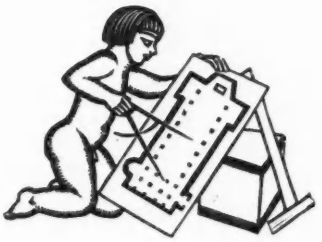
THE ARCHITECTS' JOURNAL



WEDNESDAY, JANUARY 7, 1931

SPEEDING-UP

IT is not often that architects are privileged to read an article combining the qualities which are to be found in the appeal which we publish in today's issue of this JOURNAL from the pen of Mr. Gerald Barry, Editor of *The Week-end Review*. Here we find courage, vision, and a patriotic concern for British industry and, in particular, for the basic industry of building.

It is not surprising, however, that the editor of a journal which has recently opened its columns to so brilliant an architectural series as that which Mr. Clough Williams-Ellis has contributed on the subject of English towns should embrace within his survey not only politics, literature and the other topics commonly dealt with at such length in the London weeklies, but architecture also. Mr. Gerald Barry has some valuable reflections upon this theme, and it may be hoped that he will return to it on some future occasion. The immediate purport of his architectural message is that now is a singularly opportune time to build, that everybody who has any capital lying idle should be encouraged to invest it in bricks and mortar.

At the present moment building materials are unusually cheap. For instance, many varieties of steel are now almost at pre-war price, and reductions affect several of the other principal constituents in a contractor's bill of costs.

Obviously, therefore, those industrialists and men of commerce who for some time past have meditated upon the possibility of erecting more up-to-date premises should hesitate no longer, but " do it now," if one may quote the popular slogan. There exist, neatly pigeon-holed in numerous offices, architects' plans for future building developments. Let the designs be pigeon-holed no longer, but be executed without further delay; for if those responsible for such building projects wait but a few months longer, they may easily find that building prices have advanced by from ten to twenty per cent.

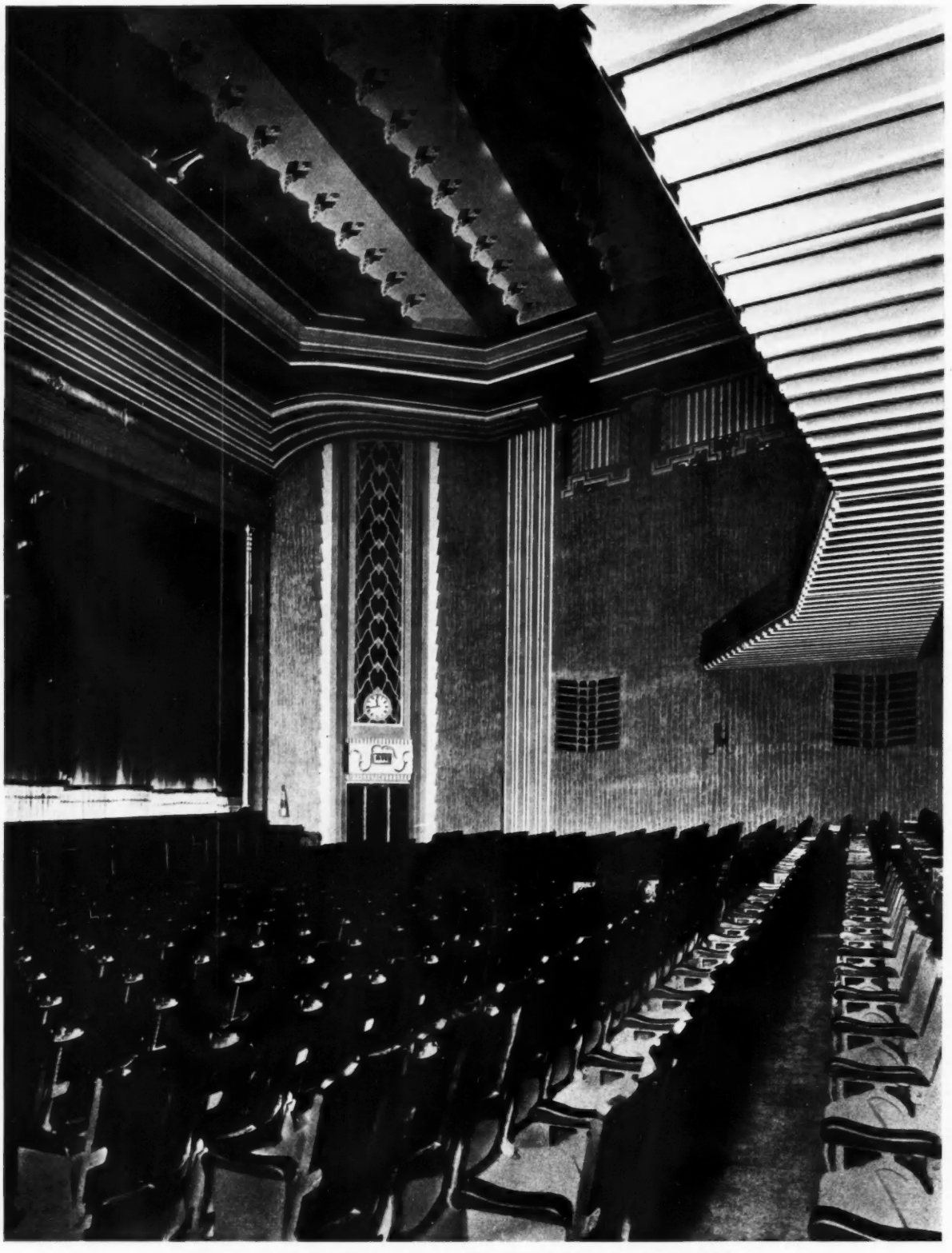
Mr. Barry raises the interesting question as to whether we do wisely or the reverse in erecting buildings so constructed that they have but a short lease of life. Opinions differ concerning the longevity of some of our newest building materials. There are being erected today urban buildings having reinforced concrete framework so strong that nothing but an earthquake or blasting operations on a big scale could conceivably shift them. It does not always follow that rapid construction means shoddy construction, for a building erected in a few months may last for hundreds of years.

Perhaps the ideal state of architecture, from the point of view of both the architect and the builder, would be one in which our houses required to be renewed almost as often as our clothes. If this ever came about, fashion in architecture would become a reality and we should have a succession of styles which for the period of their operation would determine the forms of buildings throughout the whole country.

Whether architecture, even in the distant future, either could or should be allowed to reach such a stage of development is perhaps open to question, but at any rate it may be affirmed without fear of contradiction that the opposite extreme, namely, a state of inertia, in which we follow the policy of preserving buildings until they begin to totter with senility, is thoroughly bad for architecture and for the building trades. This indisposition to build is, as Mr. Barry explains, a psychological malady which is, in fact, curable.

It is noteworthy that this view finds strong support in an article recently contributed to *The Manchester Guardian* by Mr. J. Maynard Keynes. The eminent economist, instead of yielding to the pessimism which seems now to afflict so many of our financiers and commercial experts, is not ashamed to regard our industrial future with cheerfulness. England, he points out, is still far and away the richest country in Europe and by no means at the end of progress.

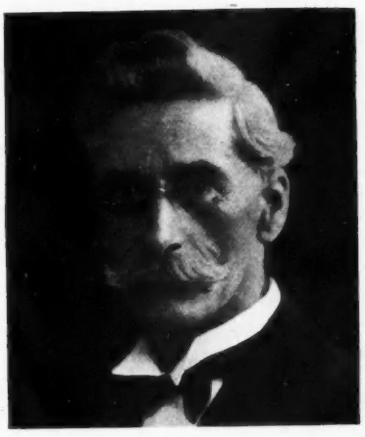
The state into which many of us have now fallen resembles that so graphically described by Thucydides in his account of the great plague that befell the Athenians. " By far the most terrible feature in the malady," he says, " was the dejection which ensued when anyone felt himself sickening, for the despair into which they instantly fell took away their power of resistance and left them a much easier prey to the disorder." It is, however, by no means a plague of this kind which now afflicts British industry, for, to quote Mr. Keynes once more, " in the middle of our troubles we must remember their temporary character, for they will certainly be followed by an upward movement."



THE NEW SHEEN CINEMA: A SIDE VIEW OF THE AUDITORIUM

The shape has been primarily designed to give the best acoustical results (see page 8). The colour scheme of the decoration is based on the flood-lighting colours—red, blue and green—and is intended to do nothing more than form a background to obtain the maximum effects for the changing coloured lights. Leathart and Granger are the architects.

NEWS & TOPICS



Sir Robert Tasker, chairman of the London County Council, whose knighthood was announced in the New Year's Honours List.



Frank M. Elgood, O.B.E., F.R.I.B.A., until lately chairman of the National Housing and Town Planning Council, elevated to C.B.E.

NEW YEAR HONOURS IN THE WORLD OF ARCHITECTURE

THOUGH there were no titles for architects in active practice announced in the New Year list, several honours were bestowed in this field. Sir Robert Tasker, chairman of the L.C.C., received a knighthood; Lord Rutherford, a vice-president of the Incorporated Association of Architects and Surveyors, became a peer, and Mr. Frank M. Elgood, O.B.E., F.R.I.B.A., until lately chairman of the National Housing and Town Planning Council, was elevated to C.B.E.

SIR ROBERT TASKER

Major Sir Robert Inigo Tasker, T.D., J.P., D.L., was born in 1868, educated at Ardingly College and in Belgium, France and the United States of America, and became articled to his father in a firm of four generations of architects and surveyors. His energy is such that he has found time, in addition to maintaining the prestige of his firm, to be for twenty years a member of the London County Council, for four years Chairman of the Building Acts Committee, and for six years a member of the London Old Age Pensions Committee. He is now Chairman of the L.C.C. Sir Robert Tasker is hon. surveyor to many charitable associations. It was in 1926 that he added enormously to his work by becoming a founder-member of the then newly Incorporated Association of Architects and Surveyors, whose presidential chair he occupied in 1928 and 1929, and in whose service he has been indefatigable ever since. He is also a Fellow of the Royal Society of Literature and a Member of the Institution of Structural Engineers. Sir Robert Tasker, as already hinted, is one of the hardest-working men in the country. He has written much—for private circulation only—on scientific subjects, and is a keen palæologist.

LORD RUTHERFORD

Lord Rutherford, O.M., F.R.S., was born in New Zealand fifty-nine years ago, and since 1919 has been Professor of Experimental Physics in Cambridge University. He holds many high scientific degrees in England, the Colonies and abroad. In 1908 he was awarded the Nobel Prize for Chemistry; and since 1925 he has been President of the Royal Society.

MR. F. M. ELGOOD

Mr. Frank Minshull Elgood was born in 1865, and designed a large number of houses in the neighbourhood of Cavendish Square. One of his best-known buildings is Dewar House, Haymarket. He was chairman of the Ruislip-Northwood Town Planning Council from 1910 to 1915, and Housing Commissioner for the Ministry of Health from 1919 to 1921. He ceased to be chairman of the National Housing and Town Planning Council, a position he had occupied since 1922, last year, and was succeeded by Mr. W. H. Gaunt.

THE LATE LORD MELCHETT

In Lord Melchett, writes Major G. B. J. Athoe, the Incorporated Association of Architects and Surveyors lost a valued vice-president. He was so widely known as a statesman and industrial magnate that his keen support of the arts was not generally recognized. It was he, however, who commissioned Mr. Charles Jagger to design the quadruple group of sculptural figures for the adornment of the Imperial Chemical Industries building, Millbank. Lord Melchett's appreciation of all the arts was in part hereditary, but his wealth and influence allowed him to patronize them in a lavish manner. He was a member of the Burlington Fine Arts Club, had been President of the British Science Guild and President of the Association of Technical Institutions, and owned a collection of bronzes and old furniture of fabulous value, including Gian Bologna's "St. John the Baptist."

SHEFFIELD BUILDERS AND "DIRECT LABOUR"

Sheffield Corporation's plan of doing everything for themselves has antagonized builders as well as architects, for their architectural department controls a "direct labour" building department of such activity as leaves very little corporation work for private enterprise to carry out. Sheffield builders have been affected to such an extent that they have had to look elsewhere for their trade, which is not really economical. Private enterprise, now that there is no Government subsidy to help with housing, has a much harder time of it, and there is a suggestion that their tenders for Corporation work are used as a check against "direct labour" costs and estimates, which, if it is true, is directly unfair, unless the ratepayers are given an opportunity of knowing the relative costs of both methods.

A RARE COINCIDENCE OF DRESS AND ARCHITECTURE

The harmony which used to exist between dress and architecture is realized today only on rare occasions. It seemed pretty evident, however, at the meet of the Garth Hunt in Wokingham Market Place on Boxing Day. To obtain the desired effect, portions of the dress must have similar colours, but deeper and more vivid than those of the buildings, and on this occasion the right conditions existed. For the red coats were mirrored by the red

walls, and the white breeches and grey horses of the huntsmen and whips by the white framework and grey glass of the windows. The white, black and brown of the hounds were reflected by the paintwork of doors and porches in their procession down the streets. The twentieth century merely filled in the semi-tones; the cars looked drab. Still, the scene remained typically English—the light sparkle of rain, the crunched mud, a wide variety of types of all sorts and conditions, all in a fold of rich brick buildings except where one opening gave a view-halloo of purple winter hedges, grey fields and a winking sky.

OWEN JONES'S CLAIM TO FAME

Who was the designer of the " 'fifties " who decorated Victorian areas with cast-iron railings based on the motif of a halbert surmounted by the fleur-de-lis ? I have found the answer, with several entertaining sidelights on nineteenth-century architects, in Mr. Harbron's little book *Amphion*. The fame of Owen Jones, it appears, rests not solely on his *Grammar of Ornament*, but also on his scheme of colour for Paxton's Crystal Palace in Hyde Park. After the committee had discussed all possible shades, including one of " bamboo-cane hue," the problem was referred to Jones, who selected red and blue. " Vapour gas," as it was called, was becoming popular at the time, Barry's new Houses of Parliament were being built, and Poodle Byng and some friends tried an experiment in " illumination effected by five thousand gas jets all flaring at once." It was a great success, but the thermometer rose to 120 before the gas was turned off !

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Not the least entertaining paragraphs in *Amphion* are those which tell of the *faux pas* of Victorian critics on their contemporaries. Perhaps the best is that of Pugin on Cockerell's Taylor Institute at Oxford, where he dismisses that masterpiece as something " that may please the admirers of gin-palace design," though some remarks made by Payne Knight at a dinner-party to Lord Elgin are deserving of a second place : " You have lost your labours, my Lord Elgin, your marbles are overrated; they are not Greek, they are Roman of the time of Hadrian."

WANTED : A BOARD OF AMENITIES

The system of architects' panels set up by the C.P.R.E. and R.I.B.A. is far from dead. Its difficulties are many, but they are realized; and that they are not insuperable the articles in this issue of the JOURNAL, of which I have had a " press-view," will abundantly prove.

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One fruitful cause of inaction arises from the lack of official recognition of the prime object for which the panels were formed. The modest little Act on to which the panel idea was loosely grafted has only a slight bearing on the question of rural preservation, and has been used by very few authorities. What is needed is, of course, some form of elevational control of houses with competent architectural advice for local authorities, officially recognized as part of the Act. It is ridiculous that, because our system of local government employs part-time amateur elected councils and low-paid, over-worked permanent officials, these same officials should have to be made the arbiters in matters of taste, just because it may be difficult to join official and unofficial action in harmonious partnership. Certain it is that elevational control without good architectural advice will be a farce and a new form of evil.

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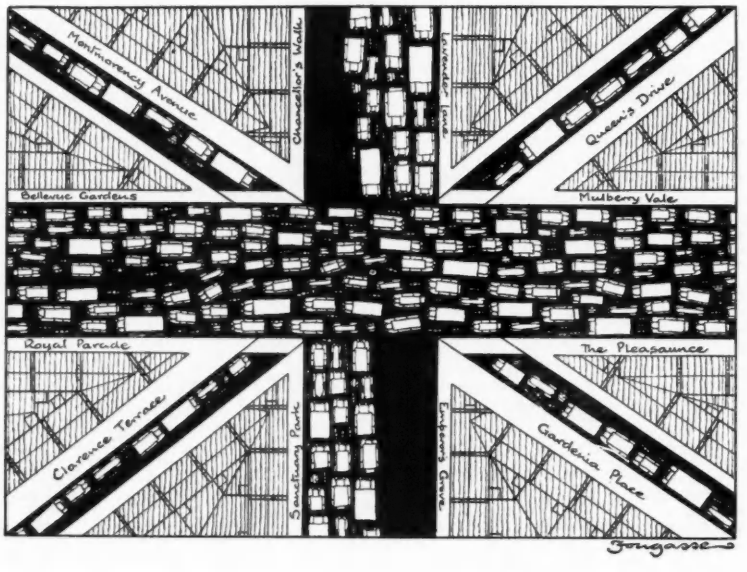
Meanwhile, the destruction of suburban and rural England spreads like a scourge, damped down and turned aside here and there by valiant bodies of enthusiasts. Two such enthusiasts, Messrs. Darby and Hamilton, have produced a super-indictment of spoliation called " England, ugliness and noise." Their little booklet, of which the frontispiece by Fougasse is reproduced here, is a luminous exposure of the vulgarization of the country : forcible yet perfectly reasonable. The moral is : we have learnt how to fly, to broadcast, to electrify the world, to travel at speed, to talk across the oceans—but we have forgotten how to think. And the remedy is a Board of Amenities : a body with powers of extensive forward information of every new discovery, and the right of conducting inquiries for the public into every major manifestation of well-financed progress. This Board of Amenities is no dream. It is a necessity.

ASTRAGAL



The new Union Jack, drawn by Fougasse, and reproduced from *England : Ugliness and Noise* (by Messrs. Darby and Hamilton). Astragal, on this page, points out that the remedy for the spoliation of England is a Board of Amenities, " a body with powers of extensive forward information of every new discovery, and the right of conducting inquiries for the public into every major manifestation of well-financed progress."

BUILDING FOR PROSPERITY

BY GERALD BARRY
(*Editor of* The Week-end Review)

"WE have already seen Change worshipped as Progress, and we may yet live to witness the apotheosis of Decay." So remarked a cynical friend of mine the other day when we were discussing modern economic tendencies. He meant, I think, much what the American meant who is reported to have said that anyone who built a skyscraper to last longer than forty years was doing a disservice to industry and the State. He meant, in fact, to point the moral of an industrial age which concentrates more on quantity than quality, and in which, in order to keep pace with production, it is necessary to stimulate consumption by stressing the advantages of, or creating the necessity for, rapid and frequent replacement. Mr. H. G. Wells only the other day was talking of a time, in the not distant future, when he foresaw that cities and towns would be replanned and rebuilt twice or more in a century, being condemned as "slums" almost as soon as they were completed.

This is a vision of civilization behaving in a somewhat nursery manner, like children who build houses with toy boxes of bricks only to knock them down again. But Mr. Wells, who has many times been proved astoundingly right, was only crystallizing and magnifying a tendency which is plainly observable in our modern economic life. The day when a thing was made to last for ever is past and gone. I am not preaching—God forbid—the Gospel of Jerry Building: I like to think that the banks and temples and viaducts of today will stand the test of time as sturdily as those of Rome. I have quoted these three remarks merely to show that progressive thought looks favourably on the prospect of rapid and sustained development in the world of building, as in other worlds.

Whether it is Change or Progress we are witnessing; whether the theory of rapid deterioration in order to stimulate consumption is good economics or bad, only history can show. But it is certain that this country, in common with others, is only half way through a process of industrial evolution of which these things are the symptoms, and that the depression from which the world is now suffering is but, so to speak, the marking-time of an army irresistibly on the march towards a bigger and—we may hope—a better destiny.

In this halt by the wayside, it seems to me—writing strictly as a layman—that building is in a peculiar and favourable position. A fact that must strike any interested observer as he goes about the streets of London is that, at a time of almost unexampled depression and unemployment, there greets his eye at every turn either some old building in process of demolition or some new building in process of erection. Building is an act of faith in the future. If we did not believe in a future of security and prosperity, we should not, and could not, assemble the stones and steel and capital and skill required for new buildings.

Building has therefore a psychological as well as a material significance at the present time, and those who build are performing a service not only to themselves but to others. As a matter of fact, it is not unreasonable to expect that the fall in commodity prices should stimulate employment in the building trade rather than diminish it, as it has done elsewhere. A time of depression should also be a time for renovation. If the army is sore of foot and down-at-heel, it must use the halt by the wayside to plaster its feet and repair its shoe leather, so that it may be the more efficiently equipped for the fray when the hour strikes for it to resume the march to battle. This is especially true of the building trade in relation to other industries; and by the extent to which the price of building materials falls, the opportunity of renovation is increased and simplified.

Nothing is more certain than that this country cannot stand still industrially. It must either go forward to better times, or back to worse, and all the signs at present are that it is marshalling its forces slowly but unmistakably to go forward. Although our industrialists are hardly less slow than our politicians to learn the lesson of the hour and to discard the inadequate theories and shibboleths of an age that is dead or dying, there is at last stirring among the people of this country, and among the best of the politicians and industrialists, a determination to have done with outworn creeds and sham conflicts and to unite on a realistic policy of national progress. That blessed word "rationalization," as applied to individual industries, has given way to a new conception — the idea of national planning. This year or next, unless I am greatly mistaken, will witness a national awakening, and the initiation of new plans to reorganize and revitalize the economic life of the nation and to reassert our industrial and moral leadership of a world.

The British people are slow to act, but once they get off the mark they are inflexible in the pursuit of their quarry. In this national planning, building is bound to play a prominent part. Old industries must be re-housed and re-equipped; new industries must be accommodated. Slums will have to be swept away and the displaced populations transferred to new and better quarters. The development of new areas will call for progressive schemes of regional planning, in which a new and better concept of civic architecture will be correlated with the industrial and social needs of the neighbourhood. Nor need this process cease with renovation, for with the increased efficiency resulting from the work of reorganization there should develop a fresh era of prosperity which will call for still further expansion.

All this is possible, is almost certain, if only the defeatist attitude of the last few years can be exorcized and a new and more vigorous outlook replace it. What is required is an idea, and the inspiration to "put it across." The country is sick to death of party routine and out-of-date political machinery. It is quite certain that unless we can pull ourselves together as a people and unite in a common effort of national revitalization we shall slowly and painfully deteriorate into the position of a third-rate Power. But if this is true, the contrary is also true: that given the lead and the will to follow it, nothing can prevent us from once more regaining our old confidence and our old supremacy in the world.

The problem is very largely psychological. Our first task is to concentrate with every nerve-centre in our bodies on destroying the devils of doubt and depression which are doing more than anything else to undermine our vitality and destroy our belief in ourselves. What is wanted is leadership and a call to hard work and sacrifice, and, above all, a renewal of belief in ourselves. If this sounds like a sermon, I can only plead that at this moment perhaps a sermon is not entirely out of place.

We must stop talking Depression and start talking Prosperity. We must stop pulling down and start building up. We must Coué ourselves into renaissance. They are doing it in America, where they understand propaganda, and we can do it here. And, as I see it, building has not only a large share of the coming prosperity in store for it, but a great part to play in setting, here and now, an example to the nation of self-help and self-confidence.



The principal façade is designed to comply with the owner's request that a great neon sign should occupy a central and prominent position. The bay feature with glazed returns lights the foyer on the first floor and forms the background for the title sign.

THE SHEEN CINEMA,

Sheen Lane, S.W.

DESIGNED BY LEATHART AND GRANGER

THE Sheen Cinema occupies a site fronting Sheen Lane, with the return side facing Larches Avenue, a *cul-de-sac*. The shape of the auditorium is designed primarily to obtain the best possible acoustical results. The walls and ceilings act as resonating surfaces, and the rear wall is covered with absorbent tiles. The ceiling rakes upwards from the proscenium end in a line parallel with the stalls floor, and by this means the volume of the auditorium is kept low; the figure is 154 cubic feet per seat.

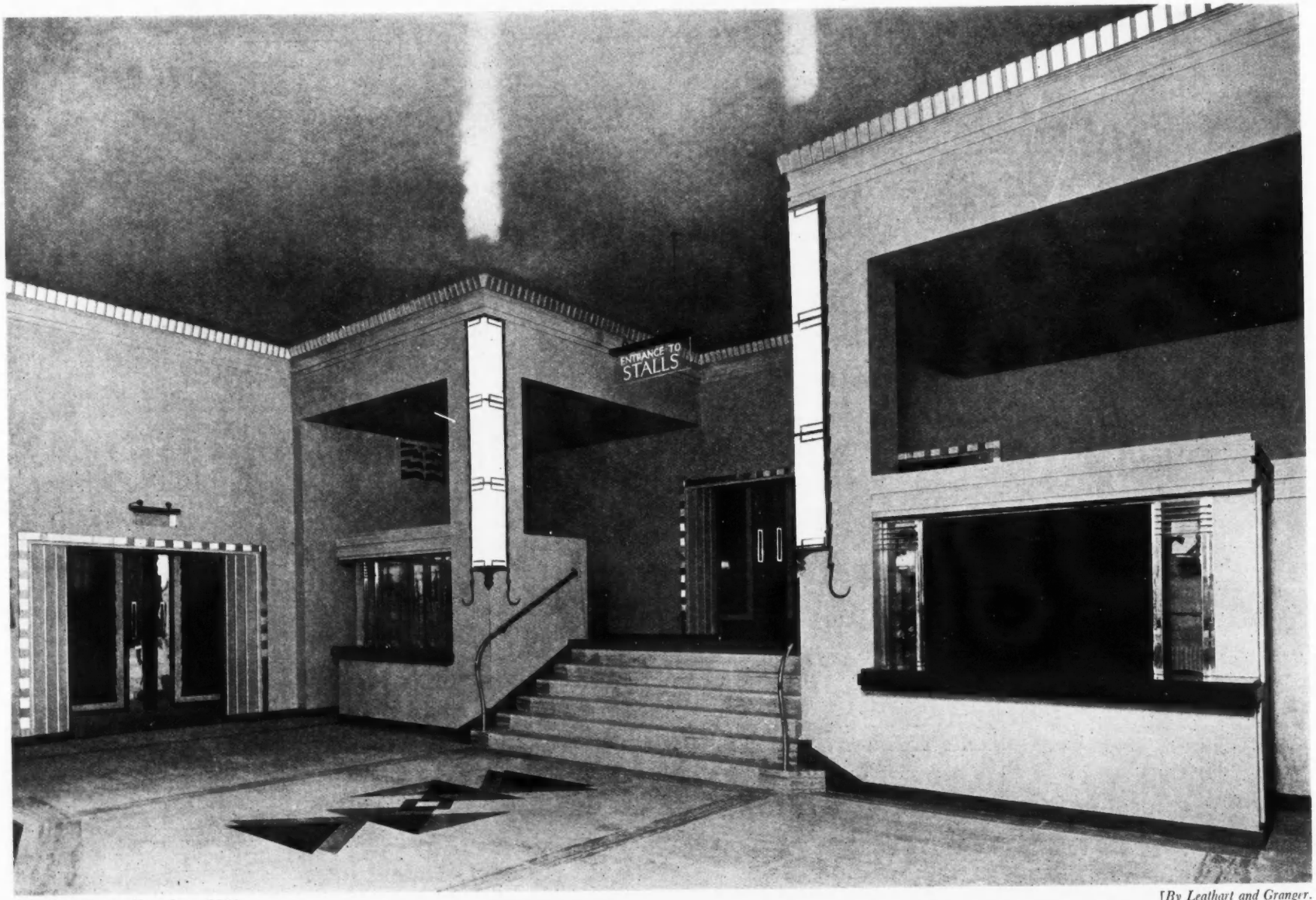
The reverberation coefficients are :

	Full auditorium	..	1·0 second.
Two-thirds	,, ,,	..	1·25 ,,
One-third	,, ,,	..	1·5 ,,
	Empty ,,	..	2·0 ,,

The balcony front is arranged in four straight facets, and is inclined backwards on section. By this means, reinforcement of sound by reflection on the front stalls seats is avoided, as well as the risk of reflected sound being concentrated from the balcony front back to the loud-speaker horns, with the consequent echoes or stationary waves.

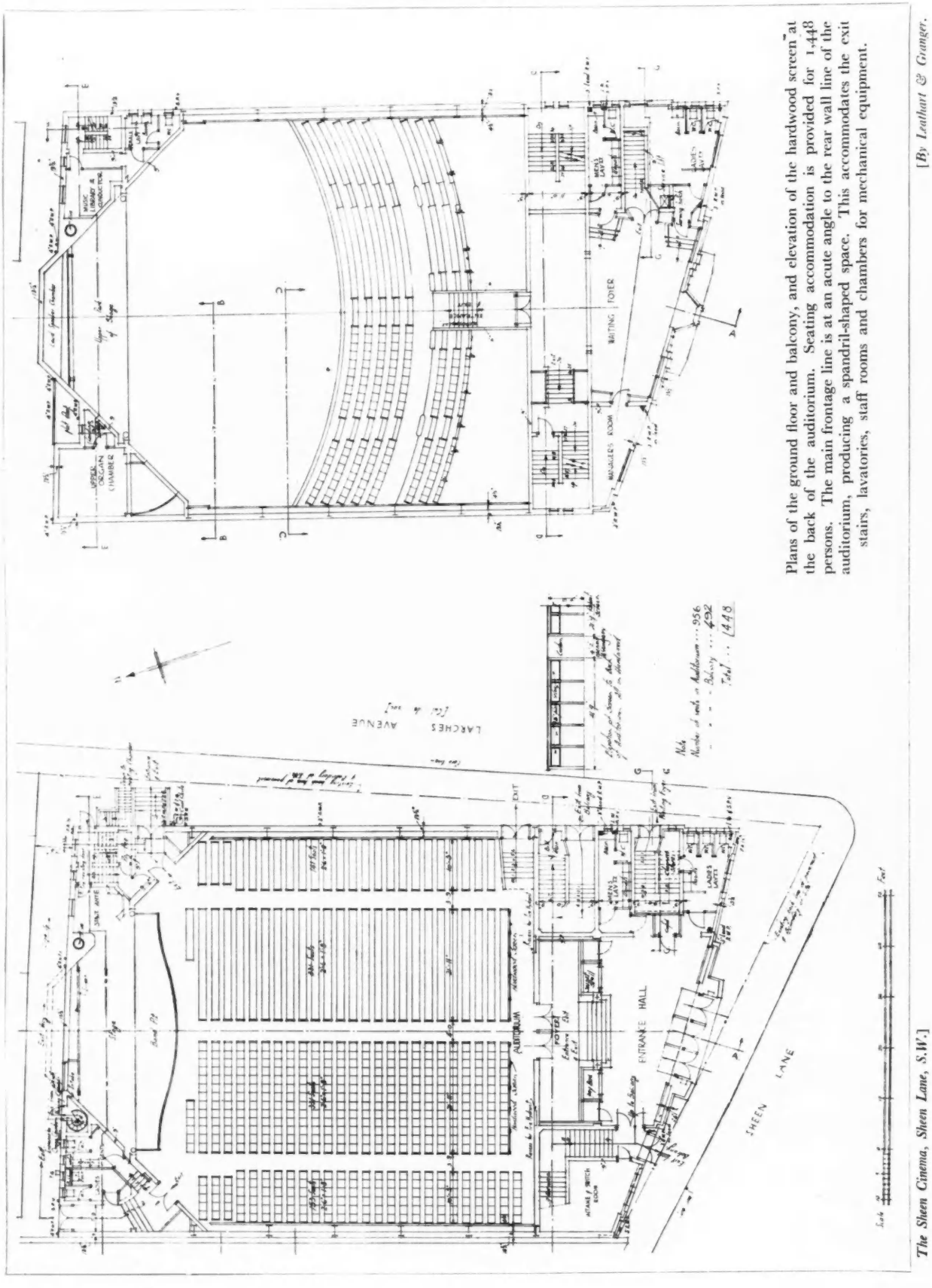
The splayed wall faces flanking the proscenium opening are carried through as side walls to the stage, and act as resonators, from which sound falling upon them is carried well under the balcony to the rear stalls. Care has been exercised to eliminate the sound of running machinery being carried into the theatre by means of suitably arranged insulation, in the form of canvas, rubber or cork.

The auditorium has been decorated in a simple, direct manner. The raking ceiling has been divided into ten



The Sheen Cinema, Sheen Lane, S.W.] [*By Leathart and Granger.*

The entrance hall on the ground floor, looking towards the stairs leading to the auditorium. On the left is the pay-box, on the right the sweet stall, and opposite are the main entrance doors from Sheen Lane. On the extreme left are the doors leading to the staircase up to the balcony. The entrance hall, foyer (see page 11) and the main staircase are treated in two colours only—beige walls and a soft rose, highly glazed, for the ceilings, with black, silver and cobalt-green doors. The floor is of marble.



Plans of the ground floor and balcony, and elevation of the hardwood screen at the back of the auditorium. Seating accommodation is provided for 1,448 persons. The main frontage line is at an acute angle to the rear wall line of the auditorium, producing a spandril-shaped space. This accommodates the exit stairs, lavatories, staff rooms and chambers for mechanical equipment.

The Sheen Cinema, Sheen Lane, S.W. [*By Leathart & Granger.*

transverse lighting troughs, in which batteries of concealed changing-colour flood-lights have been installed. In addition, the constructional form of the external walls of the auditorium has enabled further coloured-light units to be concealed in recesses which form a decorative frieze to the side wall-heads. The fluted members flanking the proscenium front are further utilized to conceal batteries of vertical flood units.

The disposal of these light sources floods the auditorium with slowly-changing sequences of coloured illumination, and no electric-light fittings, other than those essential to comply with the regulations governing maintained lighting, are necessary.

The lines of the decoration are thus unobstructed by suspended fittings. The balcony soffit has been similarly treated, and all light sources are concealed.

The colour scheme of the decoration is based on the consideration of the flood-lighting colours—red, blue and green—and is intended to be nothing more than a background to obtain the maximum effect for the changing coloured light. Buff and matt silver surfaces predominate, accentuated by orange, peacock blue, and silver leaf portions to give point where necessary to the decorative form. The carpets and seat upholstery throughout are in dark green.

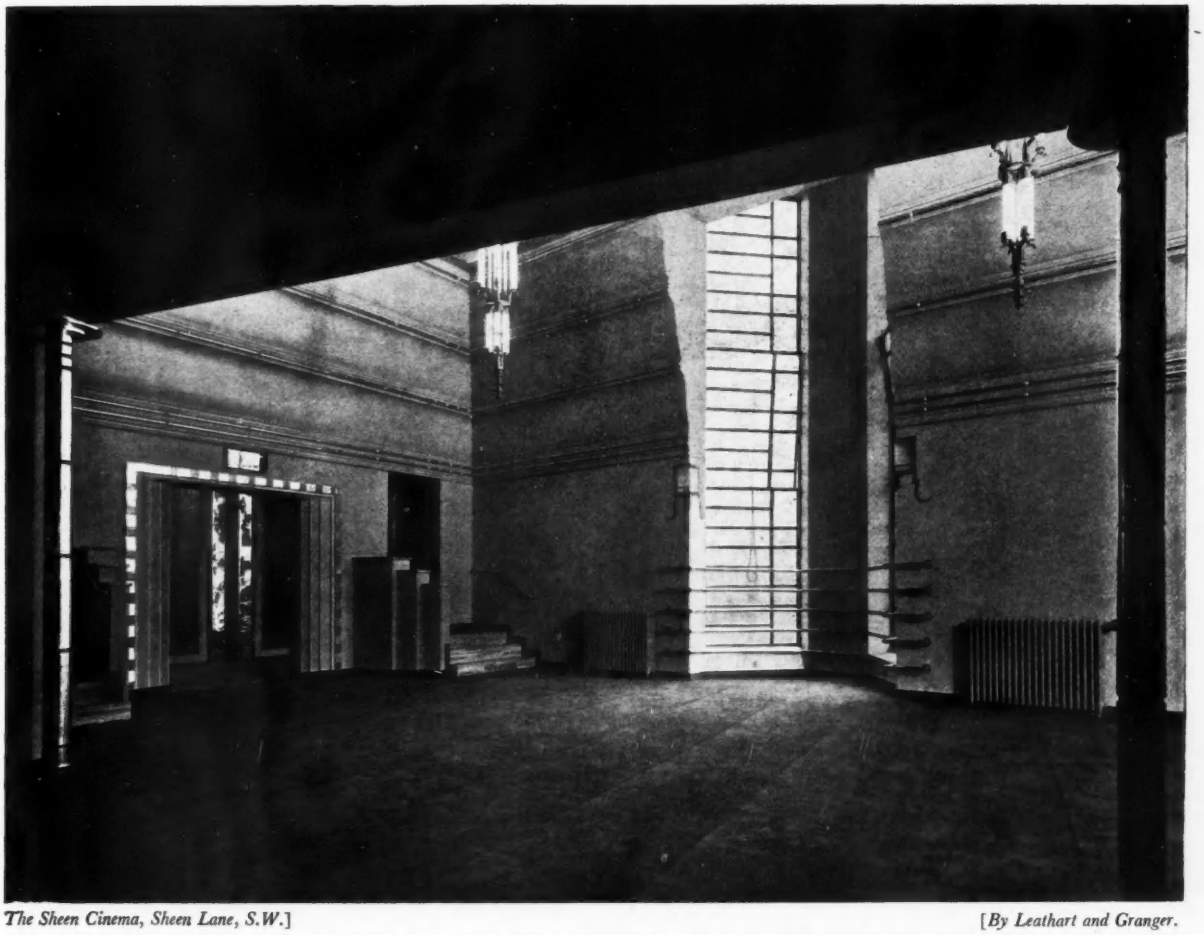
In the interior, enrichment of the usual free type is entirely absent, and straight lines predominate. Reliance for effect is placed on the emotional appeal of illuminated wall surfaces from concealed sources rather than on the more customary profusion of modelled painted ornament.

The auditorium walls are treated in plastic paint, modelled with a vertical dragging movement. The walls of the entrance hall, foyers and staircase are finished in broadly stippled paint on hard plaster.

Polychrome faience, in biscuit colour, forms the background of the main front. The narrow vertical facets and the figure groups — modelled by Eric Aumonier—are in light jade green, and the horizontal bands on the plinth are in dark green. The metal bay neon feature is in green bronze; the canopy, reveals and head of the door opening are in " Staybrite " steel, and the door grilles are in Monel metal, set in a black surround.

Flood-lighting from concealed sources is arranged for on the canopy top, and the base and the top to the bay feature. In addition, the bronze urn at the top of the bay is illuminated, the canopy soffit is lighted from glazed panels, and the surrounds of the deeply recessed main entrance doors have glazed light panels. The side wings and return elevation are faced with multicoloured bricks with faience dressings.

The figure groups are designed to lead the eye inwards and upwards towards the central bronze urn features on the bay top, and these three features form a triangular pattern in the composition of the general design of the façade.



The Sheen Cinema, Sheen Lane, S.W.] [*By Leathart and Granger.*

The waiting foyer on the first floor, looking from the balcony staircase landing. On the left is an exit staircase, and on either side are lavatories. On the right is the bay-windowed feature which forms the background for the neon sign on the main front.

[*By Leathart & Granger.*

The Sheen Cinema, Sheen Lane, S.W.]

THE NECHELLS HALL, BIRMINGHAM

DESIGNED BY A. L. SNOW

THE Nechells Hall is a branch of the Birmingham Central Mission of the Wesleyan Church. The original proposal was to extend an old chapel and schools, but the buildings were found to be in too dangerous a condition and were pulled down. In formulating the present scheme advantage has been taken of the opportunity thereby presented to provide not only a place of worship, but also a place of social recreation, for such are scarce in the district, which is one of the poorest in Birmingham.

The main hall affords seating accommodation for five hundred, including the platform, and the gallery for two hundred and twenty more. It is entered through a spacious entrance hall extending the full width of the building, between which and the street are the staircases to the gallery and lower floor, which effectively screen the hall from exterior noises.

The recesses, which are a feature of the interior, are provided partly to give extra seating accommodation, but chiefly to obtain a break in the barrel ceiling for acoustic reasons. These reasons also largely account for the use of oak panelling and front to the platform. In the result the acoustic properties are very nearly perfect.

The whole of this front block is a steel and concrete structure, carrying the weights of the roof, floors and gallery independently of the brick walls which encase it. Provision is made for the exhibition of films, and the stringent local licensing regulations are fully complied with.

At the rear is a three-story block containing kitchen, three vestries, lavatories and three large rooms which are used for schoolrooms on Sundays, and during the week for every kind of social purpose. This block has a flat roof, designed for use during the summer months.

Heating is by low-pressure hot water, with ventilation in conjunction. The hall is lit from reflector fittings in the roof space, with glazed panels flush with the ceiling, an even glow of light being obtained all over the hall. The photographs here reproduced were taken by Mr. Ernest Fletcher, of Birmingham.



The main entrance front, of which the outstanding features are the marquise and the tall arched window above it. Immediately within are staircases to gallery and to lower hall.

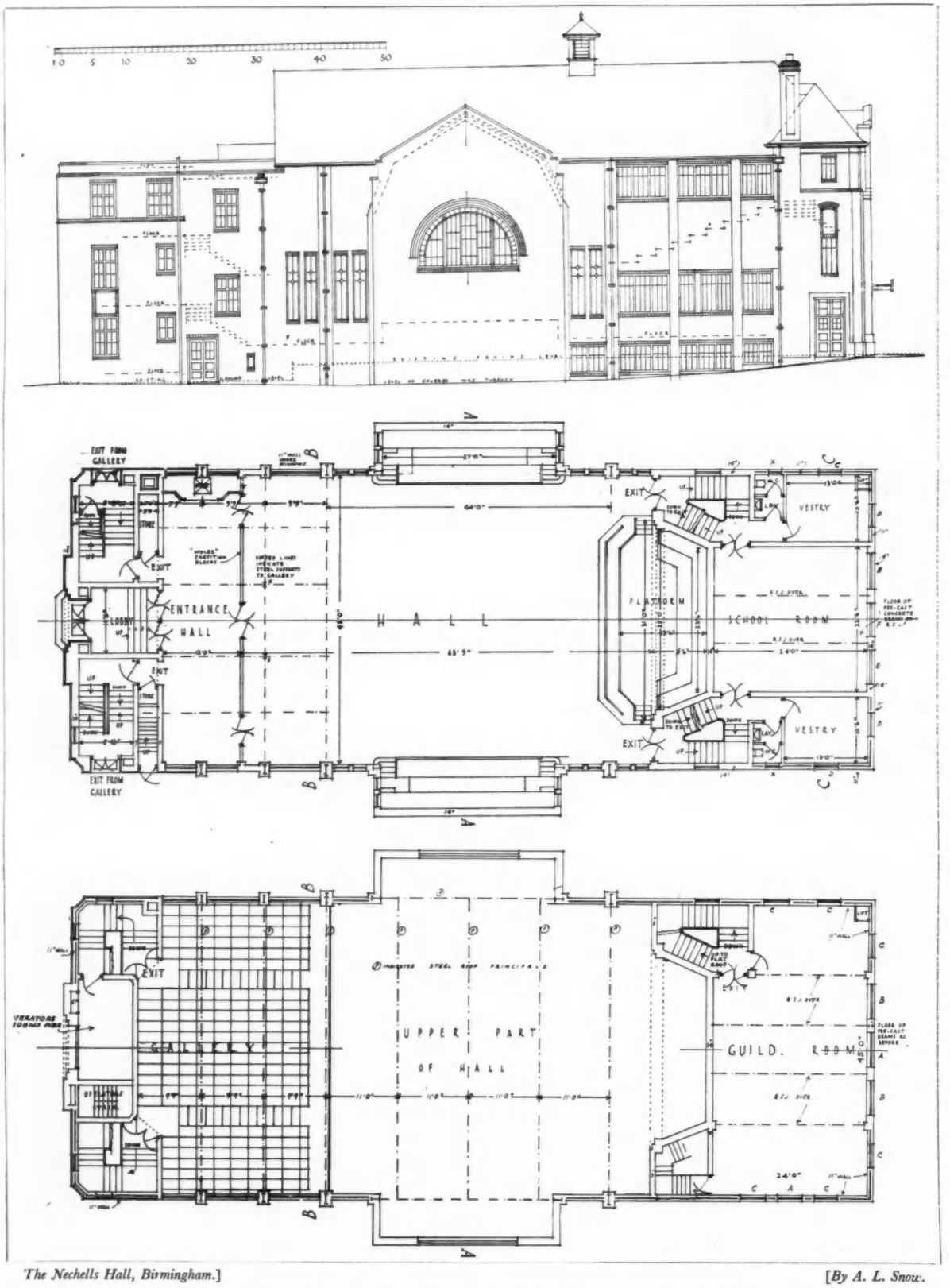


The entrance end of the hall, with gallery above; the back wall of this is pierced with holes for the projection of films. On either side of the hall are the shallow recesses, the objects of which are described in the article.



The Nechells Hall, Birmingham.] [*By A. L. Snow.*

The interior, looking towards the platform, which has a dado to its recess and a front, both panelled in oak, partly in the interests of acoustics. The furniture is also in oak. Steps lead up from the floor of the hall on either side.



The Nechells Hall, Birmingham.] [*By A. L. Snow.*

The architect's drawings of side elevation ; main floor plan ; and gallery plan. In addition to the large hall (72 ft. by 45 ft. and 58 ft. 6 ins.) there are a spacious entrance hall, vestries and schoolroom, and, above, a guild-room and cinematograph box. There is a lower hall in the basement. For sectional drawing see supplement to this issue.

LETTERS FROM READERS

Cropthorne Court

SIR,—I have viewed the above building from the road and studied photographs of it, without being able to accept the statement that its unusual form secured maximum benefits of sunlight; and after exploring the matter in the pages of your issue for December 17, and seeing the statement repeated with the exact circumstance which makes its flat denial safe, I write to point out to any of your readers who may not have examined the claim that it is not only without justification, but that the characteristic form of Cropthorne Court definitely restricts, instead of augmenting, benefits of sunlight.

It is clear that Sir Giles Gilbert Scott never made the claims you set forth. His most skilfully planned design solves with great ingenuity the problem of arranging a maximum flat accommodation on the site without recourse to light wells; but as the arrangement of salients does not allow as much sunlight to fall on the windows as a flat wall face would, the architect has certainly never said it was a device to secure more.

The writer of this article speaks of the main front facing south; but it does not face south: it faces at least ten degrees west of south-west, or fifty-five degrees at least west of south. Broadly, it faces west. My authority for saying this is the compass point on the plan. This error does not affect the general question, but it does affect the particular case.

On page 896, in the caption under the photograph of the entrance of the building, attention is called to the layout of a series of salients advancing towards the sun. It would, however, be as exact to say "a series of salients *retreating* from the sun," for each salient in offering one window more directly to the sun is entirely cutting off the sun from another. On this ground alone—that the device gives one window an unnecessary amount of sunshine at the cost of entirely shadowing another—the arrangement is not an improvement upon allowing each window to receive an adequate amount of direct sunlight, but the fact is that it would have been truer if the caption had said "a series of salients which operate to prevent half the windows in them, as well as a large proportion of those that are not, from getting sunlight," for the salients overshadow the "flat" wall stretches lying between them. The photograph itself perfectly illustrates these conditions. It was taken in sunshine at about noon, when the whole front of a flat elevation would have been in sunlight, and it shows how approximately nine-sixteenths of the wall was at the time cut off from sunshine and seven-sixteenths only illuminated, and the caption goes on to comment: "The result [of the salients] is a semitic increase in the amount of light falling into the principal rooms as compared with a flat wall."

Anyone with the plan before him may follow the sun round the building and observe exactly how the various salients and recessed parts are served during the day; and he will see that the amount of light is sensibly diminished and that when it is augmented the increase takes the form of giving excess of sunshine to a room well secured of it, at the cost of a room that is in need.

When I happened to examine the claim you make, I felt I must be mad. I have since decided that someone else is: at any rate, there is some mistake or wrong assessment of values somewhere, and I for one should be glad to know the explanation. Unless something is done, the saw-toothed elevation will become accepted as a sun-attracting device, when it is exactly the opposite.

H. B. CRESWELL

[*The above letter was submitted to Sir Giles Gilbert Scott, the architect of Cropthorne Court, who has sent us the following reply.*]

SIR,—With reference to your correspondent's letter in regard to this new block of flats, there is a great deal of truth in what he says, and I have always felt that there has been a certain amount of loose thinking in this matter of so-called "sun traps." It is dangerous to generalize and say that a "saw-tooth" plan has certain advantages or disadvantages as compared with a straight frontage; everything depends on the particular site, aspect, etc.

In the case of Cropthorne Court, there were certain advantages to be obtained by the "saw-tooth" arrangement:

1: It gives all the living-rooms, which are the most important rooms, windows facing nearly south instead of nearly west.

2: It enables these rooms to have windows on two sides, instead of on one only.

3: It gives diagonal views from these windows along the road instead of straight across it. This has proved a distinct advantage, and would be of even greater value in a narrower street.

4: Owing to building line restrictions, the actual building site is a long strip, and the arrangement adopted, as your correspondent points out, enabled more flats without light-wells to be accommodated, than a straight frontage type of plan would have allowed.

I think your correspondent's remarks are more applicable to the remaining rooms; in these there are advantages in some and disadvantages in others, but these rooms are of less importance than the living-rooms.

(SIR) GILES GILBERT SCOTT

South Africa House

SIR,—Nothing but a Christmas indigestion of unusual severity could excuse Astragal's criticism of Sir Herbert Baker's South Africa House in your last issue. I do not myself applaud Sir Herbert's architectural style any more than I applaud that of his colleague, Sir Reginald Blomfield. But the design for the new building on the east side of Trafalgar Square is surely better sense than the conscientious replica on the other side.

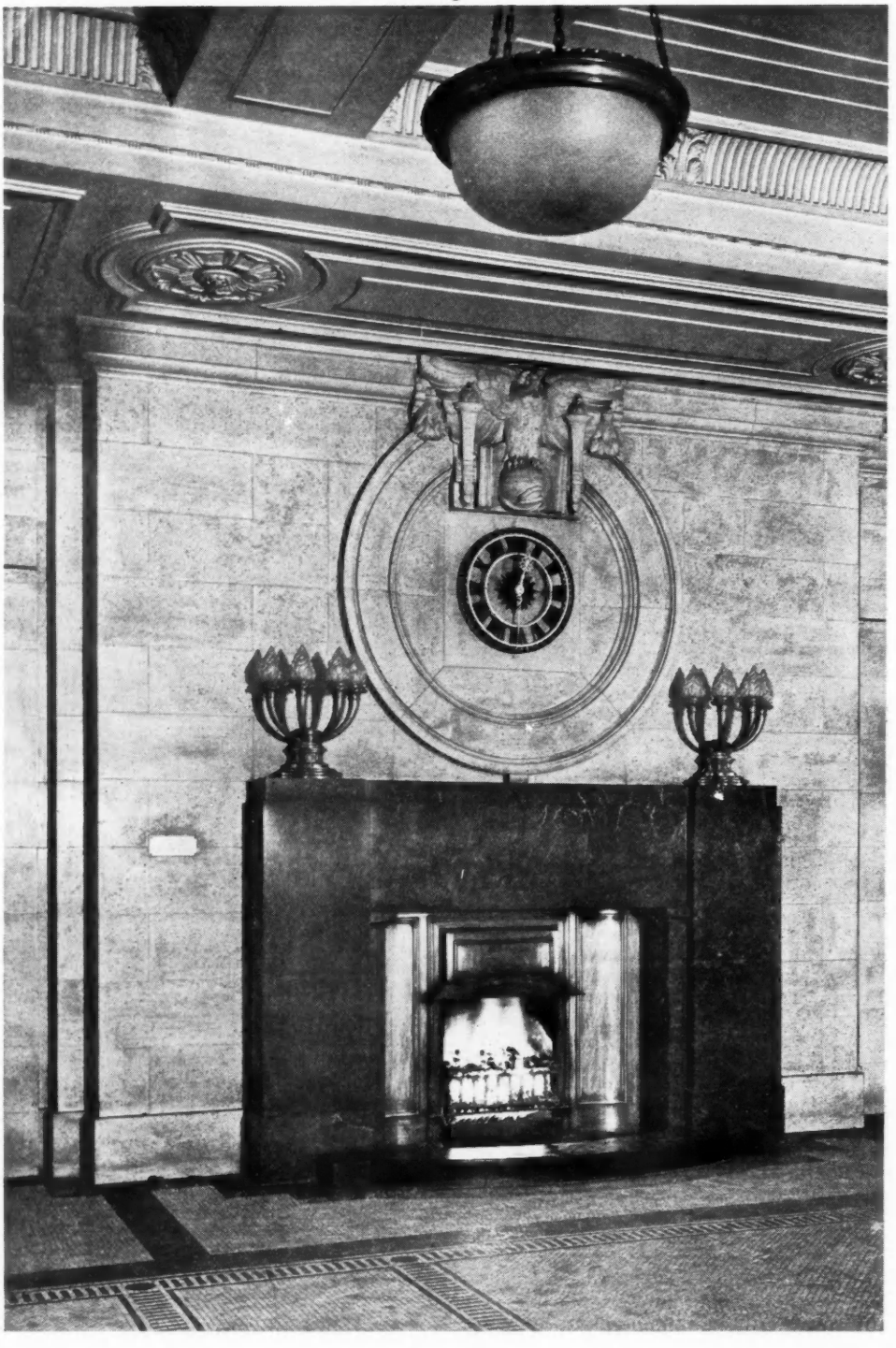
In his Bank of England building Sir Herbert Baker decided (or had it decided for him) to retain a low screen wall erected a century ago, and to put up a new high building within and above this wall, which happened to be the principal work of one of the most original architects England has ever produced. Mr. Septimus Warwick chose to treat the Canada House block on the west side of Trafalgar Square in very much the same way. The general mass of both buildings is quite incongruous, as it must be wherever the whole has been sacrificed to a part. Such a sacrifice might be justified in connection with the Bank of England. It would be harder to justify for Canada House, and for the South Africa building it would be quite indefensible. Let us, therefore, be grateful to Sir Herbert Baker for giving us a complete building.

ELIZABETH RANKINE

Houses Scaled to Incomes

SIR,—Since the end of the war, England has built many hundreds of thousands of houses, all "scaled to incomes." The quality of these houses has been varied according to the skill in design of the architect, surveyor, engineer or plumber responsible for the design, but in the main we have produced a series of very satisfactory plans, and are now told that it is possible to build these houses in quantities at £300 apiece. We do not attempt this because we are told that the price would immediately increase. So, instead of building our £300 houses and rehousing our unfortunate proletariat now trying to exist in the slums, we make expeditions to Holland, France, Germany and Sweden to discover a panacea for the high cost of dwellings. First we study J. P. Oud at Rotterdam and the Hague, then le Corbusier at Audincourt, Tony

A SMOKELESS COKE FIRE AT THE COUNTY HALL



One of the smokeless coke fires installed in the main entrance halls of the London County Hall, S.E. Architect, the late Ralph Knott. Mr. E. W. L. Nicol, in a letter on the facing page, states that smokeless gas coke has the " advantage of being readily applicable to most existing fire-grates at trifling cost."

Garnier at Lyons, then Ernst May at Frankfurt and elsewhere, and now Asplund at Stockholm.

These architects and their myriad confrères have done much excellent work, and we should study the results of their experiences; but considering our great traditions, excellent current practices and bright future in housing, does it not appear that in this worship of anything foreign—good or bad—is a very serious loss of the sense of proportion which has in the past built us a great Empire ?

This latest fashion of Swede-worship appears if anything rather more painful than any of the previous variations on the theme. We are told that the Stockholm exhibition of last summer was (to use an Americanism) a " world-beater "—its wonderful parade of glass and concrete shops, its mast full of sky-signs, its gay bunting.

Certainly attractive; but visit a street of houses in this style on a cold-wet November morning when the roads are nice and slimy, no gay flags, not even any bright flowers—no wonder we funk this variety of Functionalism. Take, then, an individual case of one of these Swedish houses, for example, the Type No. 12 on p. 949 of THE ARCHITECTS' JOURNAL for December 24. Here is clearly an important house; but study its planning. A visitor calls, he enters a hallway 3 feet square and stands at the kitchen door. It is inconvenient to admit him to the sitting-room, so he must wait in this 3-foot square; in the kitchen, the w.c., or in the cupboard under the stairs. In our quaint old-fashioned English way he would have been invited into the dining-room to wait; but in Type No. 12 this can only be reached via the kitchen and the pantry. At last the host is ready to see him, so he is taken into the sitting-room. This large apartment (a grand piano looks small in it) has three external walls, two of concrete and one mainly of glass; surely the heating of this room is not " scaled to income." Outside the glass wall is a terrace, a large one; let us refer to Francis Bacon, " Let the Court not be paved, for that striketh up a great heat in summer, and much cold in winter." Francis Bacon died 300 years ago. The great windows of Type No. 12's sitting-room would help greatly to prove Sir Francis's argument. In this sitting-room is a recess from which is reached a w.c. and toilet-room. This is a delightful idea; even our Victorians didn't rise to an absolutely unventilated and unlit w.c. in their drawing-rooms. It is undoubtedly a novel idea, but somehow our incomes will not scale themselves down to it.

Then No. 12 has a dining-room; at a squeeze it will seat seven persons. The bedrooms, not counting the maid's, accommodate six persons, so when dining *en famille* a Swedish hostess may invite one guest. In this dining-room all fat people must sit on one side of the table, because the parlour-maid has only about 2 ft. 6 ins. between the chairs and her pantry in which to operate her trays. The pantry is arranged with two large doors to nullify as far as possible any use that might be made of it ; still she has a nice little yacht's galley in which to prepare the food.

Let us go upstairs; the stairs are obviously an after-thought, and are tacked on to the side of the house in a blister.. They are spiral, so that the small children of the house may miss their footing and finish their descent in the sitting-room, which is large enough for a sick ward, where they may recover from their journey to it. At the top of the stairs is a long corridor with one side exposed, and exposure in Sweden is a cold business. The cold air in this corridor will, by its own crude nature, tumble right down into the sitting-room, and in its route draw air under all the bedroom doors, creating draughts in all the bedrooms. The only light allowed on the stair is one microscopic window, the effect of which is largely neutralized by a large cupboard at the top of the stairs. The bedrooms themselves are in the approved L.N.E.R. manner, one side of each bed, and in most cases both ends, being closed in, so that the maid must drag the bed into the room every time she has to rearrange the sheets.

I suppose it is an old Swedish custom, and therefore quite in order; but if so, then why plan the room and its furniture so that the bed cannot be drawn forwards for remaking ? (see bedroom 6). I will not take any more trouble to criticize the rest of the plans, but leave this as an indication only.

However, the site plan is interesting enough. There is M. le Corbusier's Utopia, all laid out in nice squares. We have illustrations in our town-planning text-books of " Fulham from the air " and " Wigan from the Ordnance Map " to show us how not to do it. They are just like this wonderful Swedish plan.

Sweden has in the past few years achieved a great position in the arts, particularly in architecture. Ostberg and Tengbom have given us some very fine examples of the art of building.

Anæmia has set in, however, and with this Asplundic effort our Europe worshippers have succumbed to the stunt and to the pretty flags of an empty evasion of architectural principles.

If this is an example of " scaling to income " let us try another line. Let us " scale to intellect."

ARTHUR L. HALL

The New Year Double Number of THE ARCHITECTS' JOURNAL *will be published next week, and will be sold at the price of One Shilling. The contents will include : Landmarks of the Year, by Professor C. H. Reilly, and illustrated articles on India House, Liverpool (Briggs and Thornely and Herbert J. Rowse) ; Kelham Chapel (Currey and Thompson) ; The Daily Telegraph Building (Elcock and Sutcliffe and Sir John Burnet and Partners, Associated Architects), the Stockholm Public Library (E. G. Asplund), and Wappingthorn Farm, Steyning (Maxwell Ayrton). There will also be illustrated articles on The Architecture of Steel and The Modern City Garage, and reproductions of water-colour sketches by Sir Edwin Cooper, R.A., F.R.I.B.A., this year's Royal Gold Medallist.*

Soot Bound

SIR,—Referring to your interesting leader and subsequent correspondence on this subject, architects will no doubt be interested to know that the combined efforts of the gas industry and manufacturers of domestic heating appliances have evolved a smokeless open fire that retains all the desirable features, and all the psychological and traditional appeal, of the coal fire.

The fuel used is ordinary smokeless gas coke plus the refinement of correct and accurate grading. The ignition difficulty has finally been eliminated by the introduction of a powerful gas burner, concealed and protected under the grate. The momentary reunion of the two chief elements of coal—gas and carbon—profitably divorced at the gas-works, provides in a few minutes, and with a minimum of trouble and expense, a glorious, radiant and lasting fire that satisfies the most hypercritical and offends no one—a fire such as Shakespeare no doubt had in mind when he referred to " the latter end of a sea-coal fire "—a fire of glowing carbon from which the offending, but valuable, elements had been driven off.

This improvement has the additional advantage of being readily applicable to most existing fire-grates at trifling cost. Installed in the entrance halls of the L.C.C. County Hall, they may be seen at any time.

E. W. L. NICOL
(ENGINEER AND FUEL EXPERT, THE LONDON SMOKE COMMITTEE)

PANELS AND PRESERVATION: A SYMPOSIUM

In the three sections that follow, each contributed by writers with specialized knowledge and definite view-points, an attempt is made to lay before the reader a comprehensive survey of the panel system. Stock is taken of what has been achieved to date, and steps are suggested towards the accomplishment of the immense labours that lie ahead.

i: Two Years of Operation

BY H. C. HUGHES

THE scheme of panels of architects devised by the C.P.R.E. with the close co-operation of the R.I.B.A. has now been in operation for about two years. This does not mean, however, that all the panels have been operating for two years: some of them have been established, but there has never come that request for help which should be the occasion of their first meeting. In some areas the panel has not yet got itself locally established at all.

There are several reasons for this slowness, quite apart from the newness of the idea. First, of course, the panels were established primarily to give assistance in the improvement of old cottages under an Act which, except in a few districts, has never become popular. In the first place, the conditions of the grant are very little known to owners. The owners are timid of binding their property by the very necessary limiting conditions of the subsidy; and they are discouraged by the reluctance of most local authorities, whose housing committees for the most part do not want ratepayers' money spent on buildings which are out of their control, and which they associate with the definitely lower standard of living of their youth. Many think it pouring money down the sink to spend it on old cottages.

In some counties the Act is administered by the Rural District Councils. In Devonshire this has been conspicuously successful, and 500 cottages have been reconditioned at an average expenditure per cottage of £150. Hampshire is an important instance where the Act is administered by the County Council, in close co-operation with the Rural District Councils. Some of these have architects; in a few the surveyor has taken a keen interest, found cottages that needed reconditioning, persuaded the owners it should be done, and seen it carried through. In most districts, from one cause or another, few have even asked for the subsidy. This is a great pity. No one denies that the old cottages are beautiful; but it is also true that a large percentage—I would hazard a guess of 40 per cent.—have larger rooms and a more permanent framework than most brick and slate council cottages of today, and an average expenditure of, say, £100 will bring many old cottages up to the standard of new ones. Unfortunately, the subsidy is too often applied for when the cottages are too much out of repair—this discredits the whole business. Really, the person who can make the Act a success is the sanitary officer of the Rural District: he can go to the owner of the cottage and say, "We shall close your cottage if you don't bring it up to reasonable requirements; but, if you will try, we can help you."

Now take the appointment of the panels. The Act was passed and most of the local authorities framed their schemes before the panels were in existence, though consultation with architects is urged in the Act itself. The scheme was worked out from above by a few men enthusiastic for the improvement of new building in the countryside; but the formation of the panels was quite properly left to the local architectural societies affiliated to the R.I.B.A., and the nomination took, in some cases, a long time. The fact that the panels were established somewhat late in the day for that particular Act has certainly been a stumbling-block, though several circulars from the Ministry of Health have called attention to them.

It is often said by historians of English people and habits that our changes come very, very gradually; here a stone and there a stone is dropped on the heap, but in time the heap is large enough to give direction to all travellers. So one feels that it is rather better that this thing should have happened rather silently: it gives time for the panels to settle down. If they had come with a great clatter of immediate employment, any early mistakes might have been disastrous. Where the panels are gradually making themselves useful in isolated instances and acting quickly and reasonably when they are asked, they are entrenching themselves. But nothing is more harmful than for a panel to be asked for advice and to be a long time giving it. The ground that they have been given may be as hard and stony as the Chalk Downs, but the trench, once dug, lasts the longer.

The technical work of the panel ought to be organized by a qualified architect. The county architect can be invaluable, whether as convener or secretary. To my own mind, it is better, if a suitable person can be found, for the secretary of the panel to be a layman who is already associated with the preservation of the countryside, as he can undertake the propaganda, which is so essential. The secretary of the County Rural Community Council is sometimes a most valuable ally.

If the panel wants to give advice, let it by devious ways secure that it is asked for it, and not itself ask to be asked. There are friendly members on almost all district councils; there are land-owners who are glad of help. The lay members of the panel should be in touch with all sorts of people.

Take the easy and obvious cases first. A panel is, to some extent, a judicial body: let there be no shadow of professional trades unionism. Granted that local surveyors often do architects' work, and sometimes do it badly. If the local society of architects protests, it is *assumed to be* a professional body acting in the interests of its own members. A panel, if it is to have plans submitted to it, must remain absolutely detached and judicial. Even the speculative builder, for whom hardly anyone has a good word, must be treated as having a perfect right to do what he does: else would the panel only tell him not to! It is a great good that the panel has so many lay members, representatives of local authorities, land-owners and builders. This is a safeguard against a too professional viewpoint, and should disarm all criticism on that score.

Certainly the Housing (Rural Workers) Act is not being widely used, in spite of a good deal of suggestion to local authorities by the Ministry of Health. But in some counties quite a lot has been done, and often it is the panels that have been instrumental in bringing the cases before the local authorities and securing the grants. It is hard for a local authority to know how much information it is justified in asking for: plans and specification are not formally demanded in the Act, though they are usually necessary to explain proposed changes. If the request comes up with the approval of the architects' panel, it has a cachet which sometimes saves the local authority further deliberation; and I think the usefulness of the panels in this limited sense has been proved.

The Housing Act was the *occasion* of the formation of the panels; but there certainly existed in the minds of their founders the idea that they might be useful in other ways as well, and this side of their activities, in connection with town-planning schemes and other questions affecting rural amenities, was

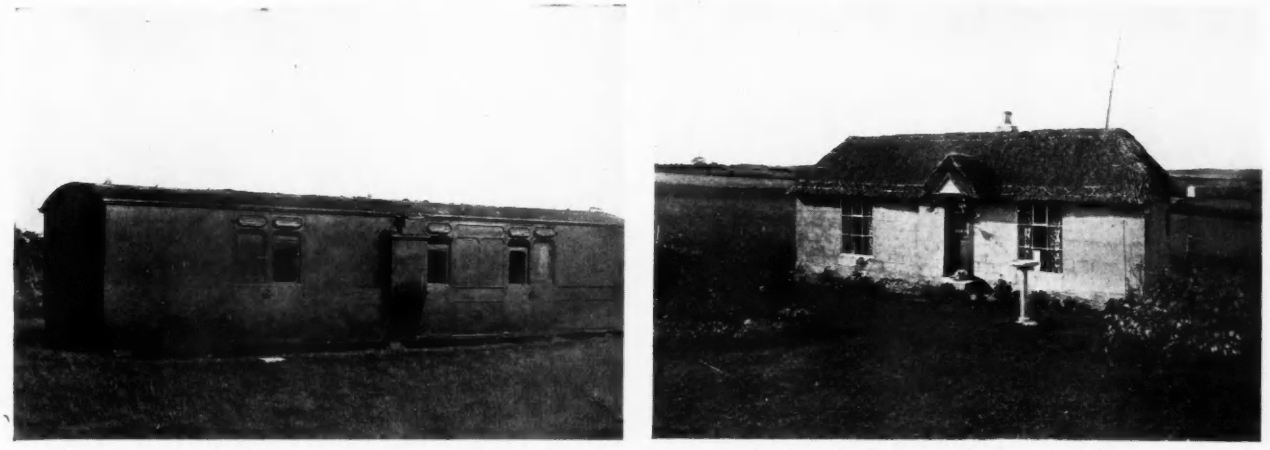


Figure one : (*a*) As originally proposed to be deposited on a main-road site, hard by the fence, but disallowed by the committee; (*b*) as finally approved by the committee, and completed by the owner himself. This example, recently published in " Letters from Readers," is here reprinted to show how, with a little care on the part of local authorities, disfigurements are avoidable. The circumstances are fully described in the text.

specially commended to local authorities by the Minister of Health in a circular (No. 940) sent out in November, 1928. The Rural Workers Housing Act was judged to be the most suitable *occasion* for the founding of the panels—the *first* job of work they should be given to do. The C.P.R.E., in its letter to the Prime Minister at the end of October, 1929, recommended that the help of the panels should be sought when the routes for overhead electricity transmission were being selected; and there are many other directions in which they can be, and are being, found useful. The Hampshire Panel has given advice on three occasions in town-planning schemes, and its help has been much appreciated. It is sponsored by the county architect. It is not everywhere that town-planning officers welcome the help of " those damned architects." Here I think it is important to remember that the panels are chosen for rural work; that their members were selected partly because of their knowledge of, and sympathy for, local methods of building. It would be unwise for them to undertake work in big cities, unless specially commissioned to do so.

Now we all know that bylaws only give to a council control over mechanical and sanitary efficiency. With amenity they have nothing to do. And yet it is very generally realized now, by people who build, that amenity is very important. Opinions on amenity differ, certainly; but I think it will be found that most people build ugly houses because they do not see how to get better without spending more money. They are, in very many cases, amenable to advice and even to a certain amount of friendly pressure. What the Bath clause, then, does officially in a town-planning scheme can sometimes be done unofficially by the architects' panel, through the friendliness of the plans committee or the surveyor or architect of the local authority.

Two lovely villages in the stone region of Oxfordshire are being jealously watched over in just this way by the local council and the panel architect, as hereafter described. If a dispute arose, perhaps the case for amenity could not be maintained; but with the whole current of opinion setting in this direction most people are glad to take advice, provided it is given in a reasonable way. Of course, this use of the panel is only an extension of a habit of private estate owners, and even of many urban and rural surveyors or architects; but it is a valuable extension, and one which should be whole-heartedly encouraged. The sooner the practice becomes normal, the more will it be introduced in official planning schemes.

There are many instances of those panels which have really got under way being consulted freely by private persons on a great variety of subjects. At Brighton, Canterbury, Croydon and Guildford advice and assistance have been gladly given and received in regard to buildings and the amenities, and in regard to bylaws for buildings and for advertisements. In Cambridgeshire the panel was asked by the largest of the rural district councils for a criticism of its standard house design, and the design was considerably modified in accordance with that criticism. New types of design have been introduced, two of them prepared by the panel; and advice has in some important instances been sought and taken on the layout of building plots.

In all this the initiation came from members of the council who were acquainted with the existence and work of the panel; and this, to my mind, is where the initiation should come from.



Figure two : (*a*) As originally proposed—in brickwork, rendered in cement roughcast; smooth red tiles, and ill-proportioned wooden casements without glazing bars; (*b*) as finally approved by the committee, and built in brickwork, rendered in rough-trowelled cement stucco and colour-washed, clay tiles, and standard metal windows.

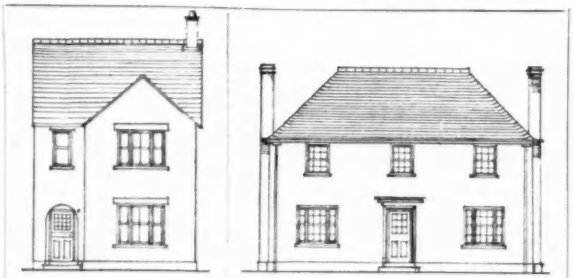


Figure three: (*a*) As originally proposed—in brickwork, rendered in cement stucco, lined to represent ashlar (!), blue slates on an unpleasantly pitched roof, and sash windows without glazing bars; (*b*) as finally approved and built in brick, rendered in cement, finished lias lime, grey clay tiles, and sash windows with glazing bars.



Figure four: (*a*) As originally proposed—square and box-like in shape, ugly windows and doors without glazing bars—materials suggested: roughcast brickwork and smooth foreign red tiles: (*b*) as finally approved by the committee, and built in brickwork, rendered in cement stucco, float-finished, grey concrete tiles, and standard metal windows.

The popularization of the panel would be one of the most useful works of the local branches of the C.P.R.E., which are growing up in many districts and will eventually form a network over the country, like that of the architectural societies.

ii: An Experiment at Witney

BY THOMAS RAYSON AND THOMAS THOMSON

AT the "Cotswold" Conference, held recently at Cheltenham, a delegate rose to ask a most important question, but one which, we fear, was not adequately answered. "Who," interrogated our friend, "are the 'architects' of these horrible bungalows and things one sees desecrating the countryside?"

This question undoubtedly hits at the whole difficulty in rural preservation. It is one thing to say that the country must be preserved, and entirely another to set about the work of preserving it effectively. It is a matter very largely of persons and not of things.

The "architects" referred to are to a very large extent the real source of the trouble. Their personnel varies, but generally ranges from that much-admired worker in another sphere, the builder's foreman, to the sanitary inspector's assistant; and, again, from the amateur builder-owner to the misguided cheap "estate agent." It is not that one begrudges these well-meaning people the means of adding a few extra guineas to their perhaps scanty income, but what one does begrudge them is the uninterrupted right to defile the whole countryside through their lack of thought or knowledge of appropriate design or materials.

In the Witney area, largely a rural district of some 130 square miles on the borders of the Cotswold country, the authors have been concerned in an experiment with a view to seeing how far it is possible to do real practical work of rural preservation under the machinery of town-planning procedure. With somewhat over a year's experience from which to speak, we have felt that it would be perhaps of general interest if we ventured to say a little about the "success" and difficulties encountered.

We hope thereby to convince those architects who have in the past felt a little dubious about plunging themselves into a kind of voluntary work which, whilst little appreciated perhaps, may even hurt their professional dignity; that by giving a little of their time regularly to this work of serving on advisory panels, in the same way as doctors give gratuitous service to the hospitals, they are doing a really good and useful work for their country, and at the same time raising the *status locum* of their profession—no mean dual achievement.

Before giving details of actual cases on which we have been called upon to advise, it will, perhaps, be as well to outline the procedure followed. At Witney, a joint urban and rural town-planning scheme is being prepared under the 1925 Act, and has reached the preliminary statement stage. Having at the moment no power to set up an advisory committee, consisting of an architect, a surveyor, and a Justice of the Peace, according to statute, the Witney Committee have taken the Minister of Health's advice, given in his Circular No. 940 to local authorities—namely, to take advantage of the services of the advisory panels set up by the Council for the Preservation of Rural England in collaboration with the Royal Institute of British Architects.

The committee have cordially invited the architect member of the Oxfordshire section of the Berks., Bucks. and Oxon. panel (the joint author of this article) to advise in consultation with their town-planning surveyor (the other joint author) on all plans submitted to the committee for approval, and to attend the meetings at which these plans are considered. This procedure has been found to be most convenient. The town-planning surveyor is independent of the surveyors to either Council and, whilst engaged on the preparation of the actual town-planning scheme for the area, also reviews all plans submitted to the committee for approval. He refers all doubtful cases to the panel advisor and obtains in consultation an alternative sketch plan or suggestion.

The committee approve or disapprove as they think fit after having considered the panel advisor's report and suggestions. If disapproved, these are sent to the owner with the disapproval notice, and it is then up to him to submit a fresh proposition. Quite frequently, however, and especially of late, we have found that owners or their agents will come in and ascertain our views before proceeding to prepare plans. This is a useful and most satisfactory outcome of the system, as it saves everybody much time, trouble and patience.

There is, of course, no legal status to this advice, and the advisor or the committee have no power of veto. This comes later, when the preliminary

statement has been approved, but even then, with a legally constituted advisory committee in the background, it is doubtful whether anything could be more convenient than the mild method of peaceful persuasion which we have perforce had to use with much discretion in this area.

We must not, of course, give the impression that all the cases dealt with are "successes." A review of some 110 cases dealt with during the past twelve months reveals the contrary; but, having regard to what we have said just above, it is gratifying that the percentage of what may be called, we suppose, "successes" has reached 65 per cent. in the first year of working.

We have found that plans submitted for approval fall roughly into three classes. First, there are those of the "back of a piece of notepaper" or "want to build as I please" type; secondly, there are those of the amateur draughtsman; and, thirdly, those of the architect and of the self-styled "architect."

The first class are a very difficult proposition, and, unfortunately, if left alone, develop into a very vicious form of the disease we are out to combat. They are usually submitted by the very poor rural settler, with no ideas except the fundamental one of placing a roof over his head in the cheapest manner compatible with his ideas of permanence. He usually builds his house or shack himself, and is often quite insensible to the meaning of lines on paper. All one can do in cases of this sort, under existing powers, is to insist on inoffensive (even if cheap) materials.* It is difficult to recall any particular case of this class which has been completely humanized as a result of the committee's action, yet one stands out in the memory as being of especial interest.

A struggling poultry farmer wished to erect as a residence a disused railway carriage on brick piers adjacent to a main trunk highway and on a plot overlooking a valley of special beauty. Having little power definitely to stop this outrage, the man was given permission to erect, subject to certain requirements, some of which the owner, being an industrious worker, himself suggested. In short, he set back the erection some 100 ft. on a receding contour, took out the small carriage windows, and replaced them by two large old standard metal casements, rendered the sides and ends in cream stucco, built a chimney-stack, and built up and thatched a roof. To look at this little effort it seems difficult to imagine that once it was a perfectly unsightly railway carriage, so well does it now blend in with the landscape. (See figures 1*a* and 1*b*.)

* The Witney Committee have found that their work has been eased very considerably by the issue of a memorandum dealing with the use of appropriate materials, and giving simple hints on such matters as siting, form and colour. (See "The Specification Writer" in issue for October 29, 1930.)

Town Planning Memorandum issued by the Witney and District Joint Town Planning Committee, obtainable from the Clerk, at 28 Bridge Street, Witney, Oxon. Price (post free) 4d.

Then there is the second type one has to deal with, the amateur draughtsman's plan. The pain these often cause the reasoned mind is inestimable! The trouble we find is that action is being taken all too late. So many of these atrocities have been actually erected under the style of "desirable modern residences" that the average prospective house-owner has come to regard them as the accepted standard of "modern" design, and from this conviction it is often extremely difficult to wean him. Hopeless as these cases appear at first sight, it is surprising what can be done by tact and a little skilful handling of individuals. This, we find, is the only way; the most architectural alternative sketch, unless explained and backed by someone on the spot, conveys very little to the average prospective house-owner, and less to his would-be "architect," who spends all his time looking for whatever discrepancies he can conjure up.

For example, we recently dealt with a case where a plan, prepared on behalf of a small jobbing builder, was submitted by an owner for a most conspicuous corner site. How bad the design actually was may be guessed from figure two (*a*). The committee, on the recommendation of their advisor, disapproved the plan and suggested an alternative [see figure two (*b*)]. After some negotiation, this was accepted and built by the same builder for exactly the same price. The owner, although at first resentful of "interference,"



Figure five: (*a*) As originally proposed—in brickwork, rendered cement roughcast, dark clay tiles, imitation half-timbering to gable, and wooden casements without glazing bars; (*b*) as finally approved by the committee, and built in brickwork, rendered in cement and float-finished, dark clay tiles to roof and gables, and standard metal windows.



Figure six: (*a*) As originally proposed, by a metropolitan investment trust, to be built in roughcast brickwork and foreign red tiles; (*b*) as finally approved by the committee, and built in brickwork and rendered in cement, float-finished, and grey concrete tiles. All the figures here reproduced are referred to in section ii of the accompanying symposium, in which the authors describe the measure of success that has attended their efforts in the Witney district of Oxfordshire. Their experiment under the panel system shows what can be done with the existing machinery, but is almost an isolated case, taking the country as a whole.

is now most grateful, and whilst the house as such has no pretensions to being good, it is at least quite inoffensive considering the small outlay.

Another owner submitted a similar plan. This also was rejected by the committee [see figure five (*a*)]. In this instance an alternative plan was prepared gratuituously by the committee's adviser [see figure five (*b*)], but the owner was extremely annoyed at the "interference," would have none of it, and cancelled his order with the builder! Two days later the builder showed this alternative sketch to a friend who had heard of the affair, and he only too heartily agreed with the committee's decision. In fact, next day he ordered a similar house to be erected on the adjoining plot for himself. The first owner has now had an opportunity of seeing the result of the alternative suggestion and, changing his mind, has reinstated his order. The plea that such restrictions on building increase unemployment and the housing shortage can thus be refuted with a telling rejoinder.

A small but, we think, representative selection from the many similar cases dealt with are given in the other comparative illustrations — figures three (*a*) and (*b*), four (*a*) and (*b*), and six (*a*) and (*b*).

Then there was a case before the Committee where an artist-owner wished to increase accommodation by adding a story to one of twin delightful Dutch-gabled houses at the foot of a fine Cotswold High Street—a proposal which, although admittedly made unwillingly by the owner, would have utterly spoiled the dignity and composure of this nice architectural unit. After a careful examination of facts and alternatives with the owner, a decision was arrived at to leave the existing house as it is, and build a new and larger house on a site near by. Thus once again two houses have been secured instead of one.

Whilst a full account of negotiations in the many cases dealt with would doubtless make interesting reading, we must refrain, and content ourselves with just one or two examples.

We referred above to a third type of plan with which one has to deal, that of the architect, and of the self-styled "architect." Here again we are on difficult ground. The policy we have found most convenient is that in the former case, in order to maintain the proper relationship between architect and client, we usually do not comment unless absolutely necessary on account of very unsuitable design or materials. Where comment is absolutely necessary, an interview with the architect before placing the plan before the committee usually suffices.

In the case of the impostor it is different; and here we feel justified in acting in the usual way, as it can certainly do no harm where it is obviously a case of the blind leading the blind. Such a case has recently come before us, where an estate of some three hundred acres was being broken up and plots put to the most abominable uses purely on the advice of a gentleman practising as an architect and estate agent. The committee experienced considerable difficulty with this agent over a number of his designs for houses, and eventually a member of the committee, having some acquaintance with the owner, took the opportunity of advising that he needed to proceed with some caution if his estate was not to be very soon strangled by ill-considered building. Accordingly his advice was taken, and now the estate will no longer be subject to the vicissitudes of incompetence. So often does one find that such potentially valuable estates get into the hands of people who unfortunately develop the habit of producing the wrong "goods"!

The more experience we gain in this panel work the more we are convinced that, if the countryside is to be preserved and developed on right lines, we architects must revise our notions a little and get busy. There is little doubt that it will mean a good deal of unpaid work, but, nevertheless, we are confident that both morally and financially it will, in the long run, adequately repay us as a profession in direct proportion to the devotion given. This is the experience of the medical profession, we are sure.

Panels, generally speaking, are, we feel, too small. Each allied society should have a panel of at least twelve well-adapted members, who would work by rota, similar to the Washington Panel, each member serving on one committee for not more than three or six months at a stretch. This, we feel, will do more than anything to help the movement to succeed. If one member serves for a very long period, the whole thing becomes rather personal, and people are apt to get the idea that, if they want a plan passed, it is merely a question of getting Mr. So-and-so to do the job. This is, of course, the wrong impression to give if we are after real results; although undoubtedly all building work should be handled by qualified architects. Accepting this as an object which somehow must be achieved, it behoves us as architects to uphold the status of our profession and to see that every job we turn out, however small, is irreproachable. Unfortunately, it is hardly so at present, but it is gratifying to see new life being instilled into the profession as a result of the educative influence of the great architectural schools.

iii: Organizing the Future

BY E. MAXWELL FRY

THE spoliation of the countryside has been going on these many years, the evidences of its canker in pre-war days differing from the blight of this present in degree rather than in kind. Only the spread of motor car and charabanc has proved to those who were enjoying its nearly unspoiled beauty that its days, unless a miracle should supervene, were numbered.

No saving miracle, but a gradual education of the common mind has come to set a barrier between the beauty of the countryside and the tide of ignorant destruction that threatened to extinguish it for ever. How this education has been achieved, the degree in which it has been achieved, is known to its full extent only by a few enthusiasts who have spent their every effort in the task since the war liberated them from other things.

Their efforts have been rewarded over a very wide field, in salvation accomplished, in legislation enacted, and in a new spirit shared by an increasing section of the community. It is extremely important to remember what extended translation their first words of warning have enjoyed, for it is the very core and substance of the movement, operating now in a thousand different ways, and causing men by the impulses of both love and fear to act for the good of the community and the saving of their country.

This is recorded in no spirit of congratulation, but rather to show, before we deal with a minor aspect of the problem, that it is through the education of the ordinary man that spoliation will be made to give place to real constructive effort.

We all know to what extent the railway has affected the materials of building—how the easy transport of bricks and slates, and all the lesser parts of construction, have robbed *locality* of its meaning; how the standardization of the bylaw house of the past has provided the small builder with enough fractions to enable him to piece together an incongruous but recognizably whole house; and how, therefore, though he has lost his old skill of building, and gained no new principles of design, he has yet become the universal provider of rural architecture.

And we have seen the later degeneration of the bad but solid materials of pre-war days into the flimsy pink and grey poverty of these "bungaloid" times. These are the forces with which we have chosen to grapple in an endeavour to save rural architecture from the fate of its suburban sister, and the architects' panel system is the weapon which we have chosen for our attack.

In section i of this symposium an attempt is made to survey the organization and achievement of these panels which the R.I.B.A. and C.P.R.E. set up together to assist the better designing of rural cottages under the Housing (Rural Workers) Act of 1928. It was felt at that time that, though there had been a miserably disappointing response to the spirit of the Act from both local authorities and architects, time was needed for its wider recognition, and that it was too early to allow of valuable deductions from the ascertainable facts.

It was nevertheless felt that the machinery provided by the C.P.R.E. and R.I.B.A. was too flimsy, and relied to an altogether unwarrantable extent upon the enthusiasm of the average architect, whom it provided with no adequate introduction to the surveyors and councils, nor with any literature outlining a body of building principles which could be accepted by both parties. The natural result of this lack of organization was shown to be an extreme reluctance upon the part of the more than average architect, as represented by the members of a conference then being held, to enter upon the work with any real enthusiasm.

Since that time the system has moved forward on its original small impetus, aided by another Government pamphlet, by odd Press references to its work, and by exhortations to town-planning committees through the medium of regional and other reports. What progress has been made is confined to a few localities, and in these localities, represented by active and enthusiastic men, much has been accomplished. But generally it is negligible.

I am confining my remarks to rural architecture, the immediate object of the panels; and I avoid more than a reference to the wonderful work of the various bodies of the C.P.R.E., and in particular to the pamphlets of the D.I.A., which must be accounted one of the best works of propaganda and the surest means of educating the average man.

In one of the districts referred to the local town-planning committee have carried out the interesting experiment described in section ii. This procedure, which is convenient to the committee and gives the voluntary services of the architect some status, has been found to work smoothly and well.

There are reproduced some excellently clear drawings showing the type of work accomplished by this committee. No one can deny that it is work that is worth doing by architects, and that, done as Messrs. Rayson and Thomson have done it, the standing of the profession is raised rather than lowered.

Out of a consideration of this experiment in control of rural architectural amenities several important discoveries arise. First, it is absolutely necessary, if architects are to lend their services, that they should be given the fullest possible measure of control, so that it will not be said that they fiddled about with other people's designs to no good effect. Secondly, the personal element should be avoided by enlisting the services of at least ten or twelve architects to each large panel, and never less than three to any panel. This means, in point of fact, getting all the architects of the district into the work, and keeping them going on a rota.

Thirdly, there should be more panels, covering wide areas in small local organizations.

Fourthly, there should be a series of pamphlets—such as that found indispensable by the Witney Committee—dealing with building and design in various localities and generally with the best ways of using new materials. Other districts are preparing them, and a sub-committee of the R.I.B.A. is at present in consultation on the same matter.

Fifthly, the central organization, which I suspect to be a divided organization, should combine in an attempt to procure the introduction to the local town-planning and other committees of the services of the panels. In this case just described, the two parties should be got together at the invitation of the town-planning committee or by personal contact of an unofficial nature. Some more universal approach should be made to enable a much greater fusion to take place, by giving encouragement on both sides—architects to offer their services, committees to take them.

Finally, the scope of the work to be undertaken by the panels should be laid down by headquarters in consultation with local panels, and this should be put forward clearly as the concrete form of the services to be offered, so that there shall be nothing that is meaningless or vaguely philanthropic or merely amateurish, for it must be remembered that the panels represent the R.I.B.A., and failing, bring discredit upon the profession.

I leave it to readers to decide, from the evidences reproduced in illustration to this article, and from their own imagination, what could be done elsewhere and in their own districts, whether the work is worth taking up and promulgating seriously and strenuously. Certainly it should not be left to a few men to carry more than their share of voluntary work, but I feel that nothing more may be expected unless the joint bodies that brought the plan into being offer considerably more encouragement in the form of a more active and closer organization and propaganda upon which these bodies must spend time and whatever money there is to spare. I understand that some grant is available for this purpose, and suggest that it should be spent at headquarters and not dispersed where no direct and tangible results will be obtained.

THE ANCIENT MONUMENTS BILL.

ALTHOUGH at first sight the Ancient Monuments Bill is a little disappointing, upon reflexion it becomes evident that its effect will be far greater than might appear. In essence, the measure is really as much as anything an enabling Act for the Act of 1913. Action by the Commissioners under that Act has up to now been severely hampered by the fact that it contained no provision for compensation of owners whose objections to a Preservation Order were on the score that it damaged them financially. It followed therefore that the Commissioners were hesitant to issue any Preservation Order which, when the necessary confirming Bill came before Parliament, would be opposed by the owners. By the present Bill this formidable obstacle will be removed.

The powers to deal with the environments of Ancient Monuments is a very important acquisition. And the prohibition of export of ancient buildings, even if they be occupied, is a great advance in legislation. It is probable though that the clause covering this will undergo some modification.

As to the time when the Bill may be expected to become law. I gather, it is thought that it will be referred to the Commons in February; that its second reading will not be opposed, and that it will straightway go into the Committee stage; so that with fair luck it might become law in March.

It is, I think, to be regretted that the measure contains no provision for financial assistance to the owners of ancient monuments for works of repair.

There appears to be no essential difference between the terms monument and ancient monument so far as preservation is concerned. There is neither in the Act of 1913 nor in the Bill any restriction as to date. Should the Commissioners think proper, they could schedule the Marble Arch or even the Shaftesbury Memorial. Restriction to the year 1714 applies only to the Survey of Ancient Monuments, and that is, I believe, only to keep it within reasonable bounds. By the Act of 1913 ecclesiastical buildings are exempted, and the Bill leaves this position undisturbed.

R. MINTON TAYLOR

THE SPECIFICATION WRITER

On the Job: Foundations

BY THE GUV'NOR

THERE are several types of foundation, each designed to meet special cases. The most economical and generally used, where fairly good bearing soil is found, is the ordinary trench for walls, and the isolated concrete base for stanchions, reinforced or not, according to requirements, and having sufficient spread to distribute loads over the area according to the calculated safe-bearing value of soil.

Where good bottom is only to be found at some depth, bearing piles may be driven, either steel or reinforced concrete, and their heads connected by similar beams; and walls and bases built off a system of these.

Where no bottom is available, friction piles may be used instead of bearing piles, and the whole system connected at their heads, forming a similar foundation to the last.

A raft may be formed independently of piles, and consist of a concrete bed, reinforced either in the orthodox manner with rods of calculated size or with steel joists or rails in one or more layers as required. The reinforcement should be placed so as to equally distribute the loads over the whole raft, also the concreting must be carried on continuously until completion if a satisfactory raft is to result. As in all reinforced concrete work, exact gauging is essential and all reinforcement should be wired so that it cannot be forced out of position.

No excavation should be carried on in the proximity of concrete work whilst in hand.

In regard to bases for stanchions, since the application of reinforced concrete design considerable modifications have been possible, resulting in a saving of depth in excavation and in concrete over the standard method of mass concrete, combined with steel grillage, upon which the base plate of the stanchion, heavily gusseted, rests, as shown in figure three.

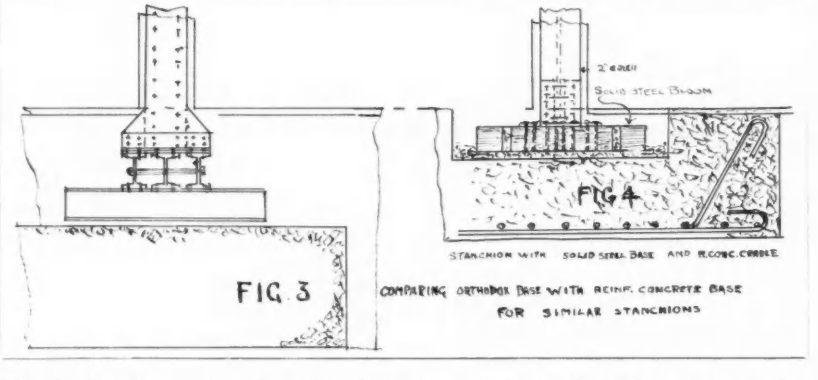
When used in conjunction with solid steel bloom, as base for stanchion, the reinforced concrete base, with the reinforcement forming a cradle, gives us the maximum of saving in this direction, as shown in figure four. A drawback to this method in practice is that a sinking or pocket is usually necessary for the steel base, making it difficult to keep clean.

The wedging plumb of the stanchion in a restricted area is not quite so easy, and grouting up requires extra attention. It is usual to allow a space all around of about 6 ins. for this purpose. In regard to grouting, engineers are divided upon the question as to whether grout should be poured or semi-dry and rammed, the latter being favoured because of less risk of water- or air-pockets being formed under the base and spoiling the distribution of loads. This risk may be lessened by having holes drilled through the base to liberate any imprisoned air or water during the process of pouring.

Figure five shows a method of saving asphalt suitable for a deep base. A 6-in. layer of firm concrete must be placed directly under the grillage, reinforced as required to protect the asphalt from being compressed.

A type of foundation that is now being developed is that formed by means of pressure piling. This method is peculiarly adaptable to sites where pile-driving by means of hammers (steam or otherwise) would set up a vibration dangerous to surrounding buildings. It is actually a reinforced concrete pile *in situ*, having the advantage over its precast cousin to the same extent as an extruded reinforcing rod has over its perfectly cylindrical brethren in the matter of increased frictional resistance.

A boring is made in the same manner as for an artesian well, and lining pipes of heavy section sunk (without hammering), until a solid bearing is found.



The boring is continued a few feet farther than the lining extends, the shell augur being then removed and the steel reinforcement placed in position. A pressure cap being screwed on to head of lining, compressed air is admitted, blowing any water clear from the bore-hole up through a pipe inserted for the purpose. Cement grout is now introduced through the same medium, air pressure in bore-hole being increased to about 5 tons per sq. ft., thus forcing the cement into the surrounding earth and forming a mushroom base to the pile.

Concrete is then introduced and, as the lining pipes are gradually withdrawn, pressure is applied and the concrete forced into voids and soft places, forming bulbous collars at intervals, which are of great assistance and add to value where skin friction is relied upon for bearing capacity (see figure six).

RETAINING WALLS

As mentioned previously, the older method of forming a wall of brickwork or concrete, sufficiently massive to resist overturning stresses, is only possible economically for approximately low walls. The reinforced concrete wall comes next in order, as, by adding reinforcement to mass concrete, and forming sufficient toe and heel, a self-supporting wall may be built of about half the thickness. The steel grillage, however, allows of the thinnest possible wall, relying on its strength, and that of properly framed ties and struts to the main steel structure.

Before allowing the stresses from a retaining wall to fall upon the structure, due care must be taken that the structure is sufficiently complete, in the matter of ties and struts, to withstand the loads, or stanchions may be forced out of plumb, and other complications set up.

The best aggregate for concrete in mass is Thames ballast, with its natural complement of sand. For reinforced concrete work, with rods at short distances apart, a graded mix is needed. Crushed ballast has its drawbacks. It is possible to find, for instance, that stones may be cracked only. Used in this state, an opportunity is afforded for the start of a fracture; in the case of a small beam, it may be serious.

In regard to reinforced concrete walls the great point to watch is that the toe, forming a vital part in resisting overturning, is properly built as one unit with the wall; also that the rods are accurately spaced and wired in position; and, most of all, that the formwork is thoroughly clean and the joint between new batch and previous day's work is well washed (all loose

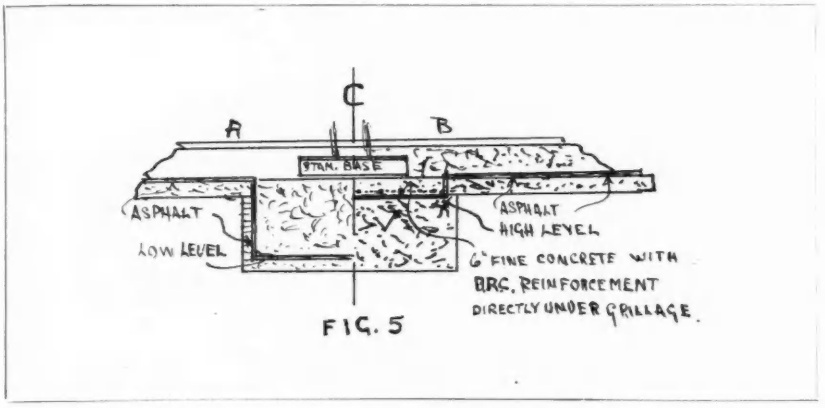


FIG. 5

material removed), and the surface properly grouted to ensure adherence.

Proper tamping while pouring is essential unless a very wet mix is being used. Engineers still debate the efficiency of dry over wet, or vice versa, but the mix which achieves best results is a medium one, which enables the concrete to penetrate into all angles of moulds and around reinforcement, and it must be varied according to the spacing of rods. If the mix is too dry, pouring will continue too long or rods will be exposed when shuttering is struck. As we often use the quicker-setting cement nowadays, the less the concrete is interfered with after placing the better.

Shuttering is also one of the most important factors in reinforced concrete work when applied to walling or suspended beams and floors. Unless the formwork is true and efficiently strutted and braced to prevent the slightest movement, when loaded with concrete it may give slightly during the initial set and the work will be spoiled.

Formwork should be of timber, thicknessed and wrot one side, giving a uniform face when finished and making striking easy. If a rough face is required, there are patent preparations on the market with which the formwork may be coated, giving better results than can be obtained by expensive backing and with greater economy.

In all cases the greatest care should be taken in cleaning shuttering for re-use, as concrete is likely to adhere and come away in patches when the work is struck, exposing the reinforcement to the detriment of the job.

It is equally important that concrete has sufficient time to set properly before formwork is struck, especially in these days when we foreshorten the time limit by the use of quick-setting cements. The weather is liable to play us tricks in delaying setting in some instances, whilst in others protection is necessary in winter from frost and in summer from heat and dry winds, when spraying with water should be adopted to obtain best results.

THERE are few matters in regard to decoration more important than the precise matching of colour shades; yet what would seem at first sight a comparatively simple problem in reality presents almost insuperable difficulties. So far, all attempts to establish one universal colour chart, offering an absolute, permanent standard, to which reference could be made alike by manufacturers and users of any material into which the element of colour enters, have failed. In the scale of sound, a particular tone can be exactly defined, since it always corresponds to a certain frequency of vibration. But colours depend upon the light in which they are viewed; also, there are few pigments that are not fugitive in some degree.

The British Engineering Standards Association has been giving attention to the matter as regards ready mixed paints, and the results of their investigation reveal something of the prevailing chaos. In this industry alone, nearly three thousand different colours were identified on the colour cards issued by manufacturers, and many hundreds of different shades of some of the colours. As for the names affixed, they were legion, and spelt babel. The Schedule (B.S.S. No. 381/1930, price 7s. 10d., post free) contains fifty-seven colour patterns with agreed names, and with the colorimetric values in an appendix.

Standardized Electric Lights

THE modern movement towards standardization has had an interesting reaction upon the manufacture of electric light fittings. Some makers have standardized a number of geometric shapes which the architect can take and combine into a variety of patterns. One of the simplest of these consists of a simple glass cube containing an electric bulb and fixed to a batten with an invisible collar. These cubes

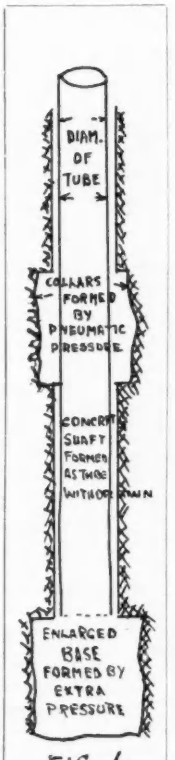


FIG. 6

can be combined to form interior pendants or brackets, or they may be fixed in solid phalanx as a cornice illumination, while for external lighting to theatres or public buildings they can be massed like the cells of a honeycomb into effective schemes. From a practical point of view, since each cube is a self-contained unit, renewal and repairs can be quickly and simply carried out. As these blocks are made in sizes from 4 ins. square up to 14 ins. square, the combinations possible are almost infinite.

There is also on the market a fitting which consists of a series of geometrically-shaped prismatic glass panels. These squares, rectangles and triangles, have dimensions each bearing a definite relation to the others, which enables them to be built up into a number of designs. The connections are made by means of standard die-cast corners and standard lengths of metal strips. These fittings differ from those previously described, for whereas each unit of the latter contains a single lamp, the former are able to be made up in any size to contain anything from a single lamp to a high-power bulb or clusters of lamps; also the various panels can be removed singly to replace breakages without dismembering the fitting.

Visitors to Paris may have noticed the remarkable electric light in the Polo Club buildings, and a similar system of lighting has been installed in the banqueting rooms of the Trocadero Restaurant. These lights are composed of standard $\frac{1}{4}$-in. fluted glass tubes, wired horizontally into frames. The light from the electric bulb produces rays across the lines of tubes, and gives a soft subdued band of light entirely without glare. These tubes are made in a variety of colours, and wired into an infinite number of shapes suitable to all modern forms of decoration. Broken rods can be replaced without dismantling the fitting, and the simplicity of the unit renders repairs inexpensive and simple.

LL. E. W.

QUESTIONS THAT ARISE

Bent Beam

A. D. writes: "*It is proposed to design an R.C.C. beam bent at an angle of 150 degrees at one end for a length of about 5 ft., with a clear span of 15 ft., on the fifth story of a town building. The bent beam is marked A in the accompanying sketch. Beams so designed are required to be placed 12 ft. apart centre to centre, carrying the concentrated load of 9 ins. brick masonry parapet wall carried over R.C.C. trimmers D. These beams also carry distributed loads of floor and roof slabs as shown on the sketch. Will your expert let me know the correct method of designing such a beam by actual calculations, considering a superload of 70 lb./sq. ft. for the open flat terrace and 56 lb./sq. ft. for the sloping roof.*

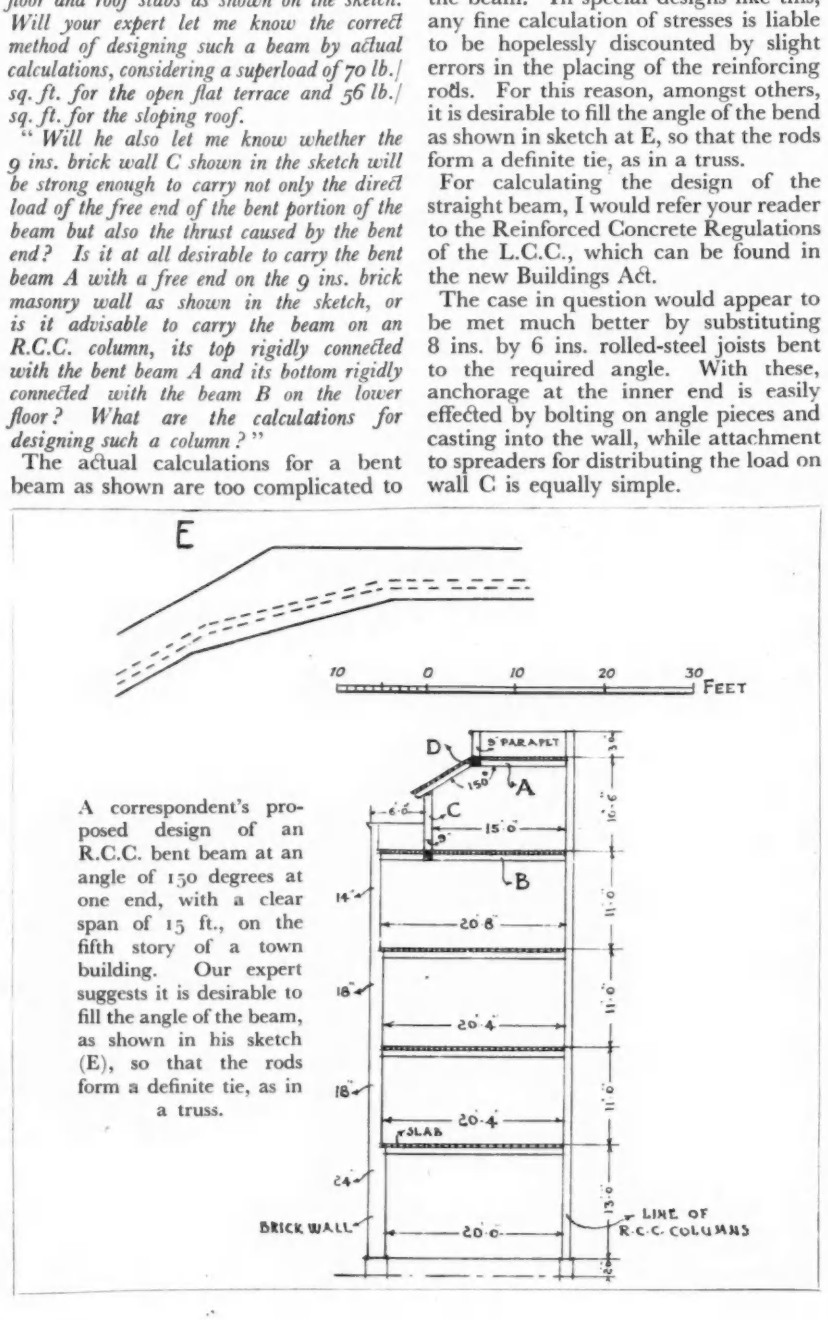
"*Will he also let me know whether the 9 ins. brick wall C shown in the sketch will be strong enough to carry not only the direct load of the free end of the bent portion of the beam but also the thrust caused by the bent end? Is it at all desirable to carry the bent beam A with a free end on the 9 ins. brick masonry wall as shown in the sketch, or is it advisable to carry the beam on an R.C.C. column, its top rigidly connected with the bent beam A and its bottom rigidly connected with the beam B on the lower floor? What are the calculations for designing such a column?*"

The actual calculations for a bent beam as shown are too complicated to be safely handled without a thorough knowledge of the principles of reinforced concrete design, and even then would be greatly affected by the method of anchorage at each end. The information given in the enquiry is very vague on this latter point.

The total load on each beam in this example is not serious, and it would be simpler to calculate as for a plain beam of the same total length, allowing a margin of strength of, say, 25 per cent., to cover any fault in actual casting of the beam. In special designs like this, any fine calculation of stresses is liable to be hopelessly discounted by slight errors in the placing of the reinforcing rods. For this reason, amongst others, it is desirable to fill the angle of the bend as shown in sketch at E, so that the rods form a definite tie, as in a truss.

For calculating the design of the straight beam, I would refer your reader to the Reinforced Concrete Regulations of the L.C.C., which can be found in the new Buildings Act.

The case in question would appear to be met much better by substituting 8 ins. by 6 ins. rolled-steel joists bent to the required angle. With these, anchorage at the inner end is easily effected by bolting on angle pieces and casting into the wall, while attachment to spreaders for distributing the load on wall C is equally simple.



A correspondent's proposed design of an R.C.C. bent beam at an angle of 150 degrees at one end, with a clear span of 15 ft., on the fifth story of a town building. Our expert suggests it is desirable to fill the angle of the beam, as shown in his sketch (E), so that the rods form a definite tie, as in a truss.

The 9 ins. wall, 6 ft. high, under the bent end of the beam, is quite sufficient to carry both the dead load and the overturning thrust of the beam, provided a sufficient spreader is built in to distribute the point load. This load is better spread over the 9 ins. wall than carried through as a point load on a stanchion to the floor beam below, as the latter would have to be designed for a concentrated load.

I should like to ask your correspondent if it is necessary to carry the whole load of the top story on to the floor beam B below. The beams B (carrying as they do the roof and parapet, beams A and D, and wall C) will require to be of excessive size, only justified if there is no alternative. Also, half the load on B is then carried by the 14 ins. wall at the front, in which there will presumably be windows to add to the complication of safely spreading the load. If partitions are present, it may be possible to insert stanchions to carry D as a beam and not as trimmers. Beams A could then be much lighter, in two short sections, supported by D, instead of supporting it and the parapet. The transmission of the weight to the ground through partitions would greatly relieve the load on B and obviate increasing its size unduly. A. H. H.

Damp Concrete Floor

W. writes: "*I have an old cottage, the floor of which, executed in brick paving, has been recently taken up and laid in concrete. I find that this concrete, either from rising damp or condensation, always has water on it, sometimes pools. Could your expert inform me 1: the cause of this damp, and 2: a reasonable and inexpensive remedy? The surrounding ground is rather damp, and the ground floor is practically level with the outside ground. The walls, being old, have no dampcourse. I further notice that near the door, where there is plenty of air, there is no sign of damp on the concrete.*"

1: The cause of the dampness in the floor is due to there being no damp-proof course in the walls and because the surface of the concrete flooring is not raised sufficiently above the surrounding ground, which is itself very damp. The position of the concrete also prevents its drying quickly after being deposited, and this no doubt aggravates the matter.

2: If the site and position of the cottage render it practicable, a remedy would be to form a dry area round the outside about 2 ft. wide and 9 ins. or 12 ins. below the surface of the floor. One side and the bottom of the area should be formed with concrete, while the wall of the cottage would form the other side. The bottom of the area should be laid to falls and drained. Then the surface of the concrete floor should be floated about 1 in. thick

with cement and sand to which has been added a damp-proofing mixture. If the damp still continues to rise in the walls the only remedy would be to insert a damp-proof course, which is an expensive matter. T.

LITERATURE

ENGLISH WROUGHT IRONWORK

IT was during Sir Mervyn Macartney's long editorship of *The Architectural Review* that the happy idea was conceived of publishing portfolios of measured drawings and photographs of examples of architectural details. These practical exemplars of architecture have proved invaluable to schools of architecture, and indeed for students of all ages.

The most recent of such portfolios is one of *English Wrought Ironwork of the Late Seventeenth and Early Eighteenth Centuries*, containing twenty plates of details, all drawn full size (with one exception) and, in most instances, with a small scale drawing attached.

The authors, Mr. Tunstall Small and Mr. Christopher Woodbridge, are already known for their *Houses of the Wren and Early Georgian Periods*, to which their new production may be regarded as a companion work. By the omission of photographs which, in their opinion, " . . . leave one more or less ignorant as to true shapes and dimensions and the constructional methods employed . . ." they have been able to give fuller measure to their delineations of the examples they have selected, and these are all drawn with much feeling and care.

No man has ever exercised so profound an influence on the character of wrought ironwork in England as did Jean Tijou, the famous French smith, who came to this country soon after the Restoration. Examples of the masterly work he did for Wren at St. Paul's Cathedral and Hampton Court Palace, with others from Clarendon Buildings, Oxford, and Burghley House, Stamford, are herein included. Less ornate work by skilled native craftsmen like Robert Bakewell, Thomas Robinson, etc., are also represented.

Smith Square, Westminster; Queen's House, Chelsea; Great Ormond Street, Bloomsbury, and All Hallows Church, Barking, supply types of other London work, whilst the provincial towns that figure in the list of plates include Derby, King's Lynn, Worcester, Leominster, Ludlow, Bristol, and Rainham, Essex; so it will be seen that the two enthusiastic collaborators have made their selections over a wide range.

By restricting their purview to the best period of English ironwork, they avoid the degeneration that set in towards the end of the eighteenth century, when riveting took the place of welding, design began to fail, and the final coming of cast iron sounded the death-knell to the fine old English craft of ornamental wrought ironwork. It is only by the careful study of the work of the finest smiths that any approach to the former high standard can be regained.

Authors and publishers alike have rendered a signal service to the cause of continuity in English tradition by this publication, and have thereby deprived the modern smith of any excuse for slipshod methods.

BASIL OLIVER

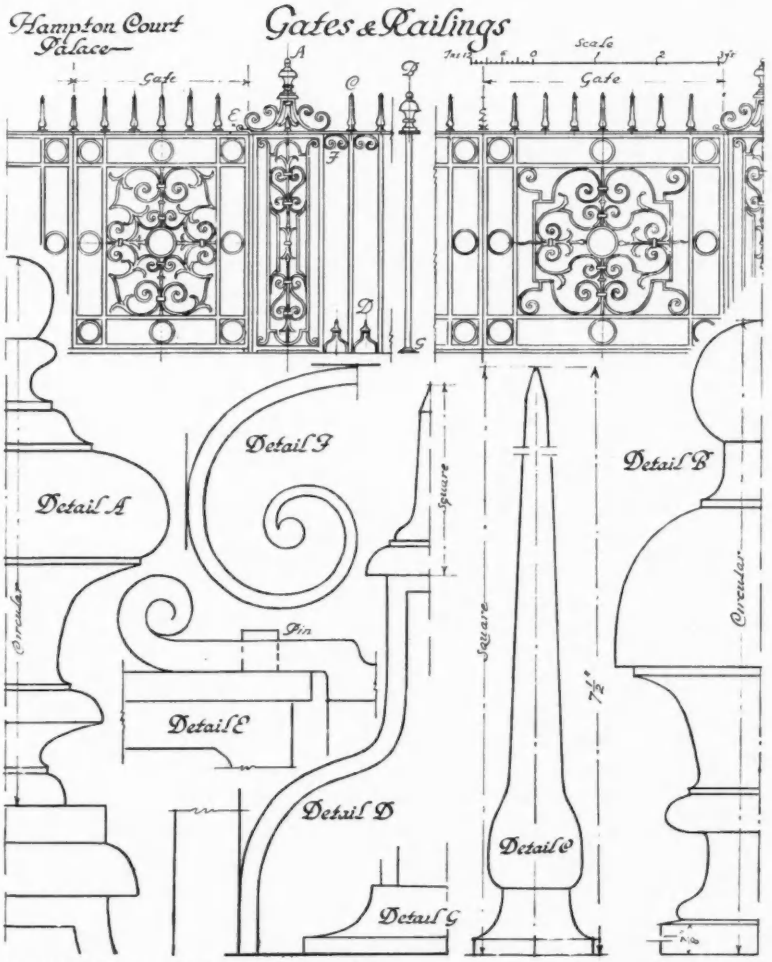
English Wrought Ironwork of the Late Seventeenth and Early Eighteenth Centuries. By Tunstall Small and Christopher Woodbridge. London: The Architectural Press. Price 8s. 6d. net.

A SURVEY OF CORNWALL

THE Cornish coast, like Surrey, is dotted about with buildings whose chief claim to notice is a fine disregard for local style and colour. But the inland of Cornwall, the stretches of moorland, the plain buildings of hard surface granite, and the grey wet towns are fortunately considered dull by the usual sort of tourist who hopes to find every village a replica of Stratford-on-Avon.

At last a thorough and comprehensive survey of the County, amply illustrated, has appeared. There are maps showing the bus routes and railway routes, and the building land near to them; there are photographs, not only of the antiquities, but also of the bungaloid growth on the coast line.

The first part of the book deals with Cornwall as it is today, and it contains a thorough, though somewhat terse, account of Cornish architecture. The survey will be useless as a text-book on the prehistoric and Celtic remains; but the thorough study of local seventeenth-century architecture, with which the county most abounds, makes it more valuable than the guide-books, which pay more attention to golf-



From English Wrought Ironwork of the Late Seventeenth and Early Eighteenth Centuries.] [*By Tunstall Small and Christopher Woodbridge.*

Details of the gates and railings at Hampton Court Palace, reproduced to half size.

courses and bathing facilities. Neither is Georgian architecture neglected, although the illustrations of this, especially in the towns, would have been more, and less conventional.

A scheme is proposed in the second part of the book, which consists of recommendations for the improvement of the appearance of Cornwall, for a national coastal park. This is a brilliant idea, but it must be done quickly before it is too late. Considering the size and excellent production of the book, the price is surprisingly cheap. J. B.

Cornwall. Moors, Coasts and Valleys. By W. Harding-Thompson. Published for the Council of the Preservation of Rural England, by the University of London Press. Price 17s. 6d net.

LAW REPORTS

WHAT IS SOLE AGENT ?
IMPORTANT JUDGMENT

Bentall Horsley and Baldry v. *Vicary. King's Bench Division. Before Mr. Justice McCardie*

THIS was an action brought by Messrs. Bentall, Horsley and Baldry, estate agents, of Brompton Road, against Mr. Geo. Cecil Vicary, a solicitor, of Lymington, Hants, claiming commission, and alternatively damages, for alleged breach of contract, or in the further alternative on a *quantum meruit*.

Mr. Rayner Goddard, K.C., and Mr. H. Malone appeared for the plaintiffs, and Mr. du Parcq, K.C., and Mr. W. Blake Odgers for the defendant.

The facts appear from his lordship's considered judgment.

His lordship said the case raised points of legal interest to estate agents and property owners. The defendant was the owner of a house called Arnewood, Hants, and for some time prior to March, 1929, he had been endeavouring to sell it. It was a large and secluded residence, and the defendant had placed it in the hands of several agents for sale, but no successful result had been reached. Then the plaintiff suggested to the defendants that they should become the sole agents for the disposal of the property. An interview took place, and the terms arranged were embodied in a letter, which both sides agreed contained all the terms of the contract made. It was addressed to the defendant by the plaintiffs, and stated that the arrangement was that the plaintiffs were to be the sole agents for the sale of the property for six months to October 1, and that if they introduced a purchaser they were to receive a special commission of 5 per cent. on the price realized. Further, plaintiffs were authorized to expend on behalf of defendant up to the sum of £100 in advertising the property, and if it did not sell they were to bear half the cost, but should it sell, plaintiffs were to receive back the whole of the amount expended in advertising within a limit of £100. Plaintiffs asked for a list of agents in whose hands the defendant had placed the property so as to withdraw defendant's instructions and renew the instructions through plaintiffs, who would offer them their full scale of commission for their co-operation in finding a purchaser. Plaintiffs added that as arranged with defendant, they proposed to advertise the property at £6,800 as a whole, or £6,000 excluding the cottage and 1½ acres.

His lordship, proceeding, said the 5 per cent. commission mentioned was nearly double that which would normally be payable to estate agents. The plaintiffs then proceeded to take the usual steps, by advertising, circularizing likely purchasers, writing letters and so on. They spent about £35 in advertising. Apart from that, their out-of-pocket expenses for various matters amounted to some £35.

Whilst plaintiffs were still endeavouring to secure a purchaser, the defendant was interviewed by a lady, who had never had the slightest communication with plaintiffs, and appeared to be unaware that they were agents for the sale of the property. She and the defendant negotiated personally, and eventually she agreed to purchase Arnewood and the cottage and 1½ acres of land for £5,000, about the end of June, 1929. The plaintiffs themselves were not aware of the existence of the lady till after the defendant had sold.

The first question, said his lordship, was, were the plaintiffs entitled to commission on the sale of the property ? In his opinion the answer was No. The material words of the contract on the point were : "If we introduce a purchaser we are to receive a special commission of 5 per cent. on the price realized." It was admitted that plaintiffs did not introduce the purchaser to the defendant. It therefore followed that they were not entitled to commission.

In the second place, were the plaintiffs entitled to damages for breach of contract ? That raised a question of some importance. The plaintiffs were appointed sole agents for the property for a period of six months. There was ample consideration for that agreement by reason of the arrangement as to advertising expenses. But what was the effect of the words just set out. The plaintiffs submitted that those words gave to them, and to them alone, the right to sell the property, and that therefore the defendant committed a breach of contract by himself disposing of it. To put it another way, the plaintiffs argued that it was an implied term of the contract that the defendant should not himself sell the property and so deprive the plaintiffs of the commission which they might perhaps be able to earn. Here it was the plaintiffs and not the defendant who drafted the contract. Hence the *contra proferentem* rule must be remembered, and secondly, his observation was that the Court ought not to introduce an implied term into the contract unless such implication was needed for "such



From Cornwall. Moors, Coasts and Valleys.] [*By W. Harding-Thompson.*

A house near Trebetherick, Cornwall. Designed by Robert Atkinson.

business efficacy to the transaction as must have been intended at all events by both parties who are business men."

After citing authorities on the point, his lordship said in the contract before him he saw nothing to prevent the business efficacy of the document by reason of the circumstance that the defendant was himself entitled to sell. It was to be noted that the contract contained no express words at all indicating a prohibition against a sale by the defendant himself. All the defendant said by the contract was "I appoint you my sole agents" for the sale, and not "I give you the sole right to sell." In such contracts as the present it was always important to observe the exact words used.

Having examined certain decisions, which showed the importance of observing the exact wording of each contract, his lordship said it was quite open to a property owner to agree that an estate agent should have the sole right to dispose of the property, and that no one else, whether another agent or the owner himself, should deal with the property during the contract period. If, however, such a bargain was intended, then clear words must be used. In the present case he held that the defendant committed no breach of contract by himself selling the property.

With regard to the claim on a *quantum meruit*, it was clear that plaintiffs did work and incurred expense, but that was quite a usual feature of an estate agent's vocation when he worked under a commission note which only gave him a right to recover commission when he fulfilled the terms of the note. He ran the risk of losing his labour and expense unless he could comply with the conditions of his bargain. There was no scope in the present case for the operation of the doctrine of *quantum meruit*. The plaintiffs worked under a special contract and they had failed to do that which entitled them to commission. The maxim, *Expressum facit cessare tacitum*, here applied. Plaintiffs failed in the claim on a *quantum meruit*. He gave judgment for the defendant with costs, but defendant must give credit to the plaintiffs for £17 15s., defendant's share of the advertising expenses under the contract.

His lordship granted a stay of execution, and said in the event of the Court of Appeal holding that there had been a breach of contract he assessed the damages at 20s.

IMPROVEMENT LINE: QUESTION OF JUSTICES' DECISION

Sittingbourne U.D.C. v. *Lipton, Ltd. King's Bench Division. Before Justices Avory, Acton, and Talbot*

This was an appeal by the Council from a decision of the local justices



From Cornwall. Moors, Coasts and Valleys.
A corner of St. Ives.

dismissing a summons against Lipton, Ltd., for erecting a building beyond the improvement line at 106–108 High Street, Sittingbourne. The respondents submitted that the building of a new shopfront was not an erection within the meaning of the Public Health Act.

Mr. Schofield, K.C., for the appellants, said the short point here for decision was whether Lipton, Ltd., as the result of operations carried out by them in the High Street, placed an erection there in contravention of an improvement line prescribed by the Council. The justices held that the erection did not amount to an erection within the Act. Counsel contended that what Lipton, Ltd., had done was building beyond the improvement line, and amounted to an erection within the Act; with the result that, if and when the Council acquired the property, they would have to pay an enhanced price.

Mr. Harvey, for the respondents, contended that they had done nothing to extend the boundaries of their property or to bring themselves within the Act. His clients had only put in a new glass front. What his clients had done was negligible in regard to enhancing the value of the property.

The Court allowed the appeal and remitted the case to the justices to find that there had been an offence under the Act.

Mr. Justice Avory, in giving judgment, said Mr. Harvey, in his able arguments, took the point that this decision must be treated as by the magistrates on a question of fact. In the present case the answer was that there was no evidence upon which the justices could find as a matter of fact that what had been done by the respondents was not an erection within the meaning of section 33 of the Public Health Act, 1925. He was satisfied that the justices here intended to ask the opinion of this Court upon a point of law, whether what had been done by the respondents amounted to an erection within the meaning of the section. With regard to the improvement line, he came to the conclusion that what had been done would damage the plan in a financial aspect should the local authority have to acquire the property. What was formerly a piece of forefront of this shop had now been enclosed and made into part of the shop. He was of opinion that the cost of the acquisition of the shop as it now stood would be greater than the acquisition of the forefront. His lordship entertained no doubt that what had been done amounted to a new erection. It was not open to the justices on the facts of this case to come to the conclusion they did. Under these circumstances the appeal would be allowed and the case remitted to the justices to find that there had been an offence committed under the section of the Act.

Justices Acton and Talbot concurred.

HOUSING SCHEME AND PROVISION FOR WORKERS

Egremont Urban District Council v. *John Laing and Son, Ltd. King's Bench Division. Before Mr. Justice McCardie*

Matters appertaining to a subsidized housing scheme arose out of the action by the Egremont Urban District Council, Northumberland, against John Laing and Son, Ltd., builders, of Carlisle, to recover the sum of £1,416 odd.

Mr. Croom Johnson, K.C., for the Council, explained that in 1919 the defendants were employed by the plaintiffs to erect 200 houses on a new estate at Egremont, the houses being subsidized by the Government. In lieu of a subsistence allowance for the workmen engaged on the work, the plaintiffs allowed twenty of the new houses to be occupied by the workmen and their families rent free, on the terms that the defendants paid a reasonable rent to the plaintiffs. The Ministry of Health, in 1921, withdrew the authority of local councils to grant these subsistence allowances, and though acquainted with the order issued, the defendants refused to give up possession, and counsel's instructions were that in some instances they had received rent in respect of the houses. The submission was that the plaintiffs were entitled to the rent the defendants had so received.

Mr. Miller, K.C., for the defendants, submitted that the action was misconceived, or alternatively that the plaintiffs had been paid the money alleged to be due. There had been a full settlement here between the parties, and that settlement he contended included the rent.

Mr. Croom Johnson said the rent of the

houses was expressly excluded from the agreement.

After a consultation between the parties a settlement of the action was arrived at, under which certain money paid into Court was to be paid out to defendants, who were to pay plaintiffs £140 in discharge of all claims. Each party was to pay its own costs.

His lordship approved of the settlement, observing that it was satisfactory, proper, and just.

SOCIETIES AND INSTITUTIONS

IRISH ARCHITECTS' ANNUAL MEETING

AT the annual general meeting of the Royal Institute of the Architects of Ireland, held in Dublin, the following were elected members of the Council: Messrs. J. J. Robinson, W. A. Dixon, T. J. Byrne, H. Allberry, C. H. Mitchell, T. F. Strahan, F. Hayes, W. H. H. Cooke, and R. M. Butler.

Mr. Geoghegan was appointed auditor for the coming session.

The report for 1930 stated that repeated consideration was given to various points arising in connection with the draft Registration Bill, which was approved. The Bill was submitted to a member of the Dail, who made some criticisms on matters of detail, not affecting the principles embodied in the Bill, with a view to facilitating the passing of the measure. The question of making suitable modifications with this object had been again referred to the Committee, and was under consideration.

The R.I.B.A., it was announced, had accepted an invitation to hold the conference next year in Dublin from June 17 to 20. This will be the first occasion upon which Ireland has been selected for the conference.

THE R.I.B.A. INTERMEDIATE EXAMINATION

The R.I.B.A. Intermediate Examination qualifying for election as Student R.I.B.A. was held in London from November 21 to 27, and in Manchester, Newcastle and Edinburgh from November 21 to 26, 1930.

Of the 200 candidates examined, 96 passed and 104 were relegated. The successful candidates are as follows:

Adams, J. S.
Alcock, H.
Aldred, D. W.
Ardin, A. J.
Bacon, C.
Barrett, T.
Bashforth, A.
Baxter, A. J.
Bentley, S.
Bott, C. S.
Bozier, G. A.
Calton, J. N.
Chamberlaine, D.
Coleman, J. N.
Cooper, E. C.
Cusworth, H.
Dark, A. J.
Davies, E.
Dixie, F. H.
Dumble, A.
Dyer, L. S.
Dyer, S.
Edleston, R. C.
Edleston, W. E.
Edwards, E. G. W.
Edwards, P. W.
Everest, A. L.
Eyre, O. F. C.
Farquhar, R. E.
Fermaud, L. H. A.
Foreman, M.
Fowler, W. R.
Freeborn, E. E.
Gingell, C.
Godsall, H. V.
Goodair, A. G.
Haddock, H. M.
Haines, S. M.
Hall, D. M.
Hardcastle, A. J.
Harding, H.
Harrison, J. E. K.
Harvey, H. J.
Hasker, F. L.
Head, P. E.
Henry, G. A.
Hewitt, F. A.
Hill, J. J.
Hives, E. G. V.
Hodgess, I. S.
Hope, J. L.
Ingham, W.
Jarratt, H. S.
Johnson, C. P.
Jones, A. H. D.
Jones, D. A.
Jones, J. R.
Keeping, C. M. G.
Kemp, A. S.
Lack, K. R.
Lister, C. L.
Macfarlane, A. A.
Mason, S. C.
Mellor, H. V.
Millard, L. W.
Moore, E. C.
Moore, T. E.
Morrison, D. C.
Moseley, H. G.
Neil, C. A. W.
Olley, B. W. J.
Owen, G.
Penman, L. R.
Potter, R. J.
Potterton, G. E.
Ratcliffe, B. F.
Reid, J. G.
Reid, K. C.
Richardson, M. S.
Roberts, E. A.
Robertson, D. L.
Robins, S. E.
Saint, A.
Sanderson, W. H.
Scherrer, E. C.
Scott, W. J.
Soulsby, G. E.
Surtees, J.
Templeman, K. F.
Tippetts, R. W.
Walker, H.
Watson, P. A.
Watson, W. I.
Williams, H.
Wood, A. H.
Woodcock, P.

R.I.B.A. PRIZES AND STUDENTSHIPS

It will be recalled that the Council of the R.I.B.A. had decided that, after January 31, 1931, in addition to the existing qualifications, competitors for the Tite prize must be at least registered Probationers R.I.B.A., and competitors for the following prizes must be at least elected students R.I.B.A.:

The Soane Medallion,
The Victory Scholarship,
The Owen Jones Studentship,
The Silver Medal for Essays,
The Henry Saxon Snell Prize,
The Alfred Bossom Travelling Studentship,
The Grissell Prize,
The Neale Bursary,
The Hunt Bursary,
The Godwin and Wimperis Bursary.

The Council, in response to representations received from overseas, have decided that the competitions referred to shall be open also to registered students of the R.I.B.A. Allied Societies in the Dominions.

A NOTABLE YEAR BOOK

If the South-Eastern Society of Architects have reason to be well pleased with their *Desk Diary and Year Book for 1931*, as they surely have, they are not so content that they cease to look for still better things in the future. In an article entitled "This Year Book and the Future," it is pointed out that the year book is at once a record of events, a directory of members and district builders, a calendar and a time-table; and it reaches not only their members but many other individuals and bodies whose interest in the activities of the Society is known or desired.

They rightly point out that there is no limit to the field it may reach, and state that there must be no limit to their efforts to make it not only a volume of domestic interest, but one which will grip outside attention and interest. Several ways are outlined in which they might do better; among them a number of signed articles upon architectural matters; some academical, some practical, but all designed to be instructive.

The Society has been in existence as an organized body for little more than two years, and to have established within the first year district design clubs for students to serve the whole area of three populous counties has been no mean achievement. The Society, however, are not prone to sit back in self-satisfaction. They have recognized that these students' clubs, though full of promise and potential development, are not quite perfect in machinery, and they have produced the will to surmount them.

The whole subject, therefore, has been very carefully considered by the executive and the Council, and it has been decided to endeavour to establish courses for training in architecture in six or seven municipal schools of the south-eastern counties.

The activities which the Society has exercised this year in the lighter vein, as well as in the friendly formality of more official functions, has maintained the same variety and interest which we found in the previous years of their foundation. Of these events, perhaps the most important was the joint conference with their neighbours, the Hampshire and Isle of Wight Architectural Association, at Southampton.

NEW MINISTRY OF HEALTH LAWS

In pursuance of the policy of consolidating the various statutes regulating the work of the Ministry of Health, the Rt. Hon. Arthur Greenwood, M.P., has appointed a committee with the following terms of reference: "With a view to the consolidation of the enactments applying to England and Wales (exclusive of London), and dealing with (a) local authorities and local government, and (b) matters relating to the public health, to consider under what heads these enactments should be grouped in consolidating legislation, and what amendments of the existing law are desirable for facilitating consolidation and securing simplicity, uniformity and conciseness."

The membership of the Committee is as follows:

Chairman: The Rt. Hon. the Viscount Chelmsford, P.C., etc. *Members:* Sir William M. Graham-Harrison, K.C.B., K.C.; Sir Frederick F. Liddell, K.C.B., K.C.; Sir Harry G. Pritchard; Lt.-Col. Sir Seymour Williams, K.B.E.; Major J. J. Llewellin; Major J. Milner;

Captain Ernest Evans, M.P.; and Messrs. L. S. Brass, H. J. Comyns, E. J. Maude, C.B., Cecil Oakes, L. A. J. Granville Ram, C. E. Staddon. Secretary, Mr. R. S. King-Farlow.

THE INSTITUTE OF FUEL

The Melchett Medal for the year 1930 (the first to be awarded) will be presented to Dr. Kurt Rümmel, of the Warmestelle, Düsseldorf, by the President (Sir David Milne-Watson, LL.D., D.L.), at the Institution of Civil Engineers, Great George Street, Westminster, S.W.1, on Friday evening, January 23, at 6.30 p.m.

The Melchett Medal was instituted by the founder-president of the Institute, the Right Hon. Lord Melchett, LL.D., F.R.S., who offered the Institute a few months ago a sum of money to found the medal in perpetuity.

Following the presentation, Dr. Rümmel will give the Melchett Lecture which, it is hoped, will also be an annual event. His subject will be "The Calculation of the Thermal Characteristics of Regenerators."

Immediately following the meeting, Dr. Rümmel will be the guest of the Institute at a dinner to be held at the Connaught Rooms, Great Queen Street, Kingsway, W.C.2.

Tickets are obtainable (price 12s., exclusive of wines) on application to the Secretary, the Institute of Fuel, 53 Victoria Street, London, S.W.1.

COMPETITIONS OPEN

January 10, 1931.—Sending-in day. Medical Clinic in Tower Bridge Road, S.E., for the Bermondsey Borough Council. Premiums: £250, £150 and £50. Designs to E. Goff Clark, Town Clerk, Town Hall, Spa Road, Bermondsey. Last day for conditions was December 6, 1930.

January 15.—Sending-in day. Rebuilding of the Foundation and Clinic Hospital, Zagreb, Yugoslavia. Premiums: 20,000, 15,000 and 10,000 Swiss francs. Designs to: The Committee of the Foundation Hospital and the Rectorate of the Royal Yugoslavian University of Zagreb.

February 1.—Sending-in day. Fire Station, Bethel Street, Norwich, for the Norwich Corporation. Limited to architects practising in the county of Norfolk. Designs to: Noel B. Rudd, Town Clerk, Guildhall, Norwich.

February 12.—Sending-in day. Stand at the Building Trades Exhibition, Manchester, for Venesta, Ltd. Assessors: Christian Barman, H. de C. Hastings, W. L. Wood, Henry Rutherford, and Professor A. E. Richardson. Premiums: £100 and four of £10. Conditions from the Editor, THE ARCHITECTS' JOURNAL, 9 Queen Anne's Gate; or direct from Venesta, Ltd., Vintry House, Queen Street Place, London, E.C.4.

April 1.—Sending-in day. Development of the uses of aluminium and its alloys, for the International Aluminium Bureau. Two premiums of 25,000 francs. Conditions from the Bureau International de l'Aluminium, 23 bis, Rue de Balzac, Paris, France.

April 30.—Sending-in day. Last day for conditions, January 31. Hospital for Infectious Diseases, Coventry, for the Coventry Corporation. Assessor: E. Stanley Hall, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

THE ARCHITECTS' DIARY

WEDNESDAY, JANUARY 7

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. "Cautionary Guide to Liverpool and Surrounding Country." By Clough Williams-Ellis, F.R.I.B.A. **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Lancashire and Cheshire Branch. At the Engineers' Club, Albert Square, Manchester. Paper by J. Theo. Halliday, F.R.I.B.A. **7 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At the Swedenborg Hall, 20 Hart Street, Bloomsbury, W.C.1. "Notes on the Theory of Radiant Heating." By C. G. Heys Hallett, M.A. **7 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. Informal Meeting. "Reinforced-Concrete Deep Water Jetties." By Ernest Latham, M.INST.C.E. Chairman: Sir Cyril Kirkpatrick. **6 p.m.**

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.1. "The Story of the English Potter." By Harry Barnard. (Illustrated by lantern slides and specimens.) **3 p.m.**

THURSDAY, JANUARY 8

SHEFFIELD, SOUTH YORKSHIRE AND DISTRICT SOCIETY OF ARCHITECTS AND SURVEYORS. At the University, Sheffield. "Some New Buildings in Sweden and the Stockholm Exhibition." By E. R. Jarrett, A.R.I.B.A. (Tea, 5.30 p.m.) **6.15 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "Thames House." By R. Travers Morgan, A.M.INST.C.E. **6.30 p.m.**

FRIDAY, JANUARY 9

INSTITUTION OF STRUCTURAL ENGINEERS. Annual Dinner to be held at the Mayfair Hotel, W.1. 6.45 for 7.15 p.m. Midland Counties Branch. At the Chamber of Commerce Buildings, New Street, Birmingham. "Some Considerations Affecting the Construction and Reconstruction of Bridges in Urban Areas." By E. R. Knight, A.M.INST.C.E. **6.30 p.m.**

SATURDAY, JANUARY 10

Sunrise, 8.3 a.m. Sunset, 4.13 p.m.

MONDAY, JANUARY 12

ARCHITECTURAL ASSOCIATION, 34 Bedford Square. W.C.1. "Modern Painters." By R. Wilenski. 8 p.m. Exhibition of Examples of Modern Painting. Until January 24. **8 p.m.**

SURVEYORS' INSTITUTION, 12 Great George Street, Westminster, S.W.1. "The Restoration of St. Paul's Cathedral." By J. E. Drower, C.B.E. (Lantern illustrations.)

ILLUMINATING ENGINEERING SOCIETY. At the British Commercial Gas Association, 28 Grosvenor Gardens, Victoria, S.W.1. General Meeting. 7 p.m. "Recent Developments in Gas Lighting." By E. L. Oughton, M.INST.GAS.E. 7.30 p.m. **7 p.m.**

TUESDAY, JANUARY 13

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. London and District Branch. At the Borough Polytechnic, Borough Road, Southwark, S.E.1. "Concealed Floor Heating." By John H. Francis. 7 p.m. Manchester and District Branch. At the Milton Hall, Deansgate, Manchester. "Hot-Water Heating." By R. Thorp. **7 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. Ordinary Meeting. "Experiments on Siphon Spillways." By Professor Arnold Gibson, D.SC., M.INST.C.E., Thomas H. Apsey, M.SC., and Frederick Tattersall, M.SC. **6 p.m.**

INSTITUTE OF LANDSCAPE ARCHITECTS. At the Royal Horticultural Hall, Greycoat Place, S.W.1. "The Relationship of Landscape Architecture to Town Planning." By Thomas Adams, P.P.T.P.I.

WEDNESDAY, JANUARY 14

INSTITUTION OF STRUCTURAL ENGINEERS. Yorkshire Branch. At the Metropole Hotel, Leeds. "Some Problems in the Design of Steel Framed Multiple-Story Buildings." By V. H. Lawton. **7 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "English Mediæval Architecture: The Pre-Mediæval Periods." By Sir Banister Fletcher, P.R.I.B.A., F.S.A. **6 p.m.**

INSTITUTION OF ELECTRICAL ENGINEERS. Hampshire Sub-Centre. At the Municipal College, Portsmouth. Short papers will be read and discussed. **7.30 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. Students' Meeting. "The Aerial Cableways at Nag Hammadi Barrage, Upper Egypt." By Ivor W. G. Freeman, B.SC. Chairman: Professor S. M. Dixon. **6.30 p.m.**

Secretaries of architectural and allied societies are invited to forward particulars of their forthcoming meetings and visits for publication on this page. They should be addressed to the Editor at 9 Queen Anne's Gate, S.W.1.

THURSDAY, JANUARY 15

R.I.B.A., 9 Conduit Street, W.1. Special Meeting. "Persian Art." By Arthur Upham Hope. **5.30 p.m.**

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION, The Castle, Winchester. Council Meeting. 3 p.m. General Meeting. 6.15 p.m. **3 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. Lecture by J. Stuart Lewis, M.I.STRUCT.E., M.I.E.E. **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. South Wales and Monmouthshire Branch. Visit to Abershaw and Rhos Cement Company's Works, Rhos.

FRIDAY, JANUARY 16

LONDON SOCIETY. At the Royal Society of Arts, John Street, Adelphi, W.C.2. Joint Meeting with the Architecture Club. Papers will be read on "A Plan will Pay," by Sir Josiah Stamp, G.B.E.; "The Architect and the Plan," by Alderman Ewart G. Culpin; "The Slums and the Plan," by Alfred C. Bossom, F.R.I.B.A.; and "Traffic and the Plan," by Mervyn O'Gorman, C.B. **5 p.m.**

SATURDAY, JANUARY 17

Sunrise, 7.57 a.m. Sunset, 4.24 p.m.

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Manchester and District Branch. Visit to liner at Liverpool.

L.C.C. SCHOOL OF ARTS AND CRAFTS. Visit to Dorman Long & Co.'s Works, Middlesbrough. (Party limited to 90.)

MONDAY, JANUARY 19

R.I.B.A., 9 Conduit Street, W.1. General Meeting. Presentation of London Architecture Medal, 1929, and medals and prizes, 1931. **8 p.m.**

INSTITUTION OF ELECTRICAL ENGINEERS. Western Centre. Annual Dinner to be held at Bristol.

TUESDAY, JANUARY 20

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. First of nine public lectures on "Persian Art." By Professor Percy Dearmer. To be held every Tuesday until March 17. **5.30 p.m.**

INSTITUTION OF ELECTRICAL ENGINEERS. North-Western Centre. Annual Dinner to be held at the Midland Hotel, Manchester.

WEDNESDAY, JANUARY 21

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. "Bridges." By G. H. Jack, F.R.I.B.A., M.INST.C.E. **7.30 p.m.**

ARTS BUILDING, University, Lime Grove, Manchester. "Treatment of the Smaller Houses." By Herbert A. Welch, F.R.I.B.A.

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "The Mediæval Period: Plans, Vaults and Buttresses." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

DRAWING OFFICE MATERIALS MANUFACTURERS AND DEALERS' ASSOCIATION. Annual Dinner to be held at the Hotel Victoria, Northumberland Avenue, W.C. 6.30 for 7 p.m. **6.30 p.m.**

THURSDAY, JANUARY 22

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Paper by Professor J. Husband, M.ENG., M.INST.C.E. **6.30 p.m.**

FRIDAY, JANUARY 23

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At the Technical College, Cardiff. First of six public lectures on "Egyptian and Western Asiatic Architecture." By Norman Culley, F.R.I.B.A. **7.45 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Western Counties Branch. At the Merchant Venturers' Technical College, Unity Street, Bristol. "Fatigue of Metals." By M. Morgan, B.SC. 7.30 p.m. Lancashire and Cheshire Branch. At the College of Technology, Manchester. "Structural Engineering in Modern Gasworks." By A. E. Pierce, M.I.STRUCT.E. 7 p.m. Midland Counties Branch. At the Chamber of Commerce Buildings, New Street, Birmingham. "Reinforced Construction at Bournemouth Gas Works." By H. M. Hale, M.I.STRUCT.E. **6.30 p.m.**

BRISTOL SOCIETY OF ARCHITECTS. At the Berkeley Café, Queens Road, Clifton. "Architecture in Modern Germany." By F. R. Yerbury, HON.A.R.I.B.A. **5.30 p.m.**

SATURDAY, JANUARY 24

Sunrise, 7.50 a.m. Sunset, 4.36 p.m.

INSTITUTION OF STRUCTURAL ENGINEERS. Midland Counties Branch. Fifth Annual Dinner to be held at Birmingham.

MONDAY, JANUARY 26

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "The Place of the Designer in Commerce." By R. P. Gossop. **8 p.m.**

TUESDAY, JANUARY 27

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS, 1 Wilbraham Place, S.W.1. "Norman Architecture." By S. E. Whitaker, P.A.S.I. **7 p.m.**

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. Second of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

WEDNESDAY, JANUARY 28

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "The Mediæval Period: Interiors, Exteriors and Openings." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

LEAGUE OF ARTS. At the Guildhouse, Eccleston Square, Belgrave Road, S.W.1. "Persian Painting." By Laurence Binyon. Chairman: Dr. Percy Dearmer. **8.30 p.m.**

TRADE NOTES

A new plastic paint, manufactured by Messrs. Archd. Eadie & Co., Ltd., of 54-56 Cook Street, Glasgow, has just been placed on the market. It is called Muraltex, and can be worked by hand, by brush or by stippling, to any desired pattern, and can be coloured to individual taste. Interesting decorative effects can be obtained by applying such colouring agents as flat oil paint, graining, colours, oil colours and bronzes. The best result is obtained by finishing the surface with Muraltex glaze (velvet gloss or high gloss). This is claimed to give a permanent surface which can be washed with perfect safety, and which has the added advantage of being rapid-hardening. It is said that a thin coat will dry over night, while a thicker one will dry in twenty-four hours. It is also claimed that the new plastic paint is quite neutral, and has no effect on super-imposed colour. It is not necessary to finish plaster or cement dead smooth before the application of the plastic paint. Messrs. Eadie & Co. have a highly trained research staff for the purpose of meeting the latest requirements of the architect and decorator. This research work is enabling the firm greatly to extend their markets. In addition to their present wide connection with engineering and shipping, as well as Government contract work, they are now rapidly forging ahead in the decorative market. To meet with this increased business, and to ensure immediate delivery in all parts of Great Britain, Eadie's are now opening depots in London, Birmingham, and Manchester. (These are in addition to the Cardiff Depot at Hurman Street, Bute Docks, and the London Export Office.)

*

Messrs. T. and W. Farmiloe, Ltd., of Westminster, have issued a new catalogue dealing with their many specialities. It comprises about 230 pages, fully illustrated and indexed. The firm's manufactures include sheet lead, milled and cast; lead pipe, compo pipe, tin washed and tin encased lead pipe, block tin pipe, barrelling, soil pipes, round and square, lead traps and bends, laminated lead and tea lead, caulking lead, rod lead and lead wire, window lead, lead sash weights, lead washers, lead nails, lead shot, anchor brand solder, plumbers' brasswork and sanitary fittings. All the baths and lavatory basins made by the firm can be supplied in colours of lavender, primrose, almond and Romany green, pink, electric blue, yellow, grey and blue. One of the latest specialities of the firm is the Westminster valve repair cover, a tool to be included in the plumber's kit. It does away with the necessity of turning off the water over the whole house for any length of time whilst one tap is being repaired. If a tap requires repairing, it is practically always the top part that is at fault. The plumber can remove the top part of the tap and clamp the repair cover in position. The top part can then be taken away and repaired at leisure. When this has been done, the repair cover can be taken off again and the original top part screwed into position. This operation necessitates the water being turned off for about three minutes. During the time the tap is being repaired, this repair cover constitutes a temporary screw-down movement.

*

The British Thomson-Houston Co., Ltd., of Rugby, has obtained an order for two 75,000 kw. turbo-alternators from the County of London Electric Supply Company for their new Barking extension. The consulting engineers are Messrs. Merz and McLellan, of London and Newcastle. These machines are thought to be the largest yet ordered in this country.

*

The architectural metalwork at the Orpheum Theatre, Finchley, illustrated in THE ARCHITECTS' JOURNAL for December 10, was carried out by Messrs. the Kingsmill Co., and comprised balcony balustradings, bronze section handrailing, grilles in proscenium, balustrading in the foyer, and the bronze shaped section handrails on the staircases.

THE BUILDINGS ILLUSTRATED

Following is a list of the specialists, general contractors and some of the sub-contractors for the buildings illustrated in this issue :

The Sheen Cinema (pages 4, 8–11). General contractors, Joseph Mears, Ltd.; Hope Bagenal, A.R.I.B.A., acoustical expert; J. F. Farquharson, steelwork consulting engineer; Wingfield-Bowles and Clay, electrical consulting engineers. Sub-contractors : Messrs. Doulton & Co., Ltd., glazed faience ware; Wood & Co., structural steelwork; John Blaikie & Co., heating and ventilation; T. Lawrence & Co., facing bricks; Locke and Soares, electrical installation; Holophane, Ltd., flood lighting installation; James Walker, Ltd., fibrous plaster; Campbell Bros., Ltd., decorative painting; Anselm Odling and Sons, Ltd., marble flooring to entrance hall; Art Pavements and Decorations, Ltd., terrazzo steps, etc.; S. R. Pirie & Co., external bronze sign to the central bay feature, and side canopy in Larches Avenue; C. Harvey & Co., Staybrite steel canopy, head and reveals to main entrance door recesses, and electric light fittings to auditorium, staircases and entrance; Troughton and Young, Ltd., electric light fittings, first-floor waiting foyers; F. Knight & Co., Ltd., monel metal grilles, railings, etc.; Soole and Sons, Ltd., special joinery work; H. Lazarus and Son, Ltd., seats and carpets; Minters, Ltd., stage and door curtains; Norman Hill and Beard, organ; W. J. Furse & Co. (London), Ltd., electrical curtain track equipment; May Construction Co., Ltd., acoustical tile work in auditorium; James Gibbons, Ltd., metal casements; John Blaikie and Sons, Ltd., plumbing and sanitary work; Nolan, Ltd., wall tiling; Ross, Ltd., projectors.

Nechells Hall, Nechells Park Road, Birmingham (pages 12–14 and supplement). General contractors, Messrs. W. J. Whittall and Son; Leonard Voisey, Quantity Surveyor. Sub-contractors : Benjamin Pearson, Ltd., demolition; Val de Travers Asphalte Paving Co., Ltd., asphalt; "Aztec-Pave," external paving, British Reinforced Concrete Engineering Co., fabric; Aldridge Colliery Co., bricks; Butler & Co., Ancaster stone; Braithwaites & Co., Ltd., structural steel; Concrete, Ltd., Bison floors and stairs; Colthurst Symons, tiles; Moler Blocks, partitions; Pearce and Cutler, leaded lights and stained glass; Hollis Bros. & Co., Ltd., wood-block flooring; Beck and Windibank, cork carpet to gallery, and tip-up chairs to gallery, etc. ; Hope's Heating and Lighting, Ltd., central heating and ventilation ; J. S. Wright & Co., gasfitting and plumbing; Reynolds and Bradwell, electric wiring; Kalee, Ltd., cinematograph apparatus; A. D. Foulkes & Co., sanitary fittings; Walker and Worsey, door furniture; James Gibbons, Ltd., casements and window furniture; Bostwick Gate Co., folding gates; Lewis's, Ltd., cinema screen, blinds to windows of hall, chairs to platform, tables, etc., elsewhere; Panicali Bros., decorative plaster ; Bigwood Bros., metalwork ; Frederick Restall, Ltd., panelling and front to platform; Harlew Cabinet Co., communion table and reading desk; A. G. Turley, Ltd., chairs to hall; Waygood-Otis, Ltd., service lift; John Gibbs, Ltd., canopy.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office. All inquiries concerning inventions, patents and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated readers should apply to the Patent Office, 25 Southampton Buildings, W.C.2. The price is 1s. each.]

LATEST PATENT APPLICATION

38282. Ambrose, J. G., and Concrete, Ltd., and Matthews, C. B. Concrete floors and ceilings. December 19.

SPECIFICATION PUBLISHED

339616. Mussett, E. C. Method of constructing buildings.

ABSTRACT PUBLISHED

337516. Walker, F. T. Cavity walls.

ANNOUNCEMENT

Messrs. Ernest A. Newton and Leslie B. Ward, architects, have removed their offices to Philos Chambers, 195 Oxford Road, Manchester. Telephone number : Ardwick 3844.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The CROYDON Council has endorsed a recommendation of the Education Committee to appropriate one and a-half acres of land in Kensington Avenue for a new school.

The DAGENHAM U.D.C. is to provide a branch library at Chadwell Heath.

The WEST HAM Education Committee is to enlarge the secondary school in Tennyson Road.

The WEST HAM Education Committee is seeking sanction for a loan of £36,000 for the erection of a central school in Carter Road.

EASTERN COUNTIES

The Essex Education Committee has voted £4,814 for the erection and equipment of an assembly hall at the CLACTON county school.

The LINCOLN Corporation is to undertake clearance schemes and to provide houses for about eighty families on the St. Giles's estate.

SOUTHERN COUNTIES

The ABINGDON R.D.C. is to carry out a water supply scheme.

The BANBURY Corporation is to erect seventy-six houses on the Easington estate.

The KENT Education Committee has obtained sanction for loans totalling £113,000 for new schools and extensions.

The Kent Education Committee is to erect a junior school at SNODLAND.

MIDLAND COUNTIES

The BIRMINGHAM Corporation is to enlarge the mortuary in Newton Street.

The BIRMINGHAM Corporation is to undertake sewerage works at a total cost of £192,000, chiefly with the idea of finding work for unemployed.

The BIRMINGHAM Corporation has acquired five sites for the erection of a total of 566 houses.

In order that the erection of houses may be continued at the greatest possible speed, the BIRMINGHAM Corporation is seeking sanction to borrow a further sum of £5,000,000 for housing purposes.

The BIRMINGHAM Corporation is to erect sixty-nine shops on various housing estates, at a cost of £68,500.

The BIRMINGHAM Education Committee has acquired a site in Stratford Road for the erection of a clinic.

In connection with the reorganization of the elementary schools, the BIRMINGHAM Corporation has placed contracts at a total of £47,332 for alterations and improvements at various schools.

The BIRMINGHAM Education Committee is to erect an elementary school on the Bushmore Farm housing estate, Hall Green, at a cost of £50,000.

The BIRMINGHAM Corporation is to remove the water works depot and to erect new workshops and administrative buildings at Edgbaston.

The Society of Friends is to erect new premises in Upper Priory, BIRMINGHAM.

The Bourneville Village Trust is to acquire thirty-two acres of land on the Shenley Court Farm estate, Northfield, BIRMINGHAM, for development on lines similar to those on the Weoley Hill estate, which is now in course of development by the Trust.

The Warwickshire Congregational Union has acquired a site at the corner of Brackenbury Road and Dulwich Road on the Kingstanding estate, BIRMINGHAM, for the erection of a church and other buildings.

The Birmingham Baptist Extension Committee has acquired a site on the Daisy Farm estate, BIRMINGHAM, for the erection of a church.

The trustees of the Miles Street Gospel Hall have acquired land for extending the meeting hall in Sandy Lane, BIRMINGHAM.

The DUDLEY Corporation has decided to erect a further four cottage shops on the Priory Estate.

The DUDLEY Corporation Housing Committee has approved plans for the erection of fifty-two houses in roads adjoining Nith Place.

Plans passed by MERIDEN R.D.C.: Forty houses, Byepass Road, for Mr. A. Francis; nineteen houses, Radford Lane, Coundon, for Messrs. J. F. Daly and Son; four houses, New Road, Westhill, Coundon, for Mr. W. Isaacs; two houses and shops, Bromford Lane, Castle Bromwich, for Mr. A. A. Howard; eight houses, Brown's Lane, Allesley, for Messrs. Gazey Bros.; two houses, Bennett's Lane, Corley, for Mr. T. H. Richardson.

The NEWARK Corporation is to erect fifty houses on the Gilstrap Park estate.

Plans passed by the RUGBY R.D.C.: Alterations, Raven Inn, Brinklow, and Rose and Crown, Long Lawford, for Messrs. Lucas & Co., Ltd.; forty-six houses, Shenstone Avenue, Hillmorten, for Messrs. D. Mitchell and Sons.

The STOKE-ON-TRENT Corporation is negotiating for land adjoining the Stanfield sanatorium, required for extension purposes.

NORTHERN COUNTIES

At a meeting of the AMBLESIDE Council a recommendation of the Housing Committee that the surveyor be instructed to prepare a scheme for housing, and that the Council apply to the Ministry of Transport for sanction to borrow £10,000, was approved.

The West Riding Education Committee has approved an estimate of £7,790 for the erection of a school for 250 children in Moss Road, ASKERN.

The BARROW Corporation is acquiring land on the Rosegate estate for a housing scheme.

The CHESHIRE County Council is to prepare a scheme for the construction of a bridge across the water splash on the Tilston-Duckington road.

The CHESHIRE County Council is to obtain a site at Nantwich for the erection of a welfare centre.

At a meeting of the CHESHIRE County Council it was reported that the present position with regard to the proposed Granage Hall Institute was that, consequent upon the decision of the Joint Board, the architects should prepare lay-out plans for the accommodation of 1,000 patients instead of 500.

The CONGLETON R.D.C. is preparing a revised scheme for the provision of a water supply to various parishes, the cost being estimated at £20,000.

The West Riding Education Committee has voted an estimate of £22,400 for the erection of a senior school at DINNINGTON.

The West Riding Education Committee is to provide a school for 600 scholars for the DARFIELD and GREAT HOUGHTON district, at a cost of £21,000.

The HARTLEPOOL Town Council has decided to schedule as an improvement area the property between the Town Wall and the High Street. There are in the area eighty-six houses unfit for human habitation, occupied by 477 persons. It is proposed to re-house these persons in 102 houses to be erected on the cleared site and to build seventy-five houses on one of the Corporation housing estates.

Messrs. R. L. Dilworth, Ltd., are to erect eleven houses in Silosey Street, LANCASTER.

The MACCLESFIELD Corporation is to borrow £9,000 for covering the reservoir at Buxton Road.

The MIDDLESBROUGH Corporation is to clear the Nile Street area and erect about 150 houses.

The tender of Messrs. Dorman Long & Co., Ltd., of Middlesbrough and London, for the construction of the Newport Bridge across the River Tees at MIDDLESBROUGH, at a cost of approximately half a million pounds sterling, has been provisionally accepted. When completed, this will, it is claimed, be the largest and heaviest lift bridge in the country, the weight of the lifting span alone being 2,500 tons, and the passage provided for shipping will be 250 ft. wide, with a clear headroom of 120 ft. The hoisting is carried out by means of 160 steel wire cables, each 7¼ in. in circumference, working in cast-steel sheaves at the tops of towers 160 ft. high. This bridge, which carries a roadway 38 ft. wide and two cantilever footways each 9 ft. wide, will considerably facilitate traffic through Middlesbrough, as at present the nearest road bridge is some five miles farther upstream at Stockton. Included in the contract are ten further approach bridges, five on each side of the river, over L.N.E.R. tracks, roads, etc., and a length of embankment requiring 150,000 yds. of filling, thereby increasing the total length of the contract to 4,920 ft. It is estimated that the work will take 2¾ years, and approximately 6,500 tons of steelwork will be required.

The Preston Council has passed plans for a new cinema at PENWORTHAM.

The Durham County Council has submitted to the Board of Control plans for the new mental institution at SCHOOL AYCLIFFE.

The Durham County Education Committee is to erect a school for 400 pupils on the Carr House estate, SEAHAM HARBOUR, at an estimated cost of £10,000.

The SPENNYMOOR U.D.C. is inquiring as to the possibility of a grant for a scheme for the provision of a swimming bath.

The SPRINGHEAD (YORKS.) U.D.C. has made application to the Ministry of Health for sanction to build thirty houses in Cooper Street.

The Durham County Education Committee is to erect a school for 350 scholars, at SPRINGWELL, at an estimated cost of £12,250.

The Durham County Education Committee is to provide a school for 360 scholars for the THORNLEY and WHEATLEY HILL districts.

The Cheshire County Council is to prepare a scheme for the reconstruction of Egg Bridge at WAVERTON.

The Durham County Education Committee is to erect a school for 350 scholars at WEST PELTON, at a cost of £12,250.

SCOTLAND

The COATBRIDGE T.C. has agreed to a housing scheme comprising fifty houses, and also to a recommendation by the Housing Committee that plans of suitable types of houses of two, three and four apartments be prepared in readiness for the completion of estimates and costs.

The DUMBARTON County Council Education Committee has decided to erect a new Roman Catholic school at Alexandria, at a cost of £23,000.

Alterations to LEITH Academy, at an estimated cost of £5,000, were approved at a meeting of the Education Committee of the Edinburgh Town Council.

The following figures show the progress that has been made in State-aided housing schemes in Scotland to November 30, 1930: 1919 Act, by local authorities, 25,129: 1919 Act, by public utility societies, 421; private subsidy schemes (1919 Additional Powers Act), 2,324; slum-clearance schemes, 12,332; under construction, 2,049: 1923 Act, by local authorities, 4,033: 1923 Act, by private enterprise, 18,998; under construction, 970: 1923 Act, by public utility societies, 80: 1924 Act, by local authorities, 47,519; under construction, 5,405: 1924 Act, by private enterprise, 2,931; under construction, 37: 1924 Act, by public utility societies, 127; under construction, 16: 1930 Act, by local authorities, under construction, 110; demonstration houses, 17; steel houses erected on behalf of Government by Scottish National Housing Company, 2,552. Total houses completed, 116,463; total under construction, 8,587; total, 125,050.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers; the rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6½	1 1½
A_1	Abergavenny	S. Wales & M.	1 6½	1 1½
B	Abingdon ..	S. Counties	1 5	1 0½
A	Accrington	N.W. Counties	1 7	1 2½
A_3	Addlestone	S. Counties	1 5½	1 1
A	Adlington ..	N.W. Counties	1 7	1 2½
A	Airdrie ..	Scotland	*1 7	1 2½
C	Aldeburgh ..	E. Counties	1 3	11½
A	Altrincham	N.W. Counties	1 7	1 2½
B_3	Appleby ..	N.W. Counties	1 3½	11½
A	Ashton-under-Lyne	N.W. Counties	1 7	1 2½
A_3	Atherstone	Mid. Counties	1 5½	1 1
B_3	Aylesbury ..	S. Counties	1 3½	11½
B_2	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4½	1 0½
A_1	Barnard Castle	N.E. Coast	1 6½	1 1½
A	Barnsley ..	Yorkshire	1 7	1 2½
B_2	Barnstaple	S.W. Counties	1 4	1 0
A	Barrow ..	N.W. Counties	1 7	1 2½
A	Barry ..	S. Wales & M.	1 7	1 2½
B_2	Basingstoke	S.W. Counties	1 4	1 0
A_3	Bath ..	S.W. Counties	1 5½	1 1
A	Batley ..	Yorkshire	1 7	1 2½
A_3	Bedford ..	E. Counties	1 5½	1 1
A_2	Berwick-on-Tweed	N.E. Coast	1 6	1 1½
A_2	Bewdley ..	Mid. Counties	1 6	1 1½
B_3	Bicester ..	Mid. Counties	1 3½	11½
A	Birkenhead	N.W. Counties	*1 9	1 3½
A	Birmingham	Mid. Counties	1 7	1 2½
A_1	Bishop Auckland	N.E. Coast	1 6½	1 1½
A	Blackburn ..	N.W.Counties	1 7	1 2½
A	Blackpool ..	N.W. Counties	1 7	1 2½
A	Blyth ..	N.E. Coast	1 7	1 2½
B_3	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 7	1 2½
A_3	Boston ..	Mid. Counties	1 5½	1 1
A_3	Bournemouth	S. Counties	1 5½	1 1
B_2	Bovey Tracey	S.W. Counties	1 4	1 0
A	Bradford ..	Yorkshire	1 7	1 2½
A_3	Brentwood	E. Counties	1 6	1 1½
A	Bridgend ..	S. Wales & M.	1 7	1 2½
B_2	Bridgwater	S.W. Counties	1 4	1 0
A_1	Bridlington	Yorkshire	1 6½	1 1½
A	Brighouse ..	Yorkshire	1 7	1 2½
A_3	Brighton ..	S. Counties	1 5½	1 1
A	Bristol ..	S.W. Counties	1 7	1 2½
B_2	Brixham ..	S.W. Counties	1 3½	11½
A_2	Bromsgrove	Mid. Counties	1 6	1 1½
C	Bromyard ..	Mid. Counties	1 3	11½
A	Burnley ..	N.W. Counties	1 7	1 2½
A	Burslem ..	Mid. Counties	1 7	1 2½
A	Burton-on-Trent	Mid. Counties	1 7	1 2½
A	Bury ..	N.W. Counties	1 7	1 2½
A_1	Buxton ..	N.W. Counties	1 6½	1 1½
A_3	CAMBRIDGE	E. Counties	1 5½	1 1
B_2	Canterbury	S. Counties	1 4	1 0
A	Cardiff ..	S. Wales & M.	1 7	1 2½
A	Carlisle ..	N.W. Counties	1 7	1 2½
B	Carmarthen	S. Wales & M.	1 5	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4½	1 0½
A	Carnforth ..	N.W. Counties	1 7	1 2½
A	Castleford ..	Yorkshire	1 7	1 2½
B_1	Chatham ..	S. Counties	1 4½	1 0½
B_1	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5½	1 1
A	Chester ..	N.W. Counties	1 7	1 2½
A	Chesterfield	Mid. Counties	1 7	1 2½
B_2	Chichester ..	S. Counties	1 4	1 0
A	Chorley ..	N.W. Counties	1 7	1 2½
B_2	Cirencester	S. Counties	1 4	1 0
A	Clitheroe ..	N.W. Counties	1 7	1 2½
A	Clydebank ..	Scotland	1 7	1 2½
A	Coalville ..	Mid. Counties	1 7	1 2½
A_3	Colchester ..	E. Counties	1 5½	1 1
A	Colne ..	N.W. Counties	1 7	1 2½
A_3	Colwyn Bay	N.W. Counties	1 5½	1 1
A_1	Consett ..	N.E. Coast	1 6½	1 1½
A_3	Conway ..	N.W. Counties	1 5½	1 1
A	Coventry ..	Mid. Counties	1 7	1 2½
A_2	Crewe ..	N.W. Counties	1 6	1 1½
A_3	Cumberland	N.W. Counties	1 5½	1 1
A	DARLINGTON	N.E. Coast	1 7	1 2½
A	Darwen ..	N.W. Counties	1 7	1 2½
B_3	Deal ..	S. Counties	1 4	1 0
A_2	Denbigh ..	N.W. Counties	1 5½	1 1
A	Derby ..	Mid. Counties	1 7	1 2½
A	Dewsbury ..	Yorkshire	1 7	1 2½
B	Didcot ..	S. Counties	1 5	1 0½
A	Doncaster ..	Yorkshire	1 7	1 2½
B_3	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorks	1 5½	1 1
A_3	Droitwich ..	Mid. Counties	1 5½	1 1
A	Dudley ..	Mid. Counties	1 7	1 2½
A	Dundee ..	Scotland	1 7	1 2½
A	Durham ..	N.E. Coast	1 6½	1 1½
A_2	EASTBOURNE	S. Counties	1 5½	1 1
A_1	Ebbw Vale	S. Wales & M.	1 6½	1 1½
A	Edinburgh	Scotland	1 7	1 2½
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6½	1 1½
A_2	Exeter ..	S.W. Counties	*1 6	1 1½
B_2	Exmouth ..	S.W. Counties	1 4	1 0
B	FELIXSTOWE	E. Counties	1 5	1 0½
A_3	Filey ..	Yorks	1 5½	1 1
A	Fleetwood ..	N.W. Counties	1 7	1 2½
B_2	Folkestone	S. Counties	1 4	1 0
A	Frodsham ..	N.W. Counties	1 7	1 2½
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 7	1 2½
B_1	Gillingham	S. Counties	1 4½	1 0½
A_2	Gloucester ..	S.W. Counties	1 6	1 1½
A_2	Goole ..	Yorkshire	1 6	1 1½
A_3	Gosport ..	S. Counties	1 5½	1 1
A_3	Grantham ..	Mid. Counties	1 5½	1 1
A_1	Gravesend ..	S. Counties	1 6½	1 1½
A	Greenock ..	Scotland	*1 7	1 2½
A	Grimsby ..	Yorkshire	1 7	1 2½
B_1	Guildford ..	S. Counties	1 4½	1 0½
A	HALIFAX	Yorkshire	1 7	1 2½
A	Hanley ..	Mid. Counties	1 7	1 2½
A	Harrogate ..	Yorkshire	1 7	1 2½
A	Hartlepools	N.E. Coast	1 7	1 2½
B_1	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 4	1 0
A_3	Hatfield ..	S. Counties	1 5½	1 1
B	Hereford ..	S.W. Counties	1 5½	1 0½
B	Hertford ..	E. Counties	1 5	1 0½
A_1	Heysham ..	N.W. Counties	1 6½	1 1½
A_1	Howden ..	N.E. Coast	1 6½	1 1½
A	Huddersfield	Yorkshire	1 7	1 2½
A	Hull ..	Yorkshire	1 7	1 2½
A	ILKLEY ..	Yorkshire	1 7	1 2½
A	Immingham	Mid. Counties	1 7	1 2½
A_2	Ipswich ..	E. Counties	1 5½	1 1
B_3	Isle of Wight	S. Counties	1 3½	11½
A	JARROW ..	N.E. Coast	1 7	1 2½
A	KEIGHLEY	Yorkshire	1 7	1 2½
B	Kendal ..	N.W. Counties	1 5	1 0½
B	Keswick ..	N.W. Counties	1 5	1 0½
A_2	Kettering ..	Mid. Counties	1 6	1 1½
A_2	Kidderminster	Mid. Counties	1 6	1 1½
B_2	King's Lynn	E. Counties	1 4	1 0
A	LANCASTER	N.W. Counties	1 7	1 2½
A_2	Leamington	Mid. Counties	1 6	1 1½
A	Leeds ..	Yorkshire	1 7	1 2½
A	Leek ..	Mid. Counties	1 7	1 2½
A	Leicester ..	Mid. Counties	1 7	1 2½
A	Leigh ..	N.W. Counties	1 7	1 2½
B_3	Lewes ..	S. Counties	1 3½	11½
A_3	Lichfield ..	Mid. Counties	1 5½	1 1
A	Lincoln ..	Mid. Counties	1 7	1 2½
A	Liverpool ..	N.W. Counties	*1 9	1 3½
A_3	Llandudno	N.W. Counties	1 5½	1 1
A	Llanelly ..	S. Wales & M.	1 7	1 2½
	London (12-miles radius)		1 8½	1 3½
	Do. (12–15 miles radius)		1 8	1 3
A	Long Eaton	Mid. Counties	1 7	1 2½
A	Loughborough	Mid. Counties	1 7	1 2½
A_2	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 7	1 2½
A_1	MACCLESFIELD	N.W. Counties	1 6½	1 1½
B_1	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5½	1 1
A	Manchester	N.W. Counties	1 7	1 2½
A	Mansfield ..	Mid. Counties	1 7	1 2½
B_2	Margate ..	S. Counties	1 4	1 0
A_3	Matlock ..	Mid. Counties	1 5½	1 1
A_1	Merthyr ..	S. Wales & M.	1 6½	1 1½
A	Middlesbrough	N.E. Coast	1 7	1 2½
A_2	Middlewich	N.W. Counties	1 6	1 1½
B_2	Minehead ..	S.W. Counties	1 4	1 0
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 7	1 2½
A	Morecambe	N.W. Counties	1 7	1 2½
A_2	NANTWICH	N.W. Counties	1 6	1 1½
A	Neath ..	S. Wales & M.	1 7	1 2½
A	Nelson ..	N.W. Counties	1 7	1 2½
A	Newcastle ..	N.E. Coast	1 7	1 2½
A	Newport ..	S. Wales & M.	1 7	1 2½
A	Normanton	Yorkshire	1 7	1 2½
A_1	Northampton	Mid. Counties	1 6½	1 1½
A	North Staffs.	Mid. Counties	1 7	1 2½
A	North Shields	N.E. Coast	1 7	1 2½
A_2	Norwich ..	E. Counties	1 6	1 1½
A	Nottingham	Mid. Counties	1 7	1 2½
A	Nuneaton ..	Mid. Counties	1 7	1 2½
B	OAKHAM ..	Mid. Counties	1 5	1 0½
A	Oldham ..	N.W. Counties	1 7	1 2½
A_2	Oswestry ..	N.W. Counties	1 5½	1 1
B	Oxford ..	S. Counties	1 5½	1 0½
A	PAISLEY ..	Scotland	*1 7	1 2½
B_3	Pembroke ..	S. Wales & M.	1 3½	11½
A	Perth ..	Scotland	*1 7	1 2½
A_2	Peterborough	E. Counties	1 6	1 1½
A	Plymouth ..	S.W. Counties	*1 7	1 2½
A	Pontefract	Yorkshire	1 7	1 2½
A_1	Pontypridd	S. Wales & M.	1 6½	1 1½
A_3	Portsmouth	S. Counties	1 5½	1 1
A	Preston ..	N.W. Counties	1 7	1 2½
A	QUEENSFERRY	N.W. Counties	1 7	1 2½
A_2	READING	S. Counties	1 5½	1 1
B	Reigate ..	S. Counties	1 5	1 0½
A_2	Retford ..	Mid. Counties	1 5½	1 1
A_1	Rhondda Valley	S. Wales & M.	1 6½	1 1½
A_2	Ripon ..	Yorkshire	1 5½	1 1
A	Rochdale ..	N.W. Counties	1 7	1 2½
B_1	Rochester ..	S. Counties	1 4½	1 0½
A_1	Ruabon ..	N.W. Counties	1 6½	1 1½
A	Rugby ..	Mid. Counties	1 7	1 2½
A_2	Rugeley ..	Mid. Counties	1 5½	1 1
A	Runcorn ..	N.W. Counties	1 7	1 2½
A_2	ST. ALBANS	E. Counties	1 6	1 1½
A	St. Helens ..	N.W. Counties	1 7	1 2½
B_3	Salisbury ..	S.W. Counties	1 3½	11½
A_1	Scarborough	Yorkshire	1 6½	1 1½
A	Scunthorpe	Mid. Counties	1 7	1 2½
A	Sheffield ..	Yorkshire	1 7	1 2½
A	Shipley ..	Yorkshire	1 7	1 2½
A_2	Shrewsbury	Mid. Counties	1 6	1 1½
A_2	Skipton ..	Yorkshire	1 6	1 1½
A_3	Slough ..	S. Counties	1 5½	1 1
A_2	Solihull ..	Mid. Counties	1 6	1 1½
A_3	South'pton	S. Counties	1 5½	1 1
A_2	Southend-on-Sea	E. Counties	1 6	1 1½
A	Southport ..	N.W. Counties	1 7	1 2½
A	S. Shields ..	N.E. Coast	1 7	1 2½
A_2	Stafford ..	Mid. Counties	1 6	1 1½
A	Stockport ..	N.W. Counties	1 7	1 2½
A	Stockton-on-Tees	N.E. Coast	1 7	1 2½
A	Stoke-on Trent	Mid. Counties	1 7	1 2½
B_1	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland ..	N.E. Coast	1 7	1 2½
A	Swadlincote	Mid. Counties	1 7	1 2½
A	Swansea ..	S. Wales & M.	1 7	1 2½
B	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6½	1 1½
B_1	Taunton ..	S.W. Counties	1 4½	1 0½
A	Teesside Dist.	N.E. Counties	1 7	1 2½
B	Teignmouth	S.W. Coast	1 5	1 0½
A	Todmorden	Yorkshire	1 7	1 2½
A	Torquay ..	S.W. Counties	1 7	1 2½
C	Truro ..	S.W. Counties	1 3	11½
B	Tunbridge Wells	S. Counties	1 5	1 0½
A	Tunstall	Mid. Counties	1 7	1 2½
A	Tyne District	N.E. Coast	1 7	1 2½
A	WAKEFIELD	Yorkshire	1 7	1 2½
A	Walsall ..	Mid. Counties	1 7	1 2½
A	Warrington	N.W. Counties	1 7	1 2½
A_2	Warwick ..	Mid. Counties	1 6	1 1½
A_3	Wellingborough	Mid. Counties	1 5½	1 1
A	West Bromwich	Mid. Counties	1 7	1 2½
B	Weston-s-Mare	S.W. Counties	1 5	1 0½
A_2	Whitby ..	Yorkshire	1 6	1 1½
A	Widnes ..	N.W. Counties	1 7	1 2½
A	Wigan ..	N.W. Counties	1 7	1 2½
B_1	Winchester	S. Counties	1 4½	1 0½
A_2	Windsor ..	S. Counties	1 5½	1 1
A	Wolverhampton	Mid. Counties	1 7	1 2½
A_2	Worcester	Mid. Counties	1 6	1 1½
A_3	Worksop ..	Yorkshire	1 5½	1 1
A_1	Wrexham ..	N.W. Counties	1 6½	1 1½
A_3	Wycombe ..	S. Counties	1 5½	1 1
B_1	YARMOUTH	E. Counties	1 4½	1 0½
B_2	Yeovil ..	S.W. Counties	1 4	1 0
A	York ..	Yorkshire	1 7	1 2½

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rate of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£ s. d.
Bricklayer	per hour	1 8½
Carpenter	,,	1 8½
Joiner	,,	1 8½
Machinist	,,	1 9½
Mason (Banker)	,,	1 8½
,, (Fixer)	,,	1 9½
Plasterer	,,	2 0½
Plumber	,,	1 8½
Painter	,,	1 7½
Paperhanger	,,	1 8½
Glazier	,,	1 8½
Slater	,,	1 8½
Scaffolder	,,	1 4½
Timberman	,,	1 4½
Navvy	,,	1 3½
General Labourer	,,	1 3½
Lorryman	,,	1 6
Crane Drivers	,,	1 7½
Watchman	per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

		£ s. d.
Grey Stone Lime	per ton	2 8 6
Blue Lias Lime	,,	2 10 6
Hydrated Lime	,,	2 16 0
Portland Cement	,,	2 6 0
Ferro-crete	,,	2 13 6
Ciment Fondu	,,	5 15 0
Thames Ballast	per Y.C.	8 9
¾" Crushed Ballast	,,	10 0
Building Sand	,,	10 6
Washed Sand	,,	11 6
2" Broken Brick	,,	9 6
¾" ,, ,,	,,	12 6
Pan Breeze	,,	6 6
Coke Breeze	,,	8 9

BRICKLAYER

		£ s. d.
Flettons	per M.	3 1 6
Grooved do.	,,	3 3 6
Stocks, 1st Quality	,,	4 18 6
,, 2nd ,,	,,	4 12 6
Blue Bricks, Pressed	,,	9 18 0
,, Wirecuts	,,	8 16 0
,, Brindles	,,	8 0 0
,, Bullnose	,,	10 8 0
Red Sand-faced Facings	,,	7 11 0
Red Rubbers for Arches	,,	15 0 0
Multicoloured Facings	,,	9 4 0
Luton Facings	,,	8 16 0
Arlesley White Facings	,,	6 15 0
Midhurst White Facings	,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:		
Stretchers	,,	21 10 0
Headers	,,	21 0 0
Bullnose	,,	28 0 0
Double Stretchers	,,	30 0 0
Double Headers	,,	27 0 0
Glazed Second Quality, *Less*	,,	1 0 0
,, Buffs and Creams, Add	,,	2 0 0
,, Other Colours ,,	,,	5 10 0
2" Breeze Partition Blocks	per Y.S.	1 9
2½" ,, ,, ,,	,,	2 0
3" ,, ,, ,,	,,	2 3
4" ,, ,, ,,	,,	3 0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

		4" s. d.	6" s. d.
Straight pipes	per F.R.	1 1	1 6
Bends	each	2 10	4 4
Taper bends	,,	6 3	7 2
Rest bends	,,	5 9	8 9
Single junctions	,,	3 9	5 9
Double ,,	,,	5 9	8 9
Straight channels	,,	2 6	3 2
¾" Channel bends	,,	7 8	—
Channel junctions	,,	7 0	12 6
Channel tapers	,,	5 6	7 9
Yard gullies	,,	9 6	11 6
Interceptors	,,	18 6	25 9
Iron drain pipe	per F.R.	2 3	3 5
Bends	each	6 0	13 0
Inspection bends	,,	15 3	24 0
Single junctions	,,	9 3	18 0
Double junctions	,,	14 0	27 6
Lead wool	lb.	6	—
Gaskin	,,	5	—

MASON

		s. d.
The following d/d F.O.R. at Nine Elms:		
Portland stone, Whitbed	F.C.	4 6
,, ,, Basebed	,,	4 9
Bath stone	,,	2 11
York stone	,,	6 9
,, Sawn templates	,,	7 6
,, Paving, 2"	F.S.	1 8
,, ,, 3"	,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station.

		£ s. d.
24" × 12" Duchesses	per M.	31 0 0
22" × 12" Marchionesses	,,	28 0 0
20" × 10" Countesses	,,	20 5 0
18" × 10" Viscountesses	,,	17 0 0
18" × 9" Ladies	,,	15 0 0
Westmorland green (random sizes)	per ton	8 10 0
Nails, compo	lb.	4
,, copper	,,	2 0
Best machine roofing tiles	per M.	5 0 0
Best hand-made do.	,,	5 10 0
Hips and valleys	each	9½
,, hand-made	,,	10

CARPENTER AND JOINER

		£ s. d.
Good carcassing timber	F.C.	2 6
Birch	as 1" F.S.	9
Deal, Joiner's,	,, ,,	5
,, ,, 2nds	,, ,,	4
Mahogany, Honduras	,, ,,	1 3
,, African	,, ,,	1 1
,, Cuban	,, ,,	2 6
Oak, plain American	,, ,,	1 0
,, Figured ,,	,, ,,	1 3
,, Plain Japanese	,, ,,	1 2
,, Figured ,,	,, ,,	1 5
,, Austrian wainscot	,, ,,	1 6
,, English ,,	,, ,,	1 11
Pine, Yellow	,, ,,	1 0
,, Oregon	,, ,,	4
,, British Columbian	,, ,,	4
Teak, Moulmein	,, ,,	1 3
,, Burma	,, ,,	1 2
Walnut, American	,, ,,	2 3
,, French	,, ,,	2 3
Whitewood, American	,, ,,	1 1
Deal floorings, ¾"	Sq.	1 1 0
,, 1"	,,	1 3 6
,, 1¼"	,,	1 5 6
,, 1½"	,,	1 11 0
,, 1¾"	,,	1 15 0
Deal matchings, ¾"	,,	16 0
,, 1"	,,	17 6
Rough boarding, ¾"	,,	1 6 0
,, 1"	,,	18 0
,, 1¼"	,,	1 0 0

Plywood, per ft. sup.

Thickness	¼"			⅜"			½"			⅝"			¾"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6			
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6			
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/5½	10	–			
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–			
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–			
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–			

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

		s. d.
Rolled steel joists cut to length	cwt.	9 6
Mild steel reinforcing rods, ¾"	,,	10 0
,, ,, ⅞"	,,	9 9
,, ,, 1"	,,	9 6
,, ,, 1¼"	,,	9 0
,, ,, 1½"	,,	9 0
,, ,, 1¾"	,,	9 0
,, ,, 2"	,,	9 0

		¾" s. d.	4" s. d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.	7	10
Shoes	each	2 3	3 3
Anti-splash ,,	,,	5 0	8 6
Boots	,,	3 3	4 6
Bends	,,	2 9	4 0
,, with access door	,,	—	6 9
Heads	,,	4 0	8 0
Swan-necks up to 9" offsets	,,	4 0	6 3
Plinth bends, 4½" to 6"	,,	4 0	5 6

		5" s. d.	6" s. d.
Half-round rain-water gutters of ordinary thickness metal	F.R.	5	6
Stop ends	each	6	7
Angles	,,	1 7	1 11
Obtuse ,,	,,	2 0	2 6
Outlets	,,	1 9	2 3

SMITH AND FOUNDER—Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	⅜"	1"	1¼"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23¾" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11¾" long ,,	7	9	1/3	1/8	3/–
Long screws 12"–23¾" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11¾" long ,,	8	10	1/5	1/11	3/6

SMITH AND FOUNDER—Tubes and Fittings (*continued*):

		¼"	⅜"	1"	1¼"	2"
Bends	each	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket union	,,	2/–	3/–	5/6	6/9	10/–
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/–	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/–	2/–
Flanges	,,	9	1/–	1/4	1/9	2/9
Caps	,,	3½	5	8	1/–	2/–
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

	Per cent.		Per cent.
Gas	62½	Galvanized gas	50
Water	58¼	,, water	45
Steam	55	,, steam	40

FITTINGS.

Gas	47½	Galvanized gas	37½
Water	42½	,, water	32½
Steam	37½	,, steam	27½

PLUMBER

		£ s. d.
Lead, milled sheet	cwt.	24 0
,, drawn pipes	,,	24 6
,, soil pipe	,,	27 6
,, scrap	,,	14 0
Solder, plumbers'	lb.	1 0
,, fine do.	,,	1 4
Copper, sheet	,,	1 0
,, tubes	,,	1 4

L.C.C. soil and waste pipes:		3"	4"	6"
Plain cast	F.R.	1 0	1 2	2 6
Coated	,,	1 1	1 3	2 8
Galvanized	,,	2 0	2 6	4 6
Holderbats	each	3 10	4 0	4 9
Bends	,,	3 9	5 3	10 3
Shoes	,,	2 10	4 4	9 6
Heads	,,	4 8	8 5	12 9

PLASTERER

		£ s. d.
Lime, chalk	per ton	2 8 6
Plaster, coarse	,,	2 10 6
,, fine	,,	5 10 0
Hydrated lime	,,	2 16 0
Sirapite	,,	3 10 0
Keene's cement	,,	5 10 0
Sand, washed	Y.C.	11 6
Hair	lb.	6
Laths, sawn	bundle	2 4
,, rent	,,	3 9
Lath nails	lb.	3½

GLAZIER

		s. d.		s. d.
Sheet glass, 21 oz.	F.S.			3½
,, ,, 26 oz.	,,			4½
Arctic glass	,,			5
Cathedral glass	,,			6
Hartley's rough rolled	,,			9
Do. wired plate	,,			1 3
¼" Polished plate, n/e 1	,,	1 0	to 1	3
,, ,, 2	,,	1 2	,, 1	7
,, ,, 3	,,	1 7	,, 2	5
,, ,, 4	,,	2 1	,, 2	11
,, ,, 6	,,	2 3	,, 3	2
,, ,, 8	,,	2 6	,, 3	6
,, ,, 12	,,	2 9	,, 3	8
,, ,, 20	,,	3 0	,, 3	11
,, ,, 45	,,	3 3	,, 4	1
,, ,, 65	,,	3 7	,, 4	6
,, ,, 90	,,	3 10	,, 4	9
,, ,, 100	,,	4 0	,, 5	0
Vita glass, sheet, n/e 1	,,		1	0
,, ,, ,, 2	,,		1	3
,, ,, ,, 4	,,		1	6
,, ,, plate, n/e 1	,,		2	6
,, ,, ,, 2	,,		4	6
,, ,, ,, 4	,,		4	9
,, ,, ,, 6	,,		5	2
,, ,, ,, 8	,,		6	6
Putty, linseed oil	lb.			3

PAINTER

		£ s. d.
White lead	cwt.	2 8 0
Linseed oil	gall.	3 3
Boiled oil	,,	4 3
Turpentine	,,	3 4
Patent knotting	,,	14 0
Distemper, washable	cwt.	3 0 0
,, ordinary	,,	2 5 0
Whitening	,,	4 0
Size, double	firkin	3 0
Copal varnish	gall.	13 0
Flat varnish	,,	14 0
Outside varnish	,,	16 0
White enamel	,,	1 15 0
Ready-mixed paint	,,	13 6
Brunswick black	,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12″ deep and cart away	Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away	Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away	,,	11 0
,, ,, 10′ 0″ deep and cart away	,,	11 6
,, ,, 15′ 0″ deep and cart away	,,	12 6
If in stiff clay	add ,,	3 0
If in underpinning	,, ,,	5 0
Digging, return, fill and ram	,,	5 0
Planking and strutting to sides of excavation	F.S.	1 0
,, ,, to pier holes	,,	6
,, ,, to trenches	,,	6
,, ,, extra, only if left in	,,	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	,,	1 13 6
,, ,, ,, (4-2-1)	,,	1 18 6
,, ,, ,, underpinning	,,	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, junctions	,,	3 9	4 6
Gullies and gratings	,,	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER.

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
,, ,, in cement	,,	34 0 0
,, Stocks in cement	,,	41 10 0
,, Blues in cement	,,	62 0 0
Extra only for circular on plan	,,	3 0 0
,, backing to masonry	,,	2 0 0
,, raising on old walls	,,	3 0 0
,, underpinning	,,	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	,,	1 0
,, red brick facings	,,	1 6
,, blue brick facings	,,	1 9
,, glazed brick facings	,,	4 6
Tuck pointing	,,	10
Weather pointing	,,	4
Slate dampcourse	,,	1 0
Vertical dampcourse	,,	1 3

ASPHALTER

		s. d.
½″ Horizontal dampcourse	Y.S.	5 6
½″ Vertical dampcourse	,,	7 6
¼″ paving or flat	,,	5 6
1″ paving or flat	,,	6 6
1″ × 6″ skirting	F.R.	1 0
Angle fillet	,,	2
Rounded angle	,,	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do. all as last	,,	15 6
Artificial stone and do.	,,	16 6
York stone templates, fixed complete	,,	14 0
,, thresholds	,,	16 0
,, sills	,,	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	4 5 0
Do., 18″ × 9″	,,	4 2 0
Do., 24″ × 12″	,,	4 12 0
Westmorland slating laid with diminished courses	,,	6 10 0
Tiling, best hand-made sand-faced tiling, laid to a 4″ gauge, nailed every fourth course	,,	4 0 0
Do., all as last, but of machine-made tiles	,,	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
,, to stanchions	,,	1 0
,, to staircases	,,	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	,,	6 9
,, ,, roofs	,,	8 3
,, ,, trusses	,,	9 0
,, ,, partitions	,,	12 0
½″ deal sawn boarding and fixing to joists	Sqr.	1 17 6
1″ ,, ,, ,, ,,	,,	2 1 6
1½″ ,, ,, ,, ,,	,,	2 7 6
3″ × 2″ fir battening for Countess slating	,,	12 6
Do. for 4″ gauge tiling	,,	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
,, ,, ,, 2 ,,	,,	3 0
,, ,, ,, 3 ,,	,,	3 6
Stout herringbone strutting to 9″ joists	F.R.	1 0
1″ deal gutter boards and bearers	F.S.	1 4
1½″ ,, ,, ,, ,,	,,	1 8
2″ deal wrought rounded roll	F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
1¼″ do.	,,	3 4 0
1½″ do.	,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1¼″ do.	,,	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½″ deal moulded sashes of average size	F.S.	2 3
2″ ,, ,, ,, ,,	,,	2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ⅜″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	4 3
2″ ,, ,, ,, ,,	,,	4 6
Extra only for moulded horns	Each	9
1½″ deal four-panel square, both sides, door	F.S.	2 6
2″ ,, ,, ,, ,,	,,	3 0
1½″ ,, but moulded both sides	,,	3 0
2″ ,, ,, ,, ,,	,,	3 6
4″ × 3″ deal, rebated and moulded frames	F.R.	1 6
4½″ × 3½″ ,, ,, ,,	,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1½″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	3 0
1½″ deal moulded wall strings	,,	2 6
1½″ ,, outer strings	,,	2 9
Ends of treads and risers housed to string	Each	2 0
3″ × 2″ deal moulded handrail	F.R.	1 6
1″ × 1″ deal balusters and housing each end	Each	2 6
1½″ × 1½″ ,, ,,	,,	3 3
3″ × 3″ deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	,,	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders and hoisting and fixing in position	,,	1 3 0
Do. stanchions with riveted caps and bases and do.	,,	1 2 0
Mild steel bar reinforcement ½″ and up, bent and fixed complete	,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	2 0 6
Do. in flashings	,,	2 3 0
Do. in covering to turrets, etc.	,,	2 10 0
Do. in soakers	,,	1 16 0
Labour to welted edge	F.R.	3½
Open copper nailing	,,	3½
Close ,,	,,	4½

		½″ s. d.	¾″ s. d.	1″ s. d.	1¼″ s. d.	2″ s. d.	4″ s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 3	1 8	2 2	2 9	3 10	—
Do. soil pipe and fixing with cast lead tacks	,,	—	—	—	—	—	6 0
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions	,,	3 6	4 0	5 6	8 0	—	—
Lead traps	,,	—	—	—	—	—	—
Screw down bib valves	,,	7 6	10 6	12 6	—	—	—
Do. stop cocks	,,	10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4″ cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	,,	1 6
Do. outlets	,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	,,	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n,w to beams, stanchions, etc.	,,	5 6
Lathing with sawn laths to ceilings	,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	,,	2 6
Do. vertical	,,	2 9
Rough render on walls	,,	2 3
Render, float and set in lime and hair	,,	3 0
Render and set in Sirapite	,,	3 3
Render, backing in cement and sand, and set in Keene's cement	,,	4 6
Extra, only if on lathing	,,	9
Keene's cement, angle and arris	F.R.	8
Arris	,,	3
Rounded angle, small	,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth	,,	2
1″ granolithic pavings	Y.S.	5 0
1½″ ,, ,,	,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed	,,	1 2 6
9″ × 3″ ,, ,, ,, ,,	,,	1 7 6
Extra, only for small quadrant angle	F.R.	9

GLAZIER

		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	,,	1 0
Arctic glass and glazing with putty	,,	1 2
Cathedral glass and do.	,,	1 3
Glazing only, British polished plate	,,	8
Extra, only if in beads	,,	2
Washleather	F.R.	4

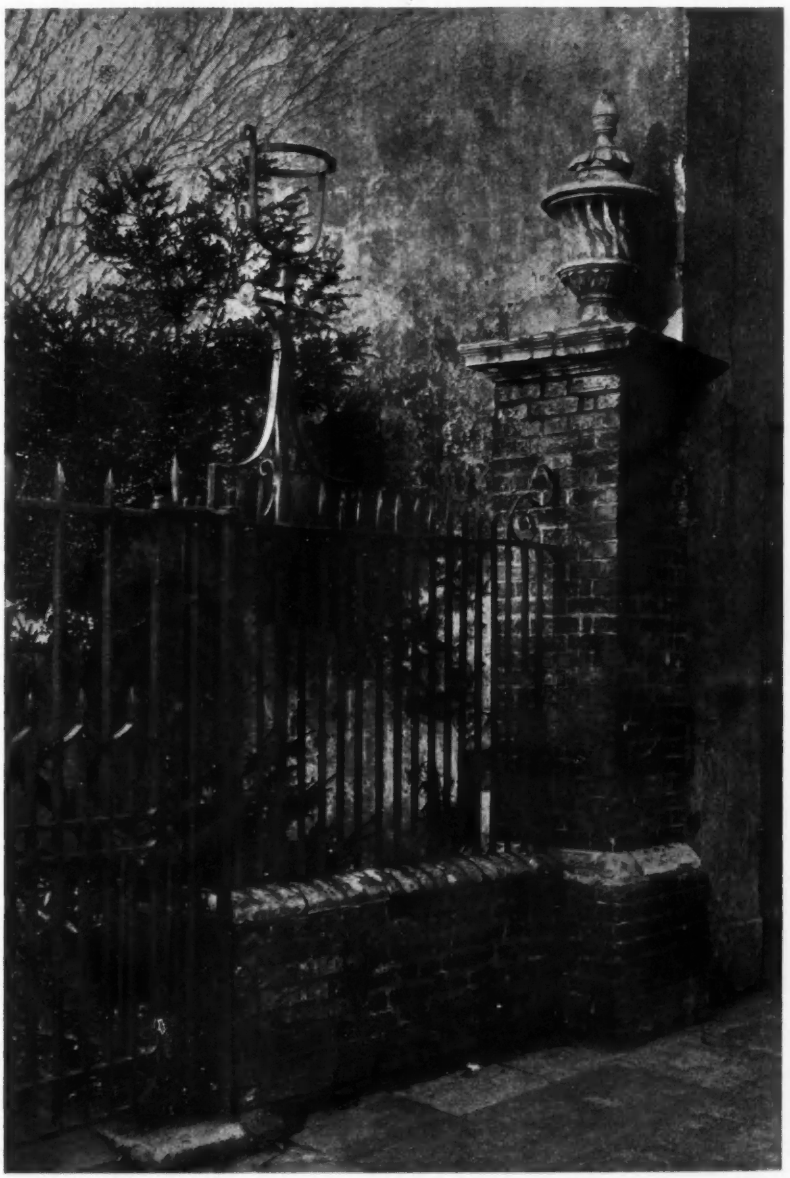
PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	,,	1 0
Do. with washable distemper	,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3 3
Do. on woodwork	,,	3 6
Do. on steelwork	,,	3 0
Do. and brush grain and twice varnish	,,	5 6
Stain and twice varnish woodwork	,,	1 11
Stain and wax-polish woodwork	,,	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper	from ,,	3 0

TWO MEASURED SUBJECTS:

XVIII CENTURY PIER AND RAILINGS

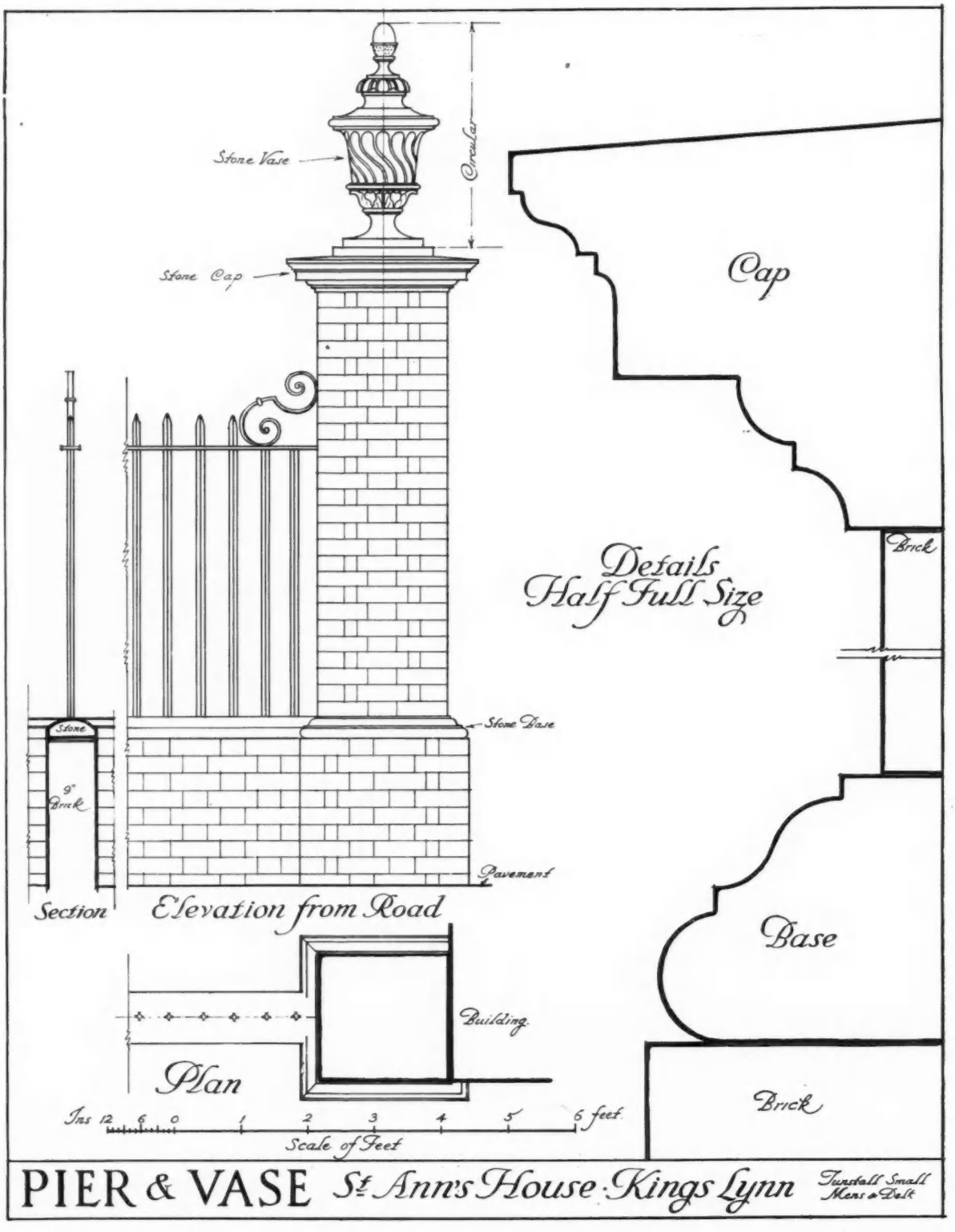
A YORK STONE HOUSE FRONT



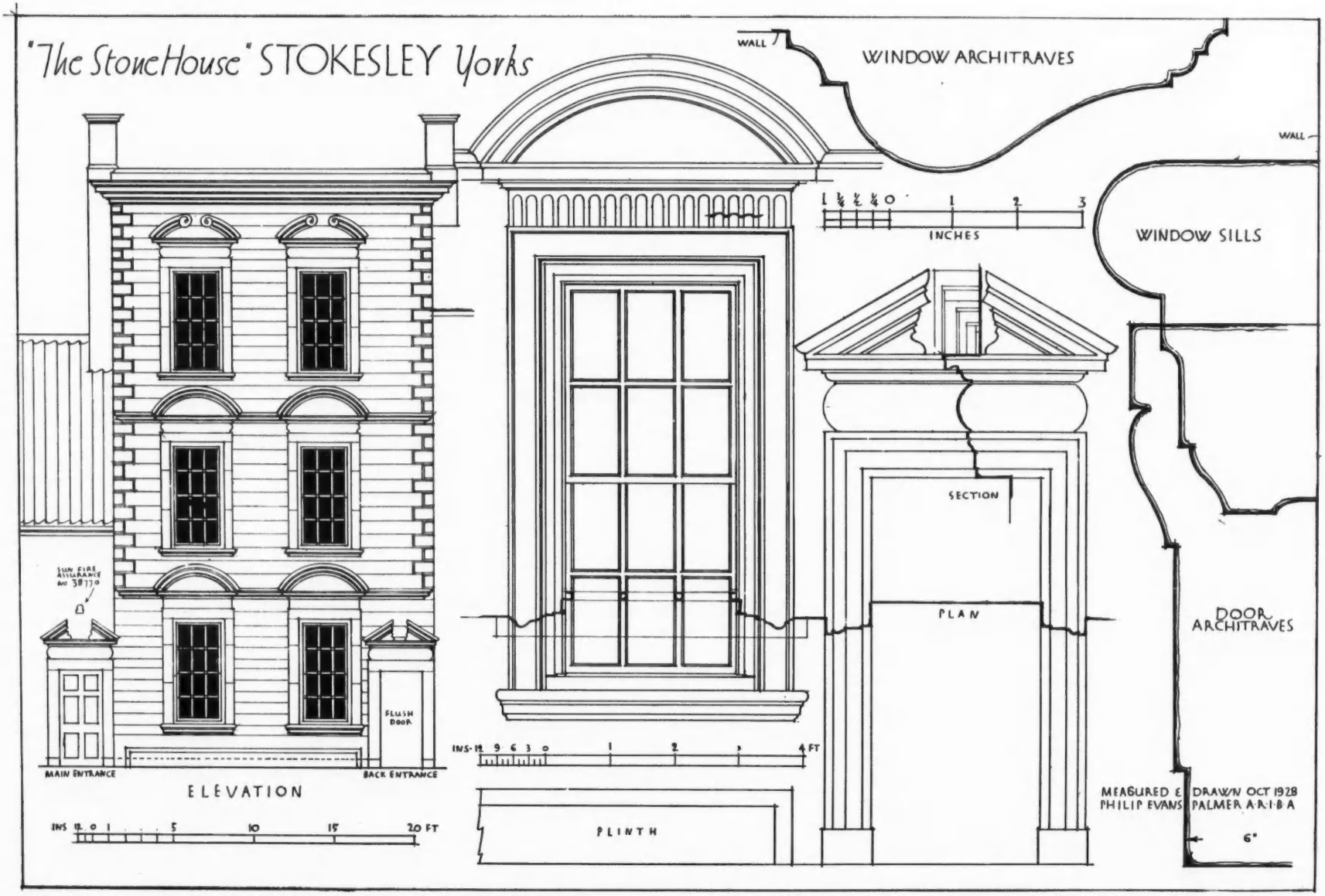
[*Photo by L. Edmund Walker.*

BRICK PIER AT ST. ANN'S HOUSE, KING'S LYNN, NORFOLK

PARTS of the house from which is taken the detail of brick pier and iron railings illustrated in the photograph reproduced above, and overleaf in measured drawing form, go back at least to Tudor times. Despite the unmannerly modern intrusion of the garage of which the door is indicated on the extreme right, the pier and vase retain the charm of the age of their addition—the XVIII century.



Though the fabric of the house is of more ancient origin, it was given a new front in the XVIII century, and it was at this period of its history that these details, of brick pier and vase, and wrought-iron railings and gate, were added. This drawing shows clearly the original outline of the moulded stone plinth, which, in the photograph reproduced on the preceding page, is seen to have suffered defacement, and also the fine lines of the stone vase and stone capping that crown the brickwork of the pier.



Built in York sandstone, the detail of this house front has a Palladian flavour. The stone architraves and pediments to the doors are painted buff colour. That on the right gives on to a passage leading to the back door; that on the left is the main entrance. Over it is one of the ancient fire insurance tokens: "Sun Fire Assurance No. 38770." Within, the house has a splendid staircase and there are also some excellent panelled rooms.

THE NECHELLS HALL, BIRMINGHAM

THE ARCHITECT'S WORKING DRAWING OF PART OF THE LONGITUDINAL SECTION



A. L. Snow, Architect.]

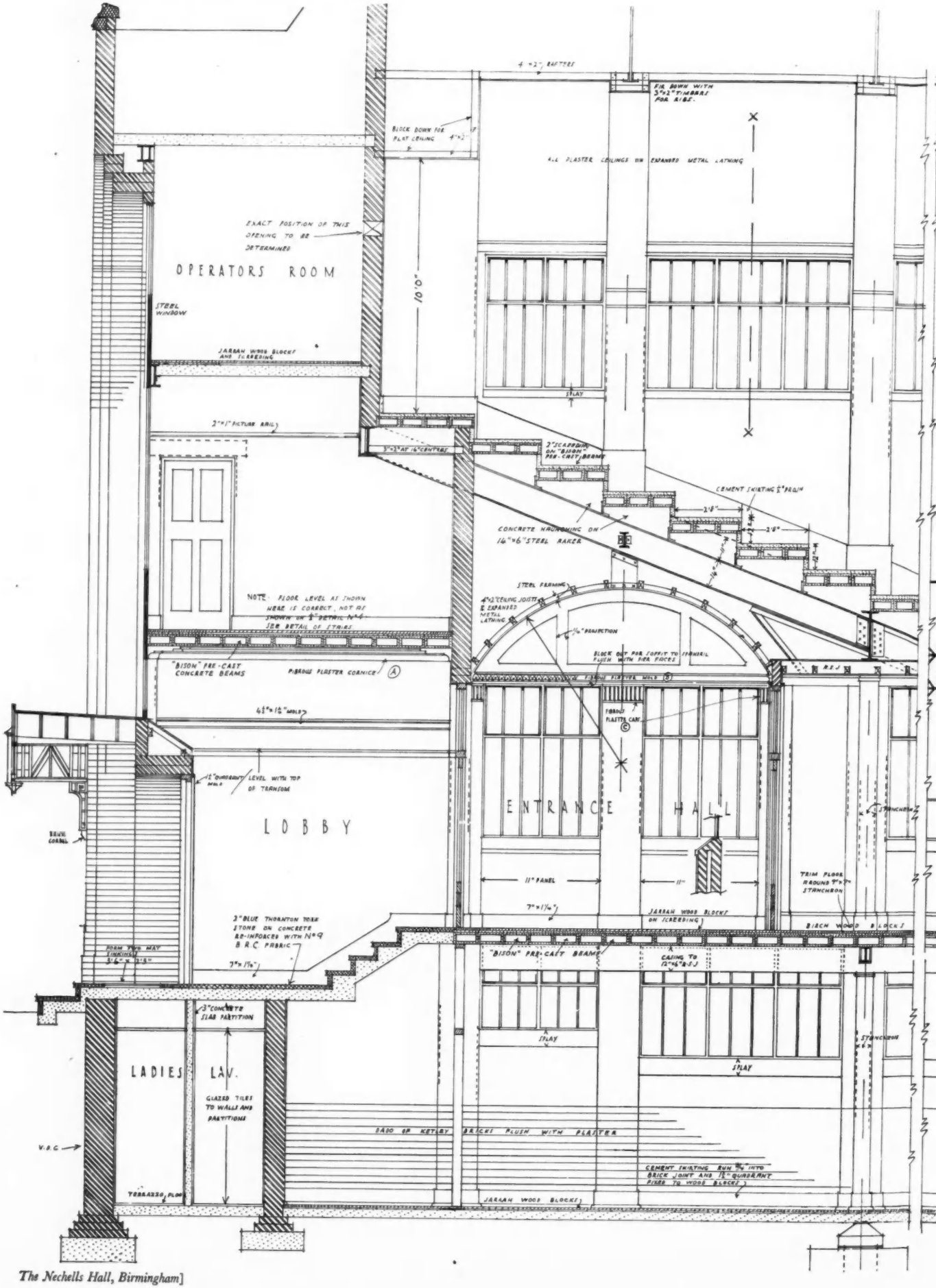
[*See also other pages of this issue.*

VIEW OF THE INTERIOR, SHOWING PLATFORM AND RECESSED SIDE

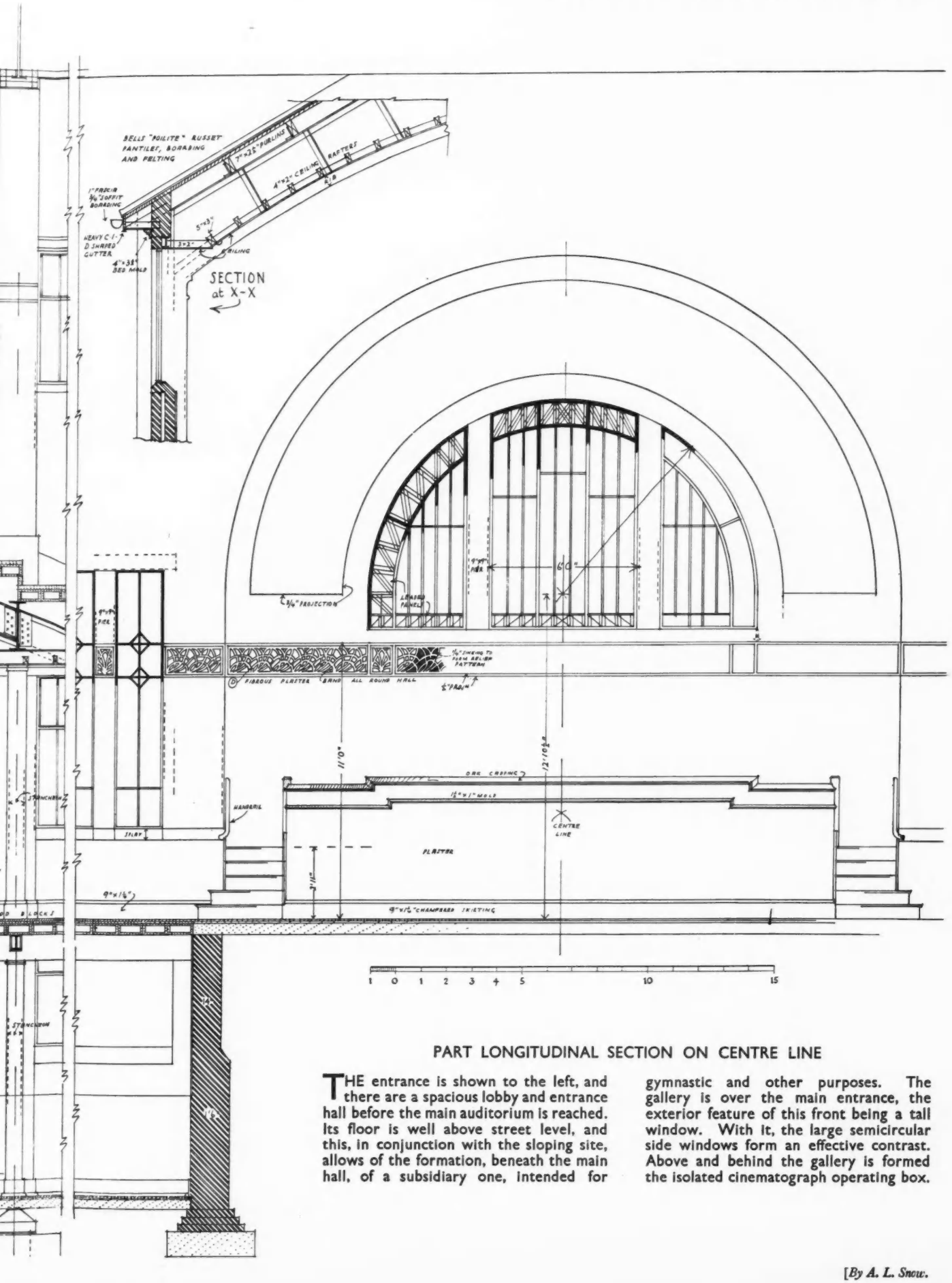
THIS is one of those multi-purpose halls, the need for which is increasingly felt, particularly among religious denominations operating in poor neighbourhoods. In this case, the building was required to serve the Birmingham Central Mission of the Wesleyan Church with a chapel and schools, which should, at the same time, be adaptable for varied social recreations. Music would be an element of these. It was the desire for good acoustics, as much as for a little extra seating, that led to the planning, on either side of the main hall, of the recesses with raised seats, which are perhaps the most distinctive of the features represented in the photograph above, and more precisely in the architect's drawing overleaf.

Results most favourable from the point of view of sound have followed upon the adoption of this device for breaking the barrel ceiling, and of oak panelling for the front and back of the platform. The hall is 72 feet long, and the general width of 45 feet is thus locally increased to 58 ft. 6 ins. There is, at the other end, a gallery with, behind it, an operator's projection box for film-showing purposes.

The structure is of steel and concrete, carrying roof and floor stresses independently of the brick casing.



The Nechells Hall, Birmingham]



PART LONGITUDINAL SECTION ON CENTRE LINE

THE entrance is shown to the left, and there are a spacious lobby and entrance hall before the main auditorium is reached. Its floor is well above street level, and this, in conjunction with the sloping site, allows of the formation, beneath the main hall, of a subsidiary one, intended for gymnastic and other purposes. The gallery is over the main entrance, the exterior feature of this front being a tall window. With it, the large semicircular side windows form an effective contrast. Above and behind the gallery is formed the isolated cinematograph operating box.

[*By A. L. Snow.*

SELECTED PRECEDENTS:
EARLY IRON AND STEEL DESIGNS



Photo : H. Vaudey (A. Joinard).

CHURCH OF ST. EUGÈNE DE PARIS, MONTMARTRE

THE illustration on this page is of the Church of St. Eugène in Montmartre, Paris, built in 1854 by Louis Auguste Boileau (born 1812). Columns, roof, walls, galleries—in fact, the entire structure—are of cast iron.

Boileau also built the French Church in London (see the article, "The Architecture of Steel," on pages 82–87), and of St. Michel-des-Batignolles, Paris; Vésinet, near Paris; and Montluçon (Alliers).

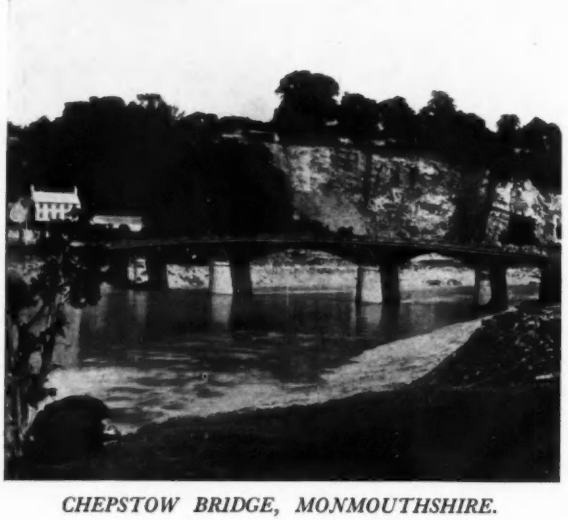
On the other side of the page are views of four English bridges of the early period, when architecture and engineering were more closely associated than they afterwards grew to be. The oldest, Telford's Pontycysylltan aqueduct (1795–1803), which carries the Ellesmere Canal across the Vale of Llangollen, was described by Sir Walter Scott as the most impressive work of art he had ever seen. The Newcastle high-level bridge is a combined road and railway bridge designed by Robert Stephenson in 1849. The smaller bridge at Chepstow, by John Urpeth Rastrick (1780–1856), contains one of the earliest cast-iron trusses of considerable size (1852); the middle arch has a span of 112 ft. The Runcorn bridge over the Mersey near Liverpool, commenced in 1863 from designs by William Baker, shows the incipient divorce between the architect-designed masonry and the engineer-fabricated steel.



THE PONTYCYSYLLTAN AQUEDUCT, VALE OF LLANGOLLEN.



THE OLD HIGH-LEVEL BRIDGE, NEWCASTLE-ON-TYNE.

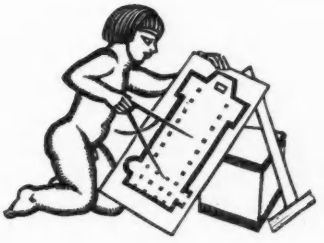


CHEPSTOW BRIDGE, MONMOUTHSHIRE.



RUNCORN BRIDGE, NEAR LIVERPOOL.

THE ARCHITECTS' JOURNAL



WEDNESDAY, JANUARY 14, 1931

STEEL

IT is a platitude that architects cannot afford to neglect any of the great industries which contribute to the sum total of the building materials which they have at their disposal. But, on the other hand, the manufacturers of such materials and the technical experts who are best qualified to give advice as to their practical application should seek to work in collaboration with the architect who, whether they like it or not, is one of their principal patrons, and has considerable powers either to make or to mar their fortunes.

The steel industry is a case in point, and as this industry has been undergoing a period of serious depression, the men who control its policies are seeking to do all they can to popularize steel, and in particular to encourage architects to use it more. That wide-awake body, the British Steelwork Association, is about to issue an important memorandum, in which it will be urged that the prosperity of the steel industry is largely dependent upon the possibility of investing this material with an æsthetic appeal. The arguments therein advanced receive support in the article published elsewhere in this issue under the title, "The Architecture of Steel," in which it is pointed out that in past times the manufacturers of steel, in trying to set about their business without soliciting the interest and collaboration of architects, have deprived themselves of valuable commercial opportunities.

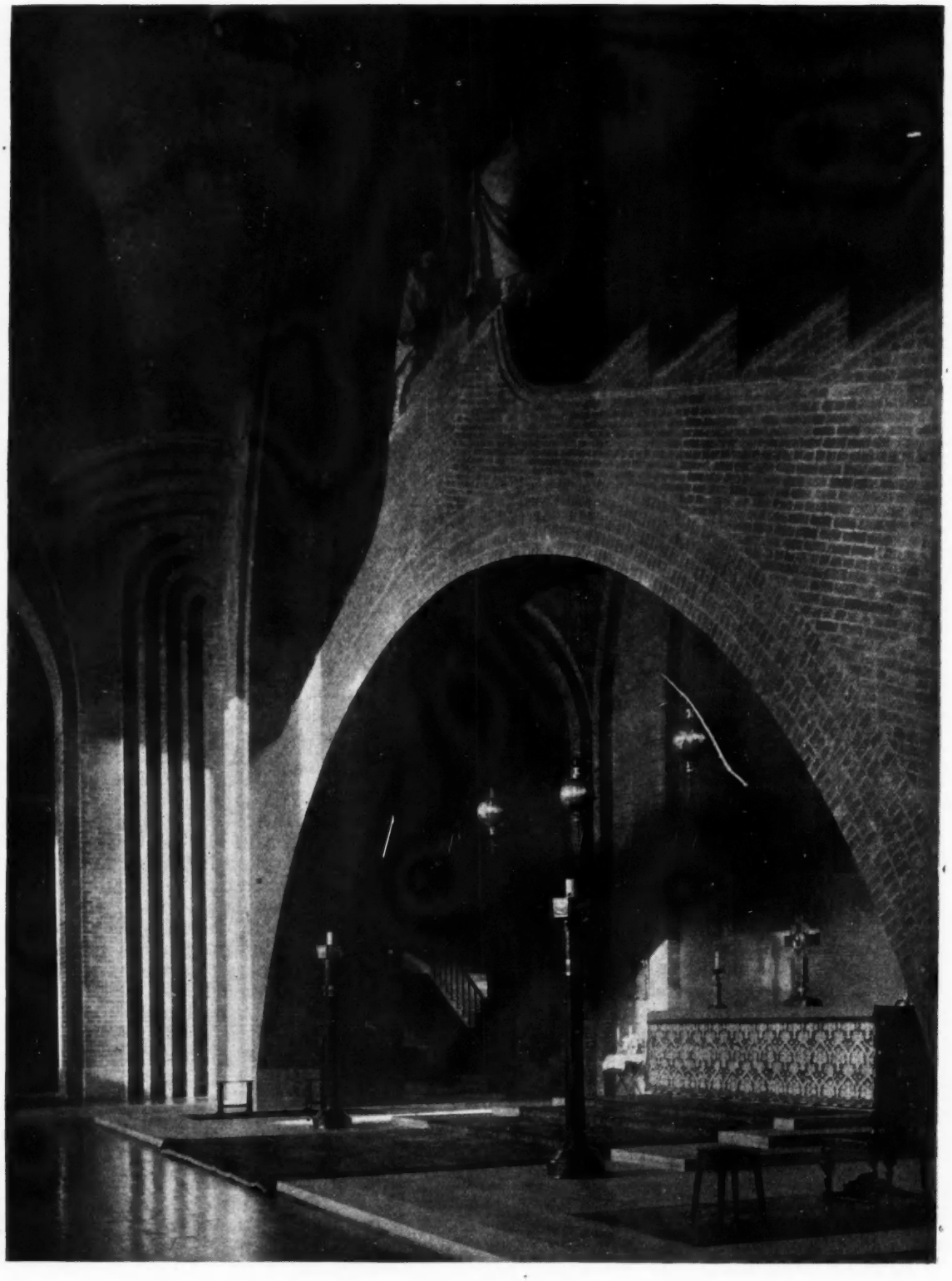
It is not as if the architect had shown any indisposition to regard with interest the artistic possibilities of steel, for there is abundant evidence that this material has for him a fascination, not only because it is so powerful a constructional medium, but because it lends itself to the creation of a wide range of novel and graceful architectural forms. But this interest needs further encouragement if it is to result in the increased employment of steel as a building material, and not only steel manufacturers, but the structural engineers who are responsible for erecting the steel frameworks of so many modern buildings, might with advantage adopt a more friendly attitude towards the architect.

Quite recently, the contractor for a large West End job on paying a visit to the steelwork engineer, was informed by the latter that he was getting on very nicely with his work and would be getting on still better "if only the architect did not keep butting in"; but unless the steelwork engineers tolerate, nay welcome, the architect butting in, he is going to turn elsewhere as soon as the opportunity presents itself.

There are many instances, of course, in which the steel framework of a building is merely a structural skeleton which supports a façade of stone or brick, and here it may be admitted that the design of this framework, regarded as a mechanical structure, fashioned to resist certain stresses and strains, comes rightly within the province of the engineer. There is one type of façade, however, which is in a quite different category, namely, the large metal front which is becoming increasingly common in modern street buildings. It is somewhat strange that there has as yet been so little attempt to correlate this metal front with the metal framework behind it. Here is surely an occasion for an æsthetic treatment of steel which would commend itself both to the artist and to the enlightened industrialists who comprise the British Steelwork Association.

At a time when export business is being severely hit and competition in foreign countries grows keener every day, it is becoming ever more necessary that the British iron-master should foster the home market. If he is successfully to accomplish this purpose, there is one person whose mood, whose policy, he feels compelled to study before everything else. That person is the architect. It is, of course, not one of the primary functions of the architect to take special measures to stimulate British industry, for he lives in an industrial environment in the creation of which he has only a minute share. Yet, if the satisfaction of his own artistic preferences results in a great stimulus to one of the basic industries of the country, that is indeed a happy circumstance.

Let the architect then consider that by devising new ways and means of employing steel he is engaged in a patriotic activity. On the other hand, it is incumbent upon steel manufacturers and steel engineers to treat the architect not as an interfering outsider to be kept at bay wherever possible but as a valued confidant and friend.



THE CHAPEL AT KELHAM: THE ROOD ARCH

Designed by Currey and Thompson, and built for their new Theological College at Kelham, near Newark, Notts., for the Society of the Sacred Mission, this chapel is described in the present issue in one of the last articles to be written by the late Sir Lawrence Weaver (see pages 64–68). At the time he wrote it, the bronze Crucifix group, designed by Charles Jagger, had yet to be fixed in the central position, surmounting the rood arch, as here shown.



The President of the R.I.B.A., Sir Banister Fletcher, who occupies the Presidency for the second year in succession. Some of his more important architectural work has been illustrated in the JOURNAL. A lecturer on architecture, his book, *A History of Architecture on the Comparative Method*, is known to every practitioner of the art.



The new President of the Incorporated Association of Architects and Surveyors, Sir Edwin Lutyens, R.A.



Sir Harold Brakspear, President of the Wessex Society of Architects. His knighthood, included in the New Year Honours List, was bestowed in recognition of his work in connection with the restoration of the Garter Chapel of Saint George's, Windsor Castle, work carried out as consulting architect to the Dean and Canons of Windsor.

NEWS & TOPICS

THE PAST YEAR UNDER REVIEW

THIS year we have just done with has not been eventful enough to be recalled as a date apart. Its record of building may be impressive, but I shall prefer to remember it as being a year of preparation; one in which, for once, the mental activities were more important than the jobs actually carried out.

★

A good deal has happened in the year, for despite a general depression, the volume of building has not yet slackened in proportion, and the rebuilding of London and the great towns has gone forward as though we were being carried on a wave of unexampled prosperity. London is being rebuilt, but one great work of restoration serves to remind us of an earlier rebuilding of London. St. Paul's Cathedral, five years in the hands of the restorers, was reopened with all the ceremony befitting an occasion of universal thankfulness. It is now safe for another century.

★

Parliament has been busy with affairs bearing more or less upon architecture: a new Ancient Monuments Bill, Housing, new Building Acts and a rather shadowy Town Planning Bill have all been discussed. The Architects' Registration Bill, which, to the surprise of many, reached a second reading and is now in committee, concerns us most of all, that is, if we believe that the Bill will provide the protection against malpractice which was promised by its promoters.

★

Looking farther afield, the Stockholm Exhibition was to have been one of the events in the year to which a large body of very intelligent architectural opinion looked forward with unmixed anticipations of delight, expecting that their half-way house to modernity would throw out still another wing of distinguished and refined ornamented architecture in which they might take their pleasure. Their shock upon finding there yet another, even if a gay and poetically imaginative, manifestation of the advanced mentality of functional expression, was a complete and recognizable event. It was, so far as the architecture of the Town Hall was concerned, and for a limited number of resolute souls, "good-bye to all that"; and for many another a cause for deep and troubled thought. Asplund's Exhibition and his Library were indeed events of an order that I will attempt to define when I have done with other things.

★

Among these we may remember that the R.I.B.A. is now definitely to leave Conduit Street for new premises that will be designed by the winner of a very eventful competition, not unrelated, we hope, to the movement of thought which we discern about us.

★

Another competition is awaited with hopes now dimmed with waiting: I refer to Charing Cross Bridge, a great metropolitan improvement which has so suffered at the hands of public controversy, political jugglery and the exchange of personal animosities, that its fine purposes have become nearly obscured. It lies now with a committee formed by the L.C.C. and headed, most fortunately, by Sir Leslie Scott, to bring the bridge and all that it implies in town planning and redevelopment into the ordered perspective of a scheme worth the expenditure of time and public money. This committee has been sitting for several months, gathering opinion, advice and data of all kinds, and examining the schemes of many capable and some imaginative men—architects, engineers and town planners. In February the results of these labours are to be offered to the world in the form of a scheme examined and blessed by the committee, or as some composite fusion of more than one scheme.

★

The large scope of Charing Cross Bridge scheme leads one to consider the course of town planning during this last year; and here may be recorded the first official reference, in the King's speech at the opening of Parliament on October 28, to the extension of town planning powers to include all land developed as well as undeveloped. No Bill has as yet appeared, since performance lags behind

the promises of a minority Government; but the gesture is significant.

★

Some look with alarm upon the growing farce of a bureaucracy required to *implement* (I use the official word to prove that bureaucracy *is* a disease) the unceasing flow of new Acts designed to bring order to the chaos of English towns and countryside; but though there is cause for alarm, there is still cause for further Acts, not necessarily unwieldy ones like the new Housing Act, passed also in October of last year, but some official recognition of a new and saner way of planning, and some definite and legally-defined plan of action.

★

There are two ways of replanning or re-creating the black spots of our towns and country, both to a certain extent interlocking and both with a direct bearing upon architecture. One method uses the Town Planning Acts already in force, and the other uses persuasion. It is hard to say which of the two is the more useful, because each plays into the hands of the other. The chronicle of what has been done under the various forms of statutory town planning during the last year would make an impressive document, and on the other hand we shall not forget by how much the cause for which all architects stand has been advanced by such active bodies as the C.P.R.E. and the D.I.A.; the last, egged-on, directed and inflamed by the zeal of that happy warrior, Mr. Clough Williams-Ellis. The "Cautionary Guides" which were issued under his guidance have pierced the armour that has withstood the blows of generations.

★

Even so, the work of these zealots is a sign of the times as much as it is the instrument of regeneration. Heaven forbid that we should imagine the world saved and safe for men of sense to live in because the cry of "Save the countryside!" has become a popular slogan; but inasmuch as it was but a crying in the wilderness a few years ago the atmosphere is provedly a little clearer and fitter for better things.

★

And it seems to me that this last year, disastrous in so many ways and darkened by a world-wide depression, has witnessed a gradual clarifying of the mental atmosphere. Despite the accumulation in London of worthless period architecture, and despite the obvious paucity of buildings in any way fit to rank with the best Continental work, one cannot help but feel the press of a new impetus towards reasoned, clear-minded architecture. It is as though we in England had at last resolved to undertake the overhaul of our equipment which our state of mind in the early post-war years rendered out of the question. Even the attempts to revise our building code this year—determined efforts where they were once but half-voiced disgruntlements—serve to show us in a new light, gradually freeing ourselves from all sorts of mental strait-waistcoats.

★

The story of last year's achievement lies, I still think, in the future; which is to say that it is with the evolution of ideas and their infiltration to wider circles of appreciation that historians will concern themselves, and it seems to me that the indications which form so small a part of what has actually been done during twelve months are the only really important events. The fact that Sir Edwin Lutyens is about to build a Roman Catholic Cathedral in Liverpool is a fact impressive and ponderable. The fact that Asplund has found joy in the demonstration of a new form of organic architecture has to be proved and accepted before it can become fact for us in England. Its reception by a few, helping forward by so much the fabrication of a new mental equipment, is leading to the endowment of architecture in England with new powers of expression, and the casting off of the last shreds of a tradition that has become contemptible by too long familiarity and use. May it face 1931 with new vigour!

THE PERSIAN EXHIBITION

The influence of Persia on architecture and decoration cannot be over-estimated. The dome came from Persia. The International Exhibition of Persian Art at Burlington House contains reproductions of entrances to famous mosques, coated with tiles of unimaginable blues, and photographs showing with what skill and richness of decoration the dome was evolved. In the history of decoration Persia has been a fount of inspiration in numberless ways, and Persian motives may be traced in every phase and period of European art from Scandinavia to the Levant.

★

Persian art has, of course, not only a transcendent sense of form, but a colour sense such as art has seldom achieved. To visit this exhibition is to enter into an enchanted world, in which there is no discordant note anywhere, and where miracle after miracle of colour is displayed to the fullest advantage. The exhibition is truly an international one: the collections of twenty-seven countries have lavishly emptied themselves to furnish this display, the like of which London has never seen before. A special lantern lecture in connection with it will be given at the R.I.B.A. tomorrow (January 15), at 5.30, by Mr. Arthur Upham Pope, the great American expert and Director of the Exhibition, to whose initiative this amazing exhibition was originally due. Architects, their friends, and members of the public should avail themselves of this opportunity of gaining a keener understanding of an art which has a bearing so direct upon architecture.

THE HERALD OF DECAY

There is a great deal of talk lately about narrow streets, higher buildings and the poor motor-coach being kept in the outer pale. True, it seems silly to prohibit the motor-coach from the inner metropolis, if doing that you throttle a growing form of transport. On the other hand, there is admittedly little enough room to spare for these behemoths of the road on the narrow and overladen streets of the City and West End.

★

The natural criticism of our street system will not help the situation in the immediate future, nor can I see that streets can be widened, by an exchange of greater height to street frontages for greater width to the street, without the creation of new problems of congestion, and unnecessary privations of light and air. The illogical position in which we find ourselves must surely hasten the passing of a new town planning Act for urban areas, and this Act will be of little use if it can offer no simpler form of compensation and betterment than at present exists.

★

It can be said with safety that ten great thoroughfares cut through the heart of ordinary London property would pay for themselves long before the full repayment of the money involved; and yet so enormous is the cost of

purchase and compensation—in the case of Kingsway, eighteen times the cost of the street itself—that no one dare start the job. It has got to be done, for, as Hilaire Belloc has rightly said, the continuance of a state of expensive congestion is the herald of decay. The only way of bringing new movement and vitality to the sluggish stream of traffic is to cut new arteries. No cost is too dear, but because of the state of vested interests the cost must be reduced to the highest acceptable minimum, either by the pooling of resources or by State action.

IMPROVING THE SMALLER HOUSE

I have heard recently of two attempts to improve the design of small houses, both emanating from architects. The first comes from Manchester, which is as it should be, because Manchester housing schemes have been distinguished by their dullness and by the terrible materials of their construction. The architects of the Civic Advisory Committee have offered their services free of charge in connection with the layout and design of cottages for a small but important site at Wythenshawe, and it seems likely that their offer will be accepted. Nothing but good can come from this offer, for it is impossible that good architects should not produce beautiful cottages for the same money as the bad ones. The pity, as *The Manchester Guardian* remarks, is that such an offer was not made and accepted ten years ago.

★

The other attempt takes a rather different form, and Mr. Rayson, the secretary of the Oxford Society of Architects, is at the bottom of it. His Society, in its continuous endeavour to protect the Oxfordshire country from spoliation, has hit upon a plan of offering a prize to the small house or bungalow, to be built in 1931, which most nearly fulfils the canons of decency and good building. The conditions lay stress upon the fact that importance will be attached to "the general shapeliness of the building, to the simplicity, restraint and good proportions of its details, *and particularly to its harmonious relation to the countryside.*" The prize will be given to anybody, architect or builder, the one really binding condition being the size of the house. This competition, widely enough advertised, should stimulate public interest, and be a good thing. I hope an architect wins it.

THE BRUSSELS CONGRESS

The Third International Congress of Modern Architecture, held in the new Palais des Beaux-Arts at Brussels from November 26 to 30, which was opened by Professor Karl Moser of Zurich, proved a much more notable gathering of *avant-garde* architects than either of the initial conferences at Frankfort-on-Main and La Sarraz. Practically every country in Europe was represented except Great Britain—an abstention universally deplored, and one which it is to be hoped will not occur again. The United States delegate was Herr R. Neutra, the Austrian architect who has now settled in Los Angeles. Dr. Siegfried Giedion, the energetic Swiss secretary of the organizing committee, had arranged an extremely interesting exhibit of "Rational Building Methods." These were explained bilingually in connection with the deliberations by C. Van Eesteren (Amsterdam), Victor Bourgeois (Brussels), Corbusier (Paris), R. Steiger (Zurich), and P. Barbe (Paris).

★

The principal subject debated was whether single-story houses, skyscrapers, or blocks of dwellings of intermediate height offered the most rational means of housing families living on the minimum wage. Corbusier's paper was substantially a repetition of the "Plan for a Contemporary City of 3,000,000 Inhabitants," published some time ago in his *Urbanisme*, and since translated by Mr. Frederick Etchells. Neutra, who can claim a less theoretical experience of "tower-dwellings," explained that the skyscraper was undoubtedly an economic form of construction for small flats where, as in America, there was an active demand for them from comparatively wealthy, childless couples willing to pay high rents. The American, like the European, paterfamilias preferred ordinary houses. The investigations of Herren Boehm and Kaufmann, Ernst May's lieutenants at Frankfort, showed that all three types enjoyed an approximately equal amount of fresh air and sunshine. On the whole, they found that a four-to-five-story structure offered the greatest number of economic and technical advantages, though this cannot be pronounced an ideal form of habitation because it lacks the outstanding merits alike of the skyscraper and the single-story house. The latter, however, is unable to compete in cost with buildings of two or more stories. Professor Gropius wanted to see our cities loosened, but not disintegrated, and was emphatically opposed to dwellings of intermediate height. A considerable measure of ruralization could be effected by limiting ten-to-twelve-floor tenements to the outer city zones, and building single-story, flat-roofed houses with gardens in the open belts.



Sir Lawrence Weaver, K.B.E., by whose death last January at the age of fifty-four, "architecture lost a friend, and the cause of betterment in many branches of applied and industrial art was deprived of a practical champion." A hall is to be erected to his memory at the Ashstead Potteries that he founded. One of his last articles appears in this issue.

★

The various national groups reported the progress made in their respective countries towards providing adequate housing accommodation for the poorest section of the community, and the nature of the opposition encountered. It was generally admitted that our technical resources are still unequal to solving the problem of building workmen's dwellings which can be let at rents that the average unskilled labourers can afford to pay. Where building subsidies are granted, the municipalities, which still evince considerable mistrust of rational building methods, are apt to regard houses as pawnbrokers' pledges. Among the Latin nations there is a characteristic indifference to the lessons of what others have achieved. It was amusing to learn that, in Holland and Switzerland, Rural and Urban Preservation Commissions are continually opposing modern housing schemes on the pretexts of traditional or scenic amenity. The subject to be prepared for the 1931 Congress—the venue of which has not yet been fixed—is "The Constructively-planned City."

ASTRAGAL



The Fenwick Street and Water Street façades, taken from the scaffolding of Martin's Bank, a lofty building in course of construction in Water Street, from the designs of Herbert J. Rowse. The new India Building stands on an island site with an area of 56,000 sq. ft., with the main frontage, about 220 ft. long, to Water Street.

THE NEW INDIA BUILDING, LIVERPOOL

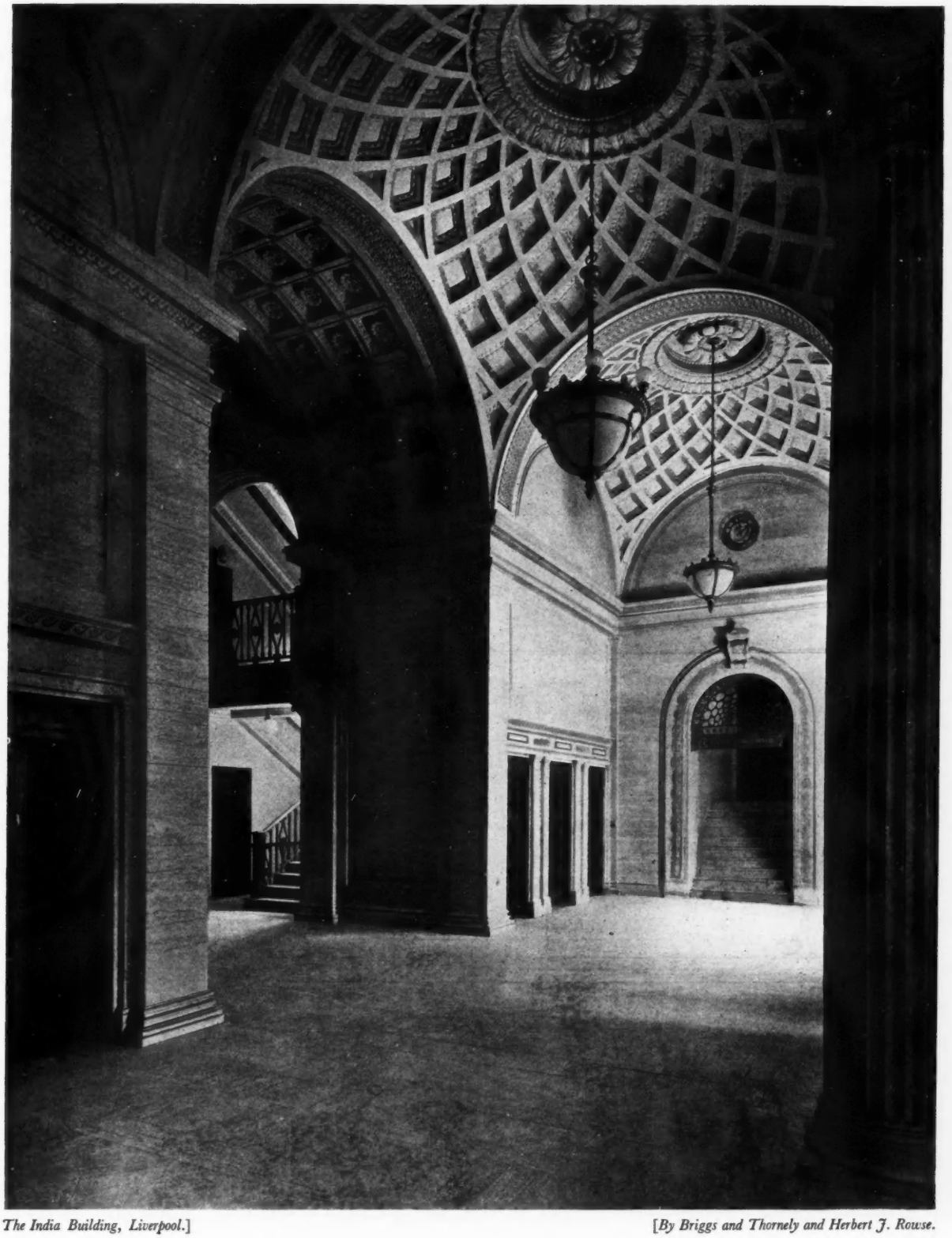
DESIGNED BY BRIGGS AND THORNELY AND HERBERT J. ROWSE

THIS great new office block stands on an island site in Water Street, within a few minutes' walk of Pier Head on the River Mersey. In elevational height it does not exceed the Royal Liver Building on Pier Head itself, but the higher altitude of the site lifts its roof far above that of the famous landmark.

The design for the India Building was awarded first place in a limited competition, assessed by Sir Giles Gilbert Scott, R.A. — a competition which ranked in importance with those for the London County Hall, the Port of London Authority building and Liverpool Cathedral, and was won in contest with picked London practitioners.

The site is bounded on four sides by existing streets. Of these, Water Street is the most important and the centre of Liverpool's shipping interests. This street, together with Fenwick Street and Drury Lane, which adjoin it, has been widened by the setting back of the original building line. Owing to the varying levels of the site, the basement in Fenwick Street is completely below ground-floor level, and emerges

[*Continued on page 51.*

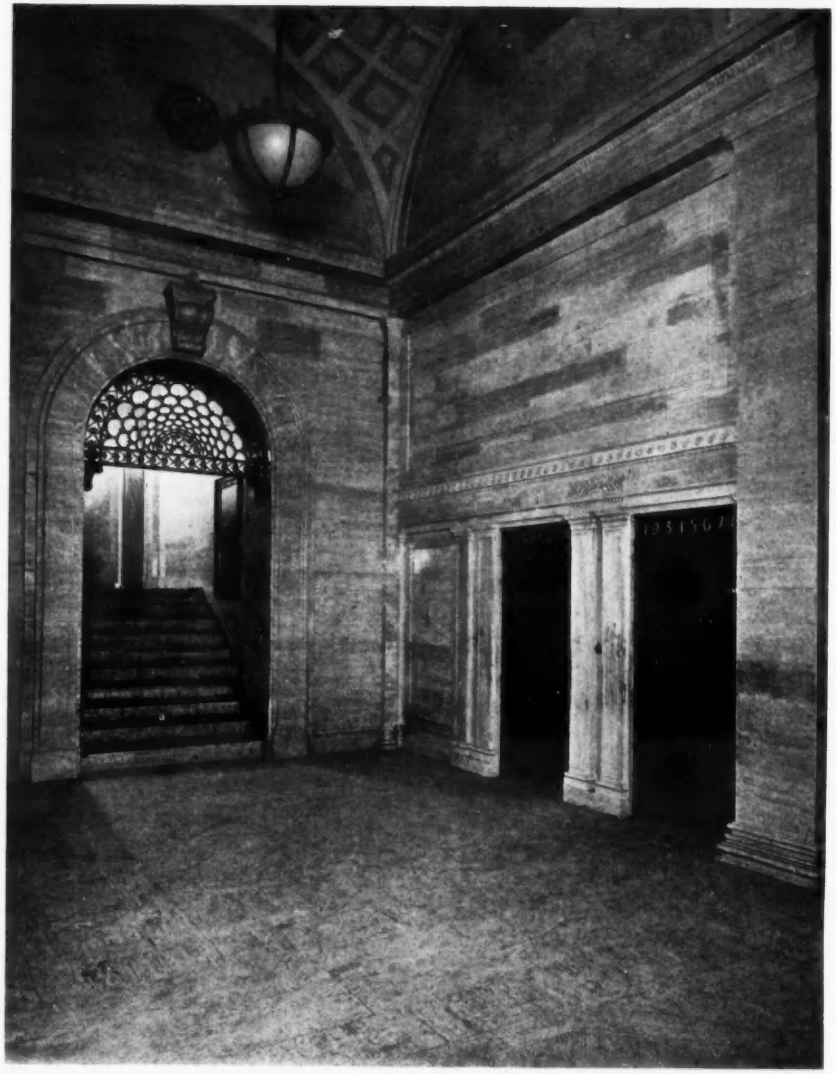


The India Building, Liverpool.] [*By Briggs and Thornely and Herbert J. Rowse.*

There are two entrance halls : one approached from Water Street, illustrated above, the other from Brunswick Street, and both connected by a long arcade (see page 47). The entrance halls are faced in Travertine marble of a cream colour, and have three saucer domes with coffered ceilings in fibrous plaster.



The main entrance from Water Street consists of three semicircular-headed doorways, lined with Portland stone, and each containing double doors in bronze, with enrichments. The four ornamental lamps flanking the openings are in bronze.

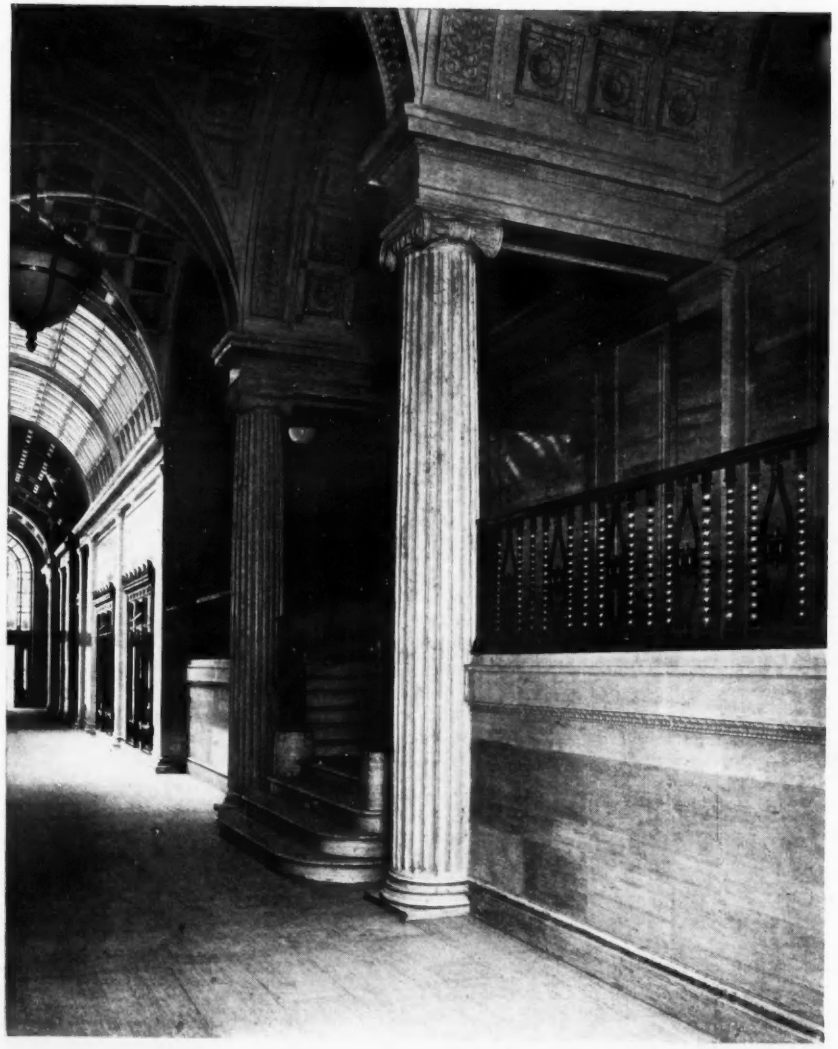


A corner of the entrance hall from Brunswick Street. To the right of the lifts is the main arcade which runs through the centre of the building to the entrance hall from Water Street. The lift entrance gates on this floor are of bronze.



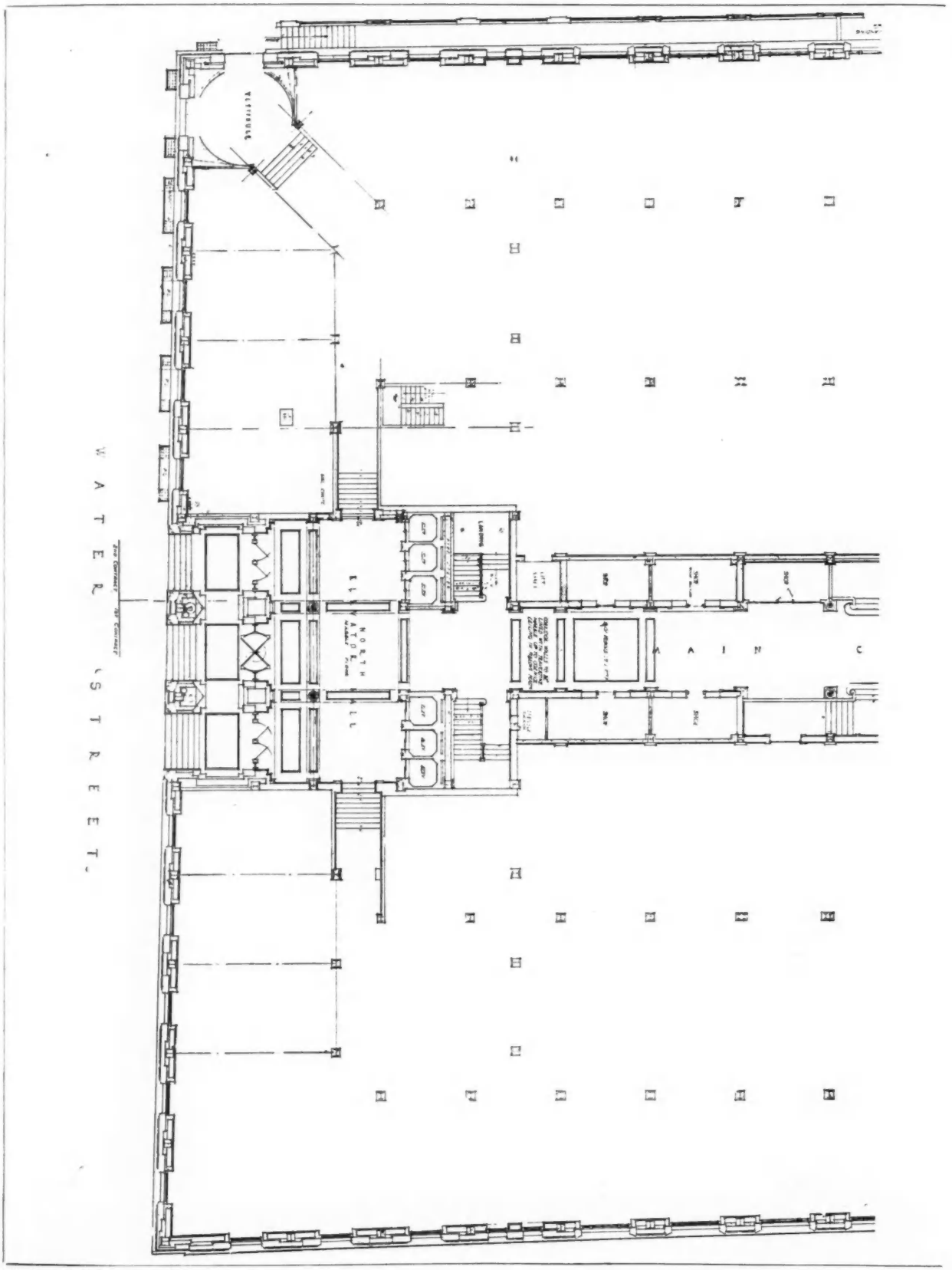
The India Building, Liverpool.]

The main arcade, looking from the entrance hall from Water Street towards that from Brunswick Street (see page 45). On either side are shops, and in the rear of the lifts are the main staircases.



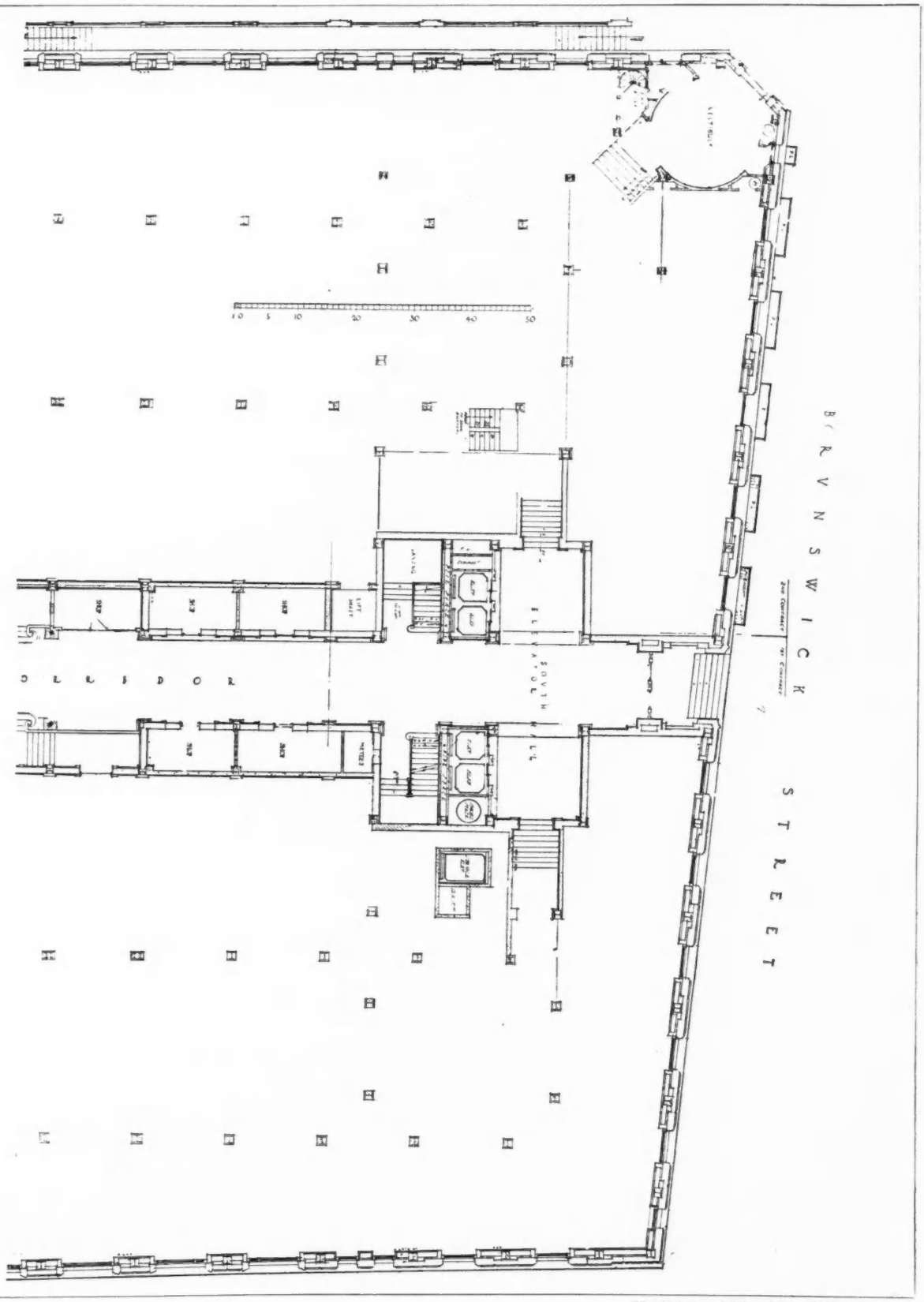
[*By Briggs and Thornely and Herbert J. Rowse.*

The centre bays in the main arcade, looking towards the entrance hall from Brunswick Street. The corresponding bays on the opposite side of the corridor are occupied by shops. The walls, floors and stairs are of Travertine marble.



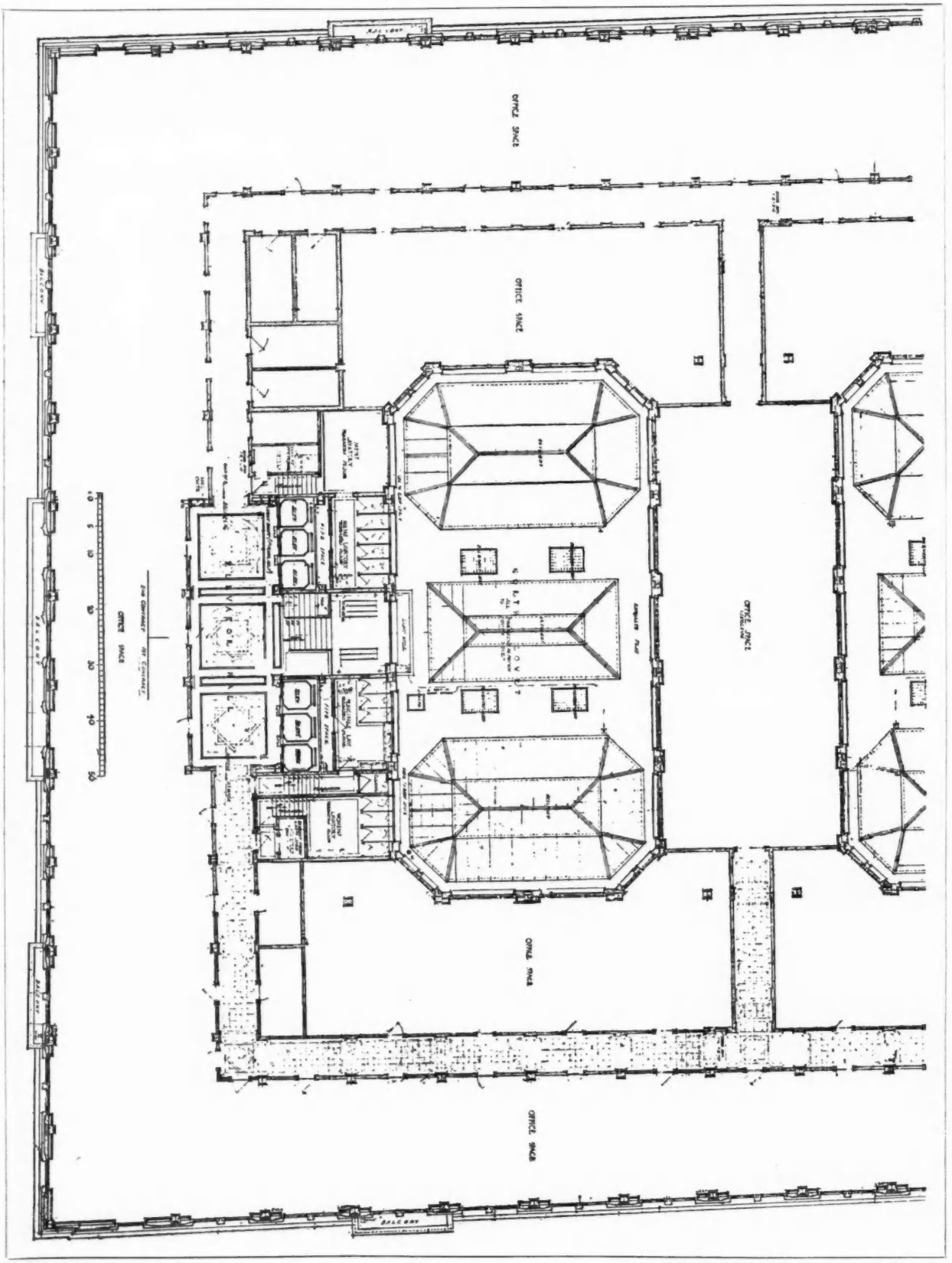
The India Building, Liverpool.]

Ground-floor plan. The building was erected in two portions (here indicated). All floor space has been planned so that it can be partitioned off to meet the individual requirements of tenants. On the ground floor practically the whole of the area facing Fenwick Street (top of page) is being occupied by Lloyds Bank. The area facing Drury Lane (bottom of page) is



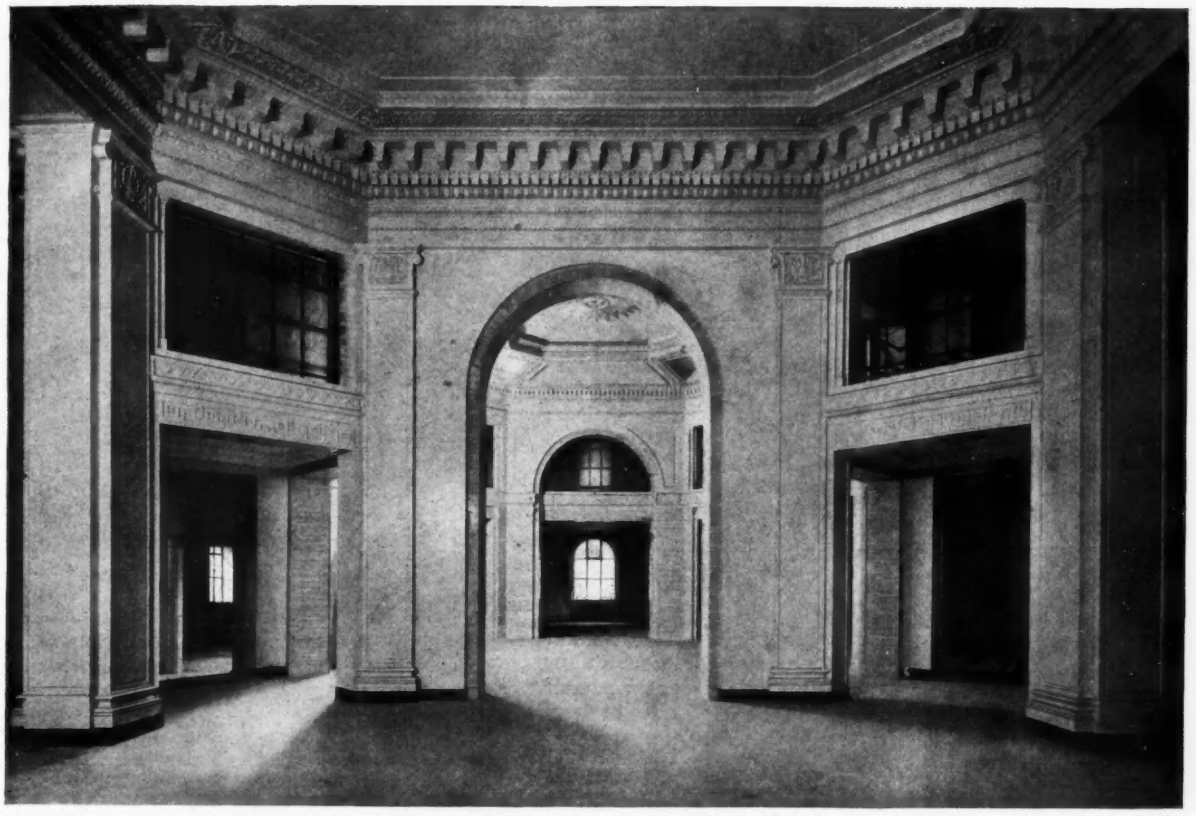
[*By Briggs and Thornely and Herbert J. Rowse.*

divided into two halves, one of which is occupied by a public hall used by the Christian Scientists as a church; by the Liverpool Wool Brokers' Association; and by the Liverpool Sugar Exchange, Ltd. The remaining portion on this side of the main central corridor has been treated in such a manner as to be suitable for use as offices of a large insurance company.



The India Building, Liverpool.] [*By Briggs and Thornely and Herbert J. Rowse.*

Half plan of first floor, Water Street end. The upper floors are lighted on the interior by two lighting and ventilation wells, and each has a continuous circulating corridor linked up with the elevator halls, lavatories and stores.



One of the octagonal halls on the ground floor. There are four, one on either side of each of the two main entrance halls.

at Drury Lane, on the pavement forming the ground floor of that façade. The frontage to Water Street is about 220 ft. long, and the depth about 260 ft., giving a site area of 56,000 sq. ft. On the main front the building is about 150 ft. high from ground level to roof.

It was stipulated in the conditions of the competition that it should be possible to erect the building in two halves by successive operations. This has been done, the building being so designed that the first portion could be built as a self-contained unit and yet take its place as a complementary part of the final structure.

In order to satisfy the lighting



The India Building, Liverpool.] [*By Briggs and Thornely and Herbert J. Rowse.*

Another octagonal hall on the ground floor. It gives access to the offices of the Liverpool Sugar Exchange, Ltd.

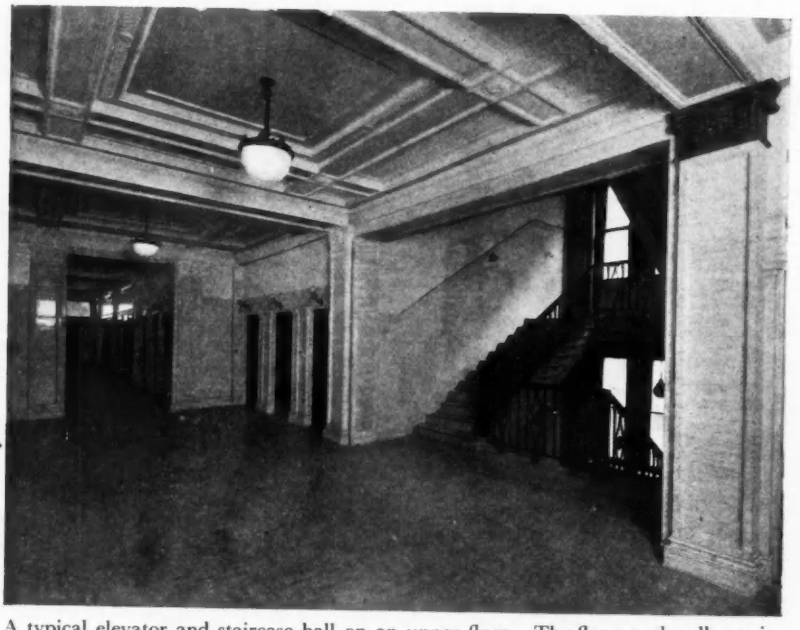
(see pages 48 and 49).

requirements of the building, two light wells are provided. These have splayed re-entrant angles which enable light to be obtained into all four corners of the office-floor plan enclosing each well.

It should perhaps be mentioned that some modifications have been introduced in the plans since the competition was won. In the original ground-floor plan were two large central spaces—one for a bank and the other for an insurance company. It was to be assumed from the conditions of the competition that the bank premises would occupy the whole of the easterly half of the ground floor, bounded by Water Street, Fenwick Street and Brunswick Street, and that an insurance or other company would become tenants of the remainder. An impressive appearance was thus required for this accommodation, and a height of 23 ft. was allowed for it.

The main frontage facing on to Water Street was to have a principal central entrance; another general entrance was to be placed at the centre of the Brunswick Street façade, and private bank entrances at both the Fenwick Street corners of Water Street and Brunswick Street. The suggestion was also made that it would be desirable to provide direct access from the street to the insurance or other accommodation on the south-west half of the ground floor. At the corner of Water Street and Drury Lane provision was to be made in the base of the building for an entrance to the subway which forms one approach to the James Street Station of the Underground Mersey Railway. In the original plan the main halls, traffic corridors and light wells were disposed on axes that ran at right angles to each other. As the bounding lines fo the site are not in rectangular relationship, a problem of readjustment was involved. The solution presented consisted in laying down the principal axes of circulation on lines which ran either parallel with or at right angles to the axis of Chorley Street, a street running through approximately the centre of the site from Water Street to Brunswick Street, which it was asked should be entirely built over.

The modified design, now carried out, provides for a large arcade running from the Water Street entrance hall to Brunswick Street. On either side of the arcade are shops, and behind are spaces suitable for office, banking and other commercial purposes. This arcade runs in the same direction and occupies approximately the same position as the old Chorley Street. In the basement is a large garage.

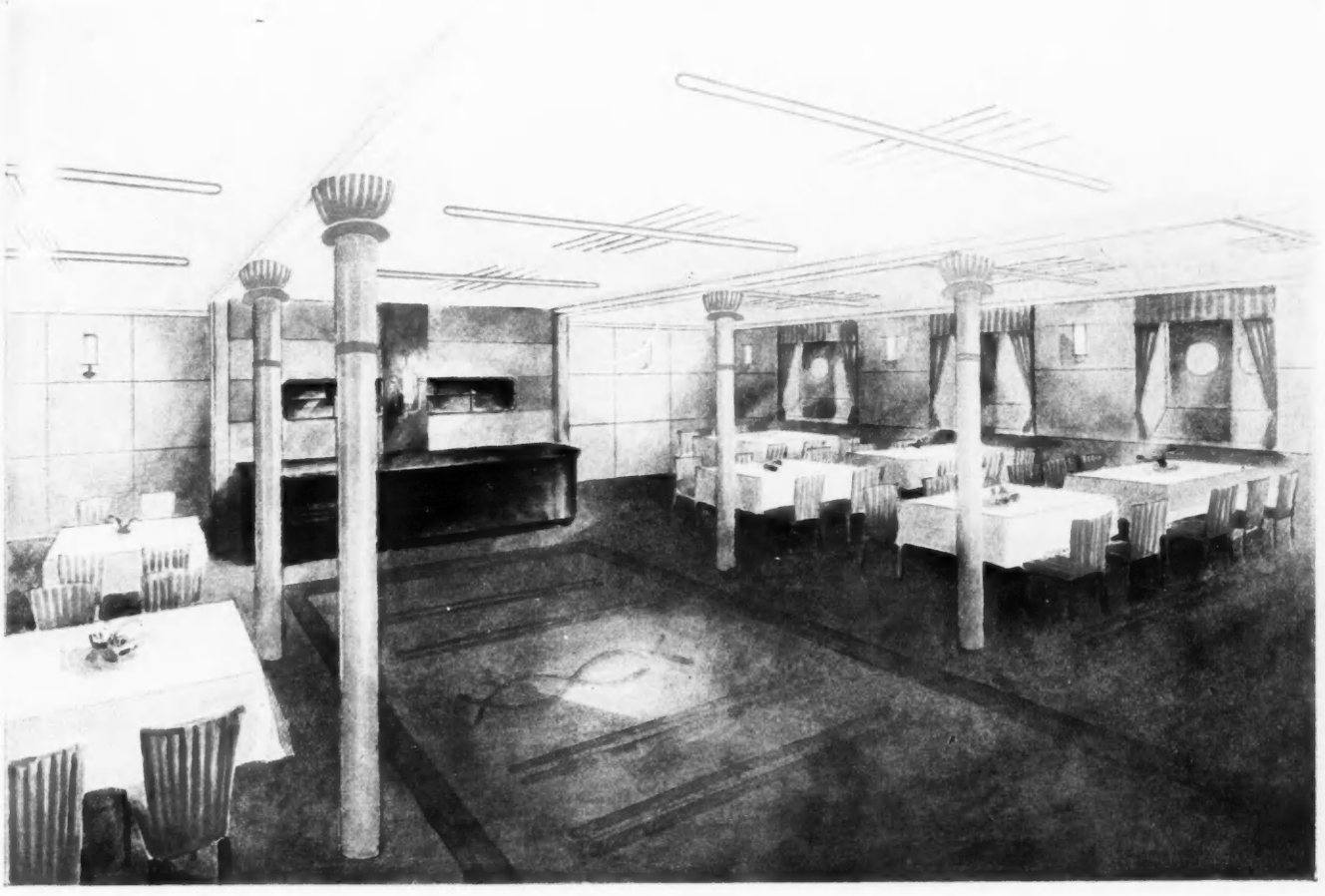


A typical elevator and staircase hall on an upper floor. The floors and walls are in Travertine marble up to the height of the string course over the lift entrances; above, the walls are plastered. The stair treads and risers, and the wall dado to the stair, are in Terrazzo to match the Travertine marble. The ceiling and pilaster caps are in fibrous plaster, the latter gilded. The lift entrance gates are cast iron, painted bronze. The stair balustrade is in cast and wrought iron, also bronze painted, and has a bronze handrail.



This view was taken from the corner of Brunswick Street and Fenwick Street after the first part of the building had been completed and the steelwork for the second part was being erected. Note the double setting back of the top stories, and the arrangement of the two internal light wells.

The India Building, Liverpool.] [*By Briggs and Thornely and Herbert J. Rowse.*



DINING-ROOM IN A SMALL STEAMER

DESIGNED BY E. FAHRENKAMP, DÜSSELDORF

From *Modern Interiors in Colour*. Stuttgart: Julius Hoffmann.
(See "Books of the Year")

rush along, but a more settled period will again remember that architecture is static. It will recall a few other forgotten or neglected considerations. There is, for instance, that of harmony beside that of utility. There is lots of space in the Place de la Concorde to put up fifty-story offices, but, all the same, that would not be desirable. Present-day London bothers little about this, a little more than Berlin—but then, Berlin has little to lose in that respect and has already lost nearly all it possessed—much less than Paris. Look how the squares of Bloomsbury (so truly "modern" in their simplicity and good proportion, by the way) have been spoilt and sacrificed!

There is another and even more important consideration—the human element, the individual expression. One car may be like all others, one factory much the same as the next, but is it really desirable that all homes should be alike? I think people's homes should express at least the character of the race, if not of the individual owners. Nations are certainly more alike than they were, but there is, and always will be, a good deal of difference between English, French, German, Dutch or Italian families and their lives. Their modern houses, however, are exactly alike; their furniture is almost identical. I fail to see that that is an advantage, and I do not deplore the fact that there are very few houses in England which might have been built by Le Corbusier or Mendelsohn.

This is a period of collectivism. The English are a race of individualists, and their spirit is *opposed* to the spirit of the period. "Modernism" in architecture is an expression of that very spirit; it is impossible that the English should welcome it with enthusiasm. The very system of the one-family house is born from a desire for individual liberty. Flats mean barracks, for rich or for poor, and barracks are a collectivist, indeed, a militarist, conception. For many reasons, sociological and economic, it is gaining ground in England, but it is so little English that English architecture here remains imitative of America. I think it most improbable that English architecture will show any originality in that direction.

It has always been at its best not in town but in the country; cottages, country houses, large or small, are amongst its happiest achievements. For many years now English architects have built country houses which were modern in spirit and independent of historical styles; nor must one forget that building is, after all, only part of something more important—town planning, *urbanisme*. And there London and England are very much in advance of other countries. It is the fashion to sneer at suburban building and at bungalows, but though a good deal of it may be hideous, that fashion is most absurd and snobbish.

The masses (if not the very poor) are infinitely better housed in England than abroad; suburban rows of houses look dull and often tawdry, but they provide decent surroundings at a very low cost. Sitting-rooms for servants, day nurseries for children, gardens, are luxuries known only to the very rich in Continental countries, and Germany is now very strenuously imitating English garden cities and housing schemes. A good deal has been accomplished (the Frankfurt developments are well known), but England is far ahead, and the lack of communications makes work more difficult in Germany.

And if anyone objects to suburban architecture in England he should have a look at the *banlieue* of Paris! The spread of bungalows is annoying to "lovers of nature," but the inhabitants of bungalows also love nature and prefer to live in the country. I consider the "bungalow pest" a most interesting phenomenon. England is small, the cities not very far apart, roads and communications excellent; people can therefore live in the country while working in cities. The country is being *re-conquered*, and that is the only back-to-the-land movement possible under modern conditions. In that direction lies the most important task of British architects. There should be no monstrosities in bungalows, settlements, or petrol-pumps; and there need not be, for any amount of good work is going on at the same time as the bad.

The English as a nation have little sense of logic and method, but they are practical and have the sense of comfort. English railway stations look old-fashioned compared with many abroad; their façades are indifferent and sometimes absurd, but for generations you have been able to get in or out of trains in comfort because platforms are raised to a sensible level. You will rarely find them on the Continent, and nowhere will you find stations built to allow cars to stand alongside trains. St. Pancras looks like an abortive cathedral, but it is very much more efficient than its Continental rivals. English theatres and cinemas generally have (I forget where I read this description) "bits of Carlton stuck about them," but their seats are comfortable and they have model exits. England is inclined to underrate the importance of the "look of the thing"; Germany is inclined to overrate it. England might well adopt the general use of central heating and running hot and cold water, might modernize bathrooms and do away with rattling guillotine windows; the Continent might remember that it is a mistake to abolish fireplaces and (ventilating) chimneys altogether, and that central heating is not much use when turned off (which it is between April and November).

ARCHITECTS IN ASYLUM: A FANTASY

BY A. TRYSTAN EDWARDS

"A REALLY modern asylum, at last!" I exclaimed, as I shook hands with Dr. Sestercius, who had kindly consented to show me over that establishment. "An asylum entirely for artists and men of letters. Well, well, we are indeed advancing!"

It is one of the principal elements in the system of diagnosis practised in this asylum, so Dr. Sestercius explained to me, that while the patients have periods of solitary confinement in which their mental processes can be allowed to take place undisturbed by outside influences, on other occasions they are given an opportunity to meet in congregation, and thus express the social side of their personalities.

"What is so fascinating in my professional activities," proceeded Dr. Sestercius, "is the constant element of surprise that enters into them. Each time I put my head into the large room where the architects, for instance, are sequestered, I never know what pranks they may not be playing nor what strange mental aberration may not, for the first time in history, be exemplified."

At this point I asked Dr. Sestercius whether he would find it convenient to conduct me to the architectural side of the asylum at once, and he most courteously granted this request.

We walked along salubrious corridors until we approached a large door, behind which we could hear a voice speaking in a presidential manner. Before entering, Dr. Sestercius hastily

explained to me that at one end of the room was a platform with a blackboard on an easel, and several hundred chairs were provided which, if the patients desired it, they could arrange in regular formation in front of the platform.

Without knocking, Dr. Sestercius opened the door, and we passed unobtrusively to the back of the hall, where we took our seats without our presence being commented upon by the patients, who seemed to be intent upon listening to the remarkable speech of the chairman of the meeting. He, I was informed, was none other than Mr. Aeneas Plimsoll Smith, late F.R.I.B.A., and he was taking the part with great gusto.

My curiosity was aroused by the appearance of the personage who was being introduced to the meeting, for, instead of sitting down in the chair, he was perched on a table to the left of the chairman, and from this eminence he surveyed the audience, his large bearded face wearing an expression of extreme benevolence.

But what particularly attracted my attention was the posture which he had chosen to assume. To put it briefly, he was on all fours.

I had not long to wait, however, before being enlightened as to the identity of the dear old man, for Mr. Aeneas Plimsoll Smith introduced him as the eminent Professor Blibstein from Jugo-Slavia.

In attempting to describe the interesting occasion at which I was privileged to be present, I cannot do better than quote the chairman's own words.

"Gentlemen," he said, "it is scarcely necessary for me to introduce to you Professor Blibstein, for his name has been a household word to all for many years. He is, as you know, the acknowledged leader of the very newest movement in architecture, and when I say newest movement it stands to reason that it is the greatest movement. Professor Blibstein stands"—and here the lecturer looked at the distinguished guest with just a little hesitation, as if for once his fluency had betrayed him into using a wrong word—"I mean, he sponsors, nay, he leads the movement which has for its object the abolition of all the redundancies, the useless trappings of architecture. Professor Blibstein stands for—no, no, I mean he advocates—first principles, the return to nature. And in order to emphasize his adherence to this straightforward and elemental philosophy, for the last twenty-five years he has walked on all fours, this being the posture appropriate to those who wish to begin at the beginning of things, who are determined to start with a clean slate.

"Students of anthropology will tell you that infants of the human species crawl before they walk; and it is the special merit of Professor Blibstein that, unlike those of us who have yielded to the corrupting influences of adult life, he has retained the innocence of childhood which is symbolized by the quadrupedal attitude.

"Gentlemen, I need not remind you of the disgraceful persecution to which Professor Blibstein has been subjected. The vulgar herd have failed to recognize the purity of his motives and the exalted intellectuality which his behaviour expressed. We remember the jibes and jeers which first greeted him when with a noble determination he first decided to abandon that verticality of posture which is assumed far too easily by his shallow-minded critics, not one of whom would have the courage to do what Professor Blibstein has already done, namely, walked from Burlington House to 9 Conduit Street on all fours. But never mind, Professor Blibstein has now outlived ridicule and persecution, and he comes before us as a redoubtable champion of first principles in architecture at whom nobody can afford to scoff. Professor Blibstein, if he has done nothing else, has made us all think. I now call upon our illustrious guest to address the meeting."

At this point the audience broke into thunderous applause, and indeed it was nearly a minute before the lecturer could make his voice heard above the din. And then at last he began.

"Gentlemen, it is highly gratifying to me, a foreigner, to be received so cordially by such a representative gathering of British architects. But, as you know, these agreeable relationships which now subsist between myself and my professional brethren in your country have not always been in evidence, and I blush to say that there have even been moments when they have failed to take up the golden threads of my message. But I bear them no grudge on this account. Of course, my designs were too daring, too original for the taste of these stick-in-the-muds, but what do I care? I should leave them to stew in their own juice. Let them cling to their half-timber work."

Here the members of the audience clapped their hands with delight. This was indeed a sally after their own hearts.

Professor Blibstein, warming to his theme, continued:

"It naturally comes as a shock to those still clinging to the Tudor tradition when they see the clean, straight lines of my compositions. Gentlemen, we have had vertical emphasis and we have had horizontal emphasis, but allow me to inform you that both of these now are hopelessly *passés*. What we require today, and what we of the modern movement insist upon having, is *diagonal emphasis*.

"Now, my friends, some of you may like to know why there is this urgent necessity for diagonal emphasis. I think that, without indulging in undue self-praise, I may say that first and last I am logical.

"I adore logic. I sometimes feel that I should like to live in a world of nothing but syllogisms, and to die in the act of exposing a *non sequitur*. But, to come to the point, the reason why all the sides of my windows make an angle of 45 degrees, thus obtaining diagonal emphasis, is that *I think diagonally*.

"To the architecturally *élite* this statement carries conviction by itself. To those whose reasoning faculties operate more slowly I am ready to explain still further. Why do I think diagonally? The obvious reason is that the two extremes—those who think vertically and those who think horizontally—are guilty of tiresome errors. Obviously the truth must lie between these points of view. Now the exact mean between the vertical and horizontal is the diagonal. Therefore, it is clear that those who would preserve a philosophic balance between excesses of verticality and excesses of horizontality must necessarily choose the diagonal, and, having chosen it, stick to it like a leech. And remember, my brothers, that these diagonal windows, such as I have here drawn upon the blackboard, symbolize the geometricality of the present age.

"For goodness' sake let us away with all the useless incrustations of the period styles. Let us return to pure geometry, and let us get back to first principles. To do this effectively we must first return to the quadrupedal state and so recover our architectural innocence."

I could see that this remarkable occasion was now reaching its finale.

With a burst of enthusiasm, which could only be described as religious, the members of the audience, who had at first stood up to cheer, took to the floor and proceeded to crawl about, making animal noises of various kinds.

"Well, well!" I said to Dr. Sestercius, "you have indeed got a wonderful farmyard to look after, and I hope some day you will write a book about it. I cannot help feeling that these manifestations of dementia are most significant, and all of us have something to learn from them. Meanwhile, may I trespass on your kindness still further and ask if I may be privileged to visit your establishment again?"

"Certainly," said Dr. Sestercius, as he conducted me away from the architectural hullabaloo towards the entrance of the asylum. "I am only too pleased when members of the public take an interest in what we are doing. But now I shall 'good-bye' as I must go and have a peep at the painters."

LONDON'S DIVERSITY IN ARCHITECTURE: TWO BUILDINGS OF 1930

A BLOCK OF FLATS



Berkeley Court, Baker Street, N.W.: W. E. Masters, architect. The façades to Marylebone Road (left) and Baker Street. There are 128 residential flats, two artesian wells and a roof garden, over an acre in extent. The building stands on an island site. It is faced with brick, with Portland stone dressings.

A CINEMA THEATRE





The New Victoria Theatre, entrance front to Wilton Road, S.W.: W. E. Trent and Wamsley Lewis, associated architects. Not many buildings, certainly no cinemas, completed in London during the past twelve months, have given rise to so much discussion, at least as regards the exterior. Most of the front has horizontal emphasis; the vertical emphasis at the entrance has been somewhat masked by the signs erected in front of it.

LANDMARKS OF THE YEAR

A Retrospect of 1930

BY PROFESSOR C. H. REILLY

How far has the modernist movement progressed ? With this inquiry the author opens his customary appreciation of the year's work—most of which, it is significant, has been in and about London. Finding signs of it among the Elder Statesmen, he passes to the frank modernists, and to the apostles of tradition. And so an estimate is tacitly formulated.

THE MODERN TREND

OF recent years the chief interest of the annual survey of the buildings of the year, for me at any rate, and I expect for others, has been the excitement of seeing how far the modernist movement has progressed among us. What new and exciting manifestations of it will the year have brought forth ? Which of our great men will have caught the infection, and which will have been too well bandaged in the cotton wool of success, or too encased in the hard shell of middle-aged convictions, to show any susceptibility to this new wind which is certainly blowing with ever-increasing force, whether we consider it to be composed of fresh air or merely of hot air ?



Westminster Housing Scheme : Sir Edwin Lutyens, architect. "Here . . are the most pleasing as well as the most exciting blocks of workmen's flats which have yet been put up in this country."



Cropthorne Court, Maida Vale, W. : Sir Giles Gilbert Scott, architect. "One expects something thrilling from him. . . . There never was in this country a more truly functional plan for flats for the middle classes whose claim to the sun in their rooms has to be listened to."

Looking over the illustrations of the year the Elder Statesman who shows the most conspicuous signs in his work that he is aware of what the younger men are driving at is Sir Edwin Lutyens. Of course, he is not an Elder Statesman at all—the term is indeed the last one would apply to him—but the youngest and most vital of us all. The first block of his great Westminster Housing Scheme shows this very clearly if not with perfect consistency. The great point about German tenements is that they emphasize the blocks. To allow people to live in mass formation, like ants or bees, is the chief function of these buildings. The modern German functional architect seizes therefore on this aspect or function, and expresses it ruthlessly. Detail disappears, and block is contrasted with block, as so much blockishness.

Sir Edwin at Westminster does the same, but does it so much more interestingly. To express the mass of his blocks and the number of his tenants, the texture of the brickwork or even the pattern of the windows, was not enough. He consequently goes a step farther and covers his blocks with a chequer pattern. It is a fine and truly functional idea. As block after block is built, this larger chequer pattern will unify his scheme, hold the blocks together, and give them light and life. Go and see the block that

is already built, on a wet, dark day, and it will be found standing out bright and cheerful among encircling gloom.

Of course, the thorough-going modernist, though rejoicing in the new way of emphasizing the mass which Sir Edwin has discovered, as well as in his strong, stark balconies and cliff walls without any cornice, will find fault with his Georgian windows and Wren-like doorways. I find the latter, myself, a little out of character with the superstructure. The windows with their bars I like, as texture, and, after all, it is cheaper for a working-man to break small panes than large ones.

Here, at any rate, are the most pleasing as well as the most exciting blocks of workmen's flats which have yet been put up in this country, or indeed anywhere, save perhaps in Vienna, and they have been done in a modernist way by our leading classicist. Who can now say the new movement is not making progress among us? If Sir Edwin does a few more things like this, Spain and England will not be considered by the Germans, as they are at present, the two architecturally derelict countries of the world.



Whitelands Women's Training College for Teachers, Putney, S.W.: Sir Giles Gilbert Scott, and the contrast of window-pattern with fine brickwork for its main effect. . . . Features

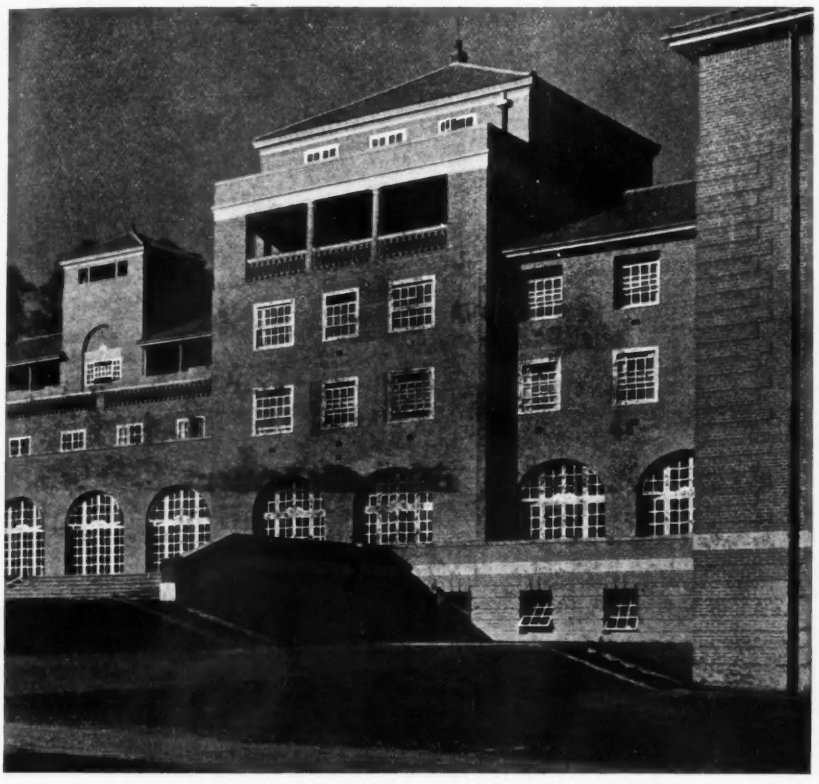
CHIMNEYLESS FLATS IN MAIDA VALE

The year has brought forth another interesting block of flats by another crowned head, the chimneyless ones in Maida Vale, by Sir Giles Gilbert Scott. Sir Giles, of course, is a young man with an ever-decreasing handicap at golf, and one expects something thrilling from him. Cropthorne Court amply provides this in its plan. There never was in this country a more truly functional plan for flats for the middle classes whose claim to the sun in their rooms has to be listened to. I have visited these flats, and once inside an apartment I have never felt less like being in a flat. The living-rooms, of normal shape, each with a window at the end and at the side of the room, not only get the sun as it travels round but each gives you the feeling that you are in the pleasant sitting-room of some spacious house in fine open surroundings. This, I think, is an extraordinary achievement, and it has been brought about by purely functional planning and letting the shape of the exterior look after itself.



The Empire Hall, Olympia, Kensington, W.: Joseph Emberton, architect. "His front, in spite of its new forms, has a fine monumental appearance, with which the strong modelling of the word 'Olympia' . . . has a good deal to do."

Having got as far as that in breaking away from the tradition of a flat front to the street, one cannot help wondering why the architect troubled about a pantile roof, hipped to all the new angles he has formed, a cornice, some round arched windows and traditional architectural features of that kind. In his entrances, vestibules, and in the actual rooms themselves, there is no strictly traditional detail, but very charming simple lines and offsets to emphasize the shapes used. I cannot help wishing myself that the ashlar base of the building had been in stone and not in a buff terra-cotta, but the colours used throughout are delightful, and the plain masses of good-looking brickwork Sir Giles has given to the many returns of his plan



architect. "A great group of fine brick buildings relying on the composition of their masses of the design, and very pleasing ones, are the open belvederes and the great terraces."

bring a fine solid character to the whole block.

WHITELANDS COLLEGE

As last year, with his Salvation Army buildings, the same architect has produced, or rather revealed, during the year another great group of fine brick buildings, relying on the composition of their masses and the contrast of window-pattern with fine brickwork for its main effect. It is called Whitelands College. Rarely in this country does one see such interesting grouping as the photograph reveals. Features of the design, and very pleasing ones, are the open belvederes and the great terraces. There is obviously a fine Italianate Chapel with pantile roofs. Anyhow, it looks a delightful place in which to live or work.

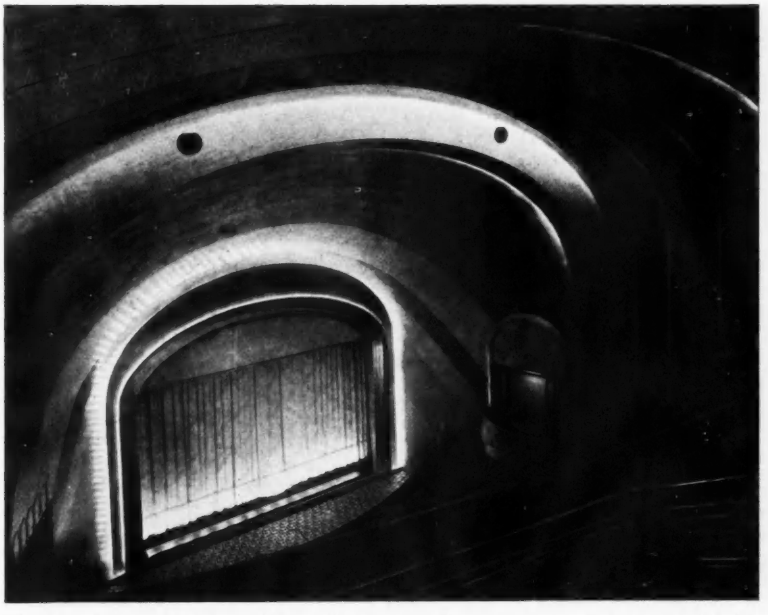
WHAT THE MODERNISTS HAVE DONE

Having mentioned now the work of the great, who are yet young enough in spirit to be leaders of youth and who show this in all they do, let us now boldly face the new world we are soon to live in and see what the modernists have done. Their three chief buildings this year are, I think, Olympia, the inside of the Cambridge Theatre, and the Bechstein Hall in Brook Street.

There is no shadow of doubt about Joseph Emberton's new Olympia. I never knew a building so positive about itself. There it is, an immense, massive, stern-looking, horizontal mass, saying very clearly: "This is the new dispensation; you may like it or not, but this is what purely functional building means." One may confess at once that next to the new dispensation the old looks rather absurd. The sooner Mr. Emberton rebuilds the rest of Olympia and all the streets round it the better. For myself I should like to give him a new town to build. I do not feel London is safe with him. What if we found him one day building in St. Paul's Churchyard—though on second thoughts I think St. Paul's is the one building strong enough to stand up against him? What a jolly bombshell a building of his would be in the City—in Lombard Street, say—and what a lot of good it would do!

I have heard Mr. Emberton explain that the arrangement of windows on his Olympia façade is a direct expression of the plan, the long vertical ones in the centre representing the central area and staircase, the long horizontal ones giving light to the exhibition halls, exactly at the level above the exhibition cases where light is most needed, and the little ones at either end representing the staircases from each floor. That is true, of course, but that they make so symmetrical and monumental an arrangement is due to the symmetrical and monumental arrangement of his plan. If the exigencies of his plan had dictated an asymmetrical arrangement of windows, would he have followed it? I believe he would, but I am glad he did not.

Personally, I think a certain amount of make-believe is necessary in architecture, but one cannot expect the

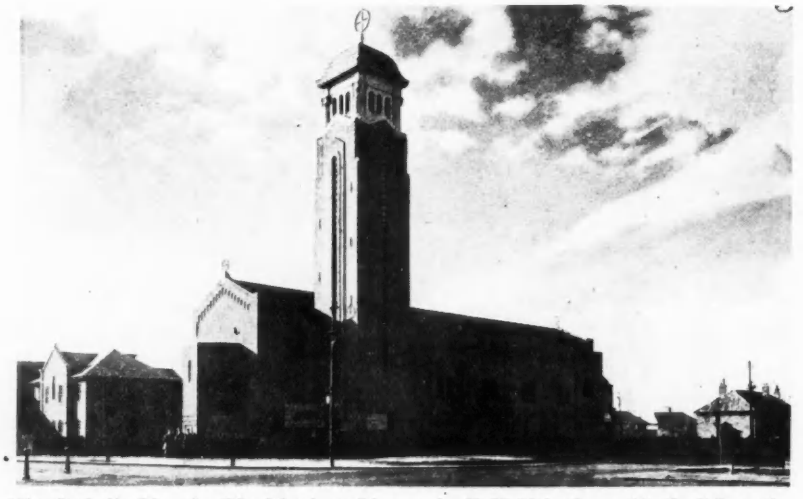


The Cambridge Theatre, W.C.: Wimperis, Simpson and Guthrie, architects. "The unadorned curved shapes and lines of this theatre make it the most gracious in London, and spell the end, I hope, of over-modelled fibrous plaster."

crusaders of a new faith to agree to that at the outset. What is particularly fine and what does not show in the illustration is the modelling of the entrances and exits under the marquise. The centre one has the fine effect of great depth, suggesting thick walls above. Mr. Emberton, I believe, apologizes for this piece of make-believe; for, of course, the walls are thin. It seems to me an unnecessary apology. Most of us would gladly accept the happy little accidents the gods give us in this way without worrying our consciences overmuch.

Whether Mr. Emberton accepts it or not, his front, in spite of its new forms, has a fine monumental appearance, with which the strong modelling of the word "Olympia" at either end of the façade has a good deal to do; and for that no happy chance, I take it, was responsible.

The interior of the Cambridge Theatre by Wimperis, Simpson and Guthrie, with its decorations by S. Chermayeff, of Messrs. Waring and Gillow, shows that, when they allow themselves the luxury of curved forms, the modernists can be as exciting and thrilling as when they stick to their pronounced straight lines, vertical or horizontal. Indeed, the unadorned curved shapes and lines of this theatre make it the most gracious in London, and spell the end, I hope, of the over-modelled fibrous plaster things that have so long disgraced us and no doubt have had their part in keeping our drama where it is, comfortably below that of every other European nation.



The Catholic Church of St. Matthew, Liverpool: F. X. Velarde, architect. "Owes its freshness a little to Ivar Tengbom, but most to its author's graceful invention."



Bechstein Hall, Brook Street, W.: Sir John Burnet and Partners, architects. "The inside of the Bechstein Hall, where one sees the finished article, is very fresh and delightful."

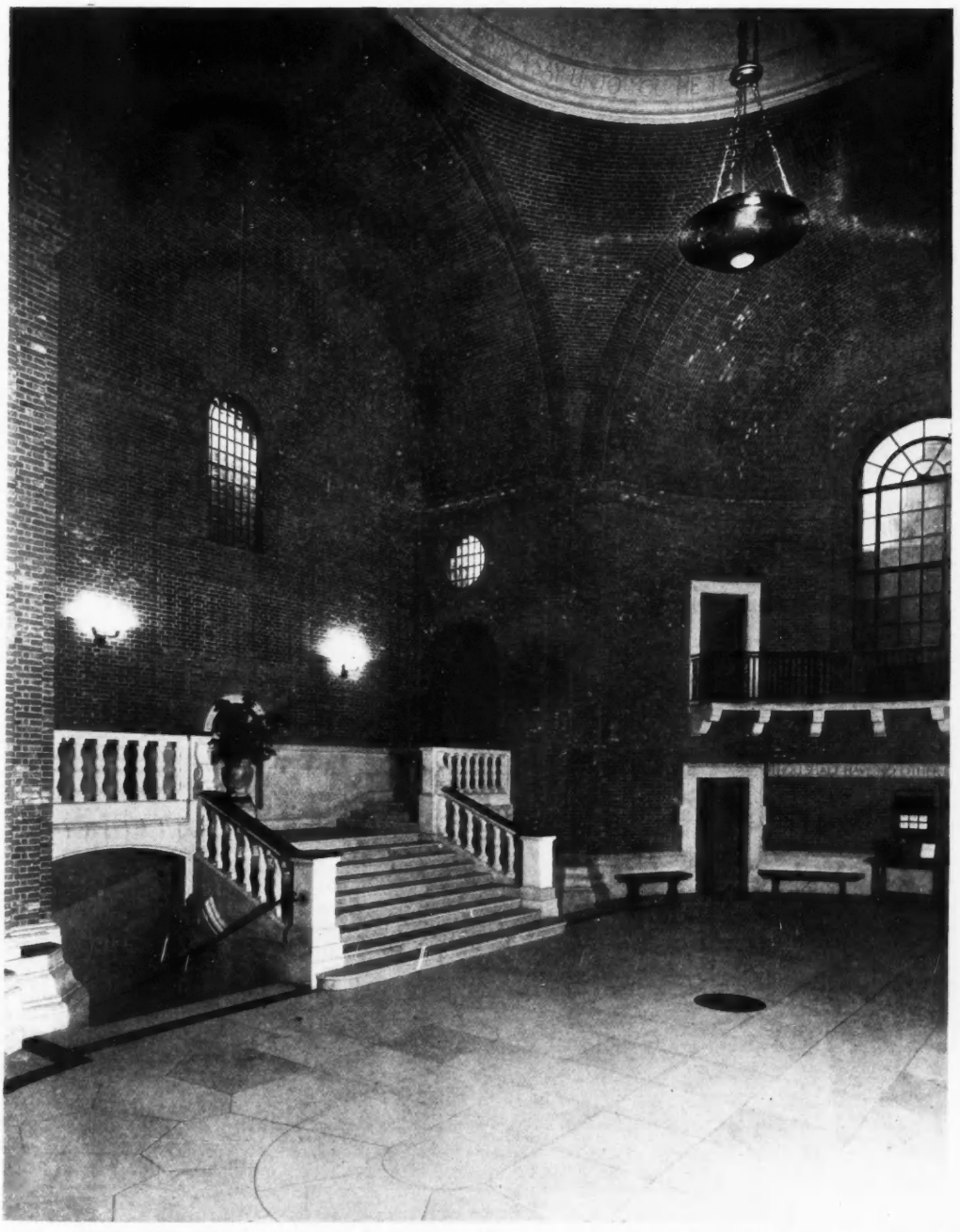
While talking of London theatres there is a little new one in Whitehall by E. A. Stone, so clean and simple in its lines that it makes the new Government Offices, banks and public-houses of that great thoroughfare look as if they needed a shave.

The Bechstein Hall in Brook Street suggests to me the beginning of a monumental block of which we are at present seeing only the end bay. It seems unfair therefore to judge it on this bay alone. Parts of it look too heavy for the present mass, but would probably fall into place in the larger scheme. In connection with this and other modernist buildings one cannot help wishing their designers would invent some other way of decorating a surface beyond concave and convex fluting.

The inside of the new Bechstein Hall, where one sees the finished article, is very fresh and delightful. It is, of course, by Sir John Burnet and Partners.

"THE DAILY TELEGRAPH" BUILDING

Not quite modernist and not quite traditional, but serving as a bridge between the two, is the new *Daily Telegraph* building in Fleet Street, by Elcock and Sutcliffe and Sir John Burnet and Partners (see pp. 73-81). Here the architects have allowed themselves



The Ninth Church of Christ, Scientist, Westminster (the entrance hall) : Sir Herbert Baker, architect. "If not a modernist he is certainly an adventurous spirit. . . . His entrance hall, with its great apsidal ends, and his barrel-vaulted Sunday school are fine things of which most people would not have seen the possibility."

recognizable columns and have framed these in the Egyptian manner with a great architrave, a motive which Sir John Burnet and his friends have used before in their classical days. Whether one likes the Teutonic flavour of this rather heavy building or not, one cannot help being impressed by its strength, by the way it stands up and dominates Fleet Street. In the perspective of the street its tall flanks, rising above the adjacent buildings and treated monumentally in stone, are very impressive. These, of course, may be hidden in time, but I think the owners and architects have been very wise to make the best of them while they last. The result is that at present this great Egyptian pile of stone, with its big but uninflected columns in their vast architrave frame, its solid attics one over the other, and its massive pylons one behind the other, makes a sort of mausoleum building, which its modernist authors, proud as they can rightly be of it, must find a little difficult to reconcile with the slender steel frame which upholds it. I think they would have to admit to a little more than the modicum of make-believe I feel is necessary.

I need not deal with Sir John Burnet's great headquarters of Lloyds Bank (with Campbell, Jones, Sons and Smithers in association), which is certainly one of the most important buildings of the year, because it has

been so much illustrated. It will be remembered that it has the same massive monumental qualities as the *Daily Telegraph* building, but refined to the pitch of a great Corinthian order, on which I hear the directors insisted. Lloyds Bank has, too, a great monumental public banking hall, the first of its kind in England. I suppose there is no reason for a great internal feature of this sort in a newspaper office. It is certainly not there, yet the Fleet Street front of the *Daily Telegraph* building seems to imply its existence with a certain amount of emphasis.

Sir Giles Gilbert Scott more than anyone else has taught us that the church



Surrey County Hall Extension, Kingston: Vincent Harris, architect. "He has added to the romping Victorian block a quiet and charming neighbour and then . . . balanced the Victorian work with a gabled wing."

of today, of whatever community, may be treated with freedom and yet retain its atmosphere of reverence. The result is that church design has once more become popular among the younger men. An evidence of this is the great entry, of 150, for the Guildford Cathedral Competition. This year has brought forth several churches of distinction which, too, are on the border line between modernism and tradition. No one yet in England has ventured on a gay Le Raincy church or on a German palæolithic cave one.

ST. MATTHEW'S, LIVERPOOL

F. X. Velarde's Catholic Church of St. Matthew at Liverpool owes its freshness a little to Ivar Tengbom, but most to its author's own graceful invention. It is difficult for me to praise this church, living as I do in the Liverpool School in such close touch with Velarde, who is a colleague of mine there, or rather it is difficult not to be always doing so. It is sufficient to say perhaps that Liverpool is intensely proud of it, and that its sanctuary, with its emerald-green and gold baldacchino, altar and other furniture, is becoming one of the good things visitors to the city make a point of seeing. In the forthcoming Cautionary Guide to the town, giving a list of good and bad things, it will have a high place on the right side.

THE NINTH CHURCH OF CHRIST, SCIENTIST, WESTMINSTER

Sir Herbert Baker always seems to me rather like Wren in being the amateur inspired by fine ideas but sometimes making howlers. If not a modernist he is certainly an adventurous spirit. In the Ninth Church of Christ, Scientist, Westminster, his entrance hall, with its great apsidal ends, and his barrel-vaulted Sunday school are fine things, of which most people would not have seen the possibility. The circular church itself does not look so impressive, but how could such a church be impressive, with no altar or chancel to form a focus, and yet with the seats having to face one way instead of being set out in concentric circles?

Adams, Holden and Pearson have done a delightful little chapel, as simple and unpretentious as possible, for Sutton Valence School, yet with the dignity, both externally and internally, which comes from that one inexpensive but priceless thing which architects can give to their clients—good proportions.

THE WELL-BEHAVED

I think we can now pass to the buildings which, while not aiming at any modern expression, are yet thoroughly satisfactory and at the same time thoroughly English. There are this year two excellent examples of this kind of thing which I think we can safely say no other nation, in its own terms, does quite so well. They are Vincent Harris's extensions to the Surrey County Hall and W. G. Newton's to Uppingham School.

Of all our classical architects there are two whose building manners are always irreproachable. They are Vincent Harris and Arthur Davis. This is so rare, even among the exponents of the classical school, and especially among those who win their work in compe-

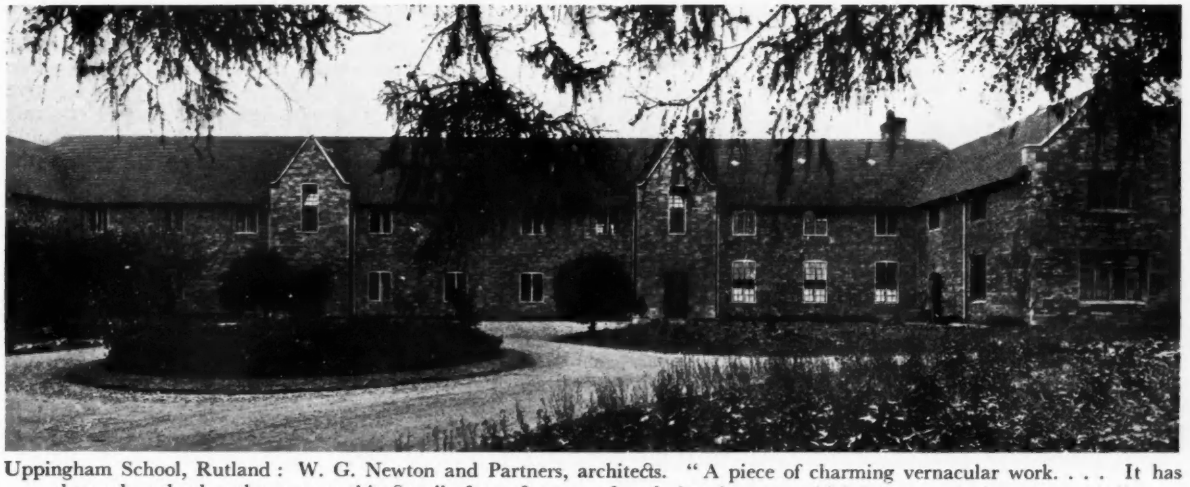
titions, that I think that the R.I.B.A., which will not, of course, look at the work of the modernists for several decades to come, ought to give to both of them their gold medal.

This year, in addition to starting his nice little building at Manchester, where he is spending a million or two of money in adding to the Waterhouse Town Hall, Mr. Harris has done this town hall work in Surrey. He has added to the romping Victorian block a quiet and charming neighbour and then, treating this latter as a centre, has balanced the Victorian work with a gabled wing which is extraordinarily clever in its good behaviour alike to the Victorian riot and to his own gentle central block. Architecturally, of course, Mr. Harris is a descendant of Norman Shaw, but without losing the vitality of that master's spirit he has superimposed upon it a refinement which the latter often lacked.

At Uppingham, W. G. Newton and Partners—I am sorry to see this style of anonymous association growing—have done a piece of charming vernacular work, exactly right for both the school and the district it is in. I could have sworn that only Mr. Newton in all England could have done it with the same charm, but now I have to wonder whether his anonymous partners can do it too. I hope, at any rate, in his great work of rebuilding the Merchant Taylors' School outside London, on which he is now engaged, something of the same quiet spirit of orderliness which is never harsh, and of charm which is never forced, will still appear. At Uppingham it has changed a school, rather poor architecturally for so famous a foundation, into one which it is a great pleasure to visit. However modern we may become in our towns in the next few years, I hope there will always be a place in the countryside of England for work like Mr. Newton's.



The Chapel, Sutton Valence School, Kent: Adams, Holden and Pearson, architects. "A delightful little chapel, as simple and unpretentious as possible . . . yet with the dignity, both externally and internally, which comes from that one inexpensive but priceless thing which architects can give to their clients—good proportions."



Uppingham School, Rutland: W. G. Newton and Partners, architects. "A piece of charming vernacular work. . . . It has changed a school, rather poor architecturally for so famous a foundation, into one which it is a great pleasure to visit."



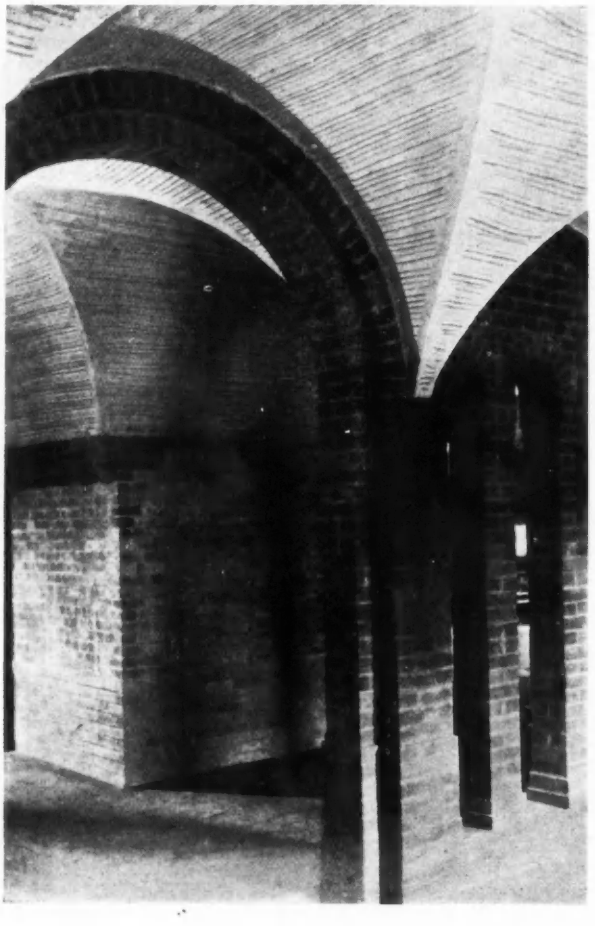


THE CHAPEL

(CURREY AND THOMPSON,

BY THE LATE

The article that is printed below was
the late Sir Lawrence Weaver, and
time before his lamented early death.
both Buckfast Abbey and the Kelham
of the Sacred Mission. Kelham
building as he had seen for many a day;



The two exterior views, reproduced above, are taken looking in south-easterly and south-westerly directions, respectively. The apse seen in both is a conspicuous figure in the north elevation, the only one which is so far completed. The nave, which is central, is square on plan, and is surmounted by the dome here shown.

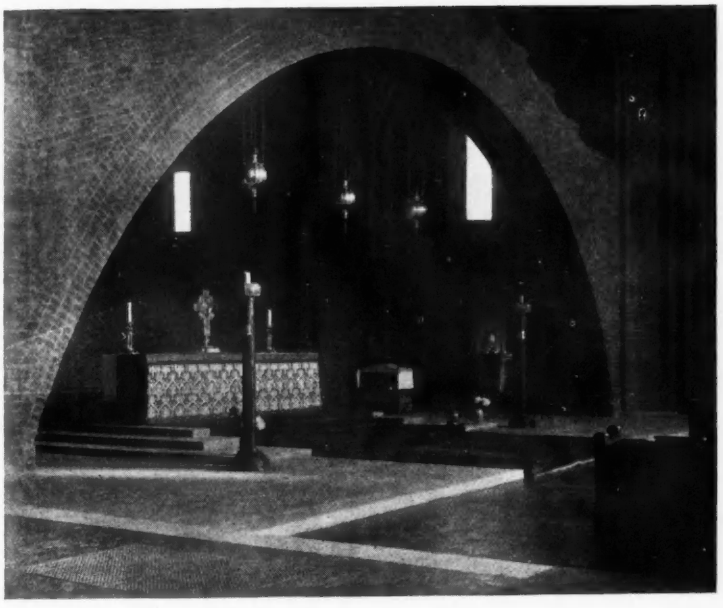
Cloisters by which the chapel is approached. The main entrance front is not in its finished condition, and no photograph of it is available.

INSPIRED, no doubt, by vague recollections of romantic novels and by early and unarchæological imaginings about the ways of mediæval building, I have always felt that some particular merit would emerge in a house of religion built by men of religion, rather than by a vulgar contractor.

A long desire to see Buckfast Abbey was achieved last Whitsuntide [1929—ED., A.J.]. Here, I thought, would be the authentic thing; here would be found that touch of craftsmanship greatly done by dedicated hands; here the taint of commerce and of contract would be absent, and the work would stand revealed as done only to the glory of God.

But my visit to Buckfast Abbey chilled me profoundly. It is a large church in the Norman manner. The building work has been carried out with the utmost care, with more care indeed than if the secular stonemason instead of the Benedictine father had been about it. But I saw no signs of that careless rapture to which we like to attribute the engaging irregularities that tease our interest in old buildings.

The design was very correct, as we





AT KELHAM

ARCHITECTS)

SIR LAWRENCE WEAVER

one of the last to be undertaken by
was, indeed, completed only a short
It was the outcome of visits to
Theological College of the Society
Chapel he declared to be as devout a
an achievement in sane modernism.

should expect from the experienced architect who provided the plans, but there was nothing to impress on my mind that this was a notable Benedictine achievement of our own day. The building did not reveal to me, what I am sure is the case, that it represents a splendid and sustained and notable effort by an ancient community blossoming into new life in a material age. I was sore and disappointed.

A few weeks later I visited the new chapel of the Society of the Sacred Mission at Kelham Theological College. The architects are Messrs. Currey and Thompson, of Derby. The building has been done in the ordinary commercial way by Messrs. William Moss and Sons, Ltd., contractors, of Loughborough.

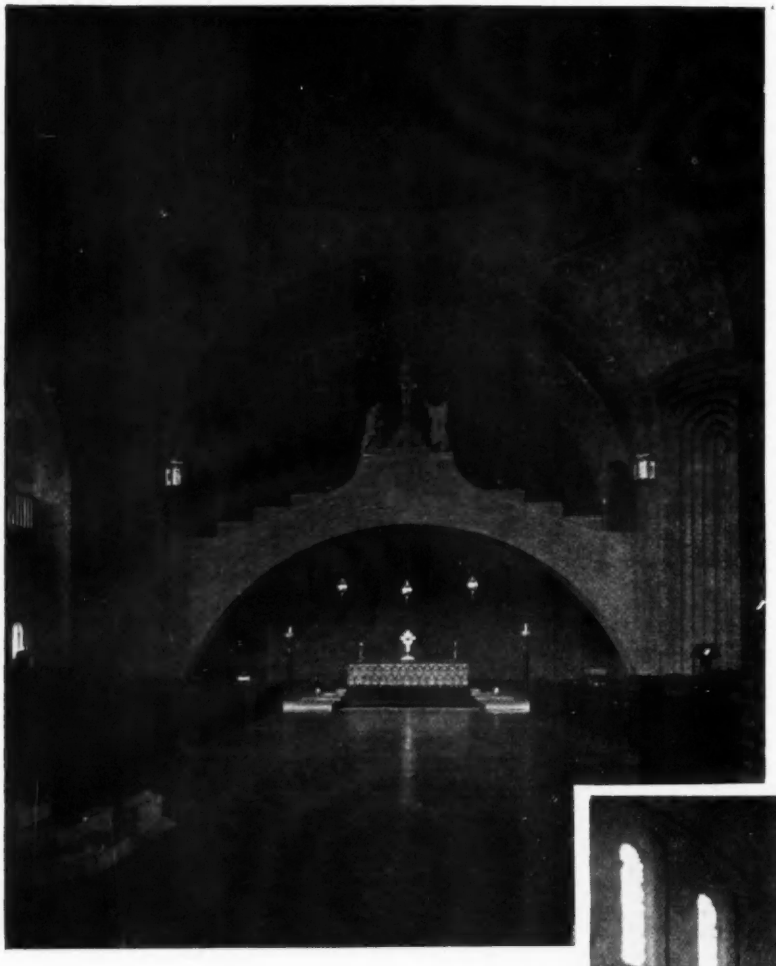
I was shown over the chapel by the warden of the community, a jovial, bearded man, who seemed to me to have the spirit of St. Francis and his brethren *joculatores Domini*. He evidently held his faith with blazing conviction, but found believing a jolly business.

It was clear that the members of this Society had put their hearts wholly and

Both the above views were taken with the camera pointing approximately north-east. That on the left is of the sanctuary, the High Altar framed in the rood arch, with a glimpse of St. Gabriel's Chapel. The other is from farther down the nave: an ambulatory will run beyond the lower arches on the right.



The great Crucifix group, designed by Charles Jagger, and carried out in bronze, which has recently been placed in position on the rood arch.



A general view of the nave and apsed sanctuary. The building is carried out in brickwork, and ornamentation is confined to such features as befit this medium.

delightedly into the building of a chapel to the glory of God and to the sacred purposes of their community. I am persuaded that the architects, when they tackled the task of designing this chapel, were infected by the same joy, for they have built a little house of God in Kelham which seems to me as devout a building as I have seen for many a day. Also it is an achievement in sane modernism.

As yet only one elevation, the north, is completed. In the accompanying photographs of the exterior the trees kindly veil the fact that the eastern elevation is incomplete. The same is true of the south and of the west. But the interior seems hardly to suffer from this incompleteness.

The nave is square on plan and roofed by a great concrete dome, and the high altar stands free in a projection which finishes with a segmental apse. The chapel is all of a decent red brick, with no ornament or other added richness. Before the altar a great brick arch has been provided to carry the rood, the bronze figures for which are to come from the hand of Charles Jagger before long. [They are now in position. —ED., A.J.]

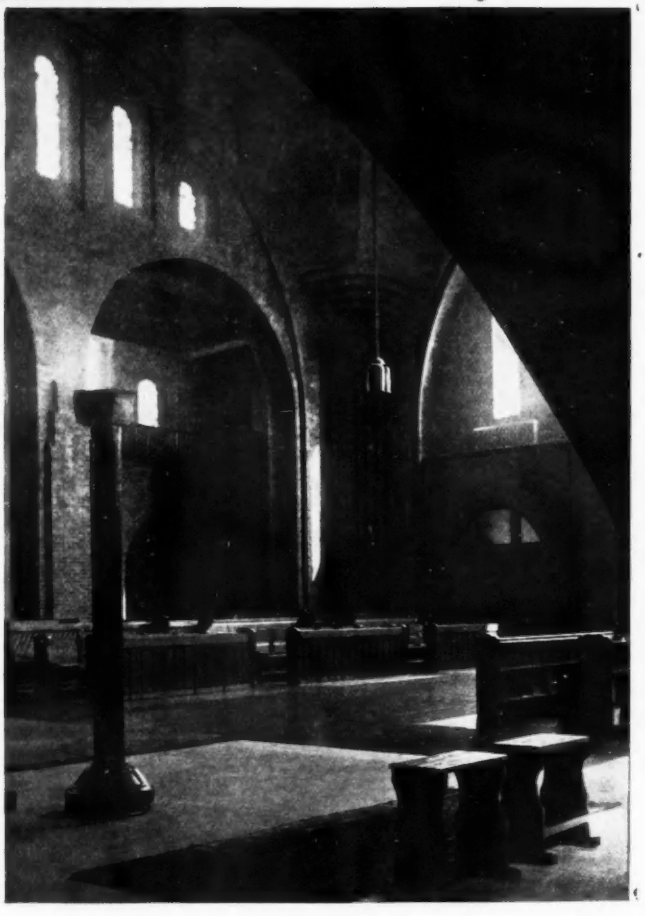
I could not help a comparison coming to my mind.

There was Buckfast Abbey, truly built in the spirit of sacrifice and service by devout men of a sacred community, the story written in stone with the old words pronounced in the old way : yet something was profoundly lacking.

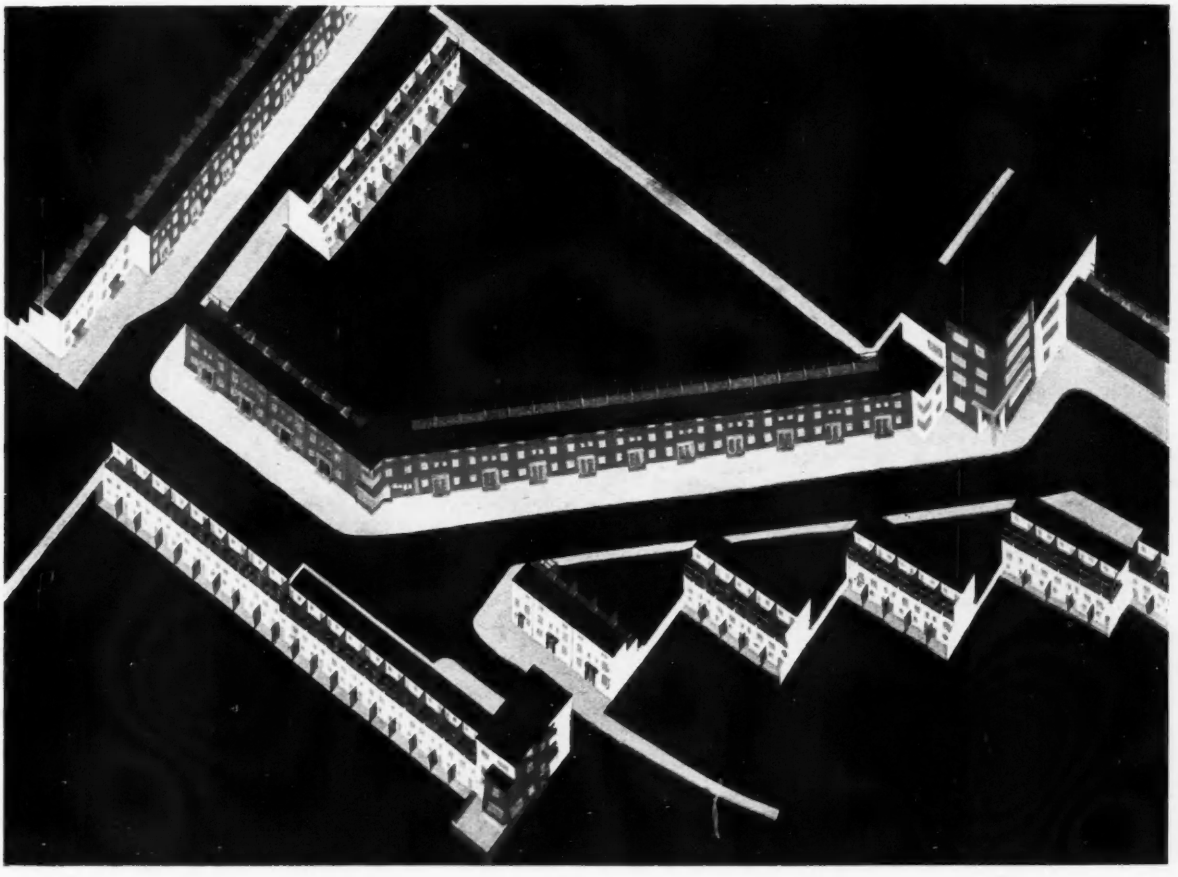
Here was Kelham, with the old aspirations finding utterance in new words and in new accents, but the methods employed were ordinary and commercial and unromantic.

And yet, because the design seemed to me alive, while the design at Buckfast seemed to me dead, Kelham is a success and Buckfast a failure. I trust I may be forgiven for making comparisons, but it would appear that passionate enthusiasm and highly mediæval methods will not by themselves produce convincing architecture.

In the long last that is a matter of design, and you may go to Kelham to see it.



A diagonal view from the sanctuary across the nave, showing part of the gallery that occurs above the narthex on the south or entrance front of the building.



THE PRAUNHEIM HOUSING SCHEME, FRANKFURT-A.-M., 1927:
An Aerial View of the Study
ERNST MAY AND EUGEN KAUFMANN, ARCHITECTS

From *Die Baukunst der neuesten Zeit* by Gustav Adolf Platz. Berlin: The Propylean Press
(See "Books of the Year")

THE SKETCH CLUB

TWENTIETH SESSION

Being Drawings by Sir Edwin Cooper, A.R.A.,
Royal Gold Medallist, 1931



HADDON HALL, DERBYSHIRE

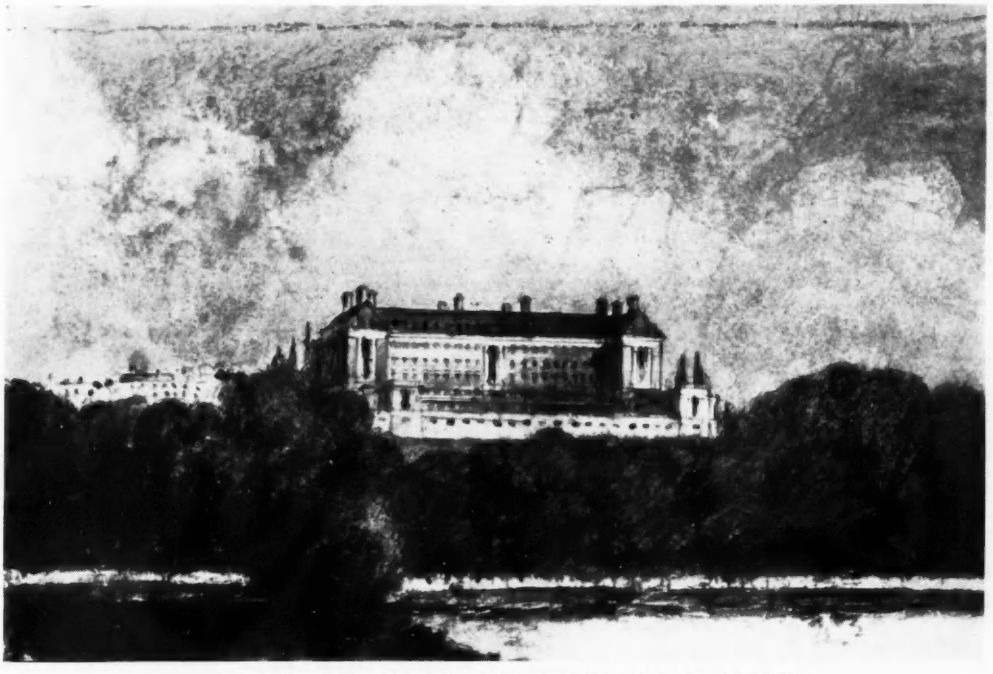
The Sketch Club is fortunate in being able to reproduce on this and the following pages a selection of six from among recent sketches by Sir Edwin Cooper. The originals are in watercolour, and owe much to their tones, which monochrome is powerless to suggest.



SHEPHERD'S COT, KINLOCH RANNOCH, PITLOCHRY, PERTHSHIRE

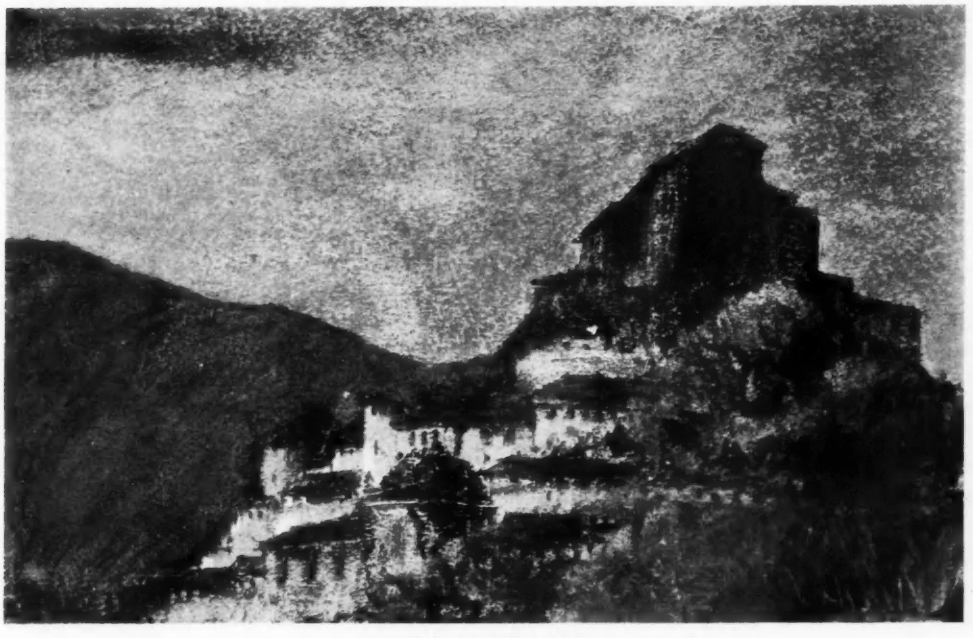


OLD MILL, KINLOCH RANNOCH, PITLOCHRY, PERTHSHIRE



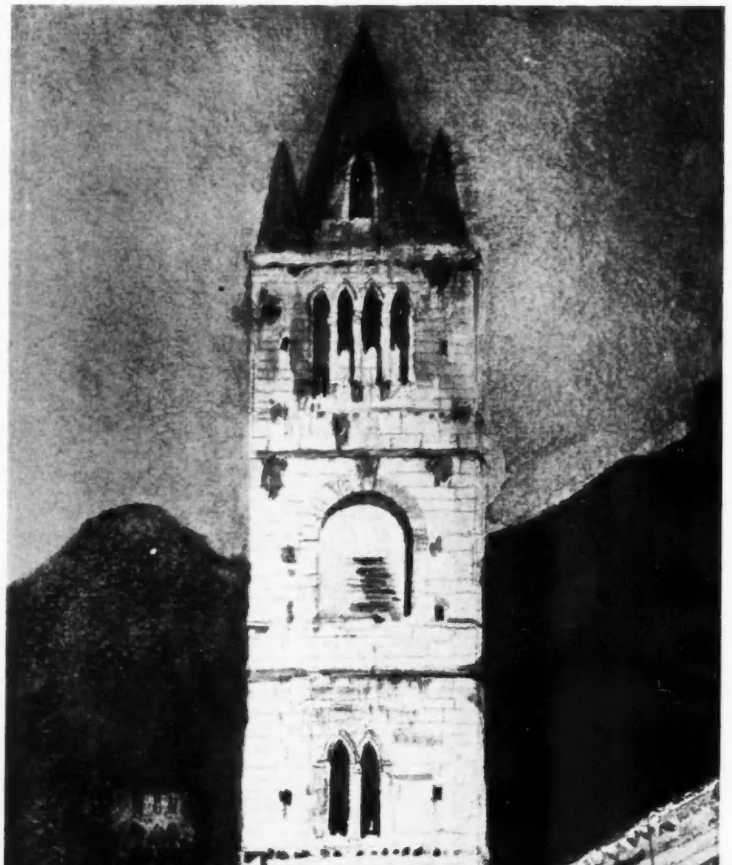
THE STAR AND GARTER HOME, RICHMOND, SURREY

(When the Star and Garter site was utilized for a Home for the Disabled, Sir Edwin Cooper was the hon. architect)



SUBIACO, ITALY

(Subiaco is a hill-town on the River Aniene, a tributary of the Tiber, about 35 miles from Rome)

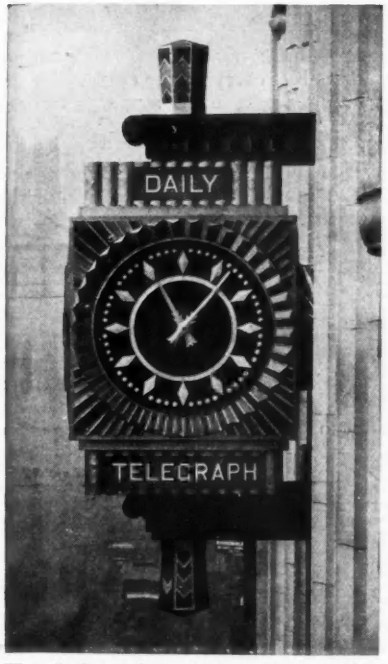


AT CARRARA, ITALY

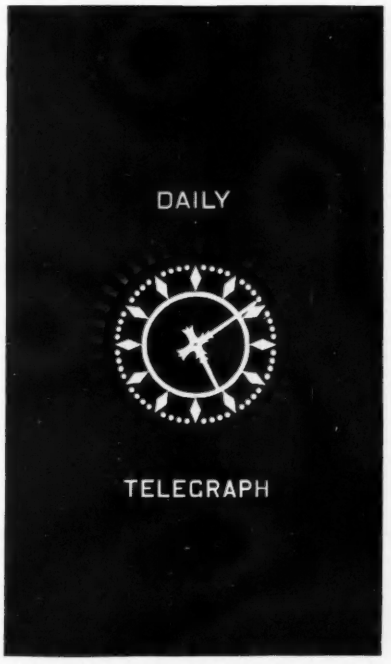
AT THE SIGN OF THE CLOCK

In Fleet Street, E.C.

ELCOCK AND SUTCLIFFE
AND
SIR JOHN BURNET
AND PARTNERS,
ASSOCIATED ARCHITECTS.



The clock by day. It is set in a golden case enriched by bright enamels and forms a striking landmark in Fleet Street.



The clock by night. It is designed and lit in the modern manner in keeping with the façade, and replaces its famous predecessor.

THE growing needs of modern journalism and the foresight of the directors of *The Daily Telegraph* have resulted in Fleet Street being enriched by a building which sets a new standard of scale and treatment of the modern constructional problem.

In addition to the varying problems arising from the complicated requirements of the plan, the necessity for obtaining access to the printing works at the rear of the new offices involved the construction of a temporary roadway for vehicular traffic; meanwhile, in order to provide accommodation for the staff, it was necessary that the first portion of the building, with all its services, should be ready for occupation before demolition of the old offices was commenced. Under these onerous conditions congratulations are due to the general contractors [Messrs. Carmichael (Contractors) Ltd.] that during the whole of the building operations the publication of the paper was carried on uninterruptedly.

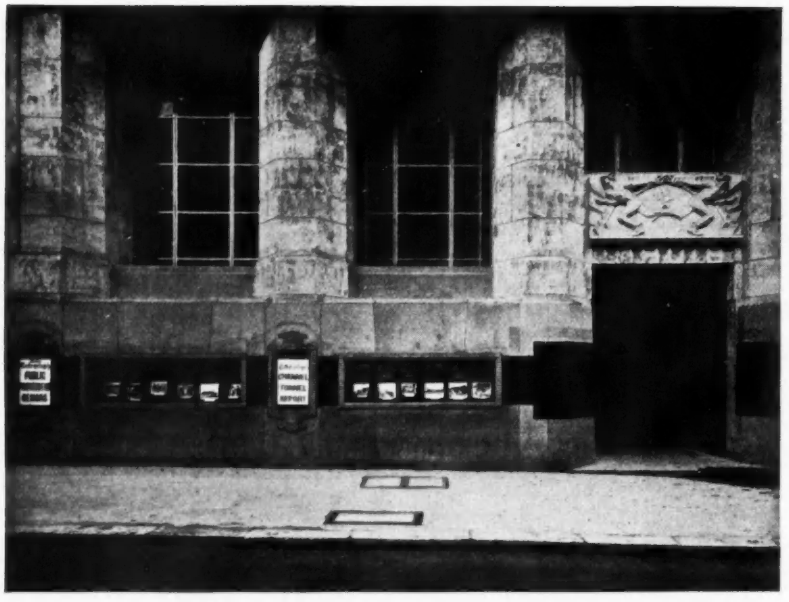
The first consideration of the architects was to provide a building in which intercommunication between the



The main entrance, from Fleet Street. On either side are photograph-showcases, illustrations of which appear on the following page.



The main inner doors from Fleet Street, looking from the entrance hall. They are of wrought iron and, with the greater part of the metalwork on the ground floor, are coloured Pompeian green.



The main entrance and two of the photograph showcases. The latter, a back view of one of which is shown below, have bronze frames.

many departments was simple and direct, and in which every inch of floor space was used to its best advantage. For this reason the number of main supports was reduced to a minimum (there are only four internal stanchions), thus permitting straight corridors and offices of convenient shape; and the main staircase, with the battery of three high-speed lifts and letter conveyor, were therefore placed in the centre of the building.

The architects, while refusing to be bound to traditional styles and cast-iron rules of diameters and modules, have produced a building which exhibits, externally, a definite relation of solid and void: by the use of simple motives of fluted and reeded bands in the main parapet and terminations of the two tower-like pylons an intriguing skyline has been obtained. Friezes and soffits with scalloped and triangular edges institute a form of decoration which is used throughout the building.

From a strong base of Creetown granite, relieved by a band of black marble, which is pierced by four bronze-framed photograph showcases, rise strong semi-octagonal piers supporting a projecting balcony at the first-floor level. These piers form the bases for the tall columns between which are large windows in bronzed frames occupying the whole wall space between floor and ceiling; the whole is framed by a wide architrave between two strong buttressing towers, at the base of which are the cartway entrances to the courtyard in the rear.

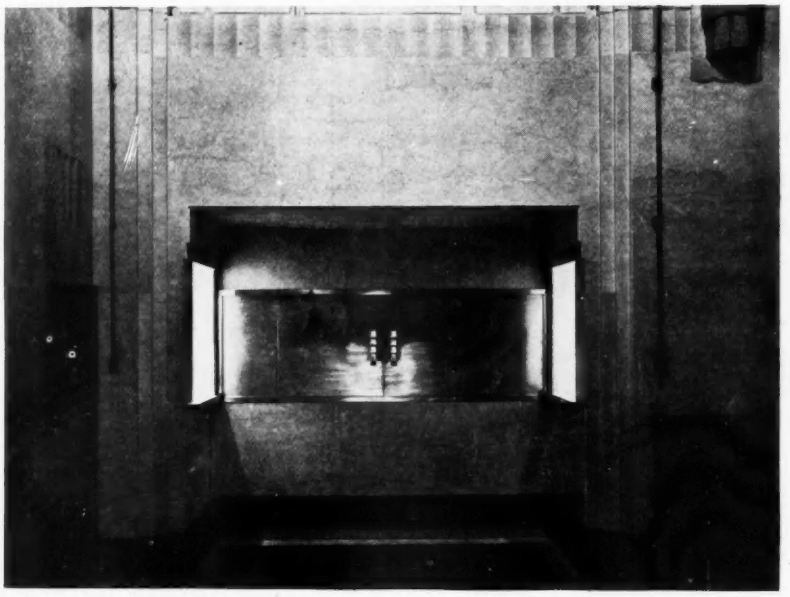
The famous *Telegraph* clock has been replaced by one more in keeping with the modern treatment of the façade. With its golden case enriched by bright enamels of scarlet, green, blue, mauve and yellow, it forms a landmark in Fleet Street and a reminder of the immense services rendered to the community by the fourth estate.

There are nine floors, including the basement, which covers practically the whole of the site, and extends from Fleet Street under the courtyard behind the public offices to the printing works in the rear. It contains lavatories, storerooms, cloakrooms and calorifier-room, through which run the large main cables carrying the current for the printing works to a separate switch-board in the dynamo-room.

The ground floor is entirely occupied by the public offices, which form one of the most interesting features of the building. These are divided into two portions by the entrance hall, which runs through the centre to the main staircase and lifts between screens of glass in bronzed frames. These, with the whole of the metalwork on this floor, are coloured Pompeian green. Around three sides a gallery is carried at mezzanine-floor level, which, in addition to providing extra office accommodation, gives a sense of scale to the whole.

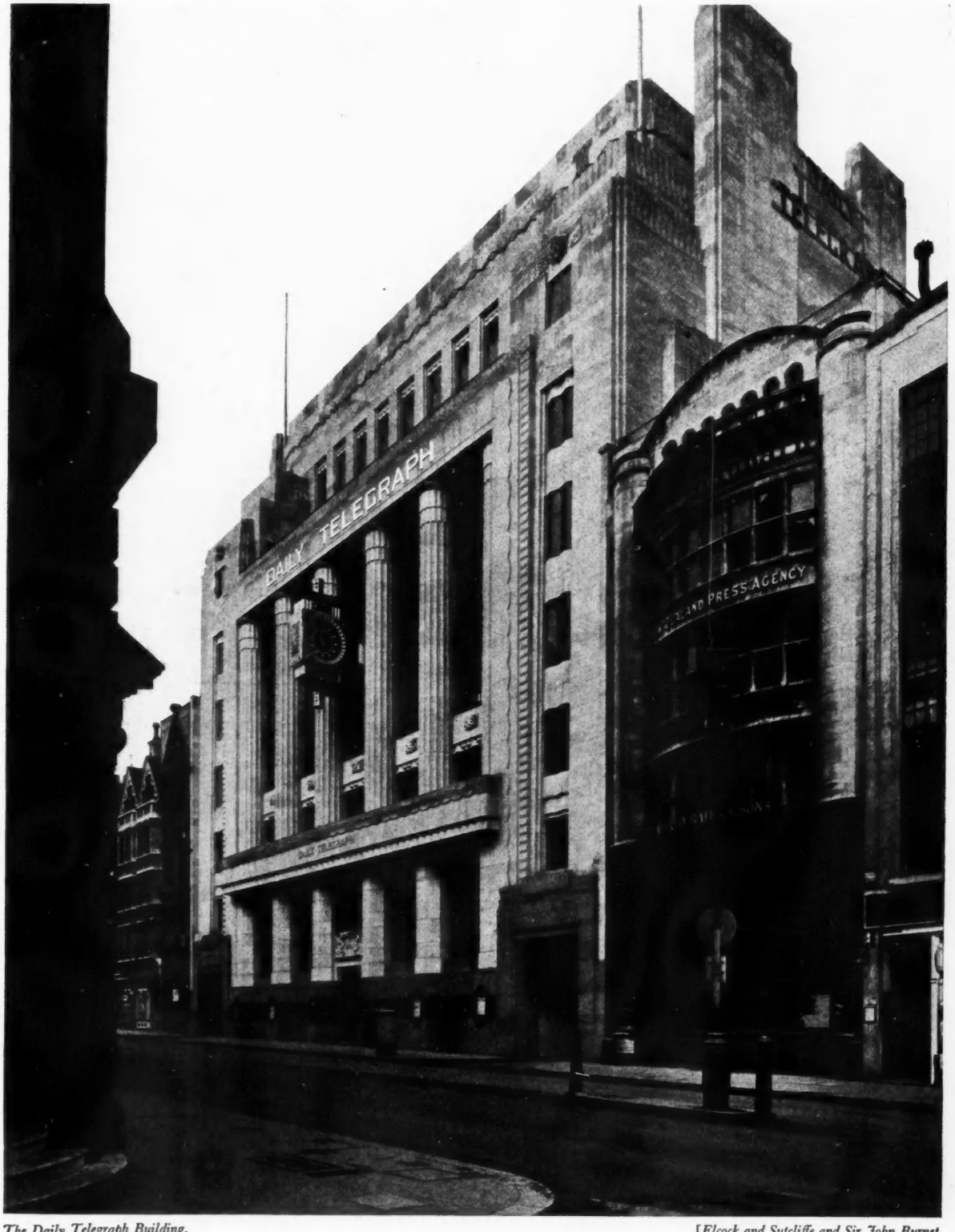
The walls of the public offices, and the counters which run round two sides of each, are of Botticino marble, with a black marble skirting. The floor is of green rubber tiles and the counter top of black rubber; these, together with the special sound-absorbing plaster which has been used on the simply panelled ceiling, produce a sense of quiet in strong contrast with the noisy bustle of Fleet Street, without.

Five large windows with massive iron grilles provide light from Fleet Street, while smaller windows beneath the balcony light the offices on all sides. The artificial light is supplied by wall brackets and five great octagonal lanterns, designed in bronze, with etched and satin-finished glass sides in recessed planes.



The Daily Telegraph Building, Fleet Street, E.C.] [*Elcock and Sutcliffe and Sir John Burnet and Partners, associated architects.*

A back view of one of the photograph showcases. On either side of the two doors, which give access to the showcase, is a writing desk.

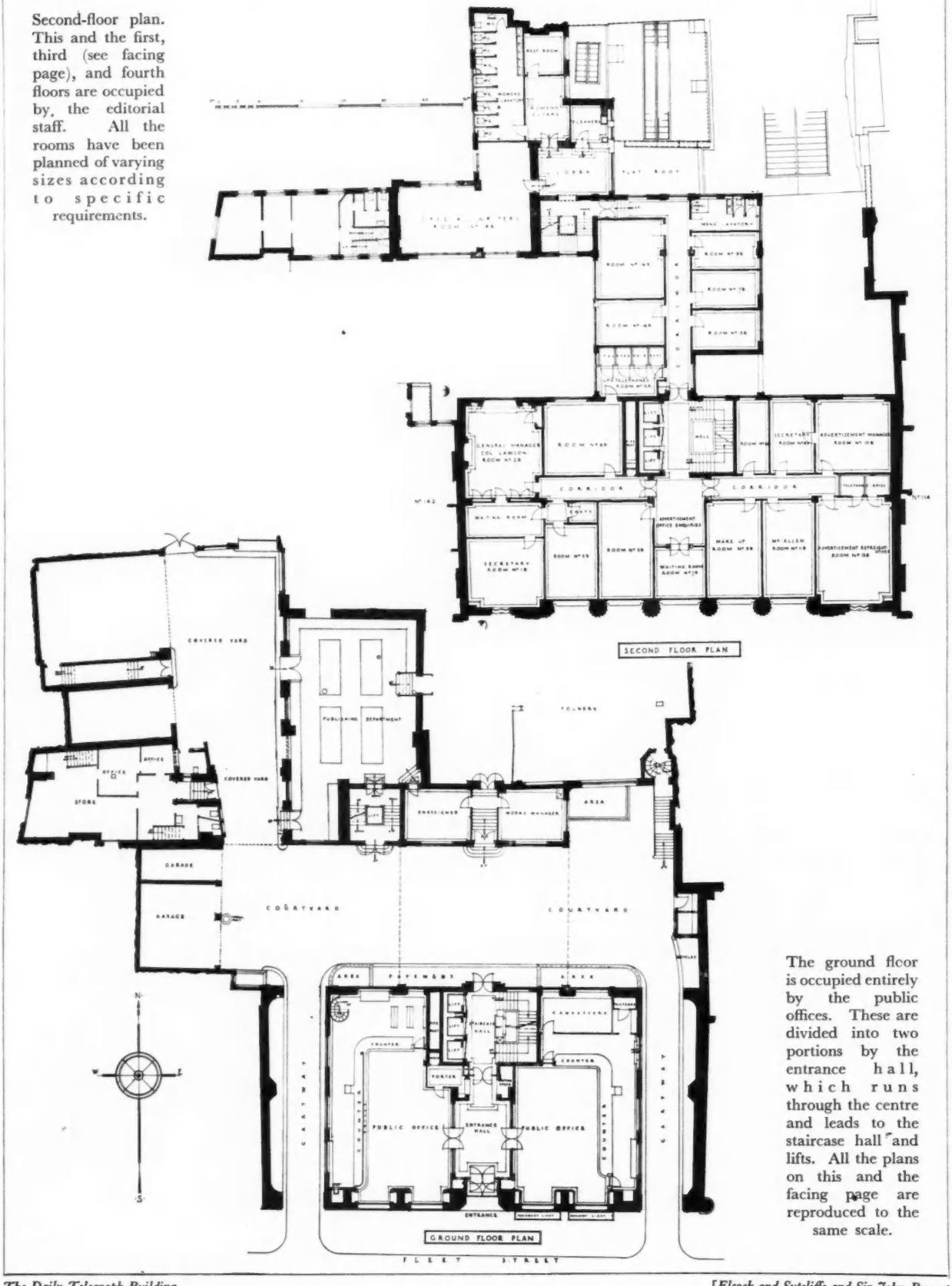


The Daily Telegraph Building, Fleet Street, E.C.]

[*Elcock and Sutcliffe and Sir John Burnet and Partners, associated architects.*

The base of the Fleet Street façade is of Creetown granite, relieved by a band of black marble. Semi-octagonal piers support a balcony at first-floor level, and form the bases for the tall columns. Between the columns are large windows in bronzed frames, occupying the whole wall space between floor and ceiling. The façade is framed by a wide architrave between two buttressing towers, at the base of which are cartway entrances to the courtyard in the rear.

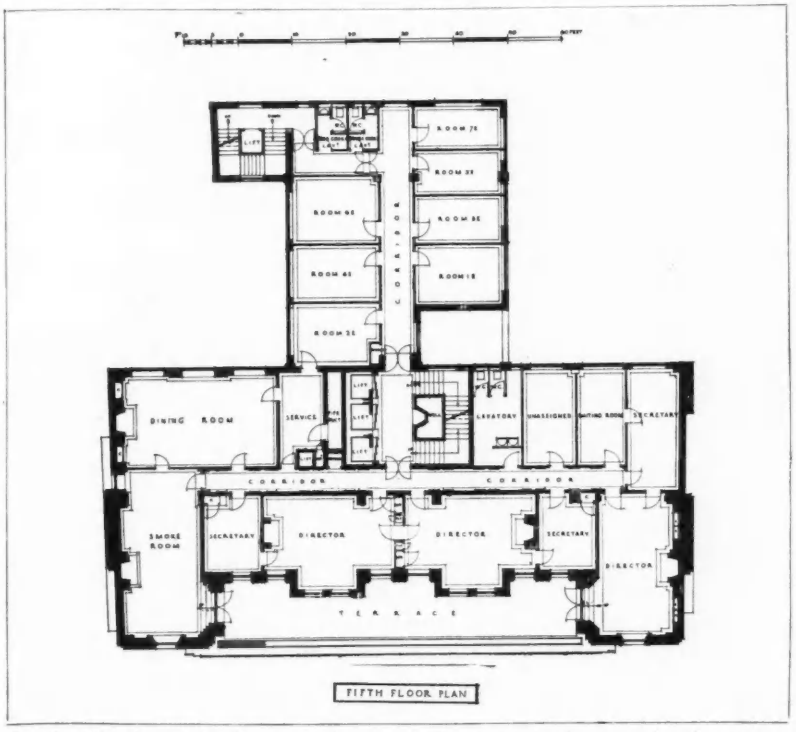
Second-floor plan. This and the first, third (see facing page), and fourth floors are occupied by the editorial staff. All the rooms have been planned of varying sizes according to specific requirements.



The ground floor is occupied entirely by the public offices. These are divided into two portions by the entrance hall, which runs through the centre and leads to the staircase hall and lifts. All the plans on this and the facing page are reproduced to the same scale.

The Daily Telegraph Building, Fleet Street, E.C.]

[*Elcock and Sutcliffe and Sir John Burnet and Partners, associated architects.*



On the fifth floor is the directors' suite. At this level a set-back was rendered necessary under the London Building Act. This has enabled the architects to provide a terrace on the Fleet Street front, access to which is obtained by French windows.

enabling filing cabinets and furniture to be placed against the walls without the risk of important papers falling behind. In these rooms, where the noise of the traffic in Fleet Street is liable to penetrate, sound-absorbing plaster has been used on the ceilings with success.

The general lighting is by means of special daylight reflectors and, in addition, wall and floor boxes are spaced at frequent intervals in each room, into any of which telephones, bells or lamps may be plugged to suit the convenience of the occupants.

An automatic letter conveyor runs from the porter's box in the public office to all floors, and a system of pneumatic tubes for the quick distribution of "copy" is installed on the first floor, delivering to the sub-editors', night editors' and composing rooms.

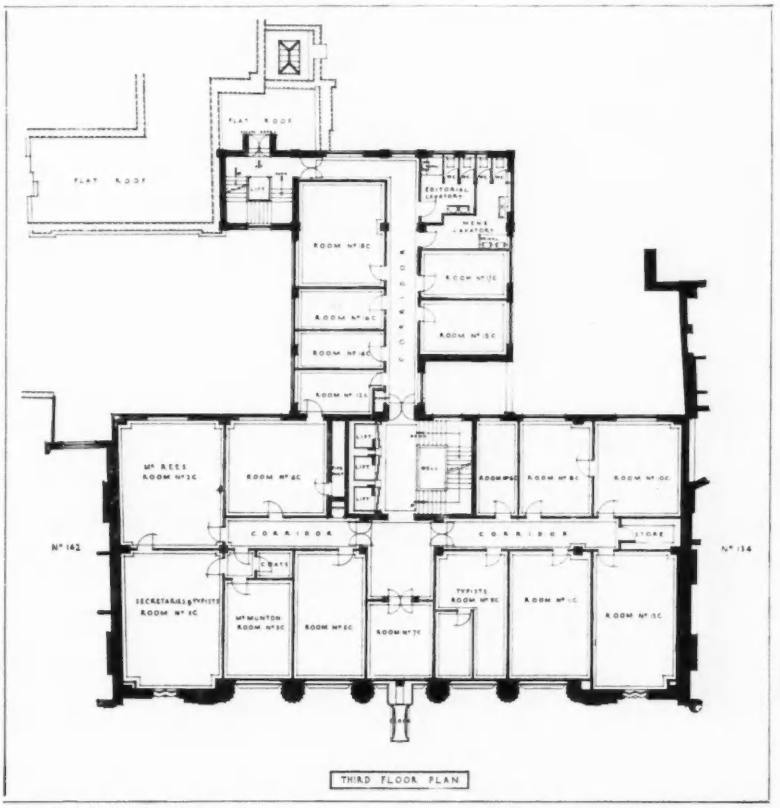
The editor's room on the first floor, and general manager's room on the second, are panelled, the former in limed oak and the latter in silver spruce. The library, to which reference is being constantly made, is conveniently placed on the first floor and occupies the whole depth of the building from Fleet Street to Peterborough Court. Here the fittings are designed in English oak, slightly wax polished,

The floor of the entrance hall between these two offices is laid in Travertine, Sienna and Irish green marble tiles, which combine harmoniously with the green of the bronze entrance doors and the doors to the main staircase; the clean-cut lines of the Botticino marble balustrade and wall linings, together with the flush bronze doors of the lifts, carry on the feeling of efficient modernism created by the public offices.

At the mezzanine-floor level the courtyard is bridged by the northern block of offices, extending to the printing works and rear offices in the older portion of the premises. The sense of spaciousness pervading this floor, which is occupied by the accountancy department, is due to the treatment of the rear corridor, which is glazed on either side with large sheets of glass between reeded pilasters of light oak, with a walnut skirting and light green rubber floor within a margin of Botticino marble.

The first, second, third and fourth floors are occupied by the editorial staff in conveniently planned rooms of varying size, according to their different requirements. The same feeling of quiet efficiency and brightness is maintained by the use of light green rubber tiling throughout the corridors.

The floors of the offices are of Terradura of a golden-brown colour, with a light buff margin, which is carried up the walls to form a dado about 3 ft. high, thus avoiding a skirting and



The Daily Telegraph Building, Fleet Street, E.C.] [*Elcock and Sutcliffe and Sir John Burnet and Partners, associated architects.*

The third-floor plan: another portion of the editorial department. Sound-absorbing plaster has been used on all the office ceilings on the main front to prevent the penetration of noise from the traffic in Fleet Street.



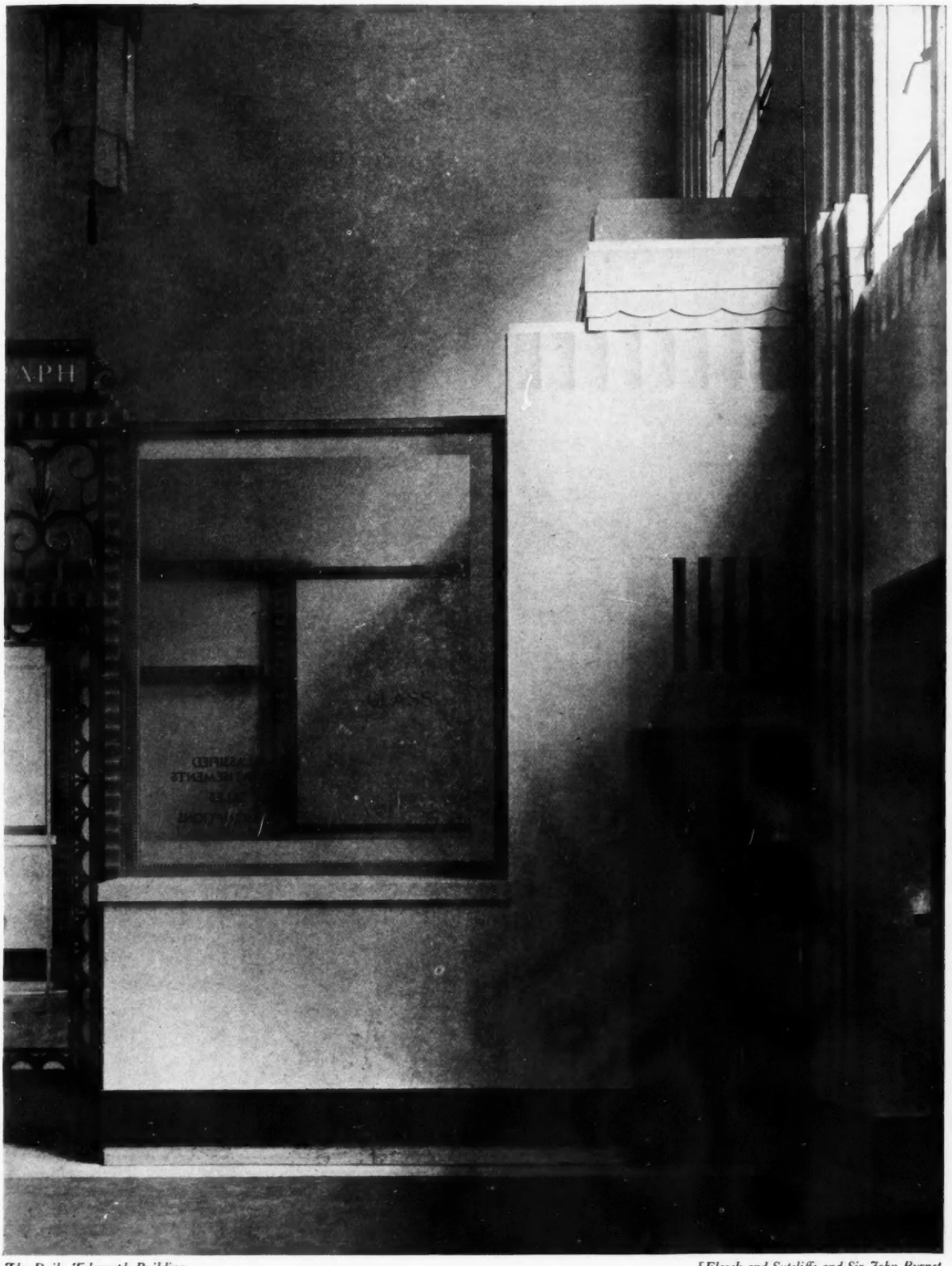
The Daily Telegraph Building, Fleet Street, E.C.]

The doorway leading from the entrance hall to the staircase hall and lifts. In the left-hand reveal is the "Enquiries" office. The names of the members of the staff of *The Daily Telegraph* who gave their lives in the Great War are inscribed on the octagonal tablet now fixed on the right-hand pier.



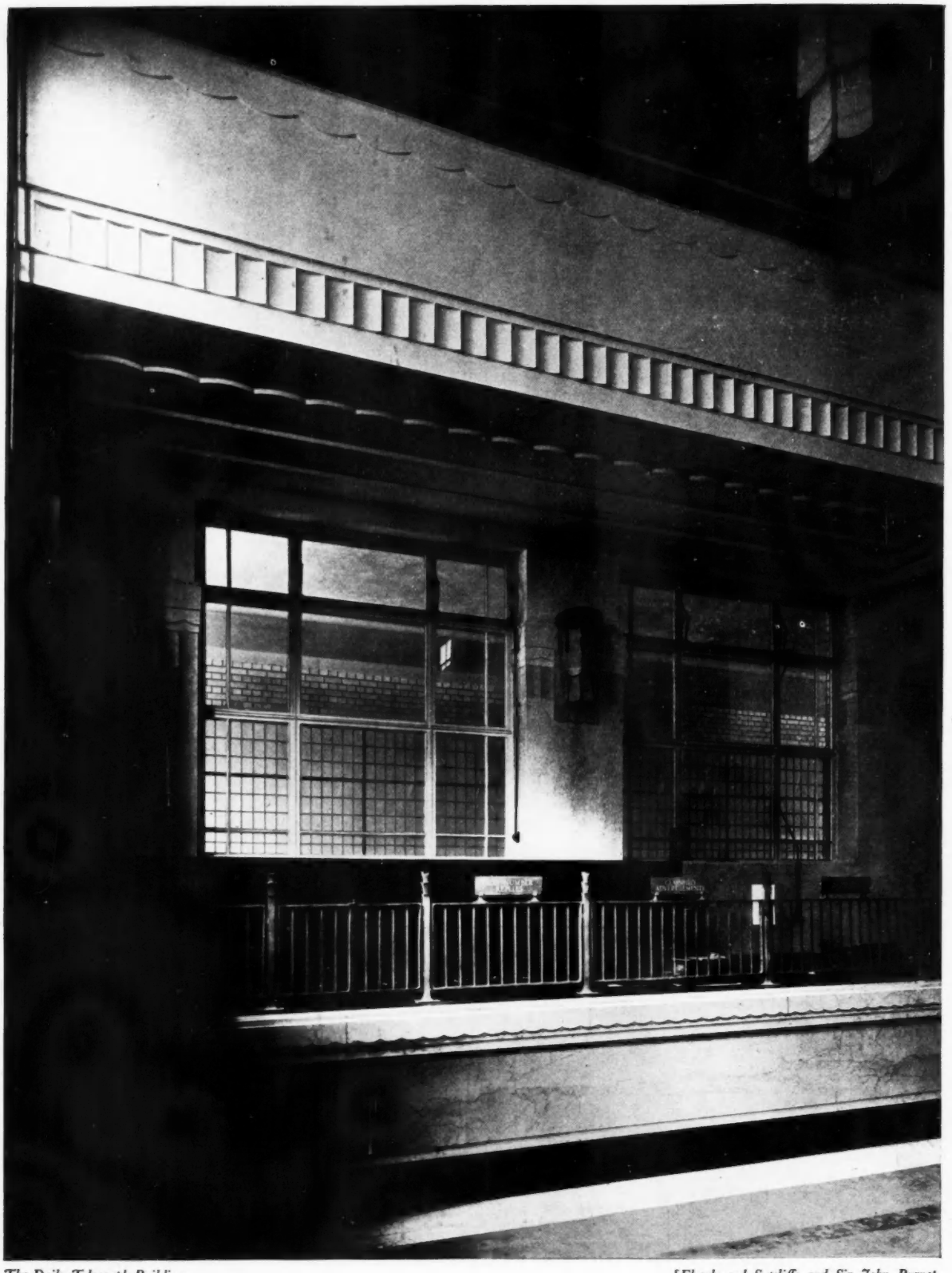
[*Elcock and Sutcliffe and Sir John Burnet and Partners, associated architects.*

In the advertisements, sales and subscriptions office, looking through the bronze and glass screen into the entrance hall and towards the doorway shown in the accompanying illustration on this page. There is a similar screen to the other public office, on the opposite side of the entrance hall.



The Daily Telegraph Building, Fleet Street, E.C.] [*Elcock and Sutcliffe and Sir John Burnet and Partners, associated architects.*

Another view in the advertisements, sales and subscriptions office. The Botticino marble pier on the right of the bronzed and glass screen forms part of the surround of the main outer doors from Fleet Street. In the recess on the extreme right of the illustration are a pair of doors giving access to one of the photograph showcases on the Fleet Street front (see page 74).



The Daily Telegraph Building, Fleet Street, E.C.] [*Elcock and Sutcliffe and Sir John Burnet and Partners, associated architects.*

The walls of the public offices and the counter-fronts are of Botticino marble with a black marble skirting. The floor is of green rubber tiles and the counter-top of black rubber. Artificial light is supplied by wall brackets and octagonal lanterns, designed in bronze, with etched and satin-finished glass sides in recessed planes.



The main staircase, looking towards the corridor on the mezzanine floor, which is lined with large sheets of glass.



The end of the mezzanine corridor. The pilasters are light oak, the skirting is walnut, and the floor is of light green rubber, with a margin of Botticino marble. The treatment with sheets of glass between many of the pilasters gives a sense of space, and unifies the decorative scheme.

and the floor is covered with blue rubber tiling.

On the fifth floor, where the directors' suite is situated, the architects have taken advantage of the set-back necessary under the London Building Act to form a wide terrace, covered with Cumberland turf, to which access is obtained from each room by means of French windows. The treatment of this suite differs from that of the remainder of the building, the rooms being finished more traditionally with panelling in walnut, oak and mahogany, in a scheme of decoration characteristic of the period of William and Mary.

The staff luncheon- and editorial dining-rooms are placed on the sixth floor, in close proximity to the main kitchen, which, with its stores and service rooms, etc., is easily accessible from the service stair and goods lift.

These rooms are bright and cheerful in appearance, and the kitchen equipment is sufficient to cope with 1,000 meals per twenty-four hours.

The flat roofs have been kept clear of all obstructions and will be available for various forms of recreation. A panorama of London, from the Alexandra Palace in the north to the Crystal Palace in the south, is obtained from the special observation platform which has been constructed.



The Daily Telegraph Building, Fleet Street, E.C.] [*Elcock and Sutcliffe and Sir John Burnet and Partners, associated architects.*

The editor's room on the first floor is panelled in limed oak, and has a fireplace ornamented with brickwork of diaper pattern.

THE ARCHITECTURE OF STEEL

BY CHRISTIAN BARMAN



The design for the proposed new bridge across the Thames at Maidenhead, which exploits architecturally the possibilities of steel and concrete. Sir John Burnet and Partners, architects; Sir Douglas Fox and Partners, engineers.

THE average architect's interest in steel as an architectural building material is less than mild, it is almost non-existent. Steel-frame construction is an established fact, like the trapped gulley and the fuse-board. It is used in certain circumstances and for certain purposes because there is nothing else to use. If, however, no particular brilliance attaches to the fuse-board and the gulley as elements of architectural design, structural steel has fallen even lower; its existence has definitely become obnoxious to hundreds of architects who care for such things as logic and honesty in building.

I do not myself believe that an attitude of indifference or antagonism to structural steel in general has the remotest justification; in fact, I am convinced that it is ridiculously wrong. But whether it is right or wrong, it is well that we should ask ourselves whether the coolness that is to be observed can properly be blamed on the architect. Does the fault, in fact, lie with him, and also the remedy? For if, as some people seem to think, a remedy is needed, it is very necessary to inquire in what direction it may most usefully be sought.

Invariably the architectural profession has welcomed new materials; neither iron nor steel have been exceptions. When, in the last years of the eighteenth century, iron was first applied as a structural material, architects and designers greeted it with an astonishing enthusiasm. A world of new forms was, they felt, being thrown open to them. Bridge builders already strode in the van of structural enterprise; they had done so for half a century or more. The nature of their work required them to be the first to test the possibilities of metallic construction. But every step they took was being closely watched by the architectural profession. An æsthetic was being formulated for iron as it had been, generations earlier, for bricks. Houses were to be set up, roof-trusses framed, and even furniture built on the principles so triumphantly demonstrated in the bridges of Telford and his associates. Articles were written and papers read on fitness and honesty in metallic design. The ironmaster had but to lift a finger for the finest and most vigorous elements in the profession to follow him into the unknown. The risks were heavy, but the joys seemed proportionate. And for a little while they went forward together. But only for a little while.

"The calamity we all acknowledge," said Sir Edwin Lutyens on one of his rare public appearances in England, "is the separation of our great profession into engineers and architects." Not, be it observed, the drifting apart of two professions, as others have described the same process, but the splitting up of one. Towards the middle of last century it did seem as though the one great profession of building design might preserve its unity. The early iron bridges—Coalbrookdale, Buildwas, Monkwearmouth—had been followed by such masterpieces as Stephenson's high-level bridge at Newcastle (1849) and the Conway and Britannia tubular bridges of a few years earlier. Most of the great Victorian architects incorporated experimental iron and steel designs in their buildings. Waterhouse's Home Office Building, Scott's St. Pancras Hotel, and many more contain staircases and other features that testify to their partiality for the new materials. Norman Shaw did odd and even more courageous things. In France there are the reading-rooms of the Bibliothèque Nationale and of the Bibliothèque Sainte-Geneviève. There are Baltard's Halles and Janvier's cattle-market at La Villette. There are also the cast-iron churches of that remarkable genius, Louis Auguste Boileau, an ecclesiastical woodworker who embraced the new material with unequalled fervour.

I advise all my ironmaster friends to see Boileau's church of Notre-Dame de France in Leicester Place. It lacks the impressive windows of Saint Eugène (illustrated elsewhere in this issue) and of other churches he built in his own country. It is a building that you can go on criticizing till there is little left of it. Yet I defy any person not a complete die-hard and defeatist to contemplate it without a warming of the spirits. Neither iron nor steel has had a doughtier exponent than the author of this design.

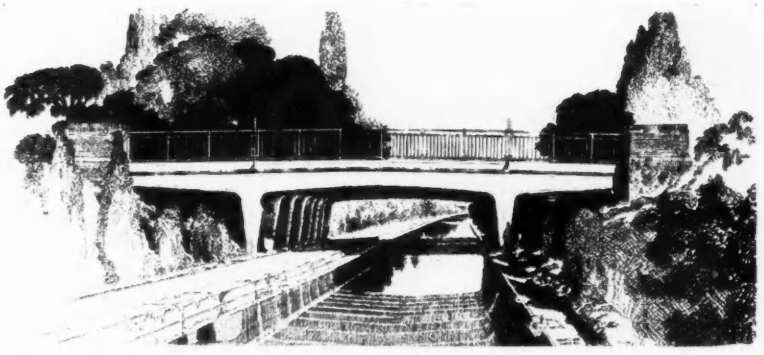
Courage was indeed required, for there was an opposition very much to be reckoned with. There were those, for example, who fought to keep iron subservient to the ancientness of stone. Westminster Bridge is one manifestation of this repressive tendency. (Another, and a more violent, is to be found in the new Sydney Harbour Bridge.) Yet the die-hard group by itself would never have been sufficient to cause the split. Architectural support was too strong with us, while in France such men as César Daly and Viollet-le-Duc were wholly for iron. Then, of course, there was the amazing case of Hector Moreau. If Moreau had lived in this Hollywood age his achievements would have been proclaimed from a thousand neon tubes, but as a nineteenth-century architect he was at best an unsettling influence. There is no doubt that this "Victor Hugo of Architecture" whose lifelong ambition was to create a "style Victoria" is the source of the inspira-

tion behind Paxton's superb Crystal Palace design. There is equally little doubt that he scattered the practical engineering folk like so many frightened rabbits wherever he showed himself.

But again, not ten Moreaus could have cut off the architectural from the engineering half of the constructional world. It is, indeed, impossible to lay the blame for this anywhere except with the engineers themselves. The ironmaster, and the ironmaster alone, is the real instigator of the divorce, and if today he sees the architect forming alliances elsewhere, he should know that he has only himself to blame.

It is these very alliances that in this year 1931 enable one to see the matter in a clearer light. Ten years ago there might have been some doubt as to the architect's willingness to co-operate. Today there can be none. One has only to behold his interest in the possibilities of concrete construction to be reminded of the expectant attitude in which he regarded iron a century ago. The difference is not in the attitude of the architect, it is in the attitude of the engineer. Why is it that again and again one hears architects speaking as though modern design and concrete design were interchangeable terms? A recent lecturer at the Architectural Association introduced a statement with: "As the roots of modernism are firmly planted in reinforced concrete . . ." The rest of his sentence wanted proof, but that much was axiomatic, unquestioned by anyone, least of all by our ironmasters, who are firmly convinced that architects have flown to reinforced concrete just to spite them.

What has happened is really very simple. Architects were powerfully attracted by iron and steel. After a brief experimental partnership they were quite unmistakably "choked off." Today concrete and reinforced concrete have swum into their ken, and this time their friendly if somewhat over-excited approach is reciprocated.

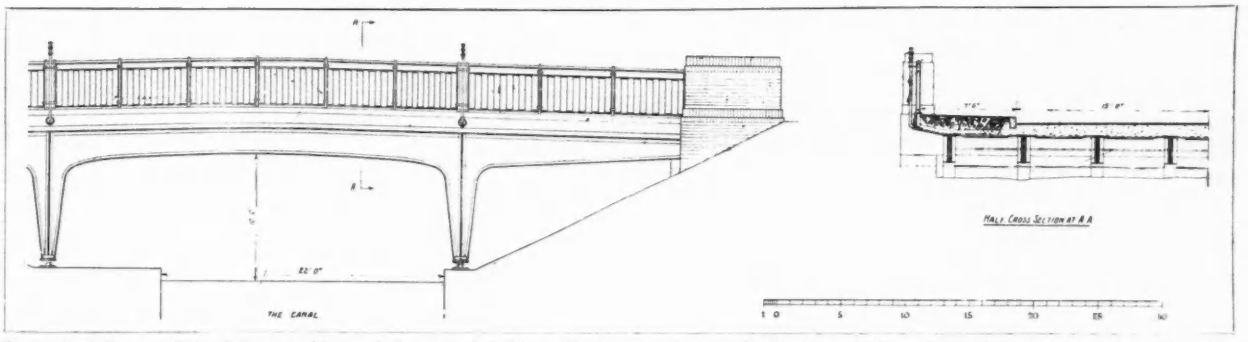


A perspective drawing of a proposed type of canal bridge for widespread use—another sign of the arrival of a new order in steel. Sir John Burnet and Partners, architects; Mott, Hay and Anderson, engineers.

Whereas the steel engineer sought only to resist his overtures, the concrete engineer actually manages to respond to them. Need one be so very astonished to find the architect cheered and delighted? He, poor fellow, desires nothing better than to move with the times and to serve the spirit of the age. But what is he to do when the times cold-shoulder him and the spirit of the age tells him he must keep out of the way and not make himself a nuisance? For that is precisely what the ironmasters have told him, in deeds if not in words.

Just over four years ago this JOURNAL published a special number on concrete design which attracted considerable attention in engineering circles. "The convention is established," said a writer in that issue, "that the appearance of a steel truss does not matter very much. One has only to compare, for instance, the roofing of the older railway stations, such as Paddington, with some of those more recently erected. In the former case engineering had not yet completely emancipated itself from the traditions of architecture, and designers of steelwork felt it to be incumbent upon themselves to combine the constructional members into patterns having some formal significance. With the advent of reinforced concrete, however, there are signs that a new era of engineering is making its commencement, namely, an era in which engineering will tend to resume that close association with architecture which was characteristic of it at the beginning of the industrial era."

I quote this declaration at length in order to make it clear to the engineering reader that I am only expressing a feeling with which the architect is familiar: in a word, I am repeating a commonplace. The architect's province is design. But to design without an adequate contact with one's material is tiresome and humiliating. The contact may be direct or indirect, it does not matter which; but in one form or another it simply must exist. The concrete engineer knows this, and has given the architect unlimited opportunities for both kinds of contact. The steel engineer has consistently denied them. He is only happy when the architect is completely out of sight. To be compelled to talk construction with the architect is bad enough: to have him butting into the shop or drawing-office is monstrous, intolerable. It seems to be essential to the ironmaster's happiness that the architect should know absolutely nothing about



Part elevation and half cross-section of the canal bridge illustrated above. Built of steel, its end members rest on bronze bearing plates, set upon the brick abutments; the thrust of the foot of each pillar is taken by cast-iron rockers. The vehicular level is made good with concrete, and has a 2-inch surfacing of road material.

steel. Where steel is concerned, all knowledge, all wisdom, must be the engineer's alone. Obscurantism is a mild name for this attempted "corner" in the data and the experience which are the designer's daily bread.

After the publication of the special concrete number of THE ARCHITECTS' JOURNAL to which I have referred, it was intended to produce a similar number on steel. The scheme broke down for the simple reason that no constructional firm could be induced to supply for publication any worthwhile technical information. A general feeling exists among architects that the object of this almost morbid secretiveness on the part of steelwork engineers is to render them entirely indispensable to the architectural profession and so to tighten their hold upon the world of building. This feeling may or may not represent a mistaken view of the situation; but it is certain that the policy of telling the architect as little as possible about steel has in no way increased his respect and affection for it. As for the steelwork engineer being indispensable to modern building, those who today still hope to see him in that enviable position are sanguine indeed. "The appearance of steel frames and trusses," says the engineer, "does not matter," has not got to matter. But architects can only fulfil their obligations to society by producing forms that matter as much as possible. Once they give them an opportunity to do so by other means than iron and steel, and they will forsake these materials to a man and gratefully take up the cause of their deliverer.

Let there be no mistake about the benefits conferred upon concrete solely by the designer. He alone has been able to surround the material with an aura of dignity and interest that has raised it to a status undreamt of by its inventors and manufacturers. And in dealing with concrete structures it was inevitable that the architect should be inspired to a very large extent by the traditions established in steel and iron manufactures outside the architectural world. For those engineers who use iron and steel for purposes other than building have not by any means followed the same short-sighted policy. While the structural steelworker thus jealously guarded his little plot till it has become a wilderness, his colleagues in other fields have thrown theirs open to the husbandry of design. Steel ships, steel vehicles, steel containers—steel manufactures of all sorts and sizes down to the instruments used by doctor and surgeon in their work—these things have thrilled the world with the sharp and slender precision of their outlines. The Paris and London motor shows are possibly the chief artistic events of the season in each capital, and what are they except a people's tribute to the astonishing elegance achieved by steel? New ocean liners as they leave the slipways are filmed and photographed for all the

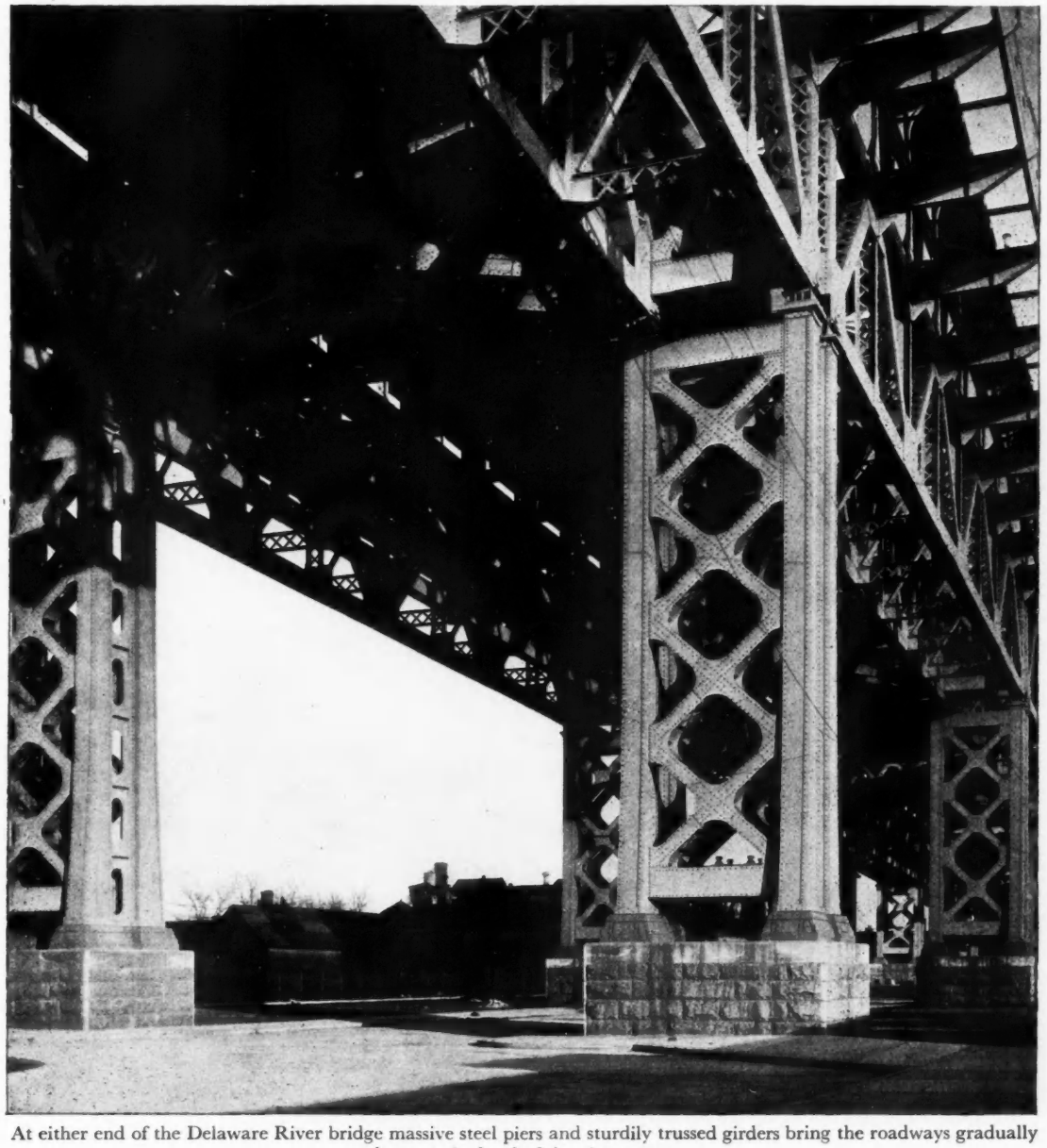


A general view of the Delaware River bridge, which crosses the Delaware River, U.S.A., from Philadelphia, Pa., on the west, to Camden, N.J., on the east, by a single span of one-third of a mile—a hitherto unprecedented suspension length. Paul P. Cret, architect; Ralph Modjeski, engineer.

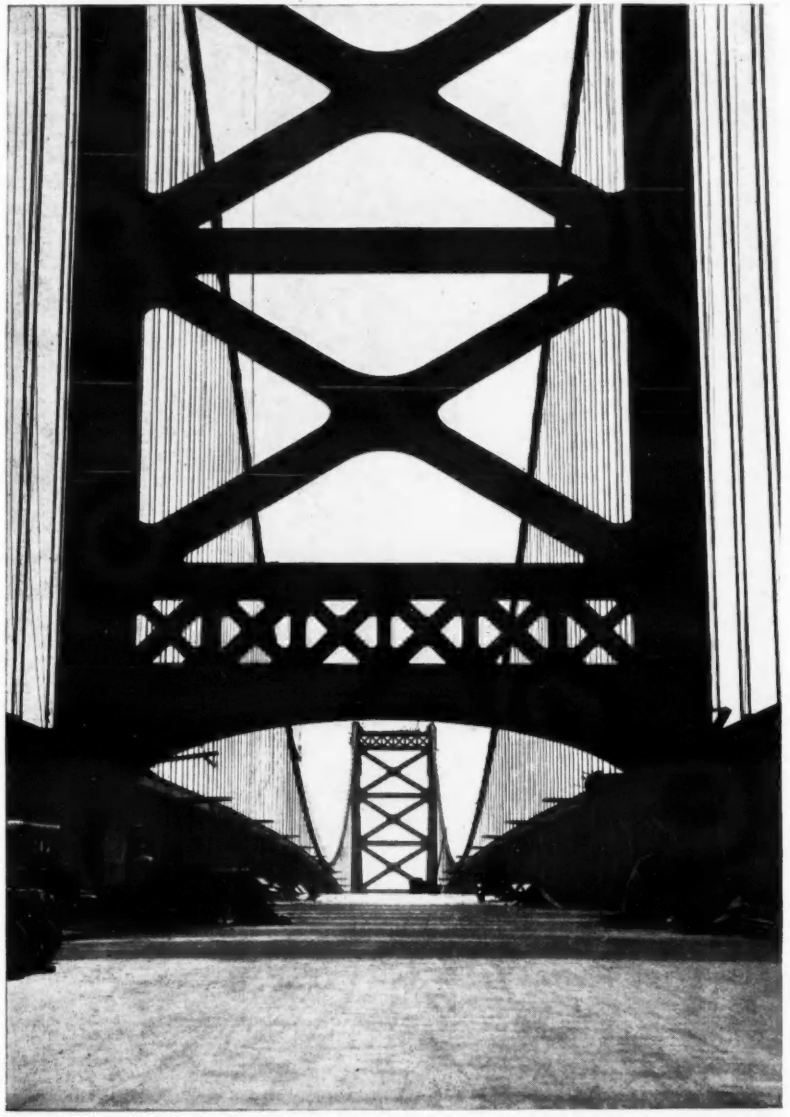
world to comment upon. If we consider for a moment this resounding success of steel design in other fields, we shall not be surprised to see the designer in concrete inspired and guided by its examples.

Here, indeed, must be the ironmaster's bitterest punishment today. For among concrete structures acclaimed as typical of the new material, nine out of ten will prove, if they are closely examined, to bear unmistakable signs of their derivation from a metallic design. Mendelsohn's Einstein Tower owes more to trams and submarines than to anything that concrete has ever given us. The resemblance of certain elements in the best concrete factories in both continents to steel tools and cast-iron machine parts cannot be regarded as a coincidence by any honest person. Even the modest pillar-box of Queen Victoria's reign is the ancestor of a respectable concrete progeny. It is safe to say that if iron and steel had not been studied by several generations of able and enthusiastic designers whose example was creating a "modernist" tradition as much as a hundred years ago, we should be hearing precious little about the architecture of concrete today.

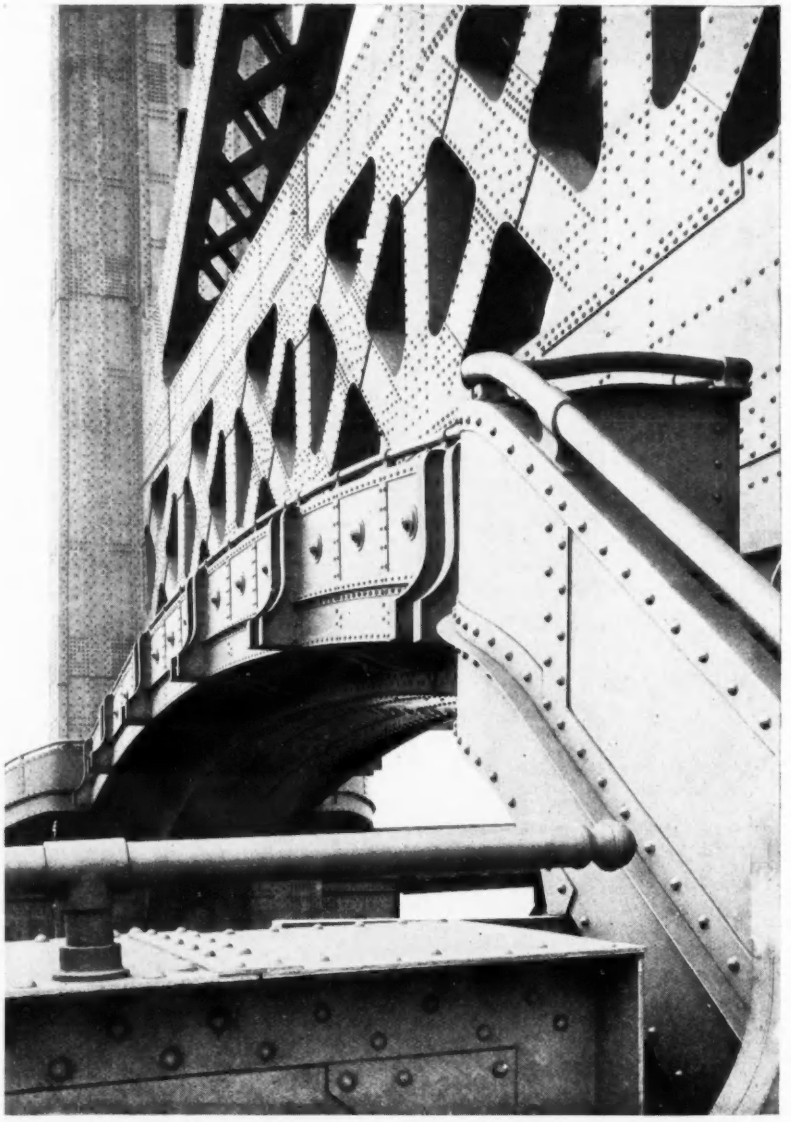
With so much lost to an enterprising and favoured rival, will the steel industry be able to regain enough ground to make its position in England secure? The year 1931 is to witness its first effort for over half a century to form a lasting and honourable alliance with the art of architecture. If that effort can be prosecuted with sufficient energy the outcome is fairly certain. But can it? Will it? That is a question which has grown by now to the dimension of a national issue. Let architects beware, then, of approaching it in any other spirit than one of tolerance and determined goodwill.



At either end of the Delaware River bridge massive steel piers and sturdily trussed girders bring the roadways gradually down to the level of the city streets.



A view of the roadway of the Delaware River bridge, taken when approaching completion. The further suspension tower is of the same form as the near one, but the camber of the suspended span conceals its lower portion.

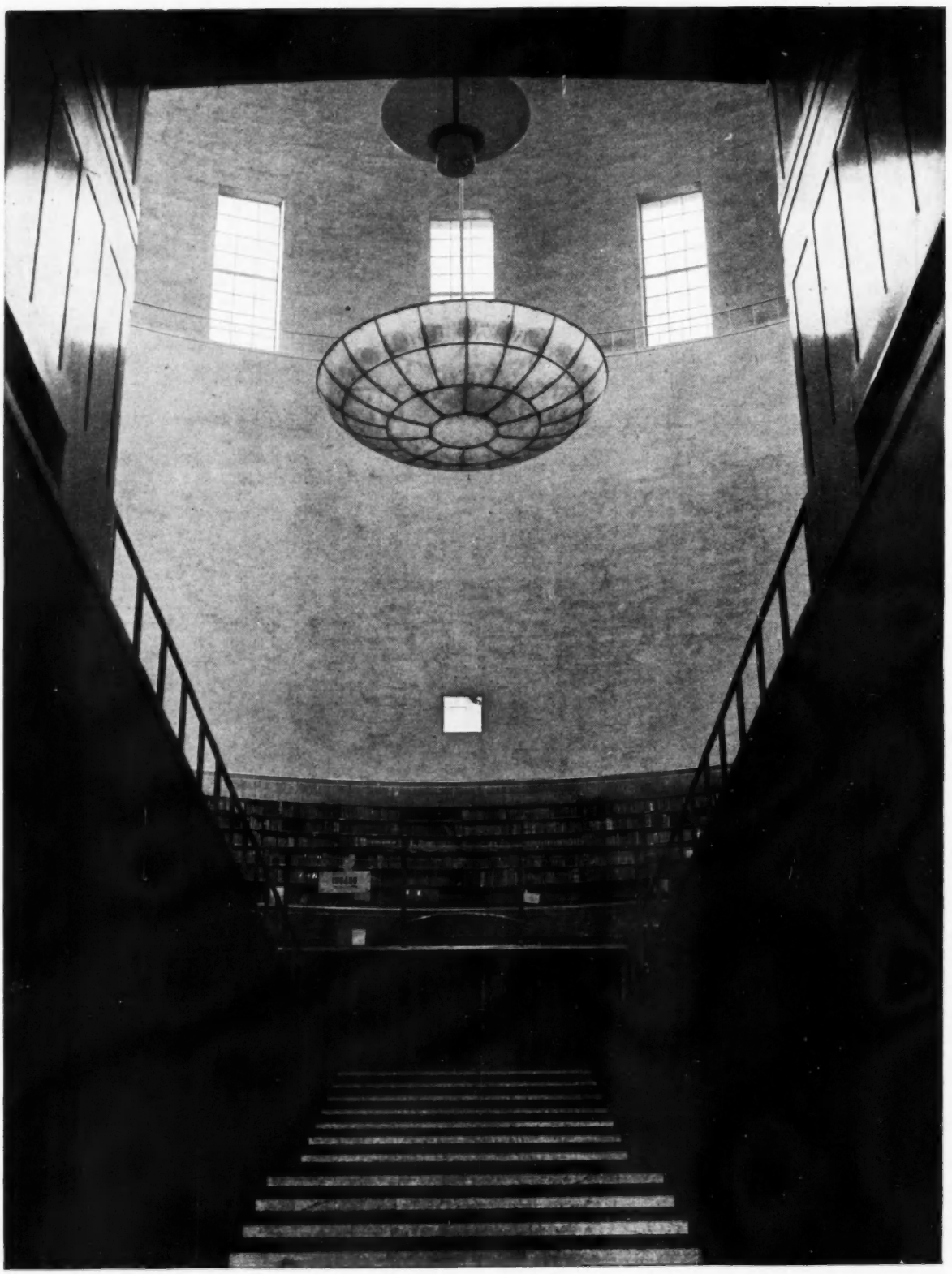


A near view of the arch shown in the adjoining photograph, the constructive elements of which reveal a variety of interesting shapes and patterns, for which a certain stark grace may justly be claimed.



Looking along the suspended span of the Delaware River bridge, from footway level. To the left is seen thrusting aloft one of the two gigantic suspension towers, and the system of cables it supports fades away from it in perspective into the distance, nearly half a mile away; even the strictly utilitarian rivets in the steel structure assume patterns of symmetry. The roadway itself, which accommodates six lines of vehicles and four of rapid-transit and trolley cars, is carried through an aperture in the tower, spanned by a massive arch of steel.

STOCKHOLM PUBLIC LIBRARY: THE ROTUNDA

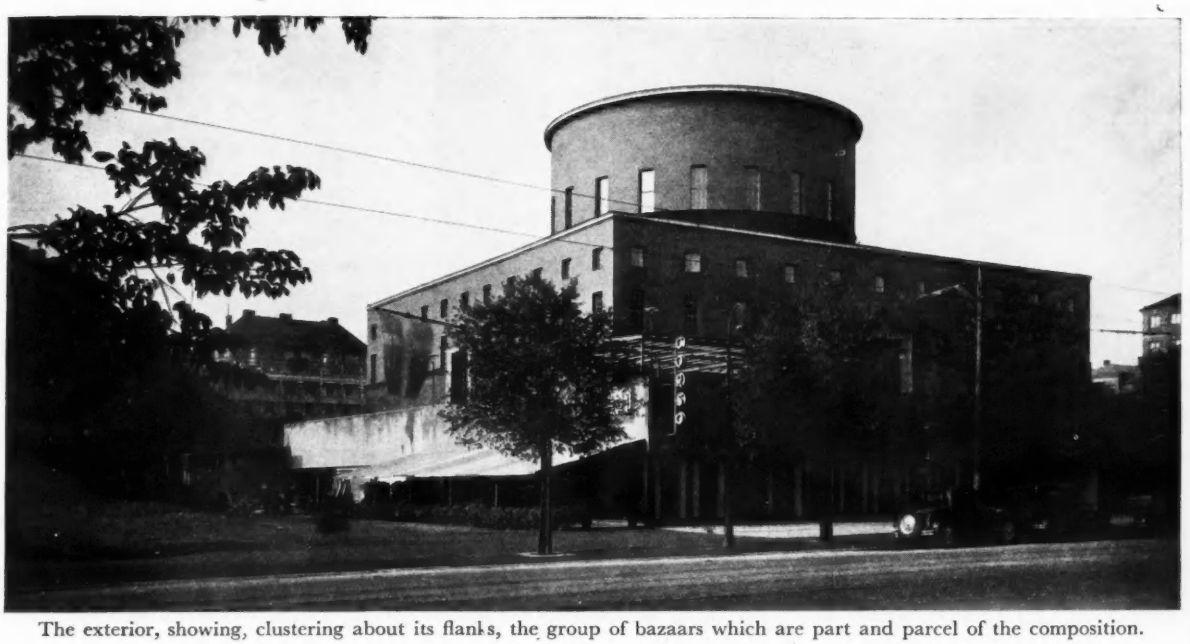


A study taken from the main entrance staircase of the library, looking up towards the domed lending-hall, with its central lighting fitting. On page 89 there begins an illustrated description of the building, written by the architect, E. G. Asplund; this is followed by an impression from the English point of view specially contributed by H. Austen Hall.



LORD BENBOW'S APARTMENT:
The Design awarded the First Prize of £100 in *The Architectural Review* recent Competition
BY RAYMOND McGRATH





The exterior, showing, clustering about its flanks, the group of bazaars which are part and parcel of the composition.

STOCKHOLM PUBLIC LIBRARY

E. G. ASPLUND, ARCHITECT

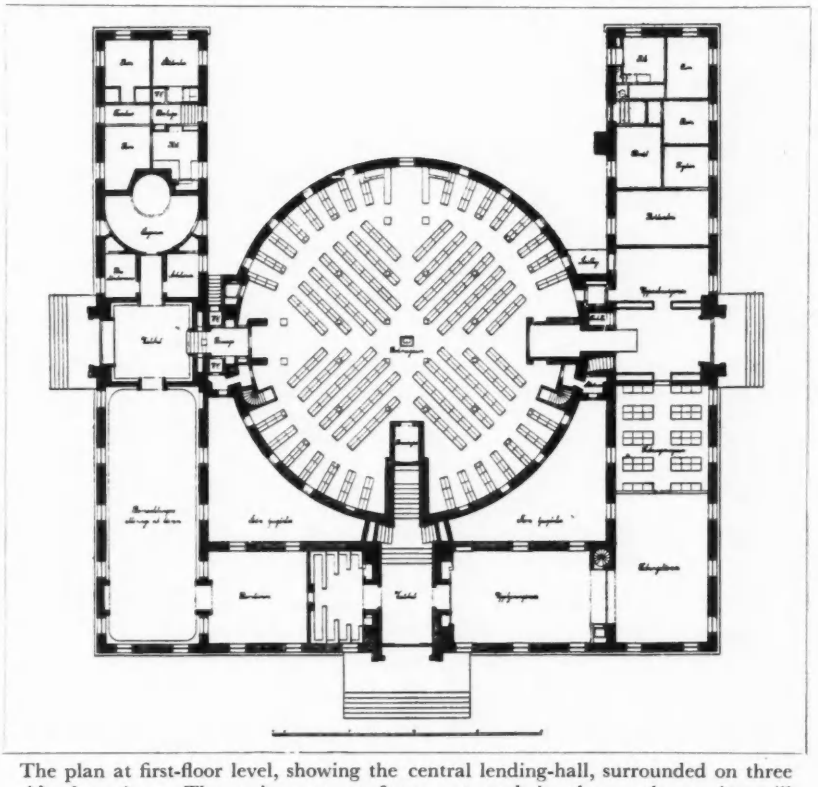
i: How I Saw It

BY E. G. ASPLUND

ERECTION of the building of the Municipal Library was begun in the autumn of 1924, and, as far as the actual building work was concerned, was completed in the autumn of 1927. But the group of bazaars in front of it, the buildings behind the Odengatan, and the park towards Sveavägen, are to be taken into consideration as completing its surroundings.

In the planning of the building, the decisive factor was the principal room, with its lending-hall, reading-rooms, study rooms, etc. The concentrated design of the plan is explained by the desire, in actual operation, to leave the least possible distance between the entrance and the counter of the lending hall. A study of the popular library buildings abroad, especially in America, shows that for large libraries a plan of this kind is being adopted more and more: a central lending-hall, top-lit, the long sides of the reading-room around it, and two or four areas lighting the stairs and secondary rooms. In this case, the fact that the building programme required two reading-rooms, two study rooms, etc., naturally suggested a symmetrical arrangement of the plan in the same manner as the corner position of the building seemed to me to render a concentrated body of the building desirable.

The book storage room originally planned has, on account of expense, been postponed to the future, and a book magazine sufficient for the next few years has been arranged instead, beneath the lending hall.



The plan at first-floor level, showing the central lending-hall, surrounded on three sides by wings. The main entrance faces east, and in the southern wing will be noticed, semicircular on plan, the Legend Room referred to in the text.

K



One of the children's study rooms, upon the ceiling of which is a stellar map, surrounded by signs of the Zodiac, painted by Alf Munthe.

The entrance for the adult general public is through the main doorway from the Sveavägen, straight forward and up stairs which are run in close to the lending desk in order to provide the compact passage necessary for checking purposes.

The public, whose objectives are the study circle rooms or the offices on the top floor, must pass along the two narrow staircases, which, in addition, provide, for the staff, communication with the galleries of the hall, the study rooms and newspaper reading-room.

The entrance for children is placed on the park side, forming an entirely separate division. Officials and servants enter from the Odengatan. The inner communication for officials from their workroom to the main room, the packing room, the book magazine and the workshops and galleries runs via the stairs and two passenger lifts.

While the literature less in demand is kept in the book magazine, topical literature has been laid out on the very attractive open-shelf system, directly accessible to the public. This method, of course, requires good supervision, and rooms without dark corners.

The books in the lending-hall are arranged in circular rows, accessible from the floor, and also in two galleries which, at any rate until further notice, are only accessible to the staff. It was intended at first to light the hall from the roof. The ordinary construction of roof windows, however, with secondary dull or rough glass panes, gives a dull grey light. No sunlight passes down, and as it was found practically impossible to obtain direct clear lighting on this principle, it was abandoned and, instead, the windows were arranged in the cylindrical portion of the outer walls.

Set upon a base of concrete, the building is built of brick. The floors are of concrete with filler-joist construction, and are covered with thick inlaid linoleum. The flat roof over the wings is of the same construction but with deeper filling, while the roof over the lending-hall is a steel frame with copper-covered panels. The staircases which go round the cylindrical body of the building are freely supported structures of armoured concrete with cork inside.

The outer façade and also the inner walls and roofs are stuccoed. This stucco, on the bottom parts of the façade and also in the vestibule, the principal stairs and the reading hall, has been treated with colour, a cheap form of ornamentation, without marble facing. The windows are constructed on the Braat system with steel frames fixed direct in the wall by cement and screws in lead plugs.

The supports and the shelf doors on the shelves of the book magazines are of steel. In the lending-hall and lending rooms the supports consist of channel sections, run into plaster, with closely-punched holes. The shelves are of stained and polished wood, on the bottom face of the short ends of which there are supporting brackets fixed in such a manner that the wood cannot



Stockholm Public Library.] [*By E. G. Asplund.*

A corner of the newspaper room, on the north of the main entrance on the ground floor, in which periodicals are laid out on the open-shelf system.

shift and also cannot warp. The brackets are provided at the back with punched hooks, fitting in the holes in the channel iron supports.

The ring-shaped lining of the gallery beams of the lending hall, and all the doors of the hall and the three panels in the four passages to the hall are constructed of frames of so-called Ibus board which are veneered on the outside with mahogany, Gonzales Alves and Borneo jakaranda. These panels, which are partly exposed to very trying local heat, give prospect of standing it very well, a proof that the wood in the Ibus board is as well seasoned as it is possible to obtain.

The heating of the library building is effected by means of a pump hot-water system with central heater in the cellar room and local radiators in the rooms to be heated. The upper part of the book hall, and the outer room between it and the roof above it, are heated, however, by means of low-pressure steam. The vestibules are also, in part, heated by hot air, which is forced in through hot chambers situated in the basement.

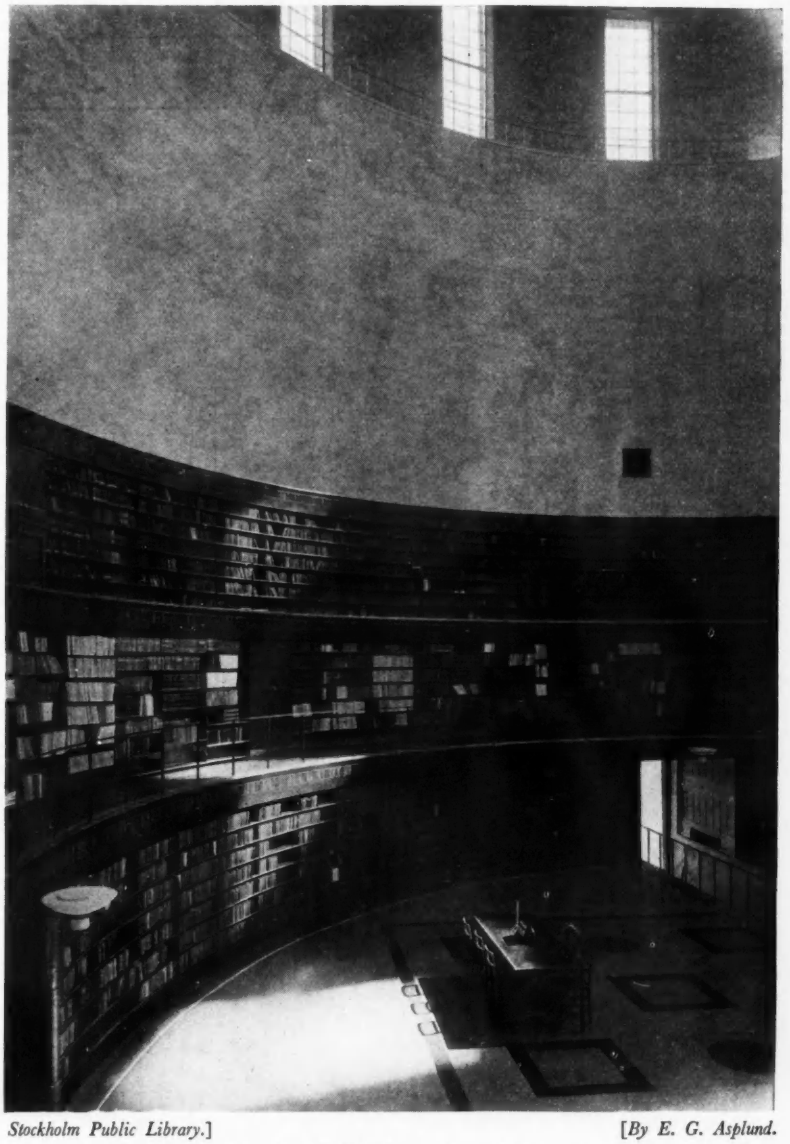
In order to exhaust the used-up air, suction channels are arranged which are brought together into two fan chambers in special upper structures above the outer roof.

Regulation is from the central regulating room in the basement, containing also the circulation pumps, adjoining the boiler room. From the same room, by means of a distance thermometer, the temperatures of the different parts of the building are also read off.

To defray the costs of the building, a sum of £121,000 was available, an amount which was provided by the Wallenberg Foundation, the Forsgrenska Fund, and the Danelius Fund, and was not exceeded. As the volume of the building is about 1,377,000 cubic feet, the unit price is about 1s. 9d. per cubic foot.

The constructional statistics were calculated by Kreügers, consulting engineers. The heat, water and drainage programme was prepared by the engineer, Hugo Theorell, and the electric programme by the Electric Testing Institute.

In the vestibule, Ivar Johnsson has put up a series of illustrations from the *Iliad*. Hilding Linnquist has, in the southern reading-room, in four panels, undertaken the cycle of paintings with bellatristic subjects which are to adorn the area between the windows. In the vestibule in the children's department, Nils Sjögren has set up two panels in high relief and in the so-called Legend Room Nils Dardel has painted a world of adventure beneath the umbrella of John Blund. In addition, Alf Munthe, on one of the ceilings in the children's department, has provided a stellar map



Stockholm Public Library.] [*By E. G. Asplund.*

The central lending-hall : a view looking down from the lower gallery, and showing, on the right, a glimpse of the staircase which ascends straight up into its centre from the main entrance.

for educational purposes, while Kaj Behling and Britta Hörlin have done decorative painting in the management room and study circle room.

In my architectural office my chief and skilled collaborators were the engineer, Birger Ahlström, and the architects, Sven Ivar Lind and Hans Quiding. The furniture is the result of co-operation between myself and the furniture designer, Gustaf Bergström.

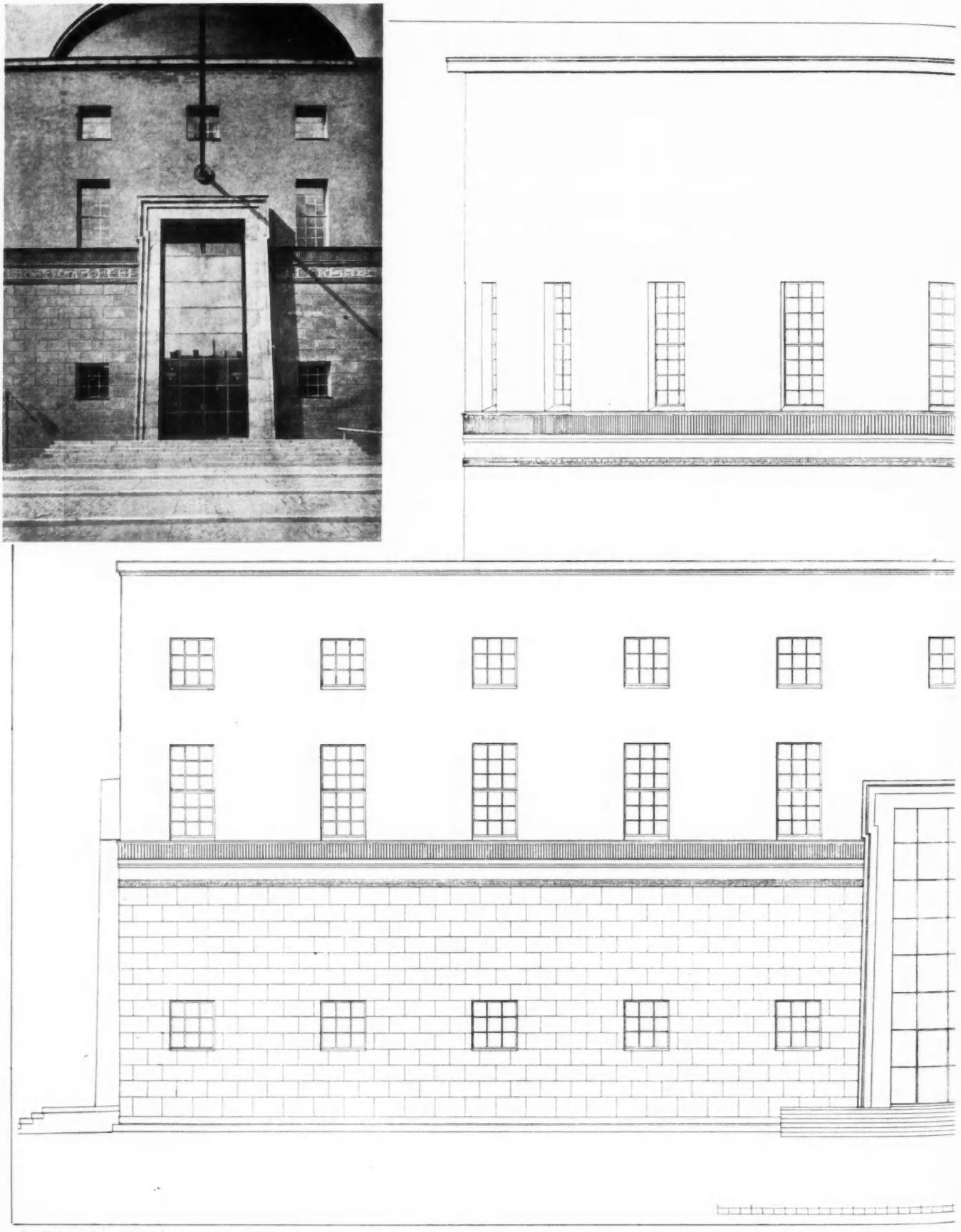
ii: How I See It

BY H. AUSTEN HALL

THIS is one of those clean-cut, stark buildings to which we have become accustomed in recent years, and which seem to be done most successfully under foreign skies. At first approach it has a certain bleak quality about it which suggests the detention of the readers as well as the books.

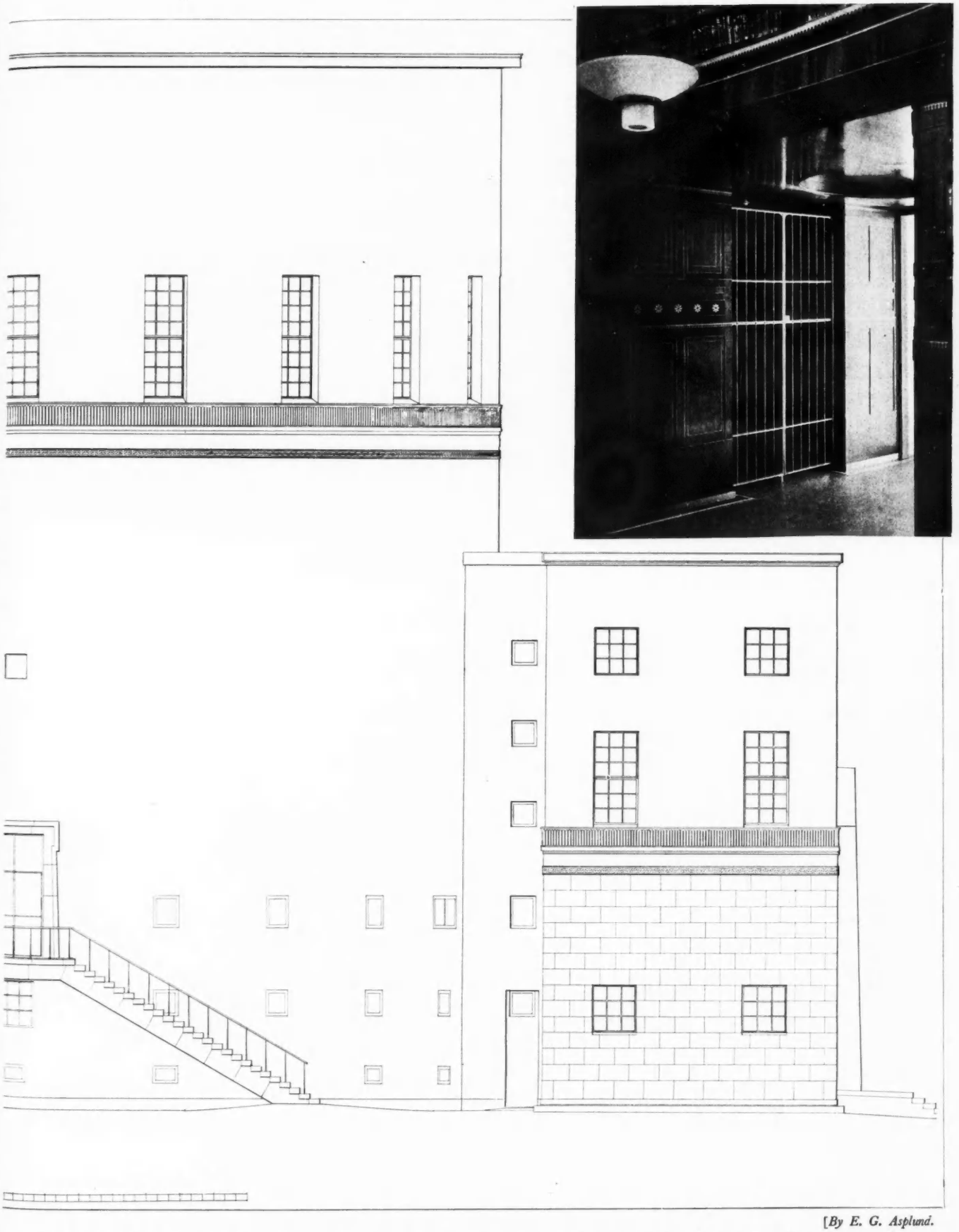
This lack of cheer is not lessened by the cement walls of unrelieved grey, or the entrance hall of black granite with its scenes from the *Iliad* in low-relief panels. Yet this entrance hall is of fine quality and feeling, and the panels are of lovely workmanship. It is only about 12 ft. wide, and I think the treatment might have been brighter for such a small space, but it has breeding and craftsmanship in every line. It is " the work of a gentleman," as Carlyle said of Chelsea Hospital.

A straight flight of stairs, which are really too narrow, runs from the entrance



Stockholm Public Library.]

Half the architect's elevation drawing of the main façade to the Sveavägen; and a photograph of the entrance doorway, which is approached by a flight of shallow steps. Inside it is a vestibule with three staircases, one leading to the lending-hall.

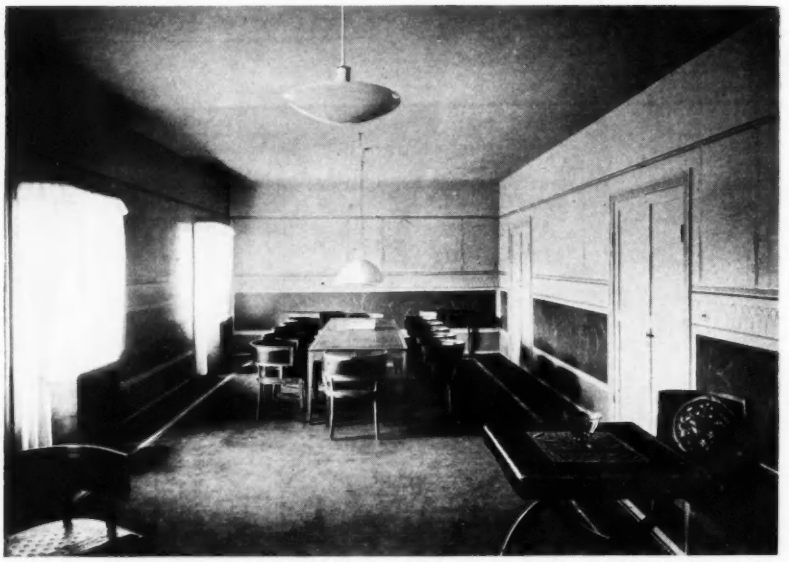


[*By E. G. Asplund.*

Half the architect's drawing of the western elevation, showing, to the right, the end of the southern wing, and the outside stairs to a subsidiary entrance. The photograph is of one of the openings lending from the lending-hall to the " Stockholmiana " galleries.



The long, narrow reading-room in the northern wing.

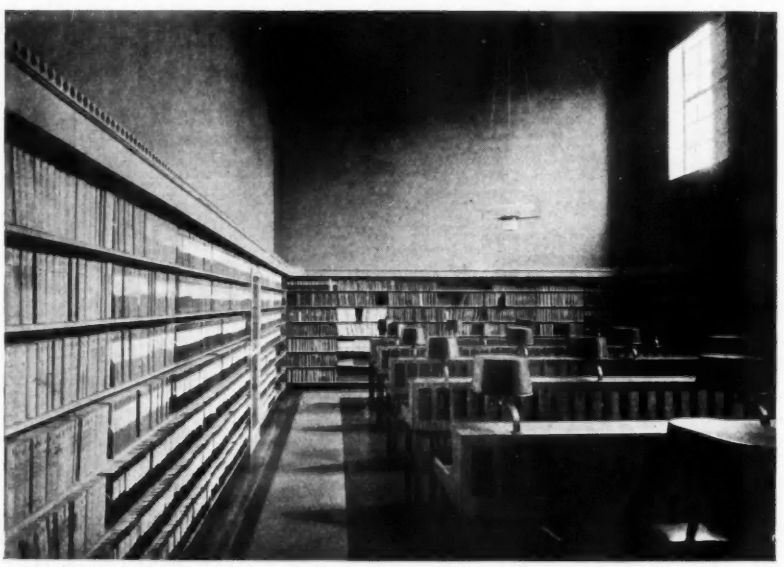


The room of the chief municipal librarian, which also affords accommodation at the end shown for sessions of the managing committee.

into the centre of the circular lending-hall, and on each side are other staircases leading to the rooms on the upper floors as well as to the galleries for books. These staircases are ingenious in their planning for a dual purpose, but rather narrow and depressing in use. I think the arrangement of their starting-point in the entrance hall is not good. It would be much easier to do two stairs instead of three at this junction, but this could only be if the lending-hall were at ground-floor level. I cannot see why this room is on the first floor at all, so obvious are the disadvantages. But all the same it is most impressive, with the great sweeping lines of books climbing up the walls, and one regrets more than ever the great incursion of the stairs into the fine floor.

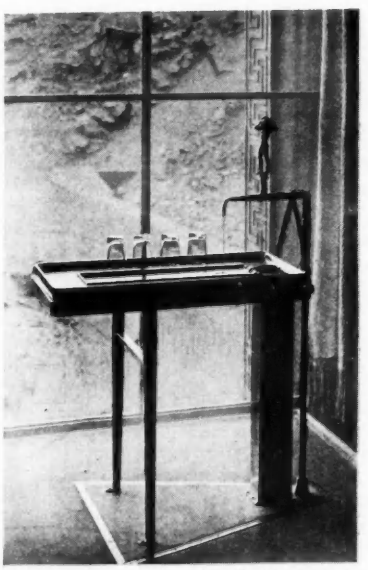
The fittings are exceptionally good, with a pleasant Regency flavour that would delight the soul of Gower Street. The construction is of laminated Ibus boards, veneered with mahogany and inlays of brass. It is pleasant to find illustrations of the fittings in the book on *Laminated Boards* by the late Sir Lawrence Weaver, which is just published by the Fanfare Press.

The other rooms in the building are those usually to be found in a library, with the exception of what is called the Legend Room. Here for an hour every evening a real story-teller sits with a group of children around him and sows the seeds of wonder in their hearts. The children are arranged in a semi-circle (see the left-hand side of the ground-floor plan), and the narrator sits in the recess you see. Behind him the walls are decorated with fairies, good and bad, the adventures of the mind in which we move so easily when we are very young. Over all is painted a great umbrella, as if to keep the mysteries from those foolish adults who have grown beyond their spell. I think it is the loveliest room for children I have ever seen.



Stockholm Public Library.]

A study room connected with the southern reading-room. Furniture throughout the library is designed by the architect and Gustaf Bergström.



[*By E. G. Asplund.*

The drinking-fountain in the southern reading-room.

A TOY FARM COME TO LIFE

FROM DESIGNS BY MAXWELL AYRTON



Every line of this central unit in the composition of the long, low elevation presented to the yard seems to realize some half-remembered fancy of nursery days. In point of prosaic fact, this is a pair of grain silos in reinforced concrete.

THE Home Farm, Wappingthorn, near Steyning, Sussex, lies on rising ground in those levels through which the ribbon of the River Adur describes innumerable loops on its way to the bridge at Bramber and so through the South Downs to Shoreham and the sea.

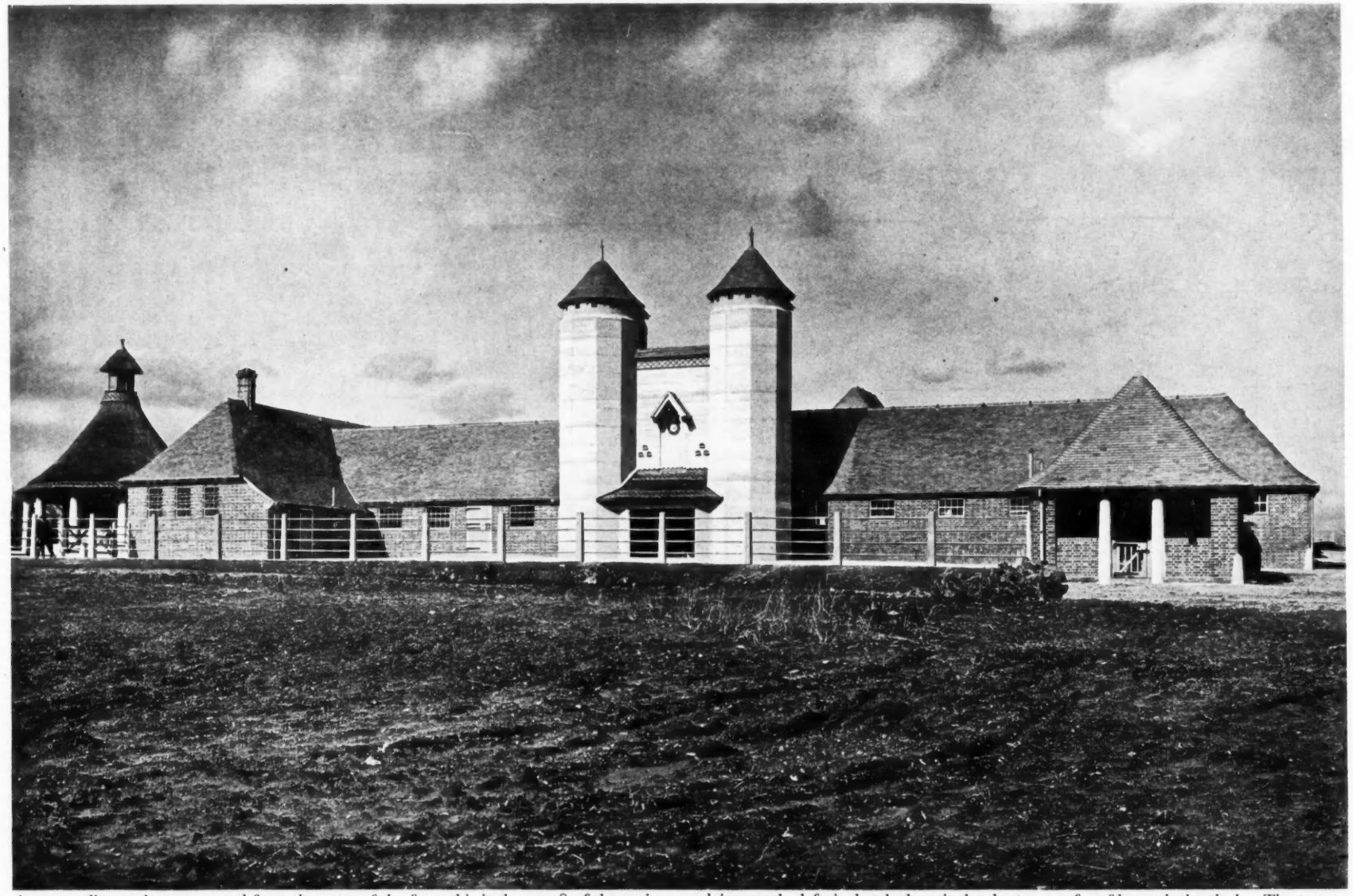
All this one can see from the hills above Steyning, laid out before one's eyes like a map. The very atmosphere of the Downs breathes farming. There is the distant tinkle of sheep bells, a team of horses ploughing on the lower slopes—it is not so long ago that teams of black oxen were seen engaged in similar labour hereabouts. The climber, glancing about him, with a mind predisposed to such matters, is likely to receive something resembling a shock of delight when his eye chances to light on what looks for all the world like a tower out of some superlative Noah's Ark. Peering further, he may descry a long, low building, with tall twin central circular turrets, red-tiled, and a fascinating cone or two of thatch, contrasting with them. It is Wappingthorn Farm, a farm straight from the toyland of his dreams; and no architect could resist the desire to inspect it at closer quarters.

The discovery of Wappingthorn Farm was not quite accidental on the part of the present writer. Reading a year or two ago Viscountess Wolseley's *Sussex in the Past*, and seeing therein Mr. Garnet Wolseley's picture in colour of Wappingthorn Manor, he set out one day to see it. It was a crushing disappointment to find on arriving on the scene that the house had been demolished and the site cleared. Inquiries, however, brought some comfort from the information that the materials had been carefully preserved with a view to re-erection. And when it was found that this task was being undertaken by Maxwell Ayrton, the last vestige of regret passed.

Nor was the object of the expedition entirely frustrated, for word was passed of the completion of the brand-new farm here illustrated to designs from the same hand. There are not so many new farms being built about the country that this was not, in itself, an event of particular interest, and closer acquaintance laid one completely under its spell. Though, however, the toy farm has indeed come to life, it is not to be thought that half-remembered fancies of the nursery have carried the day against practical considerations. The Hon. Arthur Howard, Lord of the Manor of Wappingthorn, for whom the farm was designed, is a breeder of pedigree cattle, and the layout was produced with the necessary amenities, including a small piggery and stable for farm horses, which this purpose implies, first in mind.

The plan reproduced with this article is so eloquent of efficiency that it seems needless to describe the farm here. It was only after all possible requirements had been met in this direction that the architect gave rein to his imagination and evolved out of bricks and tiles, reinforced concrete columns and thatch, elm weather-boarding and green-painted woodwork, the fascinating rectangle of buildings.

Readers will not require to be told



As one walks up the access road from the gates of the farm this is the aspect of the main building that meets the eye. Its appeal is enhanced by the attractions of texture and of colour, the latter focussed in the bright blues and reds of the clock face and hands. The dairy, on the left, is thatched; so is the short span of roof beneath the clock. The turrets and roofs are tiled; from ordinary half-round ridge tiles, cut and set against the concrete shuttering, were contrived the dovecot holes and ornamental wall-frieze above.

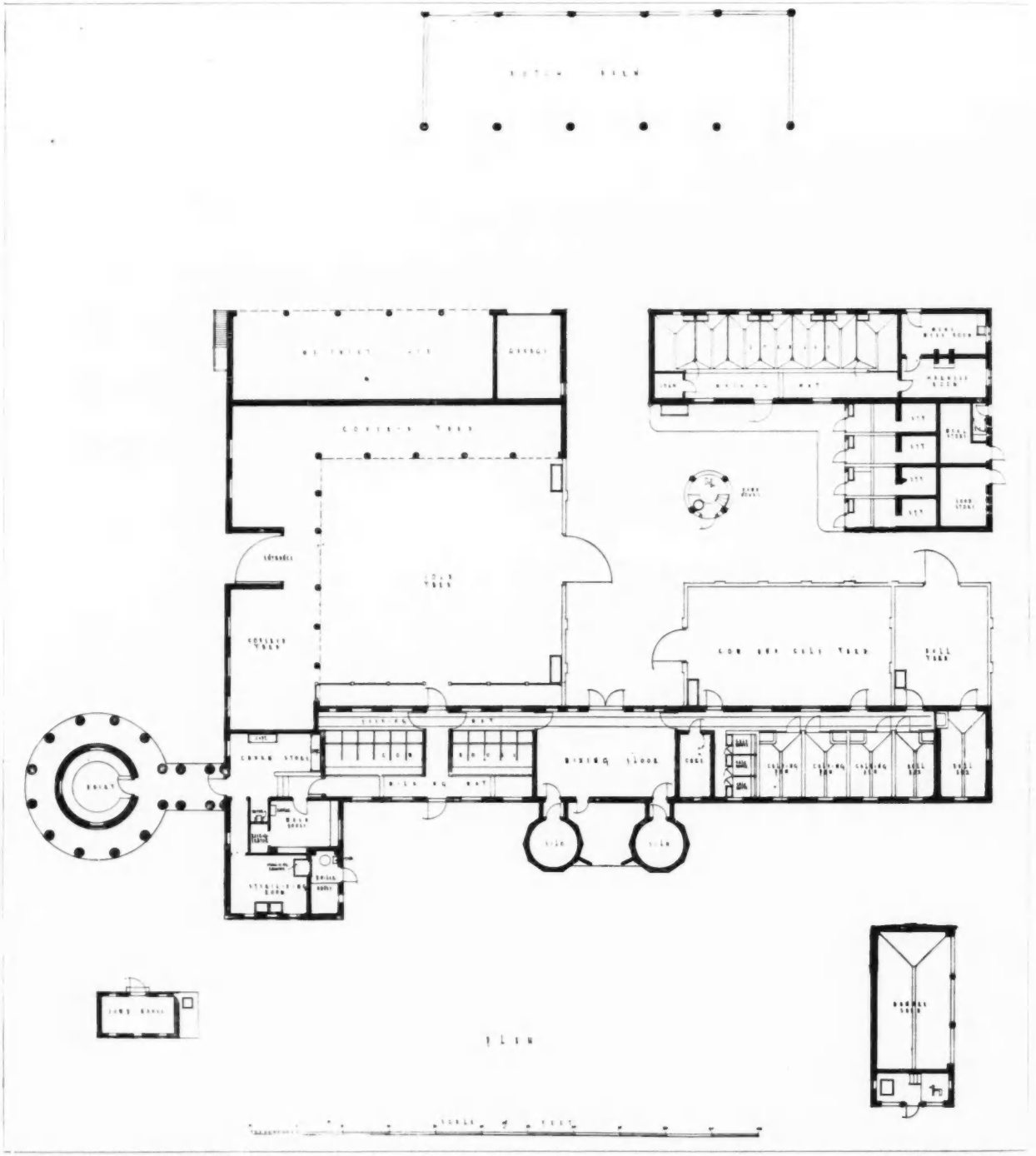
colour, the latter focussed in the bright blues and reds of the clock face and hands. The

shuttering, were contrived the dovecot holes and ornamental wall-frieze above.



Wappingthorn Farm, Steyning, Sussex.] [*By Maxwell Ayrton.*

The dairy is a circular building, connected to the western end of the main block by an open passage, thatched and colonnaded like the dairy itself, the columns being of precast concrete, wire-brushed. On the extreme left is seen the end of the implement shed, with exterior stair to loft above; on the right, the vista of the main yard and the southerly main front, with, to the right again, a corner of the pump house. The long brick wall running behind the dairy is that of the covered shelter for cattle in the fold yard.



Wappingthorn Farm, Steyning, Sussex.] [*By Maxwell Ayrton.*

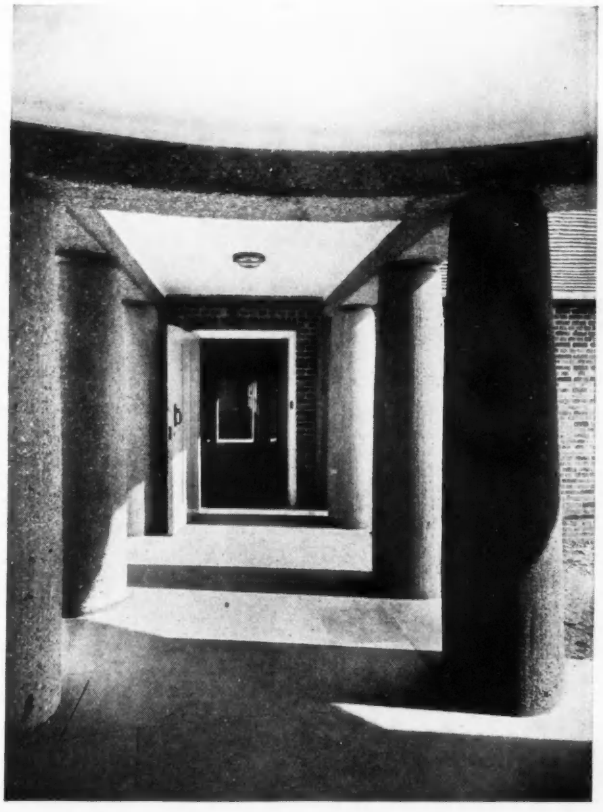
The architect's drawing of the layout of the range of farm buildings and yards. In the plan the north point is at the top of the page. The main front, with its twin-turreted central feature, therefore faces south on to the concreted yard, the enclosure of which is completed by fences and gates, not here shown. The farm is laid out for dairy and stock-breeding purposes, and study of the various divisions of the quadrangle formed by the principal houses and yards will reveal the severely practical considerations from which has sprung a felicitous flight of fantasy.

that the appointments and equipment are of the most modern kind. Sir E. Owen Williams was consulting engineer for the structure. Messrs. Rogers, Field and Bean prepared the scheme of sanitation and water supply, of which the isolated water tower is the outward and visible symbol, and Messrs. Couzens and Brown evolved the very comprehensive system of electrical power and lighting throughout the premises. Throughout, machinery and implements are driven by electricity supplied by a self-contained generating plant which, however, is adaptable to take a public supply of electricity if necessary at a future date.

Wappingthorn Manor has now been erected in its original Elizabethan style; the Home Farm is its graceful modern pendant. H. F.



The dairy is thatched with Norfolk reeds, carried down to the encircling colonnade in the interests of equable temperature conditions.



The covered way to the dairy has columns and lintel in concrete, the former precast, the latter cast *in situ* and both brush-hammered. The paving is of York stone.

A corner of the sterilizing room, showing, on the left, the sterilizing chamber. Steam comes from the adjacent boiler-room.



Wappingthorn Farm, Steyning, Sussex.] [*By Maxwell Ayrton.*



In the fold yard. The portion under cover extends, and to a greater depth, at right angles down the side from which the view is taken. The roof is tiled. In the further yard is the conical roof of the pump-house.



Wappingthorn Farm, Steyning, Sussex.]

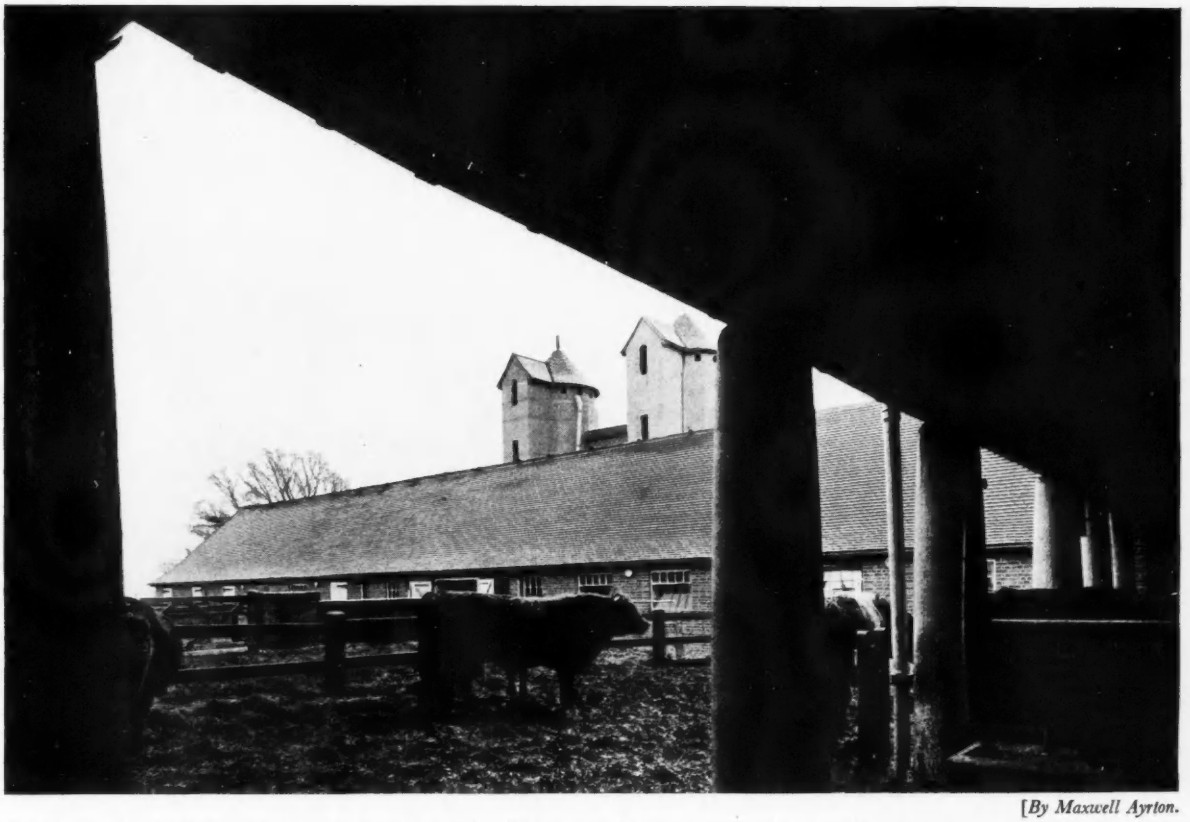
The entrance under the hay-loft that bridges the two northern wings is elm weather-boarded.



Stalls in the stables, which accommodate seven horses. The door at the end leads to the corn store.



The Dutch barn is constructed of reinforced concrete columns and elm weather-boarding, and is tiled. On the left is a corner of the stable block; in the distance, the water tower.



[*By Maxwell Ayrton.*

Looking across the fold yard, towards the back of the silo-turrets. The cow-house, with its milking bay in proximity to the dairy, occupies the right half of the building; the left contains calving pens.



Wappingthorn Farm, Steyning, Sussex.]

The water tower, the relation of which to the other farm buildings can be judged from the upper view on page 101. As the detail drawings in one of the supplements to this issue fully set forth its construction and features, it is unnecessary to say more here than that it contains living-rooms, and that the stairs by which the look-out is finally reached diminish by three inches in width at each flight.



[*By Maxwell Ayrton.*

The pump-house, the tiled roof of which is here seen covered with a powdering of snow. Here is housed a hand-pump; there is also a separate house containing a power-pump, driven by electricity, which is extensively employed for driving implements and machinery throughout the farm. On the left are seen the piggeries, and immediately behind the pump-house lies the cow and calf yard.

THE MODERN CITY GARAGE

Its Design, Construction and Equipment

BY THOMAS SPENCER

Readers will recall that in our issue for October 15 last there were published, under the title, "London's Garage Problem," proposals devised by the present author for a ring of car parks underground in London. About that time Mr. Spencer, who is the winner of the Competition lately promoted by the R.I.B.A. for a Motor Garage in the West End, read a paper at the Brixton School of Building. On that paper he has based the article that follows, taking a comprehensive survey of the problems that arise in planning, and of modern practice at home and abroad.

THE growing increase in the production and use of motor cars demands a new type of building where such vehicles can be temporarily parked, and it is this type of commercial garage or car park that is here considered.

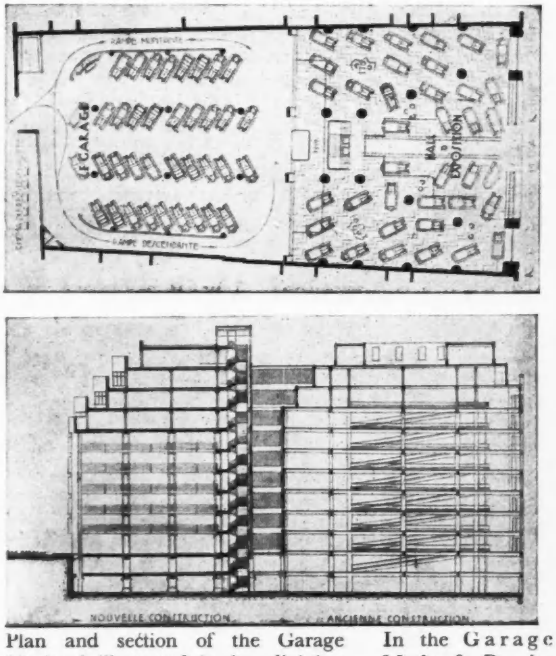
In the first place, such a building must be made commercially profitable, and the only way to effect this is by the closely combined efforts of the architect and the garage organizer. The architect must produce a building at the lowest possible constructional cost, with an efficient layout, so as to house the maximum number of cars on the minimum area of land. The garage organizer must run the garage in the most economical manner at the lowest cost, so that rentals can be low and every inducement be given to customers to park their cars in the building.

Let us first consider the problem from the architect's point of view. Naturally, a great deal depends upon the site selected, which in the case of a large city should be in the business centre, near, but not actually on a busy thoroughfare. It should abut upon two or more streets, but never on a one-way street; preferably it should be at a corner or on an island site, where it will provide a suitable space for a petrol-filling station. The entrances and exits should be arranged so as not to interfere with the streams of existing traffic, which its presence will indeed itself augment.

The number of floors for the building will depend on the area of the site selected and the accommodation in mind. When this factor has been decided, the important problem of conveying cars to the upper floors must be considered.

Where the height of buildings is limited, as in London, it is not possible to provide more than eight floors above the ground floor in a ramp garage, although in New York and Chicago garages of as many as twenty-five floors have been erected.

Therefore, the importance of parking the maximum number of cars on each



Plan and section of the Garage Marbeuf, illustrated in the adjoining photograph. The new structure appears on the right, the old on the left, in the section, and vice versa in the plan. There are two one-way ramps, giving communication for cars from floor to floor, and the system of parking them obliquely, in the garage portion, is clearly shown.



In the Garage Marbeuf, Paris, designed for the Citroën company. (A. Laprade and L. E. Bazin, architects.) Owing to the cut-away the visitor sees the tier of display floors.

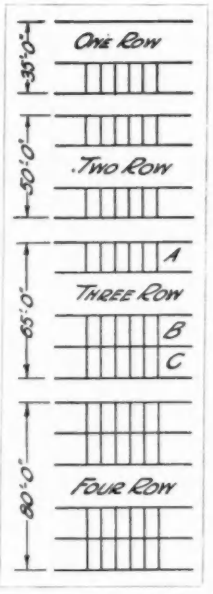


Diagram illustrating the four methods of parking cars, referred to in the text, varying from one to four rows per aisle.

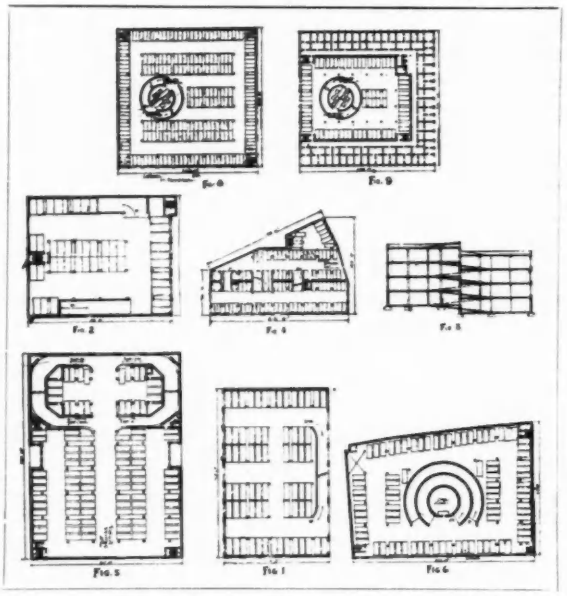


Diagram illustrating various types of ramp: (1) Single ramp; (2) divided single ramp; (3) and (4) ramps and staggered floors (with vertical section); (5) elliptical ramp; (6) concentric ramps; (8) and (9) double spiral ramp (two alternate floors). Examples of many of these systems are illustrated in the accompanying article.

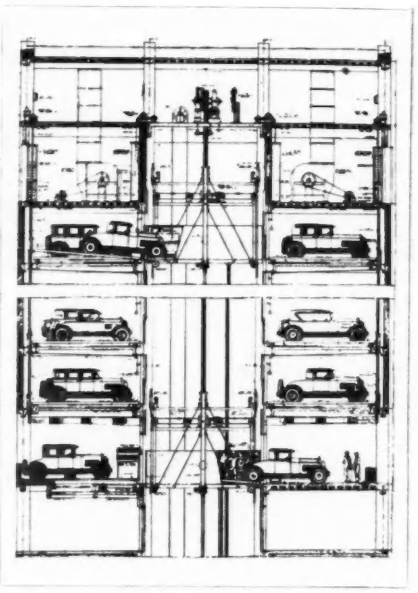


Diagram illustrating an American quick-action automatic system of car-lifts for inter-floor travel. Only three lower and the top floors are included. Tilting cradles convey the vehicles and impel them into and out of their allotted berths.

floor must not be underrated. A general layout of a typical upper floor, covering the whole of the site, should be studied, omitting details such as lifts, ramps, staircases, etc., which can be inserted later.

There are several methods of parking cars. The average dimensions of a car are 6 ft. by 15 ft.; of course, some are larger and some much smaller, but the standard size of a car bay or berth is 6 ft. 8 ins. by 15 ft., which will be found to correspond with the dimensions for an economical steel-framed building. The best method of parking is to place each car with its bonnet facing an aisle, as this allows for the most rapid and convenient handling. When it is realized that in the rush period about 60 per cent. of the total number of cars may arrive or depart within half an hour, the importance of planning for speedy handling will be appreciated.

There are four methods of parking cars, varying from one single row on one aisle to two double rows on one aisle. In each case the width of the aisle is 20 ft. and the space allowed for the depth of a car is 15 ft.

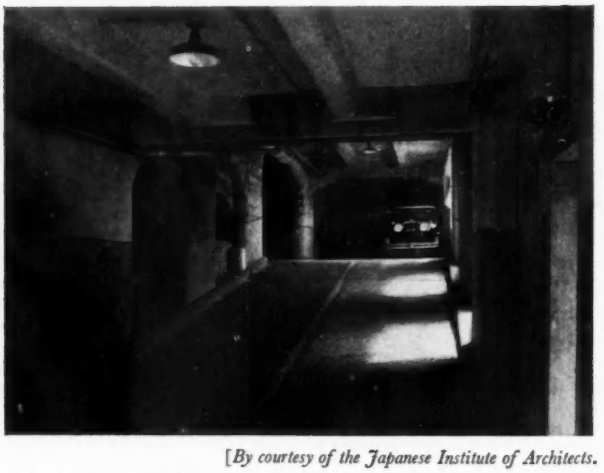
The objection to double-row parking is obvious. It entails moving the cars in the front row to reach those in the rear. This always leads to confusion and hindrance. In any case, where double parking is necessary, it should never apply to more than 15 or 20 per cent. of the floor accommodation. Four-row parking is, of course, the most economical, but is not to be recommended.

Columns should be kept back from the aisles about 2 ft. 6 ins. within the car berths. This will allow a freer space for turning the cars and also for parking large cars opposite small ones of less than 15 ft. length, while at the same time preserving the 20-ft. aisle. Thus the spacing of columns in one direction will be at 25-ft. centres and in the other direction 20 ft. apart,



By courtesy of d'Humy Motoramps.]

A one-way type of ramp, installed in the Bowdoin Square Garage, Boston, Mass. (R. H. Doane, architect).



[*By courtesy of the Japanese Institute of Architects.*

A two-way type of ramp, installed in the Marunouchi Garage, recently erected in Tokio, Japan.



By courtesy of Waygood-Otis, Ltd.]

An isometric sketch of a typical multi-floor building in America—the Kent Garage, New York—served by quick-service car-lifts.

which is the width allowed for three cars at 6 ft. 8 ins. each. If more is allowed, or over 7 ft. per car, space is wasted and the steel-framing will necessarily be heavier and more expensive.

We will now consider the best means of rapid inter-floor travel. It can be carried out in two ways: first by automatic lifts, and secondly by ramps or sloping ways connecting the floors. In a business centre where there is a small compact site, and also where the building is likely to be very high, lifts are more advantageous. On the other hand, with an extensive site, ramps are more economical to build and maintain.

In the case of ramp inter-floor travel, care must be taken to select the best system of ramping to suit the particular site. Certain statistics follow :

1 : The single-way ramp has a parking efficiency of 46 per cent. and requires 242 sq. ft. per car.

2 : The two-way ramp has an efficiency of 38 per cent. and requires 290 sq. ft. per car.

3 : The staggered floor system or d'Humy ramp has an efficiency of 51 per cent. and requires 218 sq. ft. per car.

4 : The elliptical ramp has an efficiency of 40 per cent. and requires 278 sq. ft. per car.

5 : The concentric spiral ramp has an efficiency of 43 per cent. and requires 260 sq. ft. per car.

6 : The double spiral ramp has an efficiency of 45 per cent. and requires 243 sq. ft. per car.

Comparing, now, the parking efficiency and floor space per car of two lift garages in New York and Chicago, the result is as follows :

The Kent Garage, New York, has an efficiency of 68 per cent.;

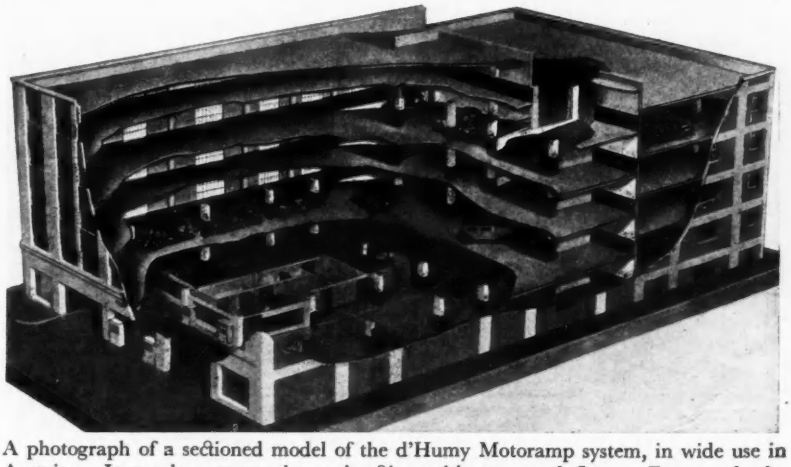
The Quincy Street Garage, Chicago, 59 per cent., and requires 187 sq. ft. per car.

It will therefore be seen that the lift system gives a higher degree of efficiency and requires a much smaller car area than the ramp system. However, there are other factors to be considered besides those of efficiency and speed.

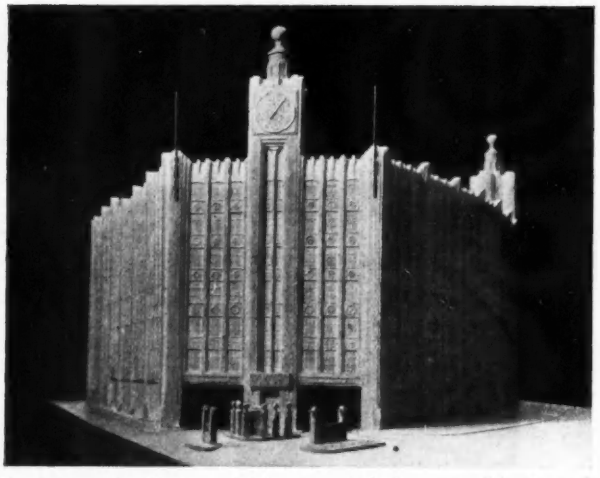
When using the ramp system the slopes should not be greater than 15 per cent., or about 1 in 7. A steeper grade only results in accidents and delays. All obstacles should be eliminated to give a clear vision, which will help to speed up the traffic. Ramps should be about 20 ft. wide, which will allow two cars to pass. The number of ramps should depend upon the accommodation of the building. As a general rule a single ramp is suitable for 300 to 500 cars, but above this number double ramps are necessary.

The turning diameter, depending on the lock of a car, must not be overlooked, and although some small cars turn in a small space, provision should be made to accommodate the lock requirements of the largest cars. Turning diameters range from that of the Ford car, which is 34 ft., to 56 ft. 10 ins. for a Rolls-Royce, those of the Daimler double-six being 55 ft., and of the Packard, the largest of the American cars, 52 ft. 8 ins. Therefore, 60 ft. to 65 ft. should be allowed for turns on all ramps and traffic ways.

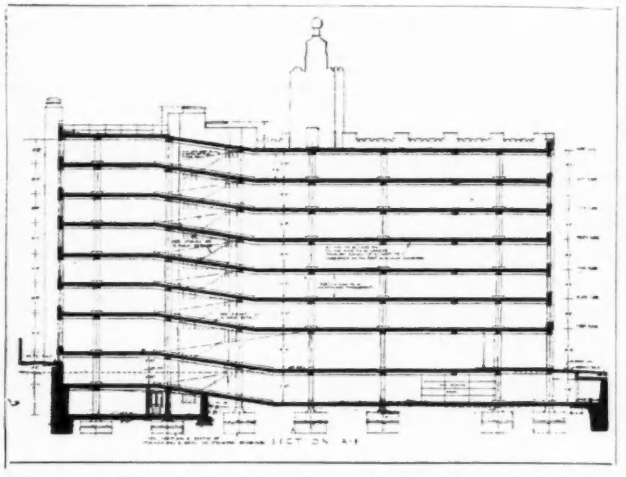
It has been recorded that twenty to thirty cars can be on the move at one time on a one-way ramp system and forty cars in one 10-floor garage. This should be noted, as, in the case of lift inter-floor travel, the number of cars actually on the move is dependent



A photograph of a sectioned model of the d'Humy Motoramp system, in wide use in America. It employs ramps in conjunction with staggered floors. For speed, the ramps are banked.



A photograph of the model for a projected garage (Mewès and Davis, architects), of which a section and two floor-plans are also reproduced on this page.



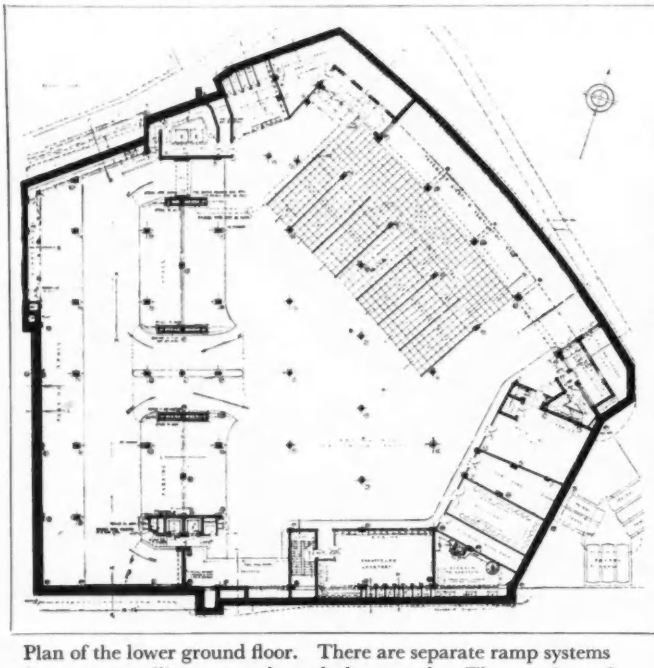
This sectional drawing shows very clearly the application of the staggered-floor-cum-ramp principle. Basement, ground and six upper floors are thus served.

on the number of lifts, and in some cases it might take two or three minutes to carry a car from the lowest to the highest floor by means of a lift. A recent test with ramps has proved that under normal conditions a car can run from the first to the eighth floor in one minute. Ramps should be placed as far as possible from the entrances and exits of the garage so as to leave a maximum space in front for parking.

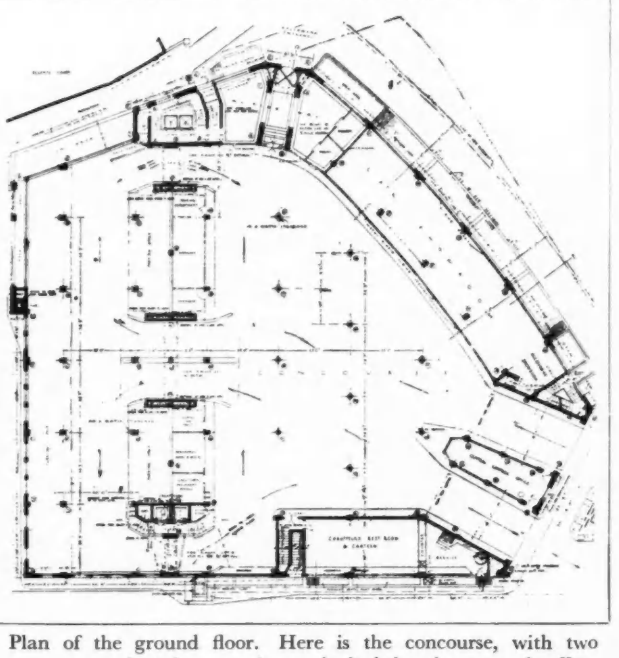
The cost of ramp construction is very little more than that of a flat floor. This method of car conveyance also has the advantage of requiring little or no upkeep and operating expenses, as motorists take their own cars up and down at their own expense. For practical purposes, however, a ramp garage should not be built higher than ten to twelve stories.

With the lift system the garage can be built to almost any height provided the local bylaws allow; and cars are automatically parked. A customer hands over his car at the entrance; it is taken by means of a conveyor into the lift, hoisted to the appropriate floor and parked in the space allotted to it. It returns by the same method when called for. Before deciding upon the number of lifts for such a garage, it is necessary to consult with a lift specialist, as too many or too few lifts may spell the success or failure of the undertaking. At a rough figure, it is estimated that there should be a lift for every 100 to 150 cars.

Generally speaking, a garage should be a complete commercial building, providing everything that is likely to be required by its customers, including the usual offices for the control and management of the business. The entrance and exit should be under the supervision of one central office in front of which all cars entering or leaving should pass, so that there is no



Plan of the lower ground floor. There are separate ramp systems for cars travelling upwards and downwards. The spacing of stanchions should be noted. The chequered space is for car-washing; the remainder is available for parking. Store-rooms and lavatories are also provided.

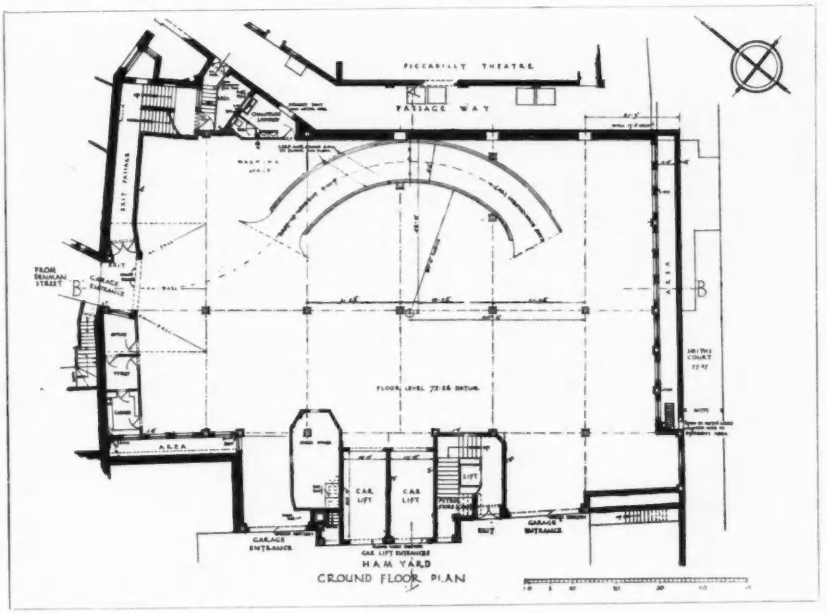


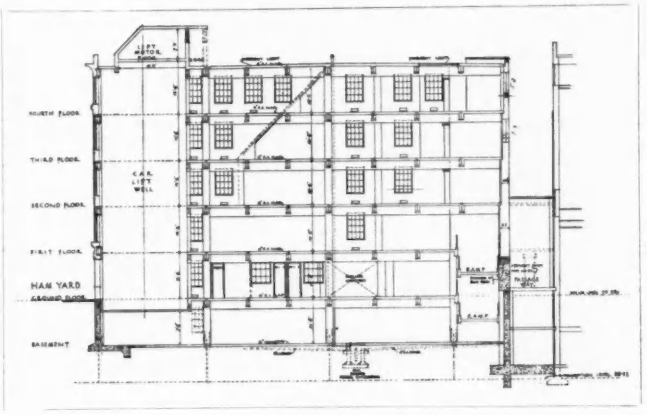
Plan of the ground floor. Here is the concourse, with two entrances; that for cars is overlooked by the control office. There is also a range of shops and offices, and a chauffeur's rest room. The upper floors are devoted principally to the provision of car-parking space.

danger of cars being stolen. This central office should be in telephonic communication with every part of the building. On each floor a superintendent's office should be planned, to accommodate the operative who is entirely responsible for all the cars on that floor. This office should be placed in a position to give a clear vision of the entire parking floor.

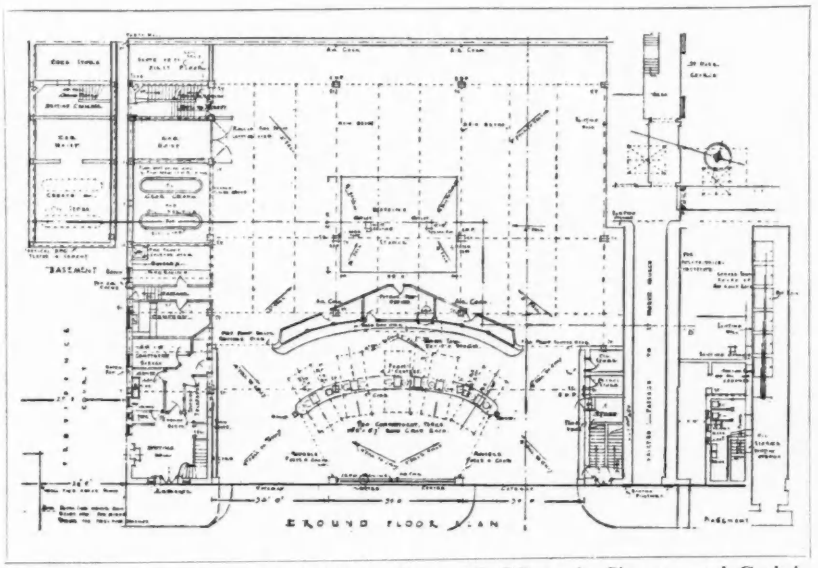
Administrative offices, comprising a general office, managers', directors' and accountants' rooms, should be near to the main entrance, not necessarily on the same floor, but in direct communication with one another. There should be staff cloakrooms for both sexes; these can be placed on the upper floors or in the basement. Comfortable waiting-rooms for customers, with cloak, changing, and bathrooms adjoining, and with lifts to give access to the various floors, should be near to the main entrance. A showroom, with space for the exhibition and sale of new cars and accessories, should be adjacent to the waiting-room and in such a position that customers will have to pass through it on their way to the garage. It should have windows facing the street as well as into the garage. The accessories department can form part of the showroom.

In this connection it might be well to mention that a considerable part of the garage income can be obtained through sales and advertising. In the records taken at one garage in America, it was found at the early stages that 80 per cent. of the takings was derived from the garage and 20 per cent. from sales, and later 30 per cent. to 50 per cent. due to the garage and 50 per cent. to 70 per cent. to sales.





The Piccadilly Garage, W. (E. A. Stone, architect). Study of this ground-floor plan and cross-section (on line A.A.) will show the arrangements for inter-floor travel. There are two car lifts, serving all floors except the basement, and, in addition, a single ramp connects basement, ground and first floors.



Ground-floor plan of garage in Balderton Street, W. (Wimperis, Simpson and Guthrie, architects). Air, petrol and oil services are concentrated at the pull-in, and travel to upper floors is by two car-lifts.

By providing suitable accommodation for chauffeurs, a certain amount of extra business may be brought to a garage; therefore a canteen, where refreshments and meals can be obtained, a reading and writing-room should be incorporated. To this room a loud-speaker should be connected to enable a customer requiring his car to telephone to the control officer, who would then call up to the chauffeur concerned. Cloakrooms and bathrooms should also be provided in connection with this department.

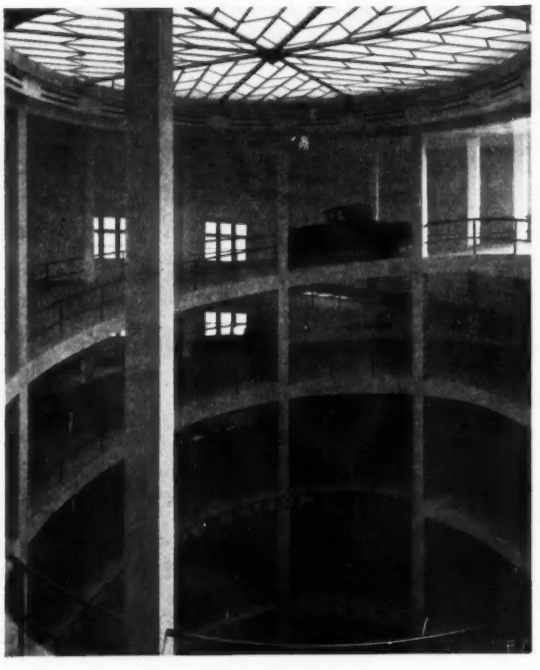
A repair shop, with complete apparatus for effecting every kind of repair, including vulcanizing of tyres, and a special room for cellulose-spraying apparatus, can be suitably placed on the top floor and, adjoining it, a breakdown car lift should give direct communication with the street. The washing apparatus is sometimes placed altogether on one floor, or, alternatively, a bay or two set aside for it on each floor.

The washing of cars is a very intricate



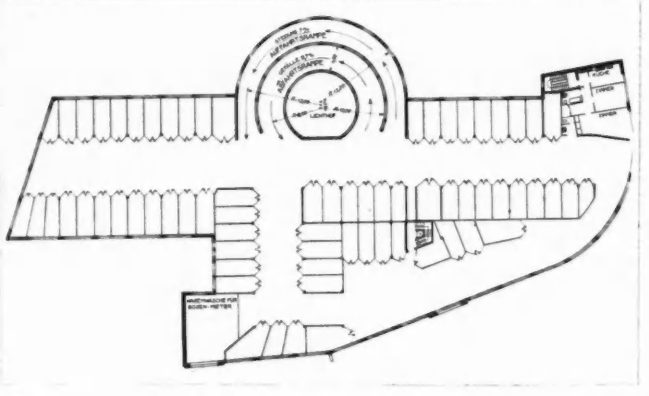
A general view of the Grosse Schlotterbeck Garage, from St. Margarethen-brücke, Basle, Switzerland. (W. E. Baumgartner and H. Hindermann, architects.)

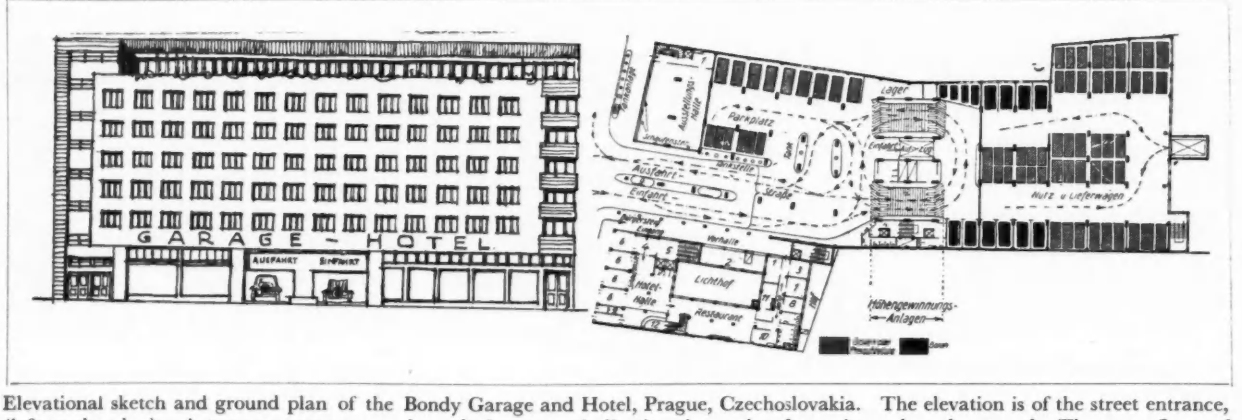
[*Illustrations by courtesy of* Schweitzerische Bauzeitung.]



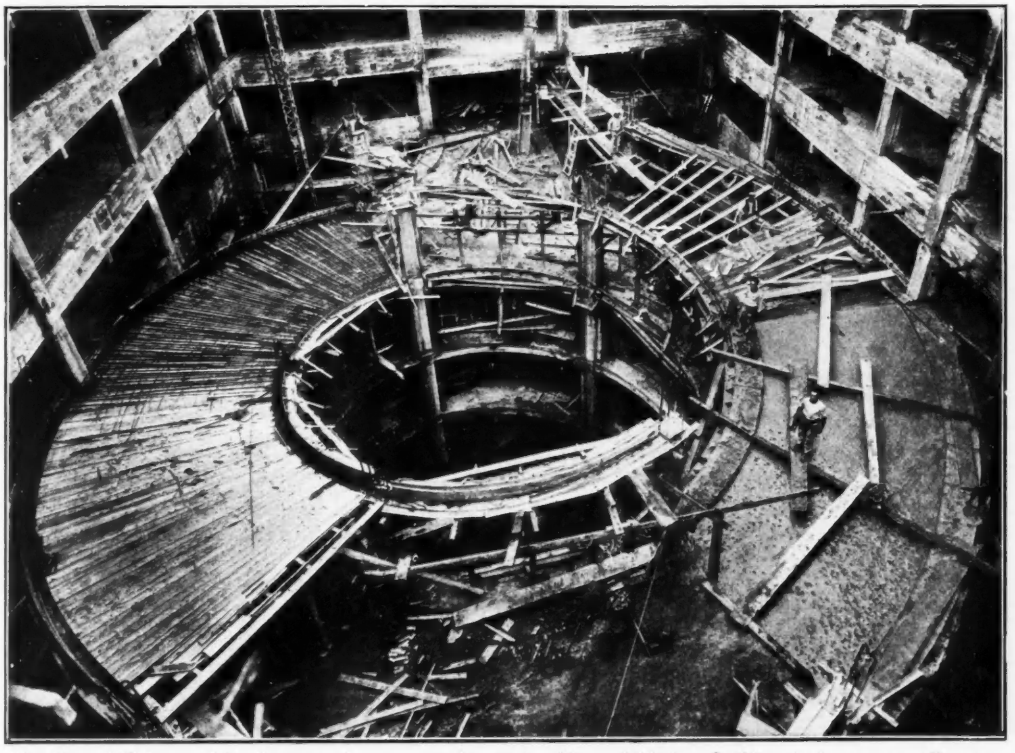
The floors of the Schlotterbeck Garage are served by a well containing concentric circular ramps, the outer for upward and the inner for downward travel, respectively.

A typical floor-plan of the Schlotterbeck Garage. This illustrates an economical lay-out of berths to accommodate some 70 cars, and also shows very clearly the two ramps that debouch on every floor. The building is of brick and reinforced concrete construction; the price was about 10d. per c. ft.





Elevational sketch and ground plan of the Bondy Garage and Hotel, Prague, Czechoslovakia. The elevation is of the street entrance, (left on the plan). A two-way ramp system is used, the arrows indicating the paths of cars, inwards and outwards. The upper floors of the short limb of the L provide an hotel; the remainder is available for garage purposes. There are two tennis courts on the flat roof



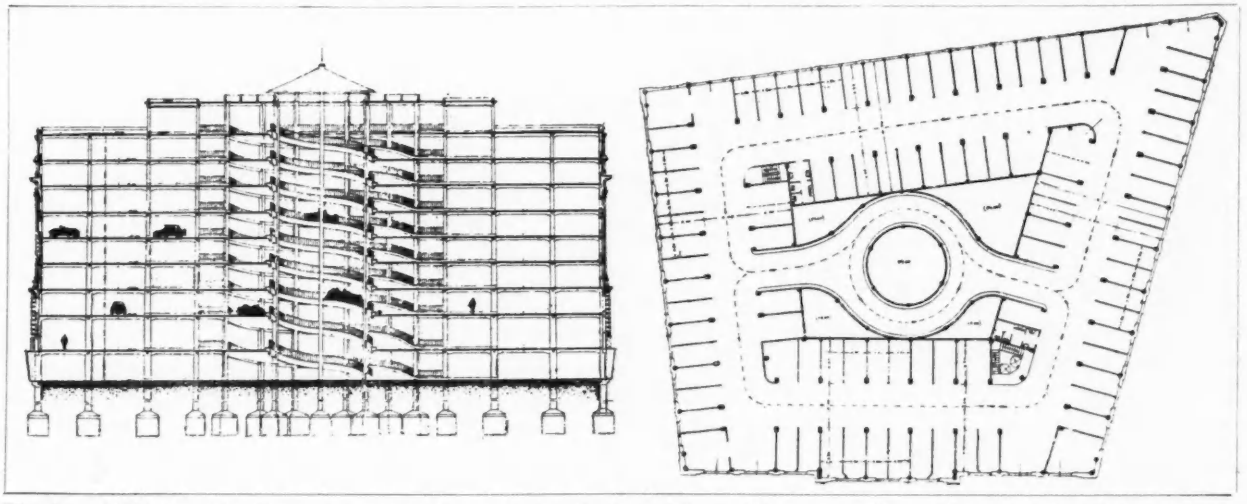
The Casa dell'Automobile, Rome : the ramp under construction. This is a double-spiral type providing two separate ways from bottom to top and top to bottom of the building, with an entrance to, and exit from, each at every floor.

process and should be carefully studied in particular relation to the needs of the garage customers. It should be carried out by means of water under compression delivered from a gun. The car should be placed on a raised revolving table, so that the washers can obtain easy access to all parts. The floor of the washing space should be formed of open iron grids so that the water and silt can run through to the troughs under and pass away as sludge.

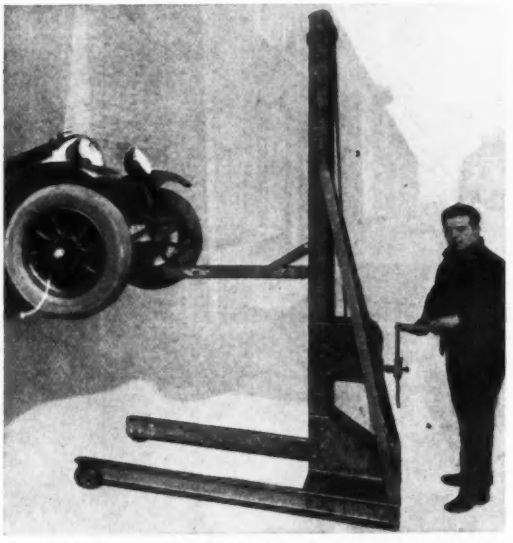
It has been calculated that four men can clean a car in five minutes. Similar raised racks should be provided for greasing and oiling the cars, thus dispensing with the old-fashioned inspection pit.

Battery charging and storage rooms are best provided on the ground floor near to the general waiting space at the entrance, so that customers can run in and replace their batteries without interfering with the normal working of the garage. Air and water standards should be provided in a central position on all floors and also in connection with the outside petrol-filling station.

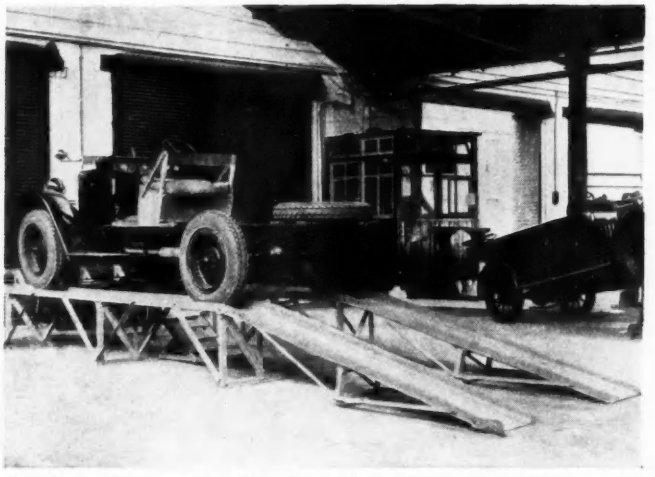
The basement of a garage is generally given up to storage, as of tyres, or to battery-charging plant. It is occasionally used for washing purposes. When planned as a parking space for cars it must be well ventilated so as to carry off the carbon-monoxide fumes. The



The Casa dell'Automobile, Rome : a cross-section, and plan of a typical floor. The ramp-well occupies a central position, and the arrangement of entry and exit at opposite sides of it, at every floor, will be followed. The illustrations also show the banking designed to facilitate rapid travel.



A one-man portable jack-hoist, shown in operation to elevate the front axle of a car, for washing, inspection, greasing, adjustment, etc.



An elevated runway, another device for facilitating operations on the underworks of cars: it supersedes the inconvenient, dark and dirty inspection pit in which the mechanic had to lie on his back.

[*Illustrations on this page by courtesy of Harvey Frost, Ltd.*]

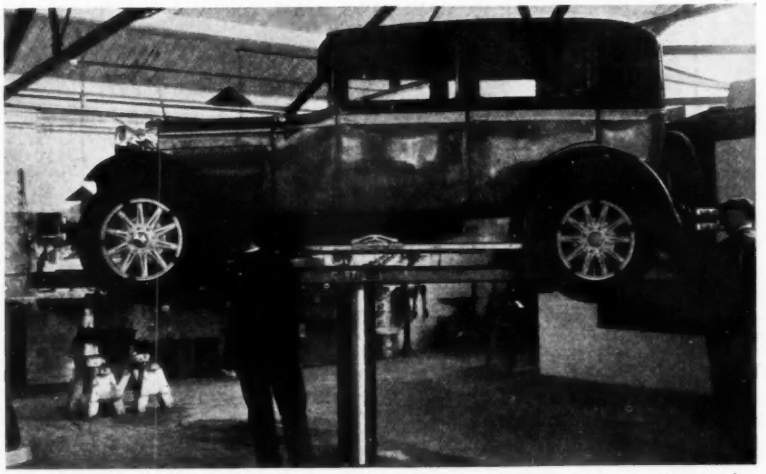


A modern car-washing plant in operation. Water is supplied, under pressure, and is directed by guns either in a heavy stream or a fine spray.

London County Council have very stringent regulations for this type of building, and will not permit basements to be used for parking purposes in a building exceeding the permitted cubic capacity of 250,000 c. ft., unless one-third of the perimeter of the site is open to the road or areas. Trunks will have to be run, communicating with extract fans and Honeyman ventilators in chambers on the roof; it is most important that the vitiated air and fumes should be extracted at floor level, not above it.

The question of modern methods of fire protection in garages is of vital importance. The majority of large garages in this country are now equipped with an automatic sprinkler installation fed by a connection or connections from town's main supplies, sometimes augmented by an overhead tank. The whole sprinkler installation is controlled by one or more controlling valves, on the wet system (about 1,200 sprinklers) or the alternate wet and dry pipe system (700 sprinklers).

The whole secret of the superior value of the sprinkler system in the case of petrol and other fires where a hose pipe would be useless, lies in the fact that the water is discharged as a fine spray over an area of from 200 to 300 sq. ft. of floor space, and, coming into contact with the heat which releases it, is largely vaporized and so forms a blanket round the seat of the fire and excludes all oxygen, without which combustion cannot take place. The sprinkler heads are placed at ceiling level in all cases and the minimum distribution is one sprinkler head to every 100 sq. ft. of floor area.

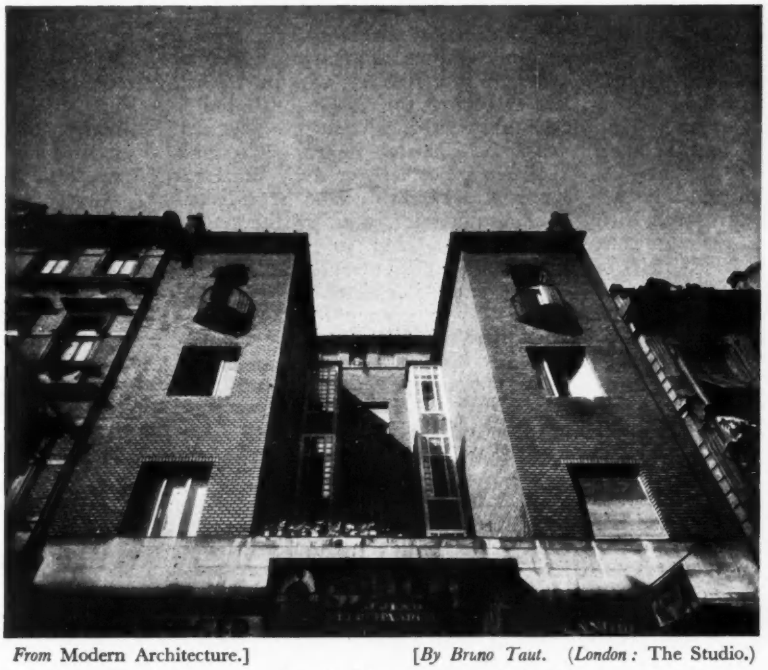


A revolving elevated turntable, in use for the purpose of convenient attention to the grease-points on the chassis, many of which are of necessity below wing level.

SOME BOOKS OF 1930

An Architect's Survey

BY GRAHAME B. TUBBS



From Modern Architecture.] [*By Bruno Taut. (London:* The Studio.)

Building in Budapest (1911). Architect: Málnai Béla (Haasz and Málnai).

THE greatest inventions are usually the simplest, and the obvious often remains undone until someone does it and is hailed as a genius; in literature also, works which, when achieved, seem inevitable, remain unwritten. It is almost unbelievable, for instance, that we should have had to wait for an adequate Life of Pepys until this year, when Drinkwater gave us his delightful biography of the greatest of all diarists. In the same way it is surely very odd that no one until today has written a history of the architectural tendencies of the last 150 years. The latter difficult task has been undertaken with incredible industry and a fair measure of success by an American, A. B. Hitchcock, in one of two books with the same title—*Modern Architecture*. Anyone who wishes to grasp the significance of modern architectural movements should read this one, but he must be equipped with almost the same pertinacity as the author, for the style is not of the happiest.

Another book that was long overdue is a complete architectural history of the nineteenth century. Professor Richardson's *Monumental Architecture* and Kenneth Clarke's *The Gothic Revival*, between them, cover a good deal of the ground, and now Dudley Harbron's *Amphion, or the Nineteenth Century*, has come along to fill in the gaps and to extend the story to the end of the century. The book consists of a number of wittily-written papers, in which the chief characters of the architectural drama—clients, critics and architects — entertainingly say their piece, make their bow and retire. Soane, Burton and Barry; John Wilson Croker, the autocratic chairman of *The Athenæum* (" . . . I do as I please; they asked for an ice-box and I gave them a frieze "); Wyatt, Elmes and Cockrell; Cuthbert Brodrick (who carried the Renaissance torch well beyond the middle of the century); the Pugins; Ruskin, Gilbert Scott and his pupils, William Morris, Philip Webb and Bodley—they are all there. We hear about the Red House that Webb built for Morris, and the one in Melbury Road that Burgess built for himself; of Norman Shaw and Nesfield's revolutionary ideas about country houses; and so to their followers who are still living. The breakdown of the old Georgian tradition is attributed to the unprecedented growth of both industrialism and transport facilities, which resulted in a great rush of work, causing the breakdown of the pupilage system and forcing the development of " drawing-board architecture." The muddle was aggravated by mental indigestion due to foreign travel and to a surfeit of reproductions. Altogether this is a very entertaining book.

During the year there have been published several works of architectural biography, the two chief ones being in French. M. Jean Stern has written an admirable two-volume life of François Joseph Belager, court architect to Louis XVI, whose best-known work is *La Bagatelle*, which he designed in forty-eight hours and built in sixty-four days. He was an artist of infinite grace, and his work and his life fit to perfection into the gay Court of Louis XVI. The other book deals with an earlier period and is by a Swede, Ragnar Josephson, who writes of his countryman, Nicodème Tessin, architect to Charles XII and designer of the Royal Palace in Stockholm. This enterprising artist, encouraged by Louis XIV's magnificent patronage of the arts, visited Paris, and in 1704 submitted a scheme for completing the Louvre. In this he had no better fortune than Bernini, but this may be partly accounted for by the fact that the style which he used had been considered *démodé* in Paris for thirty-five years! These two books display to full advantage the biographer's art which, like all history, is dependent on material provided by the patient work of archæologist and scholar.

Such material is provided in abundance by the editors of the Wren Society, whose sixth volume deals with the complicated history of Greenwich Hospital. Research among

the minutes of the building committee, various reports and the accounts, has elucidated the complicated problem of the relative responsibility of Wren, Vanbrugh and Hawksmoor, and established the fact that Vanbrugh's share in the design of this group of buildings was greater than has hitherto been thought.

Each year gives us a fine lot of records of old work of interest to the artist or antiquarian, and this year is no exception. The Royal Commission on Historic Monuments' fifth volume on the Metropolis deals with East London; it includes the Tower and Greenwich Hospital among its more important buildings, but it gives a great mass of illustrations of buildings (with measured drawings), details of doorways, mural tablets, furniture, glass and metal-work, all most carefully annotated and dated. This book, at a guinea, is undoubtedly the best value for money that can be had today. The continuation of the L.C.C. Survey of London deals with the parish of St. Margaret's, Westminster, and covers the neighbourhood of Whitehall. Jones's Banqueting Hall is illustrated in great detail by drawings and photographs. Now that the Bank of England is largely destroyed, we must be grateful to Rookesby Steele and F. R. Yerbury for their record of the building as it was. It has seventy-five excellent photographs by F. R. Yerbury and twenty measured drawings by F. W. Troup of the work of Sampson, Taylor and Soane.

From France comes the ninth volume of M. Saut Sauverin's *Chateaux de France*. This portfolio contains superbly reproduced folio photographs of the castles in the Touraine district, including Blois, Chenonceaux, and so on. Spanish work is recorded by Mack and Gibson in *Architectural Details of Northern and Central Spain*. There is also an altogether excellent book of fine measured drawings and corresponding photographs of metal- and stone-work by two other Americans, Messrs. Garrison and Rusbay, who in *Mexican Houses* record Spanish colonial buildings from the seventeenth century onwards. The style is strongly Spanish in feeling, but tempered by the local materials, chiefly adobe (sun-baked mud and straw), and by the native building tradition of the Indian artisans.

The student is assisted in his studies (whether elementary or advanced) and the designer's repertoire is enlarged by the reprint of old books that have become too rare for ordinary purchasers; M. Louis Blanc has made a collection of eighteenth-century engravings of the wrought-iron work of *La Regence* in France, and they have been finely reproduced by the photogravure process. Work is included by such master-smiths as Fordrin, who inspired Tijou, and Lamour, who made the magnificent ironwork at La Carière at Nancy. Messrs. Tiranti have issued another part of their excellent and very moderately priced reprint of Letarouilly's *Edifices de Rome Moderne*.

Leaving the work of the past and coming to that of the present, there are several general surveys, both literary and pictorial. *Living Architecture* is an example of the former, sponsored by the Chicago Chapter of the A.I.A., and purports to review modern activities in the United States. It is a somewhat superficial survey, but, nevertheless, contains some interesting ideas, especially with regard to large-scale development of residential districts, and an account of the preliminary "pooling" of architectural ideas before the programme of the competition for the Chicago World's Fair, 1933, was drawn up.

The chief record of the modern buildings of the world comes from Germany and is a fine volume of 630 pages, called *Die Baukunst der neuesten Zeit*, by G. A. Platz. It consists chiefly of very good photographs of buildings of the modern spirit from all over Europe and America, erected mostly since the war, but with a few going back as far as 1900. There is no single example of English work included (except the Crystal Palace, the first "functionalist" building, and Dr. Unwin's plan of Letchworth). This rather extraordinary state of affairs will cause despair or rejoicing, according to the reader's degree of sympathy with Modernism. Those who are dismayed at our conservative outlook will be able to refresh themselves by studying a little monograph, *Eric Mendelsohn*, on the work of probably the most significant of all "the moderns," and one who has, unlike some of its protagonists, done a great deal of work. This reproduces many of his working drawings, his vigorous and suggestive sketches, as well as photographs of finished buildings in its modest 250 pages. Another monograph, this time on a single building, the *Stockholm Town Hall*, is published in English by its architect, Ragnar Östberg, and is as great a contrast to the German's work as well could be. The text tells the story of the inception and erection of this fine building, and the photogravure plates form a good record of its beauties, which few can fail to admire, even when disapproving.

A symptom of the passing of the nineteenth-century *laissez-faire* policy is the great number of new books that are constantly published on the subject of town planning. The complexity of our civilization is forcing us, however reluctantly, to look ahead. From France we have *Le Science des Plans de Ville* by A. A. Rey and J. Pidoux, which is a treatise approached from the scientific angle. Considerations of aeration of streets and buildings and sun-penetration are illustrated by many diagrams, as are also the principles of traffic circulation: transport, improvements of existing towns and their extension by means of satellite towns, and by other means, are considered.

Hugh Ferris approaches the problem from the artist's standpoint, and in his book, *The Metropolis of Tomorrow*, he



From Cornwall: Moors, Coasts and Valleys.] [*By W. Harding Thompson (University of London Press).*

A general view of Port Isaac.

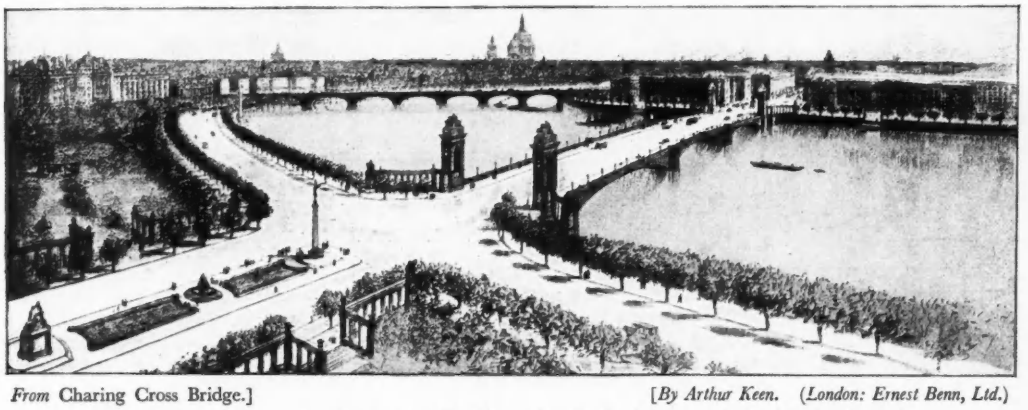
illustrates his ideas by means of magnificent drawings, the first series being of actual examples of the most recent skyscrapers, while the second part is purely an imaginative presentation of the appearance of cities of the future. He envisages structures of 1,000 ft. or more in height covering several blocks, with roads running beneath them; they will be widely spaced, and each will be devoted to a special purpose: art, philosophy, science, business and so on. The intervening spaces will not be free, as in M. le Corbusier's scheme, but covered with low buildings; altogether it is a wonderful, but rather terrifying, picture. Another book of United States origin is *Our Cities Today*, by Theodora and H. V. Hubbard. This is a survey, carried out with help from the Milton Fund, of town-planning conditions in the United States. Although it is solidly printed and extends to nearly 400 pages, it can give but a bird's-eye view of so vast a subject. It gives information on the number of cities that have initiated town-planning schemes, on those which have advisory Fine Arts Commissions or powers to control elevations, and on the various methods adopted to finance town improvements and other specially interesting features.

England is by no means lagging behind in the number of town-planning schemes that are under consideration. Certainly the most important book this year is Dr. Unwin's *Greater London Regional Planning Report* (first part), published at 5s. The area under consideration is 2,000 square miles in extent and contains between eight and nine million people. This first report is general in its recommendations, but deals in greater detail with the urgent subject of open spaces and the prevention of ribbon development. The committee pleads for new powers to enforce schemes for built-on land, zoning and kindred subjects. While this scheme deals with London as a whole, *Charing Cross Bridge*, by Arthur Keen, shows the absolute need for some large and considered policy with regard to an important area at its heart. The book is extremely valuable, inasmuch as it makes available, in convenient form, the best of the schemes that have been prepared in the last few decades for carrying out this most urgent and necessary replanning. There is no one better qualified for this than Mr. Keen, and he has done his task with great ability and puts the salient facts before his readers with brevity and restraint. He prefaces his account of the many schemes for the bridge and the south side by describing the chief of the great improvements of the last century.

The London is but one of the many regional planning schemes that are in process of evolution; the *North-East Kent* report, by Adams, Thompson and Fry, deals with part of "the Garden of England," which includes a section of the North Downs, the Thames estuary, and a considerable length of sea-coast. The recommendations make provision for open spaces on low-lying ground by the river, on the ridge of the downs, woodlands, and certain private parks, when they come into the market. The *North-East Lancashire* report has to do with a very different district, one that is already largely industrialized. The population, which numbers 3,370,000, is engaged in the cotton trade or in farming. The report pleads for improved roads and, above all, for more open spaces, which are in certain cases notably lacking; in Clitheroe, for instance, there are no open spaces of any kind, so one is not surprised to read that the death and infant mortality rates are high. The report on *Cornwall* was prepared by W. Harding Thompson for the C.P.R.E. in the hope that the local authorities and the landlords will combine to keep its lovely coast-line and beautiful moors free from the disfigurement that is already threatened.

The next class of book to engage our attention is that in which a single subject or group of subjects is given to each volume. In *Neuzeitliche Hotels und Kranken Hausen*, by V. Herman, hotels and hospitals are rather incongruously grouped together in a single, fat and excellently printed volume. The examples are taken from Central Europe, Scandinavia, Holland and the United States besides, but once more there is nothing from England. M. Moreau has published a portfolio of plates, *Hôtels des Voyageurs*, most of which are from France. P. Morton Shand writes on *Modern Theatres and Cinemas*, and his book is more for the decorator or the layman than the architect, as there are few plans and none of the technical information that might be expected. It is, however, a jolly book, and the author has raked over all Europe for the best modern examples, but has ignored the American continent. There are a number of English examples, and they show that here we can hold up our heads quite proudly. M. Moreau also published a portfolio of plates on the same subject.

A newcomer in the bibliography list is airports, of which there are two examples. In *International Airports* Col. Hanks breaks new ground and gives examples, mostly from Europe, of what has already been done towards the architectural solution of this new problem. The examples on this side of the Atlantic, he thinks, are at present better than those on the other, but the Americans are now spending immense sums on aviation and are making rapid strides forward. The second book on this subject is a collection of the prize-winning designs submitted in the Lehigh Airport competition in the United States, and contains some interesting and imaginative ideas.



From Charing Cross Bridge.] [*By Arthur Keen.* (*London: Ernest Benn, Ltd.*)

General view of an embankment-level bridge. By D. B. Niven and T. Raffles Davidson.



The Susanna Fountain, Gothenburg.
Sculptor: Carl Milles.

From Modern Architectural Sculpture.]
[*By William Aumonier. (London: The Architectural Press.)*

Subdividing the categories even further, the next kind of book is that which treats of some particular detail of the architect's repertoire. Tunstall Small and Christopher Woodbridge have completed no fewer than three books; they give measured examples of *Mouldings of the Tudor Period*, with a further collection of *Architectural Turned Woodwork* of the period of the sixteenth, seventeenth and eighteenth centuries; the third is on *English Wrought Ironwork* of the late seventeenth and early eighteenth centuries. The three are of uniform size and the measured drawings of exemplary clearness. In *The Elements of Domestic Design* A. J. Penty has produced something more than a series of working drawings of a country house; it is a practical application of his architectural philosophy which includes the necessity of getting back to primitive forms. The house, which was built from the drawings shown, seems to be a very charming one. The element of the modern interior that has secured a certain amount of attention (but not enough) from architects is the subject of a charming monograph by the late Sir Lawrence Weaver. In *Gas-fires and their Setting* he gives many treatments evolved by eminent architects, few of whom, however, seem to have grasped the fact that they are dealing with something new and modern.

The transition from the design side of architecture to the "brass tacks" of construction and law may be made by means of H. B. Creswell's delightful sequel to *The Honeywood File—The Honeywood Settlement*. This is equally amusing and helpful, and will be as useful to the student and the practitioner as the other.

The 1930 volume of *Specification* has, as usual, been revised, and contains a most helpful article on "The Planning of Modern Theatres and Cinemas," by W. G. and G. Wilson. This gives all the details as to floor-slopes and sight-lines that Mr. Shand's book, noticed above, lacked, and will form a useful supplement to it. The other articles are on "Garages" and "Acoustic Problems." There is quite a large crod of technical and legal works to mention. P. J. Waldram's *The Principles of Structural Mechanics* has gone into a second edition and now has appendices, one being on reinforced concrete. The building contract receives some attention—W. T. Creswell's. *The Law Relating to Building Contracts* has been revised and a second edition issued. *Watson on Contract* is a new work by W. E. Watson; and Mr. W. T. Creswell is responsible for *The Powers of the Architect*. *Easements of Light*, by John Swarbrick, shows how scientific methods of light measurement can be applied to the computation of damage suffered by adjoining owners.

In selecting books for an architectural library it is often difficult to know where to draw the dividing line between those that are purely works on painting or sculpture and those relating to the mistress art. There can be no such uncertainty in *Florentine Frescoes*, by Tancred Borenius, a magnificent folio, published at seven guineas. The author is one of the greatest authorities on the subject, and has given us a work of the highest standard, both in regard to the text and the illustrations, which will be greatly appreciated today, when there is a distinct revival of interest in mural painting and signs that painters and architects are more willing to co-operate.

In sculpture, two authors have selected examples of modern sculpture for publication. Stanley Casson has followed his *Some Modern Sculpture* with *Twentieth-Century Sculptors*, in the preface of which he replies to two critics of his previous book. The artists that he chooses to illustrate, besides Milles, include Dobson, Manship, Archipeuko and Zadine. The book is all that such a book should be. *Modern Architectural Sculpture*, by W. Aumonier, is a wider survey, but is not, perhaps, so critical. It gives a large number of examples, grouped under countries. Most of the outstanding men are included, but with one or two notable exceptions in the British section which, incidentally, includes much that is second-rate. In the first of Macmillan's new sixpenny series John Gloag writes on *Modern Home Furnishing*, and gives excellent advice to those about to furnish, including a warning against furniture that is the "product of salesmanship rather than workmanship"!

G. B. T.



From Gothic Wanderings in Somerset.] [*By Freda Derrick. (London: Simpkin, Marshall, Ltd.)*

Carving on the rood-loft in Norton Fitzwarren Church. (Date, *circa* 1500.)

OUR COLOUR PLATES

Since the end of the war a general and increasing tendency towards brightness in domestic interiors has been everywhere noticeable; this factor, together with the simplicity of the horizontal line and the avoidance of ornament, is a striking characteristic of modern design in furnishing. Whether on land or on sea (ships both large and small), the decoration of a room receives a great deal of attention. Our first colour plate, reproduced from *Modern Interiors in Colour* (Stuttgart: Julius Hoffmann), is a delightfully coloured interior of a dining-room on a small steamer. This book contains one hundred designs, in colour, of interiors of every possible kind, from the simplest to the most luxurious. These have been designed by artists of various temperaments. Thus, the differences in arrangement, materials used and the colour schemes are very great.

Die Baukunst der neuesten Zeit (Berlin: The Propylæn Press), from which our second colour plate—an aerial view of the study of the Praunheim Housing Scheme, Frankfurt-a-M.—is reproduced, is the second edition of this sumptuous volume, first published by the Propylæn Press in 1927. The book has been revised and comprises 635 pages—twenty-seven more than the previous edition. Many of the new illustrations represent buildings erected since the publication of the first edition. The text, covering 200 pages, presents a comprehensive survey of the trend of architectural design on the Continent today.

COMPETITIONS OPEN

January 15.—Sending-in day. Rebuilding of the Foundation and Clinic Hospital, Zagreb, Yugoslavia. Premiums: 20,000, 15,000 and 10,000 Swiss francs. Designs to: The Committee of the Foundation Hospital and the Rectorate of the Royal Yugoslavian University of Zagreb.

February 1.—Sending-in day. Fire Station, Bethel Street, Norwich, for the Norwich Corporation. Limited to architects practising in the county of Norfolk. Designs to: Noel B. Rudd, Town Clerk, Guildhall, Norwich.

February 12.—Sending-in day. Stand at the Building Trades Exhibition, Manchester, for Venesta, Ltd. Assessors: Christian Barman, H. de C. Hastings, W. L. Wood, Henry Rutherford, and Professor A. E. Richardson. Premiums: £100 and four of £10. Conditions from the Editor, THE ARCHITECTS' JOURNAL, 9 Queen Anne's Gate; or direct from Venesta, Ltd., Vintry House, Queen Street Place, London, E.C.4.

April 1.—Sending-in day. Development of the uses of aluminium and its alloys, for the International Aluminium Bureau. Two premiums of 25,000 francs. Conditions from the Bureau International de l'Aluminium, 23 bis, Rue de Balzac, Paris, France.

April 30.—Sending-in day. Last day for conditions, January 31. Hospital for Infectious Diseases, Coventry, for the Coventry Corporation. Assessor: E. Stanley Hall, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

THE ARCHITECTS' DIARY

WEDNESDAY, JANUARY 14

INSTITUTION OF STRUCTURAL ENGINEERS. Yorkshire Branch. At the Metropole Hotel, Leeds. "Some Problems in the Design of Steel Framed Multiple-Story Buildings." By V. H. Lawton. **7 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "English Mediæval Architecture: The Pre-Mediæval Periods." By Sir Banister Fletcher, P.R.I.B.A., F.S.A. **6 p.m.**

INSTITUTION OF ELECTRICAL ENGINEERS. Hampshire Sub-Centre. At the Municipal College, Portsmouth. Short papers will be read and discussed. **7.30 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. Students' Meeting. "The Aerial Cableways at Nag Hammadi Barrage, Upper Egypt." By Ivor W. G. Freeman, B.SC. Chairman: Professor S. M. Dixon. **6.30 p.m.**

SOUTH-EASTERN SOCIETY OF ARCHITECTS. Monthly meetjng at Croydon.

THURSDAY, JANUARY 15

R.I.B.A., 9 Conduit Street, W.1. Special Meeting. "Persian Art." By Arthur Upham Hope. **5.30 p.m.**

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION, The Castle, Winchester. Council Meeting. 3 p.m. General Meeting. 6.15 p.m. **3 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Steel." By J. Stuart Lewis, M.I.STRUCT.E., M.I.E.E. **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. South Wales and Monmouthshire Branch. Visit to Abershaw and Rhos Cement Company's Works, Rhos.

FRIDAY, JANUARY 16

LONDON SOCIETY. At the Royal Society of Arts, John Street, Adelphi, W.C.2. Joint Meeting with the Architecture Club. Papers will be read on "A Plan will Pay," by Sir Josiah Stamp, G.B.E.; "The Architect and the Plan," by AldermanEwart G. Culpin; "The Slums and the Plan," by Alfred C. Bossom, F.R.I.B.A.; and "Traffic and the Plan," by Mervyn O'Gorman, C.B. **5 p.m.**

SATURDAY, JANUARY 17

Sunrise, 7.57 a.m. Sunset, 4.24 p.m.

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "Continental Architecture in Everyday Life." By F. R. Yerbury, HON. A.R.I.B.A. **3 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Manchester and District Branch. Visit to liner at Liverpool.

L.C.C. SCHOOL OF ARTS AND CRAFTS. Visit to Dorman Long & Co.'s Works, Middlesbrough. (Party limited to 90.)

MONDAY, JANUARY 19

R.I.B.A., 9 Conduit Street, W.1. General Meeting. Presentation of London Architecture Medal, 1929, and medals and prizes, 1931. **8 p.m.**

INSTITUTION OF ELECTRICAL ENGINEERS. Western Centre. Annual Dinner to be held at Bristol.

TUESDAY, JANUARY 20

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. First of nine public lectures on "Persian Art." By Professor Percy Dearmer. To be held every Tuesday until March 17. **5.30 p.m.**

INSTITUTION OF ELECTRICAL ENGINEERS. North-Western Centre. Annual Dinner to be held at the Midland Hotel, Manchester.

LONDON SOCIETY. Visit to St. Saviour's Church and Institute (Architect, E. B. Maufe, F.R.I.B.A.), 27 Old Oak Road, Shepherd's Bush, W. **3.15 p.m.**

WEDNESDAY, JANUARY 21

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. "Bridges." By G. H. Jack, F.R.I.B.A., M.INST.C.E. **7.30 p.m.**

ARTS BUILDING, University, Lime Grove, Manchester. "Treatment of the Smaller Houses." By Herbert A. Welch, F.R.I.B.A.

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "The Mediæval Period: Plans, Vaults and Buttresses." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

DRAWING OFFICE MATERIALS MANUFACTURERS AND DEALERS' ASSOCIATION. Annual Dinner to be held at the Hotel Victoria, Northumberland Avenue, W.C. 6.30 for 7 p.m. **6.30 p.m.**

LONDON SOCIETY. Visit to Roland House, Scout Settlement and Boys' Hostel, 29 Stepney Green, E.1. (Party limited to 25 persons.) **3 p.m.**

SOUTH-EASTERN SOCIETY OF ARCHITECTS. Monthly meeting at Brighton.

THURSDAY, JANUARY 22

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Paper by Professor J. Husband, M.ENG., M.INST.C.E. **6.30 p.m.**

FRIDAY JANUARY 23

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At the Technical College, Cardiff. First of six public lectures on "Egyptian and Western Asiatic Architecture." By Norman Culley, F.R.I.B.A. **7.45 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Western Counties Branch. At the Merchant Venturers' Technical College, Unity Street, Bristol. "Fatigue of Metals." By M. Morgan, B.SC. 7.30 p.m. Lancashire and Cheshire Branch. At the College of Technology, Manchester. "Structural Engineering in Modern Gasworks." By A. E. Pierce, M.I.STRUCT.E. 7 p.m. Midland Counties Branch. At the Chamber of Commerce Buildings, New Street, Birmingham. "Reinforced Construction at Bournemouth Gas Works." By H. M. Hale, M.I.STRUCT.E. **6.30 p.m.**

BRISTOL SOCIETY OF ARCHITECTS. At the Berkeley Café, Queens Road, Clifton. "Architecture in Modern Germany." By F. R. Yerbury, HON.A.R.I.B.A. **5.30 p.m.**

SATURDAY, JANUARY 24

Sunrise, 7.50 a.m. Sunset, 4.36 p.m.

INSTITUTION OF STRUCTURAL ENGINEERS. Midland Counties Branch. Fifth Annual Dinner to be held at Birmingham.

MONDAY, JANUARY 26

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "The Place of the Designer in Commerce." By R. P. Gossop. **8 p.m.**

TUESDAY, JANUARY 27

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS, 1 Wilbraham Place, S.W.1. "Norman Architecture." By S. E. Whitaker, P.A.S.I. **7 p.m.**

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. Second of nine public lectures on "Persian Art" By Professor Percy Dearmer. **5.30 p.m.**

WEDNESDAY, JANUARY 28

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "The Mediæval Period: Interiors, Exteriors and Openings." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

LEAGUE OF ARTS. At the Guildhouse, Eccleston Square, Belgrave Road, S.W.1. "Persian Painting." By Laurence Binyon. Chairman: Dr. Percy Dearmer. **8.30 p.m.**

LONDON AND GREATER LONDON PLAYING FIELDS FUND. A performance of *The Fourth Wall* will be given at the Rudolf Steiner Hall, Park Road, Clarence Gate, Baker Street, N.W.1, in aid of the Fund. (Also January 29.) **8.15 p.m.**

THURSDAY, JANUARY 29

WEST YORKSHIRE SOCIETY OF ARCHITECTS, 62 Woodhouse Lane, Leeds. Students' Debate: "That Architecture should be State Controlled." Affirmative: P. Lingwood. Negative: E. M. Rice. **7 p.m.**

LONDON SOCIETY. Visit to the White Heather Laundry, Stonebridge Park, N.W.10. **2.30 p.m.**

SATURDAY, JANUARY 31

Sunrise, 7.40 a.m. Sunset, 4.49 p.m.

MONDAY, FEBRUARY 2

R.I.B.A., 9 Conduit Street, W.1. General Meeting. "The Decoration of Buildings." By Professor W. Rothenstein, M.A. **8 p.m.**

TUESDAY, FEBRUARY 3

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. Third of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

WEDNESDAY, FEBRUARY 4

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. "Competitions." By E. Berry Webber, A.R.I.B.A. **7.30 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "English Mediæval Architecture: Piers, Towers, Spires and Roofs." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

THURSDAY, FEBRUARY 5

WEST YORKSHIRE SOCIETY OF ARCHITECTS. Biennial Dinner. (Particulars will be announced later.)

INSTITUTION OF STRUCTURAL ENGINEERS. South Wales and Monmouthshire Branch. At the Institute of Engineers, Park Place, Cardiff. "Thames House." By R. Travers Morgan, A.M.INST.C.E.

SATURDAY, FEBRUARY 7

Sunrise, 7.38 a.m. Sunset, 5.1 p.m.

TUESDAY, FEBRUARY 10

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Manchester and District Branch. At the Milton Hall, Deansgate, Manchester. "Panel Heating." By C. M. Oates. **7 p.m.**

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. Fourth of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

WEDNESDAY, FEBRUARY 11

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Mediæval Architecture: Parapets, Ornaments, and Fittings." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Lancashire and Cheshire Branch. Ordinary Meeting. At the College of Technology, Manchester. "The Modulus of Elasticity of Concrete." By Professor F. C. Lea, D.SC., M.INST.C.E., M.I.MECH.E. **7 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Ordinary Meeting at the Hotel Russell, Russell Square, W.C.2. "Boilers and Metals." By W. G. Case and W. E. Dennison. 2 p.m. Dinner 7 p.m. **2 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. Students' Meeting. **6.30 p.m.**

THURSDAY, FEBRUARY 12

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At the College of Arts, Leeds. General Meeting. "Competitions." By Percy Edward Thomas, O.B.E., F.R.I.B.A. **7 p.m.**

R.I.B.A. PRIZES AWARDS

The annual awards of the R.I.B.A. prizes and studentships have been made as follows :

The Tite Prize : a Certificate and £50 for Design (for the Study of Italian Architecture).—The prize was not awarded.

The Victory Scholarship : a Silver Medal and £150 for Design. (The subject set was "A Military Academy.") Brian B. Lewis (Student R.I.B.A., Liverpool School of Architecture). Certificates of Honourable Mention were awarded to John V. Nisbet (Architectural Association, London), and Miss Hilary Archer (Student R.I.B.A., Liverpool School of Architecture).

The Owen Jones Travelling Studentship and £100. A Certificate and £100 for the study of ornament and colour decoration. The subject set was "The Interior of a Private Chapel." Miss Francis Barker, A.R.I.B.A. (Architectural Association, London).

The Pugin Studentship and £75. For the study of the Mediæval Architecture of Great Britain and Ireland. G. H. While (Birmingham School of Architecture). A Certificate of Honourable Mention was awarded to Basil Spence (Student R.I.B.A., Edinburgh College of Art).

The Royal Institute Silver Medal and £50 for an Essay. Rodney F. Tatchell (Student R.I.B.A., School of Architecture, London University), for an Essay on "The Manor Houses of Sussex."

The Henry Saxon Snell Prize. A sum of £100 for travel for the study of improved design and construction of Hospitals, Convalescent Homes, and Asylums for the Aged and Infirm Poor. Herbert Jackson, A.R.I.B.A. (Birmingham School of Architecture).

The R.I.B.A. (Alfred Bossom) Travelling Studentship : A Gold Medal and £250 (for the study of commercial architecture in America). Not awarded. A Silver Medal was awarded to Hubert John Tanton, A.R.I.B.A. (Architectural Association, London).

The Grissell Gold Medal and £50 (for the encouragement of the study of construction). The subject set for this year was "An Office Building." Not awarded.

The R.I.B.A. Hunt Bursary—£50. For the encouragement of the study of housing and town planning. Not awarded.

The Godwin and Wimperis Bursary Silver Medal and £250. (For the promotion of the study of works of modern architecture abroad.) Graham R. Dawbarn, A.R.I.B.A.

The Arthur Cates Prize (a sum of £50). Not awarded.

The Ashpitel Prize, 1930. A prize of books, value £10, awarded to the candidate who has most highly distinguished himself among the candidates in the final examinations of the year. James Stanley Hartley, A.R.I.B.A. (School of Architecture, Northern Polytechnic, Holloway, London).

The R.I.B.A. Silver Medal and £5 in books for schools of architecture recognised for exemption from the final examination. This is awarded for the best set of drawings submitted at the annual exhibition of designs by students of schools of architecture recognized for exemption from the R.I.B.A. final examination. John Verney Nisbet (Architectural Association, London).

The R.I.B.A. Bronze Medal and £5 in books, for schools of architecture recognized for exemption from the intermediate examination. Awarded for the best set of drawings submitted by Students of Schools of Architecture recognized for exemption from the intermediate examination. Robert Pearce Steel Hubbard (Liverpool School of Architecture).

The R.I.B.A. prizes for public and secondary schools.—Two prizes of £2 10s. each; one a prize for an essay of not more than 1,000 words, and one a prize for sketches or scale drawings of a building or part of a building. The prizes are offered for competition between boys and girls in public and secondary schools. (*a*) The prize for essays was divided and awarded as follows : A prize of £1 10s. to John G. Garratt (Quarry Bank High School for Boys, Mossley Hill, Liverpool) and a prize of £1 to Miss Ruth W. Owen (Watford Grammar School for Girls) ; (*b*) The prize for sketches was awarded to S. P. Jewitt (William Ellis School, Gospel Oak, London). The following competitors were commended : W. G. Wilkinson (Wisbech Grammar School), D. P. Reay (Wallasey Grammar School).

The competition drawings will be on exhibition in the R.I.B.A. Galleries, 9 Conduit Street, W.1, until January 24, between the hours of 10 a.m. and 8 p.m., Saturdays 10 a.m. and 5 p.m. (Sundays excluded).

THE BUILDINGS ILLUSTRATED

Following are the names of the specialists, general contractors, and some of the sub-contractors for the buildings illustrated in this issue :

The New India Building, Liverpool (pages 44–52). Wm. Moss and Sons, Ltd., demolition, foundation and temporary subway entrance, and stonework (Part 1); Wm. Thornton and Sons, Ltd., demolition, stonework, and main building contract (Part 2); Dorman Long & Co., Ltd., constructional steelwork; W. B. Fagan and H. Poole, stone carving; Waygood-Otis, Ltd., elevators; Aird and Anderson, lightning conductors; Thomas James & Co., access doors; Stuart's Granolithic Co., Ltd., non-slip treads; Synchronome Co., Ltd., electric clocks; Trussed Concrete Steel Co., Ltd., reinforced concrete engineers, floors; F. E. Pescod, sanitary fittings; Robert W. Haughton, plumbing; Korkoid and Ruboleum Tile Co., flooring; John Stubbs and Sons, marble; Diespeker & Co., Ltd., terrazzo; Quiggin Bros., Ltd., locks and furniture; H. H. Martyn & Co., Ltd., fibrous plaster; G. and A. Brown, Ltd., carton pierre; Bromsgrove Guild, Ltd., bronze and ornamental ironwork; Wm. Macfarlane & Co., cast ironwork; Crittall Manufacturing Co., Ltd., metal windows; James Gibbons, Ltd., window fittings; British Luxfer Co., pavement lights, skylights and laylights; John Hunter & Co., electrical work; R. Crittall & Co., Ltd., boilers, heating, oil burning and mechanical ventilation; Henry Wilson & Co., Ltd., flag poles; J. C. Edwards, terra-cotta cheneaux; Ames and Finnis, roof tiling; Mather and Platt, Ltd., fireproof doors; Richard Ashworth, mascolite; George Lowe and Sons, sundry ironwork; George Swift, tiling; E. Wilson & Co. (Collingwood), Ltd., spiral staircase.

The Chapel, Kelham Theological College, Newark, Notts. (pages 40, 64–68). General contractors, Wm. Moss and Sons, Ltd. C. P. Jagger, bronze Calvary group for rood arch. Sub-contractors : Taylor, Whiting and Taylor, ironwork; Attenborough and Turpin, lighting; Rosser and Russell, Ltd., heating; R. J. Stubbington, glazing; Alexander Fisher, high altar ornaments, sanctuary lamps, etc.; Artificers Guild, Ltd., electric light fittings, etc.

The Daily Telegraph Offices, Fleet Street, E.C.4 (pages 73–81). General contractors, James Carmichael (Contractors), Ltd. Sir E. Owen Williams, K.B.E., B.SC., constructional engineer; E. Wingfield-Bowles and Clay, consulting engineers; S. Rabinovitch, sculpture; A. J. Oakley, stone carving. Sub-contractors : H. W. Dutton & Co., Ltd., heating installation, etc.; Bell Bros., Ltd., electric installation, bells, telephones, etc.; Light Steelwork (1925), Ltd., light steelwork; Fenning & Co., Ltd., granite; Redpath, Brown & Co., Ltd., steelwork; Leeds Fireclay Co., Ltd., sanitary fittings; Postans and Morley Bros., paints, etc.; Marley Bros., Ltd., ironmongery, door furniture and counter grilles, etc., war memorial, electric light fittings to general manager's room and doors to lifts; B. Goodman, Ltd., demolition; Waygood-Otis, Ltd., lifts, etc.; Sturtevant Engineering Co., Ltd., vacuum cleaning installation; Lamson Pneumatic Tube Co., Ltd., pneumatic tubes; Terradura Flooring Co., Ltd., flooring dadoes, terrazzo, etc.; Crittall Manufacturing Co., Ltd., metal windows; J. A. King & Co., Ltd., hollow floors; Stuart's Granolithic Co., Ltd., precast grano staircase and landings; Hitchins & Co., Ltd., doors; Mellowes & Co., Ltd., lantern lights; James Clark and Son, Ltd., Sanalux glass; May Construction Co., Ltd., acoustic plaster; Fenning & Co., Ltd., marble work; Morris-Singer Co., grilles and entrance doors and lights under first-floor balcony; S. W. Francis & Co., Ltd., steel rolling shutter; Bostwick Gate and Shutter Co., Ltd., steel collapsible lattice gates; Haywards, Ltd., pavement lights and copperlite glazing; Roneo, Ltd., steel shelving; Ediswan Electric Co., Ltd., special electric light fittings; Chatwood Safe Co., Ltd., safes; Macinlop, Ltd., rubber tiling, mats; W. A. Collins, Ltd., telephone cabinets; Birmingham Guild, Ltd., clock dials, certain metalwork, handrail to stairs, spiral staircase, special clock dials and flag poles; James Clark & Son, Ltd., plate "Vita" glass; Marley Bros., Ltd., reading lamps; Mather and Platt, Ltd., fireproof doors; J. M. Pirie & Co., Ltd., photographic showcases, frames, internal metalwork screens, doors, porter's box and counter grille on ground floor; Burn Bros., (London), Ltd., iron drains; Wm. Mallinson and Sons, Ltd., wood for boardroom (blackbeam); Arthur Lyon & Co., electric clocks and external clock; Val de Travers Asphalte Paving Co., Ltd., asphalt; General Asphalte Co., Ltd., asphalt for yard; Reliance Telephone Co., Ltd., internal telephones; Restlight, Ltd., electric light fittings; Joseph Chater and Sons, Ltd., plate and wired glass; Sankey-Sheldon Co., Ltd., office fittings (second portion); J. Avery & Co., blinds; Magicoal, Ltd., electric fires; Benham and Sons, Ltd., kitchen equipment; Lamson

Pneumatic Co., Ltd., letter conveyor; Albion Stone Works, Portland stone.

Wappingthorn Manor Farm Buildings, Steyning, Sussex (pages 95–102). General contractors, Norman and Burt. Sir Owen Williams, K.B.E., B.SC., consulting engineer; Rogers Field and Bean, sanitary and water engineers; Cozens and Brown, electrical engineers. Sub-contractors: C. Gent, bricks; T. J. Stanbridge, stone; Roberts Adlard, stone seating; Rheocrete Pumice Stone Slab Co., Ltd., partitions; Stoner and Saunders, cast lead; Joseph F. Ebner, wood-block flooring; Jeffreys & Co., Ltd., central heating; Drake and Gorham, Ltd., electric wiring and telephones; Shanks & Co., Ltd., sanitary fittings; James Gibbons, Ltd., door furniture; Henry Hope and Sons, Ltd., casements and window furniture; Francis, rolling shutters; Plastering, Ltd., plaster and decorative plaster; Charles Kerridge, Shapland and Petter, and Norman and Burt, joinery; James Stubbs and Sons, marble; Van Straaten and Roberts Adlard, tiling; Young & Co., farm fittings; Waygood-Otis, Ltd., lifts. *Stable and Harness-room Fittings:* A. Ballantine and Sons, Ltd.; Carron Co.; General Iron Foundry Co., Ltd.; Haywards, Ltd.; Young & Co. (Westminster), Ltd.; Adamantine Clinker and Fire Clay Co., Ltd.; Falkirk Iron Co., Ltd.; H. Fox & Co., Ltd.; James Edwin Warner; Kirkpatrick, Ltd.; Maclean & Co.; Musgrave & Co., Ltd.; and Newton Chambers & Co., Ltd.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The Essex Education Committee has acquired a site in Parsloes Avenue, DAGENHAM, for the erection of a secondary school.

The DAGENHAM U.D.C. is to widen and reconstruct Church Elm bridge, at a cost of £14,700.

The ESSEX County Council and the L.M.S. Railway are to reconstruct four railway bridges at Dagenham, Rainham, Hornchurch and Upminster, at a total cost of £30,395.

The Essex County Council has arranged for the purchase of a site at GREAT WEST HATCH, near Chigwell, for the erection of a large institution for the south-western district.

The Essex County Council is to erect a nurses' home at the ROMFORD Institution, at a cost of £35,000.

The Essex County Council is to improve the maternity home at ROMFORD, at a cost of £700.

The WEST HAM Corporation is to erect a fire station in Prince Regent Lane, Custom House.

EASTERN COUNTIES

The Essex Education Committee has purchased a site in North Road, BRENTWOOD, for the erection of a secondary school.

The Essex Education Committee has approved plans for the erection of a central school with a practical instruction centre, at HEYBRIDGE, at a cost of £15,500.

The Essex Education Committee has approved plans for extensions at the High Road elementary school, LAINDON, at a cost of £6,000.

The Essex Education Committee is to enlarge the council school at MALDON, at a cost of £10,500.

The Essex Education Committee has approved amended plans for extensions at PITSEA elementary school, at an estimated cost of £23,500.

The Essex C.C. has purchased land at STANFORD-LE-HOPE and WALTON-ON-NAZE, for the erection of houses for the police.

SOUTH-WESTERN COUNTIES

Plans passed at POOLE: Four pair semi-detached dwelling-houses, Fortescue Road, for Mr. C. Hann; fourteen houses, Wallisdown Road, for Mr. W. J. Clapcott; house, Fancy Road, for Mr. E. C. Pitcher; house, York Road, for Mr. P. J. Pooss; two pairs semi-detached houses, Ringwood Road, house, corner of Pound Lane and Gorsehill Road, house, Pound Lane, and amended plan of house, Danecourt Road, for Messrs. Corbin and Clarke; house, Whitefield Road, for Mr. E. Lewis; three houses, Gorse Hill Crescent, for Mr. J. Jagger; house and garage, Anthony's Avenue, for Mr. G. Norman; seven dwelling-houses, off Ringwood Road, for Mr. C. C. Osborne; house, Twemlow Avenue, for Mr. A. D. Saunders; house, Gorse Hill Crescent, for Mr. F. W. Spratley; house, Coy Pond Road, for Messrs. Wand and Haycraft; amended block plan of house off Links Road, for Mr. T. W. Goldsmith; house, Burley Road, house, Stanley Green Road, and house, Rosemary Avenue, for Mr. F. G. Nutt; pair of semi-detached dwelling-houses, Gloucester Road, for Messrs. Philpotts and Manners; house, Gorse Hill Road, for Mr. J. N. McDermott; house, Harbour Hill Road, for Messrs. Taylor and Son; house, Pine Avenue, for Mr. S. G. Ward; house and garage, Spur Hill Avenue, for Mr. J. White; house, Orchard Avenue, for Mr. A. N. Patterson; house, Sherwood Avenue, for Mr. S. C. Rowden; house, Walton Road, for Mr. A. J. Dacombe; house and garage, Western Avenue, for Mr. A. Barnes; house, Jackson Road, for Mr. M. J. Lawford; house, Stanley Green Road, for Mr. R. C. Webber.

MIDLAND COUNTIES

The COVENTRY Corporation Health Committee has decided to utilize about 5¼ acres of land near Whitley Common, for re-housing purposes.

The COVENTRY Corporation has decided to erect ten additional houses on the Harnall Lane re-housing site, at an estimated cost of £3,000.

The COVENTRY Corporation Housing Committee has decided to apply for sanction to borrow £33,930 for street and sewer works.

The COVENTRY Corporation has approved the layout of the Hen Lane estate, provision being made for the erection of 474 houses and a shopping centre.

The LEICESTER Education Committee is acquiring a site in Abbey Park Road, for the erection of an elementary school.

The LEICESTER Corporation anticipates being able to erect 3,000 houses during the next five years.

The Dudley Education Committee is inviting architects to take part in a competition for designs for the erection of an elementary school in Swan Street, NETHERTON.

Plans passed at NORTHAMPTON: Two houses, Billing Road, Weston Favell, for Messrs. A. Glenn and Sons, Ltd.; two houses, Park Way, Weston Favel, for Messrs. Stafford and Agutter; two houses, Weston Way, Weston Favell, for Messrs. W. J. Richardson and Son; two houses, Weston Way, for Mr. H. P. Cross; sub-station, Park Avenue, for Northampton Electric Light Co., Ltd.; two houses, Clarence Avenue, for Messrs. H. Holloway and Sons; extension of warehouse, Chapel Place, for Messrs. Coker and Son; extension to shop, Argyle Street, for Mr. W. Pittam; alterations and additions, "The Lord Palmerston," Market Square, for Northampton Brewery Co., Ltd.; alterations and additions, "The Foresters' Arms," Wellingborough Road, for Messrs. P. Phipps and Co., Ltd.; squash racquets courts, rear of George Row, for the trustees of Northampton Club; oil store and loading bank, St. Andrew's Road sidings, for Messrs. Glico Petroleum, Ltd; six houses, Trinity Avenue, for Messrs. Chowns, Ltd.; six houses, Holyrood Road, for Messrs. W. S. Brown and Son.

The NORTHAMPTON Corporation Baths Committee has selected a site near Robert Street for the erection of a building containing two swimming pools, the larger of which could be covered in for use as a public hall during the period that the bath is not in use, and for the provision of medicinal baths, i.e. sun-ray treatment, vapour and Turkish baths, together with a sufficient area for the erection of wash-houses, to be erected, as required, at a later date.

The NOTTINGHAM Corporation is to proceed with waterworks extensions, at a cost of about £150,000.

The SMETHWICK Corporation has approved revised detailed plans of proposed extensions to the Rolfe Street public works depot, at an estimated cost of £11,400.

NORTHERN COUNTIES

The BIRKENHEAD Education Committee has approved sketch plans for the extension and alterations to the Brassey Street elementary school, and has submitted them to the Board of Education for approval.

Plans passed at BIRKENHEAD: Fourteen houses, St. Andrew's Road; rebuilding "Globe Tavern," 22 and 24 Market Street; four houses, Waterpark Road; re-erection of rear portion of "Market Inn" public-house, Market Street.

Plans passed at BOLTON: Rebuilding golf house, Lever Edge Lane, for the Great Lever and Farnworth Golf Club; transformer house, Grecian Mills, Lever Street, for Messrs. T. Taylor and Sons, Ltd.; constructional shops, Atlas Forge, Fletcher Street, for Messrs. Thos, Walmsley and Sons; two houses, Junction Road, for Mr. R. G. Hirst; eight houses, Boot Lane, for Mr. James H. Sharples; conversion of houses into business premises, 599 and 601 Chorley Old Road, for Mr. James H. Sharples; extension to premises, Kensington Place, for Messrs. Moss and Smith.

The BRADFORD Corporation is to proceed with the erection of 770 houses on the Hellow Grange estate.

The HULL Corporation has purchased a site in Cottingham Road, for the erection of a branch library.

The MANCHESTER Education Committee has selected sites on the Wythemshawe estate for the erection of three elementary schools.

The Transport Committee of the MANCHESTER Corporation is seeking sanction to borrow £50,000 for the extension of the Parr's Wood garage, rendered imperative by reason of the rapid development of the motor bus services.

The SALFORD Corporation proposes to clear three slum areas and erect about 300 houses for tenants who will be displaced.

Plans passed at YORK: Additions, Bedern, for Messrs. Wm. Wright and Sons, Ltd.; additions, 2 Church Street, for Melias, Ltd.; house and shop, Albemarle Road, for Mr. T. Chippendale; additions, 29 Coney Street, for Messrs. H. Samuel, Ltd.; additions, 6 Barker's Terrace, for Mr. C. Holt; additions, Black Horse Hotel, Monkgate, for Messrs. John J. Hunt, Ltd.; new showroom, Cemetery Road, for York Cemetery Co.; indicator buildings, Knavesmire, for York Race Committee; rebuilding 15 St. Sampson's Square, for Messrs. J. Dodsworth and Sons; two houses, Cornborough Avenue, for Mr. E. Relton; three houses, Muncaster Estate, for Mr. D. Collins; layout of Estate, Bad Bargain Lane, for Mr. J. N. Dunn; two houses, Middlethorpe Lodge Estate, Dringhouses, for Mr. T. Place; new factory, Haxby Road, for Messrs. Rowntree & Co., Ltd.; two houses, off Shipton Road, for Clifton Estates, Ltd.; seven almshouses, Water End, for the John Burrill Trustees; house and bungalow, Hull Road, for the Millfield Estate Co.; additions, Yorkshire Hussar Inn, North Street, for Messrs. John J. Hunt, Ltd.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers; the rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6½	1 1½
A_1	Abergavenny	S. Wales & M.	1 6½	1 1½
B	Abingdon ..	S. Counties	1 5	1 0½
A	Accrington	N.W. Counties	1 7	1 2½
A_2	Addlestone	S. Counties	1 5½	1 1
A	Adlington ..	N.W. Counties	1 7	1 2½
A	Airdrie ..	Scotland	•1 7	1 2½
C	Aldeburgh ..	E. Counties	1 3	11½
A	Altrincham	N.W. Counties	1 7	1 2½
B_2	Appleby ..	N.W. Counties	1 3½	11½
A	Ashton-under-Lyne	N.W. Counties	1 7	1 2½
A_2	Atherstone	Mid. Counties	1 5½	1 1
B_2	Aylesbury ..	S. Counties	1 3½	11½
B_2	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4½	1 0½
A_1	Barnard Castle	N.E. Coast	1 6½	1 1½
A	Barnsley ..	Yorkshire	1 7	1 2½
B_2	Barnstaple	S.W. Counties	1 4	1 0
A	Barrow ..	N.W. Counties	1 7	1 2½
A	Barry ..	S. Wales & M.	1 7	1 2½
B_2	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5½	1 1
A	Batley ..	Yorkshire	1 7	1 2½
A_2	Bedford ..	E. Counties	1 5½	1 1
A_2	Berwick-on-Tweed	N.E. Coast	1 6	1 1½
A_2	Bewdley ..	Mid. Counties	1 6	1 1½
B_2	Bicester ..	Mid. Counties	1 3½	11½
A	Birkenhead	N.W. Counties	•1 9	1 3½
A	Birmingham	Mid. Counties	1 7	1 2½
A_1	Bishop Auckland	N.E. Coast	1 6½	1 1½
A	Blackburn ..	N.W.Counties	1 7	1 2½
A	Blackpool ..	N.W. Counties	1 7	1 2½
A	Blyth ..	N.E. Coast	1 7	1 2½
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 7	1 2½
A_2	Boston ..	Mid. Counties	1 5½	1 1
A_2	Bournemouth	S. Counties	1 5½	1 1
B_2	Bovey Tracey	S.W. Counties	1 4	1 0
A	Bradford ..	Yorkshire	1 7	1 2½
A	Brentwood	E. Counties	1 6	1 1½
A	Bridgend ..	S. Wales & M.	1 7	1 2½
B_2	Bridgwater	S.W. Counties	1 4	1 0
A_1	Bridlington	Yorkshire	1 6½	1 1½
A	Brighouse ..	Yorkshire	1 7	1 2½
A_2	Brighton ..	S. Counties	1 5½	1 1
A	Bristol ..	S.W. Counties	1 7	1 2½
B_2	Brixham ..	S.W. Counties	1 3½	11½
A_2	Bromsgrove	Mid. Counties	1 6	1 1½
C	Bromyard ..	Mid. Counties	1 3	11½
A	Burnley ..	N.W. Counties	1 7	1 2½
A	Burslem ..	Mid. Counties	1 7	1 2½
A	Burton-on-Trent	Mid. Counties	1 7	1 2½
A	Bury ..	N.W. Counties	1 7	1 2½
A_1	Buxton ..	N.W. Counties	1 6½	1 1½
A_2	CAMBRIDGE	E. Counties	1 5½	1 1
B_2	Canterbury	S. Counties	1 4	1 0
A	Cardiff ..	S. Wales & M.	1 7	1 2½
A	Carlisle ..	N.W. Counties	1 7	1 2½
B	Carmarthen	S. Wales & M.	1 5	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4½	1 0½
A	Carnforth ..	N.W. Counties	1 7	1 2½
A	Castleford ..	Yorkshire	1 7	1 2½
B_1	Chatham ..	S. Counties	1 4½	1 0½
B_1	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5½	1 1
A	Chester ..	N.W. Counties	1 7	1 2½
A	Chesterfield	Mid. Counties	1 7	1 2½
B_2	Chichester ..	S. Counties	1 4	1 0
A	Chorley ..	N.W. Counties	1 7	1 2½
B_2	Cirencester	S. Counties	1 4	1 0
A	Clitheroe ..	N.W. Counties	1 7	1 2½
A	Clydebank ..	Scotland	1 7	1 2½
A	Coalville ..	Mid. Counties	1 7	1 2½
A_2	Colchester ..	E. Counties	1 5½	1 1
A	Colne ..	N.W. Counties	1 7	1 2½
A_2	Colwyn Bay	N.W. Counties	1 5½	1 1
A_1	Consett ..	N.E. Coast	1 6½	1 1½
A_2	Conway ..	N.W. Counties	1 5½	1 1
A	Coventry ..	Mid. Counties	1 7	1 2½
A_2	Crewe ..	N.W. Counties	1 6	1 1½
A_2	Cumberland	N.W. Counties	1 5½	1 1
A	DARLINGTON	N.E. Coast	1 7	1 2½
A	Darwen ..	N.W. Counties	1 7	1 2½
B_2	Deal ..	S. Counties	1 4	1 0
A_2	Denbigh ..	N.W. Counties	1 5½	1 1
A	Derby ..	Mid. Counties	1 7	1 2½
A	Dewsbury ..	Yorkshire	1 7	1 2½
B	Didcot ..	S. Counties	1 5	1 0½
A	Doncaster ..	Yorkshire	1 7	1 2½
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorks	1 5½	1 1
A_2	Droitwich ..	Mid. Counties	1 5½	1 1
A	Dudley ..	Mid. Counties	1 7	1 2½
A	Dundee ..	Scotland	1 7	1 2½
A	Durham ..	N.E. Coast	1 6½	1 1½
A_2	EASTBOURNE	S. Counties	1 5½	1 1
A_1	Ebbw Vale	S. Wales & M.	1 6½	1 1½
A	Edinburgh	Scotland	1 7	1 2½
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6½	1 1½
A_2	Exeter ..	S.W. Counties	•1 6	1 1½
B_2	Exmouth ..	S.W. Counties	1 4	1 0
B	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey ..	Yorks	1 5½	1 1
A	Fleetwood ..	N.W. Counties	1 7	1 2½
B_2	Folkestone	S. Counties	1 4	1 0
A	Frodsham ..	N.W. Counties	1 7	1 2½
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 7	1 2½
B_1	Gillingham	S. Counties	1 4½	1 0½
A_2	Gloucester ..	S.W. Counties	1 6	1 1½
A_2	Goole ..	Yorkshire	1 6	1 1½
A_2	Gosport ..	S. Counties	1 5½	1 1
A_2	Grantham ..	Mid. Counties	1 5½	1 1
A_1	Gravesend ..	S. Counties	1 6½	1 1½
A	Greenock ..	Scotland	•1 7	1 2½
A	Grimsby ..	Yorkshire	1 7	1 2½
B_1	Guildford ..	S. Counties	1 4½	1 0½
A	HALIFAX	Yorkshire	1 7	1 2½
A	Hanley ..	Mid. Counties	1 7	1 2½
A	Harrogate ..	Yorkshire	1 7	1 2½
A	Hartlepools	N.E. Coast	1 7	1 2½
B_1	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 4	1 0
A_2	Hatfield ..	S. Counties	1 5½	1 1
B	Hereford ..	S.W. Counties	1 5½	1 0½
B	Hertford ..	E. Counties	1 5	1 0½
A_1	Heysham ..	N.W. Counties	1 6½	1 1½
A_1	Howden ..	N.E. Coast	1 6½	1 1½
A	Huddersfield	Yorkshire	1 7	1 2½
A	Hull ..	Yorkshire	1 7	1 2½
A	ILKLEY ..	Yorkshire	1 7	1 2½
A	Immingham	Mid. Counties	1 7	1 2½
A_2	Ipswich ..	E. Counties	1 5½	1 1
B_2	Isle of Wight	S. Counties	1 3½	11½
A	JARROW ..	N.E. Coast	1 7	1 2½
A	KEIGHLEY	Yorkshire	1 7	1 2½
B	Kendal ..	N.W. Counties	1 5	1 0½
B	Keswick ..	N.W. Counties	1 5	1 0½
A_2	Kettering ..	Mid. Counties	1 6	1 1½
A_2	Kidderminster	Mid. Counties	1 6	1 1½
B_2	King's Lynn	E. Counties	1 4	1 0
A	LANCASTER	N.W. Counties	1 7	1 2½
A_2	Leamington	Mid. Counties	1 6	1 1½
A	Leeds ..	Yorkshire	1 7	1 2½
A	Leek ..	Mid. Counties	1 7	1 2½
A	Leicester ..	Mid. Counties	1 7	1 2½
A	Leigh ..	N.W. Counties	1 7	1 2½
B_2	Lewes ..	S. Counties	1 3½	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1
A	Lincoln ..	Mid. Counties	1 7	1 2½
A	Liverpool ..	N.W. Counties	•1 9	1 3½
A_2	Llandudno	N.W. Counties	1 5½	1 1
A	Llanelly ..	S. Wales & M.	1 7	1 2½
	London (12-miles radius)		1 8½	1 3½
	Do. (12–15 miles radius)		1 8	1 3
A	Long Eaton	Mid. Counties	1 7	1 2½
A	Loughborough	Mid. Counties	1 7	1 2½
A_2	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 7	1 2½
A_1	MACCLESFIELD	N.W. Counties	1 6½	1 1½
B_1	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5½	1 1
A	Manchester	N.W. Counties	1 7	1 2½
A	Mansfield ..	Mid. Counties	1 7	1 2½
B_2	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5½	1 1
A_1	Merthyr ..	S. Wales & M.	1 6½	1 1½
A	Middlesbrough	N.E. Coast	1 7	1 2½
A_2	Middlewich	N.W. Counties	1 6	1 1½
B_2	Minehead ..	S.W. Counties	1 4	1 0
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 7	1 2½
A	Morecambe	N.W. Counties	1 7	1 2½
A_2	NANTWICH	N.W. Counties	1 6	1 1½
A	Neath ..	S. Wales & M.	1 7	1 2½
A	Nelson ..	N.W. Counties	1 7	1 2½
A	Newcastle ..	N.E. Coast	1 7	1 2½
A	Newport ..	S. Wales & M.	1 7	1 2½
A	Normanton	Yorkshire	1 7	1 2½
A_1	Northampton	Mid. Counties	1 6½	1 1½
A	North Staffs.	Mid. Counties	1 7	1 2½
A	North Shields	N.E. Coast	1 7	1 2½
A_2	Norwich ..	E. Counties	1 6	1 1½
A	Nottingham	Mid. Counties	1 7	1 2½
A	Nuneaton ..	Mid. Counties	1 7	1 2½
B	OAKHAM ..	Mid. Counties	1 5	1 0½
A	Oldham ..	N.W. Counties	1 7	1 2½
A_2	Oswestry ..	N.W. Counties	1 5½	1 1
B	Oxford ..	S. Counties	1 5½	1 0½
A	PAISLEY ..	Scotland	•1 7	1 2½
B_2	Pembroke ..	S. Wales & M.	1 3½	11½
A	Perth ..	Scotland	•1 7	1 2½
A_2	Peterborough	E. Counties	1 6	1 1½
A	Plymouth ..	S.W. Counties	•1 7	1 2½
A	Pontefract	Yorkshire	1 7	1 2½
A_1	Pontypridd	S. Wales & M.	1 6½	1 1½
A_2	Portsmouth	S. Counties	1 5½	1 1
A	Preston ..	N.W. Counties	1 7	1 2½
A	QUEENSFERRY	N.W. Counties	1 7	1 2½
A_2	READING	S. Counties	1 5½	1 1
B	Reigate ..	S. Counties	1 5	1 0½
A_2	Retford ..	Mid. Counties	1 5½	1 1
A_1	Rhondda Valley	S. Wales & M.	1 6½	1 1½
A_2	Ripon ..	Yorkshire	1 5½	1 1
A	Rochdale ..	N.W. Counties	1 7	1 2½
B_1	Rochester ..	S. Counties	1 4½	1 0½
A_1	Ruabon ..	N.W. Counties	1 6½	1 1½
A	Rugby ..	Mid. Counties	1 7	1 2½
A_2	Rugeley ..	Mid. Counties	1 5½	1 1
A	Runcorn ..	N.W. Counties	1 7	1 2½
A_2	ST. ALBANS	E. Counties	1 6	1 1½
A	St. Helens ..	N.W. Counties	1 7	1 2½
B_2	Salisbury ..	S.W. Counties	1 3½	11½
A_1	Scarborough	Yorkshire	1 6½	1 1½
A	Scunthorpe	Mid. Counties	1 7	1 2½
A	Sheffield ..	Yorkshire	1 7	1 2½
A	Shipley ..	Yorkshire	1 7	1 2½
A_2	Shrewsbury	Mid. Counties	1 6	1 1½
A_2	Skipton ..	Yorkshire	1 6	1 1½
A_2	Slough ..	S. Counties	1 5½	1 1
A_2	Solihull ..	Mid. Counties	1 6	1 1½
A_2	South'pton	S. Counties	1 5½	1 1
A_2	Southend-on-Sea	E. Counties	1 6	1 1½
A	Southport ..	N.W. Counties	1 7	1 2½
A	S. Shields ..	N.E. Coast	1 7	1 2½
A_2	Stafford ..	Mid. Counties	1 6	1 1½
A	Stockport ..	N.W. Counties	1 7	1 2½
A	Stockton-on-Tees	N.E. Coast	1 7	1 2½
A	Stoke-on Trent	Mid. Counties	1 7	1 2½
B_1	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 7	1 2½
A	Swadlincote	Mid. Counties	1 7	1 2½
A	Swansea ..	S. Wales & M.	1 7	1 2½
B	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6½	1 1½
B_1	Taunton ..	S.W. Counties	1 4½	1 0½
A	Teesside Dist.	N.E. Counties	1 7	1 2½
B	Teignmouth	S.W. Coast	1 5	1 0½
A	Todmorden	Yorkshire	1 7	1 2½
A	Torquay ..	S.W. Counties	1 7	1 2½
C	Truro ..	S.W. Counties	1 3	11½
B	Tunbridge Wells	S. Counties	1 5	1 0½
A	Tunstall	Mid. Counties	1 7	1 2½
A	Tyne District	N.E. Coast	1 7	1 2½
A	WAKEFIELD	Yorkshire	1 7	1 2½
A	Walsall ..	Mid. Counties	1 7	1 2½
A	Warrington	N.W. Counties	1 7	1 2½
A_2	Warwick ..	Mid. Counties	1 6	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1
A	West Bromwich	Mid. Counties	1 7	1 2½
B	Weston-s-Mare	S.W. Counties	1 5	1 0½
A_2	Whitby ..	Yorkshire	1 6	1 1½
A	Widnes ..	N.W. Counties	1 7	1 2½
A	Wigan ..	N.W. Counties	1 7	1 2½
B_1	Winchester	S. Counties	1 4½	1 0½
A_2	Windsor ..	S. Counties	1 5½	1 1
A	Wolverhampton	Mid. Counties	1 7	1 2½
A_2	Worcester	Mid. Counties	1 6	1 1½
A_2	Worksop ..	Yorkshire	1 5½	1 1
A_1	Wrexham ..	N.W. Counties	1 6½	1 1½
A_2	Wycombe ..	S. Counties	1 5½	1 1
B_1	YARMOUTH	E. Counties	1 4½	1 0½
B_2	Yeovil ..	S.W. Counties	1 4	1 0
A	York ..	Yorkshire	1 7	1 2½

• In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rate of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£	s.	d.
Bricklayer . . . . per hour		1	8½
Carpenter . . . . ,,		1	8½
Joiner . . . . ,,		1	8½
Machinist . . . . ,,		1	9½
Mason (Banker) . . . . ,,		1	8½
,, (Fixer) . . . . ,,		1	9½
Plasterer . . . . ,,		2	0½
Plumber . . . . ,,		1	8½
Painter . . . . ,,		1	7½
Paperhanger . . . . ,,		1	8½
Glazier . . . . ,,		1	8½
Slater . . . . ,,		1	8½
Scaffolder . . . . ,,		1	4½
Timberman . . . . ,,		1	4½
Navvy . . . . ,,		1	3½
General Labourer . . . . ,,		1	3½
Lorryman . . . . ,,		1	6
Crane Drivers . . . . ,,		1	7½
Watchman . . . . per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

	£	s.	d.
Grey Stone Lime . . . per ton	2	8	6
Blue Lias Lime . . . ,,	2	10	6
Hydrated Lime . . . ,,	2	16	0
Portland Cement . . . ,,	2	6	0
Ferro-crete . . . ,,	2	13	6
Ciment Fondu . . . ,,	5	15	0
Thames Ballast . . . per Y.C.		8	9
¾″ Crushed Ballast . . . ,,		10	0
Building Sand . . . ,,		10	6
Washed Sand . . . ,,		11	6
2″ Broken Brick . . . ,,		9	6
¾″ ,, ,, . . . ,,		12	6
Pan Breeze . . . ,,		6	6
Coke Breeze . . . ,,		8	9

BRICKLAYER

	£	s.	d.
Flettons . . . per M.	3	1	6
Grooved do. . . . ,,	3	3	6
Stocks, 1st Quality . . . ,,	4	18	6
,, 2nd ,, . . . ,,	4	12	6
Blue Bricks, Pressed . . . ,,	9	18	0
,, Wirecuts . . . ,,	8	16	0
,, Brindles . . . ,,	8	0	0
,, Bullnose . . . ,,	10	8	0
Red Sand-faced Facings . . . ,,	7	11	0
Red Rubbers for Arches . . . ,,	15	0	0
Multicoloured Facings . . . ,,	9	4	0
Luton Facings . . . ,,	8	16	0
Arlesley White Facings . . . ,,	6	15	0
Midhurst White Facings . . . ,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:			
Stretchers . . . ,,	21	10	0
Headers . . . ,,	21	0	0
Bullnose . . . ,,	28	0	0
Double Stretchers . . . ,,	30	0	0
Double Headers . . . ,,	27	0	0
Glazed Second Quality, *Less* . . . ,,	1	0	0
,, Buffs and Creams, Add . . . ,,	2	0	0
,, Other Colours ,, . . ,,	5	10	0
2″ Breeze Partition Blocks . . per Y.S.		1	9
2½″ ,, ,, ,, . . ,,		2	0
3″ ,, ,, ,, . . ,,		2	3
4″ ,, ,, ,, . . ,,		3	0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4″ s.	d.	6″ s.	d.
Straight pipes . . per F.R.	1	1	1	6
Bends . . . each	2	10	4	4
Taper bends . . . ,,	6	3	7	2
Rest bends . . . ,,	5	9	8	9
Single junctions . . . ,,	3	9	5	9
Double ,, . . . ,,	5	9	8	9
Straight channels . . . ,,	2	6	3	2
¾″ Channel bends . . . ,,	7	8	—	
Channel junctions . . . ,,	7	0	12	6
Channel tapers . . . ,,	5	6	7	9
Yard gullies . . . ,,	9	6	11	6
Interceptors . . . ,,	18	6	25	9
Iron drain pipe . . per F.R.	2	3	3	5
Bends . . . each	6	0	13	0
Inspection bends . . . ,,	15	3	24	0
Single junctions . . . ,,	9	3	18	0
Double junctions . . . ,,	14	0	27	6
Lead wool . . . lb.		6	—	
Gaskin . . . ,,		5	—	

MASON

	£	s.	d.
The following d/d F.O.R. at Nine Elms:			
Portland stone, Whitbed . . . F.C.	4	6	
,, ,, Basebed . . . ,,	4	9	
Bath stone . . . ,,	2	11	
York stone . . . ,,	6	9	
,, Sawn templates . . . ,,	7	6	
,, Paving, 2″ . . . F.S.	1	8	
,, ,, 3″ . . . ,,	2	6	

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station.

	£	s.	d.
24″ × 12″ Duchesses . . per M.	31	0	0
22″ × 12″ Marchionesses . . ,,	28	0	0
20″ × 10″ Countesses . . ,,	20	5	0
18″ × 10″ Viscountesses . . ,,	17	0	0
18″ × 9″ Ladies . . . ,,	15	0	0
Westmorland green (random sizes) per ton	8	10	0
Nails, compo . . . lb.			4
,, copper . . . ,,		2	0
Best machine roofing tiles . per M.	5	0	0
Best hand-made do. . . ,,	5	10	0
Hips and valleys, . . . each			9½
,, hand-made . . . ,,			10

CARPENTER AND JOINER

	£	s.	d.
Good carcassing timber . . F.C.		2	6
Birch . . . as 1″ F.S.			9
Deal, Joiner's, . . . ,, ,,			5
,, ,, 2nds . . ,, ,,			4
Mahogany, Honduras . . ,, ,,	1	3	
,, African . . ,, ,,	1	1	
,, Cuban . . ,, ,,	2	6	
Oak, plain American . . ,, ,,	1	0	
,, Figured ,, . . ,, ,,	1	3	
,, Plain Japanese . . ,, ,,	1	2	
,, Figured ,, . . ,, ,,	1	5	
,, Austrian wainscot . . ,, ,,	1	6	
,, English ,, . . ,, ,,	1	11	
Pine, Yellow . . . ,, ,,	1	0	
,, Oregon . . . ,, ,,			4
,, British Columbian . . ,, ,,			4
Teak, Moulmein . . ,, ,,	1	3	
,, Burma . . ,, ,,	1	2	
Walnut, American . . ,, ,,	2	3	
,, French . . ,, ,,	2	3	
Whitewood, American . . ,, ,,	1	1	
Deal floorings, ¾″ . . . Sq.	1	1	0
,, 1″ . . . ,,	1	3	6
,, 1¼″ . . . ,,	1	5	6
,, 1½″ . . . ,,	1	11	0
,, 2″ . . . ,,	1	15	0
Deal matchings, ¾″ . . . ,,		16	0
,, 1″ . . . ,,		17	6
,, 1¼″ . . . ,,	1	6	0
Rough boarding, ¾″ . . . ,,		18	0
,, 1″ . . . ,,	1	0	0
,, 1½″ . . . ,,	1	8	0

Plywood, per ft. sup.

Thickness	¼″			½″			¾″			1″		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

Scotch glue . . . . . lb. 8

SMITH AND FOUNDER

	s.	d.
Rolled steel joists cut to length . . cwt.	9	6
Mild steel reinforcing rods, ¾″ . . . ,,	10	0
,, ,, ⅝″ . . . ,,	9	9
,, ,, ½″ . . . ,,	9	6
,, ,, ⅜″ . . . ,,	9	0
,, ,, ¼″ . . . ,,	9	0
,, ,, 1″ . . . ,,	9	0
,, ,, 1¼″ . . . ,,	9	0
,, ,, 1½″ . . . ,,	9	0

	3″ s.	d.	4″ s.	d.
Cast-iron rain-water pipes of ordinary thickness metal . F.R.	8	7		10
Shoes . . . each	2	3	3	3
Anti-splash ,, . . ,,	5	0	8	6
Boots . . . ,,	3	3	4	6
Bends . . . ,,	2	9	4	0
,, with access door . . ,,	—		6	9
Heads . . . ,,	4	0	5	0
Swan-necks up to 9″ offsets . ,,	4	0	6	3
Plinth bends, 4½″ to 6″ . ,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal . F.R.	5			6
Stop ends . . . each	6			7
Angles . . . ,,	1	7	1	11
Obtuse ,, . . . ,,	2	0	2	6
Outlets . . . ,,	1	9	2	3

SMITH AND FOUNDER—Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼″	½″	1″	1¼″	2″
Tubes, 2′–14′ long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12″–23¾″ long, each	10	1/1	1/11	2/8	4/9
,, 3″–11¾″ long ,,	7	9	1/3	1/8	3/–
Long screws 12″–23¾″ long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3″–11¾″ long ,,	8	10	1/5	1/11	3/6

SMITH AND FOUNDER—Tubes and Fittings (*continued*):

	¼″	⅜″	½″	1″	1¼″	2″
Bends . . each	8	11	1/7½	2/7½	5/2	
Springs not socketed ,,	5	7	1/1½	1/11½	3/11	
Socket union . ,,	2/–	3/–	5/6	6/9	10/–	
Elbows, square . ,,	10	1/1	1/6	2/2	4/3	
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1	
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6	
Plain sockets and nipples ,,	3	4	6	8	1/3	
Diminished sockets ,,	4	6	9	1/–	2/–	
Flanges . . ,,	9	1/–	1/4	1/9	2/9	
Caps . . . ,,	3½	5	8	1/–	2/–	
Backnuts . . ,,	2	3	5	6	1/1	
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6	
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–	

Discounts:

TUBES.	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58⅓	,, water .	45
Steam . . .	55	,, steam .	40
FITTINGS.			
Gas . . .	47½	Galvanized gas .	37½
Water . . .	42½	,, water .	32½
Steam . . .	37½	,, steam .	27½

PLUMBER

	£	s.	d.
Lead, milled sheet . . . cwt.	24	0	
,, drawn pipes . . . ,,	24	6	
,, soil pipe . . . ,,	27	6	
,, scrap . . . ,,	14	0	
Solder, plumbers' . . . lb.	1	0	
,, fine do. . . . ,,	1	4	
Copper, sheet . . . ,,	1	0	
,, tubes . . . ,,	1	4	

L.C.C. soil and waste pipes:	3″	4″	6″
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . ,,	3 9	5 3	10 3
Shoes . . ,,	2 10	4 4	9 6
Heads . . ,,	4 8	8 5	12 9

PLASTERER

	£	s.	d.
Lime, chalk . . . per ton	2	8	6
Plaster, coarse . . . ,,	2	10	6
,, fine . . . ,,	5	10	0
Hydrated lime . . . ,,	2	16	0
Sirapite . . . ,,	3	10	0
Keene's cement . . . ,,	5	10	0
Sand, washed . . . Y.C.		11	6
Hair . . . lb.			6
Laths, sawn . . . bundle		2	4
,, rent . . . ,,		3	9
Lath nails . . . lb.			3½

GLAZIER

	s.	d.		s.	d.
Sheet glass, 21 oz. . . F.S.					3½
,, ,, 26 oz. . . ,,					4½
Arctic glass . . ,,					5
Cathedral glass . . ,,					6
Hartley's rough rolled . ,,					9
Do. wired plate . . ,,				1	3
¼″ Polished plate, n/e 1 . ,,	1	0	to	1	3
,, ,, 2 . ,,	1	2	,,	1	7
,, ,, 3 . ,,	1	7	,,	2	5
,, ,, 4 . ,,	2	1	,,	2	11
,, ,, 6 . ,,	2	3	,,	3	2
,, ,, 8 . ,,	2	6	,,	3	6
,, ,, 12 . ,,	2	9	,,	3	8
,, ,, 20 . ,,	3	0	,,	3	11
,, ,, 45 . ,,	3	3	,,	4	1
,, ,, 65 . ,,	3	7	,,	4	6
,, ,, 90 . ,,	3	10	,,	4	9
,, ,, 100 . ,,	4	0	,,	5	0
Vita glass, sheet, n/e 1 . ,,				1	0
,, ,, ,, 2 . ,,				1	3
,, ,, ,, 4 . ,,				1	6
,, ,, plate, n/e 1 . ,,				2	6
,, ,, ,, 2 . ,,				4	6
,, ,, ,, 4 . ,,				4	9
,, ,, ,, 6 . ,,				5	2
,, ,, ,, 8 . ,,				6	6
Putty, linseed oil . . lb.					3

PAINTER

	£	s.	d.
White lead . . . cwt.	2	8	0
Linseed oil . . . gall.		3	3
Boiled oil . . . ,,		4	3
Turpentine . . . ,,		3	4
Patent knotting . . . ,,		14	0
Distemper, washable . . cwt.	3	0	0
,, ordinary . . ,,	2	5	0
Whitening . . . ,,		4	0
Size, double . . firkin		3	0
Copal varnish . . . gall.		13	0
Flat varnish . . . ,,		14	0
Outside varnish . . ,,		16	0
White enamel . . ,,	1	15	0
Ready-mixed paint . . ,,		13	6
Brunswick black . . ,,		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

	£ s. d.
Digging over surface n/e 12" deep and cart away . . . Y.S.	3 6
" to reduce levels n/e 5' 0" deep and cart away . . Y.C.	10 0
" to form basement n/e 5' 0" deep and cart away . . "	11 0
" " 10' 0" deep and cart away . . "	11 6
" " 15' 0" deep and cart away . . "	12 0
If in stiff clay . . . . . add "	3 0
If in underpinning . . . . . "	5 0
Digging, return, fill and ram . . . . . "	5 0
Planking and strutting to sides of excavation . . . F.S.	1 0
" " to pier holes . . . . . "	6
" " to trenches . . . . . "	6
" " extra, only if left in . . . . "	3½
Hardcore, filled in and rammed . . . . . Y.C.	14 0
Portland cement concrete in foundations (6-1) . . . "	1 13 6
" " " (4-2-1) . . . "	1 18 6
" " " underpinning . . . "	2 2 0
Finishing surface of concrete, spade face . . . . Y.S.	9

DRAINLAYER

	4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately) . . . . . F.R.	1 8	2 6
Extra, only for bends . . . . . Each	2 8	3 9
" junctions . . . . . "	3 9	4 6
Gullies and gratings	17 6	19 9
Cast iron drains, and laying and jointing . . . F.R.	5 6	7 0
Extra, only for bends . . . . . Each	12 6	18 6

BRICKLAYER

	£ s. d.
Brickwork, Flettons in lime mortar . . . . . Per Rod	32 0 0
" " in cement . . . . . "	34 0 0
" Stocks in cement . . . . . "	41 10 0
" Blues in cement . . . . . "	62 0 0
Extra only for circular on plan . . . . . "	3 0 0
" backing to masonry . . . . . "	2 0 0
" raising on old walls . . . . . "	3 0 0
" underpinning . . . . . "	10 0 0
Fair Face and pointing internally . . . . . F.S.	3
Extra only for picked stock facings . . . . . "	1 0
" red brick facings . . . . . "	1 6
" blue brick facings . . . . . "	1 9
" glazed brick facings . . . . . "	4 6
Tuck pointing . . . . . "	10
Weather pointing . . . . . "	4
Slate dampcourse . . . . . "	1 0
Vertical dampcourse . . . . . "	1 3

ASPHALTER

	s. d.
½" Horizontal dampcourse . . . . . Y.S.	5 6
½" Vertical dampcourse . . . . . "	7 6
½" paving or flat . . . . . "	5 6
1" paving or flat . . . . . "	6 6
1" × 6" skirting . . . . . F.R.	1 0
Angle fillet . . . . . "	2
Rounded angle . . . . . "	2
Cesspools . . . . . Each	5 0

MASON

	£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete . . . . . F.C.	1 1 6
Bath stone and do. all as last . . . . . "	15 6
Artificial stone and do. . . . . "	16 6
York stone templates, fixed complete . . . . . "	14 0
" thresholds . . . . . "	16 0
" sills . . . . . "	1 3 6

SLATER AND TILER

	£ s. d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10" . . . . . Sqr.	4 5 0
Do., 18" × 9" . . . . . "	4 2 0
Do., 24" × 12" . . . . . "	4 12 0
Westmorland slating laid with diminished courses . . . "	6 10 0
Tiling, best hand-made sand-faced tiling, laid to a 4" gauge, nailed every fourth course . . . . . "	4 0 0
Do., all as last, but of machine-made tiles . . . . "	3 11 0
Fixing only, lead soakers . . . . . Doz.	9
Stripping old slating and clearing away . . . . . Sqr.	10 0

CARPENTER AND JOINER

	£ s. d.
Flat boarded centering to concrete floors, including all strutting Sqr.	2 12 0
Shuttering to sides and soffits of beams . . . . . F.S.	1 0
" to stanchions . . . . . "	1 0
" to staircases . . . . . "	2 0
Fir and fixing in wall plates, lintols, etc. . . . . F.C.	5 0
Fir framed in floors . . . . . "	6 9
" " roofs . . . . . "	8 3
" " trusses . . . . . "	9 0
" " partitions . . . . . "	12 0
½" deal sawn boarding and fixing to joists . . . . Sqr.	1 17 6
1" " " " " " . . . . "	2 1 6
1½" " " " " " . . . . "	2 7 6
¾" × 2" fir battening for Countess slating . . . . "	12 6
Do. for 4" gauge tiling . . . . . "	16 0
Stout feather-edged tilting fillet . . . . . F.R.	6
Patent roofing felt, 1 ply . . . . . Y.S.	2 6
" " " 2 " . . . . . "	3 0
" " " 3 " . . . . . "	3 6
Stout herringbone strutting to 9" joists . . . . . F.R.	1 0
1" deal gutter boards and bearers . . . . . F.S.	1 4
1½" " " " " " . . . . "	1 8
2" deal wrought rounded roll . . . . . F.R.	9
1" deal grooved and tongued flooring, laid complete, including cleaning off . . . . . Sqr.	2 15 0
1¼" do. . . . . "	3 4 0
1½" do. . . . . "	3 13 0
1" deal moulded skirting, fixed on, and including grounds plugged to wall . . . . . F.S.	1 10
1¼" do. . . . . "	2 1

CARPENTER AND JOINER—*continued.*

	s. d.
1½" deal moulded sashes of average size . . . . . F.S.	2 3
2" " " " " " . . . . "	2 6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅝" parting beads, and with brass-faced axle pulleys, etc., fixed complete . . "	4 3
2" " " " " " . . . . "	4 6
Extra only for moulded horns . . . . . Each	9
1½" deal four-panel square, both sides, door . . . . F.S.	2 6
2" " " " " " . . . . "	3 0
1½" " but moulded both sides . . . . . "	3 0
2" " " " " " . . . . "	3 6
4" × 3" deal, rebated and moulded frames . . . . F.R.	1 6
4½" × 3½" " " " " . . . . "	2 0
1¼" deal tongued and moulded window-board, on and including deal bearers . . . . . F.S.	2 0
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages . . "	3 0
1½" deal moulded wall strings . . . . . "	2 6
1½" " outer strings . . . . . "	2 9
Ends of treads and risers housed to string . . . . Each	2 0
3" × 2" deal moulded handrail . . . . . F.R.	1 6
1" × 1" deal balusters and housing each end . . . . Each	2 6
1½" × 1½" " " " " . . . . "	3 3
3" × 3" deal wrought framed newels . . . . . F.R.	1 6
Extra only for newel caps . . . . . Each	7 6
Do., pendants . . . . . "	7 6

SMITH AND FOUNDER

	£ s. d.
Rolled steel joists cut to lengths, and hoisting and fixing in position . . . . . Per cwt.	17 0
Riveted plate or compound girders and hoisting and fixing in position . . . . . "	1 3 0
Do. stanchions with riveted caps and bases and do. . . "	1 2 0
Mild steel bar reinforcement ½" and up, bent and fixed complete . "	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g. . . . . F.S.	1 0
Wrot-iron caulked and cambered chimney bars . . . Per cwt.	1 15 0

PLUMBER

	½" s. d.	¾" s. d.	1" s. d.	1¼" s. d.	2" s. d.	4" s. d.
Milled lead and labour in flats, gutters . . . Per cwt.	£ 2 0 6					
Do. in flashings . . . . . "	2 3 0					
Do. in covering to turrets, etc. . . . . "	2 10 0					
Do. in soakers . . . . . "	1 16 0					
Labour to welted edge . . . . . F.R.						3½
Open copper nailing . . . . . "						3½
Close " . . . . . "						4½
Lead service pipe and fixing with pipe hooks . . . F.R.	1 3	1 8	2 2	2 9	3 10	—
Do. soil pipe and fixing with cast lead tacks . . . "	—	—	—	—	—	6 0
Extra, only to bends Each	—	—	—	—	2 3	6 6
Do. to stop ends . . "	7	9	1 0	1 3	2 0	—
Boiler screws and unions . . . "	3 6	4 0	5 6	8 0	—	—
Lead traps . . . "	—	—	—	—	—	—
Screw down bib valves . . . "	7 6	10 6	12 6	—	—	—
Do. stop cocks . "	10 0	12 0	16 0	23 6	56 6	—
4" cast-iron ½-rd. gutter and fixing . . . . . F.R.						1 3
Extra, only stop ends . . . . . Each						1 0
Do. angles . . . . . "						1 6
Do. outlets . . . . . "						3 0
4" dia. cast-iron rain-water pipe and fixing with ears cast on . F.R.						1 6
Extra, only for shoes . . . . . Each						2 6
Do. for plain heads . . . . . "						5 6

PLASTERER AND TILING

	£ s. d.
Expanded metal lathing, small mesh . . . . . Y.S.	3 9
Do. in n/w to beams, stanchions, etc. . . . . "	5 6
Lathing with sawn laths to ceilings . . . . . "	1 6
½" screeding in Portland cement and sand for tiling, wood block floor, etc. . . . . "	2 6
Do. vertical . . . . . "	2 9
Rough render on walls . . . . . "	2 3
Render, float and set in lime and hair . . . . . "	3 0
Render and set in Sirapite . . . . . "	3 3
Render, backing in cement and sand, and set in Keene's cement "	4 6
Extra, only if on lathing . . . . . "	9
Keene's cement, angle and arris . . . . . F.R.	8
Arris . . . . . "	3
Rounded angle, small . . . . . "	3
Plain cornices in plaster, including dubbing out, per 1" girth . "	2
1" granolithic pavings . . . . . Y.S.	5 0
1½" " " " " " . . . . "	6 0
6" × 6" white glazed wall tiling and fixing on prepared screed . "	1 2 6
9" × 3" " " " " . . . . "	1 7 6
Extra, only for small quadrant angle . . . . . F.R.	9

GLAZIER

	s. d.
21 oz. sheet glass and glazing with putty . . . . . F.S.	8
26 oz. do. and do. . . . . "	1 0
Arctic glass and glazing with putty . . . . . "	1 2
Cathedral glass and do. . . . . "	1 3
Glazing only, British polished plate . . . . . "	8
Extra, only if in beads . . . . . "	2
Washleather . . . . . F.R.	4

PAINTER

	s. d.
Clearcolle and whiten ceilings . . . . . Y.S.	8
Do. and distemper walls . . . . . "	1 0
Do. with washable distemper . . . . . "	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces . "	3 3
Do. on woodwork . . . . . "	3 6
Do. on steelwork . . . . . "	3 0
Do. and brush grain and twice varnish . . . . . "	5 6
Stain and twice varnish woodwork . . . . . "	1 11
Stain and wax-polish woodwork . . . . . "	4 6
French polishing . . . . . F.S.	1 2
Stripping off old paper . . . . . Piece	2 6
Hanging ordinary paper . . . . . from "	3 0

WAPPINGTHORN FARM

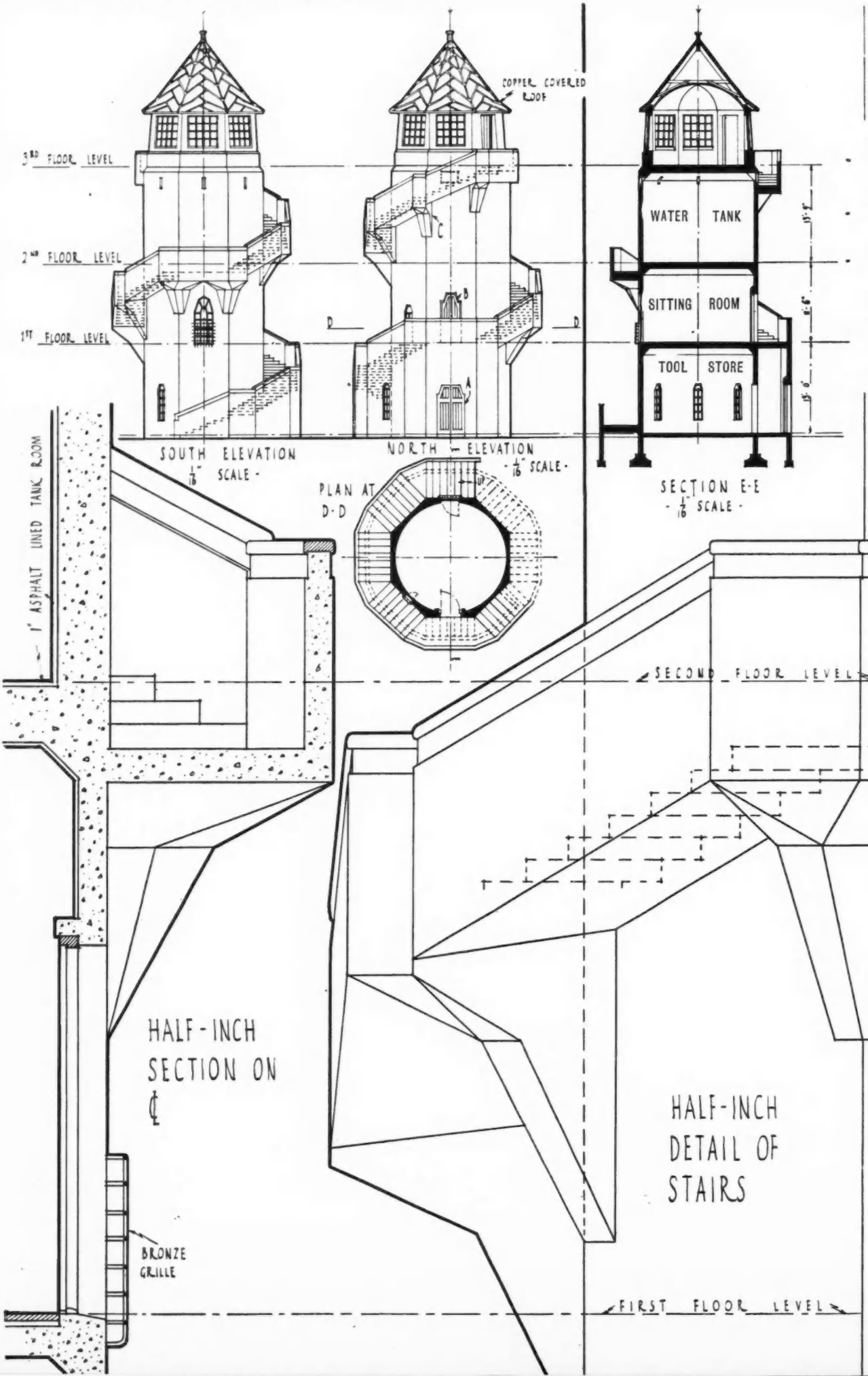
DETAIL DRAWINGS OF THE WATER TOWER



[*Maxwell Ayrton, architect.*

THE WATER TOWER FROM THE FIELDS

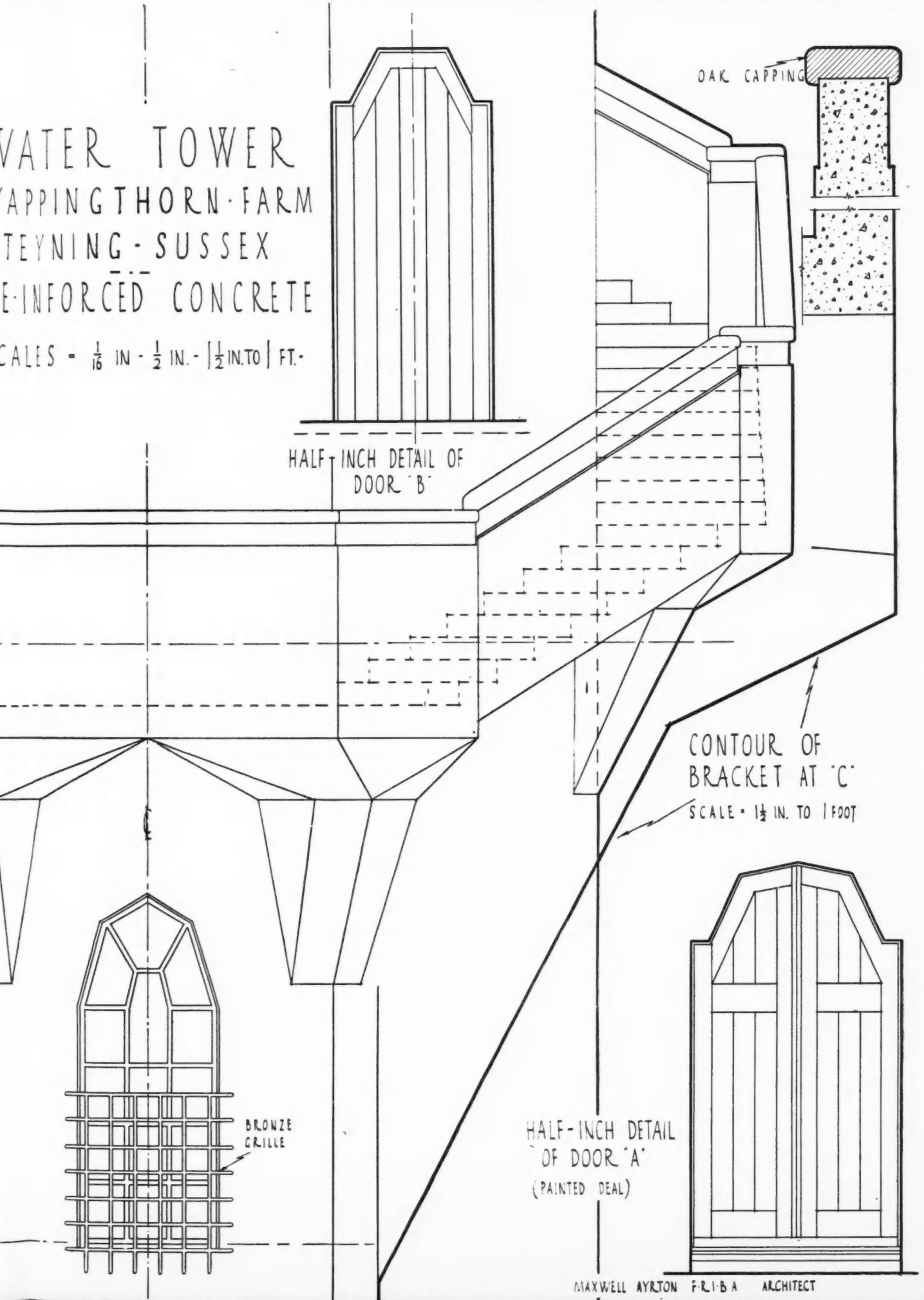
THE Home Farm, Wappingthorn, near Steyning, Sussex, is fully illustrated on pages 95–102 of this issue. Water is pumped up to an 11,000-gallon storage tank in this tower, on high ground some distance from the farm buildings. As will be seen from the sheet of detail drawings overleaf (which may be read direct with architects' ordinary scales), the lower floors provide gardener's tool store and sitting-room. At the top is a sun room.



WATE
WAPPIN
STEYNI
RE-INFO
SCALES -

VATER TOWER
YAPPINGTHORN · FARM
TEYNING · SUSSEX
E·INFORCED CONCRETE

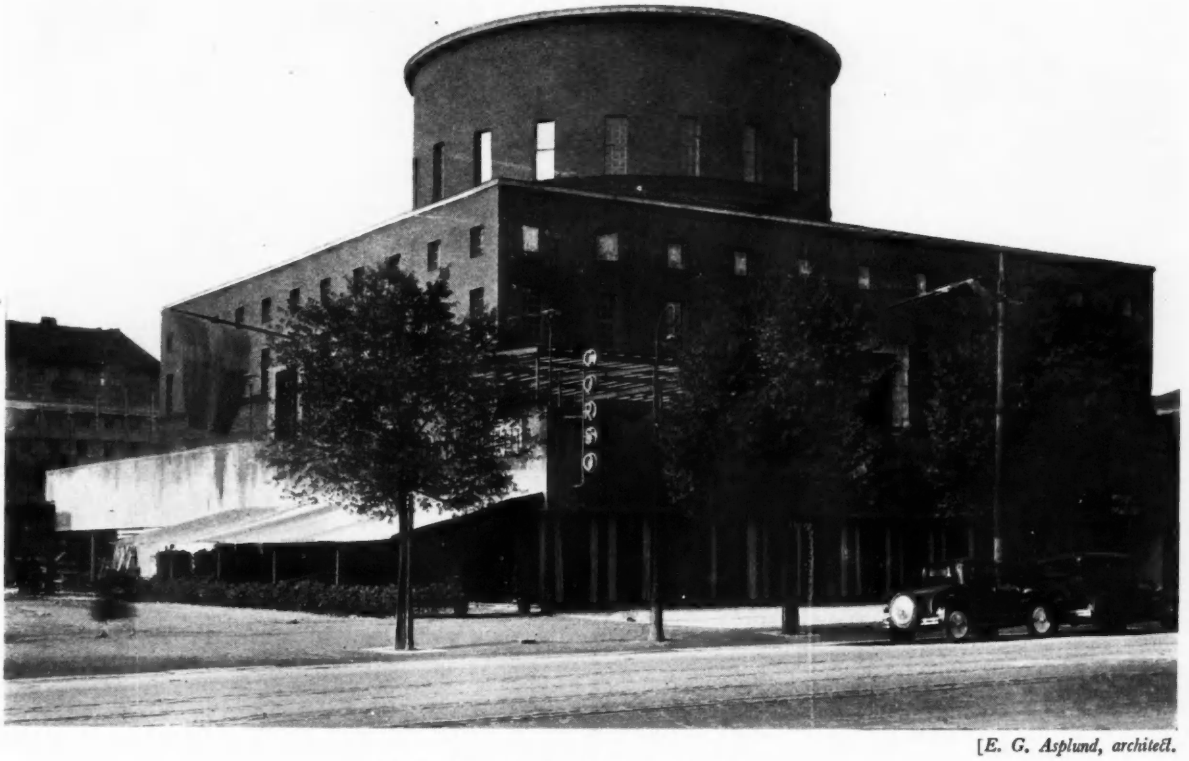
CALES - $\frac{1}{16}$ IN - $\frac{1}{2}$ IN. - $\frac{1}{2}$ IN. TO 1 FT. -



MAXWELL AYRTON F.R.I.B.A. ARCHITECT

STOCKHOLM PUBLIC LIBRARY

THE ARCHITECT'S DRAWING OF LONGITUDINAL SECTION ON EAST-AND-WEST CENTRE LINE

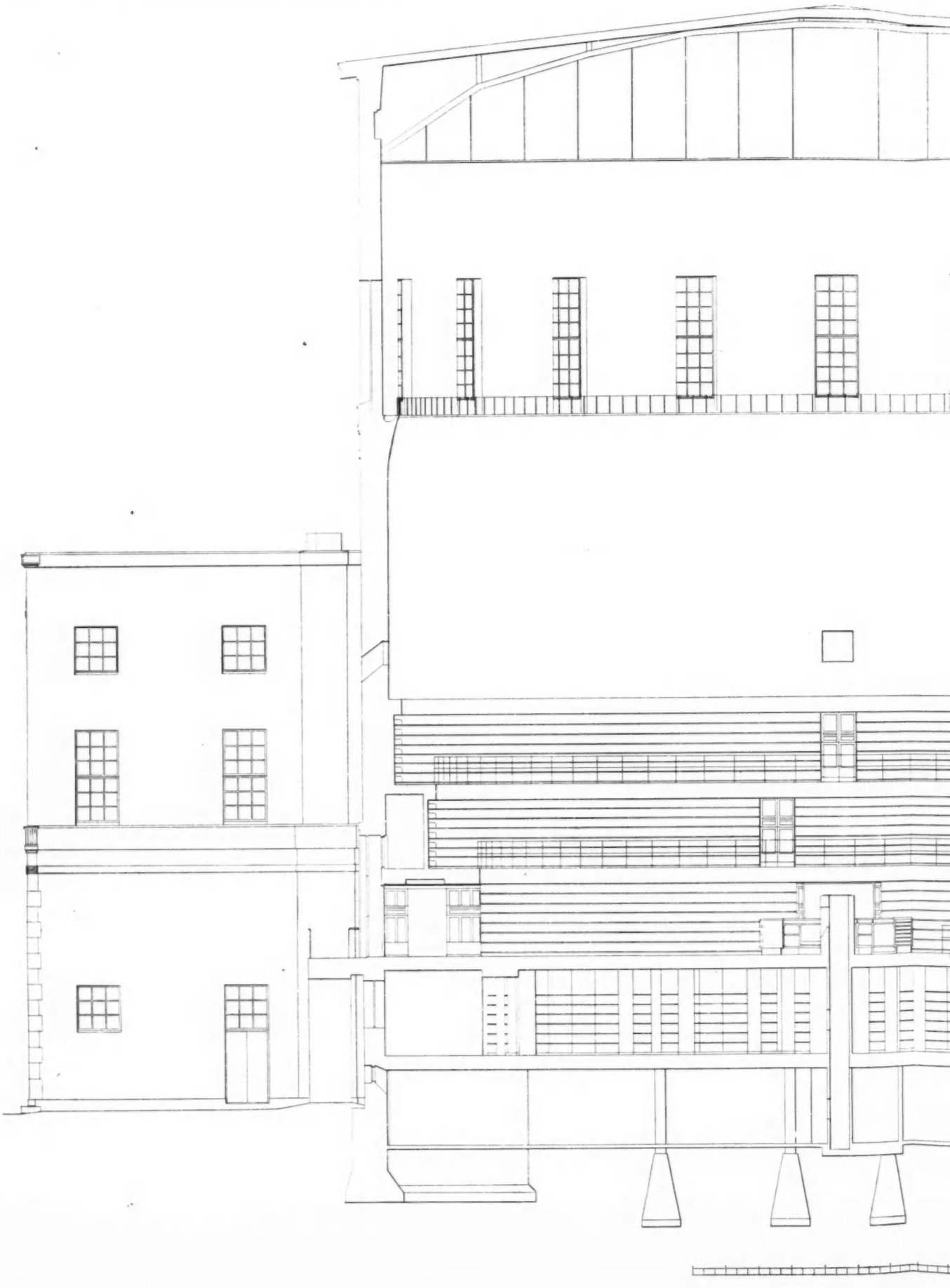


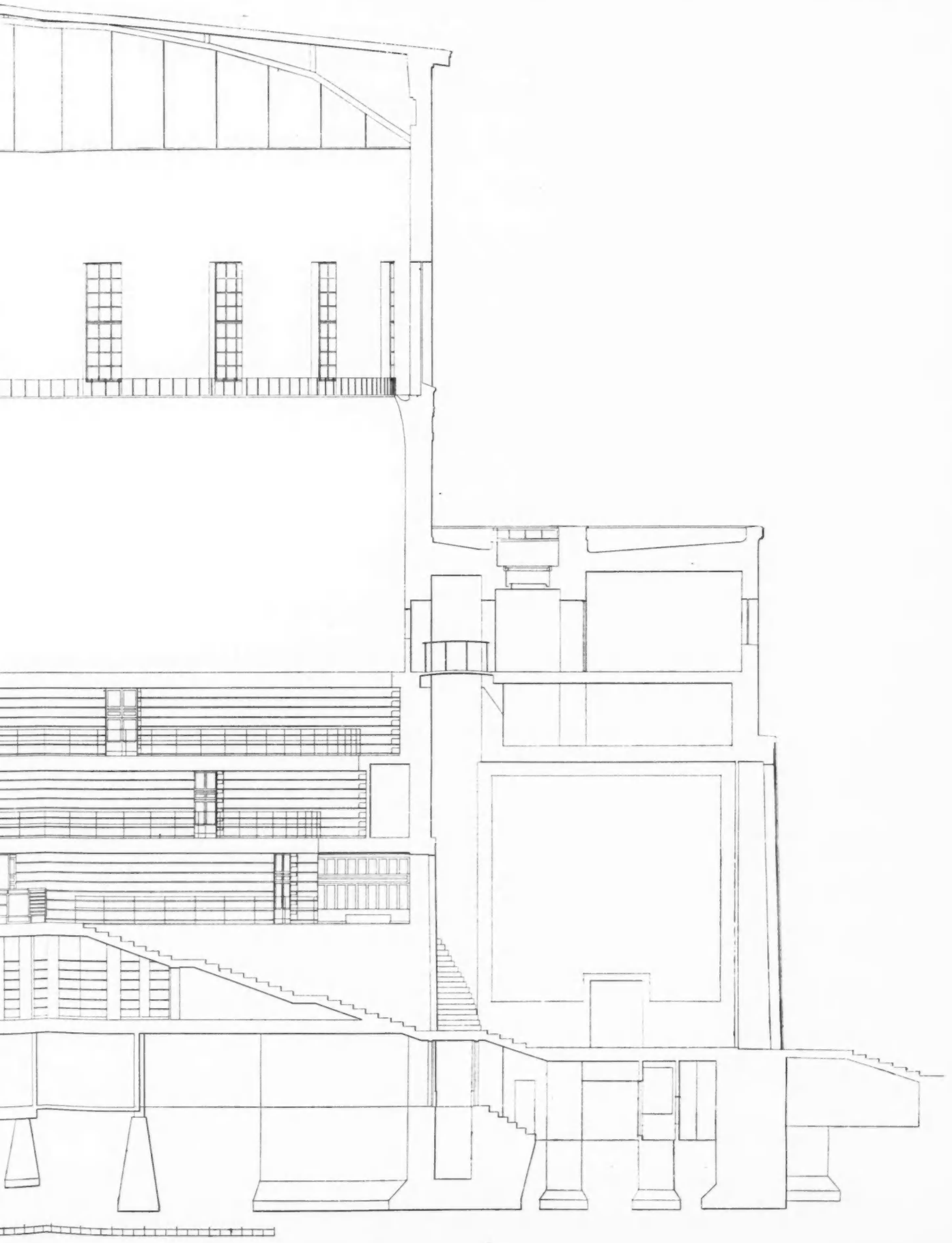
[*E. G. Asplund, architect.*

THE LIBRARY FROM THE SOUTH-EAST

THE main entrance faces east, and the sectional drawing reproduced overleaf is therefore taken on an east-and-west line through the centre of the circular lending hall. To the right is the series of flights of steps leading up, by stages, but in a straight line, from street level to the lending hall, with its two encircling galleries. In the entrance vestibule is indicated the beginning of one of the branching flights that follow the circular contour of the rotunda; also a doorway to the northern part of the east front. On the left the western end of the north wing is seen in elevation. The building is fully illustrated, with a plan, further drawings and photographs,

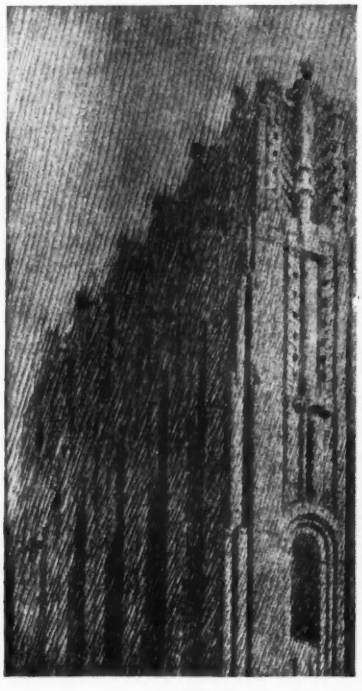
on pages 88–94 of this issue.



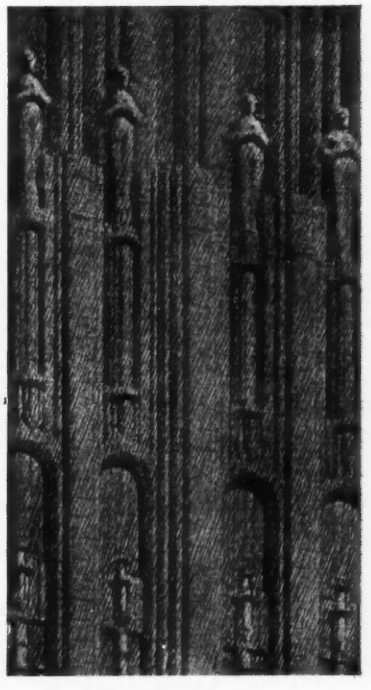


SELECTED PRECEDENTS:

GOTHIC SKYSCRAPER FORMS AND BRICK TOWERS OF ESSEX CHURCHES





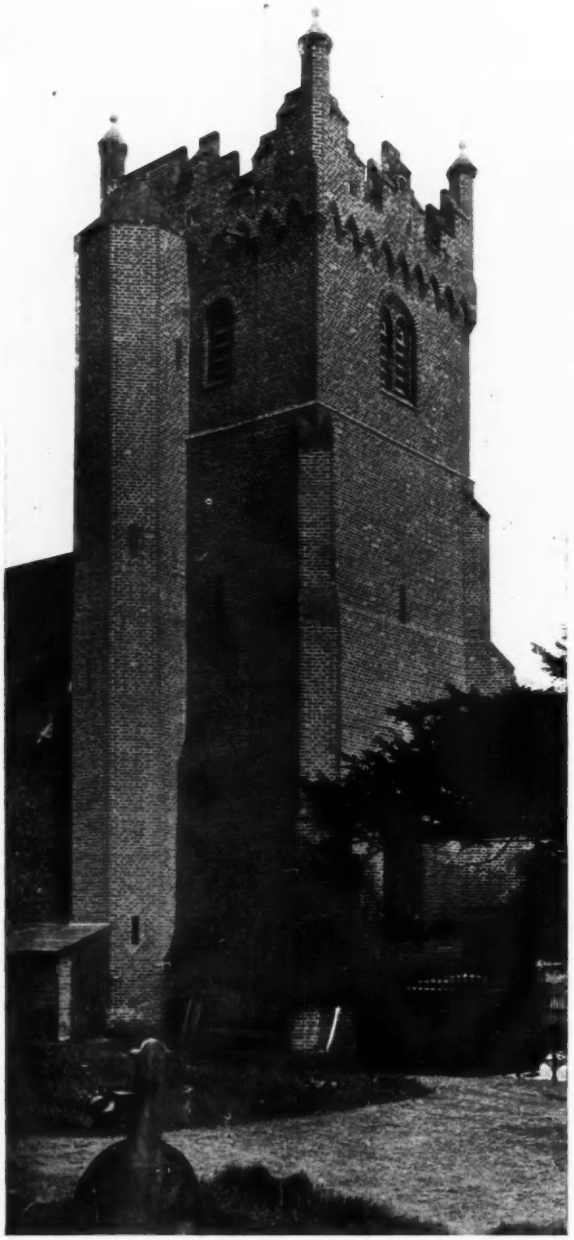


TOWER OF THE TRIBUNE BUILDING, CHICAGO; PERSPECTIVE SKETCH AND DETAILS.
Designed by ELIEL SAARINEN

THE great brick towers of Essex houses and churches show remarkable diversity of design. They are admirably proportioned. Some have one buttress, some two at each angle. The stepping of these buttresses produces those effects of stability and diminishing as the tower rises which inspired Cass Gilbert and, later, Eliel Saarinen to design the rib and buttress treatment for skyscrapers. The latter's design for the Tribune Tower, Chicago, illustrated above, revolutionized designs of very tall buildings on circumscribed sites. Previously, skyscrapers had been in the manner of a Roman palace, the walling between the base and the deep projecting cornice having been elongated to any height required. Now they are carried up as noble and graceful towers, having true Gothic character, though not in imitation of any Gothic structure. Such appreciation and inspiration drawn from architecture of the past is right development towards the architecture of the future.

The tower of Ingatestone Church, illustrated overleaf, is an example of setting-back for a purpose that differs from recent American developments; but the parallel is discernible and instructive. Most of these Essex towers were built early in the sixteenth century, entirely of red bricks. The tower of Fryerning Church, also illustrated overleaf, has been repointed, which emphasizes the jointing. There can be no doubt that its builder intended the jointing to be prominent, for English Cross Bond has been employed to produce a minute diaper effect, as subtle as it is pleasing. Such diapers compare favourably with modern work in smooth, hard, blue or black headers, arranged in sharp and regular patterns.

—NATHANIEL LLOYD

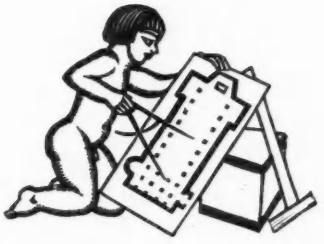


FRYERNING CHURCH TOWER, FROM THE N.W.



INGATESTONE CHURCH TOWER, FROM THE N.E.

THE ARCHITECTS' JOURNAL



WEDNESDAY, JANUARY 21, 1931

THE DAY OF CHEAP BUILDING

THE remarkable table of prices which we publish elsewhere in this issue shows conclusively that the present period is an exceptionally favourable one for architects and building owners to embark upon new schemes. Looking down the list, one finds that, with the exception of a very few items, the building materials of today are considerably cheaper than they were three years ago. In some instances—notably steel and lead—they have nearly touched the pre-war prices.

What obviously seems to be required now is a steady programme of building, having careful regard to the capacity of the various branches of the industry. Let us try to use most freely those materials whereof we know that the manufacturers have the greatest productive capacity. On the other hand, we should not put too heavy a burden upon any group of manufacturers who, faced by bigger orders than they can possibly execute in the time specified for the completion of the building, must necessarily put up their prices.

It is important that we should not repeat the disastrous errors which were made at the time of the State Housing programme immediately after the war. We do not want a sudden rush of orders such as will upset the market, but an even flow which will enable the manufacturer to retain his production at a high level without raising the prices. It is here that the competitive system of British industry is so efficacious, for while "rationalization" is difficult to achieve if the manufacturing unit is very small, there are limits to the public benefit which is derived by the amalgamation of firms making the same products. In some measure the low prices now obtaining in the building trades are due to the comparative absence of monopoly and to the healthy emulation of various firms trying to outbid one another in both the good quality and the cheapness of their merchandise.

The list of prices submitted for the information of our readers is an exceptionally valuable one and, indeed, we would urge every practising architect to pin it up in a conspicuous place in his office. Of course, clients and architects alike have their own preferences for certain materials—preferences which are hard to eradicate. In normal times it is well that we should indulge our individual taste in this matter; but in a period such as our own, when British industry requires somewhat careful nursing if a return is to be made to prosperity, it behoves all of us to put our heads together and so to build that by this act we confer the maximum benefit on the building industries of the country.

Although, as we have had occasion to remark quite recently in these columns, these latter industries are in a much healthier state than are many others that can be mentioned, they would be none the worse for that special care which—rather shortsightedly, perhaps—we are apt to reserve for industries suffering from some specific malady.

Although political laws constantly require to be reviewed afresh in the light of modern facts and experience, in some respects they possess a considerable measure of stability. For instance, we are probably right in assuming that those materials which show the greatest drop in prices can now be had in greatest abundance. The storage yards are full to overflowing, and we cannot confer a greater benefit upon the factories in question than by ordering their products in large quantities. Obviously, we should utilize as much steel as possible in our buildings, and as much lead.

The drop in the price of the latter material is particularly fortunate because it coincides with a time when there are signs of a determined attempt to introduce the flat roof into this country. In the opinion of many, lead is still the best material for such a purpose. And the parapet wall, that graceful element in the composition of an urban façade, which in recent years has fallen into desuetude on account of the high price of lead, may now return to popular favour.

The architect, surveying this list of cheap materials, each of which may have for him some special artistic attraction, must feel his heart gladden at the prospect of using them.

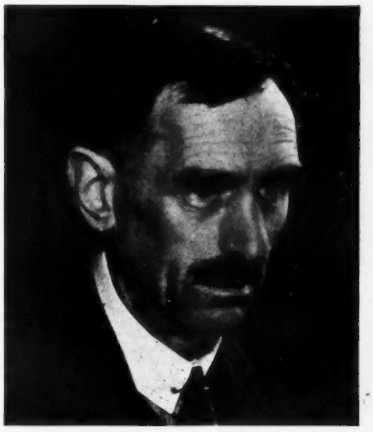
Let not the client, then, frustrate this honourable ambition, for in his own interest he should be persuaded that now is the time to build.



SYDNEY HARBOUR BRIDGE FROM THE AIR

This air view illustrates the progress made with the erection of this vast bridge up to a few weeks ago. It shows the north approach deck concreted, and seven panels of the main span deck erected beneath the great steel arch. In the foreground are the fabricating workshops. The bridge has a span of 1,650 ft., the largest in the world; and gives a clear headroom of 170 ft. at high water. The chief engineer for the scheme is J. J. C. Bradfield, who was appointed by the New South Wales Government, and the abutment tower design is the work of Sir John Burnet and Partners (for working drawings refer to New Year issue, 1930). The bridge is being erected by Dorman Long & Co., Ltd., who secured the contract in a competition open to the world.





Messrs. Adams (junior), Holden and Pearson, whose offices for the Underground Railways, Broadway, Westminster, won the R.I.B.A. Medal and Diploma for a London building completed between 1927-30. The presentation was made by Sir Banister Fletcher, P.R.I.B.A., at Monday's meeting.

NEWS & TOPICS

MR. KEYNES'S PLEA FOR COURAGE

SEVERAL readers who had been listening-in to Mr. J. Maynard Keynes's broadcast last week rang me up to point out how strikingly some of the speaker's remarks supported Mr. Gerald Barry's recent appeal in these pages. Indeed, the next morning all the papers were vociferous with Mr. Keynes's condemnation of things in these times. The brevity of most of these news paragraphs was very misleading, for it was not so much private things as public that were attacked. Many well-wishers of their country, said Mr. Keynes, believed that the most useful thing which they and their neighbours could do to mend the situation was to save more than usual. If they refrained from spending, they believed that they would have helped employment. If they were members of town or county councils they believed that their right course at such a time as this was to oppose expenditure on new amenities or new public works.

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"In certain circumstances," Mr. Keynes went on, "this would be quite right. But in present circumstances, unluckily, it is utterly harmful and misguided. For the object of saving is to release labour for employment on producing capital goods such as houses, factories, roads, machines and the like. But if there is a large unemployed surplus already available for such purposes, then the effect of saving is merely to add to this surplus, and therefore to increase the number of the unemployed. Moreover, when a man is thrown out of work in this or any other way, his diminished spending power causes further unemployment among those who have produced what he can no longer afford to buy. And so the position gets worse and worse in a vicious circle." We were urged not to button up our waistcoats tight, but to be in a mood of expansion, of activity ; to do things, to buy things, to make things. And then Mr. Keynes got on to the Boulevard scheme on the south side of the Thames, joining Westminster to the City. But he would like to see something bigger still. "For example, why not pull down the whole of South London from Westminster to Greenwich, and make a good job of it—housing on that convenient area near to their work a much greater population than at present in far better buildings, with all the conveniences of modern life, yet at the same time providing hundreds of acres of squares and avenues, parks and public spaces, having, when it was finished, something magnificent to the eye, yet useful and convenient to human life as a monument to our age ?"

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Yes, I agree with Mr. Keynes that the worst enemies of the country today are those who insist that we shall cut our coat according to our cloth, by which they mean that we must curtail our consumption, reduce our standard of life, work harder and consume less, and that that is the way out of the wood. "We have plenty of cloth," says Mr. Keynes, "and only lack the courage to cut it into coats."

THOSE OTHER THAMES BRIDGES

Charing Cross has largely obscured from the public mind the progress which has been achieved in the realization of Lord Lee's report on Thames Bridges. The progress, judged by the recommendations, is not spectacular, but it does represent four new bridges, started or starting, and two widenings in immediate prospect. Lambeth Bridge, not one of the most useful, is well under way, and will be finished in another year's time, and of the rest, contracts have been let for the widening of Putney Bridge, for new bridges at Chiswick, at Richmond and Hampton Court. Richmond Bridge, it will be remembered, is of concrete unadorned, and Mr. Maxwell Ayrton, in his successive designs, has shown that he is intent upon making this bridge a landmark of design in a new material. All the other bridges are in steel, or, as in the case of Hampton Court, in concrete decently clothed in period brick and stone. It is small progress, but if it can be said that Lord Lee's report produced directly five or six bridges, it will have done more than the reports of most Royal Commissions.

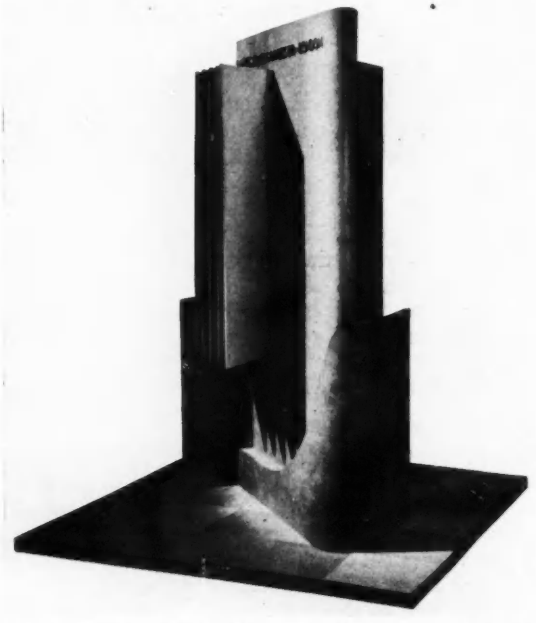
TO TRAM OR NOT——?

Just as a Commission on Traffic sounds the knell of tramways, Kingsway tunnel, enlarged to take double-deck trams, is opened with a flourish ! Just as I have made up my mind most definitely that I have a profound aesthetic loathing of trams, I see a new tramcar that fills me with æsthetic joy. It came charging along the Finchley Road, a thing of pressed steel and glass, splendid and powerful as an electric locomotive, functional from end to end. Now, where do I stand ? I still dislike the idea of trams. I know they are wasteful road monopolizers. But if the

L.C.C. continue to thrill me with these images of contained speed, trams, so far as I am concerned, will continue to run faster and faster along the foolish streets of London.

ENLIGHTENED ADVICE FROM A BUILDER

According to the books, it is the job of an architect to select a builder. But this is not always so, for I have been reading in the intelligently-written booklet of a Ruislip builder that the first step in the direction of "home building" is to consult a good firm of builders. Now in this case I am prepared to believe that consulting this builder is a very wise step, because he goes on to say that "he can advise as to the choice of an architect, for builders know about architects in the same way that chemists know about doctors. . . . One thing is certain, and that is that your ideal home must be designed and not merely built."



The plywood stand, for Messrs. Bayliss, Jones and Bayliss, designed for the Buenos Aires Exhibition by Wells Coates, and executed by Welwyn Garden City Builders. The object was to display the adaptability of various forms of plywood for railway purposes. Most of the stand is built of the birch variety, bent at one point, as will be seen, to a very acute curve. The panels at the sides exhibit mahogany, other hard woods, and metal-faced plywood.

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The writer goes on to make many remarks upon the planning and fitting up of houses that serve to show him as a sensible and astute man, who has lived in the atmosphere of good planning and in the company of architects. He is, however, the exception. Not in being a good builder, nor yet in enjoying the collaboration of builder and architect, but in viewing his work as something that merits as much care and skill as only competent architects can give. Usually the first step after meeting with a "home" builder is into a "reach-me-down" villa.

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So, while being grateful to this exception that brings us work instead of taking it away, one may ask why it should be left to builders to lead clients into the office? And why is the public so unaware of the architects in their midst or of the merits of architect-built houses? Could there not be a local directory of architects, with photographs of their work, accessible to the public? Perhaps not, but (curse this dignity!) it might lead to more good houses being built.

NEWS FROM LIVERPOOL

Professor Reilly will do us all a service if he can convince the Minister of Health that the keeping of the purse gives him control over the design of small houses. Of course, the control is his, but, if the Ministry had used the whip hand of the subsidy to make all houses, by direct or indirect means, the product of architectural thought, instead of the by-product of financial interest, we should not have laid waste so many acres of good country at the expense of the community. It is not too late now to take this step, which would at one blow fulfil so many of the desires of us architects, and of the general public too.

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Professor Reilly must have been pleased to have watched over the progress of two talented students, whose fortunes, strangely parallel, took them to the Liverpool School, to the final round of the Victory Scholarship, to be joined, finally, in an engagement that seems to be the consummation of interests more than usually common to both. I refer, of course, to Mr. B. B. Lewis and Miss Hilary Archer.

AN ARCHITECTURAL TOUR OF EUROPE

It was a happy idea of the Architectural Association to arrange for another series of Saturday afternoon lectures for the public, on the same lines as those of last year. The new series is devoted to "Present-day Architecture," and was given an admirable "send-off" last Saturday, when the audience, conducted by Mr. F. R. Yerbury, made an architectural tour of Europe. By the aid of numerous lantern slides the guide was able to illustrate how great a part architecture is playing in the everyday lives of people on the Continent. He did not suggest that Continental domestic architecture was always ahead of our own; but thought that, whilst ours was very efficient and solid, we sometimes overlooked the possibilities of the things we set out to do. We were shown the housing schemes of Oslo, the orderliness of Amsterdam, the tiny houses of Rotterdam, the courtyards and pergolas of Vienna, and, finally, the methods of building adopted in Germany. After the tour had finished, I confess I was not unhappy to return to an English home. ASTRAGAL

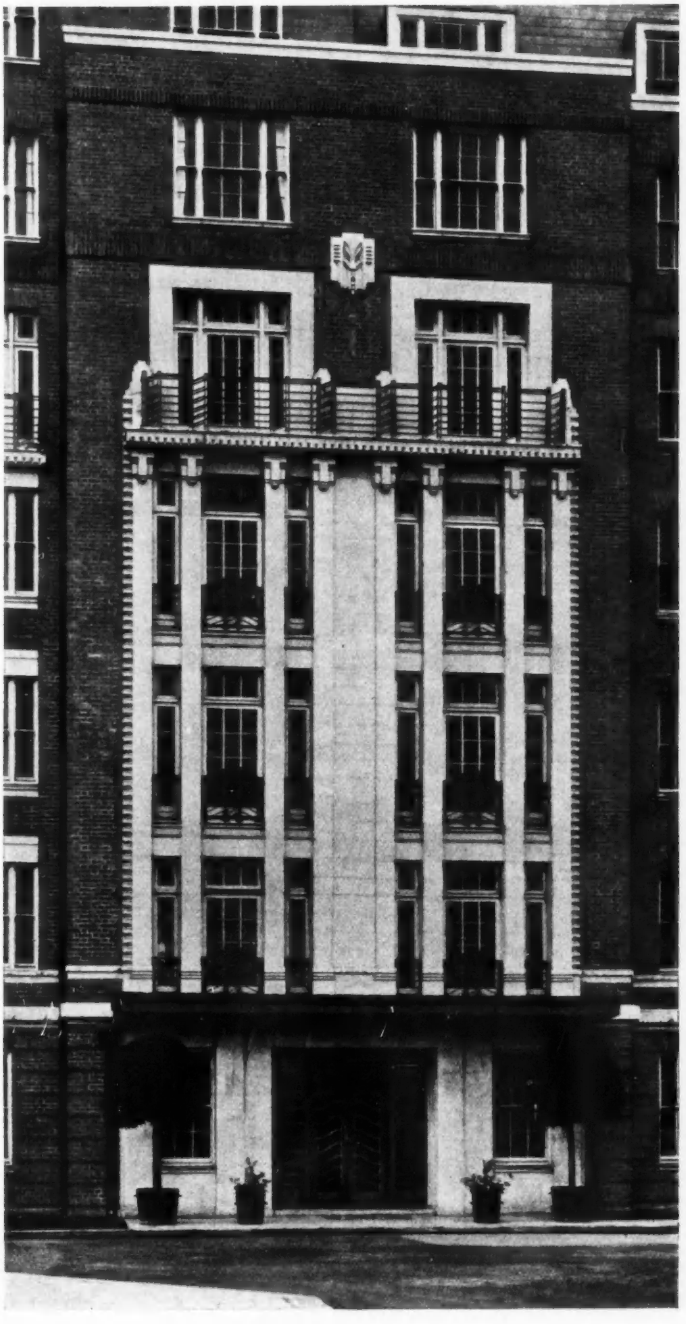
Competition Results

GUILDFORD CATHEDRAL

The following five architects have been selected by the Guildford Cathedral Committee to take part in the final competition for the proposed cathedral: Messrs. A. G. Crimp, Harold Gibbons, W. J. Palmer Jones, and Edward Maufe, all of London; and Thomas Worthington and Son, of Manchester. Each of the five competitors receives a premium of 500 guineas.

SCHOOL AT BURTON-ON-TRENT

The competition for the proposed new Council school, to be erected on a site in Clarence Road, Burton-on-Trent, has been adjudged by the assessor, Mr. H. T. Buckland, as follows: First premium (£150), Messrs. Home and Knight, of London; second premium (£100), Messrs, F. S. Antliff and Son, of Derby; third premium (£50), Messrs. Nicol and Nicol, of Birmingham. The winning designs will be illustrated in our next issue.



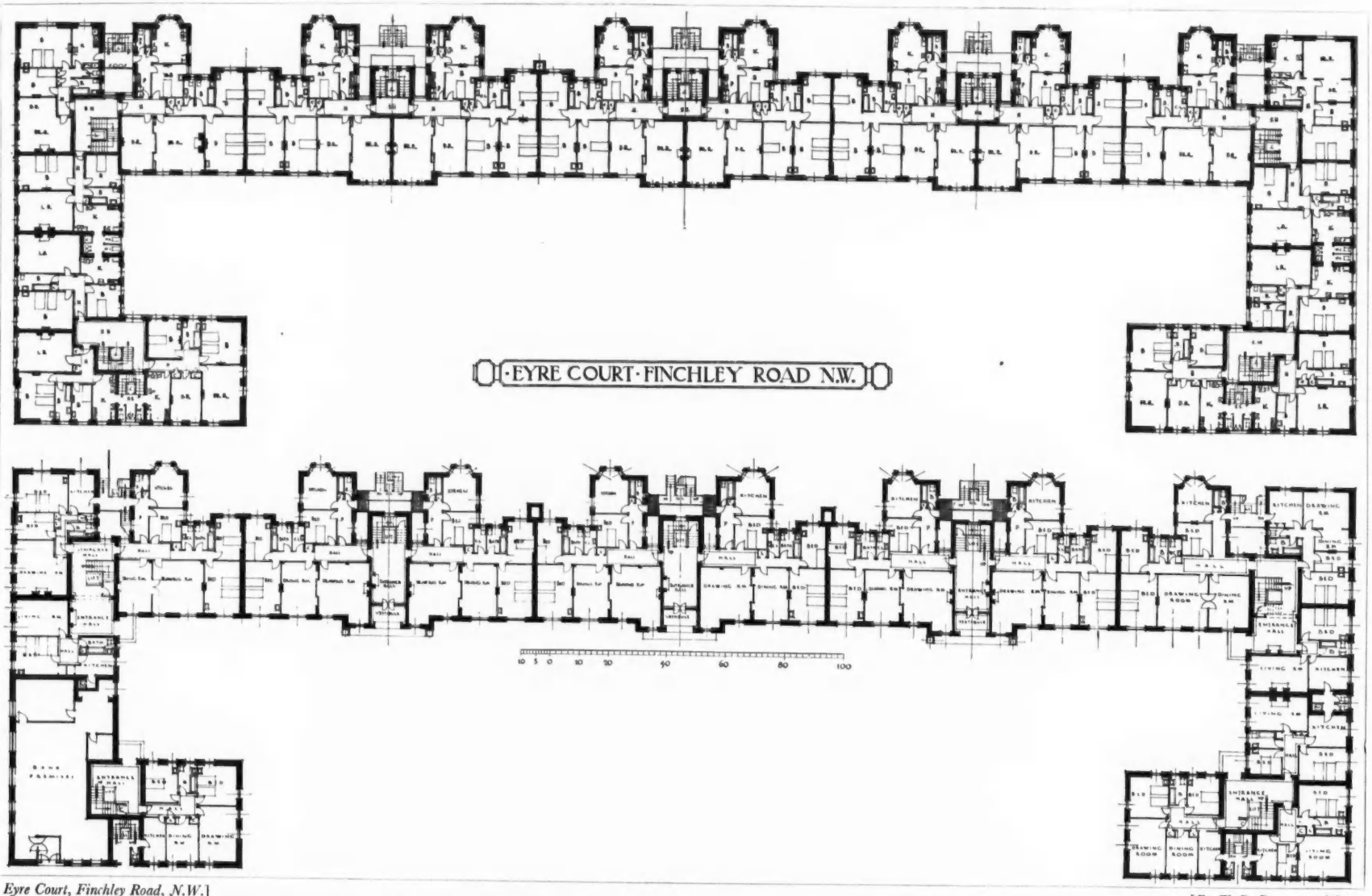
One of the main entrances from the forecourt to Finchley Road. There are three of this design on the principal façade. There are also four more entrances for tenants in the angles on the return elevation of the wings, treated with less prominence architecturally, but each of similar design. (See supplement presented with this issue.)

EYRE COURT, FINCHLEY ROAD, N.W.

DESIGNED BY T. P. BENNETT AND SON

THIS new block of residential and family flats stands on an island site, with the main front to Finchley Road, N.W. It is bounded by Grove End Road and Finchley Place on the left and right respectively, and by Waverley Place at the rear. The site is over two acres in extent, and is situated in a district where open spaces abound; within close proximity to Regent's Park and Lord's Cricket Ground, and within easy reach of the upper heights of Hampstead. There are seven types of flats, the accommodation varying from those containing one principal bedroom, one reception room, bathroom and kitchen, to those containing four bedrooms, two bathrooms, two reception rooms, pantry and kitchen.

Seven main entrances are provided for the tenants, all approached from the forecourt on the main front. Three of them are designed as prominent architectural features of the principal façade, the remaining four being disposed in angles on the return elevations of the wings, and treated in a less conspicuous manner. Each entrance leads to a hall, the floors of which, and incidentally the treads and



Eyre Court, Finchley Road, N.W.]

[*By T. P. Bennett and Son.*

Plans of the ground floor and a typical upper floor. Seven types of flats are provided, the accommodation varying from those containing one principal bedroom, one reception room, bathroom, and kitchen, to those with four bedrooms, two bathrooms, two reception rooms, pantry and kitchen. Each of the maid's bedrooms is planned so that it can be used by a member of the household in the event of no servant being employed. In the basement a box room is provided for each tenant, and in the top story are additional bedrooms for servants.

risers of the staircase, are of terrazzo, laid in squares and carpeted. In each entrance hall are an electric fire set in a fireplace of white marble with black veining, and a wood surround; and a passenger lift, with a cage in vermilion metal. Central heating is installed throughout in the two most expensive types of flats, and radiators centrally heated are provided in the halls of all the flats, thus avoiding extremes of temperature.

The fireplaces in every room in the flats (including the cooking stove in the kitchens) are adaptable to the use of gas, electricity or coal, to meet the individual requirements of each tenant. Constant hot water and an adequate number of cupboards are provided, and electric light and power are available at the extremely low rate of ¾d. per unit, whether the consumption is in respect of lighting, heating or cooking. Lavatory basins are installed in all the bedrooms.

The kitchens and domestic quarters are fitted throughout with every possible up-to-date equipment, including electric refrigerators and china and other cupboards, and in every flat are a servants' w.c., goods lift and dust-bins. The maid's bedroom has been specially planned so that it can be used by a member of the household in the case of a servant either not being employed or occupying a room in the additional servants' quarters in the roof. The bathrooms have rubber floors, white tiled dadoes with white enamelled walls above, and are fitted with a useful built-in cupboard. In the basement a box room, having its own electric light and key, is provided for the tenant of each flat.

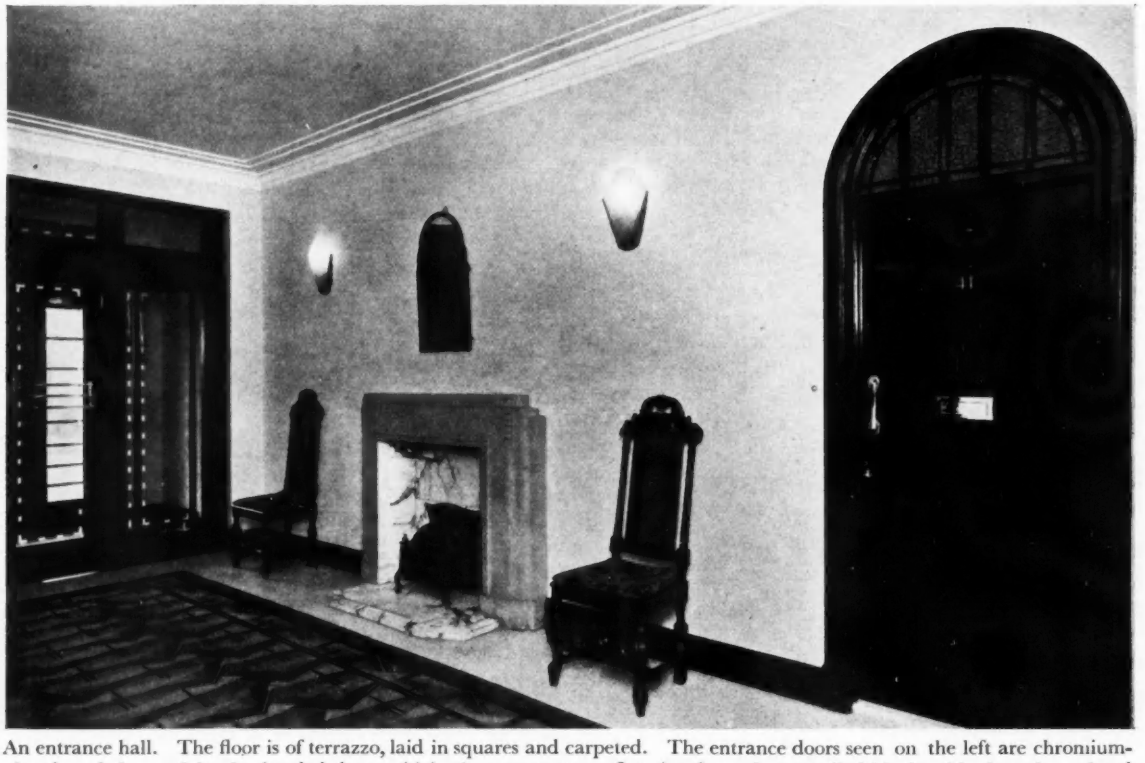
The elevations are faced with multi-coloured bricks, with quoins and string-courses in picked reds, a base of rusticated bricks and dressings of artificial stone. The roof is covered with green slates. On the principal elevations the windows are wood double hung sashes, at the rear metal casements are fitted. The canopies above the main entrance doorways and the balconies and railings to the windows are of wrought iron, painted green.

By deeply recessing the building on the site, quietude has been assured for the tenants, and direct light has been derived for all the rooms from open aspects. The rents vary from £225 to £495 per annum.



Eyre Court, Finchley Road, N.W.] [*By T. P. Bennett and Son.*

The Finchley Road front. All the residential flats (there are 126) have been specially planned by the architects to derive their light direct from open aspects. Quietude has been assured for the tenants by the deep recessing of the property on the site.



An entrance hall. The floor is of terrazzo, laid in squares and carpeted. The entrance doors seen on the left are chromium-plated, and the semicircular-headed door, which gives access to a flat, is of wood, enamelled black, with chromium-plated furniture and wrought-iron grille. The fireplace is of marble with a wood surround.



Eyre Court, Finchley Road, N.W.] [*By T. P. Bennett and Son.*

A drawing room. The floor is of oak and the walls are plastered. In the fireplace, like those in every room in the building, an electric, gas or coal fire can be installed to meet the individual requirement of the tenant.



Eyre Court, Finchley Road, N.W.] [*By T. P. Bennett and Son.*

One of the kitchens, showing the dresser, with electric refrigerator and cupboards below, and the table, which is fitted with an enamelled top, a cupboard and drawers. There are also a sink, coal chute, an electric or gas cooker, a food cupboard and fitments to accommodate brooms and buckets. The walls are painted and the floor is covered with linoleum.

NOW IS TO

A Comparison of Prices

THE beginning of a new year is a favourable period at which to review the present trend of prices in the building industry. It would be untrue to say that 1930 has been a boom year for the trade generally, though it is evident for all to see that a tremendous amount of work has been done in the London area. There have been no upheavals due to wage disputes, and there is confidence between employers and employed.

But the number of building and rebuilding schemes which have been projected and are now "hanging fire" is astonishing. We hear on every hand the remark: "I have got several good things coming along, but they are postponed for the present."

We wonder whether, when a client hesitates to proceed, sufficient emphasis has been laid upon the cheap prices of building now prevailing. The factor which determines more than any other whether a projected building scheme is to proceed or not is generally the answer given to the question: "How much is it going to cost?" We make bold to say that during no period since the war have conditions been more favourable.

Building today is cheap.

This we shall endeavour to show by a comparison between prices which ruled three years ago and those now obtaining. These low costs are largely due to the fact that the industry has at last got back to something like normal conditions both in the supply of labour and material.

We all remember the disturbance that was caused in the industry by the Government's efforts to tackle the housing shortage in the years following the war. Materials were scarce, wages high, and output slackened. Today there is an adequate supply of materials at keen competitive prices, and there is no question that, generally speaking, output is very nearly, if not quite, back to pre-war standards.

In the accompanying table we have given, in addition to those for the years we are considering, some approximate comparative prices ruling during 1914. We are well aware, of course, that it would be idle to anticipate even an approach to these prices, taken collectively, but we have given them in order to show that several commodities at any rate cost very little more today than they did in the year of the outbreak of the war.

WHAT READERS THINK

Below we print a first batch of numerous comments from prominent architects and others, inspired by Mr. Gerald Barry's article, "Building for Prosperity," published in our issue for January 7.

i: SIR FRANK BAINES

I THINK no reasonable person should question the thesis that, in lengthy periods of trade depression, building development would be an admirable form of activity in an attempt to counter the worst effects of a grave industrial "slump"; first, because building is quite definitely a home industry, and secondly, because its activity sends many and refreshing streams of orders through a number of contributory and subsidiary industries experiencing the general setback in orders.

As bearing upon the question, it is interesting to note that recently reference has been made to the fact that "real estate" values have not slumped appreciably, in spite of the world-wide depression which has so gravely prejudiced other investment values. To my own knowledge, certain "real estate" properties would hardly appear to have been affected by the general depression; this is interesting from two points of view: (a) as showing the

A COMPARATIVE TABLE OF

WAGES AND MATERIALS.		1927.	1930.	*1914.*
Mechanics' wages	Per Hr.	1/9½	1/8½	
Labourers' wages	„	1/4½	1/3½	
Transport :—				
Hire of 5-ton lorry and driver	„	7/6	6/–	
Ditto 3-ton	„	6/6	5/–	
Grey stone lime	Ton	57/–	48/6	
Blue lias lime	„	56/–	50/6	
Portland cement	„	58/6	46/–	*31/–*
Thames ballast	Y.C.	11/–	8/9	*5/6*
Building sand	„	13/–	10/6	*7/–*
Flettons	1,000	63/6	61/6	
Stocks, first quality	„	107/–	98/6	
Ditto, second quality	„	101/–	92/6	
Blue bricks, wirecuts	„	190/–	176/–	
Glazed bricks, first quality	„	485/–	425/–	
Red brick facings	„	160/–	151/–	
Breeze partition bricks, 3 in.	Y.S.	2/9	2/3	
Stone drain pipes, 4 in.	F.R.	1/1	1/1	
Iron drain pipes, 4 in.	„	3/3	2/3	
Portland stone	F.C.	4/6	4/6	
Bath stone	„	3/–	2/11	
York stone	„	6/9	6/9	
20 in. by 10 in. Welsh slates	1,000	540/–	405/–	
Machine-made roofing tiles	„	130/–	100/–	
Good carcassing timber	F.C.	2/9	2/6	
Joinery deals	as inch	F.S.	–/6½	–/5½
Austrian wainscot oak	do.	„	1/10	1/8
Honduras mahogany	do.	„	1/10	1/8
Teak	do.	„	1/9	1/7
1 in. deal flooring	Sqr.	29/–	26/–	
Rolled steel joists	basis	Cwt.	12/6	9/6	*8/6*
Mild steel reinforcing rods	do.	„	13/3	9/–	*8/9*
4 in. cast-iron rain-water pipes	F.R.	1/3	–/10	*–/10*

THE TIME BUILD!

Three Years Ago and Today

Comparing the figures of the wages and materials of three years ago, and the relative approximate prices of today, we find that wages of mechanics are down by 5 per cent., and those of labourers by 6 per cent. Transport is cheaper now than it has been at any time since the war. Limes and cements have fallen appreciably in price, and it is very seldom that we notice foreign cement being used in London today. The Fletton industry also appears to have captured practically the whole of the London market for common building bricks, especially for work above ground, and the quality is such that considerable quantities are also being used for foundations.

The output of this rationalized combine has now reached the astonishing figure of 1,000,000,000 bricks per annum, and since 1927 they have reduced their price by 3 per cent., or 2s. per 1,000. Stock bricks, both first and second qualities, show even a much greater fall in price.

Portland stone for building purposes is still very much in demand, especially in London, for the larger types of buildings, and is one of the very few units of building materials which has shown no decrease in price.

Timber is cheaper by approximately 10 per cent. Empire-grown woods are now being used more frequently, and we have no doubt that, if a sufficient demand for these woods is forthcoming, lower prices than those now being quoted will be obtained.

The biggest fall of all, of course, is in the iron and steel trades generally, although they do not show the greatest fall from three years ago to today. But this is the one industry which, owing to many causes, sells its products at very little above pre-war levels. In fact, in the case of mild steel reinforcing rods, they are in some instances quoted at prices as cheap today as in 1914.

Lead is now exceptionally cheap, and seems likely to hold its own against copper for use in pipes for some time yet.

We feel confident that these few figures are encouraging to those who contemplate building in the near future, and will go far at any rate to justify our claim that "Building today is cheap."

APPROXIMATE AVERAGE PRICES

	Per	1927.	1930.	*1914.*
WAGES AND MATERIALS.				
4 in. cast-iron half-round gutters	F.R.	–/7	–/6	*–/5*
Sheet lead	Cwt.	44/6	24/–	*21/–*
4 in. cast-iron L.C.C. soil pipe	F.R.	1/8	1/3	*1/–*
Keene's cement	,,	115/–	115/–	*95/–*
21 oz. sheet glass	F.S.	–/5	–/3½	*–/2*
¼ in. polished plate glass n/e 4 ft. 0 in.	,,	3/2	2/6	*1/6*
Linseed oil	Gal.	3/7	3/3	*3/–*
Ready mixed paints	,,	15/6	13/6	*7/9*
Copal varnish	,,	18/–	13/–	*13/–*
MEASURED WORKS.				
Dig and cart n/e 5 ft. 0 in. deep and c.a.	Y.C.	12/6	10/–	
Portland cement concrete in foundations	,,	38/–	33/6	
Stoneware drains laid complete, 4 ins.	,,	1/9	1/8	
Cast-iron drains laid complete, 4 ins.	,,	6/6	5/6	
Fletton brickwork in cement	Rod	720/–	680/–	
Slate dampcourse	F.S.	1/–	1/–	
Portland stone fixed complete	F.C.	21/6	21/6	
Bath stone fixed complete	,,	15/6	15/6	
Welsh countess slating	Sqr.	87/6	85/–	
Machine-made roof tiling	,,	97/–	—	
Centering to concrete floors	,,	57/6	52/–	
Fir fixed in wall plates	F.C.	5/9	5/–	
Fir framed in floors	,,	6/9	6/9	
Ditto in roofs	,,	8/6	8/3	
2 in. deal four-panel sq. framed doors	F.S.	3/6	3/6	
Rolled steel joists, fixed	Cwt.	18/–	17/–	*14/6*
Rod reinforcing bars, fixed	,,	22/–	20/–	*20/–*
Milled lead and labour in flats, etc.	,,	72/6	40/6	*30/6*
1 in. lead service pipe and fixing	F.R.	3/3	2/2	*1/6*
Render, float and set in lime and hair	Y.S.	3/–	3/–	*1/8*
21 oz. sheet glass and glazing	F.S.	–/11	–/8	
Whiten ceilings	Y.S.	–/8	–/8	
Twice distemper walls	,,	1/–	1/–	

fundamental faith of the public in the future of the country, and (b) as illustrating the opinion held, even subconsciously, that these unpleasant and disturbing effects of the slump, experienced practically in every country of the world today, are really temporary, and do not imply organic disease in the economic structure of the nation as a whole.

It would be interesting to ascertain, if that were possible, to what extent the value of that portion of national wealth, consisting of real estate and property in buildings, has depreciated, if at all. Sir Josiah Stamp recently estimated the national value of real property in buildings for the year 1928 at four thousand five hundred millions sterling, plus nine hundred millions for the value of Government and local property, giving a total of five thousand four hundred millions sterling for the whole of the country. If this great block of real wealth has not, in fact, depreciated materially—as a repercussion of the world depression—it would indeed give reason for a strong and hopeful outlook upon the future and do much to dissipate the prevailing pessimism and gloom.

Building development, however, requires fluid capital or credit; and business generally at the moment is, I surmise, not too well provided with fluid capital, particularly as it would hardly propose to realize its holdings in the present state of the share markets



[*By Walter Taylor.*

A perspective sketch of Sir Frank Baines's design for Thames House, Millbank, S.W., now arising in close proximity to Imperial Chemical House.

of the world. Granted, therefore, that building development is called for as a good economic measure in a period of extensive depression, where is the capital or credit to be found for that development? A ready answer would perhaps be, the banks and great assurance corporations, which today are probably uncomfortably gorged with vast reserves of fluid wealth available for reasonable and safe investment, owing to an increase in deposits and money withheld by the cautious from normal investment.

As to the business side of the proposition, it would be easy to find one more qualified to speak of this than I; but my feeling is that, as one of the heavy charges on development is the interest charge on the capital involved, this could be very largely counterbalanced by the great savings to be made if building development was undertaken on a large scale during periods of depression and low prices.

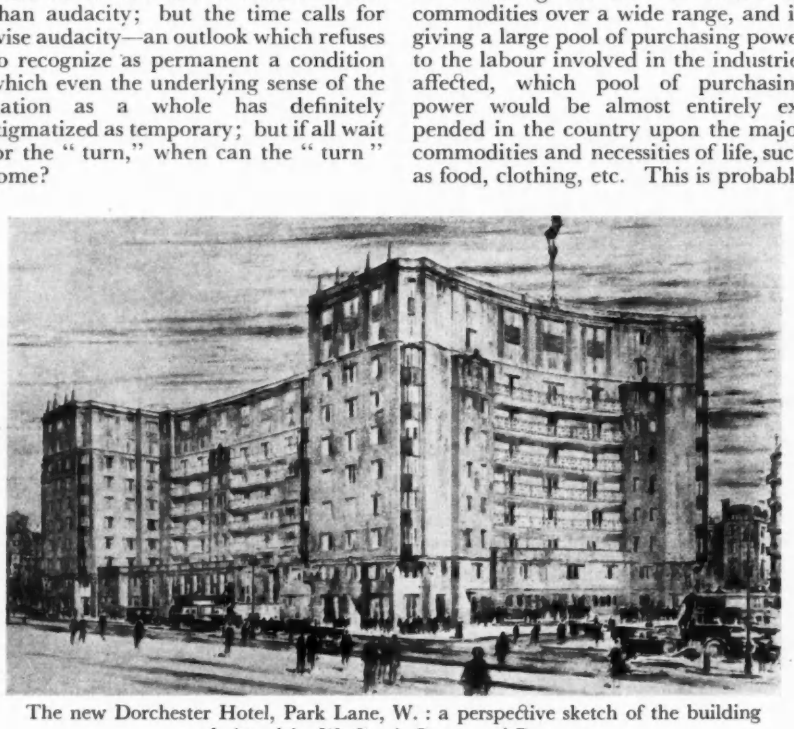
Materials are now at a very low figure of cost, and could hardly be a more moderate charge for all forms of building and construction. Contractors of all classes and kinds are cutting their "overheads," reducing to the minimum the essential return on their capital—even, perhaps, working with the aim of keeping their establishments in being, without loss, maybe, but certainly without much profit. This general position in the vast building industry of this country must have an enormous repercussion in the reduction of the capital costs of building which, in time, must very beneficially affect the return on capital invested in building development in the immediate future.

From my own experience, I am prepared to say that building costs today are as low as they have been for a decade or more, and finance would, I think, be well advised to take cognizance of this position in the utilization of capital for rational schemes of building development, for the general improvement and rationalization of commerce and industry, for the improvement in the standard and amenity of our country's buildings and accommodation generally, and for the improvement of our traffic routes. If this were to be coupled with a sane revision of our restrictive building regulations, the results would be of national importance. Inevitably, those who control fluid capital and the great financial resources and credit of the country must err on the side of caution rather than audacity; but the time calls for wise audacity—an outlook which refuses to recognize as permanent a condition which even the underlying sense of the nation as a whole has definitely stigmatized as temporary; but if all wait for the "turn," when can the "turn" come?

In the past, the building and structural industries generally have been the last to feel the "slump," mainly because their programmes of work, designed and put in hand well ahead, before the worst effects of an oncoming industrial depression have manifested themselves, must proceed to completion; it being more economical to finish a scheme, even in a period of depression and financial stringency, than to stop halfway, with a proportion of capital involved, not in a position to become an active earning asset.

As a concomitant of this, the building and structural industries are the last to feel the return of better conditions after a "slump"; for redevelopment and the prosecution of large schemes of rebuilding are rarely put in hand until those promoting them feel some assurance that the revival of trade is definite and certain of continuance. The result of this, therefore, is that building often recommences when prices have risen, and this economic factor is the cause of high costs of building development, which constitute a definite charge on industry generally.

If some organized system could be devised by which redevelopment could take place in some direct ratio to the unemployment problem and the industrial "slump," the benefit of this would not only be reflected in the reduced charges to trade and industry generally, but would also be beneficial in promoting confidence, in lessening the depth of the wave of depression, in increasing the flow of orders for commodities over a wide range, and in giving a large pool of purchasing power to the labour involved in the industries affected, which pool of purchasing power would be almost entirely expended in the country upon the major commodities and necessities of life, such as food, clothing, etc. This is probably

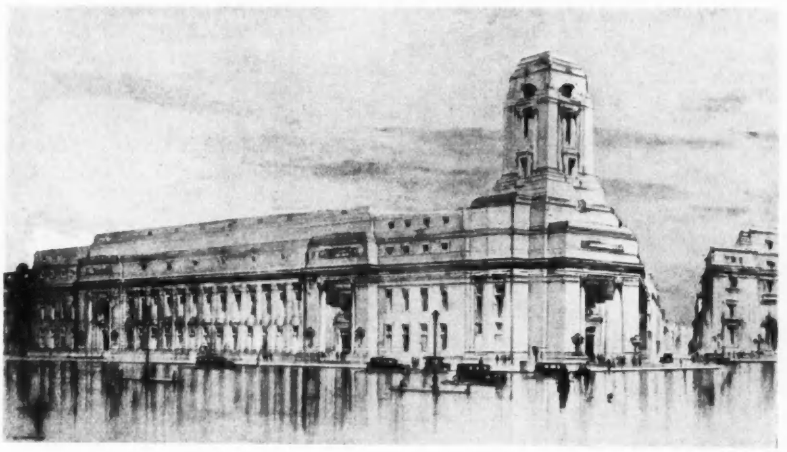


The new Dorchester Hotel, Park Lane, W. : a perspective sketch of the building designed by W. Curtis Green and Partners.

truer of the building industry than almost any other, as it is the second largest industry after agriculture, and the repercussion of its full employment would be felt over a wide area.

As to the details of the problem, namely, the specific works which could be put in hand, there is little need to consider the preparation of a schedule. We have just recently seen the report of the Traffic Commission, in which a statement is made that our streets and town developments should be made to fit our traffic, and not the traffic to fit the medieval layout of our towns. If action is to be taken to remedy this, there is indeed sufficient development in front of us to begin a new era of industrial prosperity throughout the country.

After paying for our vast imports of food and other necessities, etc., by investment abroad—crushingly vast for our agriculture, for instance — our national credit should begin at home; the development of our own country should be a first charge upon the financial and credit resources of our people.



[*By P. D. Hepworth.*

The new Masonic Peace Memorial building, Great Queen Street, Kingsway, W.C., designed by H. V. Ashley and Winton Newman.

ii : ARTHUR J. DAVIS

There is no doubt that an intelligent and broad policy in all matters concerning the building trade is long overdue, and that the present period of depression is the time in which our rulers should revise our antiquated building laws and regulations and encourage owners and clients to undertake the vast amount of reconstruction work which sooner or later will have to be executed.

A revision of the Building Act, a document incomprehensible to all outside the legal profession, is at the present time under consideration, but the no less important question of ancient lights is still a spoke in the wheel of building progress. Surely it is now time to take stock of modern conditions and requirements.

The law of ancient lights enforced today is a premium on blackmail and sharp practice. It only serves to hamper all those who desire to improve and beautify our cities. I know it will be argued that vested interests must be protected at all costs, but such laws do not exist abroad, and it is only in England that a neighbour has the power to control buildings opposite his premises, which right should be the sole prerogative of city authorities, who could deal with this matter by adequate zoning regulations.

As matters stand today, it is impossible for an architect to give his clients anything like a correct estimate of the possibilities of a site which may be controlled by neighbours, all anxious to prevent rebuilding and to extort compensation.

Before anything can be done, negotiations must be opened with the freeholders, tenants and sub-tenants of each of these neighbouring properties, and it is therefore often impossible to inform a client as to the cubic capacity of a building and of the revenue that it would produce. It often happens that considerable time is wasted and the cost of building increased by heavy compensation and legal fees with the result that, unless a client is compelled to rebuild, he refuses to face these impositions and abandons the proposal altogether.

In all commercial buildings there must be some comparison between the cost of the land and the structure, and of the revenue to be obtained therefrom. In many cases the profit is estimated on such a narrow margin that any unnecessary increase of the cost reduces the revenue to such an extent as to make the whole project commercially unsound.

There are many ways in which a revival of the building trade could be encouraged, but in my opinion no great progress can be made until our building regulations are simplified and the law concerning ancient lights amended.



Broadcasting House, Great Portland Street, W., the new headquarters of the B.B.C., designed by Val Myer and Watson-Hart.

iii : R. WYNN OWEN

Referring to Mr. Gerald Barry's eminently thought-inspiring article on the above subject in your issue of January 7, architecture is the calligraphy by means of which humanity writes its history upon the face of the earth, and the great flood of building and reconstruction which we have witnessed during the last decade is the record of a phenomenon which emerged during the war and the years immediately subsequent thereto, when

our whole scale of values was in a state of chaos in the process of gradually readjusting itself after the upheaval, which had entirely upset its balance and necessitated its complete revision.

Concurrently with a prolonged period of industrial depression, with its resultant shrinkage of exports, unemployment and poverty, we have seen a remarkable increase in building and reconstruction, which for the most part represents in material form the excess profits extorted by certain elements from the general public during a period of national distress and distraction.

These buildings will ever remain a monument to that extraordinary phenomenon—human avidity.

When the historian and the archæologian of the future compare their findings, the psychology of these years will indeed present itself as an impenetrable enigma.

Unlike Mr. Gerald Barry, I consider that this great activity in building holds no portent for the future but merely reflects the distorted mentality of the present, and is, as I have said, the architectural record of the history of the period through which we are passing.

Taking a more comprehensive view of the present situation, I feel that, if we have not actually attained thereto, we are rapidly approaching the position into which Rome unconsciously must have lapsed during, say, the fifty years preceding its withdrawal from these shores.

In fact, whether one contemplates the situation in the outlying parts or the heart of our Empire, it is impossible to conclude that all is well—and yet with inevitable certainty we continue to write our history upon the face of the earth in the calligraphy of architecture.

Just at present as a nation we are in the position of a sick man existing upon his own reserve of strength and awaiting the passing of a crisis, which may either mean extinction, future existence as an invalid, or the dawn of a new era of activity.

The nation which builds for Posterity demonstrates its faith in its own permanence; but when it begins to persuade itself that it builds for Prosperity, in the sense in which the term is employed by Mr. Barry, it evinces the symptoms of a deranged psychological outlook which, if unchecked, can but result in disintegration and ultimate decay.

I join with Mr. Gerald Barry in an apology for the sermon-like nature of this letter, but I agree with him "that at this moment perhaps a sermon is not entirely out of place."



The main elevation of Unilever House, Victoria Embankment, E.C., designed by Sir John Burnet and Partners (J. Lomax Simpson, consultant architect), to occupy the site of the lately-demolished De Keyser's Hotel.

iv: THE LATE FREDERIC COLEMAN

During the year 1930 more than one British industry has, through more than one medium of public expression, voiced its individual troubles. So much has been said and printed which savoured of despair, it is not surprising that a general malady of psychological depression has spread widely. People have heard so much of the discouragement and hopelessness of others, that they have themselves been infected with the germs of downheartedness, discontent and apprehension. This has taken place even in departments of activity in which conditions do not justify such feeling.

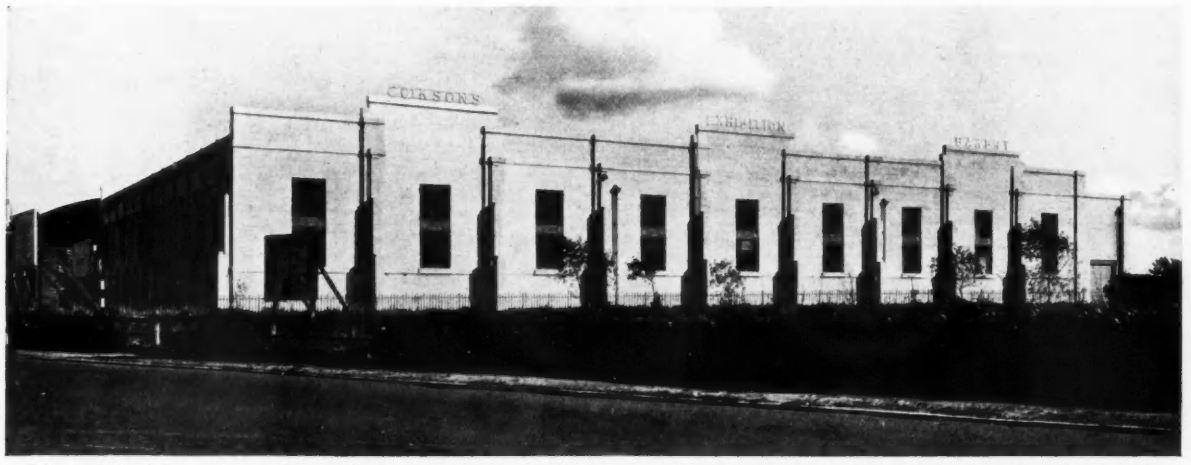
Most readers of THE ARCHITECTS' JOURNAL are vitally interested in the activities of those concerned with and engaged in building construction and its ramifications. The first conclusion to which we are brought by careful and painstaking investigation of the conditions with which we are faced is that, whatever may be the present or the prospective future of other industries, the British building industry is in a state that can by no means be considered unhealthy. Structures raised by men's hands have "lives," as have men themselves. Constructional work must proceed in degree, or greater future expense than that involved in building be inevitably faced some day.

There exist without question resources of much greater volume than the pessimists imagine. One may face the cheery, as well as the doleful, aspects of these days of widespread slowing-down all round the world of excess expenditure. As Mr. Barry suggests, we might well, keenly and with enthusiasm, seek to better the general depression, augmented by the psychological "dumps" into which too many of our fellows have allowed themselves to drift, by putting forth renewed effort. That is undeniably the road which will lead to betterment of it. Now is the time to press on, to seek new avenues of activity. If those there be among us who seem to be sitting in their tents and listening to the troubles of those engaged in less favoured industries, it is certainly wise to remind them that inaction is neither helpful nor constructive.

[*The above letter was among the last to be written by Mr. Coleman, whose sudden death is recorded on page 150.*—ED. A.J.]

v: MAJOR HARRY BARNES

I have read with much interest Mr. Barry's article. This, undoubtedly, is the time to build; when things are booming no one wants to be hampered by lack of proper premises or burdened by having to provide them at a time when trade is brisk.



The aspect of the main north-west front, presented to the Preston Road, as seen from the Promenade at Lytham St. Anne's.

A MODEL BAKERY AT LYTHAM

DESIGNED BY BARKER CRABTREE

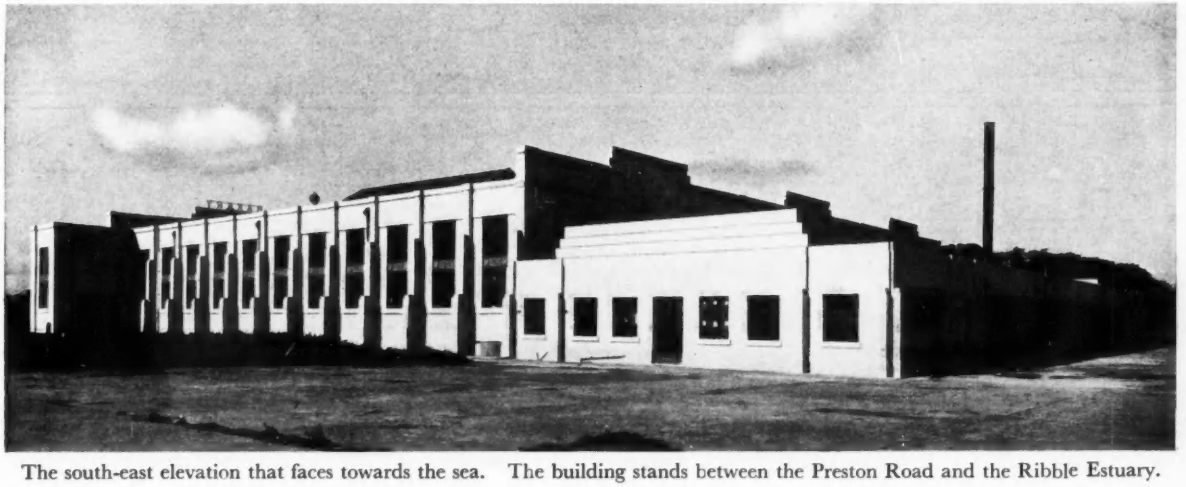
COOKSON'S Exhibition Bakery, Lytham St. Anne's, Lancashire, represents the transformation of a building erected for military purposes during the war to meet modern industrial needs—to wit, those of a bread factory. Anything more unpromising than a derelict sea-plane shed it would be difficult to imagine, there being no connection whatever between the two uses, unless that (may the pleasantry be pardoned!) it is essential for both aeroplanes and bread to rise. What happened was that a firm long established in Preston outgrew its strictly urban surroundings and, with an eye on a couple of buildings standing on the shore of the Ribble estuary, determined to remove into one of them.

Much of the original fabric was found to be quite sound, and the walls, floors and roofs have been retained and clothed with modern materials, and the vast space suitably subdivided. Thus, the original walling has been lined internally with coloured glazed bricks and faced externally with white concrete that, from a little distance, gives the effect of Portland stone. The floors throughout are of concrete, and those in the bakery have been tiled, mostly with quarry tiles, but in the case of the mixing-room, which is subject to heavy traffic, with steel-clad tiles. The steel roof principals are carried on reinforced concrete stanchions. The roof is boarded and covered with two layers of waterproof roofing material; and patent glazing is employed for the roof lights. Many steel partitions, the majority of which are glazed, have been erected on light stanchions in the interior.

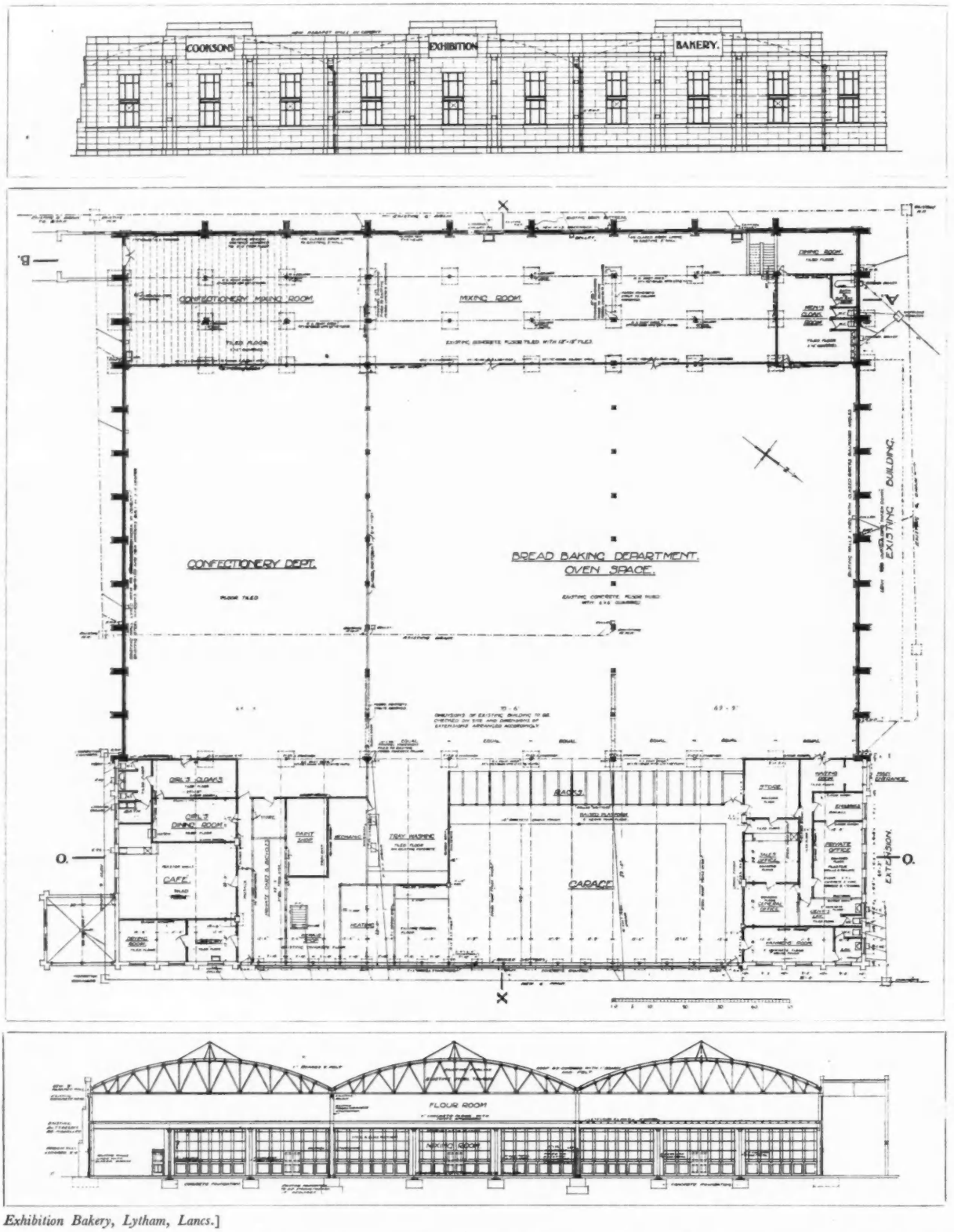
A study of the plans will disclose that a new suspended concrete floor has been carried across one end of the building for flour storage. The sacks of flour are raised by means of a continuous electric elevator, which picks them up from the lorry and stacks them on a small round platform. This platform, when filled, is conveyed to the desired part of the room by means of a pneumatic jack truck.

This is only one instance of the installation of modern plant especially designed for the purpose of making bread in its many varieties. For instance, two large continuous-travel ovens have been installed, one entirely devoted to the baking of tin loaves. Then there is a large mixing plant which not only blends different kinds of flour, but weighs out the ingredients for the dough; and, after the bread is baked, there is other machinery for cooling and wrapping the loaves.

The heating system is particularly interesting, and depends on the circulation of filtered warmed air around the rooms by electrically-controlled units operated by thermostats.

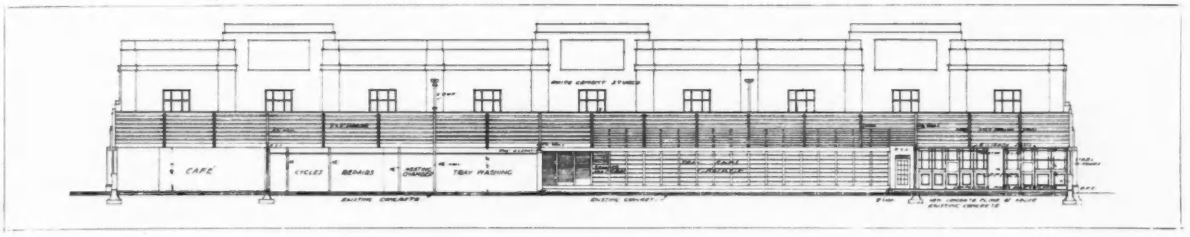


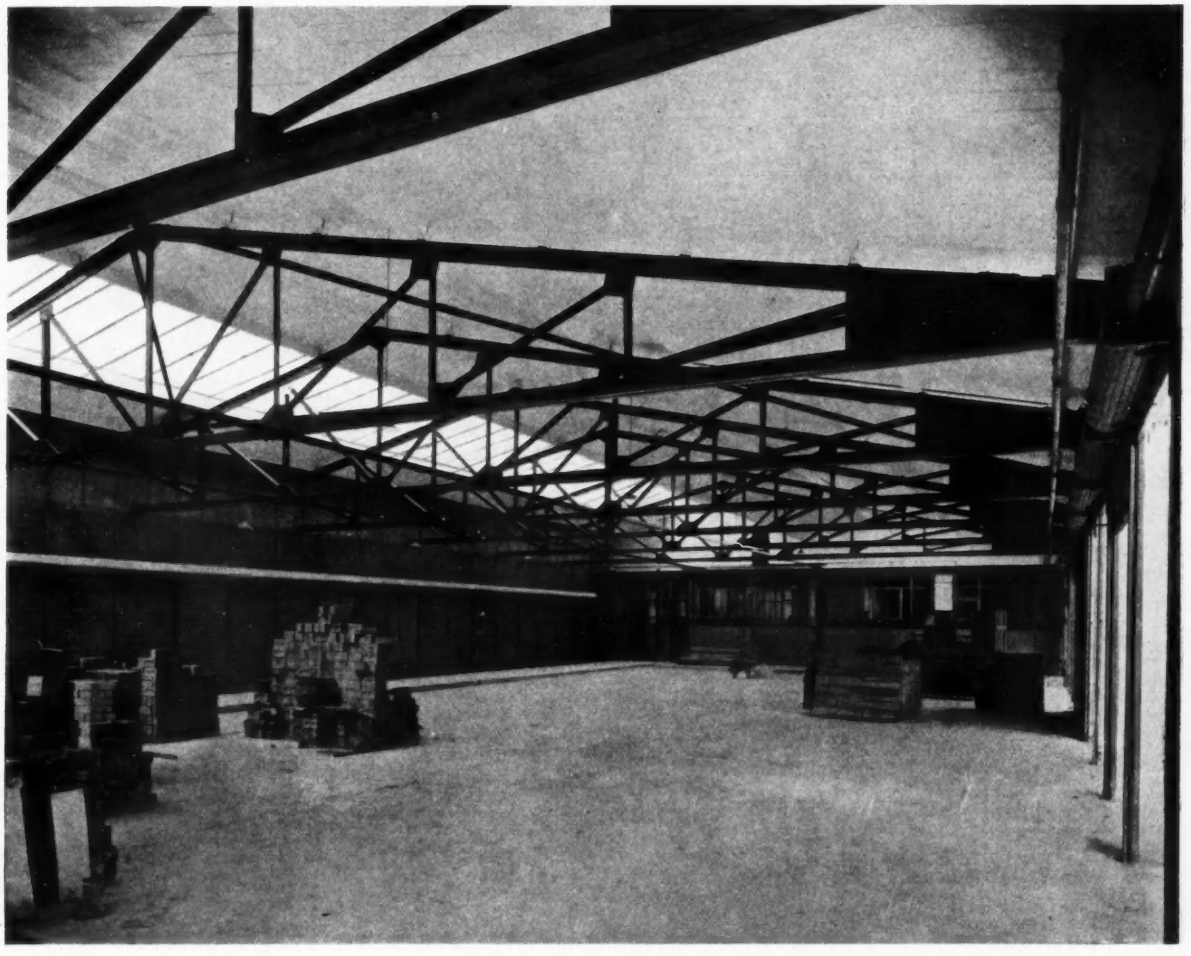
The south-east elevation that faces towards the sea. The building stands between the Preston Road and the Ribble Estuary.

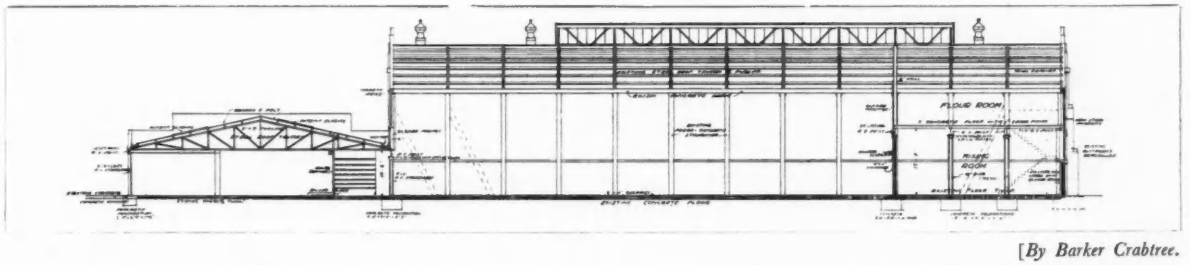


Exhibition Bakery, Lytham, Lancs.]

The architect's drawings of the main elevation; ground plan; and section on the line A—B, all reproduced to the same scale. The shell of the building is a relic of the war, being one of two sheds then erected to accommodate flying boats. The old brick walls and buttresses, floor and steel roof remain, but the walls have been lined, internally, with glazed bricks, and given the external skin of white concrete shown in the photographs. Steel and glass partitions divide up the interior, and a thermostatically controlled hot-air heating system, served by an oil-fired boiler, has been installed.

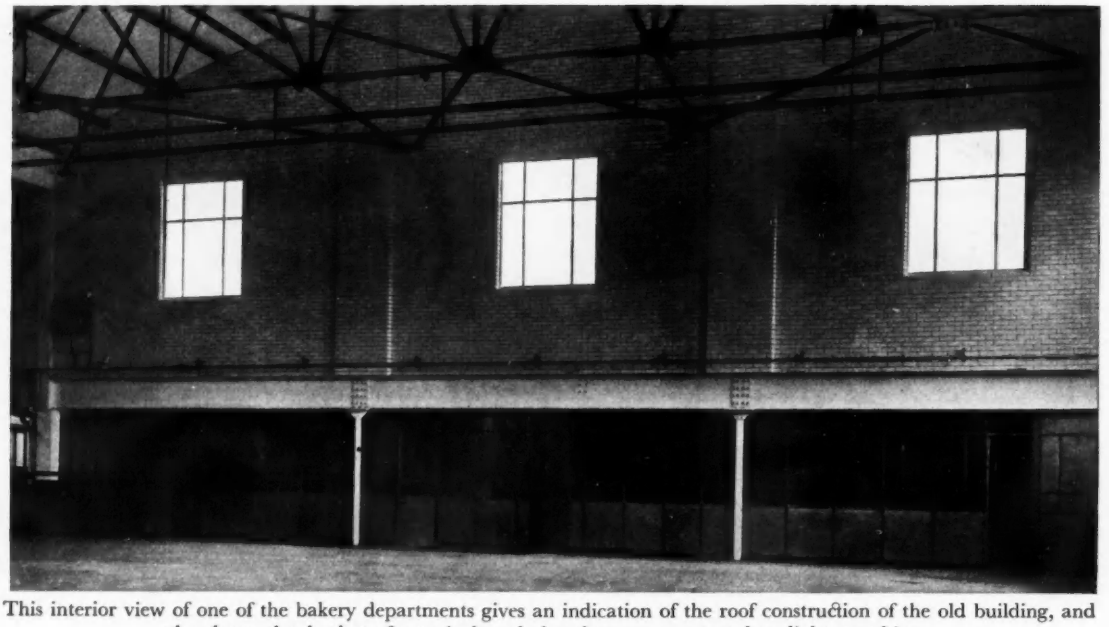




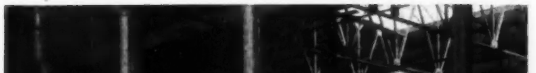


[*By Barker Crabtree.*

The section on the line O—O; a photograph in the garage portion of the building; and the section on the line X—X. The sections are to the same scale as the drawings reproduced on the facing page. The view of the garage (which was taken before it was put into service) shows, on the left, the steel roller shutters behind which loaves of bread, ready wrapped, are placed in tiers of racks, preparatory to loading on to the vehicles, and also one of the screens of glass and steel, cellulose-sprayed, of which extensive use is made for subdividing the interior of the bakery.



This interior view of one of the bakery departments gives an indication of the roof construction of the old building, and also shows clearly that of a typical steel glazed screen, supported on light stanchions.



The tin-loaf bread oven : the tins circulate through it continually, and empty themselves.



Another travelling oven, adapted for more general use : large and small loaves, rolls, buns, etc.

Exhibition Bakery, Lytham, Lancs.] [*By Barker Crabtree.*

A steel partition in the operatives' café. The floors generally are of 6-in. by 6-in. quarry tiles, but in the mixing-room steel-clad tiles are laid to withstand the heavy traffic of trollies and other conveying machinery.

LETTERS FROM READERS

The Architecture of Steel

SIR,—Having read with interest your editorial comment on Steel, and your article in the last issue entitled "the Architecture of Steel," I arrived at the conclusion that both were prompted rather more by the desire to stimulate controversy than to reflect the actual position.

To contribute briefly our conception of the position you so obviously overstate, I must say, generally speaking, that the steel designer is only too anxious to co-operate with the architect, and, indeed, it is one of the principal aims of the industry in the formation of this Association to promote these mutual interests and to render service to the fullest extent.

That minor difficulties may have occasionally arisen in the past is not perhaps to be disputed, but when one considers how rapid has been the development of modern building science, one is bound to recognize that difficulties must arise in the transitional phase—a phase in which the architect has had to adjust himself to a new technique and the structural engineer to the trend of architectural design.

Now, there is no structural problem with which the steelwork engineer cannot cope, and in making use of the materials at his disposal he is in no whit less skilled than his opposite numbers in the fields of naval architecture and bridge building. Steel structures can be designed to meet every requirement of the architect in respect of the manner in which he wishes to utilize his space, as is readily seen from the everyday solution of the divergent problems which cinema and theatre construction provide on the one hand and large retail stores, hotels and banks on the other.

It is true that official regulations are often an impediment to free design, but the architect is only too painfully aware of this from his own experience, and recognizes such limitations. His appreciation of these limitations, I feel sure, is not in excess of his appreciation of the activity of the steel industry and its wholehearted co-operation with the architectural and building professions in pressing for a revision of the building regulations.

The steel industry recognizes that without a sensible and solid co-operation, directed to press every economy into service, the vast potential field which lies before architecture in steel will remain stultified. We live in a world of change and mobility which has fashioned new standards of effort, new standards of design and new standards of building economics. In this the industry is prepared to play its part, sympathetically, hopefully, and in co-operation with all branches of the building profession.

C. J. KAVANAGH
(Director, the British Steelwork Association).

Architects' Registration Bill

SIR,—I have been reluctant to express any personal opinion on the above subject, in view of the number of Members who might write with more skill and greater authority, but as I regard the Bill as entirely unsatisfactory, I cannot remain quiescent, especially as time has failed to produce any statement to modify my opinion. It is true that the Council has a mandate from the majority of Members to prepare a Registration Bill, but it is implied that nothing perilous or derogatory to architecture should be done. The Bill as presented to the House of Commons will, I submit, give statutory power and qualification to many who treat architecture as secondary and supplementary to business, and who do not profess to have the same ideals and aspirations as ourselves.

It appears that there are to be no less than eleven bodies included in the Admission Committee besides the representatives appointed by the Institute. Of these eleven bodies, three are designated engineers, one, estate agent, one, land agent, three, architects and surveyors, and last, but not least, three, auctioneers with the supplementary appellations — estate agents, landed property agents, house agents, rating surveyors and valuers.

Members of the Institute have already been induced to make the most generous concessions gratuitously to architectural practitioners unqualified by examination; now they are asked to permanently establish and share the control of architectural practice with some of the very elements which were a most serious menace to legitimate architectural practice, and this, *con amore*. In fact, the Institute is not even to have a majority of representatives upon the Admission Committee.

Successive charters since 1837 have declared that we are associated "for the general advancement of civil architecture and for promoting and facilitating the acquirement of the knowledge of the various arts and sciences connected therewith." I would ask those who advise Members of the R.I.B.A. to exercise their influence in support of this Bill and to designate themselves as registered architects, if they conscientiously believe they are true to the birthright they have inherited.

Registration as now presented to us seems to be the product of a disordered and undisciplined epoch still suffering from the aftermath of a dreadful war. In my view the Bill is materialistic in origin and design, and at variance with our traditions. Should it become law, I fear grievous disappointment will inevitably ensue, leading to discontent and ultimate disruption.

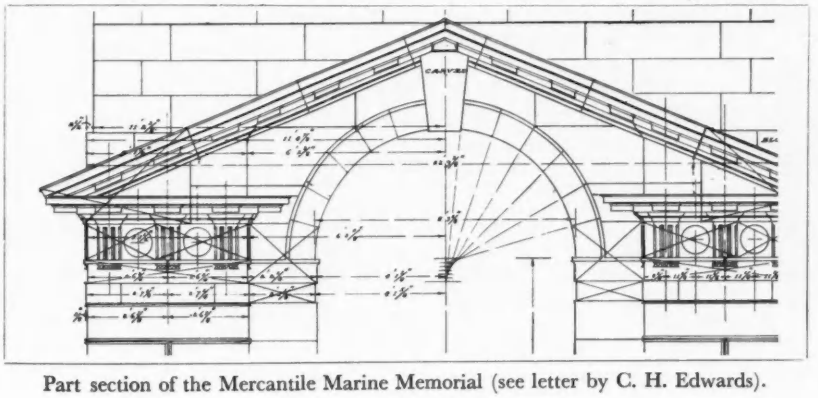
I have been trained to regard architecture as a noble vocation, calling for sacrifice to ideals. The intrusion of business organizations as proposed seems to me to be incongruous and unwarrantable. In my opinion, conjunction with the mixed assembly advocated by our Council is inconsistent and prejudicial to the supreme position we now hold under Royal patronage.

HERBERT WIGGLESWORTH

The Marine Memorial

SIR,—When a thing is beautiful it should have nothing to mar its beauty, not even in details; to wit, the dropping the centres for arch joints from springer to key (see drawing) is faulty construction, and is ugly and mentally hurtful. This is on a par with Sir Christopher Wren's arch, Temple Bar, where the joints do not radiate on to a tangential line. We have an example of this in Capetown, and the effect is hideous—each voussoir has the appearance of having slipped down. Let's hope this sort of thing is not to become "fashionable."

C. H. EDWARDS (*Cape Town*)



Part section of the Mercantile Marine Memorial (see letter by C. H. Edwards).

Better Building Methods

SIR,—Sir Clement Hindley, Chairman of the Steel Structures Committee, speaking at the recent dinner of the Institute of Structural Engineers, made some statements which should not be allowed to pass without some comment.

He tells us to free ourselves from the trammels of old tradition and generally adopt American methods of design and construction.

Higher wages and the economic factor may be important, but what is in danger of being overlooked is that the farther we get away from tradition and craftsmanship, the less enjoyment the worker gets out of his work. This is largely the cause of the present world-wide unrest and unhappiness.

Engineers should look to their own department of bridge building, and see if they cannot improve the design of these before they question the architect's ability to design modern buildings.

X. X.

[*Sir Clement Hindley's speech is reported on page 149 of this issue.*—ED. A.J.]

Expiration of Lease

SIR,—Any tenant who acts in the childish manner suggested by "Perplexed" in the December 17 issue of the JOURNAL, puts himself entirely in the wrong. Presumably he has covenanted to "leave the premises in good and tenantable repair" and has received from the landlord's agents a specification of dilapidations upon which he has obtained an estimate for the redecorations.

If he disputes the justness of this specification, the tenant can appoint a surveyor to draw up another specification and come to an agreement with the other party. There is, therefore, no justification in the proposal to paint the woodwork black or any colour but that existing, without mentioning the proposed change to the landlord, and such procedure would lay the tenant open, in my opinion, to an action for malicious damages in the Courts, in which the landlord would have no difficulty in obtaining a verdict with substantial damages.

But is one fair in including this peevish-minded tenant among the male sex? Perhaps she is a woman, an acid spinster of uncertain age-temper; in this eventuality the landlord had better be thankful it is only his paint she proposes to blacken!

L. E. WILLIAMS

[*The whole of the correspondence arising out of "Perplexed's" letter in the December 17 issue of the* JOURNAL *was submitted to our legal expert, who has sent us the following reply.*]

SIR,—I have read the correspondence in connection with the above matter with considerable interest.

It is of importance in dealing with the construction of a covenant in a lease to consider the exact words of the covenant, and moreover to consider the lease as a whole.

In my opinion it is impossible, in the absence of perusing the lease, for anyone to express a definite opinion.

Assuming that "Perplexed" has made an accurate précis of the lease, in my view a tenant would not be entitled to paint the woodwork any colour he chooses, as his obligation is to leave the house in a proper (tenantable) *condition.*

If the words of the covenant were to leave in "good tenantable *repair,*" which is the usual form, then it is suggested that the obligation of the tenant is to leave the premises "in repair," and the term "tenantable" does not extend the obligation beyond leaving the premises "in repair"—see Lurcott *v.* Wakely (1911), K.K.B. 905—so that if the premises were "in repair" the colour of the paint would not enter into the matter.

In this case, however, the wording of the covenant, in my view, shows the nature of the condition in which the premises are to be upon the tenant leaving them, and I cannot imagine the court holding that the obligations of the lease had been carried out if the property was painted with black paint.

YOUR LEGAL EXPERT

A SMALL HOUSE IN THE COTSWOLDS

DESIGNED BY FALCONER, BAKER AND CAMPBELL



This house at Minchinhampton, Glos., has cavity walls of concrete blocks made in the builder's yard from aggregate of the local limestone. Externally they are coloured cream, and use the old waterproofer, composed of tallow and lime; the roof is covered with Stamfordstone tiles, approximating in tone to stone tiling of the district.



The house has a content of 13,666 cubic feet, with a total floor area of 1,088, and contains a sitting room measuring 16 ft. by 12 ft. and living room 12 ft. 3 ins. by 11 ft.

THE SPECIFICATION WRITER

On the Job: Wet Sites

BY THE GUV'NOR

IT is a great problem at the moment as to the best method of waterproofing a building on a wet site underground. A decision on the question as to the means to be adopted should only be made after very careful consideration of the constructional work and its practical difficulties. The asphalt tank is no doubt the soundest method available, providing circumstances are favourable.

It is foredoomed to failure, however, if the joints are not in a position to be fully examined, as these are most fruitful of defect. Most especially when in underpinning in short lengths at the back of the wall, once a fault develops, it is next to impossible to locate it, as the water entering may travel quite a distance to find a weak spot in the wall before showing itself upon the surface; and when work is cut away to find a leak, the result is usually to make several others.

Further difficulties arise when asphalt is used in conjunction with reinforced concrete. The rods, spaced at close centres almost touching the asphalt face, make the carrying out of a perfect job a matter of chance only. The very best spreader cannot guarantee his work under these circumstances. Where this construction is used the asphalt might just as well be dispensed with and a good waterproofing compound, mixed with the concrete, substituted.

In regard to foundations and bases, the greatest care has to be taken in laying on a damp surface, as blowholes may be formed through even the three coats which are the standard specification for work in water.

If there is steelwork or reinforcement in the wall, there is no option but to put the asphalt at the back of it, on a half-brick thickness against the dirt, or a backing of concrete shuttering instead; but if the wall is entirely of brick, with no steel embedded, a perfect job may be made with asphalt on the front of the wall, only covered by a 4½-in. or 9-in. wall with block bonding on the face to keep the water, if penetrating, from pushing asphalt off. Any leaks subsequently developing can easily be located and repaired.

One other reliable method is to excavate the trench about 3 ft. wider and then to render the back of the wall when complete in one operation; and return, fill and ram earth after. This is not usually possible on a party wall.

Great care must be taken that asphalt work is not damaged in the placing of grillage or erection of steelwork. It is very easy for a slip to occur and the sharp edge of a stanchion base to cut through the tanking and not be noticed or attention drawn to the damage. In no case should the steelwork be allowed to pierce through the asphalt skin, as no joint can be guaranteed between iron and asphalt, and a leak may result. When unequal settlement occurs the asphalt is the first to suffer and no repair is possible.

Owing to these many drawbacks, engineers are leaning more towards the patent waterproofing compounds to tank their sites. There are many well-tried makes, some powder, some paste and some liquid. They all have their uses; and some prefer this, and some that. But they all have one common pitfall: their percentage quantity is so small in regard to the mix that if, by carelessness or oversight, the compound is omitted, there is nothing to warn the supervisor of the fact. The bad batch may at a later date let the water in, and although the defect is fairly easy to trace, expensive cutting-out and repairs will be needed. This danger (the human element) may be avoided by using a cement already waterproofed before delivery. It is scarcely possible to make concrete without using cement, so we should be sure of getting our waterproofing at any rate in correct percentage as to cement used.

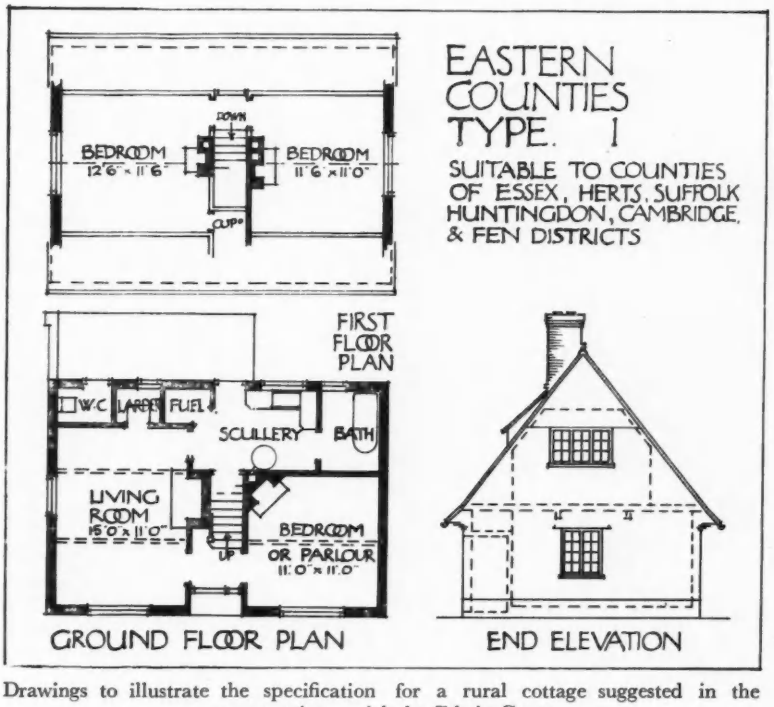
This method lends itself particularly well to all concrete jobs, whether reinforced or not, and is preferable to asphalt in these cases. It also covers the objection to the wall becoming saturated, as happens in the case where the asphalt is on the inner face of the wall.

Various methods have been tried to keep the site dry whilst work is in progress. Steel sheet piling is used in wharfside work and may also be used to retain the water in the soil under adjoining sites if danger is feared that the draining process may undermine existing foundations. It has been found possible to accomplish this result by surrounding the site with a system of piping and freezing the earth sufficiently to keep the water back. Usually we have to depend upon pumps, motor or steam-driven. Electric pumps are also in use.

Rural Cottage Specifications: Type i. Eastern Counties

BY EDWIN GUNN

THE purpose of the specification notes, the first of which appears overleaf, is not the imitation of old work or the simulation of processes or materials no longer current or available, but rather the straightforward use of modern methods in such a fashion as not to



Drawings to illustrate the specification for a rural cottage suggested in the accompanying article by Edwin Gunn.

conflict with strongly-marked local character in districts where this may still exist.

This first example shows a cottage of a shape and outline very usual in old work in the counties referred to on the drawing. The slope is commonly thatched, and the walls often of studding or wattle and daub (clay lump or clunch sometimes), and in old work the wall faces are often embellished with the delightful textural plaster patterns of East Anglia. No attempt is made by the specification to imitate the old work—this is a straightforward brick cottage with a waterproofing external coating, and a roof of a colour which does not assert itself violently in association with old thatch.

The little boarded gablets above first-floor window heads are suggested to be wrot and painted as being in accordance with much old work in mill buildings and similar structures with strong East Anglian flavour. The tarred plinth has the practical advantage in all colour-washed buildings that it minimizes the effect of splashings from heavy rain or overflowing gutters. It was usual always with the dripping eaves of old thatched and whitened cottages.

SPECIFICATION

WALLS.—External walls to be built 9 ins. thick in bricks in cement mortar, 6 to 1, finished with a rough flush joint by striking off with the edge of the trowel.

On completion of roof, the exterior wall faces from eaves, soffit and verges down to dampcourse are to be slurried with two coats of water-proofing cement applied in accordance with the following directions :

Brickwork to be made as wet as possible by saturation with water—surface wetness is not sufficient, and time must be given for water to soak well in, so that all pores are filled. The cement slurry should be mixed with one gallon of water to 18 lb. of cement, to make a creamy paste. Apply in two successive coats by brushing on as in the use of limewash, and prevent rapid drying out.

The wash should not be applied in hot or frosty weather, and should be sprayed during setting period.[1]

On completion of external painting a tarred plinth, extending from top of footings to 18 ins. above finished ground line, is to be formed by well brushing on two coats of hot tar and pitch finished to a level line. Remainder of slurried surface to be thickly whitened with a mixture prepared by slaking one bushel of good fresh lime in a barrel with 20 lb. of beef tallow and sufficient hot water, covering with sackcloth to keep in steam. Dry colours (ochre), if desired to produce cream tint, should be added before slaking lime. Thin to easy-flowing consistency with clear water, and brush on as with common limewhite.

CHIMNEYS above roof to be faced with red sand-faced bricks, caps being built as shown in three $\frac{3}{4}$ in. oversails with doubled top course. Project weathering course above ridge and head of stair dormer, to stand out $2\frac{1}{4}$ ins. Build in 9 in. red flue liners standing up 3 ins. above caps to serve as pots. Flaunch between pots and weather on oversailings with cement filleting.

ROOF (in districts chiefly thatched).—Cover the roof with 3 in. mesh galvanized wire rabbit netting, strained over the rafters and stapled on as a base for felt, and with bituminous roofing felt, and lay thereon $1\frac{1}{2}$ in. by $\frac{3}{4}$ in. sawn fir battens, and handmade light, dun-coloured sand-faced Roman tiles (85 to the square). Ridge to be covered with half-round ridging to match tiles, bedded in haired mortar and pointed in cement. All tiles to be nailed with composition nails, and verges to be bedded in water-proofing cement and sand, 1 to 3, upon an undercloak of plain tiles laid butt-jointed on rake of gables and projecting 3 ins. Lay course of plain tiles at eaves below Roman tiling.

Form flashing round chimney-stack by cutting neatly a strip of felt underslating 4 ins. wide, and laying on surface of tiling (to prevent adhesion), upon which form angular cement fillet next stack, and cover same with butted weathering of plain tiles so that neither cement nor felting can be seen.

DORMER over stairs to be set out to allow of an exact multiple of tiles, including verge projection each side. Cheeks to be boarded (without studding) and felt underlining is to be carried up from roof slopes unbroken, being afterwards covered by shaped spandrel cut out of single 9 in. board, wrought and painted externally.

GABLETS to be formed of studding, covered with roofing felt and weather-boarded externally with wrought rebated and ovolo moulded boards, which are to be knotted, primed, stopped and painted two coats cream colour.

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GUTTERS to be 4 ins. half-round and downspouts 3 ins., fixed to stand 1 in. clear of walls with pipe distance-pieces behind ears. To be cleaned and painted two coats of battleship grey bituminous paint.

ALTERNATIVE FOR TILED DISTRICT.—Roof covered with plain tiles (without wire and felt) or with Roman tiles as specified, in russet-brown tint.

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he counted upon. 5 : The Highway Authority would generally take this to mean the widening of such parts of the streets as were found congested. 6 : In London, 130 Highway Authorities had proceeded to seek this cure each in its respective locality, and to provide by local widening for the discharge of this traffic into some neighbouring area—perhaps at some spot which was not congested yet. 7 : Area "Y" was oblivious of the fact that it had been, and was, protected from traffic blocks in certain streets only so long as the unredeemed congestions in Area "X" precluded the arrival of the excess of traffic. 8 : Widenings of portions of streets, made in the absence of a plan concerted between Highway Authorities, were liable to release traffic onto those streets in a neighbouring area, which were not widened, because they were not congested. 9 : This would mean that a series of widenings that were not part of a plan, were liable not to line up with one another—and so each such widening created a congestion, or a traffic block, somewhere further on. Moreover, the main delays which were due to the crossing of lines of traffic by one another were not shortened by widenings; on the other hand, the path of the pedestrian was made more penal over the wider roads. 10 : If some Highway Authority, instead of meeting a congestion by widening, decided to provide a local bypass to it, and in addition, to arrange by means of a roundabout for the more rapid discharge of the traffic, the very studies for the choice of the bypass, the effect of the bypass on many neighbouring streets, the preparation of the necessary drawings, etc., might conduce to correlating the work of two or three, and then of several, neighbouring authorities, and so we had the birth of a Plan.

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We had provided land upon which we could build our tenements with perfect satisfaction. This was not a theory, it was a fact—a fact that had been accomplished with great success in many parts of the world. It had been done in New York, it had been done in Chicago. He was informed it had been done in Prague, in Bombay, in Boston, and in principle it had been done here at Baker Street, and done successfully.

The plan did not consist of taking any one great area to make a decanting site right away for all of those people; the suggestion was that there would ultimately be 10,000 of those who were now in the slums who could not be housed on the same sites, and that provision be made to house 10,000 over the railways. This area divided up into ten sites each for 500, and five sites each for 1,000, represented in the aggregate somewhere between thirty and forty acres, and so situated as to leave the slum dweller as near his existing home as possible during the decanting process.

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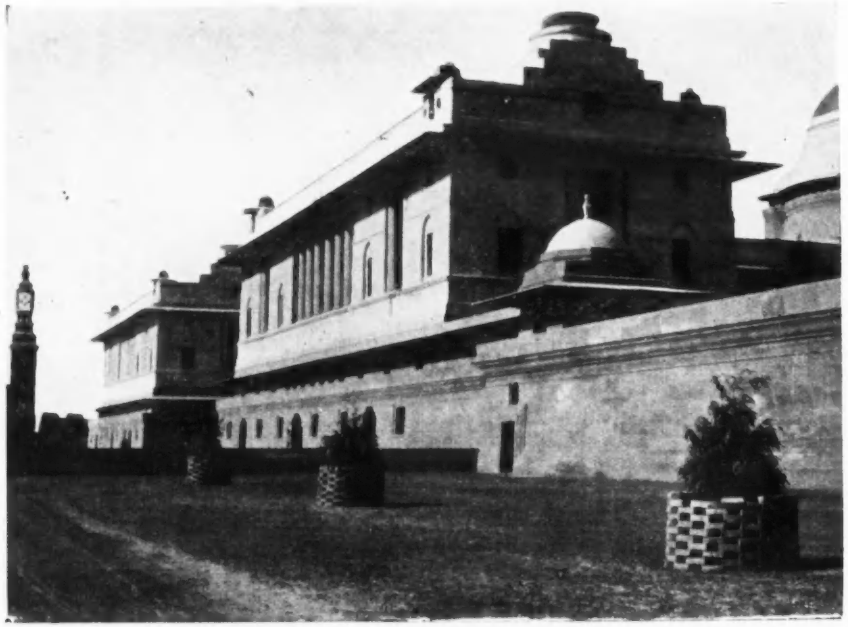
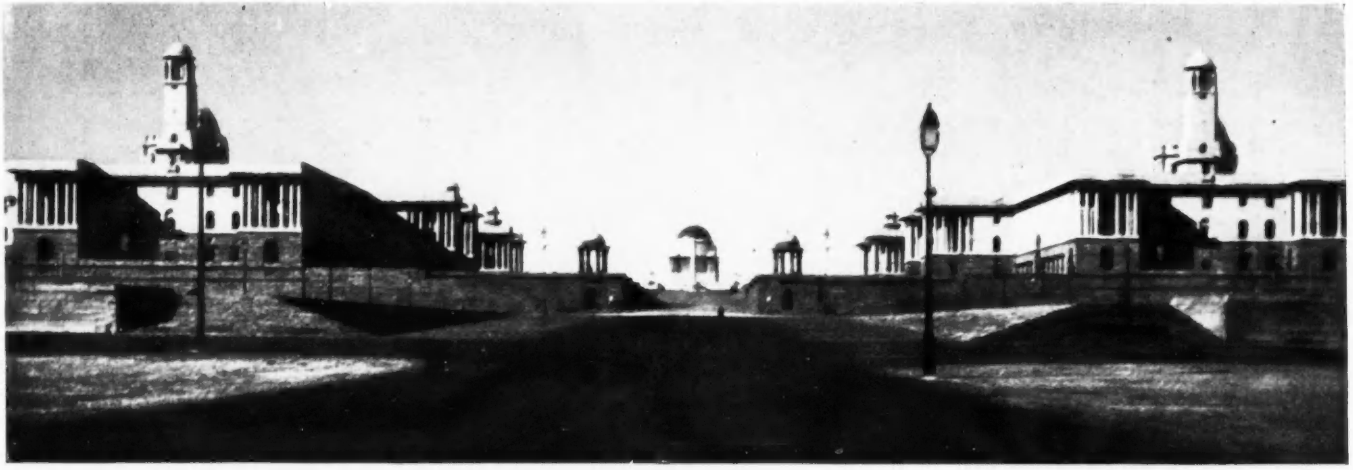


The south front of the Viceroy's House, showing the east (left) and west wings. Sir Edwin L. Lutyens, architect.



The west front of the Viceroy's House, with the water garden in the foreground. Sir Edwin L. Lutyens, architect.

THE NEW DELHI



A general view, looking up the King's Way towards the Secretariats' buildings (Sir Herbert Baker, architect) and the dome of the Viceroy's House.

IN view of the Indian Round Table Conference now convened in London, the January issue of *The Architectural Review* is a special number devoted to New Delhi, the new capital of India, which is to be officially opened in February next. On this page are reproduced three illustrations from the *Review*—two of the Viceroy's House, from the designs of Sir Edwin Lutyens, and one a general view, looking up King's Way, showing the grouping of the secretariats' buildings on either side, and the dome of the Viceroy's house in the centre. The former were carried out from the designs of Sir Herbert Baker. The whole of the letterpress, photographs and criticisms in the *Review* have been contributed by Mr. Robert Byron.

IN THAT CONTINGENCY

The following abstracts of inquiries are some of a number recently submitted to the Building Research Station, and their replies thereto.

Blistering and spalling of plaster

AN architect encountered an unusual case of defective plaster work. The building in question was eleven months old, had 9 ins. solid outside walls, faced externally with hard, machine-made, red bricks, and internally with foreign stock bricks, which were hard in some cases, but soft on the average. The brickwork was laid in lime mortar. Internally the walls were covered with two-coat plaster, which throughout the house, but not on breeze partitions, was found to be rising in blisters and falling away. Examination showed that behind each blister the internal face of the brickwork was decaying rapidly, and was encrusted with a white substance. Samples of brickwork, plaster and the white encrustation were forwarded for examination, and the inquirer wished to know whether it would be safe to re-plaster the walls entirely with Portland cement and sand for the backing coat.

Reply: The spalling of the plaster is evidently due to crystal growth resulting from the presence of soluble salts in the bricks. The crystalline material giving rise to the trouble appears to be magnesium sulphate in an almost pure condition. The fact that the crystals have formed behind the plaster is due to interaction between magnesium sulphate from the bricks and the lime contained in the plaster. The mechanism causing failures of this kind has been investigated, and is discussed in a letter to *Nature* by F. L. Brady, of the Building Research Station, in the issue of November 1, 1930, page 684.

It is difficult in cases of this kind to suggest a treatment which will be entirely satisfactory. The use of any plaster containing lime would be liable to lead to a repetition of the failure. There is also the possibility that moisture is penetrating the wall from the exterior and this may result in efflorescence, due to crystallization of soluble salts on evaporation of moisture at the inner face.

Replacement of the plaster by Portland cement cannot be recommended since, when set, the cement contains lime, and, as there probably is still some magnesium sulphate in the bricks, failure would be likely to occur again.

The best courses to follow are considered to be the following:

1: To plaster with a gypsum plaster, which does not cause crystallization to take place at the junction of the brick and plaster. Unfortunately, in the absence of any formal specification for gypsum plasters, these display considerable variations in composition and a number are alkali-accelerated and so would be unsuitable for the purpose.

2: The use of aluminous cement, in an endeavour to produce a dense layer which will reduce the rate of transmission of moisture and so reduce the rate of evaporation and crystallization of the salts. Aluminous cement itself is relatively immune from the action of magnesium sulphate. It is not absolutely certain that crystallization will be prevented in this way, but the likelihood of further deterioration is less than with Portland cement, and very much less than with lime plaster.

There would, of course, be some danger of trouble with visible condensation of moisture on a dense impermeable finish of this kind.

3: The simplest expedient would probably be to batten the wall, and to plaster on lathing or, alternatively, to apply one of the various types of fibrous wallboard or plasterboard to the battens. In this way there would be no direct capillary contact between the lining and the brickwork.

Failure of Paint on Roman Cement

An architect requires information regarding the failure of paint on Roman cement. The work is external decorative plaster, executed in Roman cement on Portland cement backing. The paintwork broke down completely in the first instance, and the cause was held, after investigation, to lie in some defect prior to the painting stage and not in the paint materials.

The work was stripped and left through a winter, when the whole of the painting was reinstated with the contractor's entire confidence in the result. The trouble is now recommencing with apparently identical symptoms.

An explanation and suggestions for a possible cure are requested.

It appears probable from the description that the failure is the familiar one of saponification of a linseed oil paint. This type of failure is liable to occur whenever the material painted contains both free lime and certain soluble compounds of soda or potash in the presence of moisture. In such circumstances, sodium or potassium hydroxide is formed in the material, and is carried in solution into contact with the paint, and there exerts a destructive effect. This dangerous combination of free lime and soluble alkali compounds is always found in set Portland cement, and would also almost certainly occur similarly in set Roman cement. Oil paint applied direct to such materials, therefore, is very liable to failure if the material is at all damp at the time of painting, or if moisture subsequently gains access to the material, e.g. by infiltration or repeated condensation. On an external surface of this type it cannot be stated definitely that oil paint can be applied direct with absolute safety, although ageing of the unpainted surface, accompanied as it is by carbonation of the lime and mechanical removal of soluble substances carried to the surface, goes far in practice to minimize the risk of failure.

Although it is hardly possible to recommend a "definite cure" for this sort of trouble, a method of treatment which has been found effective in many cases is to use a priming paint of a type which is itself unaffected by lime and alkali salts, and which in fact insulates subsequent coats of paint by a waterproof, alkali-resistant membrane. Several priming paints of this type are on the market, the most effective being those which have a tung-oil resin basis.

Lime Clinker Mortar

A contractor requires information on the advisability of using lime, sand, ashes and brick rubble ground up together in a mortar mill for building mortar. Also whether old mortar can be incorporated in the mixture.

It is difficult to make a general statement concerning the use of such materials since, obviously, much must depend on their nature, cleanliness, etc. The following observations, however, may be of some assistance, and will indicate the main points where precautions are desirable:

1: Sand should be clean and free from clay or organic impurities. It should preferably be graded from coarse to fine, and an excessive amount of fine material is undesirable.

2: Ashes should so far as possible be thoroughly burnt, free from appreciable quantities of unburnt coal and free from unconsumed organic material. It is desirable that the fine material should be removed by screening before grinding.

Assuming ashes to be satisfactory in the above respects, they are likely to develop more strength in a lime mortar than ordinary building sand; this is due to the fact that certain constituents of ashes display pozzolanic activity (i.e. have the property of combining chemically with lime to form a cementing material). This property is made use of in common practice in the North of England where "black mortar" is frequently used.

It has to be realized, however, that the strength imparted to lime mortar by the use of ashes may be rendered useless if imperfectly burnt, unsound material is used, in which latter case trouble by blowing may quite possibly occur.

3 : There is no objection to the use of brick rubble, but it should be reasonably clean, free from organic matter, and not contaminated with earth or clay. A small amount of old mortar adhering to the bricks is not likely to be objectionable, but large slabs of plaster of unknown composition should be rejected.

4 : Old mortar, whilst not likely to be actually harmful, is not a desirable material to employ. Contrary to common belief, the lime present in old mortar performs no useful function; it simply acts as a diluent of unduly fine material, and will tend to reduce the strength of the new work. The reason for this is that the lime is usually carbonated.

The principal objection to most of the above described materials is that they are commonly found to be in a dirty state, but if properly selected and picked over no harm should result from their use.

SOCIETIES AND INSTITUTIONS

R.I.B.A. COUNCIL MEETING

FOLLOWING are some notes from a recent meeting of the R.I.B.A. Council :

The Final Examination Thesis Examiners (Honorary) : Mr. P. W. Barnett, A.R.I.B.A., was appointed as a Thesis Examiner.

Schools : On the recommendations of the Board of Architectural Education the following decisions were made : (*a*) The School of Architecture, University College, Dublin : The five years' Degree course be recognized for exemption from the R.I.B.A. Intermediate Examination. (*b*) The School of Architecture, Leicester : The recognition of the three years' full-time day course for exemption from the R.I.B.A. Intermediate Examination be continued. (*c*) The Department of Architecture, the Northern Polytechnic, London : The recognition of the three years' full-time day course for exemption from the R.I.B.A. Intermediate Examination be continued, and that the condition whereby those students who only obtained a third-class pass in the Third Year Final Examination are not eligible for the exemption be abolished. (*d*) The School of Architecture, University of Cambridge : The condition whereby third-class ordinary Degree students are excluded from exemption from the R.I.B.A. Intermediate Examination be abolished, and that third-class ordinary Degree students be eligible for exemption in the same way as students obtaining first- and second-class Degrees. (*e*) The School of Architecture, Plymouth Central School of Arts and Crafts : The School of Architecture, Plymouth Central School of Arts and Crafts, be recognized for exemption from the Testimonies of Study for the R.I.B.A. Intermediate Examination.

Petrol Stations and Historical Buildings : It was decided to support and submit to the Ministry of Health the following resolutions proposed by the South-Eastern Society of Architects :

PETROL STATIONS IN RESIDENTIAL AREAS

In the fresh legislation contemplated by the Ministry of Health, it is hoped that some such clause may be incorporated that will enable local authorities to preserve for the enjoyment of the public the amenities of any street, road or locality and of avoiding obstruction or danger in regard to traffic therein by reason of the establishment of petrol stations.

EXPORTATION OF HISTORICAL BUILDINGS

It is also hoped that some legislation may be introduced to prevent the exportation of ancient buildings and monuments.

The S.P.A.B. Scholarship Scheme : It was decided to make a donation of £10 10s. towards the cost of the S.P.A.B. Scholarship Scheme.

The Architects' Benevolent Society : It was decided to renew the annual grant of £150 to the Architects' Benevolent Society.

Resignations : The following resignations were accepted with regret : Messrs. Percival William Hawkins, A.R.I.B.A., and Herbert Athill Stallwood, L.R.I.B.A.

Election of Students : The following probationers were elected as students of the R.I.B.A. :

Bell, B. M. (University of London).
Bennett, A. C. (Liverpool School of Architecture).
Bryce, H. M. (Edinburgh College of Art).
Comben, S. A. (University of London).
Copnall, S. L. W. (Liverpool School of Architecture).
Fidler, A. G. S. (Liverpool School of Architecture).
Gearey, K. W. (Liverpool School of Architecture).
Herman, M. E. (University of Sydney).
Hobbs, G. B. (Special Exemption).
Hubbard, R. P. S. (Liverpool School of Architecture).
Jackson, P. D. (Architectural Association)
Jones, D. M. (Liverpool School of Architecture).
Jubb, R H. (Manchester University).
Lewis, B. B. (Liverpool School of Architecture).
McIntosh, J. (Liverpool School of Architecture).
Naylor, D. W. (Leeds College of Art).
Pinckheard, J. A. (Northern Polytechnic).
Plews, C. E. (Liverpool School of Architecture).
Policansky, M. (Liverpool School of Architecture).
Roberts, A. (Liverpool School of Architecture).
Sayers, A. M. (Architectural Association).
Searle, C. J. (Architectural Association).
Thoms, T. H. (Glasgow School of Architecture).
Wyatt, H. (Liverpool School of Architecture).

R.I.B.A. ELECTION OF MEMBERS

The following have been elected to membership of the R.I.B.A. :

As Hon. Associates (2)

Dircks, R. J.
Scott, the Rt. Hon. Sir Leslie, K.C.

As Fellows (14)

Abbott, Major A. L.
Barnes, A H.
Bestow, S. F.
Davidson, J. A.
English, J. W.
Ford, H. W.
Gale, G. A.
Henderson, A. G.
Home, G. W.
Howitt, Major T. C.
Knight, S.
Philpot, S.
Robertson, M. D.
Scott, A., M.B.E.

As Associates (5)

Cowie, M. J. H.
Freeth, E.
Kelly, S. W.
Oakes, C. St. C. R.
Soper, S. F. E.

As Licentiates (82)

Andrews, F. W.
Asman, D. W.
Baird, G. B.
Bell, T. E.
Bell, T. P.
Beswick, H.
Boyle, E. A.
Bridge, P. G.
Brinton, S.
Broughton, J. W.
Brown, P. N.
Buck, H. A.
Burnett, C. J.
Butler, W.
Cabre, J. W.
Campbell, E.
Carruthers-Ballantyne, R.
Cayley, C.
Checkley, J. F. H.
Coombs, C. M.
Crush, C. W.
Dobson, R.
Douglas, A.
Ellis, F. C.
Fennell, A. H.
Fidler, D. C.
Fifield, C.
Frank, L. B.
Glover, C. W.
Gornall, J. M.
Grieve, R. R.
Hartley, E. S.
Hartley, J.
Harvey, F. W.
Hayman, E.
Hellawell, J. E.
Henderson, A. G.
Hetherington, L. E.
Hines, G.
Horsfall, C. E.
Johnson, F.
Mackie, D. M.
McNair, H. S.
Manton, A. J.
Margetson, A. J.
Matthews, Lt.-Col. M. K., T.D.
Messenger, A. W. B.
Morton, W.
Motion, R. H.
Munro, W. K.
Oakley, E.
Oliver, E. E.
Oswald, H.
Pearce, N. F.
Pennell, F. R.
Pettett, H. C.
Ponting, E. W.
Reeves, C. W.
Riddle, W.
Riley, F.
Roberts, E. S.
Robertson, H. E.
Satchwell, P. R. H.
Selleck, G. B.
Seward, H. T.
Shaw, J. E.
Shaw, N. B.
Silverston, H.
Simpson, A. W. R.
Slipper, S. N.
Smellie, A.
Smith, R. V.
Stevens, B.
Stewart, W. F. T.
Tilley, H. G.
Timbrell, E. G.
Wager, F.
Watson-Hart, F. J.
Webster, F. M.
Welburn, H.
Wheeler, A. C. S.
Winder, R. A.

R.I.B.A. EXAMINATIONS

Final Examination : The Final Examination qualifying for candidature as Associate R.I.B.A. was held in London and Edinburgh from December 3 to 11, 1930. Of the 85 candidates examined, 45 passed (4 in Part I. only) and 40 were relegated.

The successful candidates are as follows :

Aylwin, J. N.
Best, N.
Bond, G. H.
Bowden, G. E.
Bowring, C. C.
Caven, C. A.
Cloke, S. D. N. (*Part* 1 *only*).
Cunliffe, E. J.
Dark, F. W.
Evans, E. A. E.
Fowles, A. J.
Frizzell, F. G.
Gale, A. H.
Gillett, M.
Goddard, A. N.
Hartland, E. J.
Hemm, G.
Hills, J. W. (*Distinction in Thesis*).
Humphrey, W. E.
Jackson, W. T.
Kelly, H. L.
Lewis, B. B. [*only*).
Lindsay, R. G. (*Part* 1
McLean, C. R.
McMorran, D. H.
Maitland, J.
Marshall, T. L.
Meed, H. L. (*Distinction in Thesis*).
Mhatrè, G. B.
Millington, C. R.
Oatley, J. W.
Payton, A. G. R.
Sartain, S. P.
Saunders, V. C. L.
Schofield, J. A.
Smith, L. B.
Thomas, T. W.
Thompson, W.
Tozer, C. R. (*Part* 1 *only*).
Wakeham, P. O. G.
White, E. J.
Wilbond, F. S.
Wilkie, D. A.
Wright, R. H. (*Part* 1 *only*).
Writer, A.

The Special Examination: The Special Examination qualifying for candidature as Associate R.I.B.A. was held in London from December 3 to 9, and in Edinburgh from December 3 to 11. Of the 25 candidates examined, 7 passed and 18 were relegated.

The successful candidates are as follows :

Angles, R. E.
Brown, T.
Holman, E.
McLean, R. A.
Marsden, F.
Williams, H. D.
Worrall, W.

The Examination in Professional Practice for students of schools of architecture recognized for exemption from the R.I.B.A. Final Examination: The examination was held in London and Edinburgh on December 9 to 11. Of the 50 candidates examined, 33 passed and 17 were relegated.

The successful candidates are as follows :

Aiton, N.
Archer, H.
Beattie, I. H. K.
Brown, L. L.
Comber, E. E.
Dawbarn, C. Y.
Doran, P. J.
Drury, E.
Green, M. S.
Handisyde, C. C.
Hardie, D. G.
Hawson, H. (Jnr.).
Herman, M. E.
Kenyon, G.
McDonald, D. C.
Madeley, R. G.
Mills, E. M. I.
Minns, M.
Murray, E.
Norie, D. M.
Owen, H.
Richards, I. F. B.
Rogers, T. H.
Sanderson, J. K. M.
Shand, G. S.
Steel, E. D.
Taylor, D. S.
Taylor, W. R. H.
Thompson, H. R.
Turner, C. R.
Ullmann, E. D.
Ward, D. R.
Whiteman, H. W.

STRUCTURAL ENGINEERS AT DINNER

The annual dinner of the Institution of Structural Engineers was held at the May Fair Hotel, W.1, on Friday, January 9. Mr. R. H. Harry Stanger, F.C.S., A.M.INST.C.E., President of the Institution, presided over about 450 members, friends and guests.

After the loyal toasts, Sir Clement Hindley, K.C.I.E., Chairman of the Steel Structures Research Committee, proposing "The Institution of Structural Engineers," said there was probably nothing of greater importance to the Institution than a movement which would tend to establish professional practice in regard to steel structures on a firm and unassailable scientific basis. There would always be some natural conflict between practice and theory and between "rule of thumb" and "rule of science." In any controversy between a scientist and the practical man, the scientist would probably have recourse to the time-honoured statement that "a practical man is one who repeats and perpetuates the errors of his forefathers." It would be unfair to apply this to engineers who, as a class, were perhaps of all professional men those most adaptable to new lines of scientific thought.

But, without wishing to draw any unfair comparisons, it seemed to him that engineers who were engaged in the design and construction of steel structures had not, perhaps, in the past, taken so much advantage of research as some other branches of the profession.

He asked: was it not a fact that many problems of steel structure design were becoming increasingly difficult to solve because the methods which were used were based on the consideration of static conditions? Methods of stress analysis, on which designs were built up, tended to follow the assumption that the problem was a static one, and a more or less empirical factor was added to cover the unknown dynamic stresses. It was probable that little progress could be made until research had shown what was the real character of those dynamic factors and how they were to be allowed for in design.

In the Institution of Structural Engineers, engineers and architects met together to discuss the problems of structures as seen through the spectacles of their two separate and distinct professions. In all ages there had been some separation in their functions, and it may be said some rivalry, and perhaps worse. But those ages had been most fruitful in the production of structural work when the engineer and the architect had worked together in harmony, when the architect had listened to the voice of science and the engineer had opened his eyes to æsthetic considerations. The fusion of interests, of knowledge, and of experience which the Institution facilitated and the opportunities which it afforded for mutual discussion and study, must surely be of great value in the future and of great individual benefit to the members. And not only had the Institution gathered together in one fold engineers and architects, but it also welcomed scientists, teachers and research workers as well as those connected with the execution of constructional work by contract.

At the present time, he continued, there was nothing of greater importance to this country than improvements in methods of design and construction of buildings. It was a striking fact that in America, where wages were from three to five times the wages in this country, the study of economy in building construction, both in design and erection, had brought down costs to within a small margin of the costs in this country. No more vivid example of the introduction of new and scientific methods had been seen in this country than in the new buildings for the Thames House offices. They were an outstanding instance of the effect of careful and meticulous organization in reducing the time of construction, and consequently of reducing the cost of the undertaking.

But such examples only served to show that we were, so far, only at the beginning of the great change which must be made in the whole of our methods. Without in any way disparaging the achievements of this country, we had only to see what was being done elsewhere to realize that there was an enormous field of work to be covered and a long struggle to face before we could free ourselves from the trammels of old tradition.

In conclusion, he said, it was no exaggeration to say that the future prosperity of the building industry depended on the effort which could now be put forward to modernize methods, both of design and construction, and to bring practice into conformity with scientific knowledge.

Responding to Sir Clement Hindley, Mr. Stanger spoke of the aims and ambitions of the Institution, and the great movement which had taken place during the past year to bring building methods up to date, and also to bring the laws of public control of building equally up to date. Within the limits of the Institution they had endeavoured, through their technical committees, to assist the building industry by publishing various reports and recommendations on matters connected with steelwork and reinforced concrete work, and it was a source of considerable satisfaction to feel that their recommendations had been accepted by a number of municipal engineers.

With increasing membership, not only in this country but also overseas, was there, he asked, any reason why they should not open branches throughout the British Dominions?

In this way, through bringing together members of those professions and callings which were specially connected with structural work, it was their hope that every structural engineer should sympathetically envisage the aims of the architect who clothed the engineering structure, and that every architect should be conversant with the aims and difficulties of the structural engineer.

The toast of "Our Guests" was proposed and seconded by Major A. H. S. Waters, V.C., M.INST.C.E., and Captain J. F. C. Bennett (Mayor of Westminster), respectively.

THE HISTORY OF ST. PAUL'S

The history of St. Paul's Cathedral was vividly described by Mr. J. E. Drower, C.B.E., in a paper read before a meeting of the Chartered Surveyors' Institution. Mr. Drower, it will be remembered, was responsible for the weighing of the dome of St. Paul's.

The lecturer began by saying that on September 4, 1666, the Gothic Cathedral of St. Paul's crowned the City of London. It had been sadly

marred and damaged by time, by the elements, and by the hands of men. Yet it stood stately and admired, the pride of the City. On the day named the Great Fire of London reached it, the closely-packed dwellings and warehouses around it were a roaring furnace, the roofs caught fire, a stream of molten lead poured down upon the pavement and flowed along the streets, the huge roof timbers crashed down upon and broke through the vaulted ceilings, the counterforts and flying buttresses left to push against nothing fell in, and, when the fire died out, the mighty structure was an empty shell. Pepys, who saw it three days later, said : "It was a miserable sight with all the roofs fallen and the body of the choir fallen into St. Faith's." The remaining walls were in the end pulled down, and the noble fane became a shapeless mass of broken stone and rubble.

All that was left of Old St. Paul's for us to see today was the foundations of the Chapter House and of some buttresses, a few remains of monuments in the Crypt, and a collection of carved and moulded stone fragments kept in the Gallery. No ! Not all ! For the piers in the Crypt were faced with Kentish rag ashlar from the old Cathedral, and experts could point to some stones showing the diagonal chisel stroke of the Norman masons. But there was something left which we could not see, but which was of great importance to us now—the rubble, now forming the cores of the thicker walls, and of the great piers and bastions supporting the dome.

St. Paul's (he continued) had to be rebuilt. He thought that a very brief study of the style and of the method of building the new church would enable those present to understand more clearly the problems which had to be solved in dealing with the defects developed during the last two centuries and more since the completion of the structure in 1708. Mr. Drower then described the rebuilding of the Cathedral, referring particularly to the dome and its supports.

CREATIVE ART

At a Council meeting of the Incorporated Association of Architects and Surveyors, the following were elected officers of the Association : Sir Edwin L. Lutyens, R.A., F.I.A.A., President; Sir Robert Inigo Tasker, Chairman of Council; and His Grace the Duke of Marlborough, K.G., Vice-President. Sir Frank Dyson, the Astronomer Royal, was elected an honorary member.

After the election the Association's Secretary, Major G. B. J. Athoe, read the following letter from Sir Edwin Lutyens, written before his departure to India :

I was proud of becoming a member of our Association, prouder of becoming a Vice-President, and shall be prouder still of the greater honour of becoming your President—if I should be elected. The inclusion of architects and surveyors in one society has always seemed to me wholesome and correct. That is why I like our Incorporated Association. The combination gives a wider view and influence to the possibilities of creative art. It was under the designation of surveyor that Sir Christopher Wren entered the profession in which architect and surveyor are equal contributors to success ; success, that is in right of building in the public interest. It is because our Association can so well enhance this success that I should be happy to become your President. Day by day the stature of England's beauty grows smaller. It is not by any parliamentary authority that taste and discretion can be fostered, that insight into essential needs can be given, that imagination and high accomplishment can be assured. But it is to these ends that the Incorporated Association of Architects and Surveyors is dedicated; and these ends which, with your help, it would be my humble duty as President to promote.

THE MAKERS OF ENGLAND

Sir Banister Fletcher, P.R.I.B.A., on Wednesday last, commenced the second term of University Extension Lectures on Mediæval Architecture, at the Central School of Arts and Crafts, London, by a discourse on the earliest, or pre-mediæval architecture of England, dealing in turn with the work of the Ancient Britons, the Romans, and the Anglo-Saxons.

He pointed out the various influences which have moulded our architecture, and showed how the activities and civilizations of these earlier periods played a great part in the conditioning of Norman and Gothic architecture.

OBITUARY

FREDERIC COLEMAN : 1876-1931

BY the death of Mr. Frederic Coleman, there has passed from our midst a man whose name was very well known throughout the building industry as well as the architectural profession. He died suddenly on Monday evening last week, after a stroke in his office in Regent Street, from which he never regained consciousness. Besides being personally known to many people, his signature at the bottom of every advertisement of his firm, the Adamite Co., Ltd., in this and other professional papers, was familiar to all readers.



The late Frederic Coleman.

Mr. Coleman, who would have attained the age of fifty-five tomorrow, was born in 1876 at Spencer, Iowa, the son of the Rev. T. Coleman. Educated at Oberlin College, Ohio, he drifted into journalism at an early age, being for a time on the staff of *The San Francisco Examiner*. From there he entered the American Army, and served for two years in the Philippines, and through the Boxer rising in 1900 as war correspondent in China on behalf of the London press.

At the age of twenty-five he sailed for England as representative of the White Steam Car Company, where, in the true American style, he leapt into fame in the motoring world.

Thirteen years later the war broke out. In August of 1914 he was one of the band of motorists who volunteered for service and was sent out by the British Government to the staff at General Headquarters. It was in this capacity that his flair for journalism was given full rein. He saw much hard fighting, and it was through these experiences that he was able to write *From Mons to Ypres with French*, a book which gives an excellent insight into the wonderful spirit which pervaded the men of all ranks during the earlier part of the war. Who, on reading this effort of Mr. Coleman, did not admire his lucid style ? He was also the author of other war books, including *Our Boys Over There*, and *With Cavalry in 1915*. In the latter part of 1915 Mr. Coleman, who was then attached to the Foreign Office, was sent on an extensive lecturing tour through China and Japan. Then in 1919, after he had travelled extensively, and was well known both as author and journalist, he formed the Adamite Co., Ltd., and devoted his time to the selling of white Portland cement.

Here, his journalistic experience stood him in good stead. The advertisements of his company are so well known that they hardly need recalling. What better tribute to his methods of advertising does he require than the words spoken by a well-known member of the L.C.C., when the writer informed him of Mr. Coleman's death : "Coleman dead ? Oh yes, that's the man with the flourishing but striking signature which one sees so often."

He was a man who believed in the enormous benefits of advertising.

All who came into contact with him were impressed with his striking personality, charm and learning. The many messages of sympathy which have been received by his wife, fellow directors and members of the staff of the Adamite Co., Ltd., bear testimony

to his great popularity. To sum up, his motto in life can be said to have been "A thing worth doing is worth doing well." With what success he achieved this object can be gauged by the progress of his firm since its early days. He was without doubt one of the most outstanding personalities in the building industry.

He was buried at Esher last Thursday. It should be noted that the directors of the firm who have been associated with Mr. Coleman since its inception have decided to carry on the business.

[*The following tribute to Mr. Coleman has been paid by Mr. Laurence M. Gotch.*]

Freddie—none of us ever thought of him as Coleman—has gone, and I grieve to think that I shall no longer meet that vivid personality at my club, at Ciro's, at chez Henri and elsewhere where men meet. The last time I saw him was on the steps of the entrance hall of the R.A.C., an outstanding figure in his very ample brown Jaeger coat and his wide-brimmed homburg, his sonorous phrases flowing easily from those mobile lips, whilst his whole face expressed so freely his varying emotions that the oral sense was almost unnecessary for the understanding of his tale.

His keenness and energy in everything he did were amazing; he never changed: he was the same in his office or his home, whether golfing or dancing, and probably very few knew that he was a first-class dancer.

No building paper was really interesting unless it contained one of his advertisements—they were so typical of the man, a most astounding mixture of poet, artist and almost hectoring pugnacity. He was so downright that he gave offence where none was meant, but he never harboured ill-feeling except against those who impugned his business integrity. He had been many things and in many countries; was known to all ranks of men, from emperors to commissionaires, and was beloved for his kindness in thought and deed by many humble souls. Despite that "go-getting commercialism" and the rough-and-tumble of a life of ups and downs, Freddie carried, beneath a rugged exterior, a very loving and gentle mind.

LAURENCE M. GOTCH

COMPETITIONS OPEN

February 1.—Sending-in day. Fire Station, Bethel Street, Norwich, for the Norwich Corporation. Limited to architects practising in the county of Norfolk. Designs to: Noel B. Rudd, Town Clerk, Guildhall, Norwich.

April 30.—Sending-in day. Last day for conditions, January 31. Hospital for Infectious Diseases, Coventry, for the Coventry Corporation. Assessor: E. Stanley Hall, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

THE ARCHITECTS' DIARY

WEDNESDAY, JANUARY 21

LIVERPOOL ARCHITECTURAL SOCIETY. Bluecoat Chambers, School Lane, Liverpool. "Bridges." By G. H. Jack, F.R.I.B.A., M.INST.C.E. **7.30 p.m.**

ARTS BUILDING, University, Lime Grove, Manchester. "Treatment of the Smaller Houses." By Herbert A. Welch, F.R.I.B.A.

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Mosques and Minarets: An Introduction to Persian Architecture." By Martin S. Briggs, F.R.I.B.A. Chairman: Sir Reginald Blomfield, F.S.A., P.P.R.I.B.A. **8.30 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "The Mediæval Period: Plans, Vaults and Buttresses." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

DRAWING OFFICE MATERIALS MANUFACTURERS AND DEALERS' ASSOCIATION. Annual Dinner to be held at the Hotel Victoria, Northumberland Avenue, W.C. 6.30 for 7 p.m. **6.30 p.m.**

LONDON SOCIETY. Visit to Roland House, Scout Settlement and Boys' Hostel, 29 Stepney Green, E.1. (Party limited to 25 persons.) **3 p.m.**

SOUTH-EASTERN SOCIETY OF ARCHITECTS. Monthly meeting at Brighton.

BRITISH WOOD PRESERVING ASSOCIATION. At the Auctioneers' and Estate Agents' Institute, 29 Lincoln's Inn Fields, W.C.2. Discussion on "The Preservative Treatment of Estate Timber," to be opened by Colonel Sir George L. Courthorpe, Bt., M.P. Chairman: Sir Harold Boulton, BT. **6.30 p.m.**

THURSDAY, JANUARY 22

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Paper by Professor J. Husband, M.ENG., M.INST.C.E. **6.30 p.m.**

FRIDAY JANUARY 23

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At the Technical College, Cardiff. First of six public lectures on "Egyptian and Western Asiatic Architecture." By Norman Culley, F.R.I.B.A. **7.45 p.m.**

BIRMINGHAM SOCIETY OF ARCHITECTS. At the School of Architecture, Birmingham. "A Criticism of the 'Modernist Movement.'" By A. Trystan Edwards, A.R.I.B.A. **6.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Western Counties Branch. At the Merchant Venturers' Technical College, Unity Street, Bristol. "Fatigue of Metals." By M. Morgan, B.SC. 7.30 p.m. Lancashire and Cheshire Branch. At the College of Technology, Manchester. "Structural Engineering in Modern Gasworks." By A. E. Pierce, M.I.STRUCT.E. 7 p.m. Midland Counties Branch. At the Chamber of Commerce Buildings, New Street, Birmingham. "Reinforced Construction at Bournemouth Gas Works." By H. M. Hale, M.I.STRUCT.E. **6.30 p.m.**

BRISTOL SOCIETY OF ARCHITECTS. At the Berkeley Café, Queens Road, Clifton. "Architecture in Modern Germany." By F. R. Yerbury, HON.A.R.I.B.A. **5.30 p.m.**

SATURDAY, JANUARY 24

Sunrise, 7.50 a.m. Sunset, 4.36 p.m.

INSTITUTION OF STRUCTURAL ENGINEERS. Midland Counties Branch. Fifth Annual Dinner to be held at Birmingham.

MONDAY, JANUARY 26

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "The Place of the Designer in Commerce." By R. P. Gossop. **8 p.m.**

TUESDAY, JANUARY 27

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS, 1 Wilbraham Place, S.W.1. "Norman Architecture." By S. E. Whitaker, P.A.S.I. **7 p.m.**

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. Second of nine public lectures on "Persian Art" By Professor Percy Dearmer. **5.30 p.m.**

WEDNESDAY, JANUARY 28

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Restoration of Windsor Castle." By the Very Rev. Albert Baillie, C.V.O., D.D. Chairman: The Most Hon. the Marquess of Londonderry, K.G. **8.30 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "The Mediæval Period: Interiors, Exteriors and Openings." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

LEAGUE OF ARTS. At the Guildhouse, Eccleston Square, Belgrave Road, S.W.1. "Persian Painting." By Laurence Binyon. Chairman: Dr. Percy Dearmer. **8.30 p.m.**

LONDON AND GREATER LONDON PLAYING FIELDS FUND. A performance of *The Fourth Wall* will be given at the Rudolf Steiner Hall, Park Road, Clarence Gate, Baker Street, N.W.1, in aid of the Fund. (Also January 29.) **8.15 p.m.**

Secretaries of architectural and allied societies are invited to forward particulars of their forthcoming meetings and visits for publication on this page. They should be addressed to the Editor at 9 Queen Anne's Gate, S.W.1.

WEDNESDAY, JANUARY 28 (*continued*).

BRITISH WOOD PRESERVING ASSOCIATION. At the Auctioneers' and Estate Agents' Institute, 29 Lincoln's Inn Fields, W.C.2. "The Control of Insects injurious to Timber." By Dr. Munro. (Illustrated by lantern slides.) **6.30 p.m.**

THURSDAY, JANUARY 29

WEST YORKSHIRE SOCIETY OF ARCHITECTS, 62 Woodhouse Lane, Leeds. Students' Debate: "That Architecture should be State Controlled." Affirmative: P. Lingwood. Negative: E. M. Rice. **7 p.m.**

LONDON SOCIETY. Visit to the White Heather Laundry, Stonebridge Park, N.W.10. **2.30 p.m.**

SATURDAY, JANUARY 31

Sunrise, 7.40 a.m. Sunset, 4.49 p.m.

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C. 1. "Shops and Display." By Howard Robertson, F.R.I.B.A. (Illustrated by lantern slides.) **3 p.m.**

MONDAY, FEBRUARY 2

R.I.B.A., 9 Conduit Street, W.1. General Meeting. "The Decoration of Buildings." By Professor W. Rothenstein, M.A. **8 p.m.**

TUESDAY, FEBRUARY 3

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. Third of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

WEDNESDAY, FEBRUARY 4

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. "Competitions." By E. Berry Webber, A.R.I.B.A. **7.30 p.m.**

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Effect of Standardization on Engineering Progress." By C. le Maistre, C.B.E. Chairman: Llewelyn B. Atkinson, M.I.E.E. **8 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "English Mediæval Architecture: Piers, Towers, Spires and Roofs." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

THURSDAY, FEBRUARY 5

WEST YORKSHIRE SOCIETY OF ARCHITECTS. Biennial Dinner. (Particulars will be announced later.)

INSTITUTION OF STRUCTURAL ENGINEERS. South Wales and Monmouthshire Branch. At the Institute of Engineers, Park Place, Cardiff. "Thames House." By R. Travers Morgan, A.M.INST.C.E.

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Glass and Its Uses, and Glass Making." By R. F. Taylor, M.SC. (Illustrated by lantern slides.) **7.30 p.m.**

SATURDAY, FEBRUARY 7

Sunrise, 7.38 a.m. Sunset, 5.1 p.m.

TUESDAY, FEBRUARY 10

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Manchester and District Branch. At the Milton Hall, Deansgate, Manchester. "Panel Heating." By C. M. Oates. **7 p.m.**

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. Fourth of nine public lectures on "Persian Art." By Professor Percy Dearmer **5.30 p.m.**

ROYAL SANITARY INSTITUTE, 90 Buckingham Palace Road, S.W.1. "Recent Methods of Sewage Treatment." By Lt.-Colonel William Butler, M.B. Chairman: Professor A. Bostock Hill, M.SC.

WEDNESDAY, FEBRUARY 11

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "New Motives for Textile Designs." By F. G. Wood. Also, demonstration by Polarized Light of Micro-Crystallization. Chairman: Professor W. Rotherstein. **8 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Mediæval Architecture: Parapets, Ornaments, and Fittings." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Lancashire and Cheshire Branch. Ordinary Meeting. At the College of Technology, Manchester. "The Modulus of Elasticity of Concrete." By Professor F. C. Lea, D.SC., M.INST.C.E., M.I.MECH.E. **7 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Ordinary Meeting at the Hotel Russell, Russell Square, W.C.2. "Boilers and Metals." By W. G. Case and W. E. Dennison. 2 p.m. Dinner 7 p.m. **2 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. Students' Meeting. **6.30 p.m.**

THURSDAY, FEBRUARY 12

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At the College of Arts, Leeds. General Meeting. "Competitions." By Percy Edward Thomas, O.B.E., F.R.I.B.A. **7 p.m.**

SHEFFIELD SOUTH YORKSHIRE SOCIETY OF ARCHITECTS AND SURVEYORS. At the Medico-Chirurgical Library, University, Sheffield. "The Architect in History." By Martin S. Briggs, F.R.I.B.A. **6.15 p.m.**

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. Annual dinner and dance to be held at Southampton.

INSTITUTION OF STRUCTURAL ENGINEERS, Great George Street, Westminster, S.W.1. Ordinary Meeting. "Modern Buildings as Engineering Structures." By Oscar Faber, O.B.E., D.SC. **6.30 p.m.**

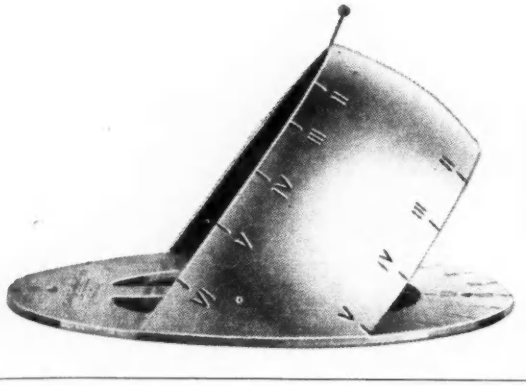
GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Some Old Buildings and how they have been Preserved." By A. R. Powys. (Illustrated by lantern slides.) **7.30 p.m.**

TRADE NOTES

The accompanying illustration is of the Orientator, a new instrument devised by Messrs. Cooke, Troughton and Simms, Ltd., to provide a simple and accurate method of demonstrating visually the exact angle at which the direct rays of the sun will fall on any window, building or wall during summer or winter. In use, the instrument is extremely simple. It is placed on the plan with the index mark along the true North line and its centre on the central point of the window. The small ball, which represents the sun, is held in the fingers, and the cord pulled tight, so that it just touches either the summer or winter curve. The cord now represents the direction of the sun's rays, and by moving it round the arc a position can be found for every hour of sunshine. Viewed vertically, it is perfectly easy to see when the sun's rays are interrupted by an obstruction, and consequently the period during which the sun's rays fall directly on a window or other opening can be read off immediately. The manufacturers claim that "the extreme simplicity of the Orientator is possible because of a comparatively little-known fact, that the sun's daily path changes from week to week throughout the year, but for three-and-a-half months in the height of the summer the change in the sun's daily path is very slight, then for the succeeding two-and-a-half months of autumn the change is very rapid, followed by a further approximately constant period of three-and-a-half months of winter, again followed by a very rapid change during two-and-a-half months of spring. For all practical purposes, then, it is possible to take the summer and winter curves, and neglect the short periods of very rapid change." Whether every ray of direct sunlight is required to enter a room or all direct sunlight is to be avoided, the Orientator is claimed to be an infallible guide. It is constructed of stout brass, which is chromium-plated to enable it to resist corrosion and to avoid soiling plans. The London showrooms of the manufacturers are at 15 to 17 Broadway, Westminster, S.W.1.

The whole of the stonework on the Purley and Coulsdon Council Offices, illustrated in THE ARCHITECTS' JOURNAL for October 29, 1930, was carried out by the Patent Victoria Stone Company, 638 Salisbury House, Finsbury Circus, E.C. 2. This pre-cast stone was finished to match Portland stone, has a very pleasing appearance, and is difficult to detect from natural stone. The carved caps are also carried out in Victoria stone. The steps to the main entrance are normal grey in finish, with Victorite non-slip treading surface.

The report of the directors of the Midland Bank Limited for the year ended December 31 last will be submitted to the shareholders at the ordinary general meeting to be held at the Cannon Street Hotel, E.C.4, today, January 21, 1931, at twelve o'clock noon. The directors report that, full provision having been made for all bad and doubtful debts, the net profits for the year amounted to £2,318,689 12s. 2d., to which has to be added the balance of £859,258 0s. 2d. brought forward from last account, making together a total sum of £3,177,947 12s. 4d. Out of this sum the following appropriations have been made: interim dividend for the half-year ended June 30, 1930, at the rate of 18 per cent. per annum less income tax, paid July 15, 1930, £982,861 5s. 5d.; bank premises redemption fund, £250,000; officers' pension fund, £100,000—a total of £1,332,861 5s. 5d. This leaves a sum of £1,845,086 6s. 11d., from which the directors recommend the payment of a dividend for the half-year ended December 31, 1930, at the rate of 18 per cent. per annum less income tax, payable February 2, 1931, £993,798 16s. 9d. Balance to be carried forward to next account, £851,287 10s. 2d. Mr. Robert Alexander Murray, a director of the Clydesdale Bank Limited, has been appointed a director of the bank. The aggregate assets of the Midland Bank and its affiliated companies exceed £521 millions. The bank now operates 2,100 branches in England and Wales; together with its affiliations, it has 2,550 offices in Great Britain and Northern Ireland.



The "Orientator" demonstrates visually the exact angle at which the sunshine will enter a room during summer and winter.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:

Eyre Court, N.W. (pages 127–31). General contractors: Gee, Walker and Slater, Ltd. Sub-contractors: Caxton Floors, Ltd., floors; Archibald D. Dawnay and Sons, Ltd., steelwork (supply); Cozens and Sutcliff, steelwork (fixing); Butter Bros. & Co., cranes; L. G. Ward, facing bricks; London Brick Co. and Forders, Ltd., brickwork; Empire Stone Co., Ltd., stonework; P. W. Courtenay, York stone; Williams and Williams, Ltd., metal windows; G. N. Haden and Sons, Ltd., heating and hot water; Hammond Bros. and Champness, Ltd., lifts; F. A. Norris & Co., Ltd., iron staircases; Potter Rax Gate Co., Ltd., decorative ironwork; T. & W. Farmiloe, Ltd., glazing and sanitary fittings; N. F. Ramsay & Co., Ltd., ironmongery; Berkeley Electrical Engineering Co., Ltd., electrical installation; North British Rubber Co., Ltd., rubber flooring; Hollis Bros. & Co., Ltd., oak flooring; W. B. Simpson and Sons, Ltd., terrazzo flooring; Faience and Tile Crafts, Ltd., glazed tiling; Electrolux, Ltd., refrigerators.

Lytham Bakery, St. Anne's (pages 137–40). General contractor: J. T. Gabbott. Sub-contractors: John Booth and Sons, steelwork; Thos. Cottam, joinery; C. W. Mallott (Preston), Ltd., plumbing; Norman Harrison & Co., electrical work; Carrier-Ross Engineering Co., Ltd., heating; Ruberoid Co., Ltd., roofing; Webbs (Preston), Ltd., building materials; Brown and Bennett, plastering, etc.; Russell Edwards & Co., Ltd., steel windows and cast panels; Pelkman Bros., baking machinery.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office. All inquiries concerning inventions, patents, and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W. 1. For copies of the full specifications here enumerated readers should apply to the Patent Office, 25 Southampton Buildings, W.C. 2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

38767. Reynolds, J. M. Construction of walls, roofs, etc. December 23.
123. Szego, S. Beam grates for roofs and ceilings. January 1.
194. Pipkin, G. L. Reinforced concrete ceiling. January 2.

SPECIFICATION PUBLISHED

340168. International Copperclad Co. Roof flashing and valleys.

ABSTRACTS PUBLISHED

338062. Dreger, O. Roofing.
338403. Rudin, E., and Kollbrunner, H. Waterproof sheets.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Plans passed at CAMBERWELL: Building, Ingoldisthorpe Grove, Glengall Road, for Mr. W. Ward; rebuilding "King William IV" public-house, Camberwell New Road, for Mr. W. G. Ingram; rebuilding of premises, 361–363 Old Kent Road, for Mr. M. K. Mathews; shop additions, 27a Half Moon Lane, for Mr. E. W. Wallis; building, 249 Camberwell Road, for Mr. A. V. Goad.

Plans passed at EAST HAM: Two houses, Kennard Street, for Mr. R. C. Turner Gordon; addition, rear of 14 High Street, for Messrs. J. Stokes and Son; alterations, rear of 225 High Street, for Mr. R. Slater (architect); alterations, 371–373 Green Street, for Mr. R. Slater.

Messrs. A. J. King, Ltd., are to build a factory at 159 and 161 Balls Pond Road, HACKNEY.

Landon's Granulated Fertiliser Co., Ltd., of Watford, are to erect a new factory at HEMEL HEMPSTEAD.

Messrs. J. Stanley Beard and Clare are preparing plans for enlarging the Palace Cinema, Kensal Rise, PADDINGTON.

The ROMFORD U.D.C. is to construct an open-air swimming bath and lay out recreation grounds, at a cost of £11,400.

The WATFORD Corporation is to erect 600 houses in the next five years.

Land at Leggatts Way and North-Western Avenue, WATFORD, is to be developed by the Watford Gardens Estate, Ltd.

Plans passed at WATFORD: House, The Gardens, for Messrs. W. Judge and Sons; two houses, Woodland Drive, for Messrs. Bracey, Ltd.; house, Langley Way, for Mr. E. Jones; two houses, Hempstead Road, for Messrs. Rice and Sons; workshop and garage, Tolpits Lane, for Mr. H. W. Tiner; store, Whippendell Road, for Mr. J. Reeves; extension of works, Whippendell Road, for the Sun Engraving Co.; addition, Leggatts Way, for the trustees of the Baptist Chapel; 6 houses, Orchard Drive, for Mr. E. W. Puddifoot; two houses, Maythorne Close, for Miss Budd.

The WEALDSTONE U.D.C. is to construct an open-air swimming bath, at a cost of £9,250.

The Wimbledon Public Utility Society is to erect three-storied flats on land between the Southern Railway and Toynbee Road, WIMBLEDON.

SOUTHERN COUNTIES

The EASTBOURNE Corporation Housing Committee has decided to adopt a programme to erect 150 houses in 1931 and fifty houses in each of the four succeeding years, and the Committee is to make application to the Ministry of Health for sanction to erect houses, at a density of twenty houses to the acre, on the Winchelsea Road site.

Plans passed at HASTINGS: Bungalow, St. Helens Road, for Messrs. Jeffery and Bowcock (architects); conversion into two flats, 54 and 55 Gensing Road, St. Leonards, for Messrs. Callow and Callow (architects); house, Essenden Road, St. Leonards, for Mr. L. H. Meyer (architect); conversion of garage into two houses, Elphinstone Road, for Mr. P. H. Oxley (architect); enlargement of shop, 90 Queen's Road, for Mr. J. Hunt (architect); additions, 62 Marina, St. Leonards, for Mr. P. H. Oxley (architect); house, Linton Road, for Mr. J. Hunt (architect); house, Linton Road, and additions and alterations, 4 Queen's Road, for Messrs. Jeffery and Bowcock (architects); two shops, Abbey Drive, St. Leonards, for Mr. H. H. Ford (architect); alterations and additions, Carlisle Hotel, for Mr. A. Ford (architect).

SOUTH-WESTERN COUNTIES

The BRISTOL Corporation reports that about 4,000 houses are to be erected on the Bedminster housing estate, and it will be necessary for the Education Committee to erect additional schools, including a secondary school.

The PLYMOUTH Corporation has adopted plans, by the city architect, for the erection of forty-six houses in Vicarage Road.

The PLYMOUTH Corporation is to purchase Plymouth Prison for £9,500.

The PLYMOUTH Corporation has obtained the approval of the Air Ministry for the layout and erection of the first section of the hangar and office accommodation at the aerodrome.

Plans passed at PLYMOUTH: Ten bungalows, Plaistow Crescent, for Messrs. A. E. Searle and Son; four houses, Breen Park Road, for Messrs. S. Tellam and Son; alterations and additions, Laira Hotel, Laira Place, for Octagon Brewery, Ltd.; three houses, Jephson Road, for Mr. F. J. Sluman; store, Market Place, for Mr. S. Knowles; four houses, North Down Road, for Mr. J. Binmore; two houses, Elmfield Road, for Mr. R. T. Pearce; eleven houses, Kent Road, for Mr. W. G. Perkins; office building, Princess Square, for Phœnix Assurance Co., Ltd.; new street, Burleigh Park estate, for Mr. F. Westcott; layout of land, Alma Road, for St. Aubyn Estates, Ltd.

The TORQUAY Education Committee is to obtain sites at Ellacombe and at Hele for two new senior schools.

MIDLAND COUNTIES

The BINGHAM U.D.C. is to erect twenty-eight houses on various housing sites.

The BURTON-ON-TRENT Corporation has purchased land in Woods Lane for the erection of thirty-three houses.

The Bakewell (Derbyshire) R.D.C. is acquiring a site at EYAM for the construction of a reservoir.

The ILKESTON Corporation has approved plans for the erection of fourteen houses on the Southern Housing Estate.

The OXFORD Corporation is to undertake clearance schemes involving the provision of 100 houses for re-housing displaced tenants.

The OXFORD Education Committee recommends the provision of an open-air school for about 140 children.

The OXFORD Education Committee is considering the erection of a preparatory school for boys under eleven or twelve.

Plans passed at OXFORD: Two houses, Crescent Road, Cowley, for Messrs. Bradbury Bros.; conversion of buildings into dairy, for the Oxford Co-operative Society, Ltd.; bungalow, Highfield Avenue, Headington, for Mr. W. Bruce; additions, Botley Road, for the Oxford Ice Skating Rink Co., Ltd.; alterations, Radcliffe Arms, Cranham Street, for Northampton Brewery; garages, rear of 4 and 6, Abingdon Road, for Messrs. J. Sainsbury, Ltd.; house, Stephen Road, Headington, for Mr. H. W. Jacobs; house, Latimer Road, for Mr. A. Simmons; two houses, Capel Close, Summertown, for Mr. H. Capel; extension of premises, for Messrs. B. H. Blackwell, Ltd.; store, Hill Top Road, for Mr. Hurford; new offices, Garsington Road, Cowley, for the Pressed Steel Co. of Great Britain, Ltd.; eighty-two houses, Towns Road, for Messrs. N. Moss and Son; office extension, Merton Street, for the Oxford Local Examination Board; twelve houses, Forest Road, for Mr. L. J. Davies and Co.; alterations, Albert Arms, Albert Street, for Messrs. Ushers' Wiltshire Brewery.

NORTHERN COUNTIES

The BRADFORD Watch Committee has approved plans with respect to certain alterations at the following picture-houses: Empress Picture House, Park Road Cinema, and the New Victoria.

The BURY Corporation is to erect 200 flats on the Springs estate.

The CARLISLE, CUMBERLAND AND WESTMORLAND Joint Committee for the Mentally Defective has adopted a revised scheme for the adaptation of Dovenby Hall as a colony for mental defectives, at a cost of £28,000.

The CARLISLE Corporation recommends the erection of municipal buildings and shops on the English Street site.

The Ministry of Health has held an inquiry into the proposal of the DURHAM Corporation, for a loan of £25,000 for the provision of baths.

The LEEDS Corporation has obtained sanction to borrow £23,814, for extensions at the Rodley Sewage Works.

The LIVERPOOL Corporation has passed plans, by Mr. A. E. Shennan, architect, for the erection of an ice-skating rink and boxing stadium in London Road.

The LIVERPOOL Education Committee is to erect an elementary school for 1,800 children at Norris Green.

The PRESTON Education Committee is to erect a senior school in Frenchwood Avenue.

The Bredbury and Romiley U.D.C. is to erect twenty-two houses on the Cherry Tree estate, ROMILEY.

The SHEFFIELD Corporation Estates Committee has decided to purchase an additional site at Totley Rise, required for housing purposes.

Plans passed at SHEFFIELD: Two houses, Grange Road, for Messrs. Dyson & Co.; shop and house, Nether Shire Lane, for Miss Wetherill; house, Whirlow Court Road, for Mr. W. C. Mander; two houses, Crimicar Lane, for Mr. Thomas Pye; four houses, Endowood Road, for Mr. W. W. Plant; eighty-eight houses, Shiregreen Estate, for the Corporation Estate Committee; house and licensed premises, Manchester Road, for Messrs. Turswells' Brewery Co., Ltd.; house, Edgehill Road, for Mr. J. B. J. Inge.

The SHEFFIELD Corporation Water Committee has received sanction to borrow £50,000 for constructional work at the Ewden Valley waterworks.

The SHEFFIELD Corporation Estates Committee has received sanction to borrow £47,101 for the erection of houses and extensions of gas mains on the Shiregreen Estate.

The Brightside and Carbrook Co-operative Society, Ltd., is to erect premises on the Shiregreen estate, SHEFFIELD.

The SHEFFIELD Corporation is to erect a further twenty-six houses on the Longley estate and ninety-eight houses on the Shiregreen estate.

The Ministry of Health has held an inquiry into the proposal of the STRETFORD U.D.C. for the erection of municipal offices, at a cost of £129,500.

The Lancashire Education Committee is to erect an elementary school for about 350 children at TOTTINGTON.

The WAKEFIELD Corporation has arranged to erect 500 houses within the next five years.

Plans passed at WAKEFIELD: Bakehouse, Union Street, for Messrs. C. Hagenbach and Sons, Ltd.; alterations and additions, Stennard Island, for the British Jeffrey Diamond, Ltd.; additions and alterations, Clothier's Arms, Dewsbury Road, for the Leeds and Wakefield Brewery, Ltd.; public-house, Providence Street, for the Leeds and Batley Properties, Ltd.

The WARRINGTON Corporation has obtained sanction to borrow £42,965, for the erection of 122 houses on the Westy Lane estate.

The WEDNESBURY Education Committee is to proceed with the erection of a senior girls' school at Holyhead Road.

The YORK Corporation has authorized the Estates Committee to negotiate for the purchase of the old prison.

The YORK Corporation is to arrange for the erection of about 150 houses on the Hewarth Grange estate.

The YORK Corporation has approved plans for the erection of fifty houses on the Hewarth Grange estate.

The YORK Corporation Housing Committee recommends the purchase of part of the Garrow Hill Estate, containing eighteen acres of land, for housing purposes.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers; the rate forcrafts men working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDABE	S. Wales & M.	1 6½	1 1¾
A_1	Abergavenny	S. Wales & M.	1 6½	1 1¾
B	Abingdon ..	S. Counties	1 5	1 0¾
A	Accrington	N.W. Counties	1 7	1 2¼
A_3	Addlestone	S. Counties	1 5½	1 1
A	Adlington ..	N.W. Counties	1 7	1 2¼
A	Airdrie ..	Scotland	*1 7	1 2¼
C	Aldeburgh ..	E. Counties	1 3	11½
A	Altrincham	N.W. Counties	1 7	1 2¼
B_3	Appleby ..	N.W. Counties	1 3½	11½
A	Ashton-under-Lyne	N.W. Counties	1 7	1 2¼
A_3	Atherstone	Mid. Counties	1 5½	1 1
B_3	Aylesbury ..	S. Counties	1 3½	11½
B_2	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4½	1 0¾
A_1	Barnard Castle	N.E. Coast	1 6½	1 1¾
A	Barnsley ..	Yorkshire	1 7	1 2¼
B_2	Barnstaple	S.W. Counties	1 4	1 0
A	Barrow ..	N.W. Counties	1 7	1 2¼
A	Barry ..	S. Wales & M.	1 7	1 2¼
B_2	Basingstoke	S.W. Counties	1 4	1 0
A_3	Bath ..	S.W. Counties	1 5½	1 1
A	Batley ..	Yorkshire	1 7	1 2¼
A_3	Bedford ..	E. Counties	1 5½	1 1
A_2	Berwick-on-Tweed	N.E. Coast	1 6	1 1½
A_2	Bewdley ..	Mid. Counties	1 6	1 1½
B_3	Bicester ..	Mid. Counties	1 3½	11½
A	Birkenhead ..	N.W. Counties	*1 9	1 3¼
A	Birmingham	Mid. Counties	1 7	1 2¼
A_1	Bishop Auckland	N.E. Coast	1 6½	1 1¾
A	Blackburn ..	N.W.Counties	1 7	1 2¼
A	Blackpool ..	N.W. Counties	1 7	1 2¼
A	Blyth ..	N.E. Coast	1 7	1 2¼
B_3	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 7	1 2¼
A_3	Boston ..	Mid. Counties	1 5½	1 1
A_3	Bournemouth	S. Counties	1 5½	1 1
B_2	Bovey Tracey	S.W. Counties	1 4	1 0
A	Bradford ..	Yorkshire	1 7	1 2¼
A_2	Brentwood	E. Counties	1 6	1 1½
A	Bridgend ..	S. Wales & M.	1 7	1 2¼
B_2	Bridgwater	S.W. Counties	1 4	1 0
A_1	Bridlington	Yorkshire	1 6½	1 1¾
A	Brighouse ..	Yorkshire	1 7	1 2¼
A_3	Brighton ..	S. Counties	1 5½	1 1
A	Bristol ..	S.W. Counties	1 7	1 2¼
B_3	Brixham ..	S.W. Counties	1 3½	11½
A_2	Bromsgrove	Mid. Counties	1 6	1 1½
C	Bromyard ..	Mid. Counties	1 3	11½
A	Burnley ..	N.W. Counties	1 7	1 2¼
A	Bursiem ..	Mid. Counties	1 7	1 2¼
A	Burton-on-Trent	Mid. Counties	1 7	1 2¼
A	Bury ..	N.W. Counties	1 7	1 2¼
A_1	Buxton ..	N.W. Counties	1 6½	1 1¾
A_3	CAMBRIDGE	E. Counties	1 5½	1 1
B_2	Canterbury	S. Counties	1 4	1 0
A	Cardiff ..	S. Wales & M.	1 7	1 2¼
A	Carlisle ..	N.W. Counties	1 7	1 2¼
B	Carmarthen	S. Wales & M.	1 5	1 0¾
B_1	Carnarvon ..	N.W. Counties	1 4½	1 0¾
A	Carnforth ..	N.W. Counties	1 7	1 2¼
A	Castleford ..	Yorkshire	1 7	1 2¼
B_1	Chatham ..	S. Counties	1 4½	1 0¾
B_1	Chelmsford	E. Counties	1 4½	1 0¾
A_3	Cheltenham	S.W. Counties	1 5½	1 1
A	Chester ..	N.W. Counties	1 7	1 2¼
A	Chesterfield	Mid. Counties	1 7	1 2¼
B_2	Chichester ..	S. Counties	1 4	1 0
A	Chorley ..	N.W. Counties	1 7	1 2¼
B_2	Cirencester	S. Counties	1 4	1 0
A	Clitheroe ..	N.W. Counties	1 7	1 2¼
A	Clydebank ..	Scotland	1 7	1 2¼
A	Coalville ..	Mid. Counties	1 7	1 2¼
A_3	Colchester ..	E. Counties	1 5½	1 1
A	Colne ..	N.W. Counties	1 7	1 2¼
A_3	Colwyn Bay	N.W. Counties	1 5½	1 1
A_1	Consett ..	N.E. Coast	1 6½	1 1¾
A_3	Conway ..	N.W. Counties	1 5½	1 1
A	Coventry ..	Mid. Counties	1 7	1 2¼
A_3	Crewe ..	N.W. Counties	1 6	1 1½
A_3	Cumberland	N.W. Counties	1 5½	1 1
A	DARLINGTON	N.E. Coast	1 7	1 2¼
A	Darwen ..	N.W. Counties	1 7	1 2¼
B_2	Deal ..	S. Counties	1 4	1 0
A_3	Denbigh ..	N.W. Counties	1 5½	1 1
A	Derby ..	Mid. Counties	1 7	1 2¼
A	Dewsbury ..	Yorkshire	1 7	1 2¼
B	Didcot ..	S. Counties	1 5	1 0¾
A	Doncaster ..	Yorkshire	1 7	1 2¼
B_3	Dorchester	S.W. Counties	1 3½	11½
A_3	Driffield ..	Yorks	1 5½	1 1
A_2	Droitwich ..	Mid. Counties	1 5½	1 1
A	Dudley ..	Mid. Counties	1 7	1 2¼
A	Dundee ..	Scotland	1 7	1 2¼
A	Durham ..	N.E. Coast	1 6½	1 1¾
A_2	EAST-BOURNE	S. Counties	1 5½	1 1
A_1	Ebbw Vale	S. Wales & M.	1 6½	1 1¾
A	Edinburgh	Scotland	1 7	1 2¼
A_1	E. Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6½	1 1¾
A_2	Exeter ..	S.W. Counties	*1 6	1 1½
B_2	Exmouth ..	S.W. Counties	1 4	1 0
B	FELIXSTOWE	E. Counties	1 5	1 0¾
A_3	Filey ..	Yorks	1 5½	1 1
A	Fleetwood ..	N.W. Counties	1 7	1 2¼
B_2	Folkestone	S. Counties	1 4	1 0
A	Frodsham ..	N.W. Counties	1 7	1 2¼
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 7	1 2¼
B_1	Gillingham	S. Counties	1 4½	1 0¾
A_2	Gloucester ..	S.W. Counties	1 6	1 1½
A_2	Goole ..	Yorkshire	1 6	1 1½
A_3	Gosport ..	S. Counties	1 5½	1 1
A_3	Grantham ..	Mid. Counties	1 5½	1 1
A_1	Gravesend ..	S. Counties	1 6½	1 1¾
A	Greenock ..	Scotland	*1 7	1 2¼
A	Grimsby ..	Yorkshire	1 7	1 2¼
B_1	Guildford ..	S. Counties	1 4½	1 0¾
A	HALIFAX	Yorkshire	1 7	1 2¼
A	Hanley ..	Mid. Counties	1 7	1 2¼
A	Harrogate ..	Yorkshire	1 7	1 2¼
A	Hartlepools	N.E. Coast	1 7	1 2¼
B_1	Harwich ..	E. Counties	1 4½	1 0¾
B_2	Hastings ..	S. Counties	1 4	1 0
A_3	Hatfield ..	S. Counties	1 5½	1 1
B	Hereford ..	S.W. Counties	1 5½	1 0¾
B	Hertford ..	E. Counties	1 5	1 0¾
A_1	Heysham ..	N.W. Counties	1 6½	1 1¾
A_1	Howden ..	N.E. Coast	1 6½	1 1¾
A	Huddersfield	Yorkshire	1 7	1 2¼
A	Hull ..	Yorkshire	1 7	1 2¼
A	ILKLEY ..	Yorkshire	1 7	1 2¼
A	Immingham	Mid. Counties	1 7	1 2¼
A_3	Ipswich ..	E. Counties	1 5½	1 1
B_3	Isle of Wight	S. Counties	1 3½	11½
A	JARROW ..	N.E. Coast	1 7	1 2¼
A	KEIGHLEY	Yorkshire	1 7	1 2¼
B	Kendal ..	N.W. Counties	1 5	1 0¾
B	Keswick ..	N.W. Counties	1 5	1 0¾
A_2	Kettering ..	Mid. Counties	1 6	1 1½
A_2	Kidderminster	Mid. Counties	1 6	1 1½
B_2	King's Lynn	E. Counties	1 4	1 0
A	LANCASTER	N.W. Counties	1 7	1 2¼
A_2	Leamington	Mid. Counties	1 6	1 1½
A	Leeds ..	Yorkshire	1 7	1 2¼
A	Leek ..	Mid. Counties	1 7	1 2¼
A	Leicester ..	Mid. Counties	1 7	1 2¼
A	Leigh ..	N.W. Counties	1 7	1 2¼
B_3	Lewes ..	S. Counties	1 3½	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1
A	Lincoln ..	Mid. Counties	1 7	1 2¼
A	Liverpool ..	N.W. Counties	*1 9	1 3¼
A_2	Llandudno	N.W. Counties	1 5½	1 1
A	Llanelly ..	S. Wales & M.	1 7	1 2¼
	London (12-miles radius)		1 8½	1 3½
	Do. (12–15 miles radius)		1 8	1 3
A	Long Eaton	Mid. Counties	1 7	1 2¼
A	Loughborough	Mid. Counties	1 7	1 2¼
A_2	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 7	1 2¼
A_1	MACCLESFIELD	N.W. Counties	1 6½	1 1¾
B_1	Maidstone ..	S. Counties	1 4½	1 0¾
A_3	Malvern ..	Mid. Counties	1 5½	1 1
A	Manchester	N.W. Counties	1 7	1 2¼
A	Mansfield ..	Mid. Counties	1 7	1 2¼
B_2	Margate ..	S. Counties	1 4	1 0
A_3	Matlock ..	Mid. Counties	1 5½	1 1
A_1	Merthyr ..	S. Wales & M.	1 6½	1 1¾
A	Middlesbrough	N.E. Coast	1 7	1 2¼
A_2	Middlewich	N.W. Counties	1 6	1 1½
B_2	Minehead ..	S.W. Counties	1 4	1 0
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 7	1 2¼
A	Morecambe	N.W. Counties	1 7	1 2¼
A_2	NANTWICH	N.W. Counties	1 6	1 1½
A	Neath ..	S. Wales & M.	1 7	1 2¼
A	Nelson ..	N.W. Counties	1 7	1 2¼
A	Newcastle ..	N.E. Coast	1 7	1 2¼
A	Newport ..	S. Wales & M.	1 7	1 2¼
A	Normanton	Yorkshire	1 7	1 2¼
A_1	Northampton	Mid. Counties	1 6½	1 1¾
A	North Staffs.	Mid. Counties	1 7	1 2¼
A	North Shields	N.E. Coast	1 7	1 2¼
A_2	Norwich ..	E. Counties	1 6	1 1½
A	Nottingham	Mid. Counties	1 7	1 2¼
A	Nuneaton ..	Mid. Counties	1 7	1 2¼
B	OAKHAM ..	Mid. Counties	1 5	1 0¾
A	Oldham ..	N.W. Counties	1 7	1 2¼
A_2	Oswestry ..	N.W. Counties	1 5½	1 1
B	Oxford ..	S. Counties	1 5½	1 0¾
A	PAISLEY ..	Scotland	*1 7	1 2¼
B_3	Pembroke ..	S. Wales & M.	1 3½	11½
A	Perth ..	Scotland	*1 7	1 2¼
A_3	Peterborough	E. Counties	1 6	1 1½
A	Plymouth ..	S.W. Counties	*1 7	1 2¼
A	Pontefract	Yorkshire	1 7	1 2¼
A_1	Pontypridd	S. Wales & M.	1 6½	1 1¾
A_3	Portsmouth	S. Counties	1 5½	1 1
A	Preston ..	N.W. Counties	1 7	1 2¼
A	QUEENSFERRY	N.W. Counties	1 7	1 2¼
A_2	READING	S. Counties	1 5½	1 1
B	Reigate ..	S. Counties	1 5	1 0¾
A_2	Retford ..	Mid. Counties	1 5½	1 1
A_1	Rhondda Valley	S. Wales & M.	1 6½	1 1¾
A_2	Ripon ..	Yorkshire	1 5½	1 1
A	Rochdale ..	N.W. Counties	1 7	1 2¼
B_1	Rochester ..	S. Counties	1 4½	1 0¾
A_1	Ruabon ..	N.W. Counties	1 6½	1 1¾
A	Rugby ..	Mid. Counties	1 7	1 2¼
A_3	Rugeley ..	Mid. Counties	1 5½	1 1
A	Runcorn ..	N.W. Counties	1 7	1 2¼
A_2	ST. ALBANS	E. Counties	1 6	1 1½
A	St. Helens ..	N.W. Counties	1 7	1 2¼
B_3	Salisbury ..	S.W. Counties	1 3½	11½
A_1	Scarborough	Yorkshire	1 6½	1 1¾
A	Scunthorpe	Mid. Counties	1 7	1 2¼
A	Sheffield ..	Yorkshire	1 7	1 2¼
A	Shipley ..	Yorkshire	1 7	1 2¼
A_2	Shrewsbury	Mid. Counties	1 6	1 1½
A_2	Skipton ..	Yorkshire	1 6	1 1½
A_3	Slough ..	S. Counties	1 5½	1 1
A_2	Solihull ..	Mid. Counties	1 6	1 1½
A_3	South'pton	S. Counties	1 5½	1 1
A_2	Southend-on-Sea	E. Counties	1 6	1 1½
A	Southport ..	N.W. Counties	1 7	1 2¼
A	S. Shields ..	N.E. Coast	1 7	1 2¼
A_2	Stafford ..	Mid. Counties	1 6	1 1½
A	Stockport ..	N.W. Counties	1 7	1 2¼
A	Stockton-on-Tees	N.E. Coast	1 7	1 2¼
A	Stoke-on Trent	Mid. Counties	1 7	1 2¼
B_1	Stroud ..	S.W. Counties	1 4½	1 0¾
A	Sunderland	N.E. Coast	1 7	1 2¼
A	Swadlincote	Mid. Counties	1 7	1 2¼
A	Swansea ..	S. Wales & M.	1 7	1 2¼
B	Swindon ..	S.W. Counties	1 5	1 0¾
A_1	TAMWORTH	N.W. Counties	1 6½	1 1¾
B_1	Taunton ..	S.W. Counties	1 4½	1 0¾
A	Teesside Dist.	N.E. Counties	1 7	1 2¼
B	Teignmouth	S.W. Coast	1 5	1 0¾
A	Todmorden	Yorkshire	1 7	1 2¼
A	Torquay ..	S.W. Counties	1 7	1 2¼
C	Truro ..	S.W. Counties	1 3	11½
B	Tunbridge Wells	S. Counties	1 5	1 0¾
A	Tunstall	Mid. Counties	1 7	1 2¼
A	Tyne District	N.E. Coast	1 7	1 2¼
A	WAKEFIELD	Yorkshire	1 7	1 2¼
A	Walsall ..	Mid. Counties	1 7	1 2¼
A	Warrington	N.W. Counties	1 7	1 2¼
A_2	Warwick ..	Mid. Counties	1 6	1 1½
A_3	Wellingborough	Mid. Counties	1 5½	1 1
A	West Bromwich	Mid. Counties	1 7	1 2¼
B	Weston-s-Mare	S.W. Counties	1 5	1 0¾
A_2	Whitby ..	Yorkshire	1 6	1 1½
A	Widnes ..	N.W. Counties	1 7	1 2¼
A	Wigan ..	N.W. Counties	1 7	1 2¼
B_1	Winchester	S. Counties	1 4½	1 0¾
A_3	Windsor ..	S. Counties	1 5½	1 1
A	Wolverhampton	Mid. Counties	1 7	1 2¼
A_2	Worcester	Mid. Counties	1 6	1 1½
A_2	Worksop ..	Yorkshire	1 5½	1 1
A_1	Wrexham ..	N.W. Counties	1 6½	1 1¾
A_3	Wycombe ..	S. Counties	1 5½	1 1
B_1	YARMOUTH	E. Counties	1 4½	1 0¾
B_2	Yeovil ..	S.W. Counties	1 4	1 0
A	York ..	Yorkshire	1 7	1 2¼

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rate of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8½
Carpenter . . . . ,,	1 8½
Joiner . . . . ,,	1 8½
Machinist . . . . ,,	1 9½
Mason (Banker) . . . ,,	1 8½
,, (Fixer) . . . ,,	1 9½
Plumber . . . . ,,	1 8½
Painter . . . . ,,	1 7½
Paperhanger . . . ,,	1 8½
Glazier . . . . ,,	1 8½
Slater . . . . ,,	1 8½
Scaffolder . . . . ,,	1 4½
Timberman . . . . ,,	1 4½
Navvy . . . . ,,	1 3½
General Labourer . . . ,,	1 3½
Lorryman . . . . ,,	1 6
Crane Drivers . . . . ,,	1 7½
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . ,,	2 10 6
Hydrated Lime . . . ,,	2 16 0
Portland Cement . . . ,,	2 6 0
Ferro-crete . . . . ,,	2 13 6
Ciment Fondu . . . ,,	5 15 0
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . ,,	10 0
Building Sand . . . ,,	10 6
Washed Sand . . . ,,	11 6
2" Broken Brick . . . ,,	9 6
¾" ,, ,, . . . ,,	12 6
Pan Breeze . . . . ,,	6 6
Coke Breeze . . . . ,,	8 9

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . ,,	3 3 6
Stocks, 1st Quality . . ,,	4 18 6
,, 2nd ,, . . ,,	4 12 6
Blue Bricks, Pressed . . ,,	9 18 0
,, Wirecuts . . ,,	8 16 0
,, Brindles . . ,,	8 0 0
,, Bullnose . . ,,	10 8 0
Red Sand-faced Facings . ,,	7 11 0
Red Rubbers for Arches . ,,	15 0 0
Multicoloured Facings . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . ,,	21 10 0
Headers . . . . ,,	21 0 0
Bullnose . . . . ,,	28 0 0
Double Stretchers . . ,,	30 0 0
Double Headers . . ,,	27 0 0
Glazed Second Quality, *Less* ,,	1 0 0
,, Buffs and Creams, Add ,,	2 0 0
,, Other Colours ,,	5 10 0
2" Breeze Partition Blocks . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . ,,	6 3	7 2
Rest bends . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¾" Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers . . ,,	5 6	7 9
Yard gullies . . ,,	9 6	11 6
Interceptors . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . . ,,	5	—

MASON

	s. d.
The following d/d F.O.R. at Nine Elms:	
Portland stone, Whitbed . . F.C.	4 6
,, ,, Basebed . . ,,	4 9
Bath stone . . . . ,,	2 11
York stone . . . . ,,	6 9
,, Sawn templates . . ,,	7 6
,, Paving, 2" . . . F.S.	1 8
,, 3" . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station.

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . ,,	28 0 0
20" × 10" Countesses . ,,	20 5 0
18" × 10" Viscountesses . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20" × 10" medium grey . per M.	26 0 0
,, green . ,,	27 15 0
Best machine roofing tiles . ,,	5 0 0
Best hand-made do. . . ,,	5 10 0
Hips and valleys . . each	9½
,, hand-made . . ,,	10
Nails, compo . . . lb.	4
,, copper . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . as 1" F.S.	9
Deal, Joiner's, . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . ,, ,,	1 3
,, African . ,, ,,	1 1
,, Cuban . ,, ,,	2 6
Oak, plain American . ,, ,,	1 0
,, Figured ,, . ,, ,,	1 3
,, Plain Japanese . ,, ,,	1 2
,, Figured ,, . ,, ,,	1 5
,, Austrian wainscot . ,, ,,	1 6
,, English ,, . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . ,, ,,	4
Teak, Moulmein . . ,, ,,	1 3
,, Burma . . ,, ,,	1 2
Walnut, American . . ,, ,,	2 3
,, French . . ,, ,,	2 3
Whitewood, American . ,, ,,	1 1
Deal floorings, ¾" . . Sq.	1 1 0
,, 7/8" . . ,,	1 3 6
,, 1" . . ,,	1 5 6
,, 1¼" . . ,,	1 11 0
,, 1½" . . ,,	1 15 0
Deal matchings, ¾" . . ,,	16 0
,, ⅞" . . ,,	17 6
,, 1" . . ,,	1 6 0
Rough boarding, ¾" . . ,,	18 0
,, 1" . . ,,	1 0 0
,, 1½" . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	⅛"	¼"	⅜"	½"
Qualities	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch	4 3 2	5 4 3	7½ 6 4½	8½ 7 6
Alder	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6
Gaboon Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –
Figured Oak 1 side	8½ 7 –	10 8 –	11½ – –	1/6 – –
Plain Oak 1 side	6½ 6 –	7½ 7 –	9½ – –	1/0 – –
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	½"	1"	1¼"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket union . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

Per cent.		Per cent.
Gas . . . 62½	Galvanized gas .	50
Water . . . 58⅓	,, water .	45
Steam . . . 55	,, steam .	40

FITTINGS.

Gas . . .	47½	Galvanized gas .	37½
Water . . .	42½	,, water .	32½
Steam . . .	37½	,, steam .	27½

SMITH AND FOUNDER—(*continued*):

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ⅜" . . . ,,	10 0
,, ,, ½" . . . ,,	9 9
,, ,, ⅝" . . . ,,	9 6
,, ,, ¾" . . . ,,	9 0
,, ,, ⅞" . . . ,,	9 0
,, ,, 1" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0

	F.R.	3" s. d.	4" s. d.
Cast-iron rain-water pipes of ordinary thickness metal .	F.R.	7	10
Shoes . . . . each		2 3	3 3
Anti-splash ,, . . ,,		5 0	8 6
Boots . . . . ,,		3 3	4 6
Bends . . . . ,,		2 9	4 0
,, with access door . ,,		—	6 9
Heads . . . . ,,		4 0	5 0
Swan-necks up to 9" offsets . ,,		4 0	6 3
Plinth bends, 4½" to 6" . ,,		4 0	5 6
Half-round rain-water gutters of ordinary thickness metal .	F.R.	⅝	6
Stop ends . . . . each		6	7
Angles . . . . ,,		1 7	1 11
Obtuse ,, . . . ,,		2 0	2 6
Outlets . . . . ,,		1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	24 0
,, drawn pipes . . . ,,	24 6
,, soil pipe . . . ,,	27 6
,, scrap . . . ,,	14 0
Solder, plumbers' . . . lb.	1 0
,, fine do. . . . ,,	1 4
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

	3"	4"	6"
L.C.C. soil and waste pipes:			
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . ,,	3 9	5 3	10 3
Shoes . . ,,	2 10	4 4	9 6
Heads . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . ,,		1 3
¼" Polished plate, n/e 1 . ,,	1 0	to 1 3
,, ,, 2 . ,,	1 2	,, 1 7
,, ,, 3 . ,,	1 7	,, 2 5
,, ,, 4 . ,,	2 1	,, 2 11
,, ,, 6 . ,,	2 3	,, 3 2
,, ,, 8 . ,,	2 6	,, 3 6
,, ,, 12 . ,,	2 9	,, 3 8
,, ,, 20 . ,,	3 0	,, 3 11
,, ,, 45 . ,,	3 3	,, 4 1
,, ,, 65 . ,,	3 7	,, 4 6
,, ,, 90 . ,,	3 10	,, 4 9
,, ,, 100 . ,,	4 0	,, 5 0
Vita glass, sheet, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		1 3
,, ,, ,, 4 . ,,		1 6
,, ,, plate, n/e 1 . ,,		2 6
,, ,, ,, 2 . ,,		4 6
,, ,, ,, 4 . ,,		4 9
,, ,, ,, 6 . ,,		5 2
,, ,, ,, 8 . ,,		6 6
Putty, linseed oil . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 4
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR		£ s. d.
Digging over surface n/e 12″ deep and cart away	Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away	Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away	,,	11 0
,, ,, 10′ 0″ deep and cart away	,,	11 6
,, ,, 15′ 0″ deep and cart away	,,	12 0
If in stiff clay	add ,,	3 0
If in underpinning	,, ,,	5 0
Digging, return, fill and ram	,,	5 0
Planking and strutting to sides of excavation	F.S.	1 0
,, ,, to pier holes	,,	6
,, ,, to trenches	,,	6
,, ,, extra, only if left in	,,	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	,,	1 13 6
,, ,, ,, (4-2-1)	,,	1 18 6
,, ,, ,, underpinning	,,	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, junctions	,,	3 9	4 6
Gullies and gratings	,,	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
,, ,, in cement	,,	34 0 0
,, Stocks in cement	,,	41 10 0
,, Blues in cement	,,	62 0 0
Extra only for circular on plan	,,	3 0 0
,, backing to masonry	,,	2 0 0
,, raising on old walls	,,	3 0 0
,, underpinning	,,	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	,,	1 0
,, red brick facings	,,	1 6
,, blue brick facings	,,	1 9
,, glazed brick facings	,,	4 6
Tuck pointing	,,	10
Weather pointing	,,	4
Slate dampcourse	,,	1 0
Vertical dampcourse	,,	1 3

ASPHALTER		s. d.
½″ Horizontal dampcourse	Y.S.	5 6
½″ Vertical dampcourse	,,	7 6
½″ paving or flat	,,	5 6
1″ paving or flat	,,	6 6
1″ × 6″ skirting	F.R.	1 0
Angle fillet	,,	2
Rounded angle	,,	2
Cesspools	Each	5 0

MASON		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do. all as last	,,	15 6
Artificial stone and do.	,,	16 6
York stone templates, fixed complete	,,	14 0
,, thresholds	,,	16 0
,, sills	,,	1 3 6

SLATER AND TILER		£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	4 5 0
Do., 18″ × 9″	,,	4 2 0
Do., 24″ × 12″	,,	4 12 0
Westmorland slating, laid with diminished courses	,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	,,	4 0 0
Do., all as last, but of machine-made tiles	,,	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
,, to stanchions	,,	1 0
,, to staircases	,,	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	,,	6 9
,, ,, roofs	,,	8 3
,, ,, trusses	,,	9 0
,, ,, partitions	,,	12 0
½″ deal sawn boarding and fixing to joists	Sqr.	1 17 6
1″ ,, ,, ,, ,,	,,	2 1 6
1½″ ,, ,, ,, ,,	,,	2 7 6
¾″ × 2″ fir battening for Countess slating	,,	12 6
Do. for 4″ gauge tiling	,,	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
,, ,, ,, 2 ,,	,,	3 0
,, ,, ,, 3 ,,	,,	3 6
Stout herringbone strutting to 9″ joists	F.R.	1 0
1″ deal gutter boards and bearers	F.S.	1 4
1½″ ,, ,, ,, ,,	,,	1 8
2″ deal wrought rounded roll	F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
1¼″ do.	,,	3 4 0
1½″ do.	,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1¼″ do.	,,	2 1

CARPENTER AND JOINER—*continued.*		s. d.
1¼″ deal moulded sashes of average size	F.S.	2 3
2″ ,, ,, ,, ,,	,,	2 6
1¼″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ⅝″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	4 3
2″ ,, ,, ,, ,,	,,	4 6
Extra only for moulded horns	Each	9
1¼″ deal four-panel square, both sides, door	F.S.	2 6
2″ ,, ,, ,, ,,	,,	3 0
1¼″ ,, but moulded both sides	,,	3 0
2″ ,, ,, ,, ,,	,,	3 6
4″ × 3″ deal, rebated and moulded frames	F.R.	1 6
4½″ × 3½″ ,, ,, ,, ,,	,,	2 0
1¼″ deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	3 0
1¼″ deal moulded wall strings	,,	2 6
1¼″ ,, outer strings	,,	2 9
Ends of treads and risers housed to string	Each	2 0
3″ × 2″ deal moulded handrail	F.R.	1 6
1″ × 1″ deal balusters and housing each end	Each	2 6
1¼″ × 1¼″ ,, ,, ,, ,,	,,	3 3
3″ × 3″ deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	,,	7 6

SMITH AND FOUNDER		£ s. d.
Rolled steel joists cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders and hoisting and fixing in position	,,	1 3 0
Do. stanchions with riveted caps and bases and do.	,,	1 2 0
Mild steel bar reinforcement ¼″ and up, bent and fixed complete	,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	2 0 6
Do. in flashings	,,	2 3 0
Do. in covering to turrets, etc.	,,	2 10 0
Do. in soakers	,,	1 16 0
Labour to welted edge	F.R.	3½
Open copper nailing	,,	3½
Close ,,	,,	4½

		½″ s. d.	¾″ s. d.	1″ s. d.	1¼″ s. d.	2″ s. d.	4″ s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 3	1 8	2 2	2 9	3 10	—
Do. soil pipe and fixing with cast lead tacks	,,	—	—	—	—	—	6 0
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions	,,	3 6	4 0	5 6	8 0	—	—
Lead traps	,,	—	—	—	—	—	—
Screw down bib valves	,,	7 6	10 6	12 6	—	—	—
Do. stop cocks	,,	10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4″ cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	,,	1 6
Do. outlets	,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	,,	5 6

PLASTERER AND TILING		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	,,	5 6
Lathing with sawn laths to ceilings	,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	,,	2 6
Do. vertical	,,	2 9
Rough render on walls	,,	2 3
Render, float and set in lime and hair	,,	3 0
Render and set in Sirapite	,,	3 3
Render, backing in cement and sand, and set in Keene's cement	,,	4 6
Extra, only if on lathing	,,	9
Keene's cement, angle and arris	F.R.	8
Arris	,,	3
Rounded angle, small	,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth	,,	2
1″ granolithic pavings	Y.S.	5 0
1½″ ,,	,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed	,,	1 2 6
9″ × 3″ ,, ,, ,,	,,	1 7 6
Extra, only for small quadrant angle	F.R.	9

GLAZIER		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	,,	1 0
Arctic glass and glazing with putty	,,	1 2
Cathedral glass and do.	,,	1 3
Glazing only, British polished plate	,,	8
Extra, only if in beads	,,	2
Washleather	F.R.	4

PAINTER		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	,,	1 0
Do. with washable distemper	,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3 3
Do. on woodwork	,,	3 6
Do. on steelwork	,,	3 0
Do. and brush grain and twice varnish	,,	5 6
Stain and twice varnish woodwork	,,	1 11
Stain and wax-polish woodwork	,,	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper	from ,,	3 0

MEMORIAL CHURCH: AYOT ST. LAWRENCE

MEASURED DRAWINGS OF THE CHURCH AND MONUMENT TO SIR LYONEL LYDE, BARONET

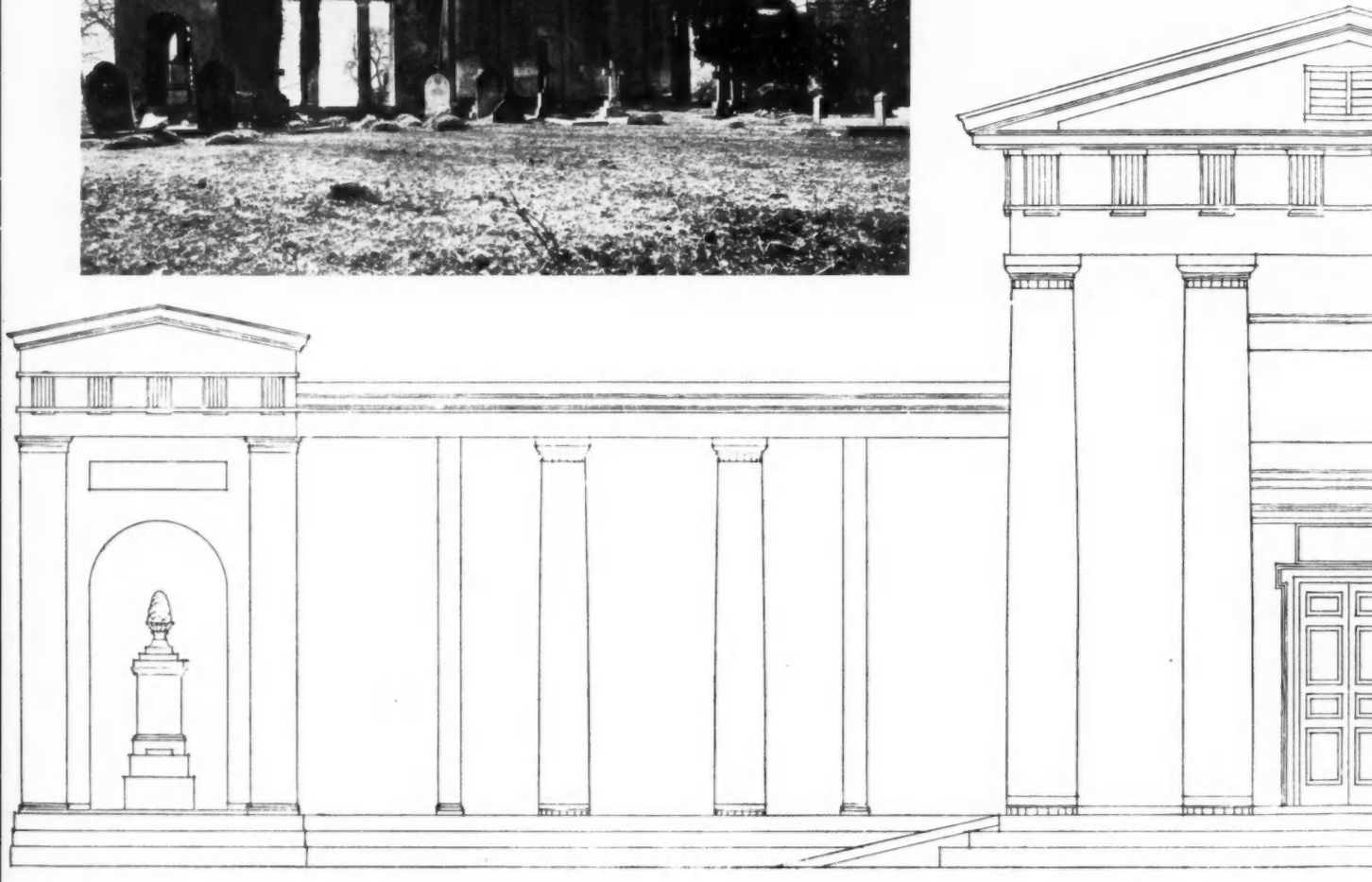


THE MONUMENT, SHOWING CONNECTION WITH THE ARCADE

THE Church of Ayot St. Lawrence, Hertfordshire, was built by Nicholas Revett (1721–1791) for Sir Lyonel Lyde in 1778–79.

Here Revett, who knew his Athens perfectly, shows an Athenian disregard for the necessities of Christian ritual. He spreads a pseudo-Greek façade where the ashes of the ancient deities are decently interred in stone sentry-boxes, before the meagre and ill-lit shrine of the Unknown God. The bell, an obvious afterthought, hangs naked and unashamed on the south side of the Doric portico, as shown in the measured drawing reproduced overleaf. The building is an antiquarian's dream, standing in the naive Hertfordshire countryside, a half-bald nestling, spreading its wings for the flights of the Greek revival that were still to come.



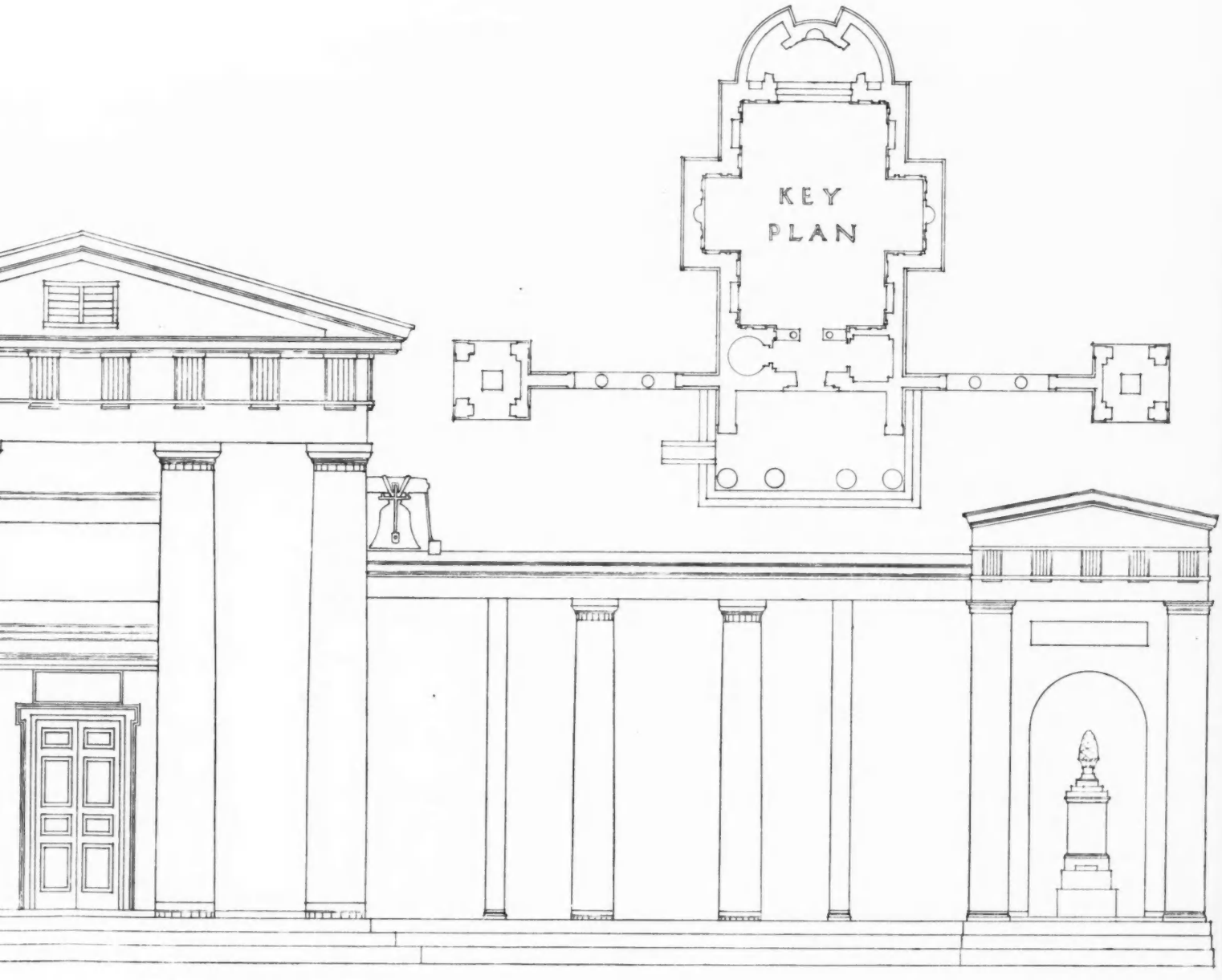


FRONT EL

CHVRCH AT AYO

NICHOLAS REVETT

D. BETHVNE-WILLIAMS. MENS. ET DELT



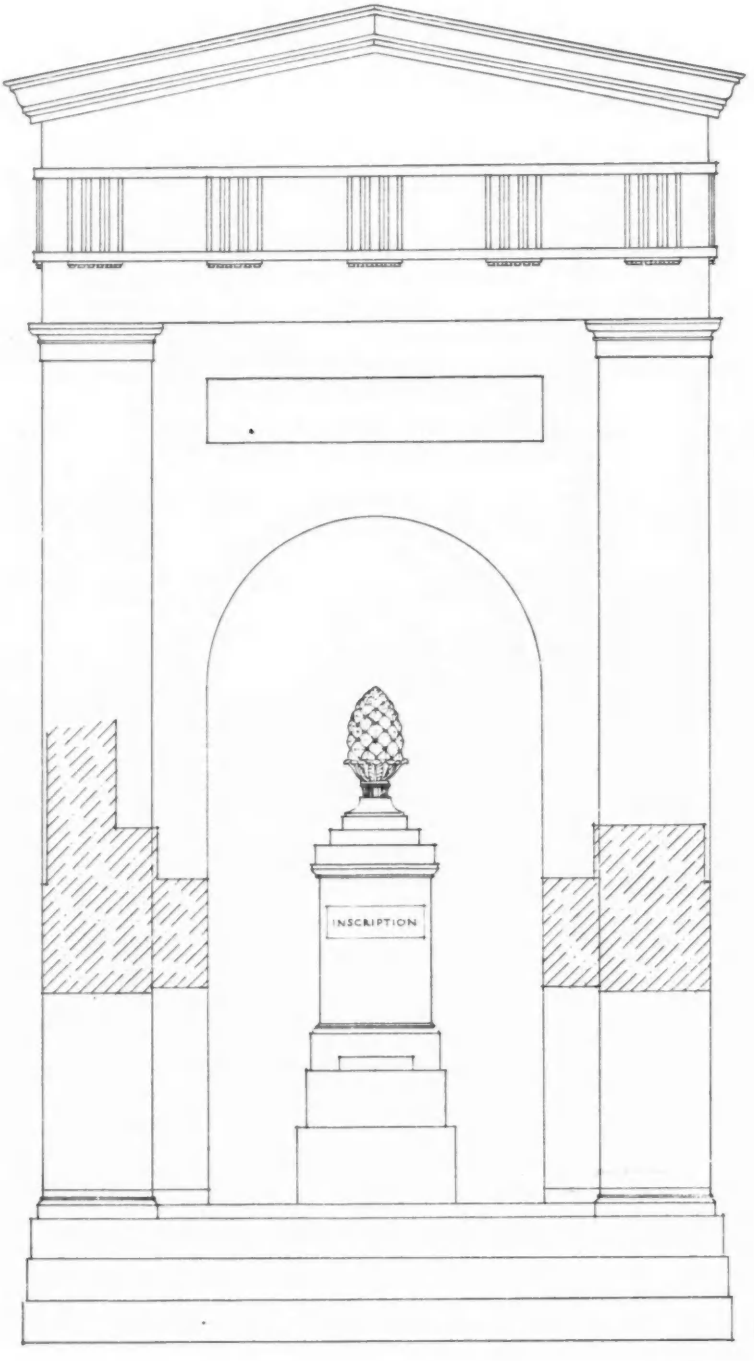
ELEVATION

YOT S. LAWRENCE

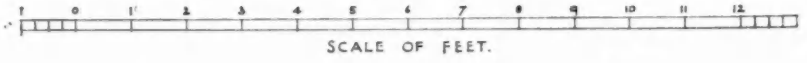
TT ARCHITECT

SCALE FOR ELEVATION.

SCALE FOR PLAN

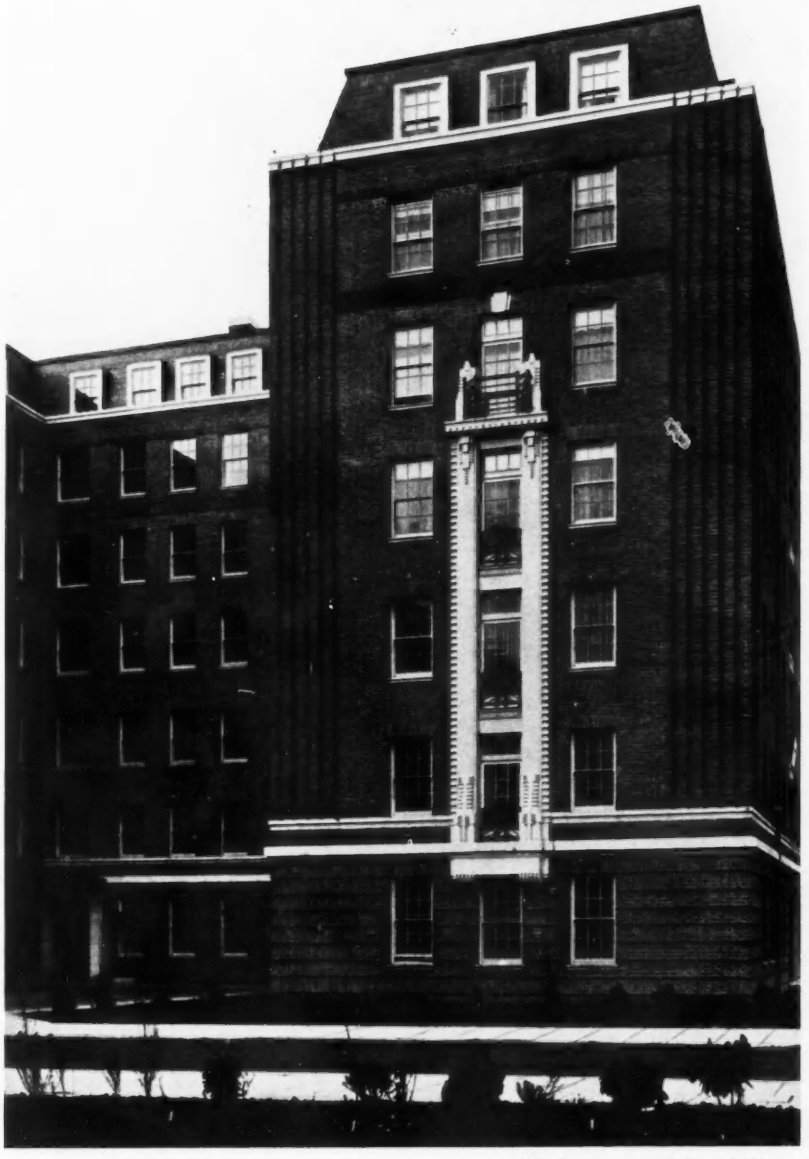


MONVMENT
TO
SIR LYONEL LYDE BART



EYRE COURT, FINCHLEY ROAD, N.W.

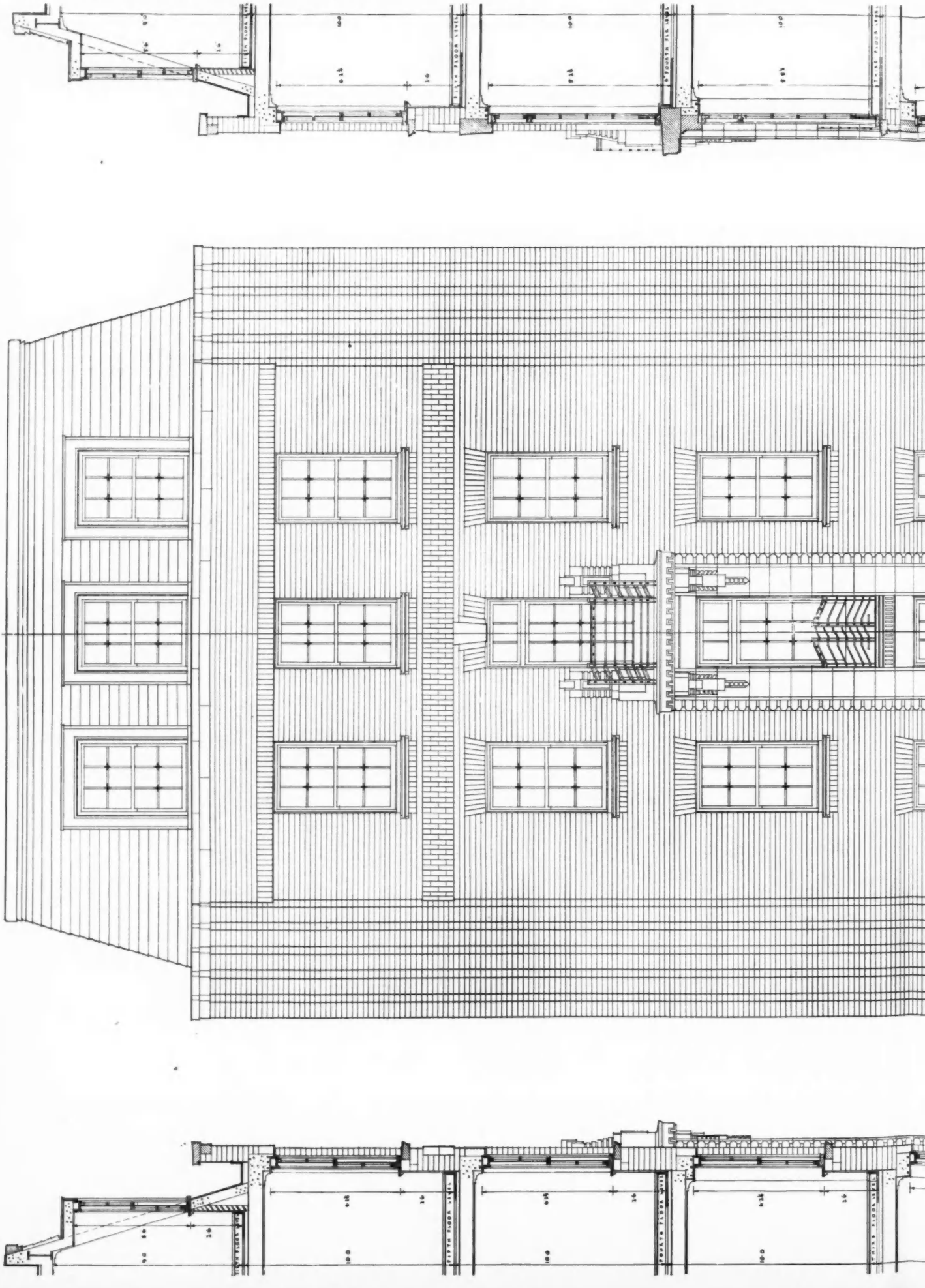
THE ARCHITECTS' WORKING DRAWING OF RETURN ELEVATION, NORTH WING

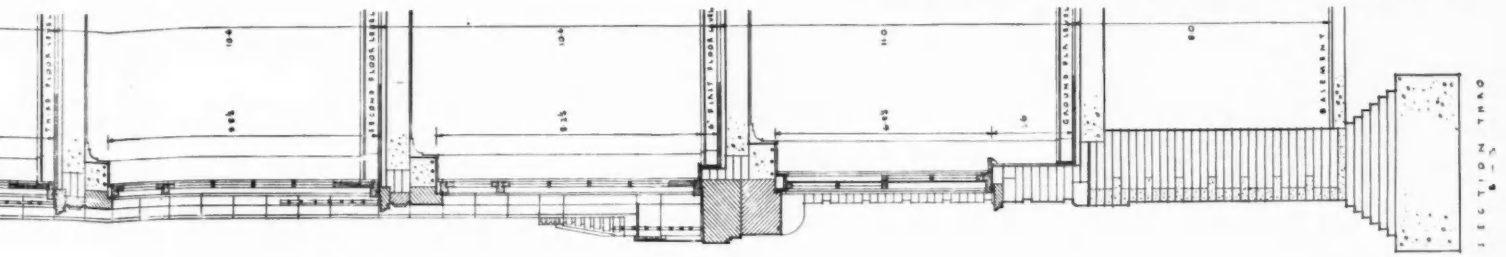


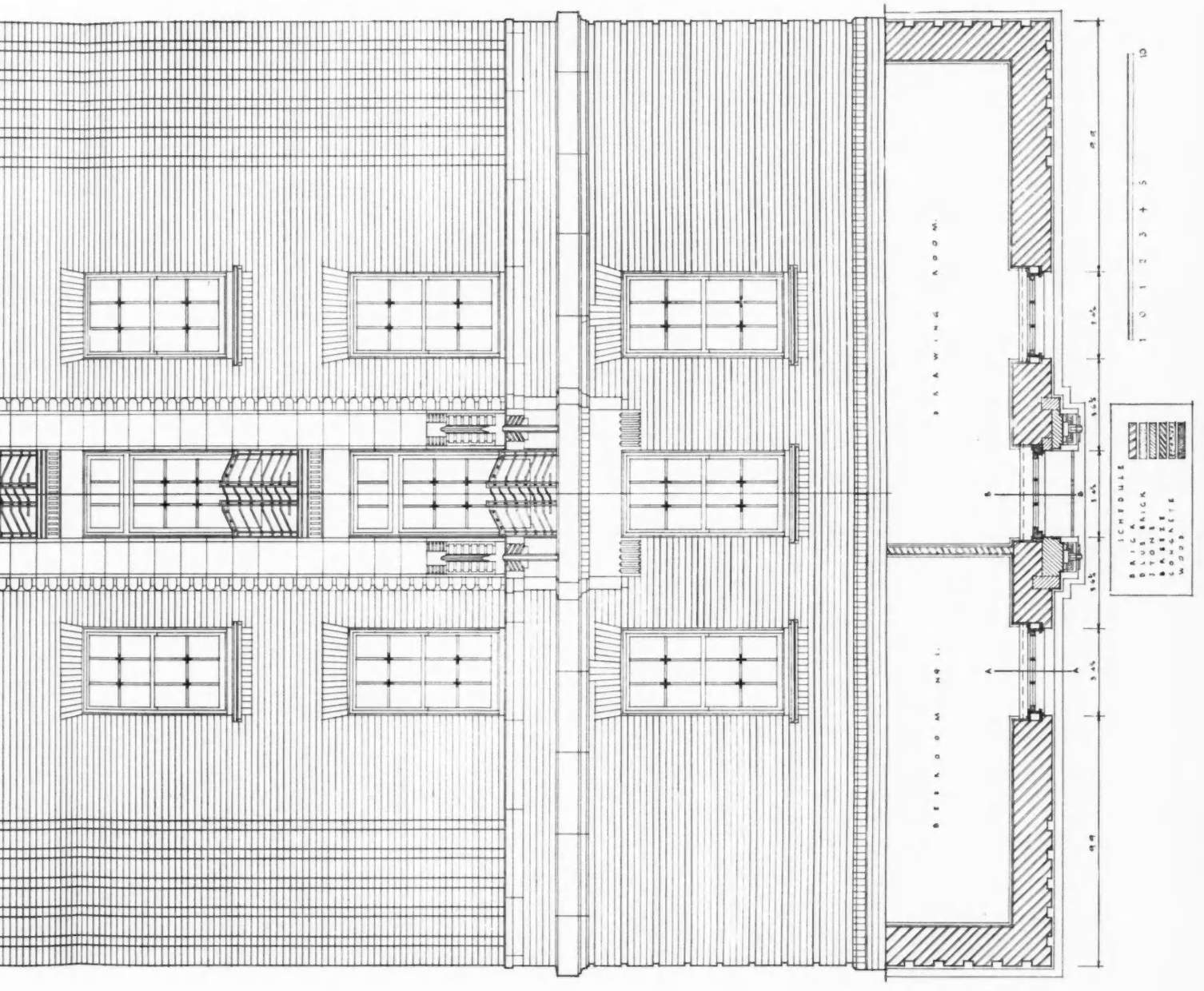
[*T. P. Bennett and Son, Architects.*

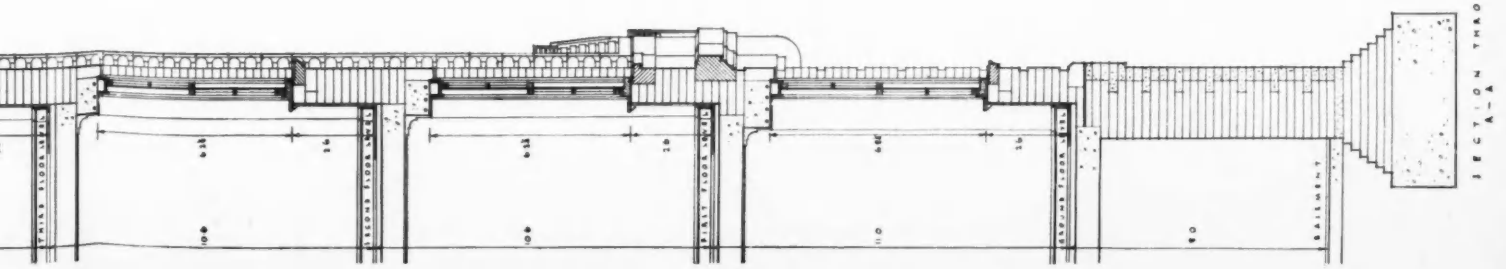
A VIEW LOOKING NORTH FROM THE FORECOURT

THIS block of 126 residential flats occupies an island site of two acres, with the main front and forecourt to Finchley Road, N.W. The above photograph and the detail drawing overleaf are of the elevation of the wing facing the north end of the forecourt; the southerly wing is similar. The materials are multicoloured facing bricks, with quoins, etc., in picked reds, a rusticated brick base, artificial stone dressings, wrought-iron balconies, painted green, and wood double-hung sashes. The roof is covered with green slates. Further illustrations appear on pages 127 to 131 of this issue.




SECTION THRO
A–A


DRAWING ROOM.
BEDROOM No 1.
SCHEDULE
BRICK
BLUE BRICK
STONE
BALUSTRADE
CONCRETE
WOOD
0 1 2 3 4 5
A
B


SECTION THRO
A–A

SELECTED PRECEDENTS:

FURTHER EXAMPLES OF ESSEX BRICK TOWERS



THE TOWER OF ROCHFORD CHURCH



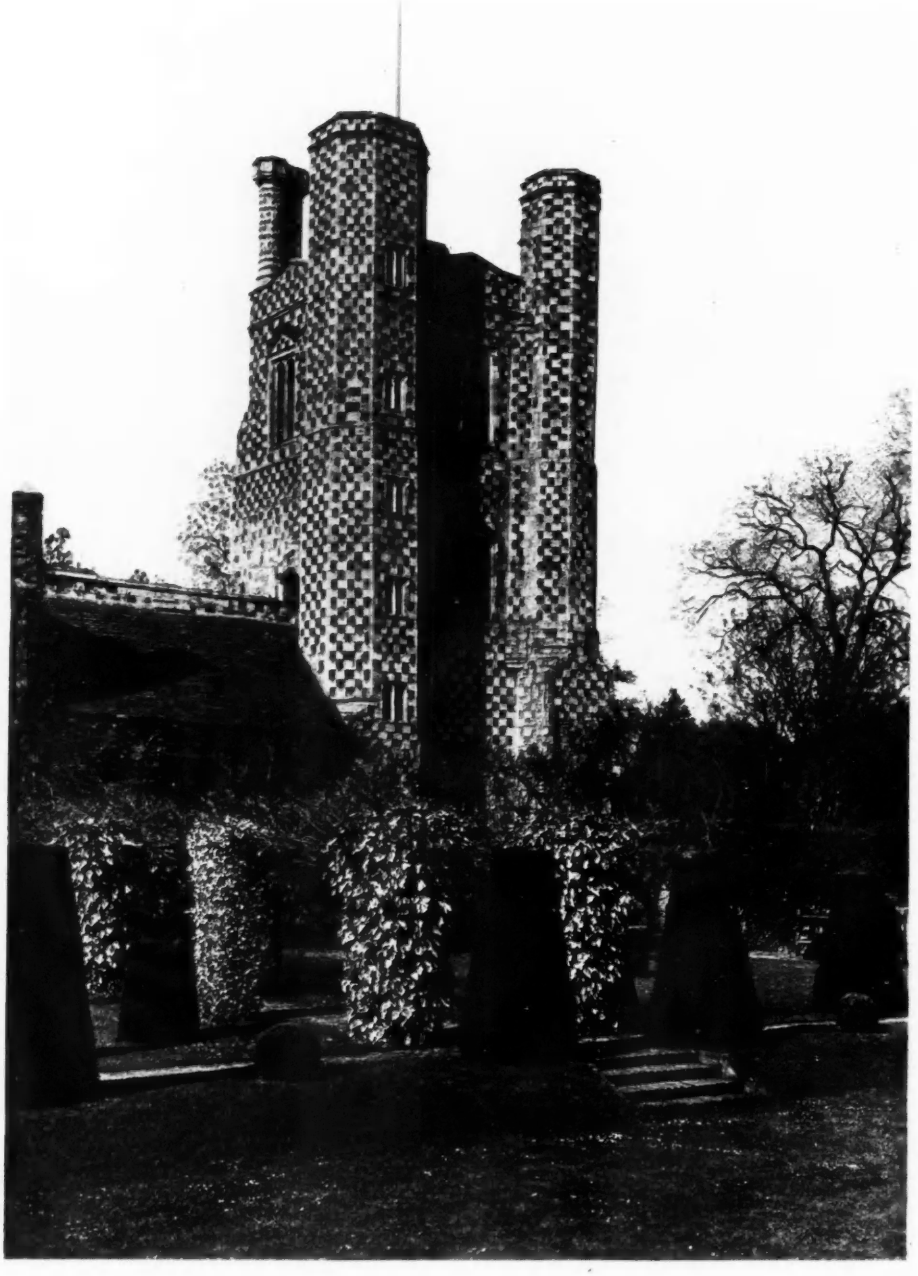
CHIGNAL SMEALEY CHURCH, FROM THE E.

MANY Essex church towers had independent newel stairs, enclosed in attached turrets. The addition of such turrets must have presented difficulties to their designers, just as a modern architect often has to solve the problem of providing a L.C.C. staircase without ruining his elevations. The architect of Rochford church soared triumphantly above his problem, so that one feels that the removal of his turret would leave the tower poorer from the change. The large-scale diaper is produced by the use of grey headers, actually overburnt bricks picked for this purpose.

Other fine features of the towers illustrated above, and last week, are their sky-lines, the parapets and pinnacles of which show considerable variety of design, but all giving the impression of well-proportioned heads to their structures. At Ingatestone there are projecting corbel tables, whereas at Rochford and Chignal Smealey string courses serve the designer's purpose. Although the parapets in all the examples are crenellated, no two are the same. One notices that forethought was exercised in proportioning, not only as viewed from a distance but from near points, as those foreshortened aspects chosen by the photographer.

The tower of St. Osyth's Priory, given overleaf, is of another type. It is the tower of a domestic building, and has two of the most graceful of our early-sixteenth-century chimneys. Its tower parapets are gone, but its chief characteristic remains in its chequered walling—alternately squares of stone and squares filled with flints in mortar. Such work is less frequent in Essex than in Suffolk and Norfolk, where it is developed further into "panel work," because Essex is not a flint country; and this is essentially the product of flint land.

—NATHANIEL LLOYD



THE CHEQUERED TOWER OF ST. OSYTH'S PRIORY, FROM THE SOUTH

THE ARCHITECTS' JOURNAL



WEDNESDAY, JANUARY 28, 1931

THE LAVENDER-LADEN SWOON

THE comprehensive Act for the further preservation of ancient monuments, which the House of Lords passed during last year, contained a clause prohibiting the export of interesting English architectural titbits. Therefore we need no longer turn to curse the misplaced acquisitiveness of American millionaires.

Indeed, let us turn to curse our own. For we are, as a nation, as deeply imbued with the false notions of possession as are the Americans, and as slobbery over " old-world " atmosphere.

If Americans actually go so far as to imagine that a dower-house re-erected at Dayton, Ohio, is one and the same with the building that used to stand at the end of Stoke-by-Wilverton village street, so, it appears, do we. For in addition to the quite common practice of breaking up old buildings in order to re-use their materials for the building of pseudo-mediæval houses, there is actually a small but lucrative trade done in the transplantation, whole, from one place in England to another, of ancient cottages.

Granting only the existence of a sufficient demand for pseudo-mediæval houses and its concentration in the most densely inhabited regions, what could follow more naturally than the supply of what the public wants at the expense of what is left to us in genuine agricultural counties ? Why, therefore, raise our eyebrows when we hear of cottages being uprooted from a Suffolk village to be re-erected in Kent ? It is so natural.

Rather than vilify the vandalistic purveyor of the antique, is it not better to attack the matter at its root, in laying bare the foolishness of all this " old-world " business, separating, once and for all in our minds, our respect for what is old and beautiful, indigenous and fitting its place in a still existent rurality from our dislike of every shallow and ignorant attempt on the part of town-bred folk to imitate it just because it is supposed to be so English, so " old-world," don't you know ?

There is only one true way of imitating the ancient manner of building; and that way is to take down old houses and cottages and re-use their materials. Either do that, or order from the timber merchant a few whole oak trunks, and tell the builder to get ahead with the job. Every other way is so much a sham and a delusion as hardly to merit a guffaw. And this true way is an expensive form of oddity—a futile excursion into the past.

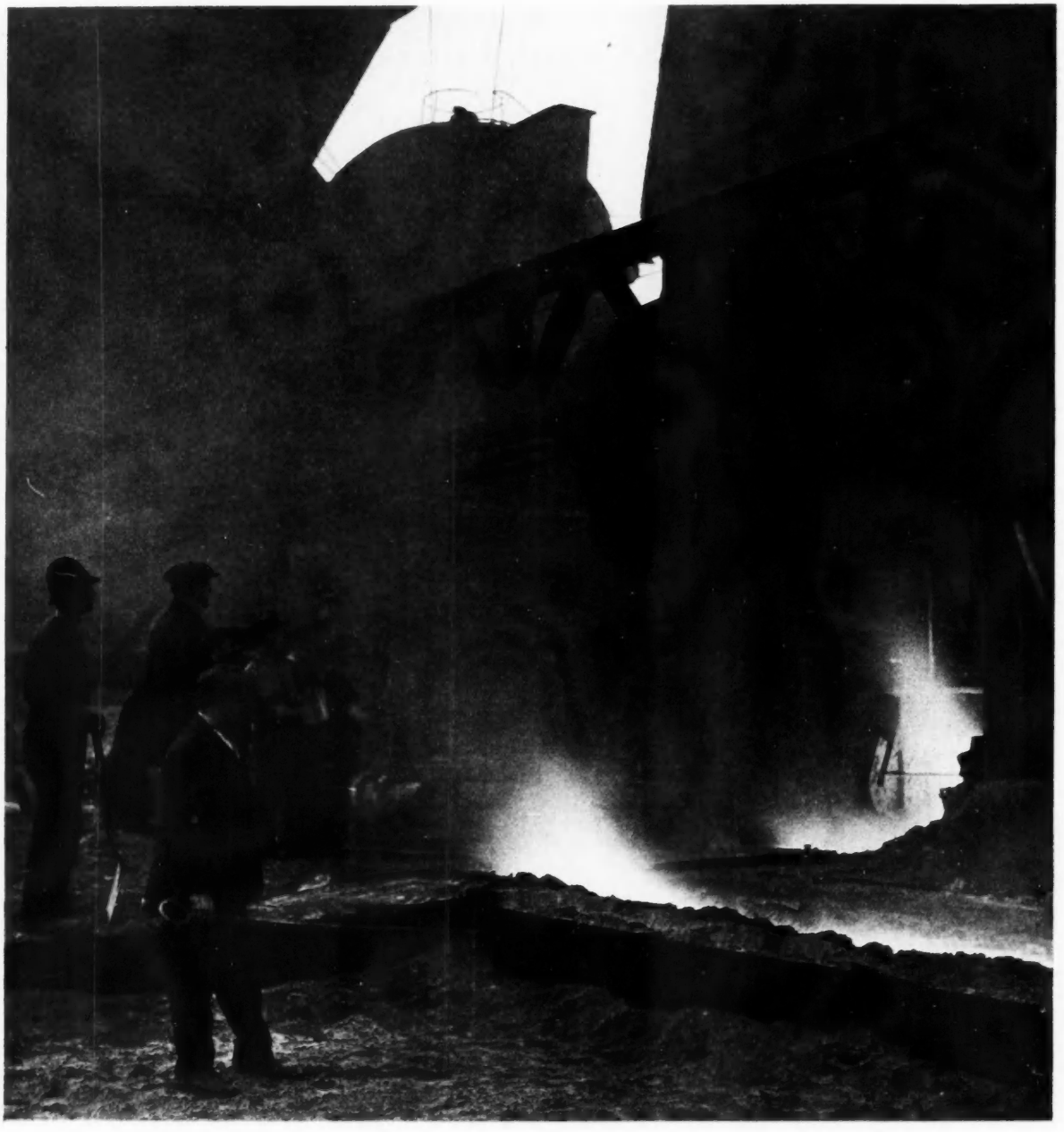
What is wrong with a modern house, built soundly of the best and cheapest materials for the job, that we must go wandering in silly day-dreams down the history of rustic architecture ? Do we not, bred in cities, value sunlight and air ? Do we not bathe ourselves in porcelain baths; wash our dishes in white-glazed sinks; require heat all over our houses—a car in our garage ? What have we to do with seven-foot-high ceilings, floors below the earth, windows the size of a handkerchief, fireplaces the size of small rooms ? Nothing that is not the mere wish to be wafted in a lavender-laden swoon of sentimentality into an " old-world " atmosphere.

There is no sentimentality about an old cottage. It is a straightforward piece of true building, to which has been added the softening influence of time. It is beautiful in colour and perhaps in form. It has settled into the landscape. It has gathered its appropriate setting of trees and flowers.

Let it live if it has not too far exceeded its allotted span. And if it suffers, as so many old cottages suffer, by lack of decent sanitation, set it in order. Repair it and make it fit for humble occupation once again. Live and let live.

If city folk come to the country, as come they must and should, let them live after their own pleasant manner : sitting in their sun-porches, opening their ample windows to the sun, enjoying their God-sent luxuries of living. They are living to the full when they are themselves children of their own time.

Let us preserve them from this other, this sloppy, sentimental sniffing round old barns. And, we architects, let us learn, ourselves !



FULL BLAST ONCE AGAIN

The scene at a large steelworks, last week, when a blast-furnace was first tapped after restarting. Owing to lack of demand and consequent accumulation of stocks, many iron furnaces have been lying idle for months past, and the fact that smelting has recommenced is evidence that renewed demands are anticipated for the manufacture of steel. An important corollary is the re-absorption of some hundreds of hands from the unemployed list.

In a modern blast-furnace the smelting process is continuous, the raw materials being fed in at the top and subjected to blasts of air and gas alternately, on their passage downwards to the hearth, where the molten iron accumulates, under a layer of slag. It is the result of tapping, through a hole provided for the purpose and filled with a stopping of clay, and the running off of the incandescent slag and waste metal, preparatory to tapping at a lower level for the iron itself, that is here illustrated.

NEWS & TOPICS

LORD BEARSTED ON BUILDING NOW

"BUILD now!" Lord Bearsted disagrees. Views continue to be aired concerning the school of thought of Mr. Keynes, Mr. Gerald Barry and others who urge immediate activity in commercial operations, and I had the opportunity a few days ago of sounding Lord Bearsted on the subject. He speaks with authority on building, as on many affairs, and is himself engaged on a large reconstruction scheme at the present time. Not that he thinks the hour propitious, he carefully pointed out, but that the scheme, being part of a planned programme, cannot well be deferred.

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It will be gathered that Lord Bearsted's view is not an optimistic one. To put it mildly, he thinks our trouble is over-production, or what he described as "a multiplication of facilities." "Take my own business," he went on. "You have only to drive out in a motor car to see there are too many petrol service stations on the road. As to houses, I suggest there are more 'To Let' boards to be seen than at any time since the war. We have not the resource or capacity yet to use all the things we have got, and there is nothing for it but to wait until the capacity for consumption is increased. Palliatives may postpone an evil; they do not cure it." He does not foresee any tendency in prices to rise. "Mr. Keynes spoke of making clothes to our cloth now because the cost of doing so is cheap. I disagree. If I buy clothes now because they are cheap, not because I want them, I have to put them by until their use is required. By that time they may be damaged or out of fashion."

★

At this point I crept away, and the same day saw the same views pronounced by two eminent bankers. Since then it has been a matter of public interest that Mr. McKenna, in a strong speech, has firmly supported Mr. Keynes and the call for optimism and activity.

MR. MCKENNA'S REVIEW OF THE SITUATION

I make bold to take the following extracts from his speech at the annual general meeting of the Midland Bank:

The debtor countries, which are mainly producers of primary commodities, have been driven to throw their products on a falling market, intensifying the decline in prices. They have been compelled, moreover, to restrict their purchases of finished goods, so that the exports of manufacturing countries have been curtailed.

Maldistribution of gold and falling prices, inability to borrow and unwillingness to lend, have thus gone hand in hand in a continuous process of action and reaction. The wholesale price level in this country has suffered the almost unprecedented fall of roughly 20 per cent. in a year, and we have no assurance in the latest statistics that the full extent of the downward movement has even yet been reached.

According to pre-war experience of the working of the gold standard, the flow of gold into the creditor countries [e.g. Great Britain, France and America] should have caused an expansion of money supplies. The stimulating effect upon prices would in turn have enabled the debtor countries to dispose of their products to greater advantage, thus reducing their adverse balance of payments and enhancing their credit as potential borrowers. By this means a more or less automatic adjustment might have been anticipated. The recent movement of gold [into France and America] has had no such effect.

All these facts, taken from both sides of the Atlantic, lead to the conclusion that the most skilful plans of monetary authorities may, under some conditions, be defeated by developments in public psychology. So far the failure to use money has been attributed to a widespread feeling of depression. The non-use of money, however, need not always arise from this cause alone; it may be at times the consequence of excessive saving. It has long been the custom to give an unqualified blessing to thrift, mainly on the grounds of personal discipline and the due recognition of responsibilities. Whatever blessings thrift may confer, however, on the individual, there are times when, judged by the interests of general economic welfare, it may be carried to excess. To realize the truth of this statement it is only necessary to consider the two extreme suppositions in which, first, everyone saves all his income beyond the amount necessary to keep body and soul together; and, next, nothing is saved, but the whole of all money expended is devoted to consumption. In the first case it is obvious that the greater part of industry would rapidly run down and cease operations for lack of customers for its output, while, in the second, plant and machinery and public and private equipment would ultimately break down for want of proper maintenance and renewal. Somewhere between these two extremes lies the point of maximum advantage.

It is an important fact in the present situation that for the time being business derives no stimulus from low commodity prices, because of the fear that they may fall yet further. Producers are still reluctant to meet anything more than immediate demands; industrialists and traders endeavour to curtail more drastically rather than augment their stocks; consumers buy only as pressing needs dictate; and savers continue to withhold their funds from investment, preferring to leave their money on deposit at the banks. In a very real sense the crisis is one of under-consumption, having its roots in a continuous downward movement of the price level. Until sufficient confidence has returned to stimulate buying, stocks of goods are not likely to dwindle, nor production to increase. And a marked revival of confidence is unlikely until prices show a tendency to harden. We shall see an end to the growth of unemployment and business losses when the recent trend of prices is arrested and reversed.

SIR JOSIAH STAMP AND "BUSINESS CONFIDENCE"

And Mr. McKenna was followed in a day or two by Sir Josiah Stamp, who, in his broadcast talk, after stating that, as a result of falling prices, the purchasing power of the mass of the people had increased since a year ago by £100,000,000, said: "We are face to face with a very difficult situation, and the keynote to it is business confidence."

THE RURAL AMENITIES BILL

Sir E. Hilton Young has again been successful in securing a second reading for his Bill for the Preservation of Rural Amenities. Last year this Bill received the approval of the House of Commons, but, owing to the pressure on Parliamentary time, made no further progress. There is little likelihood of the Bill reaching the Statute Book this session, but Miss Susan Lawrence, who spoke on behalf of the Government, said that the object of the measure was "very dear to the heart of the Government." She recalled the fact that in the King's Speech the Government had announced that there would be an extension of the law relating to town planning and the preservation of rural amenities, and there was, in the Government's programme, a Bill to cover all the proposals in Sir E. Hilton Young's Bill, and a good deal more. She asked the House, how-

ever, to approve the principle of the present measure by giving it a second reading. This advice was promptly acted upon, and it is to be hoped, therefore, that this urgent problem may soon be dealt with in an ordered and common-sense way. But the political situation at present is so uncertain that it would be rash to prophesy. An early change of Government is not beyond the bounds of possibility. As Sir E. Hilton Young's Bill has the support of members of all three political parties, it is assumed that, no matter what Government may be in power, a comprehensive Rural Amenities Bill will figure in the non-controversial part of their programme.

A COMMITTEE ON TOWN PLANNING

The Government has recently appointed a committee of town planners to inquire whether the region-planning work so far completed offers opportunities for putting in hand schemes that may be expected to make a reasonable return for the public money invested. It is a sensible thing to do, for in the thirty-two or so reports so far issued are many proposals that have been arrived at, not by studying the exclusive needs of any particular place, but of a whole region. Whatever may come of this, it should not for a moment blind us to the need for full town-planning powers, for these two will best be wielded regionally, but including the town with the country.

ENGLAND'S FIVE-YEAR PLAN

The building programmes for the whole country are now being examined by the Ministry of Health. Contrary to the stories of wide depression in the North of England, towns large and small have put forward plans for cottage building and slum clearance involving enormous sums. Newcastle-on-Tyne, for instance, is to spend £887,000 on slum clearance, and Manchester has a programme of 25,500 houses to be built by 1935. If all these houses were as badly designed as the worst of them the effort would still command admiration; as it is, there are more good and decent houses than there are bad, and all of them have three times as much light and air as they might have hoped for twenty years ago.

REMOVING CONGESTION BY SUGGESTION ?

The L.C.C.'s General Powers Bill, which is being promoted in the present session of Parliament, contains a clause providing that all new buildings occupied by more than twenty persons, all high buildings, theatres, cinemas, etc., must have their plans agreed by the L.C.C. with special reference to their means of entrance and egress from and to the street. By some method or other it is hoped that if all such plans are looked at gravely by officials of the Ministry of Transport some means will occur to them of reducing the number of occupants who will tend to congest traffic when they leave the building. The only method I know of, short of constructing private tubes or landing grounds on the roofs, is to set back the frontages of large buildings, and compensate for doing so. Knowing well my London, I cannot see this being very often done. I have also another plan which I will not divulge.

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Widening Piccadilly is one way out, I suppose, though with unlimited traffic to fill a wider street a wider street will be immediately filled. Still, I like wide streets, especially when one side is a park and the other clubs. Nobody ought to grudge a little slip of the Green Park for a wider Piccadilly. I would be prepared to concede the railings, too, or set them back a full fifty feet. Noble Piccadilly !

THE POSITION OF THE DESIGNER

At the A.A. on Monday evening the position of the designer (and of design) in these times was discussed, after Mr. R. P. Gossop had given us what might be described as a three-camera view of the subject. Always controversial, the hon. secretary of the new Society of Industrial Artists put three views of industrial and commercial design, and gave his suggestions for treatment and cure. First, the view of the industrialist, who regards the designer as a necessary, if somewhat expensive, part of his production costs as a manufacturer. Then the view of the retailer who, generally, ignores his (or her) existence; and, lastly, the designer's own view of himself (or herself).

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The question of remuneration for the designer's work is ever a vexed one. The basis of a percentage, as in architecture, is not simple when applied to industrial design; and royalties will not solve the difficulty by any manner of means. Only in the case where the designer is merely an employee is the thing simple. The free-lance designer is in a very different position. Mr. Gossop has no grievances. He aims at being constructive, and if he jests at times, he is evidently in earnest.

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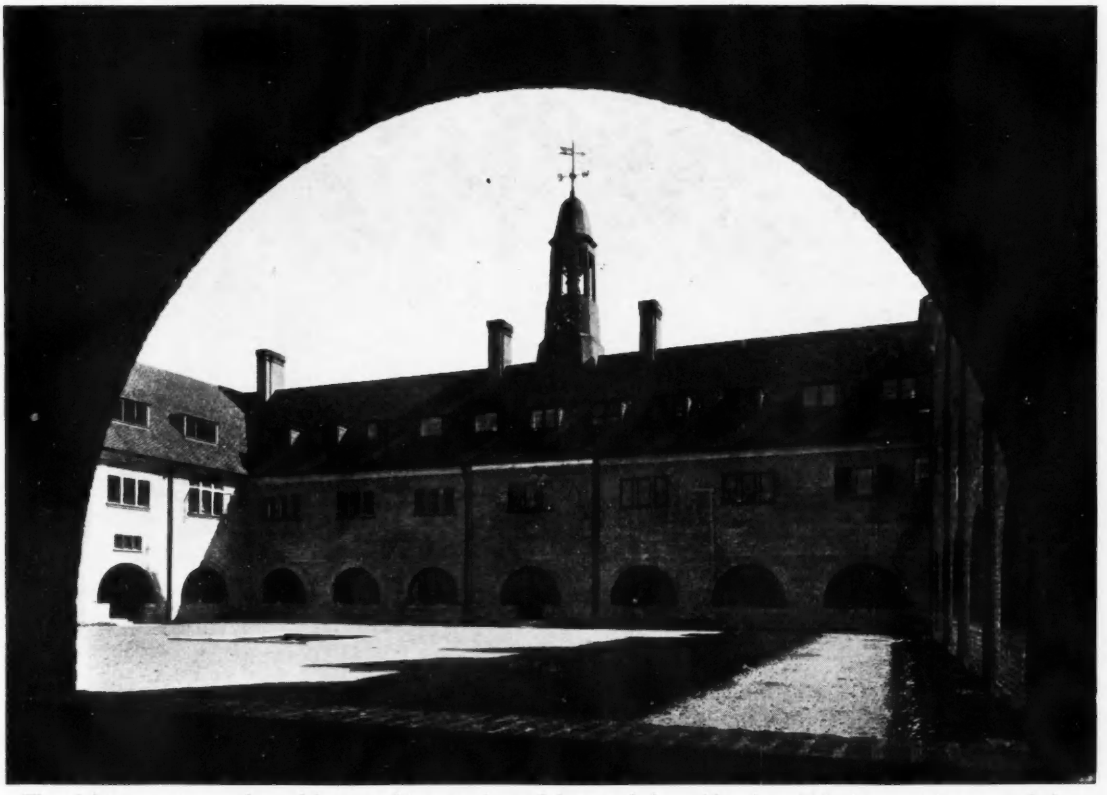
In view of our present commercial—or *un*-commercial—condition in this year of post-war grace, the need for action and increased vitality is clear to anyone who can bring a logical mind to bear upon the many problems that face our great industries. The wolf is not only at our door—he is within rending distance of our pet lambs. Moreover, the said lambs are likely to find their wool pulled fiercely by foreign competitors. The new society hopes to be not less effective in stimulating trade than our architectural societies have been in restoring our prestige as builders.

ABOLISHING HOTEL ROAD-SIGNS IN U.S.A.

Hotel proprietors in this country might well follow the example set them by an association of hotel proprietors, which met in Boston, U.S.A., last autumn, and decided to abolish all roadside advertisements of their hotels. The following is an extract taken from the Report which was unanimously approved by the Hotels Association : "We are in favour of and urge the abolishment of all advertising roadside signs, including directional hotel signs, except those located within towns and city limits It is the unanimous opinion of the Committee that roadside signs are a distinct detriment to the beauty of our landscape. . . . If they are entirely abolished, all companies using this medium of advertising would give up an equal advantage, and would be equally as well off. . . . The people of this country are almost unanimous in preserving the natural beauty and landscape as one of our most valuable, lasting and wealth-producing possessions. The landscape defacers have no rights when they are set against the right of the general public."

EQUESTRIAN RECIPE (NOT TO BE FOLLOWED)

Take equal quantities of Colleoni and Gattemelata and work into a stiff dough. Sprinkle all over with mixed execrations of red, white and blue. Allow to cool for three months. Pare off outer coating, decorate to taste and serve quite cold. ASTRAGAL



The cloister court, seen framed in one of the openings of the arcaded corridor, by which the court is surrounded on all sides : it is glazed only on the side opposite to the camera.

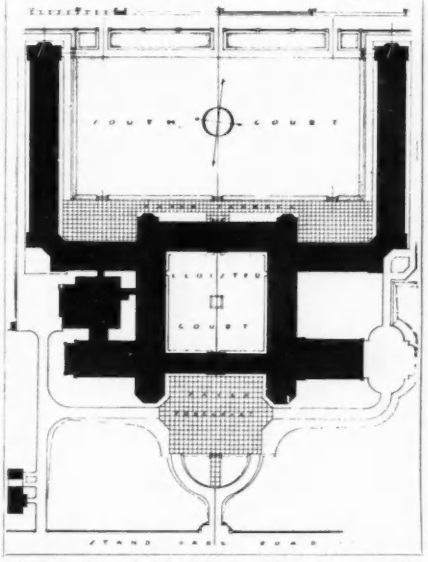
WARRINGTON TRAINING COLLEGE, LIVERPOOL

DESIGNED BY SLATER AND MOBERLY

WARRINGTON Training College at Liverpool has been built by the Central Board of the Church Assembly to take the place of the former Church Training College at Warrington, which was burnt down a few years ago. The function of the college is to train teachers to take posts in elementary schools.

Directions were given at the outset of the scheme that the buildings should have a collegiate rather than an institutional character. With this end in view, the architects paid special attention to the shapes of the spaces enclosed by the buildings. The most strictly logical layout was thereby sacrificed where it seemed likely to interfere with the spaciousness of open quadrangle treatment. Simplicity was preferred to grandeur; and the students' rooms have more affinity with a convent than with a hostel.

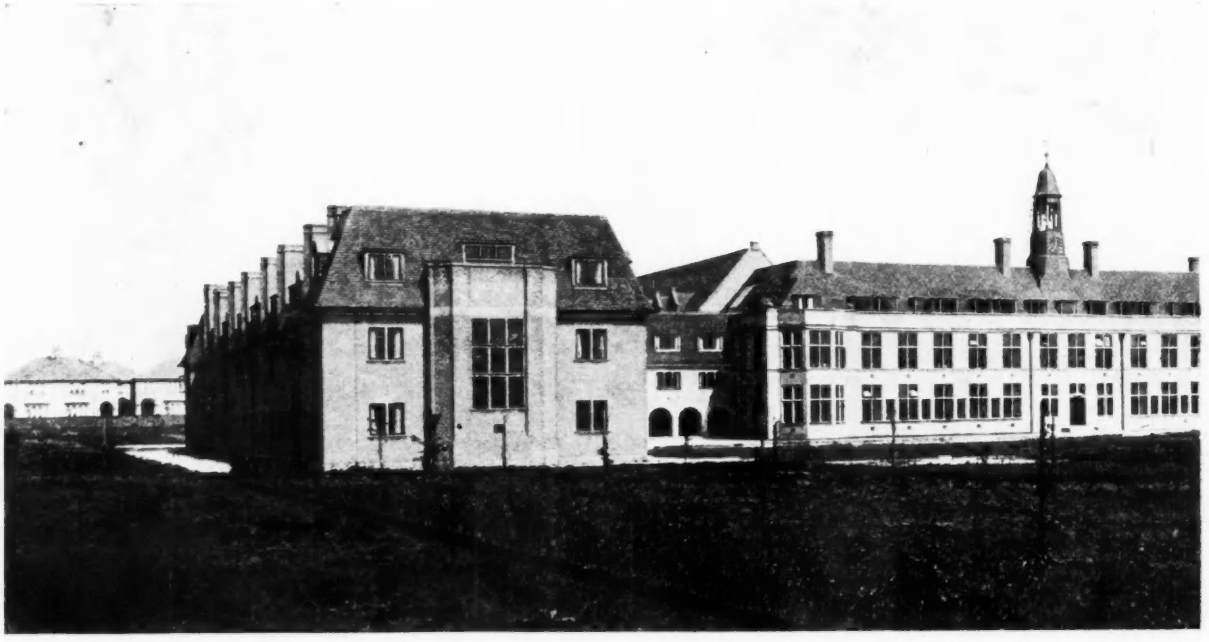
The buildings consist of a central block, built round a cloister court, and two L-shaped wings framing a larger court, which is open to the south. Each wing contains 100 study-bedrooms for the students, which all face east, west or south, the short north faces being given up to bathrooms, etc. The planning of every study-bedroom has been so arranged that a writing-table and bed-settee can each be placed near the window, while leaving ample space between them for a window seat with a radiator beneath it. Recesses for the writing-table and bed-settee are formed between the external wall and two deep cupboards which occupy the remainder of the two side walls. This leaves a clear rectangular floor space unbroken by any projecting furniture.



Block plan of the site, showing the general arrangement of the buildings.

Such an arrangement involves an unusually large frontage for each room, which is rather more extravagant in length of external wall and corridor than the normal narrower and deeper plan. At the same time, the question of adequate ventilation was considered to be of such high importance that a special scheme was worked out with the object of giving a positive flow of air through these comparatively small rooms.

Each study-bedroom is ventilated by means of an inlet grating behind the radiator and an extract grating at the top of the room. These extract gratings communicate, through sound-insulating boxes, with vertical flues which are also used as ducts for heating pipes. The warmth from these pipes provides the



A general view of the range of buildings, from the south, showing the paved terrace and open court immediately before them. The two study-bedroom wings, which enclose the latter, to right and left, have loggias, and so have the



Warrington Training College, Liverpool.]

The paved forecourt and main entrance gates, which have a northerly aspect. The main block is here seen beyond the cloister court, on the right of which is the chapel. Behind, again, stretch the wings containing the study-bedrooms.

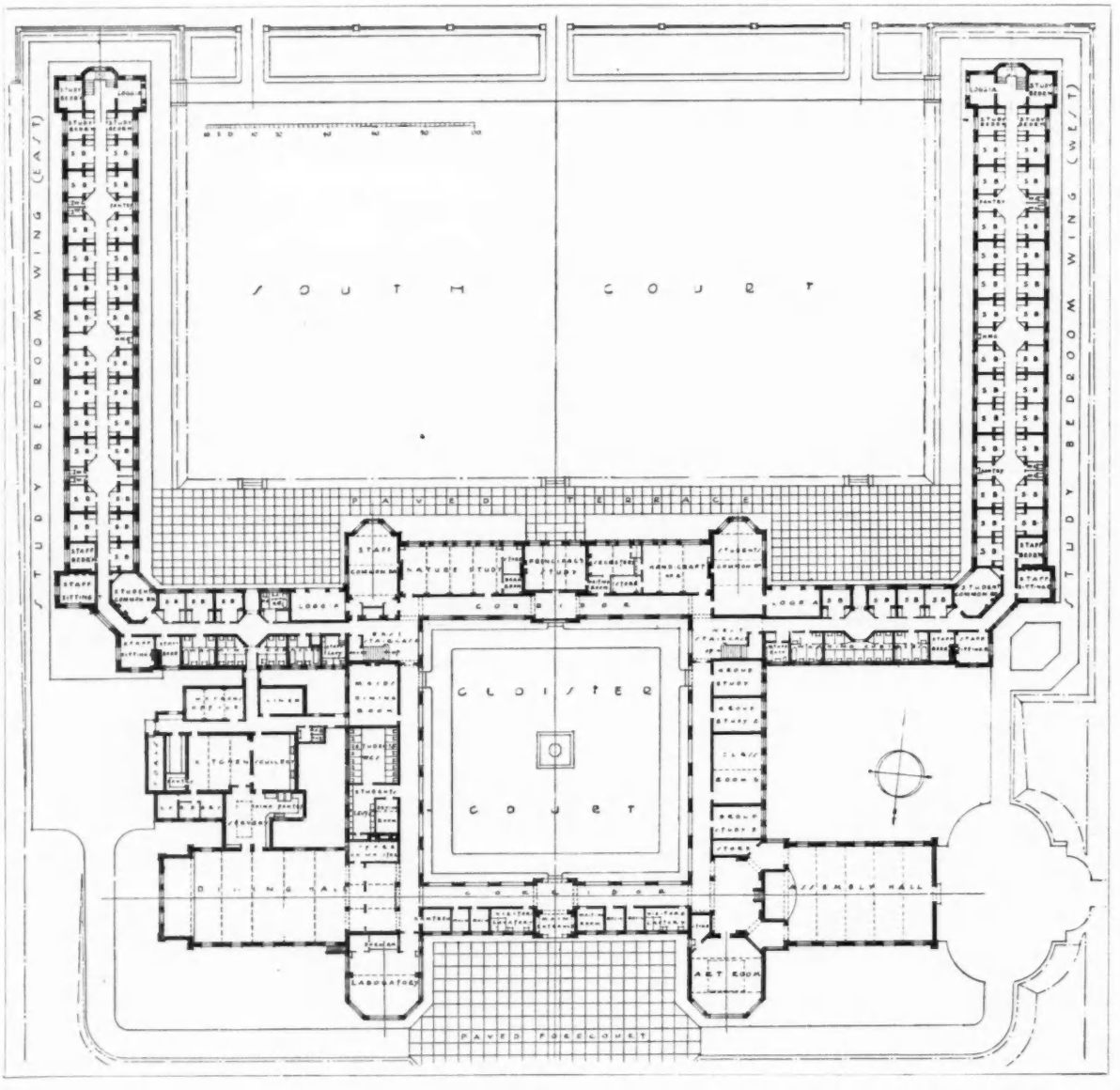


linking wings between the central block—which contains the principal's study (on the ground floor, beneath the flèche), secretary's room and two of the common rooms for the staff and for students—and the residential quarters.



[By Slater and Moberly.

Looking north in the cloister courtyard. At the far end and on the right may be seen the open arcades of the encircling corridors. The chapel occupies the upper floor of the block of which the walls can be seen on the extreme left.



The ground-floor plan. Other considerations were subordinated to the provision of comfortable bed-studies.



Warrington Training College, Liverpool.]

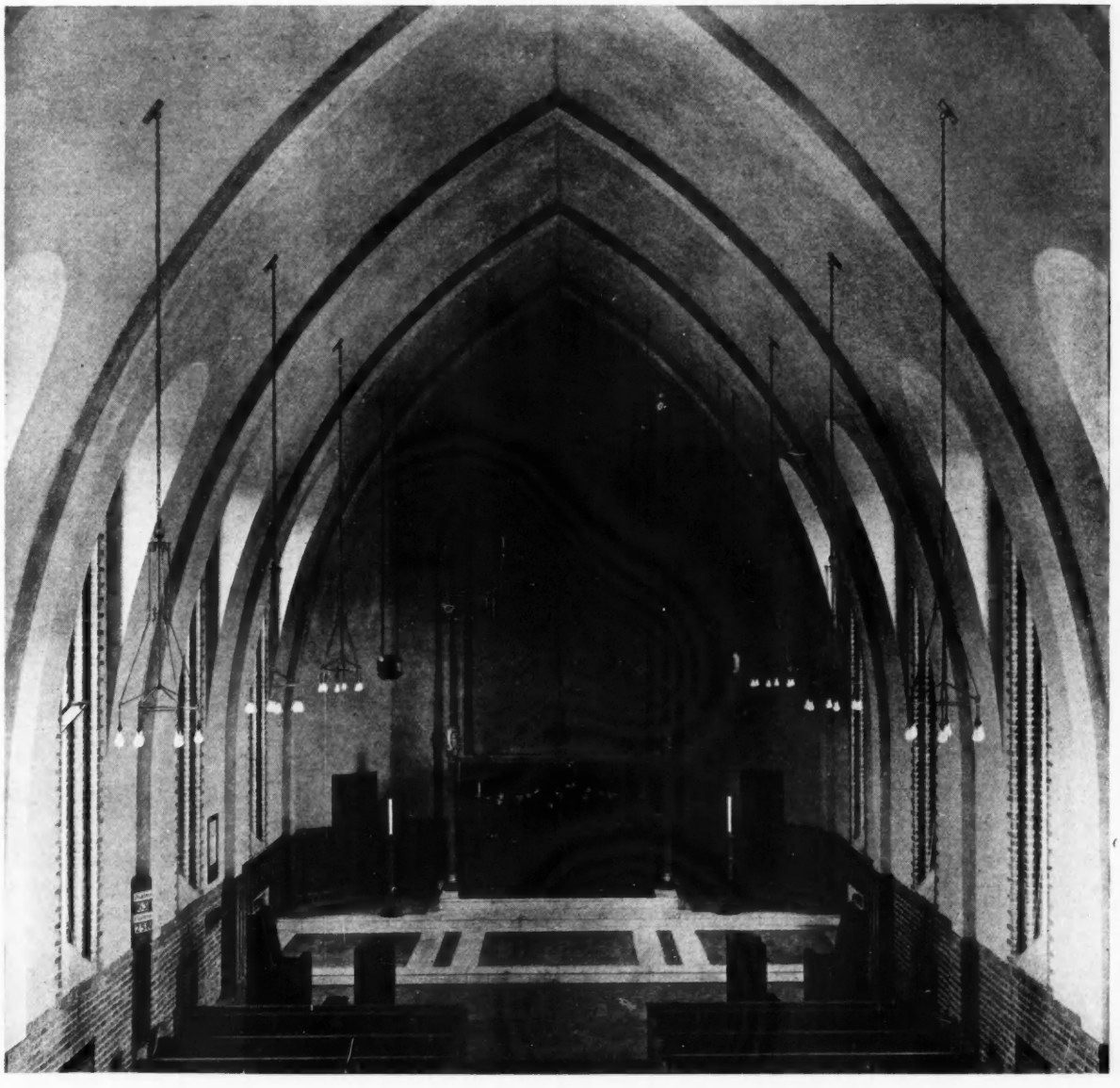
A view in the library, which is housed, together with other important rooms, in the central block, on the first floor.

motive power which draws the air up through the flues.

In laying out the plan of a study-bedroom wing a central corridor is almost inevitable, on account of the large number of small rooms. The disadvantages of the central corridor have been minimized by a liberal provision of octagonal light wells.

The chapel, library, classrooms, etc., are housed in the central block, and the assembly hall and dining-hall are at the two ends of the entrance front. The kitchen—lighted by a north-light factory roof and ventilated by clerestory windows—is placed behind the dining-hall. Electricity has been adopted for roasting, and gas for the remainder of the cooking. Oil fuel is used for the heating and hot-water installations.

The section of the chapel is unusual. The chapel being on the first floor,



and the available height therefore limited, it was important to avoid any unnecessary obstruction from roof ties.

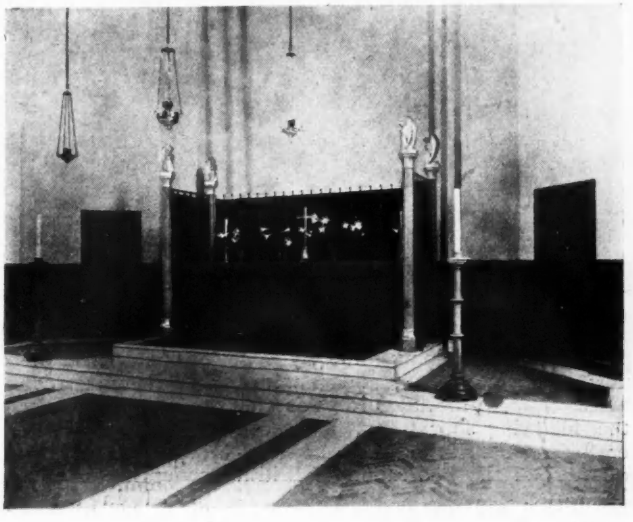
The height from floor to ridge-tile is 40 ft.; from floor to eaves 20 ft. An unobstructed height of almost 35 ft. was obtained by means of curved steel roof trusses, with their ties in the floor of the chapel. The roof trusses carry the plaster vault, which rises from the walls without any obvious springing line, and finishes at the top in the form of a pointed arch.

The line of the main vault itself is intersected by minor cross vaults framing the windows, the heads of which are raised above the eaves line by means of small gables.

The total cost of the building, including levelling and entrance drives, has been about 1s. 8d. per cubic foot.

The chapel, looking down towards the altar. Planned as part of the first floor, the avoidance of roof ties was important.

[*By Slater and Moberly.*



The altar has a screen with angels sculptured on the newel posts. Carved beads enrich the panelling behind it.

NOS. 17-29 TOTHILL STREET, S.W.

DESIGNED BY COLERIDGE, JENNINGS AND SOIMENOW

IT will be recalled by most of our readers that before moving to. 9 Queen Anne's Gate, the Architectural Press, the proprietors of THE ARCHITECTS' JOURNAL, occupied premises at 27 to 29 Tothill Street, Westminster. This latter building and part of the adjoining property has now been demolished, and the new block of offices, illustrated on this and the following four pages, has been erected on the site to house the headquarters of the Federation of British Industries.

The new building is eight floors high, including basement, and follows in architectural treatment the tradition and styles of the Early and Late Georgian periods, in accordance with the express desire of the Federation. All the floors above the first have been planned as one general unit for the use of the Federation, particular care being taken to arrange for a natural and the most workable separation of the various departments. The council chamber, committee and directors' rooms are placed in the top portion of the building, away from the noise of the traffic, and receive good natural lighting. Owing to the shape of the site and to ancient lights, which had to be observed, many difficulties were encountered in planning the floors, the latter resulting in the stepping back of the side elevation as shown on the section reproduced on page 171. Then again, the doubtful condition of the party walls made it necessary to proceed with the demolition work and the preliminary operations with the greatest caution. One party wall, in



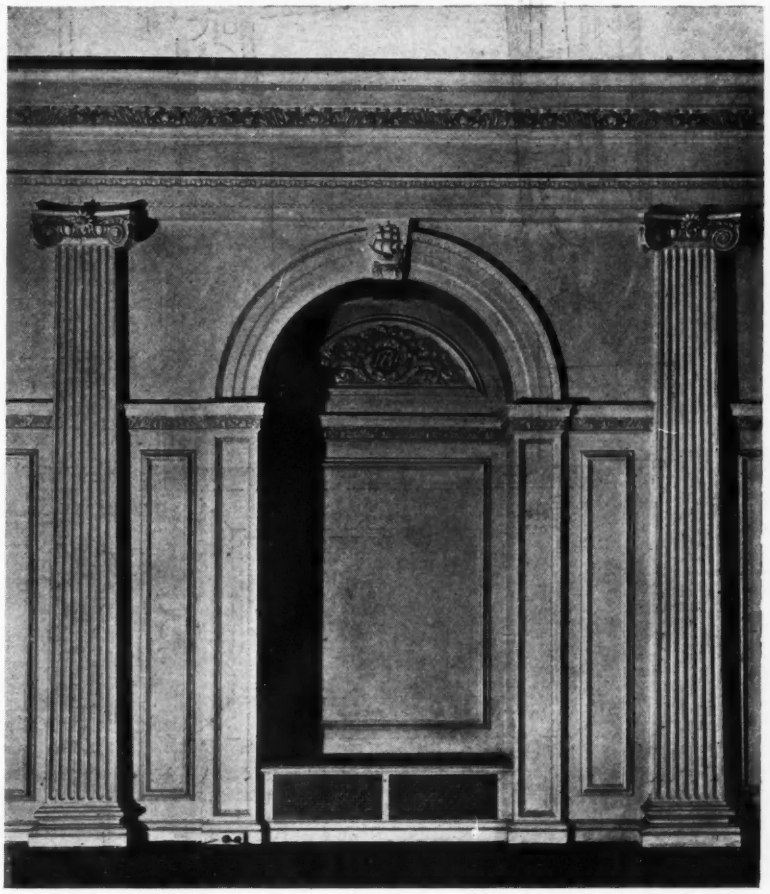
The building is faced with Portland stone and multi-coloured bricks, and has an eaves cornice in cast stone. The roof on the front portion is covered with Roman tiles; the back slopes are slated and the flat portions are finished with asphalt.



In the council chamber: the walls are of deal and plaster, painted a cream colour picked out in amber. The shape of the coved ceiling, painted white, was dictated by ancient lights. Concealed lighting and extract ventilation are arranged in the ceiling.

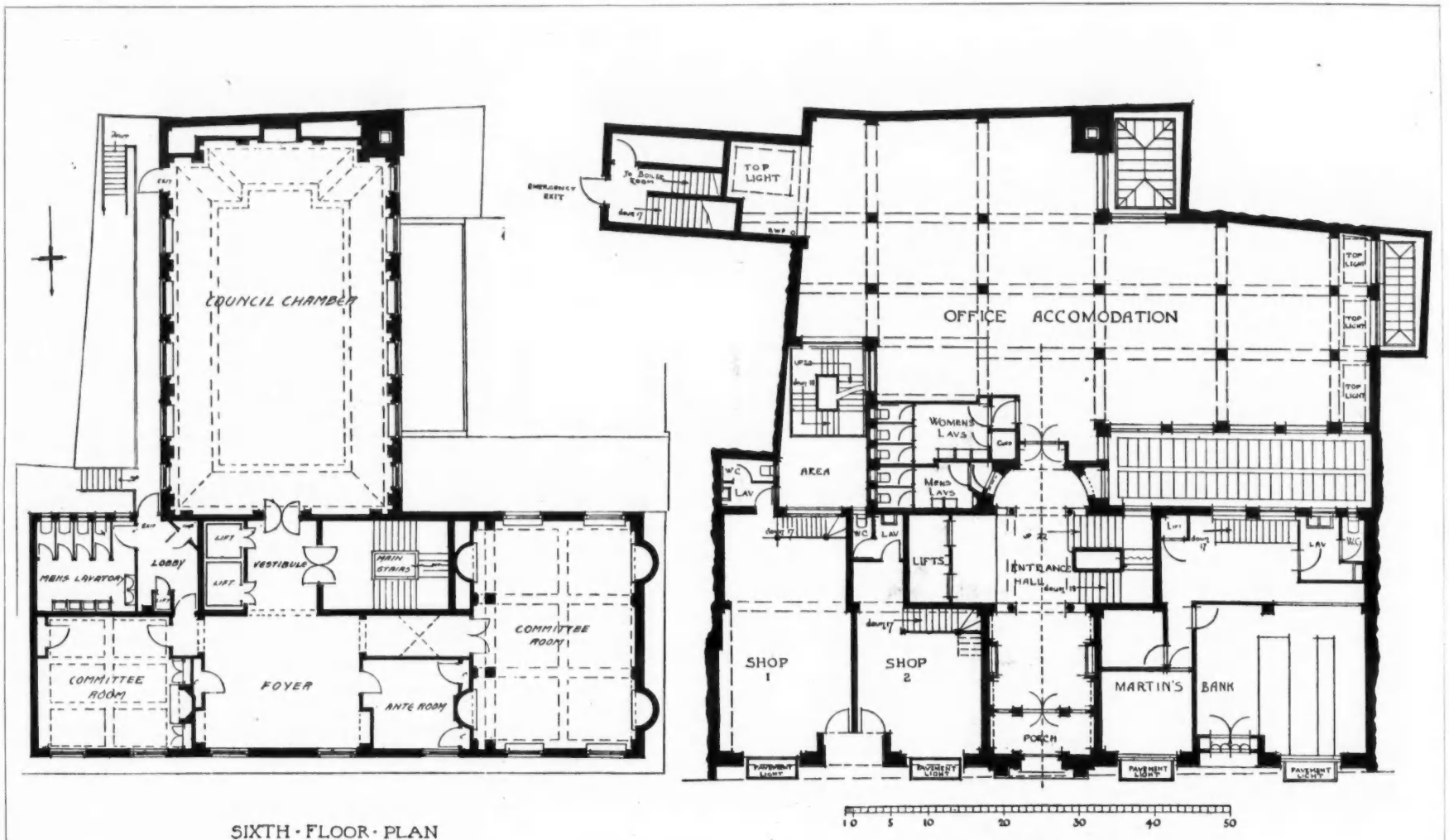
fact, was rebuilt by cutting away a portion at a time to within a half brick of the adjoining building, and re-building with new bricks. This notable achievement was carried out without disturbing or even cracking the plaster in the adjoining premises.

The foundations were carried down to Thames ballast level through interesting strata. One layer consisted of about 9 ins. of wood ash, which seems to suggest that sometime during the ages a wooden building had stood on the site and had been demolished by fire. From the depth it was found below the present surface it might readily be assumed that the structure was razed to the ground during the Great Fire in Westminster at the coronation of William the Conqueror. During the digging of the foundations many pottery fragments, etc., were collected.



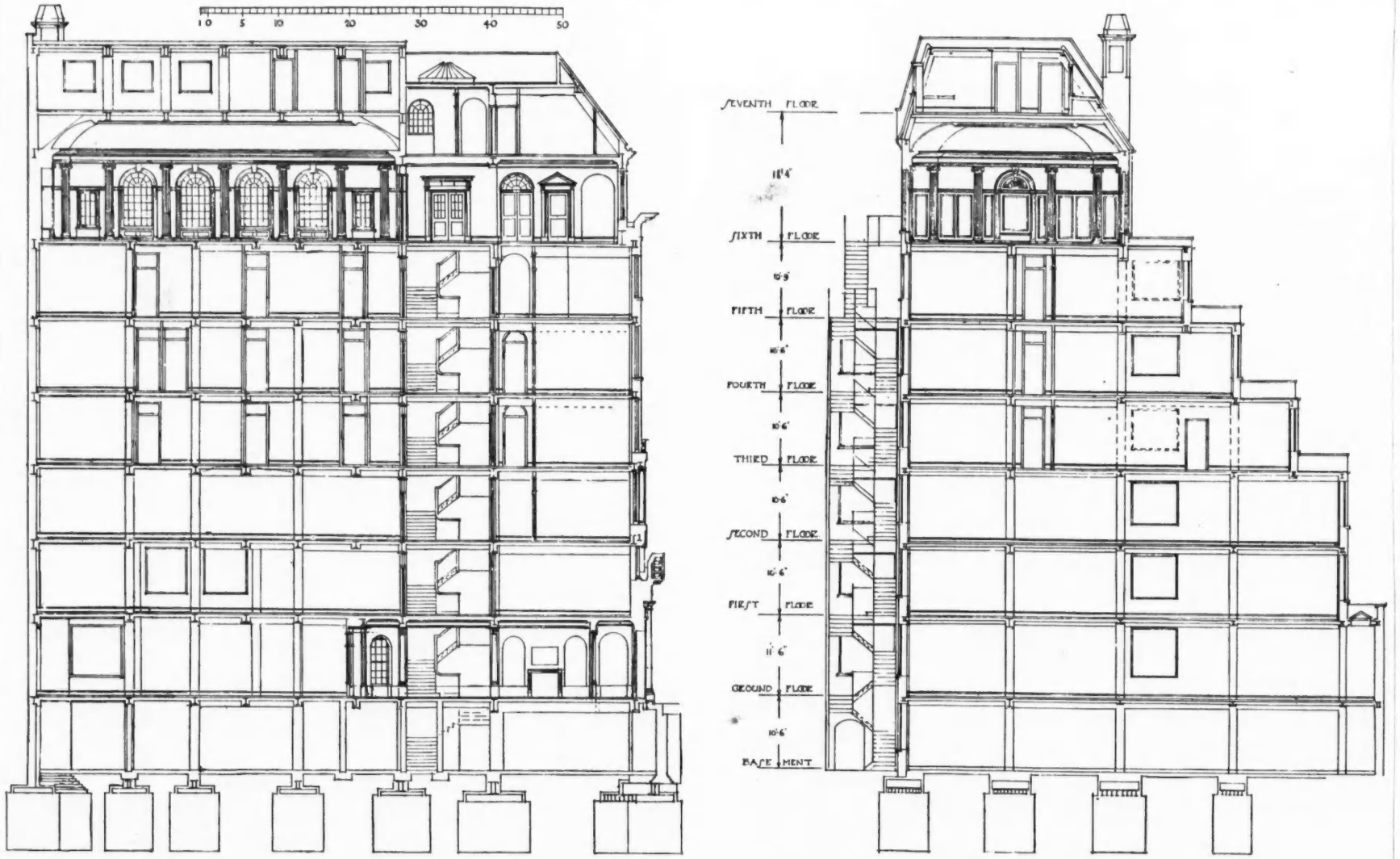
In the council chamber: the niche behind the chair. In the centre of the decorative treatment of the semicircular arch are inscrolled the initials F.B.I. (Federation of British Industries); above is a model of a ship, symbolical of the great activities of the Federation in the development of overseas trade.

Nos. 17–29 Tothill Street, S.W.] [*By Coleridge, Jennings and Soimenow.*



Plans of the ground and sixth floors. The front portion of the ground floor, on the right-hand side of the main entrance, is occupied by Martins Bank, whose famous sign of the "Grasshopper" hangs on the Tothill Street façade. All the floors above the first are planned to meet the special requirements of the Federation. The council chamber and committee and directors' rooms are placed in the top portion of the building, away from the noise of traffic in the street. The building has a frontage to Tothill Street of about 87 ft.

"Grasshopper" hangs on the Tothill Street façade. All the floors above the first are noise of traffic in the street. The building has a frontage to Tothill Street of about 87 ft.



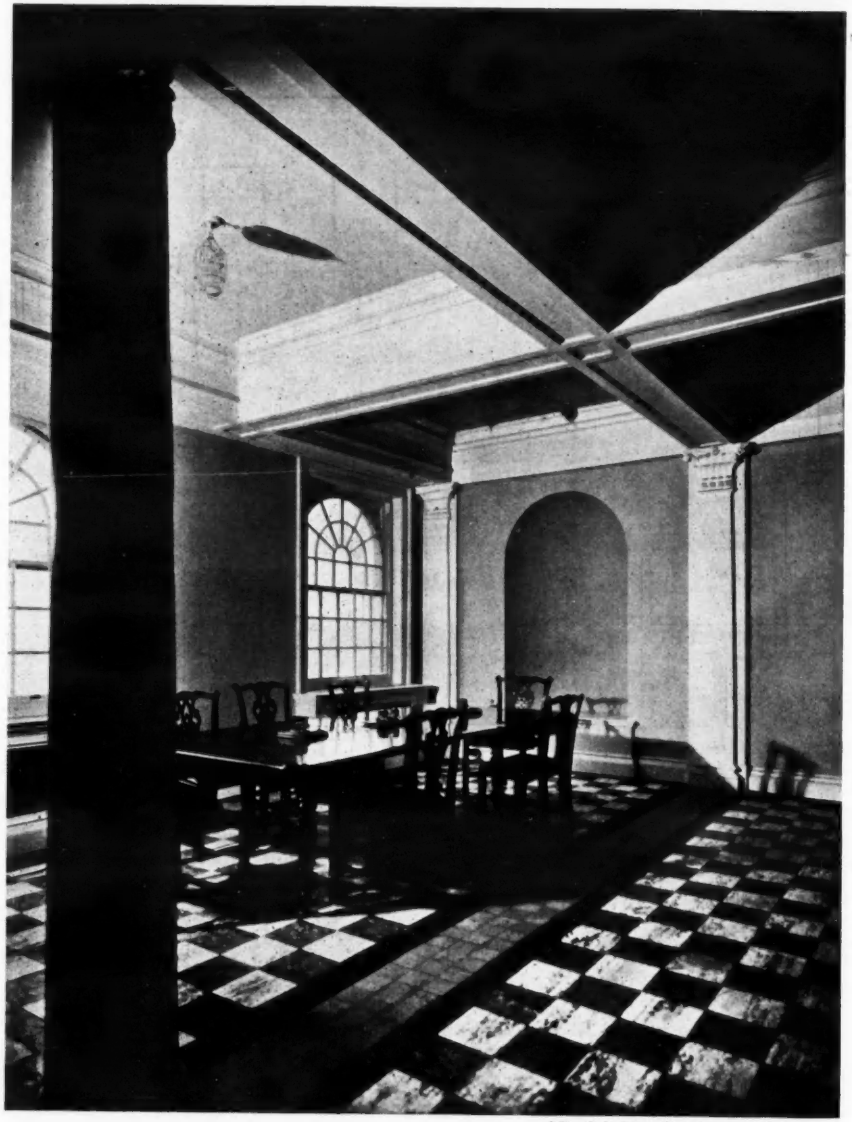
Nos. 17–29 Tothill Street, S.W.] [*By Coleridge, Jennings and Simenow.*

Longitudinal and cross sections. The foundations are composed of grillages, consisting of two tiers of rolled steel joists, placed on concrete beds. Along the party walls the grillages are cantilevered so as not to interfere with the foundations of the adjoining walls. The building is steel framed. The "set backs" on the side elevation were necessary to comply with various ancient lights. On the left of the cross section is the fire escape staircase. The building covers a site area of about 6,800 ft. and is eight floors in height, including the basement.



Nos. 17–29 Tothill Street, S.W.]

The entrance hall has pale green plaster walls with white columns and ceiling. The woodwork is of oak and the floor and plinth are of terrazzo. The radiator grilles are bronzed and have a mottled green marble surround with a white top. Behind the camera is an oak screen leading through a lobby, having a floor and plinth of marble, to the main entrance doors, which are of ebonized mahogany and silveroid.



[By Coleridge, Jennings and Soimenow.

In the large committee room, the walls and the panels of the ceiling are pale green, and the window frames, columns, pilasters and capitals, radiator cases and the ceiling beams are white. The floor is of rubber, laid in alternative squares of white and mottled green, with a border of grey and slate colours running round the room. Strips of rubber flooring of colours similar to those of the border link up the columns and pilasters.

THE IDEAL SCHOOL HALL

BY F. C. HAPPOLD (*Headmaster, Bishop Wordsworth's School, Salisbury*)
AND H. C. HUGHES

IN the ordinary secondary school the hall is one of the most important parts of the building and the part which is perhaps the most difficult to design adequately. It is not sufficient that it should be beautiful in design, it must also be capable of being put to a variety of uses. To meet the needs of modern education it must be :

1 : Capable of expansion beyond normal requirements.
2 : Equipped with a permanent stage.
3 : Unless the school possesses another large room which can be used for that purpose, capable of accommodating the school library.

The problem, then, is to design a hall to meet all these conditions. One ought first, however, to explain more fully why these conditions are considered necessary.

1 : The school hall will normally be used for assemblies of the school, for prayers, roll calls, and so on. It will, moreover, be used for lectures, concerts and plays, perhaps as a debating chamber, or for house meetings and school functions, such as gatherings of parents and prize-givings. Many of these functions demand room for an audience very much larger than can be accommodated comfortably in a hall which is big enough for everyday use. At a school concert or prize-giving not only the members of the school, but a large number of parents and friends, will be present.

2 : The study of drama occupies an important place in the curriculum of the modern school, and the terminal or annual play has become a much more elaborate and ambitious thing than the rather amateurish effort, performed on an extemporized stage, that was once characteristic of school plays. Many schools have troops of players who take themselves very seriously and aim at a high standard of acting and production. The production of school plays can, moreover, be of great educational value. Not only is work provided for actor and designer, manual worker and electrician, but also a large number of boys or girls are banded together as a social unit working for a common end.

Yet, unless proper provision is made, the production of a school play is an onerous task. If the school hall is not equipped with a permanent stage, by which is meant not a mere platform but a proper stage, with the necessary lighting equipment and facilities for the erection of stage settings, everything has to be remade and erected every time a play is produced, and much time, energy and money is wasted.

3 : As it has for a long time been acknowledged that the teaching of science demands properly equipped laboratories, so it is coming to be accepted that literary subjects cannot be effectively studied without an efficient library. The school of the future will probably rely far more on a collection of books than on the voice of the teacher. Though oral instruction will always be necessary, it is probable that greater stress will be laid on individual study. Thus, not only will a large collection of books be necessary, but also a library with plenty of working room. The type of school library so often found at present, which will accommodate only a few pupils engaged in advanced work, will be useless.

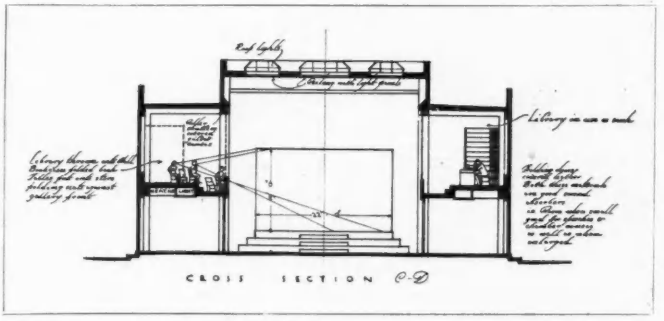
Some schools may be able to afford large working libraries in addition to a hall, and such undoubtedly is the most desirable solution; but the most economical method will be to design the school hall so that it may be also used as a working library, capable of accommodating not only pupils engaged in advanced work, but two or three forms as well.

The central library has several advantages over subject libraries housed in separate classrooms. It is more easily managed and controlled, and classification is simpler. In a school of any size it is impossible that all classes in any one subject should work in the room assigned to that subject. Moreover, in working out a problem in, let us say, history, a pupil may wish to consult books in the geography and English sections in addition to those in the history section. While it is doubtless desirable to have small duplicate libraries of books in constant use in subject rooms, in general the arguments in favour of housing the library in one place outweigh the arguments against such a plan. But there must be sufficient working space, otherwise the library becomes merely a storeroom.

The hall described in this article attempts to meet all these conditions. It will be seen that it is surrounded on three sides by a gallery, the fourth side being occupied by a permanent stage. Normally the gallery is used as a library. It is separated from the main part of the hall by roller shutters or movable partitions, as far as possible sound-proof. It is connected with the hall by a stairway, either leading up from a porch as in this plan, or descending into the hall itself. It is thus possible, by equipping the hall with folding tables and chairs, to use the entire hall as a working library. The gallery is constructed on two levels, the lower level being used as a passage-way, the upper divided by bookcases forming alcoves. These bookcases are hinged and fitted on rollers, so that they can be swung back against the gallery walls.

When the entire seating accommodation of the hall is needed, as for a prize-giving or a school play, the dividing shutters and partitions are removed and the bookcases swung back against the walls.

In construction and equipment the stage may be simple or elaborate. In its simplest form it will consist of a plain proscenium, its width and height determined by the proportions of the hall, with adequate acting space behind it. The width of the proscenium should, however, be not less than 20 ft., its height not less than 10 ft. A height of 12 or 15 ft. and a greater width in proportion is better. The depth of the inner stage may vary according to circumstances, but it should be remembered that it is very difficult to design effective stage settings for a stage the depth of which is out of



This cross-section, which is reproduced to the same scale as the drawings overleaf, shows, to right and left, the dual use of the gallery library, and also the sight-lines from it to the stage.

proportion to its height and width. Sufficient space must be allowed for in the wings and behind the back cloth. Proper arrangements for the putting up of settings and the hanging of curtains should be incorporated in the actual construction, while for a small school stage it is desirable to mask the wings entirely. An outer stage in front of the proscenium, not too narrow, and with steps leading down to floor level, is essential. Not only will it be useful in the production of plays, but it will be used during assemblies, lectures, etc. A suitable height for the stage is from 3 to 4 ft. It should not be raked, and the space underneath it should be adapted for storage purposes.

It is impossible here to say anything about stage lighting except that, when the stage is constructed, the development of a lighting system should be allowed for. The main need is for plenty of plugs at convenient points.[1]

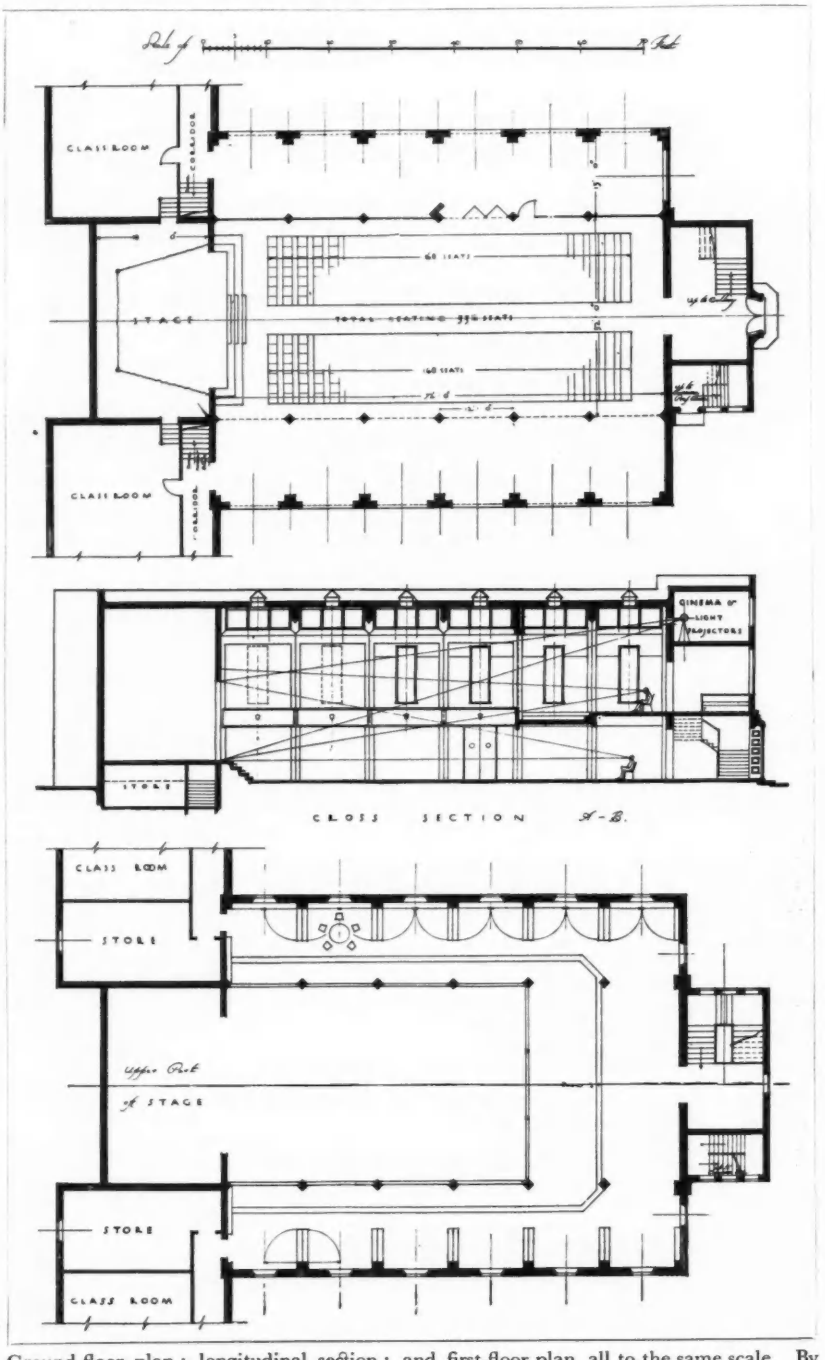
A fireproof cinema projector box and winding room, complying with the usual regulations, becomes more and more essential as the educational film develops.

Since quick entrance and exit for a large number of people must be possible, at least three double doors opening outwards, with panic bolts, should be given. In this plan the whole of the sides are furnished with folding doors, so that the hall can be emptied in a few minutes. For small meetings and for general use only the doors at the ends need be used. Access to the library is from the stair at the end of the hall, or from doors at the end of the galleries into the main corridors connecting the classrooms. The ground-floor corridor passes under the stage, giving access to storage space, and the classrooms on either side of the stage can, if required, be used with it.

The lighting in this plan is from a long row of windows close to the ceiling and from roof lights in the ceiling. Artificial lighting is from panels in the ceilings, and brackets or hanging lights can also be included. Concealed flood-lighting towards the stage should be used with caution, as it is a great nuisance for the speakers to be staring into the lights.

Heating can be arranged in the floor of hall and galleries. The structure shown is built up of steel and reinforced concrete, with flat concrete roofs, insulated and covered with asphalt, as this gives the minimum of obstruction and maximum of clear view from the galleries, but the design can be adapted to the more traditional construction of curved timber principals, with dormer windows high up. Ventilation will be partly natural through the clerestory and gallery windows, partly artificial by ducts in the gallery floors.

Such a hall would doubtless cost more than one of the type usually found, but its increased usefulness would fully compensate for the additional expense. One hears often enough of the limitations imposed on the curriculum by examination necessities; little comparatively is heard of the limitations imposed by inadequately designed buildings, often of recent date, but built by persons out of touch with the developing needs of modern educational practice.



Ground-floor plan; longitudinal section; and first-floor plan, all to the same scale. By means of folding doors the corridors can be thrown open to the hall. The gallery plan shows it in use as a library, the bays being usefully devoted to separate subjects. When more accommodation is required, the bookcases can be swung back on ball bearings.

[1] Much information on stage construction and lighting may be gained from Mitchell—*The School Theatre* (National Council of Education, Toronto); Ridge—*Stage Lighting* (Heffer); and Pendom—*Producing Plays* (Dent).

LETTERS FROM READERS

Building for Prosperity

SIR,—There is no more doubt about the cheapness of building today than there is about the cheapness of money, but if the latter fails to stimulate the public into activity it hardly seems likely that the former will change their minds unless a case can be made to justify it. Those whose circumstances make it necessary for them to build at this time are fortunate, and certainly those who have the funds available and do not use them are missing a wonderful opportunity.

As Mr. Barry says in the JOURNAL for January 7, we seem to be entering upon an era of redevelopment. In these hard times owners of property are beginning to realize that they have possessions of potential value which are being wasted. For many years old houses have stood upon sites of considerably greater value than the buildings upon them, until someone realized the fact, when a building was promptly erected. This fact applies to many properties today and also to factories in the centres of towns which should be decentralized. Also, there are, in my opinion, several towns in England where the altered traffic conditions demand either widenings or new streets to relieve bottle-necks, and I think it would be found in many cases a commercial proposition to acquire the property for these purposes and rebuild it by private enterprise, aided by fair contributions from the local authorities.

Commenting upon the detailed prices published in your last issue, according to my experience several of the prices quoted for today's values are too high, notably the concrete, brickwork, stonework, steelwork and carpentry. General opinion as to the extent of the fall in prices during the last three years assesses the rate at between 10 and 12½ per cent., and this is confirmed by our own experience. Official records show a fall between September, 1926, and February, 1930, of about 11 per cent. Later data would reveal a still greater reduction, especially in metal trades. The whole of this reduction cannot be traced to the fall in wages nor to the decrease in the cost of materials, but partly to greater competition, which shows that contractors have reorganized and reduced overheads and are therefore satisfied with a lower scale of profit.

It cannot be denied also that there is today a better understanding between masters and workmen and consequently a considerable improvement in output. In this way the men are really helping themselves. During the whole of 1930 there has been a falling market, and this will probably last for some time. It applies not only to builders' work, but to that of every sub-contractor connected with the building trade, and it nearly always happens now that actual estimates are found to be considerably lower than preliminary estimates made a few months before.

The principal argument in favour of building activity today is to make use of idle capital on a low expenditure in order to rationalize the premises as well as the staff and organization of commercial firms, at a time when scarcity of business permits it.

H. J. LEANING

SIR,—If, after reading Mr. Gerald Barry's arresting article in your issue of January 7, one were asked who in the post-war years were the outstanding builders for prosperity, I think, so far as London is concerned, the great London stores would at once come to mind. All the large retail houses, without exception, have carried through great building schemes.

Perhaps it is not too easy for those actively engaged in the building industry to take a detached view of the modern trend of building development. But I can say that there is more satisfaction in completing a building which has an economic usefulness rather than what is called a luxury building which creates nothing after its erection.

An unexpected activity surely has been the great expansion in bank building —who shall say into which category some of these bank palaces fall? To some it seems ironic that so great provision should be made for our depleted resources.

Building activity has followed every war, and the greatest war in history has brought the biggest building boom that ever was, and the fact that in spite of the depression large building operations can still be financed suggests that some of the qualities Mr. Gerald Barry calls for, viz. hard work, sacrifice and belief in ourselves, are, so far as the building world is concerned, not altogether lacking.

J. M. HILL

SIR,—We have read with interest Mr. Gerald Barry's article on "Building for Prosperity," as it is entirely in accordance with our own ideas of the present so-called "trade depression."

Let us once and for all give up the use of this miserable catch-phrase, which, after all, is usually a cloak with which we hope to cover our own deficiencies.

Man's life on this earth has never been easy. It is only by struggling that he has achieved, and history shows that the greater the struggle, the greater has been the achievement.

This being so, let us face the future in a spirit of confirmed optimism, determined to work just a little harder than we really need, for we believe that the present time affords an unparalleled opportunity. This generation may be faced with greater difficulties than any of its predecessors, but surely the opportunities are as great in proportion

L. J. GOOCH
(FOR MARRYAT AND SCOTT, LTD.)

SIR,—Mr. Gerald Barry's article, "Building for Prosperity," in THE ARCHITECTS' JOURNAL for January 7, presents many interesting, though debatable, points of view, as with a few deft strokes of the brush he clears his picture of the clouds of depression which, he informs us, are a prevailing fashion in some minds, leaving us with a bright and clear horizon for study and reflection in the New Year.

As it happens, there has been, fortunately, no need for the great building industry to "Coué" itself out of any form of the malady of depression, either imaginary or actual, during the last few years, thanks to a strong natural course of evolution in commercial enterprise and thought, expressing with increased accent, year by year, educational values counted in speed and yet more speed, to obtain the grand total — "Efficiency." A service demanded of each individual as that which matters—such is the spirit of the age.

This, then, is the faith which gives the building industry its impetus, neither transitory nor temporary, but with firm determination, strengthening the shackles which hold it to the ever-increasing revolutions of the wheels of commercial competition.

Be it the great amalgamation of industrial interests, or private enterprise, demolition of inadequate premises has been a necessity, and the opportunity for scientific planning to give greater facility for development has and is being eagerly sought under the supervision of the most eminent members of the architectural profession.

The environment of the individual is no longer "fuggy"; light and air, sanitation, facilities for healthful feeding for staff and clientele alike, the sports fields, all are necessary for healthy fitness to maintain the pace.

The interior decoration of modern buildings with its rare marbles, woods, and bronzes, etc., is lavishly displayed for the comfort of the community as a whole, rather than hidden in the seclusion of the private mansion.

No, Mr. Barry, this is no nursery building scheme of toy bricks to satisfy a whim, or to be kicked over in a fit of

temper, but a thoughtfully developed scheme to meet necessity, and, we trust, for the betterment of the human race.

The rate of advancement is such that it is difficult to foresee what change in development may take place in, say, fifteen years' time, but it is safe to assume that it will not be retrograde.

R. EVANS
(J. WHITEHEAD & SON, LTD.).

The Architecture of Steel

SIR,—Your editorial note on "Steel" and your article entitled "The Architecture of Steel" convey, in my opinion, an entirely wrong impression of the position of steelwork in building and architecture. It is surely incorrect to claim, as you do, that concrete has made a sudden leap into architectural excellence. You appear to ignore the fact that even from Roman times there has been an architecture in cement or similar plastic material.

The claim of the steelwork constructional industry is that with the help of modern scientific research we have established steel as the premier building material, and that we are now entering into the great era of steelwork construction, the true Steel Age. In the very near future it will be fully recognized that architecture on any large scale can only be carried out in steel.

There may perhaps for a short period have been some want of complete sympathy and co-operation between the engineer and the architect, the latter being fully equipped with the knowledge of his art and the former scarcely realizing the great possibilities of his material. It is hardly surprising that the natural caution of the engineer should, during the stages of development, have made him hesitate to meet all the requirements of the architect.

That phase has passed, and the steelwork engineer now offers the architect, in the only material suitable for the purpose, scientifically designed structures. The spirit of co-operation between the engineer and the architect, which is referred to in the last paragraph of your leading article, is growing every day, and will undoubtedly result in a still further extension of activities in steel-framed buildings throughout the country.

BEN WALMSLEY
(DORMAN, LONG & CO., LTD.)

SIR,—It is often a good thing to "see ourselves as others see us," so your article on the architecture of steel is sure to be welcomed by engineers and "ironmasters."

It is well known that many architects nowadays know a lot about steel, and are fully aware that any of the engineering firms will gladly give them assistance, and so enable them to carry out whatever they design or desire in steel.

Take, for instance, the roof of Westminster Hall in London, or the roof of St. John's College Library in Cambridge; in both these cases the architect and engineer have collaborated, and by specially-designed steel roof principals, covered with the ancient oak, have produced a delightful effect, far more pleasing than the reinforced concrete arched roof constructed at the Royal Horticultural Hall in Vincent Square, London.

But there are architects and architects. It was an architect who, reporting on a large timber roof, about 70 ft. square, of a church in North London, which after a century needed some repair, decided that the whole thing must be pulled down and a new one erected. Fortunately, the authorities called in another architect with a really brilliant mind, who, in consultation with an engineer, by throwing two huge steel arches about 90 ft. span from corner to corner, supported the fine old roof. The repairs were carried out at a fraction of the cost and the church was saved.

Engineers and ironmasters constantly meet architects, even very well known ones, who still insist on out-of-date steel construction, preferring a forest of stanchions and small spans to the modern construction of few stanchions and large spans which give more freedom to carry on a business. Others insist on antiquated arrangements for fixing beams on to stanchions, which are really a remnant of the cast-iron age, and so not only produce a strange-looking job, but increase the cost largely. They brush aside all advice and shut their eyes to the progress of science.

Your article should do a lot of good in bringing before both professions the need to work together.

M. B. BUXTON
(H. YOUNG & CO., LTD.)

Panels and Preservation

SIR,—I have read with very special interest the articles on this subject by Messrs. H. C. Hughes, Thomas Rayson, Thomas Thomson, and E. Maxwell Fry, which appeared in your issue for January 7.

I trust nothing I have to say will be taken as evidence that I am in any way antagonistic to this movement, but after many years' experience of acting on councils and committees, might I be allowed to point out certain possibilities and difficulties which will arise in certain districts, and which will lead to friction sooner or later? Some of these are vaguely hinted at by the writers of these articles.

First let me say that the examples quoted and illustrated are proof that excellent results have been achieved under the panel system.

I only wish to touch as briefly as possible on a few of the main points, and do so in no carping or fault-finding spirit. We cannot ignore the human element.

There is the idealist to whom all honorary work in a national cause is undertaken from a keen sense of duty. In spite of the materialism of this age, such men are to be found on nearly all committees. In opposition to this type we have the men who join anything and everything for the sake of the connection and the possibilities of finding new channels to further their personal interests.

From an economic point of view it may be true that self-interest is the greatest force in national prosperity, but in dealing with matters of art and amenity this cannot be recognized as a true factor, for the simple reason that, when weighed in the balance, self-interest usually demands quick returns, regardless of the long view.

Let me now quote from the articles referred to. In the second article the following words appear :

> There is little doubt that it will mean a good deal of unpaid work, but, nevertheless, we are confident that both morally and financially it will, in the long run, adequately repay us as a profession in direct proportion to the devotion given. This is the experience of the medical profession, we are sure.

Note the "*We are sure*," which seems to imply a doubt. I do not think the parallel holds good, for the simple reason that the medical case is one largely of humanitarianism and has already been largely abused by people who can well afford to employ a paid specialist; also a very large majority of the best medical men refused to have anything to do with a panel system.

It will be found without doubt that the housing panel system will be abused in this respect also. It will come to be a case of a few paid officials, and the bulk of the work done by enthusiasts in an honorary capacity.

Again, from the second article :

> . . . although undoubtedly all building work should be handled by qualified architects. Accepting this as an object which somehow must be achieved, it behoves us as architects to uphold the status of our profession, and to see that every job we turn out, however small, is irreproachable. Unfortunately, it is hardly so at present, but it is gratifying to see new life being instilled into the profession as a result of the educative influence of the great architectural schools.

What constitutes a qualified architect ? We know men who are doing many hundreds of thousands of pounds' worth of work annually whose qualifications as designers might be challenged.

Scarcely a week passes but we receive circulars from all types of contractors informing us that "we keep a specially trained staff of draughtsmen who will do your details." The last two sentences

may be taken as being related to one another.

The great architectural schools are doing a fine work, but is it not often too academic or too modern according to the prejudices of the professor ?

Again, in article number three :

> This means, in point of fact, getting all the architects of a district into the work, and keeping them going on a rota.

Human nature must again be considered in relation to this statement.

In any district probably only about one-tenth may be taken as first-class men.

The cultured, successful snob never served on any committee or panel, and never will.

The commercial touter will serve on any committee or panel if he sees a way of increasing his practice. The first is a man who would be of great use on such a panel if he had time or could be persuaded to serve. The second is the man who is of little use on the panel, but will stay on as long as it suits his purpose. The self-sacrificing idealist will always be elected to such panels, and will serve as long as he is permitted to serve; even long after his faculties justify his being on such a panel or occupying any position where keen critical powers are needed.

I do not wish to appear ungenerous, but these observations are founded on a fairly large experience of honorary work connected with various departments of architectural life. My lines may not, however, have fallen in pleasant places.

I do not wish to elaborate the matter by stating further likely possibilities, but one last quotation may be allowed me from article three :

> Certainly it should not be left to a few men to carry more than their share of voluntary work.

This may be the writer's pious hope, but he knows very well that since the human race began to desire better things it has been left to the few who were considered either fanatics or mental defectives to shoulder the burden of carrying forward any new and ideal movement. I cannot close this letter without stating how clearly the writers of the articles referred to have stated their case, and how obvious is their enthusiasm in the cause of amenity and right building.

WILLIAM DAVIDSON

R.I.B.A. Prizes and Studentships

SIR,—In the January 14 issue of the JOURNAL there appeared a list of the successful competitors to whom awards had been made in the annual prizes and studentships held by the R.I.B.A.

Whilst the winners are deserving of every congratulation, a most curious state of affairs is made apparent. An examination of the list reveals that no fewer than four prizes were withheld altogether, and in the case of the Alfred Bossom Studentship only the silver medal was presented. From a cursory glance it might be assumed that there were no entries in some of the competitions, but upon further investigation it is apparent that in one competition—that of the Tite Prize—for which there was no award, no fewer than 213 students took part. This result seems almost farcical. No student would trouble to enter unless he thought he had a chance to succeed, and yet out of 213 the best of them is not deserving of the prize. If this is really so, what is wrong with the architectural schools ? Practising architects today hear a great deal talked about architectural education, and yet out of 213 students, almost certainly representing a number of different architectural educational establishments, the best of them is not deemed worthy by the R.I.B.A. of recognition. This argument can be carried still further to the Institute itself. We may ask, What is the Board of Architectural Education doing ? This board appears in some measure to dictate the syllabus followed by the schools, and if we are to assume that the work in the schools is so bad, then the Institute must share in the blame.

A glance at the past history of the prizes and studentships is even more surprising. The Owen Jones Studentship was not awarded in 1928 nor in 1929. The Henry Saxon Snell Prize was not awarded in 1929. The Grissell Medal was not awarded in 1929 or 1930, while the Arthur Cates Prize does not appear to have been given since the war.

These results are not at all encouraging. It is deplored by some that present-day students do not enter for studentships in greater numbers, but when results such as these are noted it must make the younger generation wonder if the chances are worth while.

If the studentships may be regarded as preliminary to a young architect entering into the field of open architectural competition, a method much favoured in securing the larger commissions, then surely they should be governed upon the same lines. The winning design in a large competition may not be an ideal solution to the problem, but the premium is, nevertheless, awarded to the design deemed by the Assessor to be first in merit, irrespective of whether the number of drawings submitted were six or six hundred, the individual competitor being in no way responsible for the number of designs submitted. One cannot help thinking of the indignation of enraged competitors in an open competition, if the premium was withheld because none of the designs met with the personal approval of the jury. In the present-day depression, times are exceedingly difficult for the student, and one cannot help feeling that it is the duty of everyone to encourage the younger generation, in whom I, for one, have every confidence.

A PRACTISING ARCHITECT

The Smoke Nuisance

SIR,—I was pleased to read, in Mr. George Gentry's letter in the December 17 issue of the JOURNAL, that the Coal Merchants' Federation of Great Britain desires to see coal consumed domestically with the minimum of smoke, by means of both a more sensible use and modern appliances.

I agree that the case for the coal fire can be argued on the grounds of health, cheerfulness and comfort—but not economy, nor yet on the net results on health. A coal fire certainly warms a room and its occupants in a healthy manner, even though the smoke produced is responsible for much ill-health, and it is admittedly cheerful—to those who have acquired the habit. But it is at its brightest and best when the smoke-producing volatiles have been driven off, and what is in effect a carbonised fuel is left. An equally cheerful and more efficient fire can be obtained if the coal is carbonized before use, and the volatiles collected as wealth-producing substances, rather than allowed to escape into the atmosphere as health-destroying products.

On the grounds of economy I beg to differ from Mr. Gentry. Beyond the primary economy of cost per unit of heat usefully employed, which can be effected smokelessly at a lower figure than with soft-coal fires, there are three other aspects of more important national economy to be considered :

1 : Three million tons of potential fuel escape into the atmosphere every year in the form of soot, representing a waste of £6,000,000—in effect the work of over a million men for three days a year is devoted to providing the soot which pollutes the atmosphere (Royal Commission on the Coal Industry, 1925).

2 : This three million tons of fuel, laden with acids and tar, and estimated to be ten million tons of smoke, descends and brings about the well-known facts of the smoke nuisance, which necessitate an annual expenditure of a further sum of £80,000,000—borne, of course, by the users of coal.

3 : It is imperative that the nation should use its diminishing coal reserves to the greatest possible advantage, and the burning of raw coal for domestic purposes is probably the most disadvantageous way of utilizing them.

Add to these economic factors the most serious results of all—the many grave and far-reaching effects of coal

smoke upon human health, both by the continuous inhalation of filth-laden air and by the obscuration of solar radiation—and it will be seen that the case for the abolition of the coal fire is quite unanswerable.

The coal merchant may become a little perturbed at the possibility of this change being achieved, but there is no occasion for this. For his own interests and in the interests of the open fire, he should regard the smokeless solid fuel with a more than friendly eye, and welcome it as an ally by the help of which he will be able to withstand the ever-increasing onslaughts of other forms of smokeless heating.

ARNOLD MARSH
(GENERAL SECRETARY, NATIONAL SMOKE ABATEMENT SOCIETY)

QUESTIONS THAT ARISE

Wall Tie

"Manufacturers" write: "*We have just secured the patent rights for a new type of wall tie for use in hollow brick walls, but before commencing to put this on the market we are anxious to have particulars regarding the standard spacings of hollow walls used in different parts of the country. We understand that the cavity varies from 2 ins. to 2½ ins. wide, but we should much esteem your confirmation of this, especially if you could indicate to us what is the commonest practice in the following districts: London, Birmingham, Manchester, Liverpool, Sheffield, Leeds, South Wales, Scotland; and any variations from this which you may know of.*"

In ninety-nine cases out of a hundred the width of the cavity is 2¼ ins., dependent on the standard brick dimension (inch mortar joint) of 9 ins. by 4½ ins. plan size, the cavity being half the width of a brick, so that brick-dimensions are preserved in overall measurements. The actual internal width may be 2½ ins. where the bricks burn small—say, 8¼ ins. by 4¼ ins.—but is limited to a maximum of 3 ins. by the model bylaws in force in most controlled areas.

The overall thickness of cavity walling is usually referred to at the nearest integer, as 11 ins., 16 ins., and so forth, but in practice the 11 ins. wall is built 11¼ ins. and the 16 ins. wall 15¾ ins. I am unacquainted with the practice in Scotland, but see no reason why it should differ. Such differences as arise are not due to whim, but to the brick sizes current locally—see *R.I.B.A. Kalendar* or current issue of *Specification* for standard dimensions of north and south country practice. E. G.

Walls of Mud

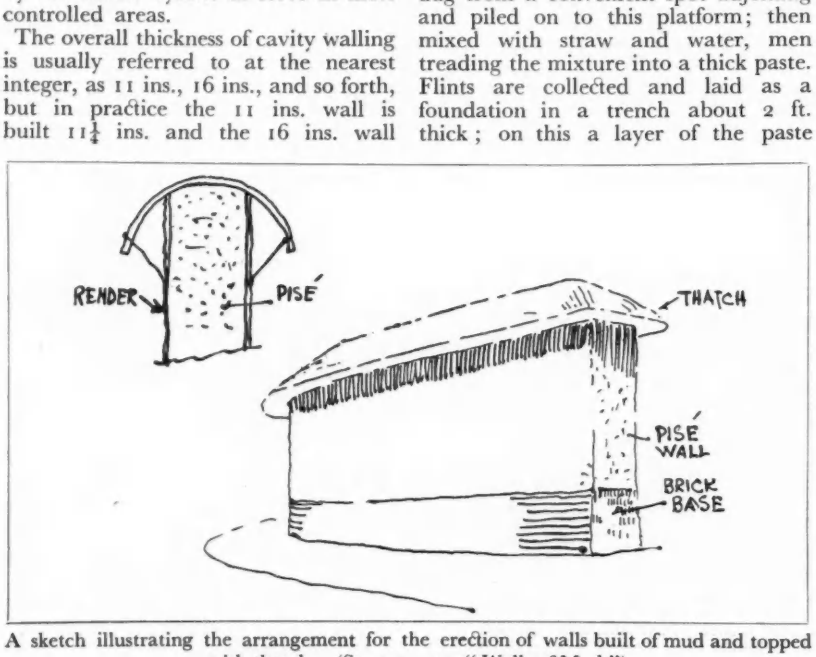
A. J. writes: "*I have noticed walls built of mud and topped with thatch; these have an interesting appearance, and seem to last. Would your expert explain the method of building?*"

Many walls, and even cottages, have been so erected in the past, as described by your correspondent, especially in Wiltshire. They are fairly durable as long as the wet is kept off, which is the reason they are coped with a wide thatch. Such walls usually decay at the bottom, where the mud is washed out by drippings, leading eventually to collapse.

The traditional method of building is to remove the top soil and form a platform of level ground. The chalk is dug from a convenient spot adjoining and piled on to this platform; then mixed with straw and water, men treading the mixture into a thick paste. Flints are collected and laid as a foundation in a trench about 2 ft. thick; on this a layer of the paste is placed, about 1 ft. high. As the wall goes up, the walker walks along, armed with a three-pronged fork, and plants in position lumps of the material, which are handed to him by an assistant. Each layer is between 18 ins. and 2 ft. in thickness. As he proceeds, the walker cleans down the faces with the back of a spade. On a long wall round a farm, by the time the walker has returned to the starting point, the material is dry enough for him to begin another layer. The top is finished saddle fashion, and the thatcher attaches his covering by pegging into the chalk.

It is not advisable to build cottages in this way today. Old ones so built are usually damp, and would be uninhabitable for at least a year after completion, owing to the large amount of moisture in the material. The external surfaces of all such walls should be constantly limewashed to protect them, and the thatch kept constantly in repair. Beyond their quaint appearance, these walls have little to recommend them to modern farmers, as the skilled farm hands who used to do this work in slack times are dying out.

The late Mr. W. R. Jaggard made a study of these walls, but I believe his death prevented his notes being completed. LL. E. W.



A sketch illustrating the arrangement for the erection of walls built of mud and topped with thatch. (See query on "Walls of Mud.")

Bills of Quantities

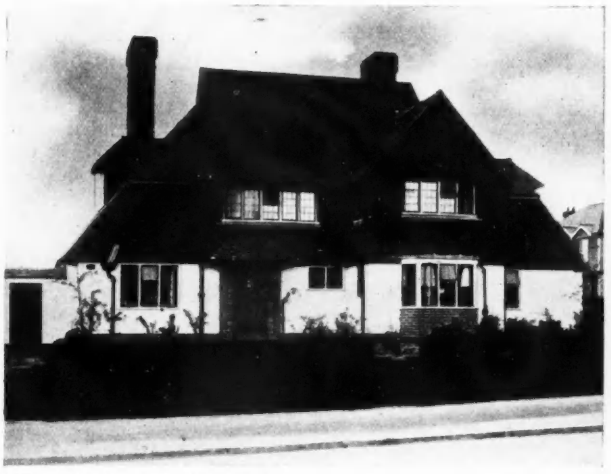
X writes: "*In a contract with which I am now dealing, the contractor, in arriving at his figure for tender, has deducted a lump sum at the end of his quantities, and against this he writes 'Less profits on Provisional Sums,' thus reducing the amount of his tender, but not the prices per item in his tender. On going into the question for variation purposes, I find that the amount deducted is more than the whole of the profits he has included on the provisional sums. I should be pleased to have your expert's opinion on the matter.*"

The quantities should never have been accepted with a lump sum deduction at the end. If the contractor wished to reduce his tender after pricing his bills, he should have secured the necessary reduction by lowering the price of certain items.

There might have been, during the course of the contract, a considerable extra measured on the priced bills, an item which the contractor might have reduced if he had submitted the bills priced in the correct manner, and on this he scores.

However, in adjustment, all profits on provisional sums will be omitted, together with all profits on any extras to these sums.

There should also be a percentage reduction on the total of the extras on the remaining prices. J. W.



The main front, facing north. The walls are built of Flettons; the lower story is finished in cream distemper and the upper part is hung with sand-faced rustic tiles.



The garden side, showing the loggia. The roof is covered with sand-faced antique tiles; and the plinth and chimney stacks are built with old English stock bricks.

A HOUSE AT GUILDFORD

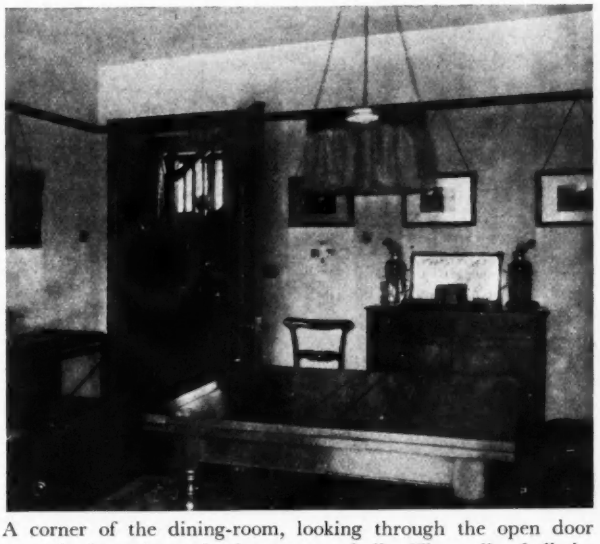
DESIGNED BY FRANK L. JOHNSON

THIS house on Woodbridge Hill, Guildford, was built for Dr. O. H. Brown, on a corner site—the principal aspect facing north. In designing a doctor's house, the architect is met with several problems which do not arise in the ordinary domestic house ; the essential being to provide separate quarters for his practice and at the same time easy access from the domestic side.

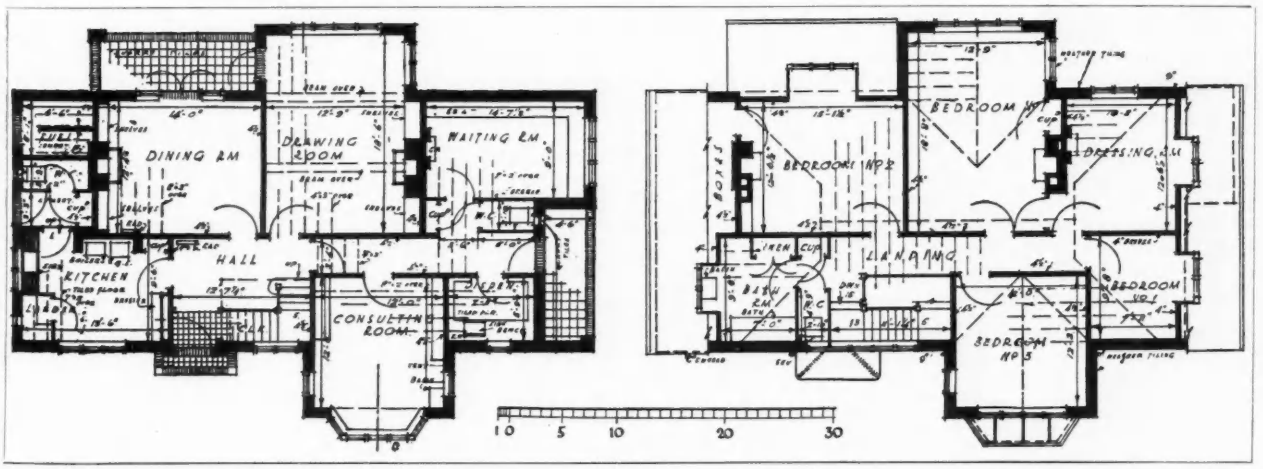
As will be seen from the ground-floor plan, the professional quarters have been grouped round the north-west corner, and consist of patients' waiting room, dispensary, consulting-room and lavatory accommodation. The patients' entrance is in the side road and the porch has been designed to accommodate their bicycles and perambulators.

This portion of the house is cut off by a door from the private entrance hall. A distance of 20 ft. was required for eyesight tests, and this is obtained in the corridor.

Owing to the large space needed on the ground floor, the area of the first floor was greater than that required, and in order to reduce this area the roof has been continued down to the first-floor level at either end. The reception rooms and principal bedrooms face south, the kitchen, consulting room and dispensary face north, and, where possible, the windows have been designed in order to obtain the best views.



A corner of the dining-room, looking through the open door towards the staircase in the entrance hall. The walls of all the reception rooms and hall are covered with rough surface plaster.



Ground- and first-floor plans. The whole of the ground floor is covered with wood blocks, oiled and polished, with the exception of the kitchen, which has red quarry tiles. The house is centrally heated, wired for electric power; and a water-softening apparatus is installed.

LITERATURE

ARCHITECTURAL TURNED WOODWORK

THIS portfolio is a very natural and desirable sequel to the two previous volumes by the same authors on *Mouldings of the Tudor Period* and *Mouldings of the Wren and Georgian Periods*.

When the first was published, it was generally agreed that the form and arrangement were of considerable convenience; this volume gave only full-size profiles. In the second portfolio, on the Tudor Period, $\frac{3}{8}$ in. to a foot drawings were added as keys to the details illustrated.

In the present instance the authors have, probably of necessity, gone a step further and included full sizes, $\frac{3}{4}$ in. to a foot details, and, where necessary, small-scale key diagrams.

Staircase balusters and newels naturally occupy the majority of the plates; and they are given in great variety, from the vigorous and widely-spaced balusters of the new Police Station, Salisbury, on sheet 4, to the charmingly delicate little mahogany balusters from a house in Margaret Street, Canterbury, clustered three to a step, shown on the last sheet.

As one turns over these plates, one cannot help being amazed by the number of different tunes that can be played on a short piece of wood. Students have here an excellent opportunity of examining past themes with a view to making variations of their own.

The $\frac{3}{4}$ in. to a foot drawings incidentally illustrate some interesting ramps and turns to handrails which may help to solve difficulties which frequently arise.

In addition to balusters, there are other examples of the turner's craft, such as the charming little vases on the oak cover to the font at St. Clement Danes, the turned finials to the bookcases at Trinity Hall, Cambridge, and the pew ends at various college chapels.

The whole book shows excellent discrimination and careful presentation. The authors have limited their field very strictly to architectural details, but they must, at times, have been sorely tempted to include table legs and bed posts.

H. D.

Architectural Turned Woodwork of the Sixteenth, Seventeenth and Eighteenth Centuries. By Tunstall Small and Christopher Woodbridge. London: The Architectural Press. Price 8s. 6d. net.

ENGLISH ROMANESQUE ARCHITECTURE

IN this book a general survey of the English Romanesque period as a whole has been attempted for the first time, other writers in the past having been content to treat either the history, the decoration, or the architecture proper as individual subjects.

The book is also notable in that the author does not choose to consider "Romanesque" merely as a somewhat rude prelude to the development of the more perfect Early Gothic, which was to come later at the time of Edward the First, but shows it to have an expression and a meaning quite definitely its own, which, with all its "frailties and imperfections" clearly mirrors the age and the manner of men which produced it.

As technical editor to the Royal Commission on Historical Monuments (England), Mr. Clapham is well equipped to make this most scholarly contribution to the history of English architecture, and deals in the present volume with the period from the end of the Roman occupation up to the time of the Norman Conquest. In a later volume he hopes to complete the survey up to the beginning of the thirteenth century.

The book is illustrated by over fifty figures in the text—mostly scale plans—and sixty-five plates, including not only some fresh and unusual photographs of the more familiar subjects, but also some new and hitherto unpublished illustrations which show some most interesting detail. The book has been produced with that high standard of technical excellence which we associate with the imprint of the Clarendon Press.

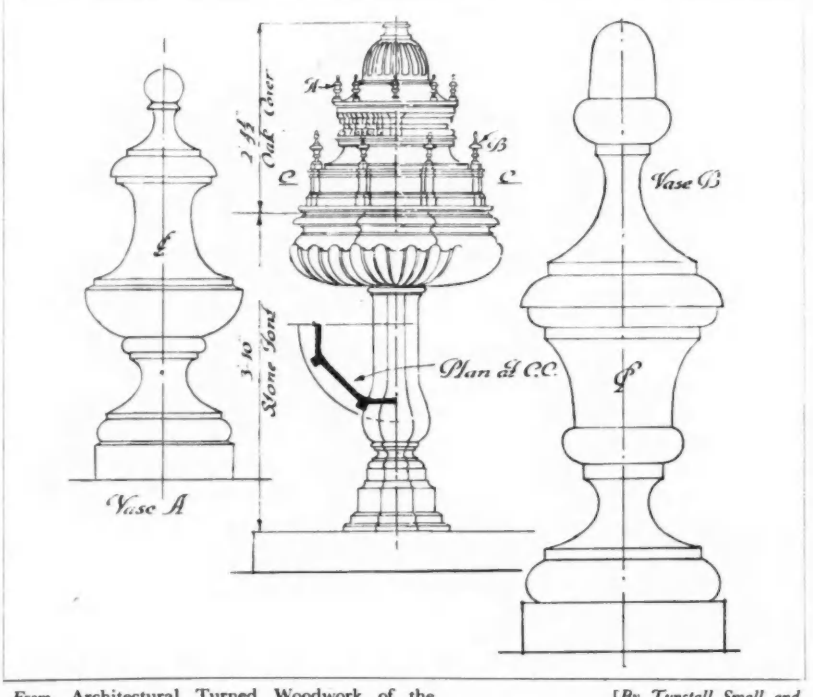
W. P.

English Romanesque Architecture before the Conquest. By A. W. Clapham, F.S.A. Oxford: Clarendon Press. Price 30s. net.

MODERN SEWAGE AND HYGIENICS

THE advance of medical science, together with the spread of education, has tended powerfully to awaken national endeavour in matters both of personal and public hygiene. One of the greatest improvements in hygienic education, I think, is that concerning safe and sanitary drainage. It was, therefore, with much interest I read *Modern Sewage Disposal and Hygienics*, from the pen of Mr. S. H. Adams. By virtue of his long experience as an engineer—over fifty years—the author has given us an historical illustrated record of sanitary and social progress from an engineering standpoint. In his foreword the author states that his intention has been to embrace in one volume information which otherwise would be widely sought. This he has accomplished to such a marked degree that the book, unlike most text-books, presents excellent reading both for the scientific worker, the student or the layman.

The first chapter, which deals with the historical aspect of the subject, describes the calls for State aid and for a Minister of Health. This is immediately followed by a chapter



From Architectural Turned Woodwork of the Sixteenth, Seventeenth and Eighteenth Centuries.] [*By Tunstall Small and Christopher Woodbridge.*

Font cover in oak, St. Clement Danes, Strand, W.C.2.

devoted to the Ministry of Health, describing its creation, functions and its duties with regard to education, legislation, and public works.

Other chapters contain descriptions of sewerage and river pollution; various irrigation farms and sewage farms in England and abroad; biological sewage purification processes; sewage sludge and its disposal; how gas is obtained from sludge when fermented in bacterial digestion tanks; the Ministry of Health requirements; the Lawrence, U.S.A., experiment station; and, finally, a chronological list of some at least of the Acts, commissions and events which have thus far lighted the path of the goddess Hygeia.

The book is also noteworthy for its large number of excellent illustrations, including statistic and other curves, graphs, charts and engineering tables.

W. K.

Modern Sewage Disposal and Hygienics. By S. H. Adams, A.M.INST.C.E. London: E. and F. Spon, Ltd. Price 25s. net.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Slum Clearance Schemes

MR. ALBERY asked the Minister of Health whether he could report any acceleration in slum-clearance schemes.

Mr. Greenwood said he could. During the eleven years since the Armistice approximately 11,000 houses had been demolished under improvement and reconstruction schemes undertaken by local authorities in England and Wales, while the 224 local authorities which had so far submitted programmes to him under the 1930 Act proposed to demolish approximately 60,000 houses in clearance and improvement areas during the next five years.

Asked by Mr. Mills if he could state the county and local authorities which had scheduled any areas for slum clearance under the Housing (No. 2) Act, Mr. Greenwood said he had been informed of seventy-nine declarations made by twenty-seven local authorities under Part I of the Housing Act, 1930.

Built-up Areas

Major Nathan asked the Minister of Health when he anticipated being in a position to introduce his projected Bill relating to town planning of built-up areas.

Mr. Greenwood said he hoped that it would be found possible to introduce the Bill at an early date.

Further Housing Accommodation

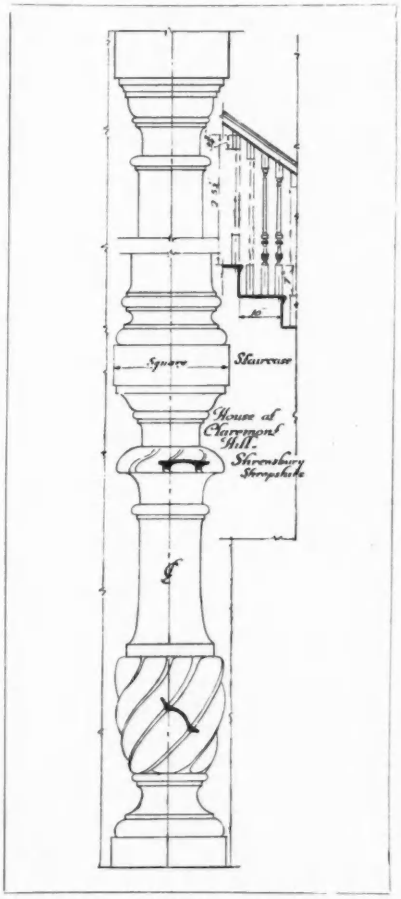
Mr. Gossling asked the Minister of Health how many local authorities had sent in a general statement of the measures which they proposed to take during the five next succeeding years for the provision of further housing accommodation; and what was the number of houses each local authority proposed to build in the five next succeeding years under the 1924 Act and the 1930 Act.

Mr. Greenwood said that 224 local authorities had so far submitted programmes in pursuance of section 25 (2) of the Housing Act, 1930.

Fall in Housing Costs

Mr. Ramsbotham asked the Minister of Health whether the general fall in prices had been reflected in the cheaper construction of subsidy houses; and what was the average price of a council subsidy house in 1930 as compared with the average price for a similar house erected by private enterprise.

Mr. Greenwood said that there had been a substantial fall in housing costs during the last six years. The average cost of building non-parlour houses provided by local authorities in England and Wales during 1930 was £340. He regretted that information as to the cost of houses erected by private enterprise was not available.



From Architectural Turned Woodwork of the 16th, 17th and 18th Centuries.] [*By Tunstall Small and Christopher Woodbridge.*

Detail of the staircase balustrade, house at Claremont Hill, Shrewsbury, Shropshire.

Direct Labour

Asked by Mr. Day if he could state the number of local authorities in England and Wales who were at present building houses under various housing schemes by direct labour, Mr. Greenwood said that the number was 110.

Standard Rates in Building Trade

Dr. Hastings asked the Minister of Health if he would state what steps were taken by his department to ensure that the fair wages clause in contracts for building subsidy houses was observed and the men employed paid the standard local rates.

Mr. Greenwood said that one of the conditions to which the grant of subsidy under the Housing (Financial Provisions) Act, 1924, was subject, was that the local authority should undertake that a fair wages clause should be inserted in the contract for the construction of the houses. The observance of the terms of the contract was primarily a matter for the contracting local authority and he had no reason to suppose that their responsibility was not generally properly discharged. He received very few complaints and they were ordinarily adjusted as a result of correspondence with the local authority.

Re-housing the Working Classes

Mr. Ramsbotham asked the Minister of Health whether, in view of the large number of better-class houses which were now becoming vacant owing to economic depression, he would consider the desirability of suggesting to local authorities the acquisition, re-conditioning, and subdivision of such residences to provide accommodation for the working classes.

Mr. Greenwood said that local authorities had already under section 57 of the Housing Act, 1925, powers of taking the action suggested, but he was not himself aware of any increase in the number of vacant houses which were suitable for conversion, and past experience did not suggest that conversion of this kind was generally economical or otherwise satisfactory.

The Haig Statue

Mr. Ede asked the First Commissioner of Works whether he was now in a position to make any statement with reference to the Haig statue.

Mr. Lansbury replied in the affirmative. Mr. Hardiman, the sculptor selected by the assessors appointed by his predecessors, had completed the second model. This had been approved by them, subject to some small modifications. The two models would be available for inspection in the Royal Gallery by members of both Houses of Parliament, after which the artist would be instructed to proceed with the work of the full-sized statue.

THE

SKETCH CLUB

TWENTY-FIRST SESSION

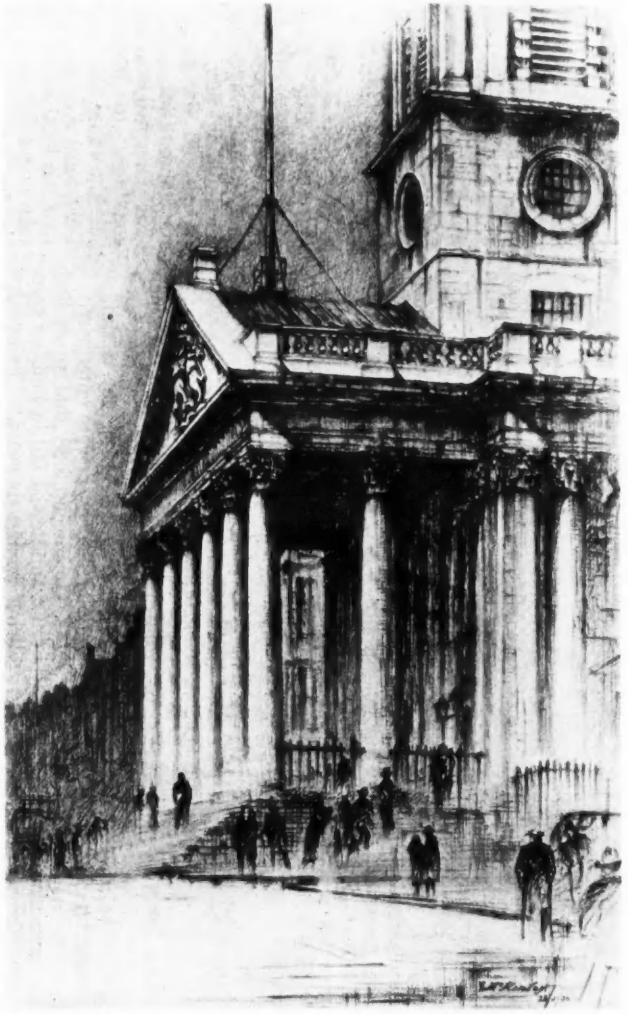
FOR this occasion, when the Club celebrates its majority, there could be no more fitting general theme than that of church architecture, for the odds are heavy that any architect's portfolios will contain more of such than of any other subjects. Those chosen range from home over several countries and many styles, including two Byzantine examples noted during the war. The fact that the majority are in pencil bears witness, no doubt, to the adaptability of this medium for the recording of detail, as regards both exactitude of outline and broad shadow effects—the prime needs of the case.



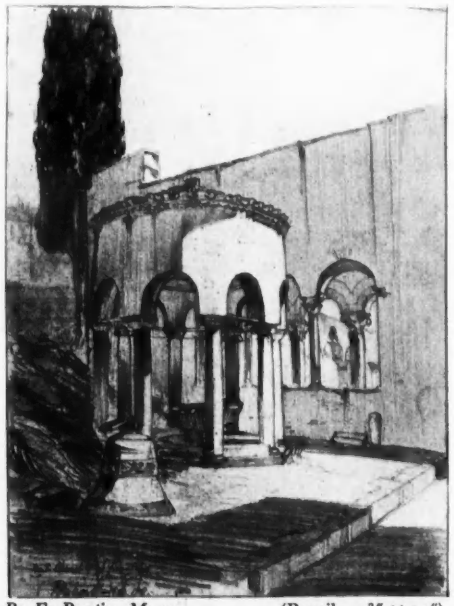
By G. McKinlay. (Pencil: 7½″ × 12″).
St. Clement Danes Church, London.



By John E. Dileuse. (Watercolour: 7″ × 10″).
Roman Catholic Church, from Simple Huis Straat, Middelburg, Holland.

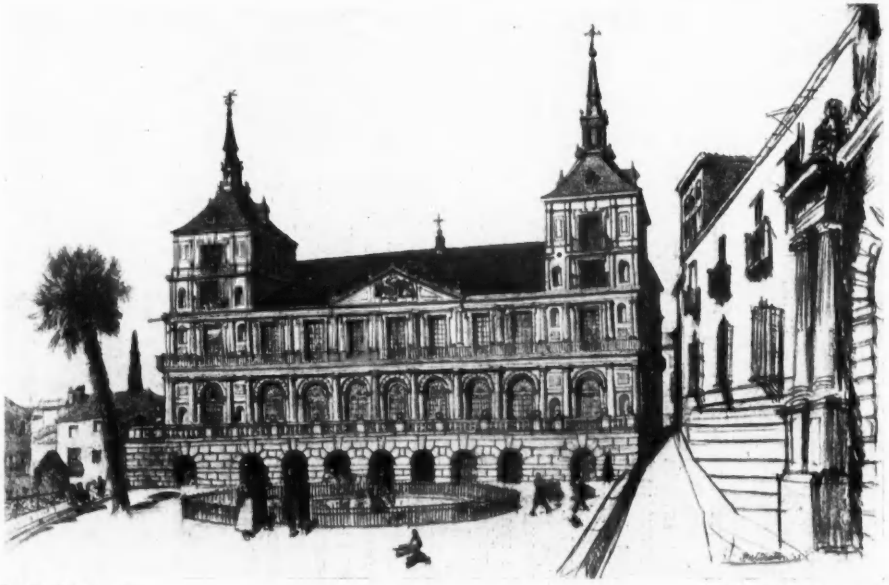


By G. McKinlay. (Pencil: 7½″ × 12″).
St. Martin-in-the-Fields, London.



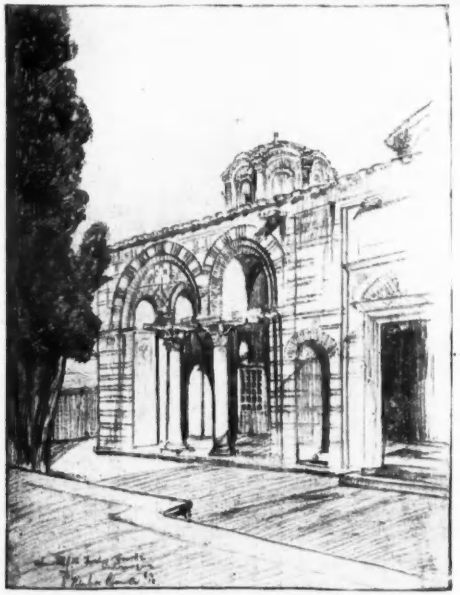
By E. Prentice Mawson. (Pencil : 9¾″ × 13″).

Baptistry outside the Church of St. Demetrius, Salonika.



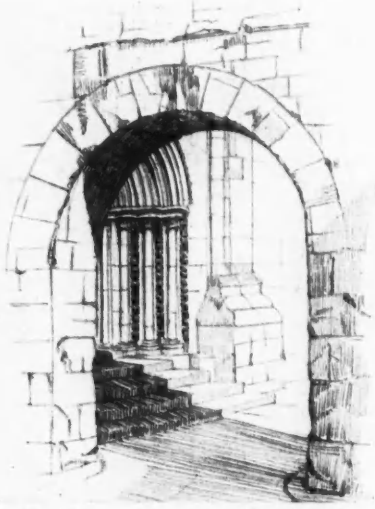
By P. M. Stratton. (Pencil : 18″ × 12″).

East Front of the Town Hall, Toledo, Spain.



By E. Prentice Mawson. (Pencil : 9¾″ × 13″).

The Church of the Twelve Apostles, Salonika, after restoration.



By B. Saunders. (Pencil : 6¼″ × 7″).

Peterborough : Norman Archway, 1085.



By E. B. Musman. (Pen, pencil and wash : 12½″ × 7¼″).

No. 49 Downshire Hill, Hampstead, London.



By B. Saunders. (Pencil : 6¼″ × 7″).

Peterborough: the Bishop's Palace Gateway, c. 1500.

SOCIETIES AND INSTITUTIONS

THE ARCHITECTURE OF PLEASURE

AT a special meeting of the West Essex Chapter of the Essex, Cambridge and Hertfordshire Society of Architects, held at the City Livery Club, St. Paul's Churchyard, E.C., a paper was read by Mr. G. Wyville Home, F.R.I.B.A., on "The Architecture of Pleasure," during which some thirty slides of the Bournemouth Pavilion (Home and Knight, FF.R.I.B.A., architects) were shown. Mr. S. Phillips Dales, F.R.I.B.A., presided.

At the outset, Mr. Home said that he would like one point to be made quite clear—that he did not intend to criticize the system of architectural education at present being introduced into our schools. His own opinion was that that system was most admirable and would produce the finest effect on the architecture of tomorrow. Students today were not only being taught traditional architecture, but they were being encouraged to enlarge their imagination in a manner unknown in the days when he was undergoing his training. Those who were responsible for this educational scheme fully understood the meaning of the word "functionalism" and the correct interpretation of the new movement, but he regretted to say that there were others who did not. To them anything new must be good, and anything traditional must be equally bad. Having joined the new crusade, they put away their collection of plates from the building papers, and they proceeded to copy the worst examples from the Continent.

To design a building which was to be devoted to pleasure was one of the most fascinating subjects upon which an architect could be engaged. This was not because there were no wearisome technicalities to be overcome—far from it—but he thought that the reason was that humanity seemed always at its best when it was embarking on innocent pleasure, and it was an inspiration in itself to think that any little part of the design might help to introduce a feeling of happiness and warmth into the minds of the future patrons of the building.

Alluding to the regrettable methods adopted in the erection of certain buildings devoted to pleasure, he said that in certain instances all that the architect did was to draw the shell of the building to eighth scale, and the rest was done by the stone firms, the "fibrous plaster man," and the furnishing firms. Beautifully coloured sketches could be procured from their "studios," and all that was necessary for the architect to do was to put his name in the bottom right-hand corner. Fortunately there were a few of us who thought that the architecture of pleasure was deserving of more than that.

Speaking of the Bournemouth Pavilion, Mr. Home pointed out that it was a municipal enterprise; and he and his partner (Mr. Knight) agreed from the very commencement that it ought, by a certain reserve and dignity of treatment, to stand somewhat aloof from its competitors in the syndicate world. By means of a playfulness of detail, and a carefully prepared colour scheme, however, he thought that the building looked what it was intended to be—a palace of pleasure.

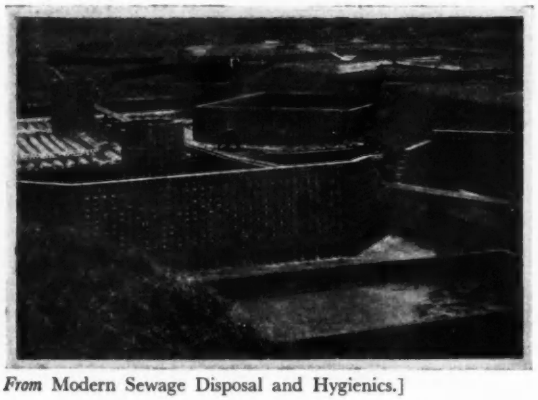
Regarding the modernist movement, he expressed the opinion that there was a great danger of over-analysis of design. To say that the long horizontal lines to be seen in some Continental buildings, and also of late in this country, were an expression of the fast-moving traffic of today was an attempt to mask the real outlook of the designer. He was quite certain that the traffic had nothing to do with it at all, and the architect was merely attempting something new which he thought was beautiful.

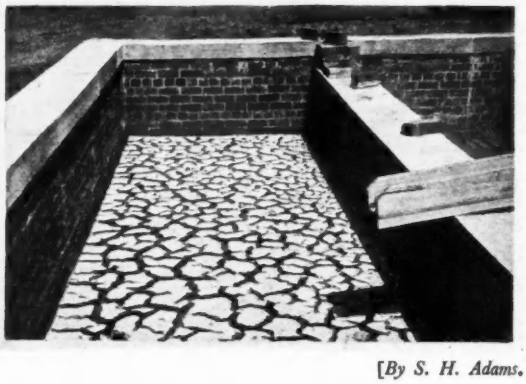
If, however, a design was bad, no reasoning or argument would make it good, and it ought not to be necessary to introduce theories and abstruse principles in order to excuse a design. A famous architect once said that the final appeal of a building was to the eye. That was very true.

The statement that the Crystal Palace was one of our finest buildings was a piece of gross impertinence, and in reply he said that he took off his hat in memory to Sir Christopher Wren, with particular reference to the dummy wall on the side elevation of St. Paul's Cathedral. It was at any rate good to look upon.

While showing a slide of the interior of the Bournemouth concert hall, he said that of a very beautiful theatre abroad he had heard it stated that the long horizontal lines involuntarily led the eye to the stage. By using the critic's own method — analysis—he would show how shallow was the remark. When one entered that theatre the lights would be up and the stage would be covered with a curtain. Here was the opportunity of enjoying the architectural composition as a whole, and the designer could have no desire for the eye to be led unnecessarily to any particular portion of the theatre. Later, when the lights would go out, the horizontal lines referred to would disappear, and it would then be up to the stage electrician and the actors to "function" and to attract and hold the eye.

In conclusion, the lecturer stated that there was in this country the beginning of a movement which nothing would stop and which every true lover of architecture would desire to see progress forward. Its future was, to his mind,





From Modern Sewage Disposal and Hygienics.] [*By S. H. Adams.*

A view showing the pigeon-holed outer walls and effluent channels at the Accrington Percolating Filters (left) and a brick-built sludge-drying filter (right). In the latter the clinker and ashes are laid upon a closely drained floor, and a valve is used for drawing off top water. (See book review on page 181.)

in grave danger owing to a certain lack of discrimination on the part of its exponents between the really beautiful and really new, and not necessarily beautiful, and it was in still further danger from those people who were not artists by nature, and who attempted to obscure the real issue with a mass of seemingly intellectual arguments by which it was suggested that design was not instinctive, but was produced as the result of a definite mental process

MR. DAWBER ON THE ARTS

A condemnation of the architecture, painting and sculpture of today was made by Mr. E. Guy Dawber, P.P.R.I.B.A., at the annual dinner of the Brighton Arts Club. Many of the buildings now being erected, he said, were exotic to this country; they were stark and bald and without any interest. A great deal of this architecture was borrowed from the Continent, but it must be borne in mind that much of it on the Continent was due to the poverty of the nations concerned.

He saw no reason why in this country we should slavishly copy such buildings as if they were the be-all and end-all of architecture. It was the same with some of the modern paintings, which, frankly, he did not understand at all. He was, he said, Englishman enough to think we had certain characteristics in our paintings, architecture, and sculpture that were worth copying and developing without going outside our own shores.

PERSIAN ARCHITECTURE

A survey of the Muslim buildings of Persia was made by Mr. Martin S. Briggs, F.R.I.B.A., when lecturing at the Royal Society of Arts last Wednesday on "Mosques and Minarets: an Introduction to Persian Architecture."

He said that to sum up his brief survey of Muhammadan architecture in Persia in a few words, it might be said that every mosque contained a *mihrab* or prayer-niche, and usually a pulpit. The larger examples had one or more minarets, most had a dome over the sanctuary, and almost invariably the characteristic stalactites and the so-called "Persian arch" were found. But, above all, Persian architecture depended for its attraction on a marvellous instinct for colour and pattern, a profound knowledge of the theory of geometrical ornament, and great skill in the manufacture and use of glazed bricks and tiles.

TITE PRIZE AND SOANE MEDALLION

The attention of intending competitors is called to the fact that the preliminary competitions for the Tite Prize and the Soane Medallion will be held in London and at centres in the provinces on Thursday, March 5, and Friday, March 6, 1931, respectively.

Forms of application for admission to the preliminary competitions may be obtained on application at the R.I.B.A., 9 Conduit Street, W.1. The closing date for the submission of forms of application is Tuesday, February 24, 1931.

BIRMINGHAM ARCHITECTURAL ASSOCIATION

Dealing with the problems of the architectural profession, Mr. A. T. Butler, in his presidential address to the Birmingham Architectural Association, said that one of the most important was the relation of the Government public bodies to architects in practice. He was not one of those who thought there was no room for official architecture. On the contrary, he thought there was, and that in many cases admirable work was being done, but there was an increasing tendency for more and more architectural work to be placed in the hands of the officials. That tendency was one that must be fought strenuously and continuously. In the advantages of competition they would find the answer to the problem. The finest of modern buildings had been obtained by this method. By no other could one have the choice of the best architectural brains and its resultant architectural schemes. Today, he continued, when new materials were replacing present ones, when new ideas were supplanting or modifying the old, when even the styles were in a state of flux, it became necessary that the widest choice should be available.

SCOTTISH ARCHITECTS

At the monthly meeting of the Council of the Royal Incorporation of Architects in Scotland, held in Edinburgh, Mr. John Watson, jun., Glasgow, was appointed Editor of *The Quarterly*.

The following were elected members of the Incorporation:

As Fellows (4)

Horsefield, A. E. — Ochterlony, M. M.
Mitchell, G. A. — Paterson, W.

As Associates (2)

M'Kenzie, W. — Thomson, F. B.

As Students (3)

Johnston, N. — Young, R.
Kirkpatrick, D.

SOUTH WALES INSTITUTE OF ARCHITECTS

The Council of the South Wales Institute of Architects, after their meeting on the afternoon of Thursday, January 15, visited the showrooms of the General Electric Co., Ltd., Cardiff.

The party first visited the electric kitchen and saw a variety of electrically equipped domestic apparatus, and then, after passing through the fitting showroom, laid out in sections showing various types and designs of fittings, the stockrooms were inspected, the extent and comprehensive nature of these being a great revelation to the party.

The industrial showroom was next entered, where the more commercial apparatus was arranged, including furnace gear, cooking and hot-water apparatus, etc. In this department an interesting display of stage-lighting effects and colour mixing was given by Mr. D. C. James, the district illuminating engineer.

A lantern lecture was then given by Mr. E. H. Penwarden, who dealt with the great developments that have taken place in modern electrical illuminations.

A hearty vote of thanks to the General Electric Co. for their hospitality and for the interesting lecture and other arrangements which had been made was proposed by Mr. T. Alwyn Lloyd, F.R.I.B.A., President of the South Wales Institute of Architects, and carried with acclamation.

ARTS AND CRAFTS

An international survey of arts and crafts was made by Mr. Henry G. Dowling, F.I.B.D., in a paper read before the London Schools Guild of Arts and Crafts, at University College, W.C.

The lecturer referred at some length to the development of Swedish decorative and industrial art. He explained that the problems of mass production and distribution of objects pertaining to the home—objects that were satisfyingly artistic—had not yet been solved. The easy way for "art in industry" was either to concentrate on luxuries or to imitate a passing vogue for a new kind of material or technique. Modern decorative and industrial art was again at a turning-point. Recognizing this, the leaders of the Stockholm Exhibition directed activity primarily towards a solution of mass production, and accordingly the Exhibition of 1930 contained examples of the best that Swedish art and industry could produce.

ARTIFICIAL LIGHTING AND DECORATION

"Artificial Lighting and its Relation to Interior Decoration" was the subject of a lantern lecture by Mr. S. W. Hamlyn, at a meeting of the Incorporated Institute of British Decorators.

Discussing artificial lighting of the past, the lecturer considered it a great mistake, and he had frequently seen it committed, to treat old Gothic and Mediæval structures with modern floodlighting effects. To throw a strong light into the deep recesses of groined roofs, and to light mouldings from angles from which they were never intended to be lit, could, he thought, do nothing more than destroy the romance and tradition of these structures, and provided an effect akin to modern picture palaces or such-like places.

Mr. Hamlyn explained that there were various methods by which light could be applied, and he divided them into

three groups, namely: 1: Direct lighting; 2: Semi-direct lighting; and 3: Indirect lighting. The first could be regarded as a method principally applied to commercial needs; the second, to obtain the best effects, required plain surfaces to ceilings and upper walls and a light colour treatment, for it was from these surfaces the bulk of the light was reflected down into the room; the third method aimed at concealing the light source and bathing the room or surrounding structure with a soft flood of light.

Mr. Oliver Bernard, seconding the vote of thanks proposed by Mr. Andrews, referred to the built-in lighting at the Strand Palace Hotel. This, he said, was rather expensive, but an excellent method of advertising.

Mr. H. G. Dowling, F.I.B.D., who also spoke, confined his remarks to the organic quality in architecture. He said he was struck with the similarity between an actual petal and a light fitting, also the spike of a winter horse tail and minaret on an Indian building, illustrated in THE ARCHITECTS' JOURNAL for January 7 last.

LANDSCAPE ARCHITECTURE

Mr. Thomas Adams, P.P.T.P.I., speaking at a meeting of the Institute of Landscape Architects, said that in spite of all the splendid advances made by town planning in England, we found that such conditions as the following existed:

1: A Royal Commission on Transport had just made a study of road traffic and general transport. It had issued an elaborate report in which some elementary principles of planning road systems were either ignored or shown to be misunderstood. Its off-hand treatment of the arterial road, and disregard of the lessons to be learned from the development of parkways in America was an example of this. The Commission did not invite any town planner of broad experience to give evidence. In spite of suggestions of value, the report was likely to do as much harm as good, as far as it was a guide to road planning policies.

2: Apparently the time of Parliament could not be obtained to extend town planning to built areas notwithstanding a wide popular demand.

3: In spite of much agitation to prevent further injury to the landscape in urban and rural areas in England, and some effort to obtain increased powers to control development, there was little hope of achieving the results desired without recognition of the place which town planning and landscape architecture must take in providing a solution.

4: In town planning work we had not comprehended that the values inherent in art were as necessary to get knowledge as the facts revealed in science; and also that interferences with nature and the creation of new objects of natural beauty were difficult and highly specialized tasks and not sidelines of architecture or engineering.

5: We continued to resist constructive methods in the name of a false economy, not recognizing that true economy consisted in supplying the things that gave social satisfaction, without extravagance, and not the mere withholding of expenditure on improvements.

DRAWING OFFICE MATERIAL MANUFACTURERS AND DEALERS' ASSOCIATION

The annual dinner of the Drawing Office Material Manufacturers and Dealers' Association was held at the Hotel Victoria, Northumberland Avenue, W.C., on Wednesday last.

After the loyal toasts, Mr. G. Stanley Walker, the chairman, responding to that of the "Association," proposed by Mr. G. Vernon Clay, referred to the early days of the Association. He said that during the war, when customers were demanding goods, no matter what prices they paid, the Association resolutely set themselves against supplying goods at any other than strictly honourable prices, with a fair remuneration to the distributor, dealer and customer.

Mr. J. B. Halden, President, proposing "Our Guests," said it was their endeavour to ensure to the users of drawing-office materials an adequate guarantee of quality and service in all transactions which might be placed with members of the Association, and, generally, he believed that today they could claim to have created, and placed at the disposal of the engineering profession, and engineering in all its branches, a service that was second to none in the world. Mr. G. Topham Forrest, F.R.I.B.A., responded.

COMFORT AND RADIANT HEATING

Considerable attention had recently been directed to the obtaining of comfort by means of radiant heat, said Mr. C. G. Heys Hallett, M.A.(CANTAB.), at a recent meeting of the Institution of Heating and Ventilating Engineers, and, he continued, the future development of the art would depend to a large extent on the care with which the underlying principles were investigated. With air heating installations, he explained, the aim was to warm the air to such a temperature that the persons moving about in it were comfortable. The aim of radiant heating, on the other hand, was the direct warming of the persons themselves; the sources of radiation being so distributed that the person could move freely about the room without experiencing a marked change in the intensity of the radiation.

INSTITUTION OF CIVIL ENGINEERS

At the last ordinary meeting of the above Institution the following elections took place: as members, four; as associate members, twenty-four; transferred from associate members to members, thirty-one; admission as students, forty-seven.

LAW REPORT

HOUSING ACT, 1925: CLOSING ORDER

Hayes v. *Thame Rural District Council. King's Bench Divisional Court. Before Justices Avory and Swift*

THIS case raised a point under section 12 of the Housing Act, 1925, with regard to the occupation of a house subject to a closing order.

The matter came before the Court on an appeal by Mr. G. Hayes, of Bedlow, against a decision of the local justices that he had permitted a house, of which he was the owner, to be occupied for human habitation when it was subject to a closing order under the Act.

Appellant's case was that he was having the premises reconstructed to counter the order made by the Council, when a friend with whom he left the key of the premises, which were some miles from appellant's house, allowed a man to store his furniture in the house, with the result that the man, without appellant's knowledge, lived in it. Here the appellant in no way condoned the offence, but merely acted out of humanity. The justices thought that his client had condoned what his friend did, but counsel argued that whatever was done, there was no permission to the man to reside in the house.

The Court dismissed the appeal with costs, holding that they had nothing to do with the appellant's feelings, and that on the evidence the justices could find that the appellant had broken the provisions of the section in question.

OBITUARY

J. MITCHELL MONCRIEFF: 1865–1931

WE regret to record the death of Lt.-Col. J. Mitchell Moncrieff, after a long and distinguished career as a consulting engineer and specialist in docks, harbours and bridges.

He held a commission in the Royal Engineers, and was Director of Engineering Work in the Department of C.G.M.S., Admiralty, from 1917–1918, being awarded a C.B.E. in 1918.

Colonel Moncrieff was a member of various bodies, including the following: Institution of Civil Engineers; the American Society of Civil Engineers; the Institution of Structural Engineers

(immediate Past President); the Association of Consulting Engineers (Chairman, 1924); and the French Society of Civil Engineers (President, at the time of his death, of the British section). He was also at one time external Examiner in Civil Engineering to Sheffield University, the author of numerous papers on engineering subjects, and a member of the Steel Research Committee of the Department of Scientific and Industrial Research. It was as President of the the Institution of Structural Engineers that Colonel Moncrieff was invited by the Ministry of Transport to organize the British section of the International Congress for Reinforced Concrete which was held at Liége last September.

ANDREW CAMPBELL, 1888–1931

We regret to announce the death of Mr. Andrew Campbell, managing director of Messrs. Honeywill Bros., Ltd., Builders' Materials Merchants, of 79 Mark Lane, E.C.3, which occurred on January 16, at Guy's Hospital, London, following an operation.

Mr. Campbell, who was forty-three years of age, was well known throughout the building industry. He was buried on Sunday, January 18, at Kirkliston, near Edinburgh.

Architects' Wills

Commander Sydney Searle, A.R.I.B.A., R.N.V.R., left £15,848 (net personalty, £15,635).

Mr. John Todd, Surveyor of the City of London under the London Building Act, left £4,934 (net personalty, £2,661).

Mr. Harold Bailey, F.R.I.B.A., left £10,540 (net personalty, £4,540).

Mr. Samuel Holland Healing, F.R.I.B.A., left £8,838 (net personalty, £7,481).

Mr. William Gilbee Scott, F.R.I.B.A., left £12,784 (net personalty, £12,482).

COMPETITIONS OPEN

February 1.—Sending-in day. Fire Station, Bethel Street, Norwich, for the Norwich Corporation. Limited to architects practising in the county of Norfolk. Designs to: Noel B. Rudd, Town Clerk, Guildhall, Norwich.

February 12.—Sending-in day. Stand at the Building Trades Exhibition, Manchester, for Venesta, Ltd. Assessors: Christian Barman, H. de C. Hastings, W. L. Wood, Henry Rutherford, and Professor A. E. Richardson. Premiums: £100 and four of £10. Conditions from the Editor, THE ARCHITECTS' JOURNAL, 9 Queen Anne's Gate; or direct from Venesta, Ltd., Vintry House, Queen Street Place, London, E.C.4.

With regard to the announcement in last week's issue of the presentation of the R.I.B.A. Medal for street architecture in respect of the Underground building, we regret that the arrangement of the photographs of the partners was misleading, and we wish to correct any misapprehension arising therefrom. While the name of the firm, Adams, Holden and Pearson, at present remains unchanged, the order of the partners is as follows: Charles Holden, L. G. Pearson and P. W. Adams.

THE ARCHITECTS' DIARY

WEDNESDAY, JANUARY 28

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Restoration of Windsor Castle." By the Very Rev. Albert Baillie, C.V.O., D.D. Chairman: The Most Hon. the Marquess of Londonderry, K.G. **8.30 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "The Mediæval Period: Interiors, Exteriors and Openings." By Sir Banister Fletcher, F.R.I.B.A. **6 p.m.**

LEAGUE OF ARTS. At the Guildhouse, Eccleston Square, Belgrave Road, S.W.1. "Persian Painting." By Laurence Binyon. Chairman: Dr. Percy Dearmer. **8.30 p.m.**

LONDON AND GREATER LONDON PLAYING FIELDS FUND. A performance of *The Fourth Wall* will be given at the Rudolf Steiner Hall, Park Road, Clarence Gate, Baker Street, N.W.1, in aid of the Fund. (Also January 29.) **8.15 p.m.**

BRITISH WOOD PRESERVING ASSOCIATION. At the Auctioneers' and Estate Agents' Institute, 29 Lincoln's Inn Fields, W.C.2. "The Control of Insects injurious to Timber." By Dr. Munro. (Illustrated by lantern slides.) **6.30 p.m.**

THURSDAY, JANUARY 29

WEST YORKSHIRE SOCIETY OF ARCHITECTS, 62 Woodhouse Lane, Leeds. Students' Debate: "That Architecture should be State Controlled." Affirmative: P. Lingwood. Negative: E. M. Rice. **7 p.m.**

INSTITUTE OF ARBITRATORS. At Queen's College, Birmingham. "Evidence in Arbitrations." By W. T. Creswell. **5.30 p.m.**

LONDON SOCIETY. Visit to the White Heather Laundry, Stonebridge Park, N.W.10. **2.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Discussion on "Draft Report of the Science Sectional Committee on Steelwork—Part III., Workmanship." To be opened by Ewart S. Andrews, B.SC., M.INST.C.E.

SOCIETY OF ANTIQUARIES, Burlington House, Piccadilly, W.1. "The Excavations at Verulamium." By Dr. R. E. M. Wheeler, F.S.A. **8.30 p.m.**

DESIGN AND INDUSTRIES ASSOCIATION. At the London School of Economics, Houghton Street, Aldwych, W.C.2. Discussion on "Tradition in Relation to Modern Architecture." **8 p.m.**

FRIDAY, JANUARY 30

ARCHITECTURE CLUB. At the Architectural Association, 34 Bedford Square, W.C.1. Supper Discussion: "That, in the opinion of this Club, there is no fundamental difference between Architecture and Engineering" **7.30 p.m.**

SATURDAY, JANUARY 31

Sunrise, 7.40 a.m. Sunset, 4.49 p.m.

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C. 1. "Shops and Display." By Howard Robertson, F.R.I.B.A. (Illustrated by lantern slides.) **3 p.m.**

MONDAY, FEBRUARY 2

R.I.B.A., 9 Conduit Street, W.1. General Meeting. "The Decoration of Buildings." By Sir W. Rothenstein, M.A. **8 p.m.**

TUESDAY, FEBRUARY 3

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. Third of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

WEDNESDAY, FEBRUARY 4

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. "Competitions." By E. Berry Webber, A.R.I.B.A. **7.30 p.m.**

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Effect of Standardization on Engineering Progress." By C. le Maistre, C.B.E. Chairman: Llewelyn B. Atkinson, M.I.E.E. **8 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "English Mediæval Architecture: Piers, Towers, Spires and Roofs." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

THURSDAY, FEBRUARY 5

WEST YORKSHIRE SOCIETY OF ARCHITECTS. Biennial Dinner. (Particulars will be announced later.)

INSTITUTION OF STRUCTURAL ENGINEERS. South Wales and Monmouthshire Branch. At the Institute of Engineers, Park Place, Cardiff. "Thames House." By R. Travers Morgan, A.M.INST.C.E.

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Glass and Its Uses, and Glass Making." By R. F. Taylor, M.SC. (Illustrated by lantern slides.) **7.30 p.m.**

INSTITUTE OF METALS. Joint meeting with the Society of Chemical Industry. At the University, Bristol. "Recent Developments in Economy of Fuel for Small Boilers." By M. Harman Lewis. **7.30 p.m.**

SATURDAY, FEBRUARY 7

Sunrise, 7.38 a.m. Sunset, 5.1 p.m.

INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS. Yorkshire District Meeting. At the Town Hall, Leeds. "Notes on the Public Health Act, 1925, Part II., Streets, Sections 30 and 31." By W. Dixon. **2 p.m.**

TUESDAY, FEBRUARY 10

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Manchester and District Branch. At the Milton Hall, Deansgate, Manchester. "Panel Heating." By C. M. Oates. **7 p.m.**

TUESDAY, FEBRUARY 10 (*continued*)

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. Fourth of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

ROYAL SANITARY INSTITUTE, 90 Buckingham Palace Road, S.W.1. "Recent Methods of Sewage Treatment." By Lt.-Colonel William Butler, M.B. Chairman: Professor A. Bostock Hill, M.SC.

INSTITUTE OF FUEL. At the Engineers' Club, Manchester. "Fuel Control in the Iron and Steel Industries." By Dr. G. V. Slottman. **7 p.m.**

WEDNESDAY, FEBRUARY 11

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "New Motives for Textile Designs." By F. G. Wood. Also, demonstration by Polarized Light of Micro-Crystallization. Chairman: Sir W. Rothenstein. **8 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Mediæval Architecture: Parapets, Ornaments, and Fittings." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Lancashire and Cheshire Branch. Ordinary Meeting. At the College of Technology, Manchester. "The Modulus of Elasticity of Concrete." By Professor F. C. Lea, D.SC., M.INST.C.E., M.I.MECH.E. **7 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Ordinary Meeting at the Hotel Russell, Russell Square, W.C.2. "Boilers and Metals." By W. G. Case and W. E. Dennison. 2 p.m. Dinner 7 p.m. **2 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. Students' Meeting. **6.30 p.m.**

THURSDAY, FEBRUARY 12

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At the College of Arts, Leeds. General Meeting. "Competitions." By Percy Edward Thomas, O.B.E., F.R.I.B.A. **7 p.m.**

SHEFFIELD AND SOUTH YORKSHIRE SOCIETY OF ARCHITECTS AND SURVEYORS. At the Medico-Chirurgical Library, University, Sheffield. "The Architect in History." By Martin S. Briggs, F.R.I.B.A. **6.15 p.m.**

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. Annual dinner and dance to be held at Southampton.

INSTITUTION OF STRUCTURAL ENGINEERS, Great George Street, Westminster, S.W.1. Ordinary Meeting. "Modern Buildings as Engineering Structures." By Oscar Faber, O.B.E., D.SC. **6.30 p.m.**

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Some Old Buildings and how they have been Preserved." By A. R. Powys. (Illustrated by lantern slides.) **7.30 p.m.**

VICTORIA AND ALBERT MUSEUM, Cromwell Road, South Kensington, S.W.7. Special Lecture: "Persian Decorative Art." By A. F. Kendrick. **5.30 p.m.**

INSTITUTION OF ELECTRICAL ENGINEERS. Annual Dinner to be held at the Connaught Rooms, Great Queen Street, Kingsway, W.C.2. 7 for 7.30 p.m. **7.30 p.m.**

INSTITUTE OF LANDSCAPE ARCHITECTS. At the Architectural Association, 36 Bedford Square, W.C.1. Discussion on "Conditions for Competitions." To be opened by E. Prentice Mawson, F.R.I.B.A.

SOCIETY OF ANTIQUARIES, Burlington House, Piccadilly, W.1. "A School of West Country Masons." By Sir Harold Brakspear, K.C.V.O., F.R.I.B.A.

FRIDAY, FEBRUARY 13

INSTITUTION OF STRUCTURAL ENGINEERS, Midland Counties Branch. Informal Meeting. Discussion on "Foundations," to be opened by S. L. Horde, A.M.INST.S.E. **6.30 p.m.**

SATURDAY, FEBRUARY 14

Sunrise 7.16 a.m. Sunset, 5.14 p.m.

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C. 1. "The Architect's Problems in a Large Building." By H. Austen Hall, F.R.I.B.A. **3 p.m.**

MONDAY, FEBRUARY 16

R.I.B.A., 9 Conduit Street, W.1. General Meeting. "The Work of Sir Robert Lorimer." By F. W. Deas, M.A., F.R.I.B.A. **8 p.m.**

TUESDAY, FEBRUARY 17

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. Fifth of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

WEDNESDAY, FEBRUARY 18

ARTS BUILDING, UNIVERSITY, Lime Grove, Manchester. "Modern Flats as a Solution to the Housing Problem." By G. Grey Wornum, F.R.I.B.A.

SOUTH-EASTERN SOCIETY OF ARCHITECTS. At the School of Art, Brighton. "Architecture in Norfolk and Norwich." By Stanley J. Wearing, F.R.I.B.A.

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Ancient Bridges." By G. H. Jack, F.R.I.B.A., M.INST.C.E. **8 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Mediæval Architecture: Monasteries, Cathedrals and Churches." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

THURSDAY, FEBRUARY 19

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Piles." By C. I. Cope, B.A.I., A.M.I.C.E. **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Yorkshire Branch. At the Hotel Metropole, Leeds. "Some Further Progress in Bridge Engineering." By Professor J. Husband, M.ENG., M.INST.C.E. **7 p.m.**

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Warrington Training College, Taggart Avenue, Liverpool (pages 163–167). General contractors, William Thornton and Sons. Sub-contractors : Redpath, Brown & Co., Ltd., structural steel; Diespeker & Co., Ltd., fireproof construction; Ames and Finnis, tiles; F. Braby & Co., Ltd., copper roofings; Henry Hope and Sons, Ltd., patent glazing; R. W. Brooke & Co., Ltd., wood-block flooring; G. N. Haden and Sons, Ltd., central heating; Bratt, Colbran & Co., Ltd., grates; Davis Gas Stove Co., Ltd., gas fixtures; National Radiator Co., Ltd., boilers; H. J. Cash & Co., Ltd., electric wiring; H. T. Hunt, plumbing; Doulton & Co., and Musgrave & Co., Ltd., sanitary fittings; James Gibbons, Ltd., and Quiggin Bros., door furniture; Crittall Manufacturing Co., Ltd., casements and glazing; Reliance Telephone Co., Ltd., telephones; John Tanner and Son, plaster; John Stubbs and Sons, wall and floor tiling; Baird and Tatlock (London), Ltd., laboratory fittings; Waygood-Otis, Ltd., lifts; Gillett and Johnston, clocks.

New Offices of the F.B.I., Nos. 17-29 Tothill Street, S.W.1 (pages 168–172). General contractors, John Laing and Sons, Ltd. Sub-contractors : Archibald D. Dawnay and Sons, Ltd., steelwork; Ragusa Asphalte Paving Co., Ltd., asphalt; Ham Hill and Doulting Stone Co., Ltd., stone; The Kleine Company, Ltd., floors; Ashwell and Nesbit, Ltd., heating and ventilating; Smith, Major and Stevens, Ltd., lifts; Cement Marketing Co., Ltd., cement; London Brick Co. and Forders, Ltd., bricks; Lion Foundry Co., Ltd., fire escapes; J. H. Sankey and Son, Ltd., " Fosalsil " partition blocks; Malcolm Macleod & Co., Ltd., reinforced concrete staircase; Hoskins and Sewell, Ltd., metal windows; J. H. Shouksmith and Sons, plumbers; Comyn Ching & Co., Ltd., ornamental metal and leadwork; Leeds Fireclay Co., Ltd., sanitary fittings; Macinlop, Ltd., rubber flooring; J. F. Ebner, hardwood flooring; Pilkington Bros., Ltd., glass; H. H. Martyn & Co., Ltd., ornamental plaster and carving; Jones, Lock & Co., door furniture.

The general contractor for the house at Guildford (page 179) was H. Ashenden.

*

St. Matthew's Church, Liverpool, illustrated on page 60 of the New Year issue, should have been attributed to F. X. Velarde, of Weightman, Bullen and Velarde.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office. All inquiries concerning inventions, patents and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated, readers should apply to the Patent Office, 25 Southampton Buildings, W.C.2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

324. Davies, C. H., and Wilson, J. Building construction. January 5.

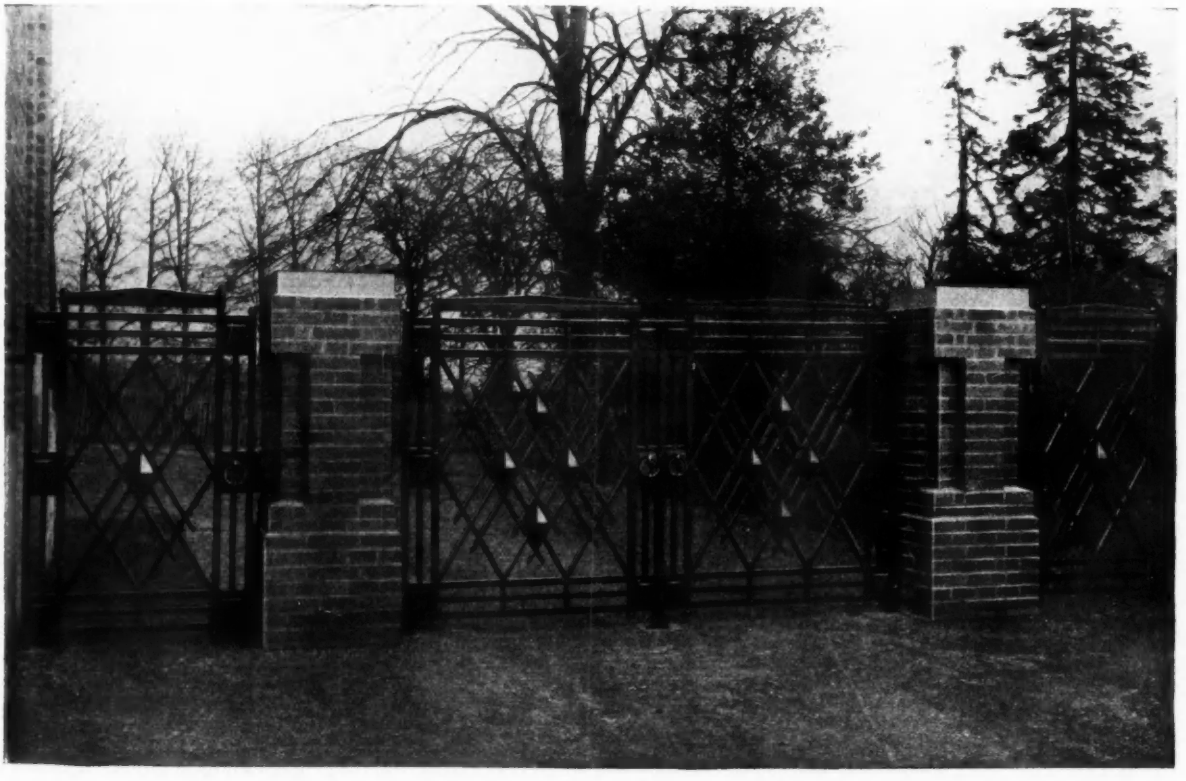
494. Allard, A. W., and Hatt, A. P., and Roberts, Adlard & Co., Ltd. Roofing tiles. January 6.

749. Braun, O., and Sanitas-Fussbodenfabrik Frankfurt-a-M. C. Weyler. Reinforced plates, slabs, etc. January 8.

777. Evans, M. R., and Roberts, J. Roofing houses, etc. January 9.

SPECIFICATION PUBLISHED

340542. Royen, H. J. Van. Building or constructional material with high resistance to wear and to shock and impact.



These wrought- and cast-iron entrance gates at the George Cadbury Memorial Hall, Selly Oak, Birmingham, were specially made from the designs of Hubert Lidbetter, architect, by J. R. Pearson (Birmingham), Ltd. They are illustrated, among other examples, in a new catalogue issued by the firm on Architectural Metalwork. Most of the metalwork shown was carried out for prominent London and provincial architects.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The COULSDON U.D.C. has decided to inform the Surrey County Council that it will raise no objection to the erection of secondary schools on land between Marlpit Lane and Coulsdon Road.

Plans passed at COULSDON: Two houses, Bradmore Way, for Mr. A. Potter; house, The Ridge, for Messrs. Thomas and Son; house, Rickman Hill, for Mr. H. Hemmings; four houses, Portnalls Rise, for Mr. W. C. E. Ingram; house, Coulsdon Rise, for Mr. A. Andrews; twenty-four houses, Rickman Hill, for Mr. A. G. Gresswell; shop, Brighton Road, for Mr. R. Rignall; alterations to shop, 140 Brighton Road, for Mr. W. G. Hearn; three shops, Godstone Road, Kenley, for Messrs. E. O'Sullivan, Ltd.; fourteen houses, Little Roke Road and Oaks Road, for Messrs. E. T. Brown and Son.

The L.C.C. has passed plans, submitted by the Gaumont British Picture Corporation, Ltd., for the erection of a cinema upon a site on the south-west side of Loampit Vale, LEWISHAM, abutting upon Rennell Street and Molesworth Street.

Plans passed at LEWISHAM: Buildings, Downham Way, Downham, for Messrs. Murrell and Piggott; shop, High Road, Lee, for Mr. J. Hudson; eight houses, Stillness Road, for Messrs. A. Waddington and Son; ten houses, Thornbeach Road, for Mr. H. R. Watt.

Plans passed at SANDERSTEAD: Five shops, Barn Road, for Mitchley Wood Estate, Ltd.; eight houses, Lime Meadow Avenue, for Mr. W. Martin; two houses, Briton Crescent, for Mr. H. P. Hawkes; two houses, Purley Bury Close, for Messrs. W. J. Frewing, Ltd.; fourteen houses, Church Way, for Mr. F. W. Thomas; eight houses, Littleheath Road, for Walton Heath Land Co., Ltd.

SOUTHERN COUNTIES

The BOURNEMOUTH Corporation has approved a sketch plan of twelve flats proposed to be erected at an estimated cost of £6,000.

Plans passed at BOURNEMOUTH: Alterations and additions, Boscombe Baptist Schools, Palmerston Road, for The Deacons; alterations, Queen Victoria Hotel, Wimborne Road, for Messrs. Strong & Co.; alterations and additions, Gordon Hotel, Overcliffe Drive, for Mr. W. G. Gubbons; additions, The Overcliffe Hotel, Grand Avenue, for Messrs. R. and M. Foulsham; alterations, 137 Holdenhurst Road, for Messrs. Eastmans, Ltd.; alterations, Hotel Metropole, for Messrs. Levy and Franks, Ltd.; additions, Whitehall Hotel, Exeter Park Road, for Mr. J. E. Harrhy; five houses, The Avenue, Moordown, for Messrs. S. Harris and Son; four flats, Stourfield Road, for Mr. C. W. Garrett; alterations, 590 Christchurch Road, Boscombe, for Messrs. Montague Burton, Ltd.; two houses, Winston Road, for Mr. F. E. Smith; seventeen houses, Winsley Avenue, for Mr. A. Bedford; business premises, Tuckton Road, for Messrs. Jones and Baines; alterations and additions, St. Thomas's Lodge, Charminster Road, for the General Committee of the Bournemouth Refuge; six houses, Iford Lane, for Mr. A. Webb; two houses, Cattistock Road for Mr. W. J. Clapcott; shops, Wimborne Road, for Mr. G. Jones; shop and five houses, Malmesbury Park Road and Bennett Road, for Mr. G. E. Elliott; shops and flats, Exeter Road, for Mr. F. F. Tarrant.

The BRIGHTON Corporation is to deal with five slum areas and provide rehousing accommodation, at a cost of £153,350.

Plans passed at BRIGHTON: Two shops, High Street, Rottingdean, for Mr. T. Hazeldine; offices, Bristol Gardens, for Messrs. J. Bodle, Ltd.; extensions, Tramways Depot, Lewes Road, for the Corporation; four houses, Elm Grove, for Mr. G. Ayling; alterations and extensions, 129 London Road, for Messrs. S. Bellman and Son; rebuilding "King and Queen" Hotel, Marlborough Place, for Messrs. Edlings, Ltd.; six houses, Carden Avenue, Withdean, for Mr. E. H. Rowe; rebuilding 37–41 Upper Russell Street, for Messrs. Bostel Bros., Ltd.; four houses, Elm Grove, for Mr. George Ayling.

The DARTFORD U.D.C. has decided to erect 100 houses on the Heath Lane site.

Plans passed at DARTFORD: Bungalow, Darenth Road, for Mr. P. E. Shephard; house, Whitehill Farm, for Mr. A. E. Exeter; two bungalows, Princes Road, for Mr. A. E. Exeter; store and garages, Brent Laundry, for Mr. F. C. Ramage; bungalow, Tile Kiln Lane, for Mr. W. Kerslake; two bungalows, Joydens Wood Road, for Mr. E. J. Payne; house, Swaisland Road, for Mrs. J. White.

The HASTINGS Corporation has under consideration the construction of a new roadway through the Old Town which will necessitate the demolition of 157 houses.

The HASTINGS Education Committee is considering sites for the proposed provision of a new grammar school.

SOUTH-WESTERN COUNTIES

The PAIGNTON U.D.C. has received sanction to borrow £10,000 for the erection of twenty-two houses at Collaton.

Plans passed at TORQUAY: Seven houses, Court Netherleigh Estate, Bronshill Road, for Messrs. Stuckey and Davey; two houses, Chatto Road, for Mr. J. H. Tearle; alterations and additions, Oddicombe Hall, for Mr. H. J. Allen; two houses, Boundary Road, Chelston, for the Chelston Building Co.; shop, Hele Road, for Mr. J. R. Stubbs; eight houses, Court Netherleigh, for Messrs. Stuckey and Davey; six houses, Warberry Vale estate, for Mr. H. I. Heard; seven houses, Babbacombe Road, for Mr. G. W. Hands.

MIDLAND COUNTIES

The Northants C.C. has submitted plans to the Board of Control for an admission hospital and other buildings at the BERRY WOOD Mental Hospital.

The CHESTERFIELD Corporation is acquiring Rose Hill estate as a site for a town hall and municipal offices.

The CHESTERFIELD Corporation is to arrange for the erection of 600 houses within the next five years.

The CHESTERFIELD Corporation has voted a revised estimate of £23,000 for the reconstruction of Horns railway bridge.

Plans passed at CHESTERFIELD: Rebuilding "Lord Nelson" Inn, Stephenson Place, and "Crown and Cushion," Low Pavement, and alterations and additions, "Buck" Inn, Holywell Street, for Messrs. W. Stones, Ltd.; bungalow, Newbridge Lane, for Mr. W. Lynam; house, Morris Avenue, for Mr. H. Wholey; alterations to premises, Hipper Street, for Messrs. S. E. Short & Co.; layout of land, Brookside, Chatsworth Road, for Mr. W. Hancock.

The Northants Education Committee is acquiring land for the erection of new premises for the DAVENTRY Grammar School.

The Northants C.C. has purchased sites at KETTERING and WELLINGBOROUGH, for the erection of police houses.

The REDDITCH U.D.C. has asked the surveyor to report as to proposals for the provision of new public offices.

The SHREWSBURY Corporation has decided to erect additional houses at a cost of £8,000.

The STAFFORDSHIRE Education Committee contemplates an expenditure of £14,000 for the purchase of sites for new schools.

The Staffordshire C.C. has voted £19,000 for the extension of the county offices in St. Chad's Place, STAFFORD.

The WOLVERHAMPTON Corporation is to erect a branch library, at a cost of £3,000.

A cinema is shortly to be commenced in Garrick Street, WOLVERHAMPTON, from plans prepared by Messrs. Satchwell and Roberts.

The WOLVERHAMPTON Corporation is seeking sanction for a loan of £38,000, for the erection of baths and wash-houses.

NORTHERN COUNTIES

A cinema is to be erected in Penny Street, BLACKBURN, for Associated British Properties, Ltd.

The BRADFORD Corporation is considering an alternative site at Five Lane End, for the erection of district baths.

The West Riding Education Committee is to erect an elementary school for 640 scholars at BRIERLEY, at a cost of £29,500.

The Board of Education has approved the plans of the West Riding Education Committee for the erection of new premises for the KEIGHLEY Girls' Grammar School, at a cost of £50,000.

The West Riding Education Committee is to erect an elementary school for 400 scholars at KIVETON PARK, at a cost of £18,650.

The LEEDS Education Committee is to erect a school at Bramley, for 120 children.

At a meeting of the LEEDS Corporation, the city engineer was asked to prepare plans for the erection of thirty-five houses for the rehousing of persons displaced by road improvement schemes.

The MANCHESTER Watch Committee has approved plans for the erection of new police headquarters in Jacksons Row and a police station for the Wythenshawe division.

The ROTHERHAM Corporation has arranged for the erection of 600 houses during the next five years, at an estimated cost of £231,000.

Plans passed at ROTHERHAM: Alterations and reconditioning, Bradgate Road, for Mr. B. Ellis; extension of printing works, Henry Street, for Messrs. H. Garnett & Co., Ltd.; sub-station, Kimberworth Road, for the Rotherham Corporation transport department; new road, off Cranworth Road, for Colonel Eastwood's estate trustees.

The West Riding Education Committee is to proceed with the erection of the ROTHWELL Grammar School premises, at a cost of £33,000.

The SOUTH SHIELDS Corporation is to clear Thames Street unhealthy area and erect fifty-two houses, at a cost of £17,940.

Plans passed at STRETFORD: Seven houses, Davyhulme Road, for Messrs. McLelland and Abel; twelve houses, Granby Road, for Mr. R. P. Wheeler; two houses, Cromwell Road, and forty-two houses, Railway Road, for Messrs. Archer and McAlpin; conversion to shop premises, 621 Stretford Road, for Manchester and Salford Co-operative Society; bakehouse, Ayres Road, for Mr. H. Barnes; foundry, Stretford Road, for Messrs. Marshall & Co.

WALES

The GLAMORGAN C.C. is to erect a new school for about 400 children at Skewen.

The SWANSEA Corporation is to erect a further fifty-four houses, by direct administration, on the Townhill estate.

SCOTLAND

The GLASGOW Corporation is to lay out a site of twenty-three acres of land at Cutlelton, for housing purposes.

On behalf of the Christian Brethren, Mr. James Stewart has obtained land in Knightswood Road, GLASGOW, for the erection of a hall.

The GLASGOW Education Committee has acquired land at Possil for the erection of an elementary school.

The GLASGOW Corporation proposes the erection of 19,500 houses during the next five years.

The GLASGOW Corporation has adopted a layout plan of ground at Sinclair Drive, Langside, for the erection of 115 tenement houses.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6½	1 1½
A_1	Abergavenny	S. Wales & M.	1 6½	1 1½
B	Abingdon ..	S. Counties	1 5	1 0½
A	Accrington	N.W. Counties	1 7	1 2½
A_3	Addlestone	S. Counties	1 5½	1 1
A	Adlington ..	N.W. Counties	1 7	1 2½
A	Airdrie ..	Scotland	*1 7	1 2½
C	Aldeburgh ..	E. Counties	1 3	11½
A	Altrincham	N.W. Counties	1 7	1 2½
B_3	Appleby ..	N.W. Counties	1 3½	11½
A	Ashton-under-Lyne	N.W. Counties	1 7	1 2½
A_3	Atherstone	Mid. Counties	1 5½	1 1
B_3	Aylesbury ..	S. Counties	1 3½	11½
B_3	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4½	1 0½
A_1	Barnard Castle	N.E. Coast	1 6½	1 1½
A	Barnsley ..	Yorkshire	1 7	1 2½
B_3	Barnstaple	S.W. Counties	1 4	1 0
A	Barrow ..	N.W. Counties	1 7	1 2½
A	Barry ..	S. Wales & M.	1 7	1 2½
B_3	Basingstoke	S.W. Counties	1 4	1 0
A_3	Bath ..	S.W. Counties	1 5½	1 1
A	Batley ..	Yorkshire	1 7	1 2½
A_3	Bedford ..	E. Counties	1 5½	1 1
A_3	Berwick-on-Tweed	N.E. Coast	1 6	1 1½
A_3	Bewdley ..	Mid. Counties	1 6	1 1½
B_3	Bicester ..	Mid. Counties	1 3½	11½
A	Birkenhead ..	N.W. Counties	*1 9	1 3½
A	Birmingham	Mid. Counties	1 7	1 2½
A_1	Bishop Auckland	N.E. Coast	1 6½	1 1½
A	Blackburn ..	N.W.Counties	1 7	1 2½
A	Blackpool ..	N.W. Counties	1 7	1 2½
A	Blyth ..	N.E. Coast	1 7	1 2½
B_3	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 7	1 2½
A_3	Boston ..	Mid. Counties	1 5½	1 1
A_3	Bournemouth	S. Counties	1 5½	1 1
B_3	Bovey Tracey	S.W. Counties	1 4	1 0
A	Bradford ..	Yorkshire	1 7	1 2½
A_3	Brentwood ..	E. Counties	1 6	1 1½
A	Bridgend ..	S. Wales & M.	1 7	1 2½
B_3	Bridgwater ..	S.W. Counties	1 4	1 0
A_1	Bridlington ..	Yorkshire	1 6½	1 1½
A	Brighouse ..	Yorkshire	1 7	1 2½
A_3	Brighton ..	S. Counties	1 5½	1 1
A	Bristol ..	S.W. Counties	1 7	1 2½
B_3	Brixham ..	S.W. Counties	1 3½	11½
A_3	Bromsgrove	Mid. Counties	1 6	1 1½
C	Bromyard ..	Mid. Counties	1 3	11½
A	Burnley ..	N.W. Counties	1 7	1 2½
A	Burslem ..	Mid. Counties	1 7	1 2½
A	Burton-on-Trent	Mid. Counties	1 7	1 2½
A	Bury ..	N.W. Counties	1 7	1 2½
A_1	Buxton ..	N.W. Counties	1 6½	1 1½
A_3	CAMBRIDGE	E. Counties	1 5½	1 1
B_3	Canterbury ..	S. Counties	1 4	1 0
A	Cardiff ..	S. Wales & M.	1 7	1 2½
A	Carlisle ..	N.W. Counties	1 7	1 2½
B	Carmarthen ..	S. Wales & M.	1 5	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4½	1 0½
A	Carnforth ..	N.W. Counties	1 7	1 2½
A	Castleford ..	Yorkshire	1 7	1 2½
B_1	Chatham ..	S. Counties	1 4½	1 0½
B_1	Chelmsford	E. Counties	1 4½	1 0½
A_3	Cheltenham	S.W. Counties	1 5½	1 1
A	Chester ..	N.W. Counties	1 7	1 2½
A	Chesterfield	Mid. Counties	1 7	1 2½
B_3	Chichester ..	S. Counties	1 4	1 0
A	Chorley ..	N.W. Counties	1 7	1 2½
B_3	Cirencester	S. Counties	1 4	1 0
A	Clitheroe ..	N.W. Counties	1 7	1 2½
A	Clydebank ..	Scotland	1 7	1 2½
A	Coalville ..	Mid. Counties	1 7	1 2½
A_3	Colchester ..	E. Counties	1 5½	1 1
A	Colne ..	N.W. Counties	1 7	1 2½
A_3	Colwyn Bay	N.W. Counties	1 5½	1 1
A_1	Consett ..	N.E. Coast	1 6½	1 1½
A_3	Conway ..	N.W. Counties	1 5½	1 1
A	Coventry ..	Mid. Counties	1 7	1 2½
A_3	Crewe ..	N.W. Counties	1 6	1 1½
A_3	Cumberland	N.W. Counties	1 5½	1 1
A	DARLINGTON	N.E. Coast	1 7	1 2½
A	Darwen ..	N.W. Counties	1 7	1 2½
B_3	Deal ..	S. Counties	1 4	1 0
A_3	Denbigh ..	N.W. Counties	1 5½	1 1
A	Derby ..	Mid. Counties	1 7	1 2½
A	Dewsbury ..	Yorkshire	1 7	1 2½
B	Didcot ..	S. Counties	1 5	1 0½
A	Doncaster ..	Yorkshire	1 7	1 2½
B_3	Dorchester	S.W. Counties	1 3½	11½
A_3	Driffield ..	Yorks	1 5½	1 1
A_1	Droitwich ..	Mid. Counties	1 5½	1 1
A	Dudley ..	Mid. Counties	1 7	1 2½
A	Dundee ..	Scotland	1 7	1 2½
A	Durham ..	N.E. Coast	1 6½	1 1½
A_2	EASTBOURNE	S. Counties	1 5½	1 1
A_1	Ebbw Vale	S. Wales & M.	1 6½	1 1½
A	Edinburgh	Scotland	1 7	1 2½
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6½	1 1½
A_2	Exeter ..	S.W. Counties	*1 6	1 1½
B_3	Exmouth ..	S.W. Counties	1 4	1 0
B	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey ..	Yorks	1 5½	1 1
A	Fleetwood ..	N.W. Counties	1 7	1 2½
B_2	Folkestone ..	S. Counties	1 4	1 0
A	Frodsham ..	N.W. Counties	1 7	1 2½
B_3	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 7	1 2½
B_1	Gillingham	S. Counties	1 4½	1 0½
A_2	Gloucester ..	S.W. Counties	1 6	1 1½
A_2	Goole ..	Yorkshire	1 6	1 1½
A_3	Gosport ..	S. Counties	1 5½	1 1
A_2	Grantham ..	Mid. Counties	1 5½	1 1
A_1	Gravesend ..	S. Counties	1 6½	1 1½
A	Greenock ..	Scotland	*1 7	1 2½
A	Grimsby ..	Yorkshire	1 7	1 2½
B_1	Guildford ..	S. Counties	1 4½	1 0½
A	HALIFAX	Yorkshire	1 7	1 2½
A	Hanley ..	Mid. Counties	1 7	1 2½
A	Harrogate ..	Yorkshire	1 7	1 2½
A	Hartlepools	N.E. Coast	1 7	1 2½
B_1	Harwich ..	E. Counties	1 4½	1 0½
B_3	Hastings ..	S. Counties	1 4	1 0
A_3	Hatfield ..	S. Counties	1 5½	1 1
B	Hereford ..	S.W. Counties	1 5½	1 0½
B	Hertford ..	E. Counties	1 5	1 0½
A_1	Heysham ..	N.W. Counties	1 6½	1 1½
A_1	Howden ..	N.E. Coast	1 6½	1 1½
A	Huddersfield	Yorkshire	1 7	1 2½
A	Hull ..	Yorkshire	1 7	1 2½
A	ILKLEY ..	Yorkshire	1 7	1 2½
A	Immingham	Mid. Counties	1 7	1 2½
A_3	Ipswich ..	E. Counties	1 5½	1 1
B_3	Isle of Wight	S. Counties	1 3½	11½
A	JARROW ..	N.E. Coast	1 7	1 2½
A	KEIGHLEY	Yorkshire	1 7	1 2½
B	Kendal ..	N.W. Counties	1 5	1 0½
B	Keswick ..	N.W. Counties	1 5	1 0½
A_2	Kettering ..	Mid. Counties	1 6	1 1½
A_2	Kidderminster	Mid. Counties	1 6	1 1½
B_3	King's Lynn	E. Counties	1 4	1 0
A	LANCASTER	N.W. Counties	1 7	1 2½
A_2	Leamington	Mid. Counties	1 6	1 1½
A	Leeds ..	Yorkshire	1 7	1 2½
A	Leek ..	Mid. Counties	1 7	1 2½
A	Leicester ..	Mid. Counties	1 7	1 2½
A	Leigh ..	N.W. Counties	1 7	1 2½
B_3	Lewes ..	S. Counties	1 3½	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1
A	Lincoln ..	Mid. Counties	1 7	1 2½
A	Liverpool ..	N.W. Counties	*1 9	1 3½
A_1	Llandudno	N.W. Counties	1 5½	1 1
A	Llanelly ..	S. Wales & M.	1 7	1 2½
	London (12-miles radius)		1 8½	1 3½
	Do. (12–15 miles radius)		1 8	1 3
A	Long Eaton	Mid. Counties	1 7	1 2½
A	Loughborough	Mid. Counties	1 7	1 2½
A_2	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 7	1 2½
A_1	MACCLESFIELD	N.W. Counties	1 6½	1 1½
B_1	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5½	1 1
A	Manchester	N.W. Counties	1 7	1 2½
A	Mansfield ..	Mid. Counties	1 7	1 2½
B_3	Margate ..	S. Counties	1 4	1 0
A_3	Matlock ..	Mid. Counties	1 5½	1 1
A_1	Merthyr ..	S. Wales & M.	1 6½	1 1½
A	Middlesbrough	N.E. Coast	1 7	1 2½
A_2	Middlewich	N.W. Counties	1 6	1 1½
B_3	Minehead ..	S.W. Counties	1 4	1 0
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 7	1 2½
A	Morecambe	N.W. Counties	1 7	1 2½
A_3	NANTWICH	N.W. Counties	1 6	1 1½
A	Neath ..	S. Wales & M.	1 7	1 2½
A	Nelson ..	N.W. Counties	1 7	1 2½
A	Newcastle ..	N.E. Coast	1 7	1 2½
A	Newport ..	S. Wales & M.	1 7	1 2½
A	Normanton	Yorkshire	1 7	1 2½
A_1	Northampton	Mid. Counties	1 6½	1 1½
A	North Staffs.	Mid. Counties	1 7	1 2½
A	North Shields	N.E. Coast	1 7	1 2½
A_3	Norwich ..	E. Counties	1 6	1 1½
A	Nottingham	Mid. Counties	1 7	1 2½
A	Nuneaton ..	Mid. Counties	1 7	1 2½
B	OAKHAM ..	Mid. Counties	1 5	1 0½
A	Oldham ..	N.W. Counties	1 7	1 2½
A_3	Oswestry ..	N.W. Counties	1 5½	1 1
B	Oxford ..	S. Counties	1 5½	1 0½
A	PAISLEY ..	Scotland	*1 7	1 2½
B_3	Pembroke ..	S. Wales & M.	1 3½	11½
A	Perth ..	Scotland	*1 7	1 2½
A_3	Peterborough	E. Counties	1 6	1 1½
A	Plymouth ..	S.W. Counties	*1 7	1 2½
A	Pontefract	Yorkshire	1 7	1 2½
A_1	Pontypridd	S. Wales & M.	1 6½	1 1½
A_3	Portsmouth	S. Counties	1 5½	1 1
A	Preston ..	N.W. Counties	1 7	1 2½
A	QUEENSFERRY	N.W. Counties	1 7	1 2½
A_3	READING	S. Counties	1 5½	1 1
B	Reigate ..	S. Counties	1 5	1 0½
A_3	Retford ..	Mid. Counties	1 5½	1 1
A_1	Rhondda Valley	S. Wales & M.	1 6½	1 1½
A_3	Ripon ..	Yorkshire	1 5½	1 1
A	Rochdale ..	N.W. Counties	1 7	1 2½
B_1	Rochester ..	S. Counties	1 4½	1 0½
A_1	Ruabon ..	N.W. Counties	1 6½	1 1½
A	Rugby ..	Mid. Counties	1 7	1 2½
A_3	Rugeley ..	Mid. Counties	1 5½	1 1
A	Runcorn ..	N.W. Counties	1 7	1 2½
A_2	ST. ALBANS	E. Counties	1 6	1 1½
A	St. Helens ..	N.W. Counties	1 7	1 2½
B_3	Salisbury ..	S.W. Counties	1 3½	11½
A_1	Scarborough	Yorkshire	1 6½	1 1½
A	Scunthorpe	Mid. Counties	1 7	1 2½
A	Sheffield ..	Yorkshire	1 7	1 2½
A	Shipley ..	Yorkshire	1 7	1 2½
A_2	Shrewsbury	Mid. Counties	1 6	1 1½
A_2	Skipton ..	Yorkshire	1 6	1 1½
A_3	Slough ..	S. Counties	1 5½	1 1
A_2	Solihull ..	Mid. Counties	1 6	1 1½
A_3	South'pton	S. Counties	1 5½	1 1
A_2	Southend-on-Sea	E. Counties	1 6	1 1½
A	Southport ..	N.W. Counties	1 7	1 2½
A	S. Shields ..	N.E. Coast	1 7	1 2½
A_2	Stafford ..	Mid. Counties	1 6	1 1½
A	Stockport ..	N.W. Counties	1 7	1 2½
A	Stockton-on-Tees	N.E. Coast	1 7	1 2½
A	Stoke-on Trent	Mid. Counties	1 7	1 2½
B_1	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 7	1 2½
A	Swadlincote	Mid. Counties	1 7	1 2½
A	Swansea ..	S. Wales & M.	1 7	1 2½
B	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6½	1 1½
B_1	Taunton ..	S.W. Counties	1 4½	1 0½
A	Teesside Dist.	N.E. Counties	1 7	1 2½
B	Teignmouth	S.W. Coast	1 5	1 0½
A	Todmorden	Yorkshire	1 7	1 2½
A	Torquay ..	S.W. Counties	1 7	1 2½
C	Truro ..	S.W. Counties	1 3	11½
B	Tunbridge Wells	S. Counties	1 5	1 0½
A	Tunstall	Mid. Counties	1 7	1 2½
A	Tyne District	N.E. Coast	1 7	1 2½
A	WAKEFIELD	Yorkshire	1 7	1 2½
A	Walsall ..	Mid. Counties	1 7	1 2½
A	Warrington	N.W. Counties	1 7	1 2½
A_3	Warwick ..	Mid. Counties	1 6	1 1½
A_3	Wellingborough	Mid. Counties	1 5½	1 1
A	West Bromwich	Mid. Counties	1 7	1 2½
B	Weston-s-Mare	S.W. Counties	1 5	1 0½
A_3	Whitby ..	Yorkshire	1 6	1 1½
A	Widnes ..	N.W. Counties	1 7	1 2½
A	Wigan ..	N.W. Counties	1 7	1 2½
B_1	Winchester	S. Counties	1 4½	1 0½
A_3	Windsor ..	S. Counties	1 5½	1 1
A	Wolverhampton	Mid. Counties	1 7	1 2½
A_3	Worcester	Mid. Counties	1 6	1 1½
A_3	Worksop ..	Yorkshire	1 5½	1 1
A_1	Wrexham ..	N.W. Counties	1 6½	1 1½
A_3	Wycombe ..	S. Counties	1 5½	1 1
B_1	YARMOUTH	E. Counties	1 4½	1 0½
B_3	Yeovil ..	S.W. Counties	1 4	1 0
A	York ..	Yorkshire	1 7	1 2½

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rate of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8½
Carpenter . . . . ,,	1 8½
Joiner . . . . ,,	1 8½
Machinist . . . . ,,	1 9½
Mason (Banker) . . . . ,,	1 8½
,, (Fixer) . . . . ,,	1 9½
Plumber . . . . ,,	1 8½
Painter . . . . ,,	1 7½
Paperhanger . . . . ,,	1 8½
Glazier . . . . ,,	1 8½
Slater . . . . ,,	1 8½
Scaffolder . . . . ,,	1 4½
Timberman . . . . ,,	1 4½
Navvy . . . . ,,	1 3½
General Labourer . . . . ,,	1 3½
Lorryman . . . . ,,	1 6
Crane Drivers . . . . ,,	1 7½
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . ,,	2 10 6
Hydrated Lime . . . ,,	2 16 0
Portland Cement . . . ,,	2 6 0
Ferro-crete . . . ,,	2 13 6
Ciment Fondu . . . ,,	5 15 0
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . ,,	10 0
Building Sand . . . ,,	10 6
Washed Sand . . . ,,	11 6
2" Broken Brick . . ,,	9 6
¾" ,, ,, . . ,,	12 6
Pan Breeze . . . ,,	6 6
Coke Breeze . . . ,,	8 9

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . ,,	3 3 6
Stocks, 1st Quality . . ,,	4 18 6
,, 2nd ,, . . ,,	4 12 6
Blue Bricks, Pressed . . ,,	9 18 0
,, Wirecuts . . ,,	8 16 0
,, Brindles . . ,,	8 0 0
,, Bullnose . . ,,	10 8 0
Red Sand-faced Facings . ,,	7 11 0
Red Rubbers for Arches . ,,	15 0 0
Multicoloured Facings . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . ,,	21 10 0
Headers . . . ,,	21 0 0
Bullnose . . . ,,	28 0 0
Double Stretchers . . ,,	30 0 0
Double Headers . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . ,,	6 3	7 2
Rest bends . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¾" Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers . . ,,	5 6	7 9
Yard gullies . . ,,	9 6	11 6
Interceptors . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . ,,	5	—

MASON

	s. d.
The following d/d F.O.R. at Nine Elms	
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . . ,,	4 9
Bath stone . . . ,,	2 11
York stone . . . ,,	6 9
,, Sawn templates . . ,,	7 6
,, Paving, 2" . . . F.S.	1 8
,, ,, 3" . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station.

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . ,,	28 0 0
20" × 10" Countesses . ,,	20 5 0
18" × 10" Viscountesses . ,,	17 0 0
18" × 9" Ladies . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20" × 10" medium grey . per M.	26 0 0
,, green . ,,	27 15 0
Best machine roofing tiles . ,,	5 0 0
Best hand-made do. . . ,,	5 10 0
Hips and valleys . . each	9½
,, hand-made . . ,,	10
Nails, compo . . . lb.	4
,, copper . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . as 1" F.S.	9
Deal, Joiner's, . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . ,, ,,	1 3
,, African . ,, ,,	1 1
,, Cuban . ,, ,,	2 6
Oak, plain American . ,, ,,	1 0
,, Figured ,, . ,, ,,	1 3
,, Plain Japanese . ,, ,,	1 2
,, Figured ,, . ,, ,,	1 5
,, Austrian wainscot . ,, ,,	1 6
,, English ,, . ,, ,,	1 11
Pine, Yellow . . ,, ,,	1 0
,, Oregon . . ,, ,,	4
,, British Columbian . ,, ,,	4
Teak, Moulmein . . ,, ,,	1 3
,, Burma . . ,, ,,	1 2
Walnut, American . . ,, ,,	2 3
,, French . . ,, ,,	2 3
Whitewood, American . ,, ,,	1 1
Deal floorings, ¾" . . Sq.	1 1 0
,, 1" . . ,,	1 3 6
,, 1¼" . . ,,	1 5 6
,, 1½" . . ,,	1 11 0
,, 1¾" . . ,,	1 15 0
Deal matchings, ¾" . . ,,	16 0
,, 1" . . ,,	17 6
Rough boarding, ¾" . . ,,	1 6 0
,, 1" . . ,,	1 0 0
,, 1¼" . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	¼"	½"	¾"	1"
Qualities	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch	4 3 2	5 4 3	7½ 6 4½	8½ 7 6
Alder	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6
Gaboon				
Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –
Figured Oak				
1 side	8½ 7 –	10 8 –	11½ – –	1/6 – –
Plain Oak				
1 side	6½ 6 –	7½ 7 –	9½ – –	1/0 – –
Oregon Pine	5 4	5½ 5 –	6 – –	– – –

	d.
Scotch glue . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	½"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket union . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . . .	55	,, steam .	40
FITTINGS.			
Gas . . .	47½	Galvanized gas .	37½
Water . . .	42½	,, water .	32½
Steam . . .	37½	,, steam .	27½

SMITH AND FOUNDER—(*continued*):

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ⅜" . . . ,,	10 0
,, ,, ½" . . . ,,	9 9
,, ,, ⅝" . . . ,,	9 6
,, ,, ¾" . . . ,,	9 0
,, ,, ⅞" . . . ,,	9 0
,, ,, 1" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0

	3" s. d.	4" s. d.
Cast-iron rain-water pipes of ordinary thickness metal . F.R.	7	10
Shoes . . . . each	2 3	3 3
Anti-splash ,, . . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	4 0	6 3
Plinth bends, 4½" to 6" . . ,,	4 0	5 6
Half-round rain-water gutters of ordinary thickness metal . F.R.	5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse ,, . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	24 0
,, drawn pipes . . ,,	24 6
,, soil pipe . . ,,	27 6
,, scrap . . ,,	14 0
Solder, plumbers' . . lb.	1 0
,, fine do. . . ,,	1 4
Copper, sheet . . ,,	1 0
,, tubes . . ,,	1 4

	3" F.R.	4"	6"
L.C.C. soil and waste pipes:	s. d.	s. d.	s. d.
Plain cast . .	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . ,,	2 10 6
,, fine . . ,,	5 10 0
Hydrated lime . . ,,	2 16 0
Sirapite . . . ,,	3 10 0
Keene's cement . . ,,	5 10 0
Sand, washed . . Y.C.	11 6
Hair . . . lb.	6
Laths, sawn . . bundle	2 4
,, rent . . ,,	3 9
Lath nails . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . ,,		1 3
¼" Polished plate, n/e 1 ,,	1 0 to	1 3
,, ,, 2 ,,	1 2 ,,	1 7
,, ,, 3 ,,	1 7 ,,	2 5
,, ,, 4 ,,	2 1 ,,	2 11
,, ,, 6 ,,	2 3 ,,	3 2
,, ,, 8 ,,	2 6 ,,	3 6
,, ,, 12 ,,	2 9 ,,	3 8
,, ,, 20 ,,	3 0 ,,	3 11
,, ,, 45 ,,	3 3 ,,	4 1
,, ,, 65 ,,	3 7 ,,	4 6
,, ,, 90 ,,	3 10 ,,	4 9
,, ,, 100 ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 ,,		1 0
,, ,, ,, 2 ,,		1 3
,, ,, ,, over 2 ,,		1 9
,, ,, plate, n/e 1 ,,		1 6
,, ,, ,, 2 ,,		3 0
,, ,, ,, 5 ,,		4 0
,, ,, ,, 7 ,,		5 0
,, ,, ,, 15 ,,		6 0
,, ,, ,,over 15 ,,		7 6
Putty, linseed oil . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 4
Patent knotting . . . ,,	14 0
Distemper, washable . . . cwt.	3 0 0
,, ordinary . . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12″ deep and cart away	Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away	Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away	,,	11 0
,, ,, ,, 10′ 0″ deep and cart away	,,	11 6
,, ,, ,, 15′ 0″ deep and cart away	,,	12 0
If in stiff clay . . . . . add	,,	3 0
If in underpinning . . . . . ,,	,,	5 0
Digging, return, fill and ram	,,	5 0
Planking and strutting to sides of excavation	F.S.	1 0
,, ,, to pier holes	,,	6
,, ,, to trenches	,,	6
,, ,, extra, only if left in	,,	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	,,	1 13 6
,, ,, ,, (4-2-1)	,,	1 18 6
,, ,, ,, underpinning	,,	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, junctions	,,	3 9	4 6
Gullies and gratings	,,	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
,, ,, in cement	,,	34 0 0
,, Stocks in cement	,,	41 10 0
,, Blues in cement	,,	62 0 0
Extra only for circular on plan	,,	3 0 0
,, backing to masonry	,,	2 0 0
,, raising on old walls	,,	3 0 0
,, underpinning	,,	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	,,	1 0
,, red brick facings	,,	1 6
,, blue brick facings	,,	1 9
,, glazed brick facings	,,	4 6
Tuck pointing	,,	10
Weather pointing	,,	4
Slate dampcourse	,,	1 0
Vertical dampcourse	,,	1 3

ASPHALTER

		s. d.
½″ Horizontal dampcourse	Y.S.	5 6
½″ Vertical dampcourse	,,	7 6
½″ paving or flat	,,	5 6
1″ paving or flat	,,	6 6
1″ × 6″ skirting	F.R.	1 0
Angle fillet	,,	2
Rounded angle	,,	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do. all as last	,,	15 6
Artificial stone and do.	,,	16 6
York stone templates, fixed complete	,,	14 0
,, thresholds	,,	16 0
,, sills	,,	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	4 5 0
Do., 18″ × 9″	,,	4 2 0
Do., 24″ × 12″	,,	4 12 0
Westmorland slating, laid with diminished courses	,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	,,	4 0 0
Do., all as last, but of machine-made tiles	,,	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
,, to stanchions	,,	1 0
,, to staircases	,,	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	,,	6 9
,, ,, roofs	,,	8 3
,, ,, trusses	,,	9 0
,, ,, partitions	,,	12 0
½″ deal sawn boarding and fixing to joists	Sqr.	1 17 6
1″ ,, ,, ,, ,,	,,	2 1 6
1½″ ,, ,, ,, ,,	,,	2 7 6
3″ × 2″ fir battening for Countess slating	,,	12 6
Do. for 4″ gauge tiling	,,	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
,, ,, ,, 2 ,,	,,	3 0
,, ,, ,, 3 ,,	,,	3 6
Stout herringbone strutting to 9″ joists	F.R.	1 0
1″ deal gutter boards and bearers	F.S.	1 4
1½″ ,, ,, ,, ,,	,,	1 8
2″ deal wrought rounded roll	F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
1¼″ do.	,,	3 4 0
1½″ do.	,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1¼″ do.	,,	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½″ deal moulded sashes of average size	F.S.	2 3
2″ ,, ,, ,,	,,	2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ⅝″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	4 3
2″ ,, ,, ,, ,,	,,	4 6
Extra only for moulded horns	Each	9
1½″ deal four-panel square, both sides, door	F.S.	2 6
2″ ,, ,, ,, ,,	,,	3 0
1½″ ,, but moulded both sides	,,	3 0
2″ ,, ,, ,, ,,	,,	3 6
4″ × 3″ deal, rebated and moulded frames	F.R.	1 6
4½″ × 3½″ ,, ,, ,,	,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1½″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	3 0
1½″ deal moulded wall strings	,,	2 6
1½″ ,, outer strings	,,	2 9
Ends of treads and risers housed to string	Each	2 0
3″ × 2″ deal moulded handrail	F.R.	1 6
1″ × 1″ deal balusters and housing each end	Each	2 6
1½″ × 1½″ ,, ,,	,,	3 3
3″ × 3″ deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	,,	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders and hoisting and fixing in position	,,	1 3 0
Do. stanchions with riveted caps and bases and do.	,,	1 2 0
Mild steel bar reinforcement ¼″ and up, bent and fixed complete	,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	2 0 6
Do. in flashings	,,	2 3 0
Do. in covering to turrets, etc.	,,	2 10 0
Do. in soakers	,,	1 16 0
Labour to welted edge	F.R.	3½
Open copper nailing	,,	3½
Close ,,	,,	4½

		½″ s. d.	¾″ s. d.	1″ s. d.	1¼″ s. d.	2″ s. d.	4″ s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 3	1 8	2 2	2 9	3 10	—
Do. soil pipe and fixing with cast lead tacks	,,	—	—	—	—	—	6 0
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions	,,	3 6	4 0	5 6	8 0	—	—
Lead traps	,,	—	—	—	—	—	—
Screw down bib valves	,,	7 6	10 6	12 6	—	—	—
Do. stop cocks	,,	10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4″ cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	,,	1 6
Do. outlets	,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	,,	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	,,	5 6
Lathing with sawn laths to ceilings	,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	,,	2 6
Do. vertical	,,	2 9
Rough render on walls	,,	2 3
Render, float and set in lime and hair	,,	3 0
Render and set in Sirapite	,,	3 3
Render, backing in cement and sand, and set in Keene's cement	,,	4 6
Extra, only if on lathing	,,	9
Keene's cement, angle and arris	F.R.	8
Arris	,,	3
Rounded angle, small	,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth	,,	2
1″ granolithic pavings	Y.S.	5 0
1½″ ,,	,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed	,,	1 2 6
9″ × 3″ ,, ,, ,,	,,	1 7 6
Extra, only for small quadrant angle	F.R.	9

GLAZIER

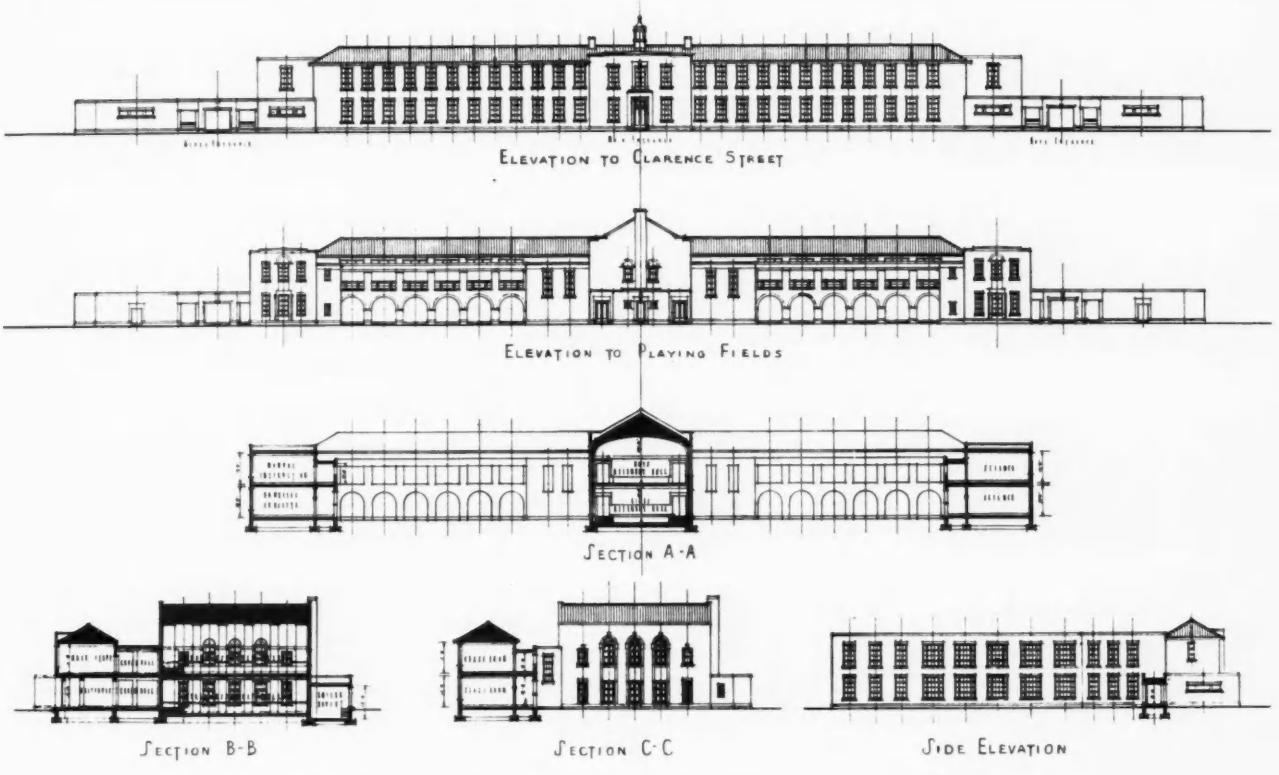
		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	,,	1 0
Arctic glass and glazing with putty	,,	1 2
Cathedral glass and do.	,,	1 3
Glazing only, British polished plate	,,	8
Extra, only if in beads	,,	2
Washleather	F.R.	4

PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	,,	1 0
Do. with washable distemper	,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3 3
Do. on woodwork	,,	3 6
Do. on steelwork	,,	3 0
Do. and brush grain and twice varnish	,,	5 6
Stain and twice varnish woodwork	,,	1 11
Stain and wax-polish woodwork	,,	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper	from ,,	3 0

BURTON-UPON-TRENT ELEMENTARY SCHOOL

COMPETITION DESIGN BY G. WYVILLE HOME AND SHIRLEY KNIGHT, WINNERS OF THE FIRST PRIZE



ELEVATIONS AND LONGITUDINAL AND CROSS SECTIONS

THE drawings above are reduced to one quarter of the architects' $\frac{1}{16}$-inch scale (i.e. : 1 in. = 64 ft.), and the plans of ground and first floors, overleaf, to one half (i.e. : 1 in. = 32 ft.). The sketch block plan is given on the last page.

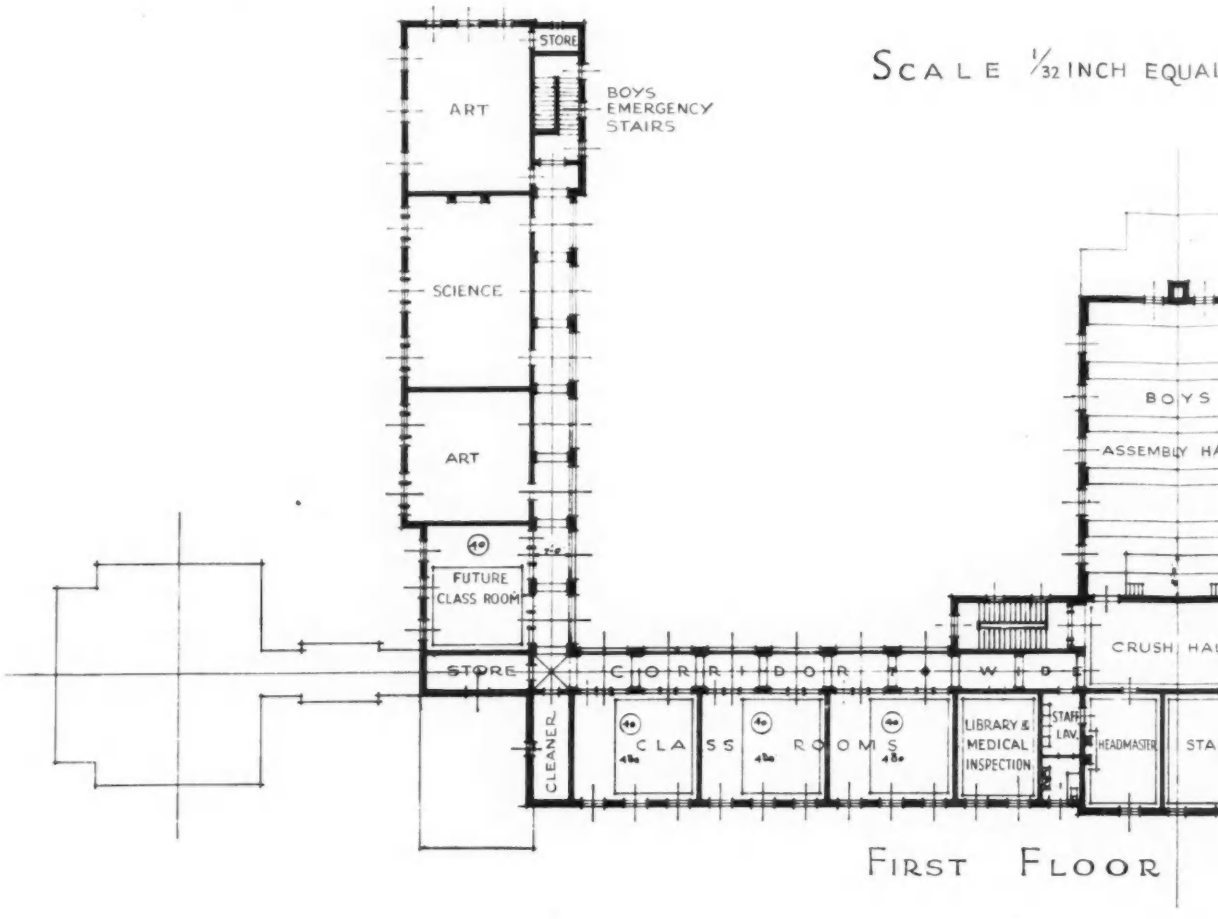
As announced in last week's issue, this design, by Messrs. G. Wyville Home and Shirley Knight, of London, won the first premium (£150). The second (£100) was awarded to that by Messrs. F. S. Antliff and Son, of Derby, and the third (£50) to that by Messrs. Nicol and Nicol, of Birmingham. One hundred and seventy-eight designs were submitted.

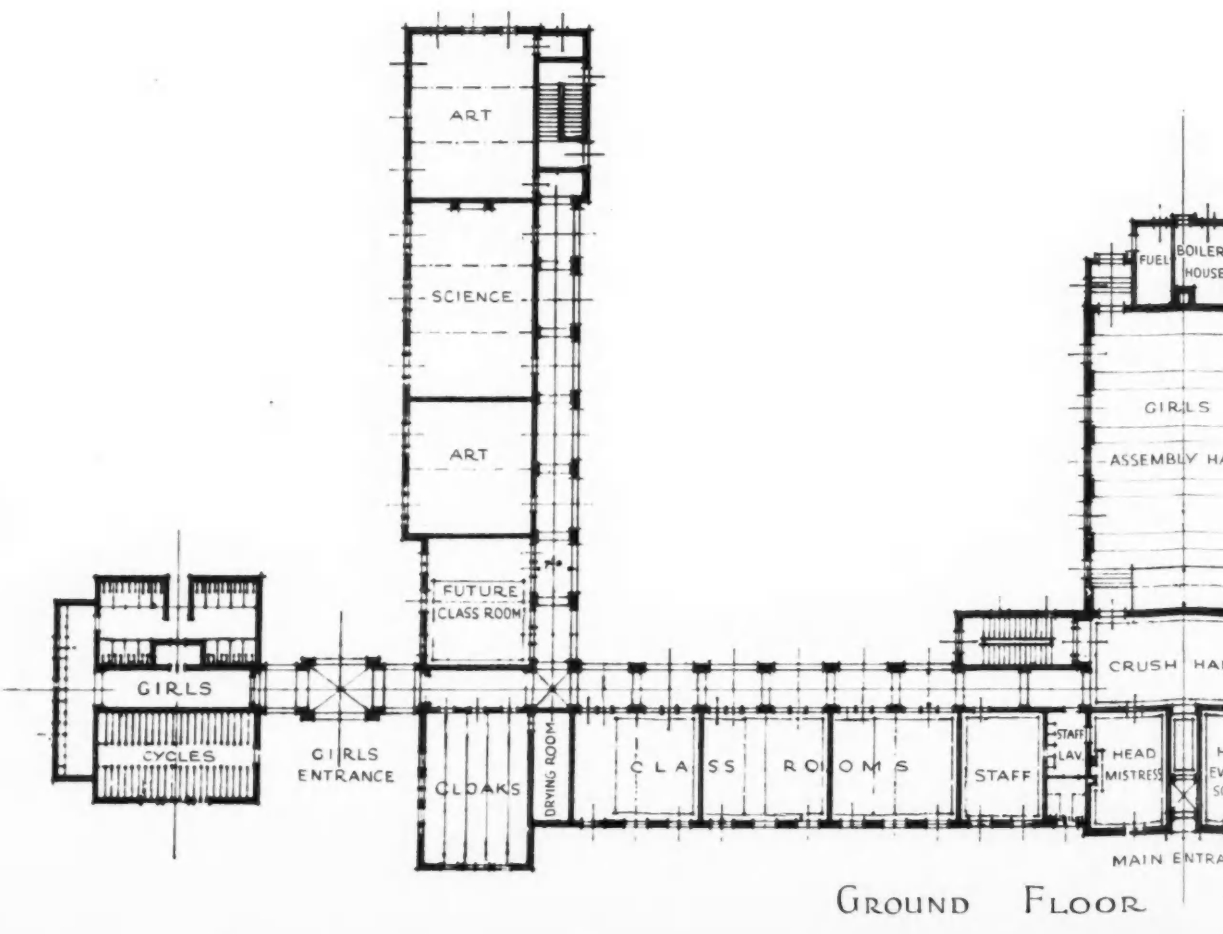
In the Conditions a two-story block was requested, with the Boys' and Girls' Schools combined or separated; the elevations to be simple; and economy to be the ruling consideration. The accommodation was specified in detail and in area. The site has an area of about $7\frac{3}{4}$ acres, out of which a playing field was to be allowed: it is crossed by a culvert, open at one point.

The assessor, Herbert T. Buckland, F.R.I.B.A., of Birmingham, in his report, observes that it is remarkable that so few competitors have realised the advantage of allocating a separate floor to each department: the first and second are exceptions in this respect. The former places the Girls on the ground floor with the Boys over, an arrangement which enables him to achieve a well-balanced plan. The general disposition of the rooms is very satisfactory, and the aspect of the class rooms South-east is all that could be desired. The special rooms are well grouped. The elevations are plain, and would require careful consideration in detailing and choice of materials to achieve a satisfactory result. Both schemes are of the open type of plan so suitable for a large, open and level site, and lending itself to through ventilation by natural means.

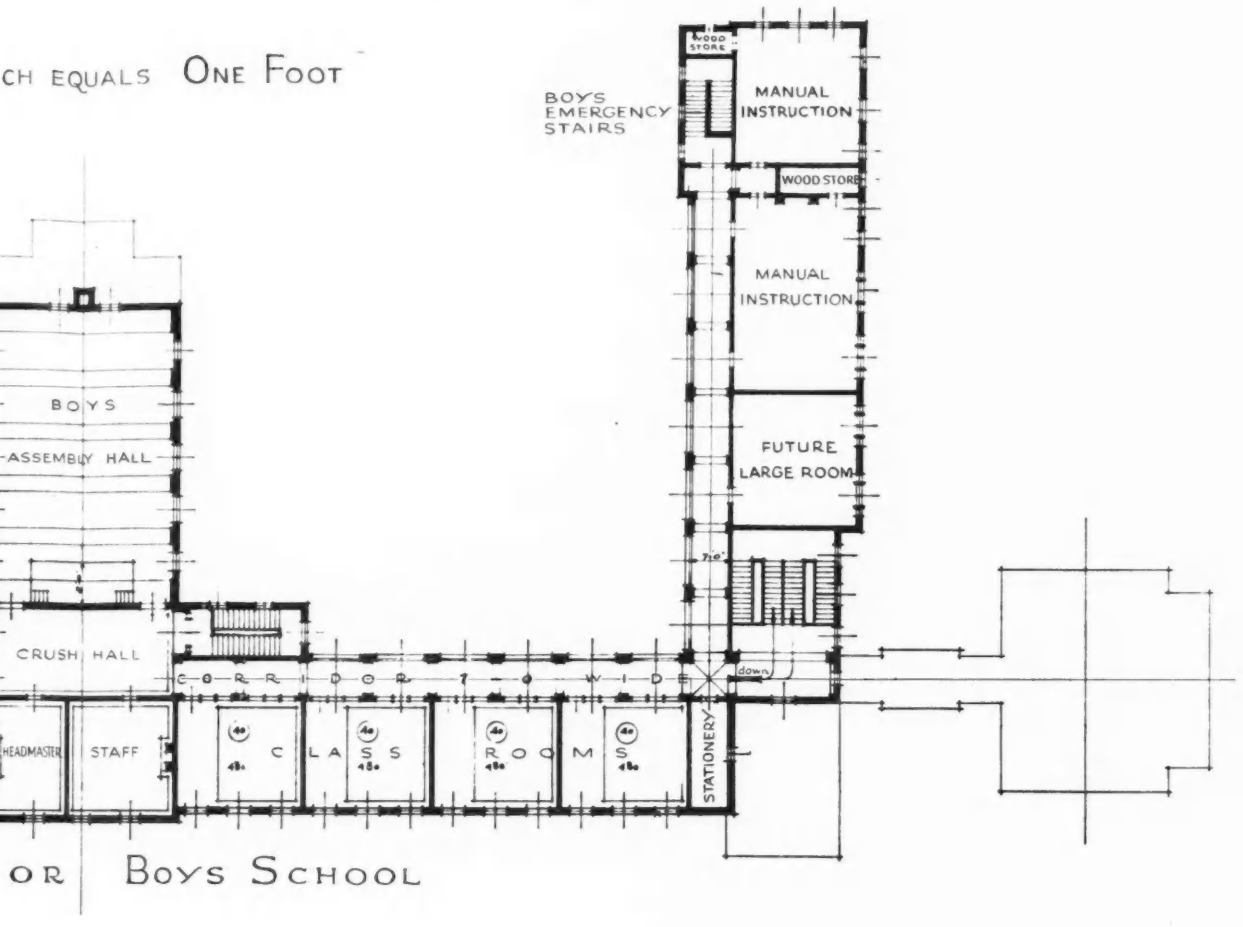
In the design placed first the staircases on either side of the halls are not necessary for the ordinary working of the school, as the only intercommunication required could be provided by a staff staircase, but the author explains in his report that "careful consideration has been given to the possibility of letting the Assembly Halls for public or other functions, and staircases have been provided" accordingly. An exit and emergency staircase would probably be required from the back end of the Boys' Hall.

The provision for future extension should receive further consideration. A stock room is required on the ground floor.

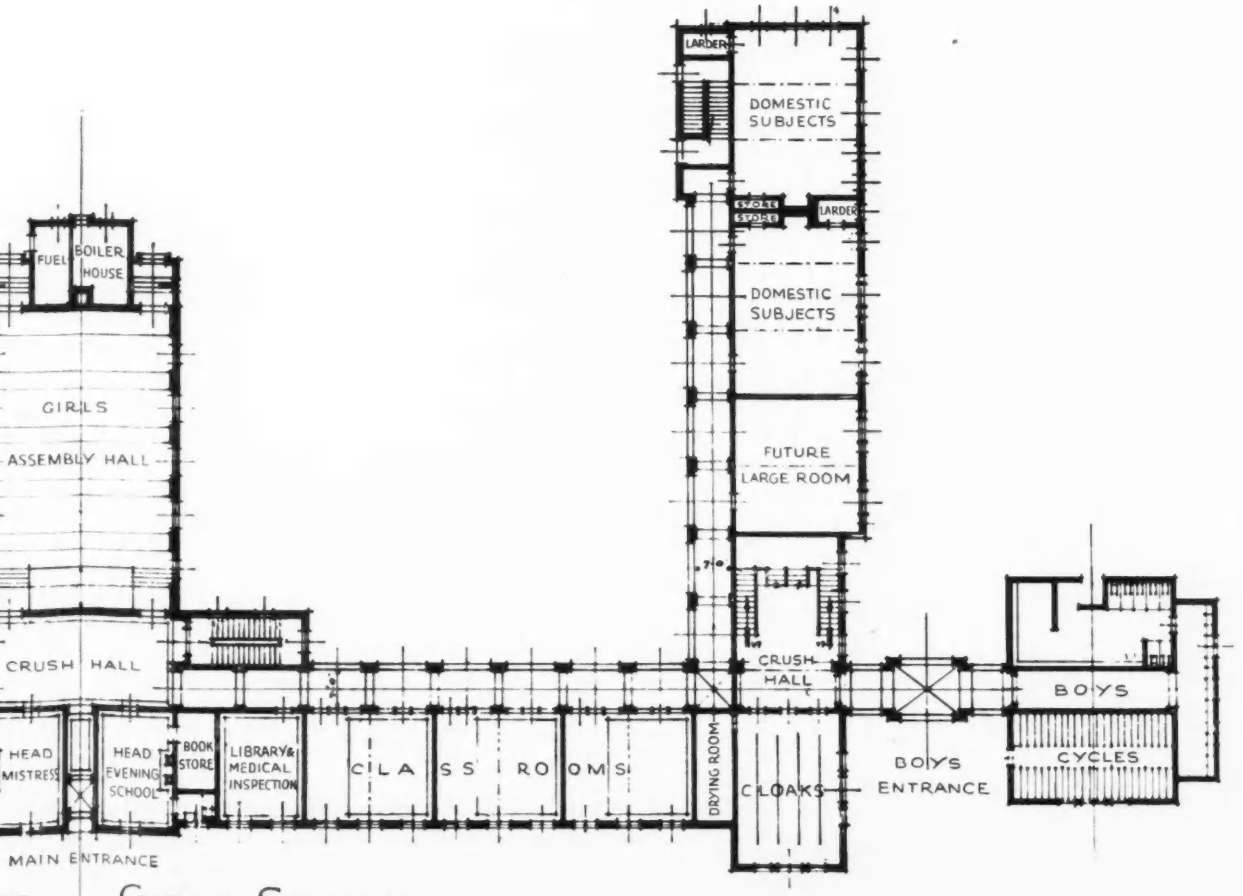

SCALE 1/32 INCH EQUAL
STORE
ART
BOYS EMERGENCY STAIRS
SCIENCE
ART
FUTURE CLASS ROOM
STORE
CORRIDOR
CLEANER
CLASS ROOMS
LIBRARY & MEDICAL INSPECTION
STAFF LAV.
HEADMASTER
BOYS
ASSEMBLY HA
CRUSH HA
FIRST FLOOR


ART
SCIENCE
ART
FUTURE CLASS ROOM
GIRLS
CYCLES
GIRLS ENTRANCE
CLOAKS
DRYING ROOM
CLASS ROOMS
STAFF
STAFF LAV.
HEAD MISTRESS
FUEL
BOILER HOUSE
GIRLS
ASSEMBLY HA
CRUSH HA
MAIN ENTRA
GROUND FLOOR

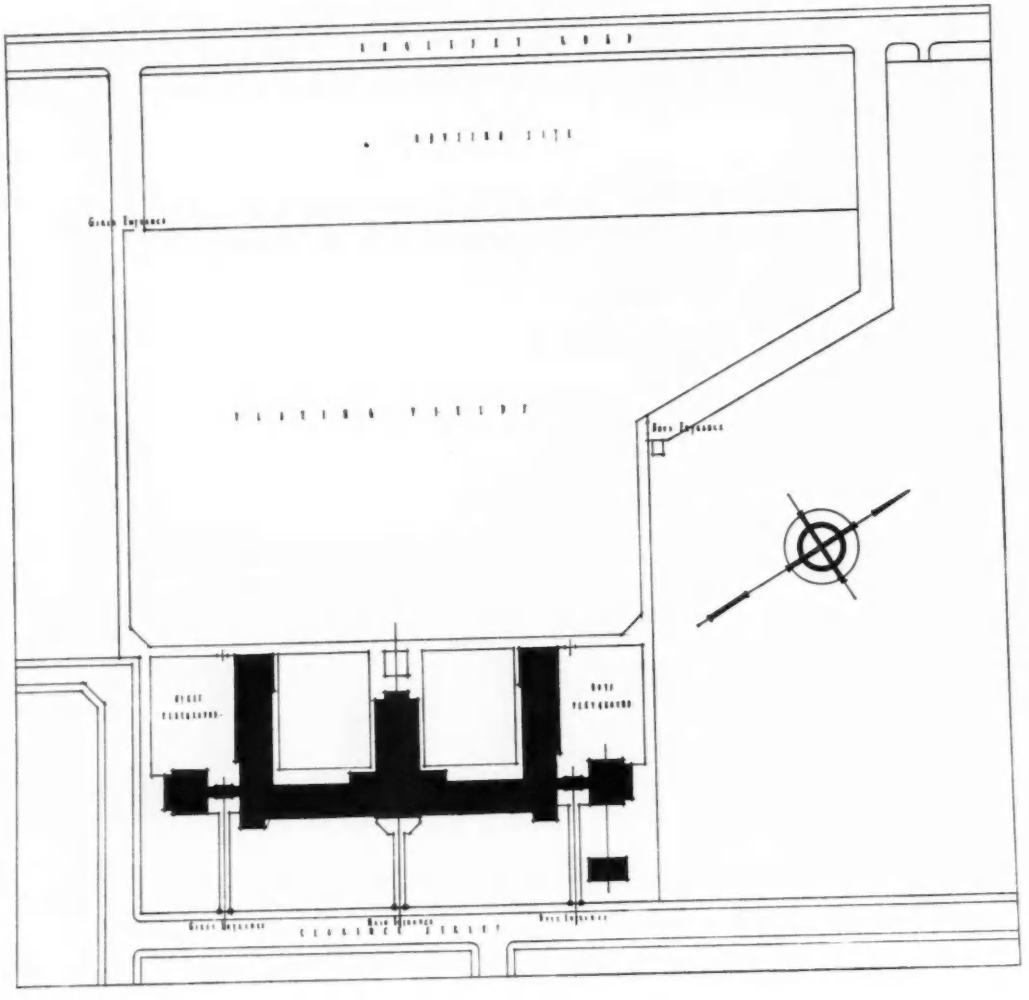
CH EQUALS ONE FOOT



OR BOYS SCHOOL

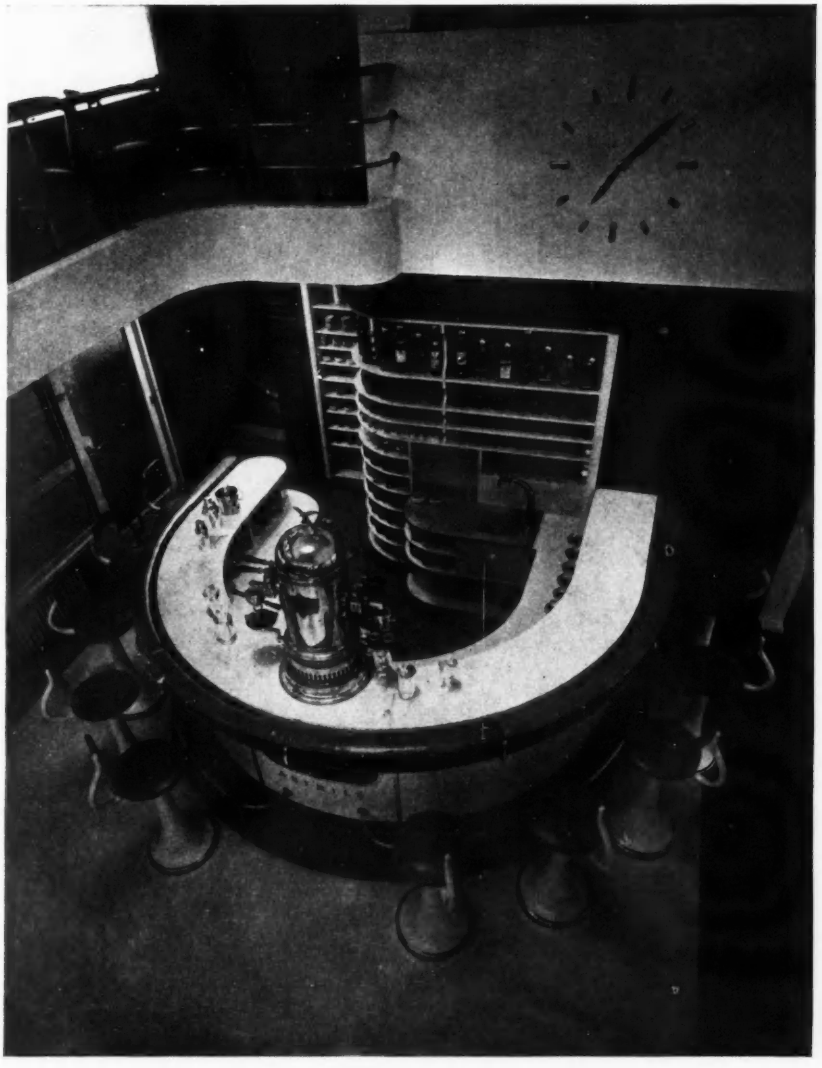


OR GIRLS SCHOOL



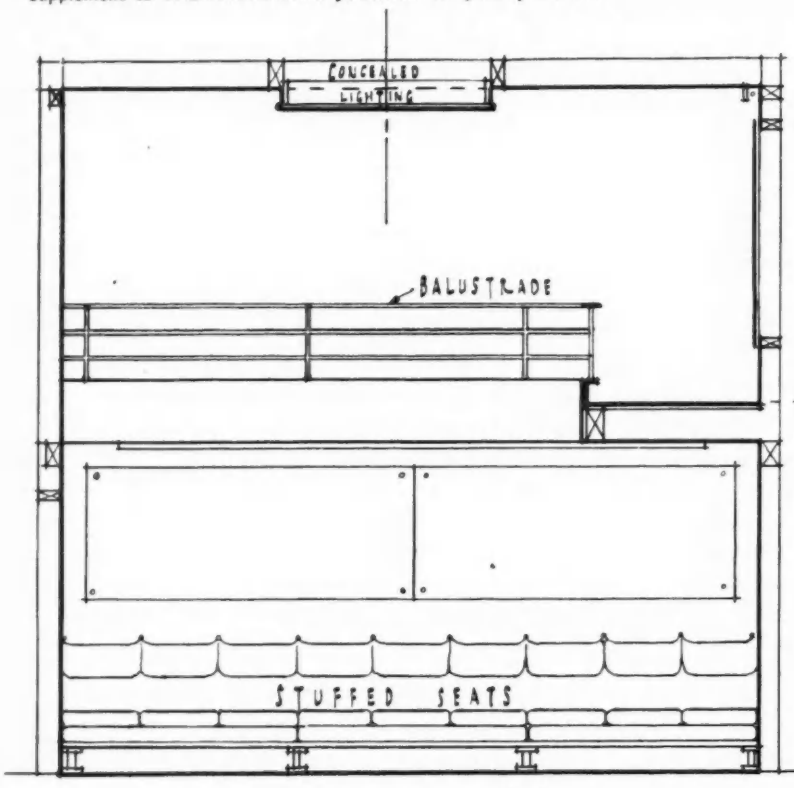
TEMPORARY COCKTAIL BAR: VIENNA, 1930

DESIGNED BY KARL HOFMANN AND FELIX AUGENFELD FOR THE WERKBUND EXHIBITION

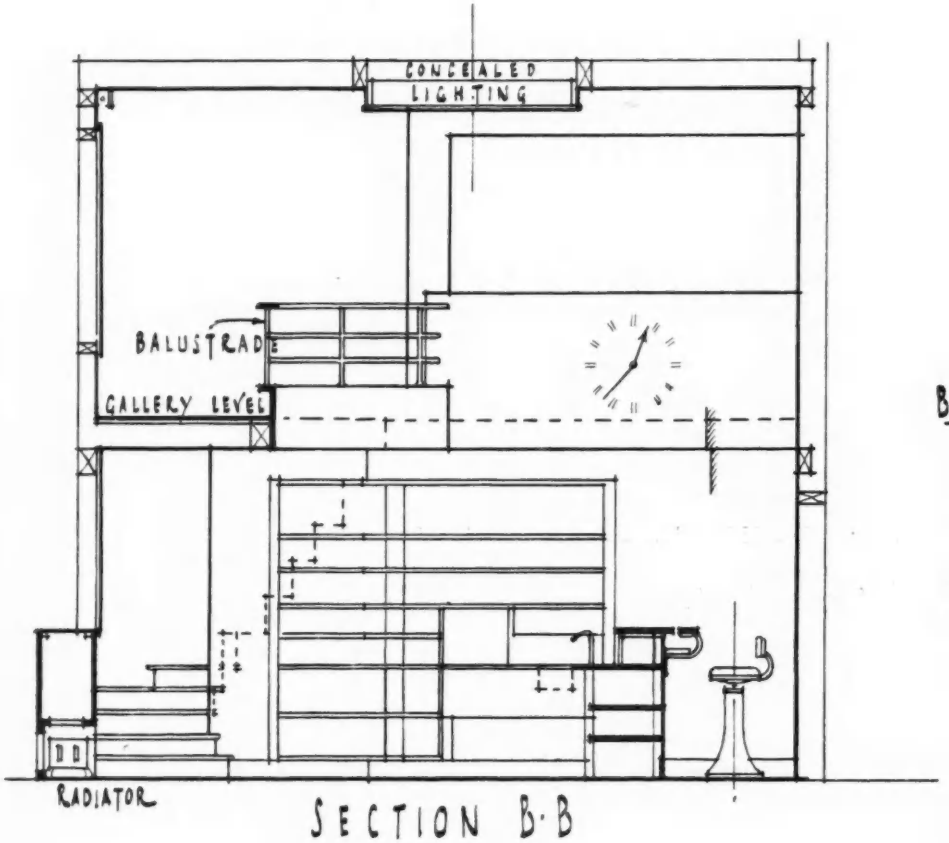


THE "ESPRESSOBAR" FROM THE GALLERY

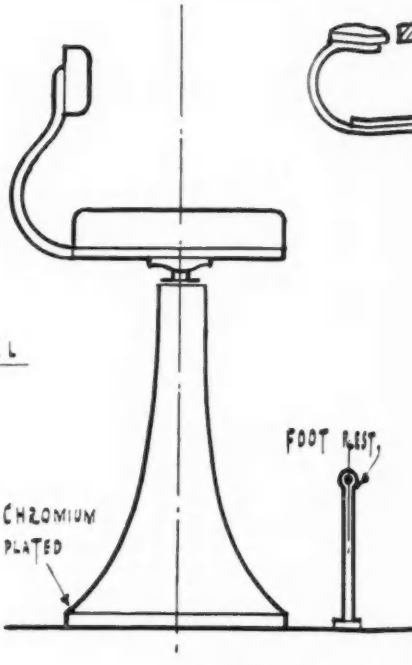
INTENDED for the quick service of coffee, cocktails and snacks, at the exhibition of last summer, the "Espressobar" illustrated in the photograph above, and overleaf by detail drawings to the scales given, was of a temporary character. Thus the counter, for permanent uses, would no doubt have been constructed of materials more durable than wood faced with lincrusta. The partition walls were of deal, finished in cream lacquer, like the bodies of the seats and tables, the upholstery of which, together with the cushioned arm-rest of the counter, was of red leather. The counter-top was of white marble; the flooring, with the skirtings of wall and counter, of red and cream linoleum. Metal fittings were mainly of brass, chromium-plated. On the veneered wood wall-panelling, seen to the right of the shelving, were inscribed the names of the architects, contractor and sub-contractors. The letter-box slot in the counter-face is for litter.



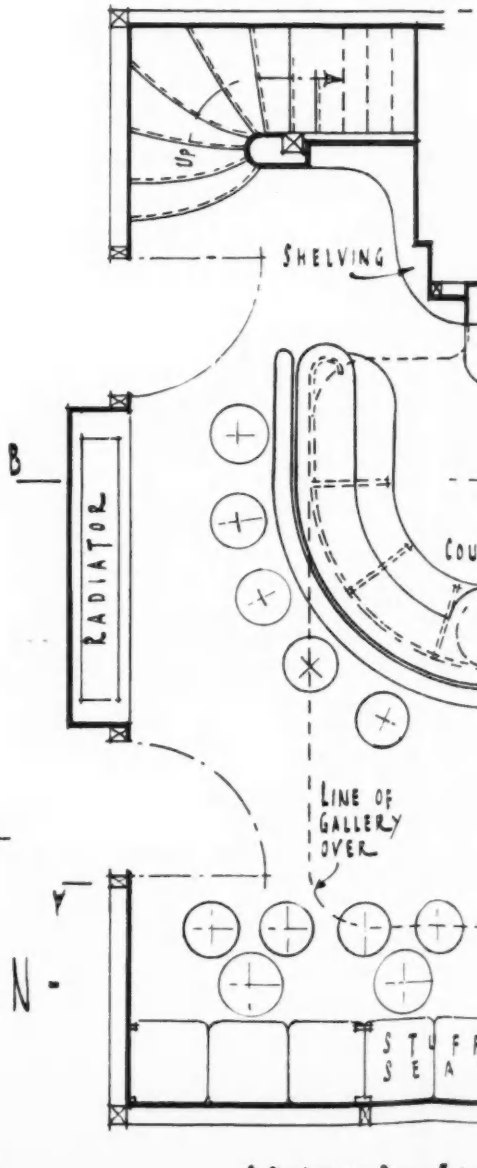
SECTION A·A



SECTION B·B



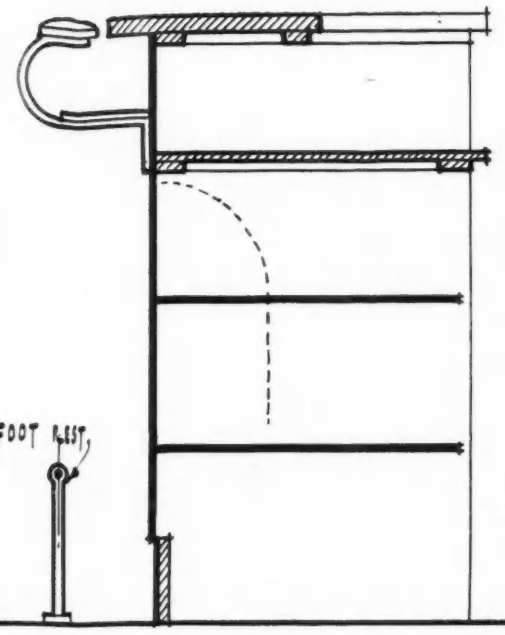
STOOL &



GROUND FL

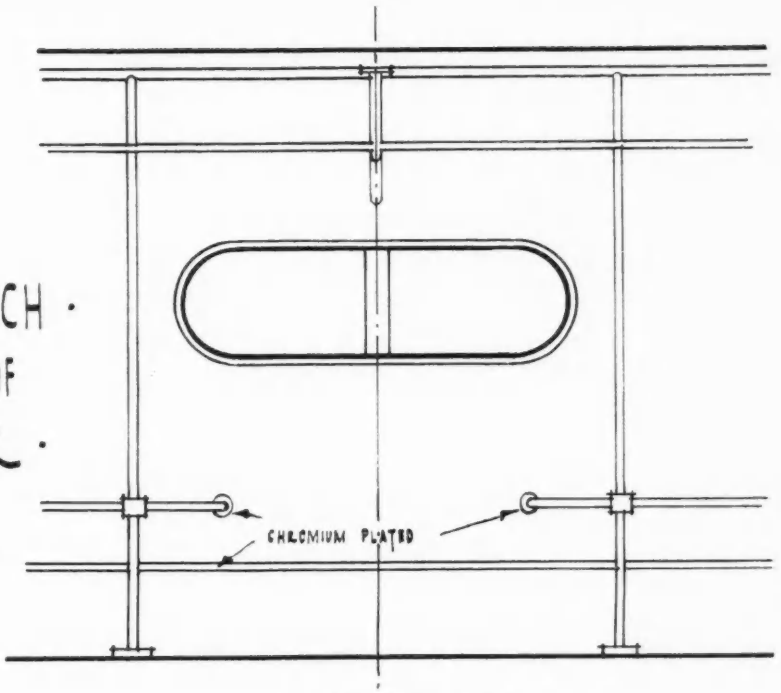
VIENNA-WERKBUND EXHIBITION-
COCKTAIL & SNACK BAR-

SCALE - ¼ IN. TO 1 FOOT - [KARL HOFFMANN / FELIX AUGENFELD] ARCHITECTS



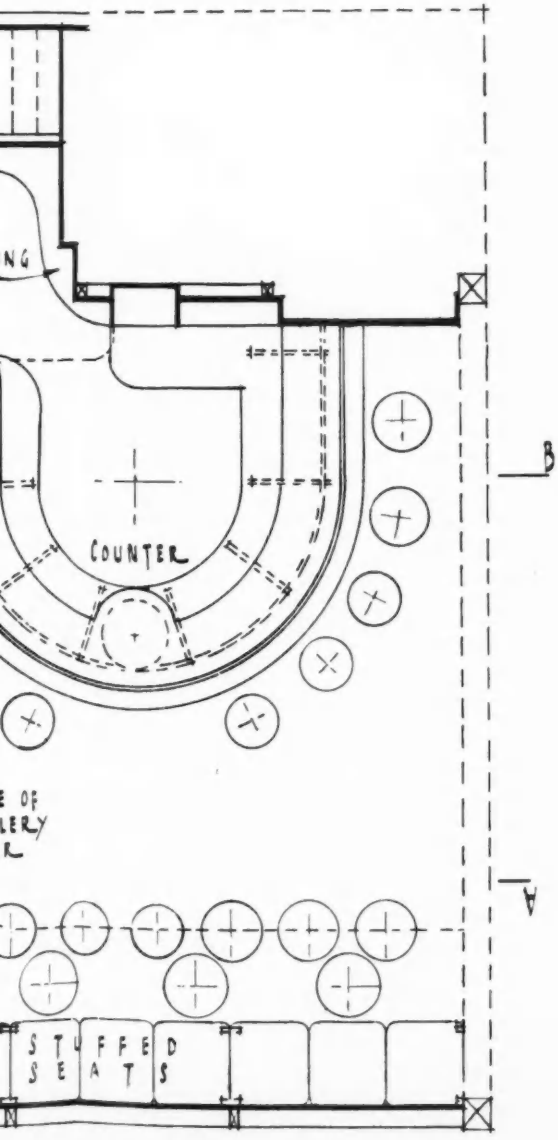
ONE-INCH · DETAIL OF COUNTER ·

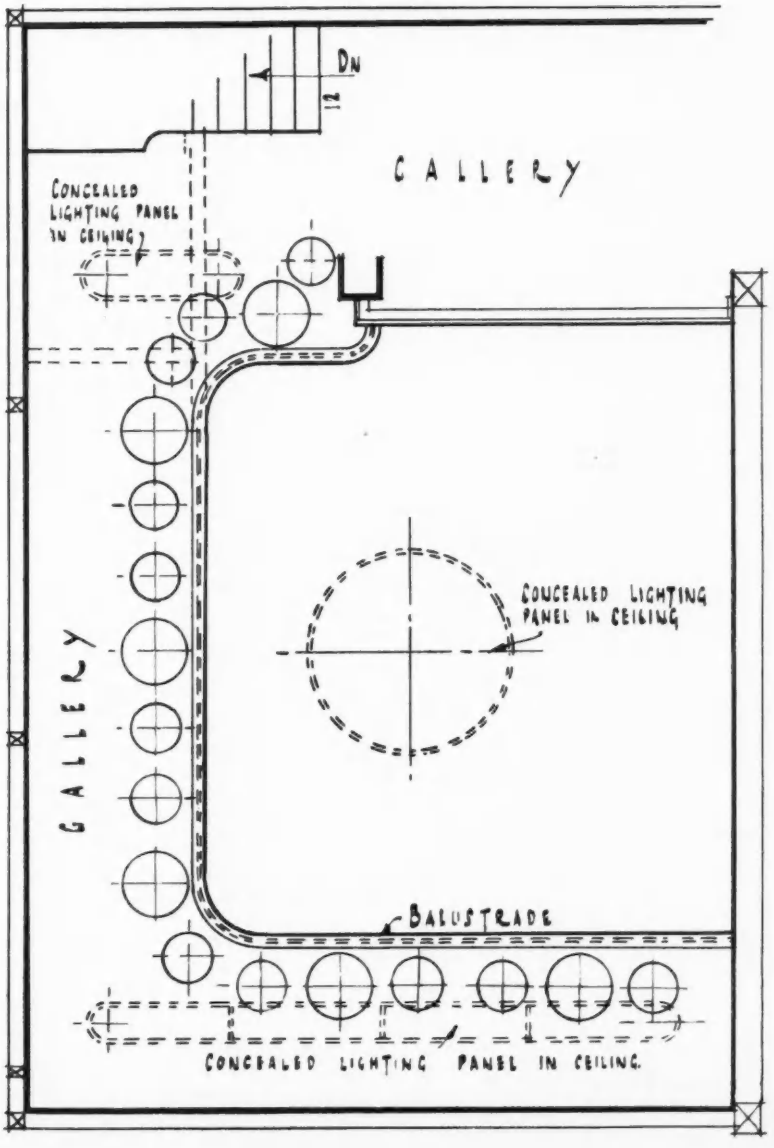
[FACED WITH LINCRUSTA]



OL & SECTION

ELEVATION



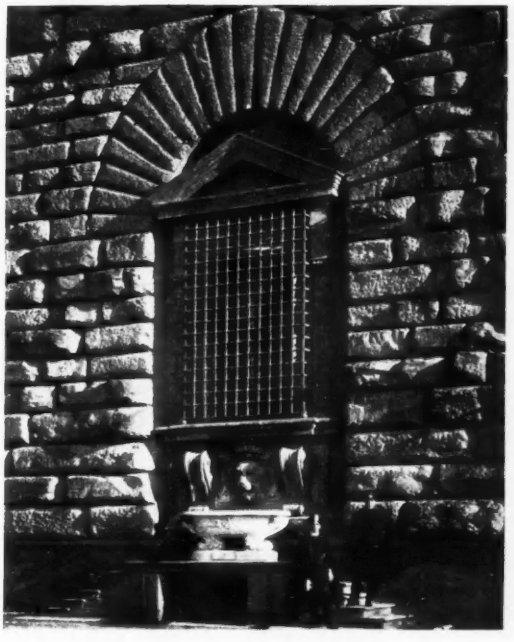


ND FLOOR PLAN

GALLERY PLAN

SELECTED PRECEDENTS:

STONEWORK IN FLORENCE



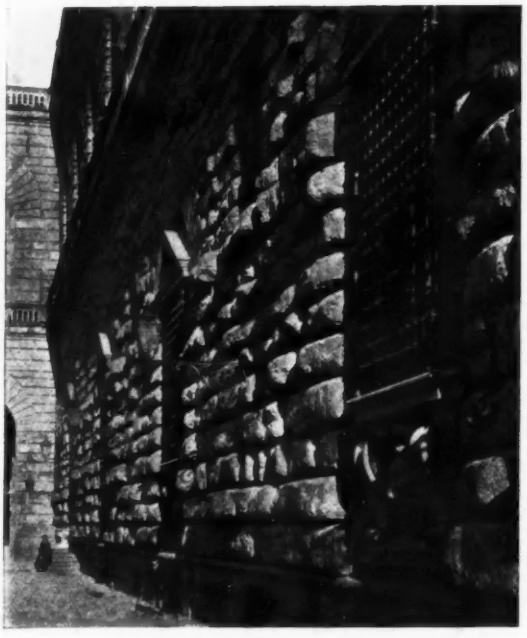
WINDOW AND FOUNTAIN
AT THE PITTI PALACE, FLORENCE

THE photographs reproduced above and overleaf are all of the main façade of the Palazzo Pitti, the central part of which was designed by Brunelleschi in 1435. The windows are by Ammanati (1568).

The stone employed was quarried on the spot, which explains the huge dimensions. A striking example is seen in the bottom view on the next page: the second course has a single block 27 feet long. Between it and the central small stone of the course below, a three-foot rule was set up. This gives the exact scale, which is also, and perhaps even more realistically, conveyed by the figures standing against the wall.

—MYRON BEMENT SMITH

[These illustrations should be studied in conjunction with the article, "An Analysis of Florentine Stonework," the first instalment of which appears on pages 211–215 of this issue.—ED., A. J.]



THE MAIN FACADE, IN PERSPECTIVE.



A DETAIL OF THE SOUTH RAMP.



THE TWENTY-SEVEN FOOT STONE IN THE SECOND COURSE OF THE FACADE.

THE PITTI PALACE, FLORENCE

THE ARCHITECTS' JOURNAL



WEDNESDAY, FEBRUARY 4, 1931

YOU WILL COME TO IT IN TIME

ON Wednesday of last week, at the Uxbridge Sessions House, a bench of local magistrates ruled that an advertisement measuring some six feet by four, bearing the word GILBEYS, and standing at the edge of an orchard by the side of the Bath Road did not constitute a disfigurement of rural scenery. They went on to decide that a hoarding measuring seventy-five feet by twelve, carrying the usual crop of clamorous posters, and standing so as to obscure the view of trees seen across a farmyard, did not constitute a disfigurement of rural scenery.

The occasion for the exercise of their judgment was the trial of twenty or more cases of prosecution by the Middlesex County Council for alleged infringement of the bylaws regulating advertisements in rural districts. These cases consisted of various signs and some hoardings, all erected along a five-mile stretch of the Bath Road, before and after it enters the Colnbrook by-pass.

If we reproduced a map of the district one would see the line of the Bath Road running across a pattern of fields and orchards, thinly sown with cottages and farms, that occasionally gather into a village, or string out ribbon-wise along the old coaching road.

If one travels along this road one sees to right and left the long perspective of fields and hedgerows, diversified by single trees or clumps, and by the banked masses of orchards. Overhead is the sky, unbroken from one horizon to the other. Near at hand hedgerows file past, cottages, old inns, villages. That is the road—the real road.

And now, what happens ? One sees the fields and trees—GILBEYS—stretching to the—GUINNESS IS GOOD FOR YOU—horizon. The trees are still—WINTER AT CANNES—there; you may still—DANCE AT THE CAFE DE PARIS, BRAY—find cottages and inns; even the—BIRD'S CUSTARD—sky, thank God, is still there, but at every—McNISH'S WHISKY—few yards of road, at every open stretch of—R.O.P. PETROL—country, against the background—MONTE CARLO THIS TIME—of every mass of foliage on the walls—I PREFER A BASS—of too many cottages and barns; wherever the eye could rest and find relief from the pressure of London streets, the boredom of the suburbs, these perky signs affront us.

If commercial travellers were ill-bred, thick-skinned insensitive bores, even *they* could not be prevailed upon by their employers to violate the sanctity of property to importune us in our gardens—even in our public gardens. Yet here, in the country, their employers are given magisterial right to occupy the public highway with such a display of salesmanship—GIVE IT A TRIAL—that opinion will bear it but little longer before it compels every bench of magistrates—YOU WILL COME TO IT IN TIME—in the kingdom to enforce the law that seeks to protect us.

Let us say at once that what seems to have influenced the magistrates is not the presence in court of forty witnesses for the advertisers, all prepared to swear that they had seen no rural scenery along the road; nor yet the advertisers' stories of how their foremen set out looking for sites where amenities could not be injured (and always finding them !); nor yet the overbearing action of the county, sending forth its summonses without regard to high or low. Rather, it seems, they judged this road out of London to be a dull road; the scenery visible from it uninteresting; the posters and hoardings exhibited along it too inevitable to require the acquisition of a new frame of mind in which a hoarding is seen to be an offence. And so, because the Bath Road is not a proven and popular "bea—WORTHINGTON—uty spot," it is decided that there *is* no rural scenery to disfigure, or conversely, that if there is, what does it matter if it is disfigured !

We should advise the County Council, who are to be congratulated upon their zeal in the public interest, to select a stretch of road for their next operation, upon which there can be no matter of doubting the rurality of the scenery. And let them but ask for unpaid witnesses by public advertisement; they will find themselves embarrassed by the richness of their choice.—ADVERTISING PAYS !



A FANTASY BY ROBERT ADAM

This drawing, inscribed "Invt. and Delt. Robert Adam, 1786," is among the exhibits at the loan exhibition of Scottish Art and Antiquities, which will be open from February 5 to 22, at No. 27 Grosvenor Square, W.1. Astragal gives some further particulars on the facing page.

NEWS & TOPICS



Joseph Addison, head of the Leeds School, and winner of the R.I.B.A. Athens Bursary, 1931. Born in Aberdeen in 1894, he received his early training in the office of Wilsons and Walker, and at the Aberdeen School of Architecture. Serving during the war with the Royal Engineers, and receiving the Military Cross, he afterwards resumed his studies in his native town, and won several distinctions. At the age of twenty-six he received his present appointment at the Leeds College of Art, which, two years ago, received full recognition of its School of Architecture for exemption from the R.I.B.A. final examination.

THE BASEMENT LIVING-ROOM PROBLEM

ARISING from the disclosures of the L.C.C. Medical Officer of Health as to the widespread existence of unhealthy underground living-rooms, the Borough of Kensington has suggested that a clause be inserted in the new L.C.C. General Powers Bill providing for a survey of all underground rooms, with powers to close unhealthy cases. Such a survey would be an onerous and expensive task. Basement living-rooms are found everywhere, in nearly all districts. I know, for instance, that round the corner from my own house, in a road that bears every mark of lower-middle-class respectability, nearly every basement is occupied for living purposes, and some, perhaps, by whole families. All those families must be suffering from under-light-nourishment and from the effect of damp and lack of air. But how will it profit us or them to turn them out, when they will have nowhere else to go that is any better ? The thing must be done, and the worst cases put right, but until we build more *and much cheaper* types of working-class flats we shall not be able to abolish the basement room.

PUBLICITY FOR NEWCASTLE

The basis of commercial enterprise which is the foundation of most large towns in this country was forcibly brought to my notice by a production called " Newcastle-upon-Tyne : Commercially Considered," which is sent to interested parties as an advertisement of the possibilities of that town. The book itself, though filled with interesting reading matter and photographs, had advertisements mixed with letterpress and letters from local and other worthies that do not greatly help a stranger to find his way to what he wants in Newcastle. The map, too, might have been more informative. I do not know whether Newcastle has a development plan, but if it has and could have produced it in colour in this book, manufacturers could spot the industrial districts at once, and by means of distinctive colours could be enabled to take in the character and disposition of the town at a glance. Newcastle, I feel, has here just missed taking full advantage of what in itself is an excellent idea.

REAL " TOWN " PLANNING

The report on the development plan of Hastings, prepared by Adams, Thompson and Fry, in collaboration with Thomas Mawson and Sons, comes to break the sequence of regional reports which have for long distracted attention from the very acute problem of the towns. Hastings is, of course, a seaside town, residential and recreational, and it has been a major part of the consultant's task to balance these two elements in a comprehensive plan for the future. The first they achieve by a carefully-worked-out zoning plan, protecting the outside of the town and segregating the few industries to specified localities : the second is covered by proposals for completing the scheme of sea-front development, extending the promenade and laying out a bathing pool, a publicly-owned amusement centre, and other works. At the same time they propose the acquisition of some 380 acres of cliffland, including the Fairlight cliffs that figured so tragically in Sheila K. Smith's novel, *Tamarisk Town*.

*

The civic centre scheme is a real attempt to gather the scattered public buildings of the town into one composition that should be worthy of the town—and the site chosen could hardly be bettered. Finally, the scheme of woodland preservation, a projection into the not-too-distant future, throws a vital protecting ring round the spreading residential areas. Those who know the beautiful hinterland of Hastings will realize the wisdom of this prevision. It is good to find a town with the common sense and the public sense of Hastings evinced in the highest form by this resolution to see clearly into the near future, and to avoid the muddle and expense of clearing away the mistakes of unguided individuals by taking on the real job of running a town with their eyes open.

THE EXHIBITION OF SCOTTISH ART

The Scottish Exhibition, which will be opened by John Buchan, M.P., at 27 Grosvenor Square tomorrow (Thursday), promises to be an exceedingly interesting collection from an artistic point of view. The standard is high and the tiresome sentimentality which has tended so long by its mere self-satisfaction to hold Scotland back as a nation as well as in art has been largely eliminated. The Highland element, instead of being predominant, is subjected to its proper place, which will enable people to realize that the whole country was not inhabited by a race of kilted barbarians, but in its more cultured parts possessed a fairly reasonable company of painters, carvers, silversmith, glass blowers, and to a lesser degree, furniture makers.

*

Architecture cannot really be represented as such, but a few carved panels of the sixteenth and seventeenth centuries are interesting for vigorous, though somewhat crude, treatment. There is a drawing or two by Robert Adam; and a letter of John Adam, dated 1752, about the details of stairs at Hopetoun, is pleasing when he says : " We are affraid the Ballusters are too slender to be of

stone and to enlarge them would make them heavy, so that we imagine there will be a kind of necessity to get them of cast iron, which will answer extremely well if your Lordship approves of it." His instruments in a small shagreen case are also shown.

THE R.I.B.A. SMALL HOUSE SCHEME IN MANCHESTER

The R.I.B.A. scheme to encourage the employment of architects in the erection of small houses is meeting with success, as I recently remarked, in Manchester. The fee for each of ten houses is calculated to work out at £2 per house, but there is some doubt as to what happens after the tenth house, and—it is hard to believe it—some builders regard £2 as too great a price to pay for the services of an architect. They have been able to get an unspecified amount of architectural talent for much less than that. The scheme was worked out some time ago by Mr. Longden, of Longden and Venables, and having studied it closely, I can say that it is a fine piece of work that deserves to be tried in just such a place as Manchester, where its effects may be the more easily discernible.

THE SHACKLES OF OBSOLETE PLUMBING

Are we actually fond of regulations and restrictions? The placid way in which we accept, not only curtailment of personal liberty, but illogical restrictions on progress, suggests it. Tamely we submit to regulations, completely out of date or born of ignorance of matters now well understood. Take the matter of plumbing. It is only a month or two since grudging and conditional concessions were wrung from the L.C.C. touching inside waste pipes. And we have far to go yet. In the course of a brief sojourn in a modern hotel in Berlin (and Germany was the very home of *verboten!*), not the least impressive features were the arrangements for water supply for sanitary and bath-room uses and the absence of supply and flushing cisterns.

★

The Berliner is not afraid of utilizing high-pressure water mains in his buildings, and does not find it necessary to interpose a cumbersome supply tank situated in an awkward corner of the roof. Of course, the occupants of the top floor miss the resonant music of a tank filling after some belated home-comer has indulged in a midnight bath; but the loss does not seem to be deplored. To be sure, one does lose the excellent mental training in patience, which is afforded us in England, by having to wait for the lavatory flushing cistern to fill slowly because its first operation was ineffective. Instead, one presses a convenient knob and performs the flushing operation in a second or two.

★

It is clear, too, that he is robbed of the decorative beauty of the " water-waste preventer " (anomalous name !) that adorns British lavatories with its assertive contour and sinuous curve of down-pipe; though the water-supply company probably benefits by the really effective use of a minimum quantity of water. There are, however, compensations in the use of a high-pressure water system. In the bathroom it is not necessary to wander round and admire the architectural beauties of the place while the bath slowly fills. Hot and cold water alike arrive with an urgency which is in itself stimulating, for the Berliner has discovered that even the hot water system is quite safe on 100 lb. pressure—a fact that is not very astounding in these days of power-station boilers operating at pressures as high as 1,200 lb.

On the question of conduits the Berliner admittedly scores. A ¼-in. pipe serves the wash basin, and the bath supply demands only ⅜-in. pipes. The reduction in space occupied by the hot and cold circuits throughout the building, in contrast with the cumbersome conduits of British practice, is a feature that both architect and decorator should appreciate. Whereas, our regulations will not permit a hot-water system to be supplied direct from a pressure main. Nor may our sanitary pans be flushed direct. Yet most domestic dwellings today have at least one draw-off cock on the water main and there is no evidence of trouble therefrom.

AN OLD CAT COMES BACK

Tramways, we are continually being asked to believe, represent an entirely obsolete mode of transport that should be summarily swept from any streets where they still dare to constrain the motorist to some degree of caution. Yet tramways, complete with all their familiar appurtenances (if one excepts the inconspicuous rails and the tramcars to run on them, that are no more conspicuous than omnibuses), are now appearing on main roads that have always preserved their aristocratic immunity from these outer-suburban disfigurements. It began with the Embankment, " the noblest prospect in Europe," etc., etc. Here the happy accident of a fire which fused the lighting mains was made the pretext for " modernizing " its illumination. Powerful lamps of many hundred watts were slung aloft, on what electric railway engineers call the " span-wire system," midway between pairs of welded-steel tramway-poles down the whole sweep of London's one and only real promenade. The Press invited the public to applaud a dazzling increase of candle-power. No voice of protest was raised. No editor recalled that only twenty years or so before " the Battle of the Bridges " was still being fought over " the threatened amenities " of this same thoroughfare.

★

Nevertheless, the hallowed shadow of Big Ben was at that juncture kept as free from defiling poles and entangling wires as the stateliest vistas of the Old Kent Road and Mare Street, Hackney. Those jealous local champions of the fabled roadside beauties of Stepney and Southwark, who anticipated the activities of the C.P.R.E. by a couple of decades, have more to their credit than the preservation of streets which are exemplars of all the nineteenth century's most glaring civic errors and omissions from the Philistine " unsightliness " of trolley lines. They were the indirect cause of saving the Embankment from the overhead linesman—until an age which declared that tramway days were done, and then promptly called him in for the job.

★

Last year the Embankment was permanently be-poled and catscradled. Today it is the turn of the Bayswater Road, a name evocative of the most eligible of gentlemanly Victorian residences. The Borough of Paddington, tired of its proud boast of being the worst-lit in London, is busy stringing up an endless row of high-pressure gas-lamps, suspended between ordinary regulation tramway standards " ornamented " with peculiarly hideous cast-iron bases and finials, all the way from Lancaster Gate to the Chapel of Rest. And again there is no protest. Where are " Indignant Ratepayer," " Constitutionalist," " A Householder of Forty Years' Standing," General Roar, Admiral Bellow and Archdeacon Athanasius ?

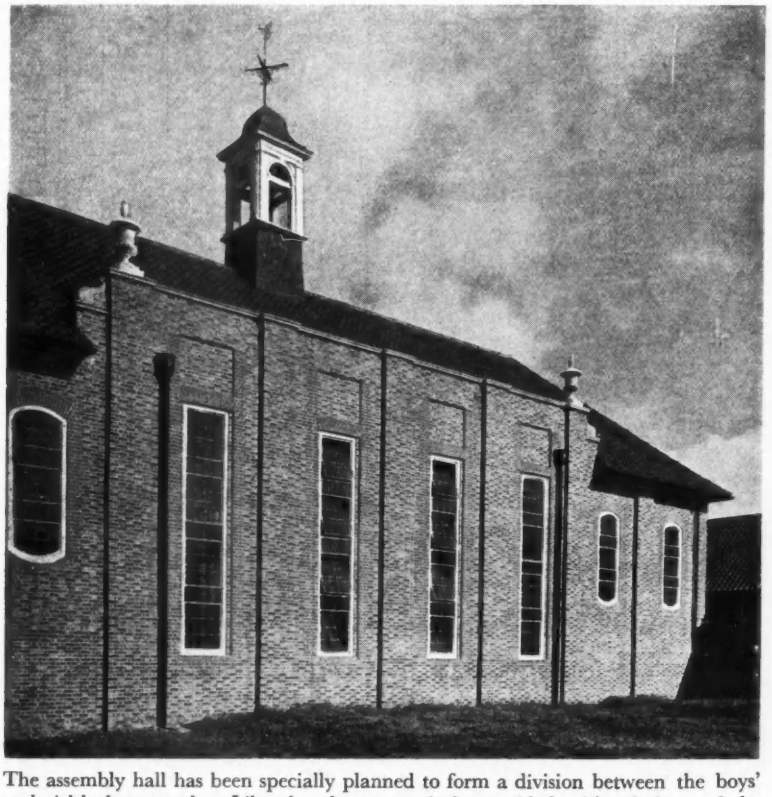
ASTRAGAL

WYKEHAM SCHOOL, NEASDEN

DESIGNED BY F. WILKINSON



The main entrance from Aboyne Road and the cornice of the front two-storied portions are in artificial stone. The school is faced with Sussex stock bricks, red bricks being sparingly used for the quoins. The roofs are covered with sand-faced pantiles.



The assembly hall has been specially planned to form a division between the boys' and girls' playgrounds. Like the classrooms, it is provided with windows of the folding and sliding type to obtain maximum sunlight and ventilation.

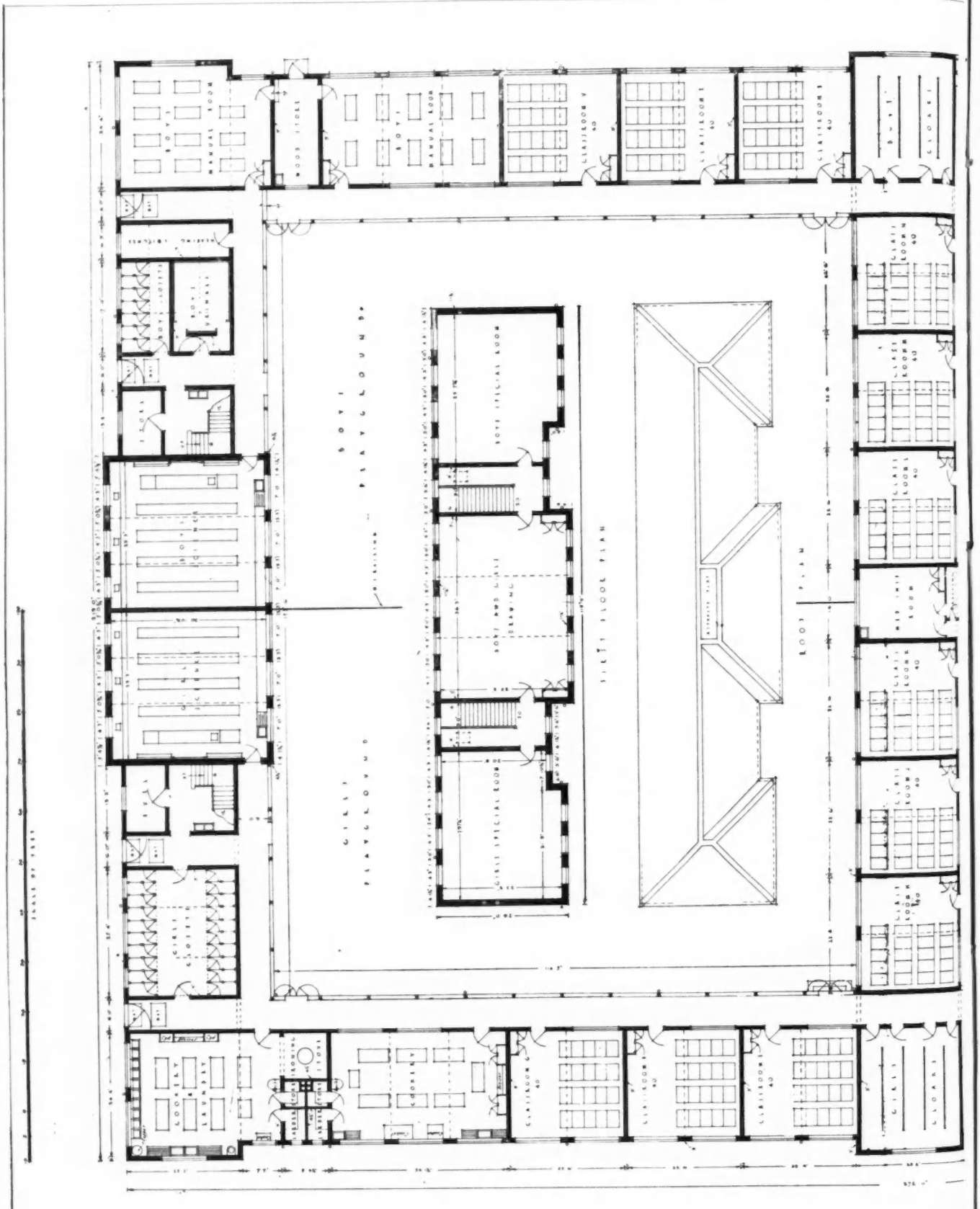
IN this new senior school, accommodation is provided for 960 boys and girls. It is situated on the south side of Aboyne Road, on the Nicol Housing Estate of the Willesden Urban District Council, and, with the adjacent playing field, occupies an island site about four acres in extent.

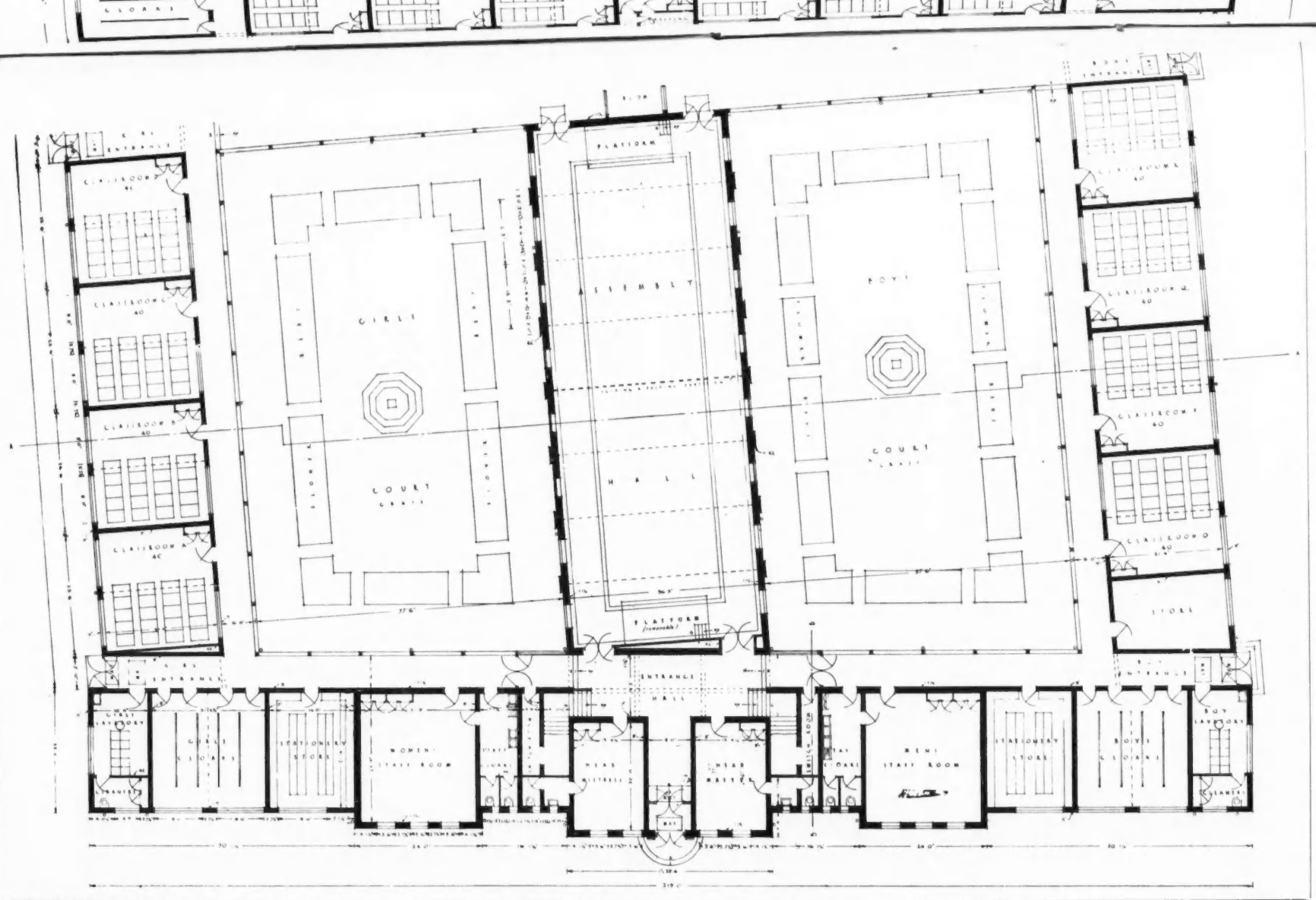
Both externally and internally, as will be seen from the accompanying illustrations, the building is treated in a simple architectural manner. Internally, all the walls and ceilings are plastered and distempered, and the classrooms, cloakrooms and lavatories have coloured tiled dadoes and window sills.

The classrooms have been planned to obtain as much sunlight as possible. Each room is 22 ft. 6 ins. long by 21 ft. 4 ins. wide, giving a floor area of 480 ft. super, 12 ft. super per child. Each room is fitted with recessed book-shelves.

To avoid, as far as possible, disturbance to the classrooms, the cookery, laundry and manual rooms are arranged at the far end of the building. The cookery rooms have white tiled walls, and are provided with cupboards and dressers.

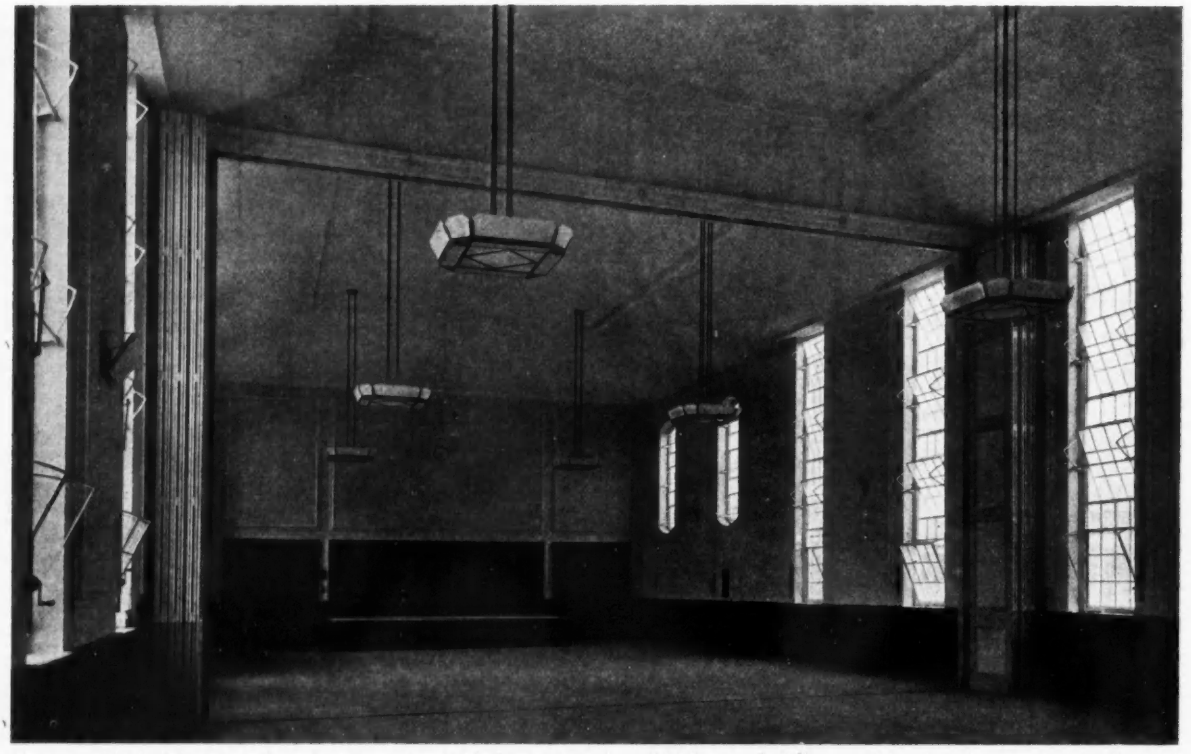
The school was originally planned with a double playshed facing the playing field, but after the commencement of the work it was decided to build four additional rooms instead, two for science and two classrooms.


BOYS' PLAYGROUND
GIRLS' PLAYGROUND
FIRST FLOOR PLAN
ROOF PLAN
MANUAL ROOM
CLASSROOM
BOYS' SPECIAL ROOM
GIRLS' SPECIAL ROOM
BOYS' AND GIRLS' DRAWING
COOKERY
LAUNDRY
CLOAKS

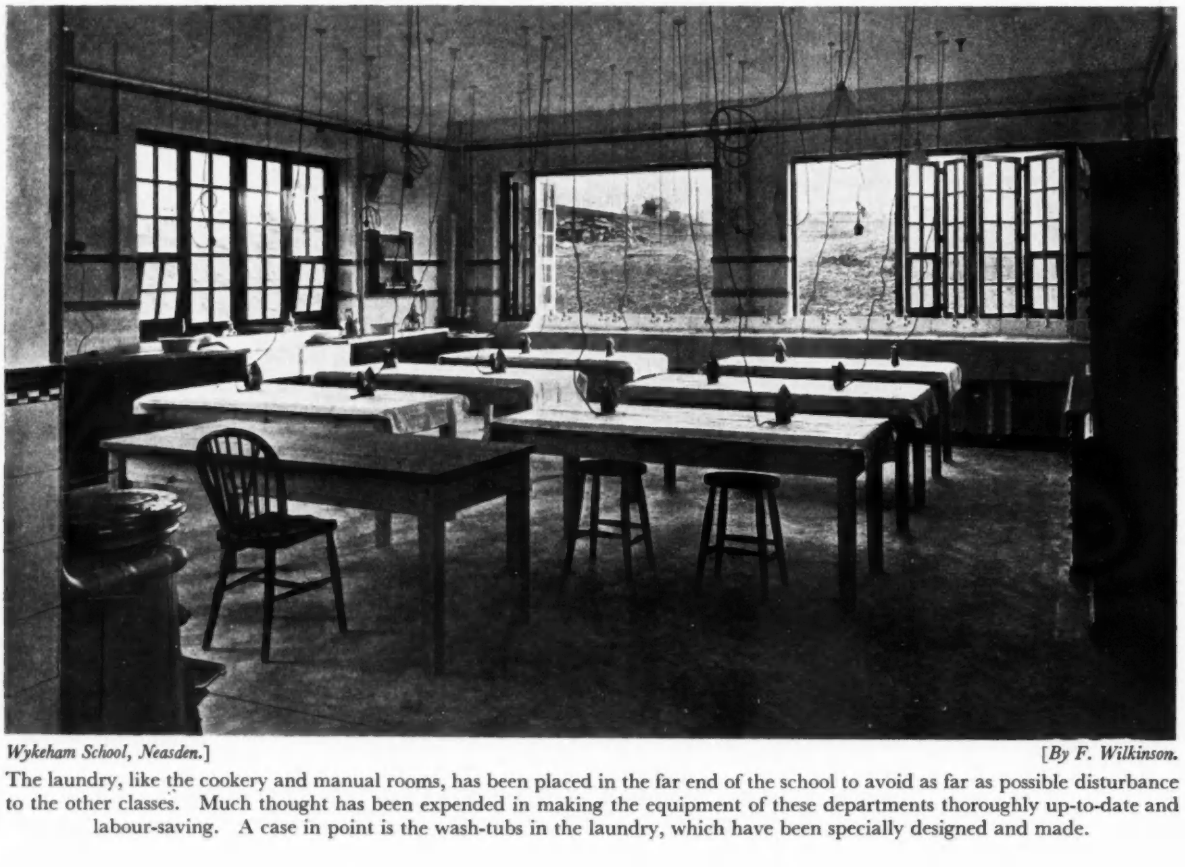


Wykeham School, Neasden.] [*By F. Wilkinson*

Plans of the ground and first floors and of the roof. Accommodation is provided for 960 senior students, boys and girls. The school generally is planned on the one-story system, and is disposed about three quadrangles. Each half of the building has ten classrooms, each of which accommodates forty scholars. On the boys' side are two manual rooms, and on the girls' are cookery, and combined cookery and laundry, rooms. Over the staff rooms are an art room and two practical rooms. The assembly hall is placed centrally.



The assembly hall is planned so that it can be divided by a soundproof folding and sliding partition into two separate units, each with its own platform. When the partition is closed, a hall 96 ft. long by 36 ft. wide is provided. One of the platforms is made in sections and is removable. The walls and dado are panelled for acoustical reasons.



Wykeham School, Neasden.] [*By F. Wilkinson.*

The laundry, like the cookery and manual rooms, has been placed in the far end of the school to avoid as far as possible disturbance to the other classes. Much thought has been expended in making the equipment of these departments thoroughly up-to-date and labour-saving. A case in point is the wash-tubs in the laundry, which have been specially designed and made.

THIS MECHANICAL ERA

Its Influences on Modern Architecture Discussed

THE following are summaries of a paper read by Arthur J. Penty last week before the Design and Industries Association; and of Professor Beresford Pite's rejoinder :—

Mr. Penty said : When your secretary invited me to speak to you this evening on " Tradition in Relation to Modern Architecture," she wrote that as an Association you were interested in " the development of a style of architecture which is the expression of the age in which we live."

No doubt you all believe that ; yet I find it impossible to reconcile such an aim with your activities, for I take it that any architecture which you approve will be orderly. Yet just in proportion as it is orderly it must fail to express the age in which we live. For the present age is an age of chaos; it is an age of spiritual, moral, intellectual, æsthetic and economic confusion.

And for that reason it appears to me that the architecture of the speculating builder, because it reflects this confusion, is the only kind of architecture which finally may claim to be the expression of the age in which we live. If you do not approve of this architecture—and I know you do not—you have no right to profess to be interested in the development of a style which is the expression of the age in which we live. For it is manifest you are interested in something else, and I submit it is in the interests of right thinking in regard to architecture that you should renounce any such aim.

I feel well advised in making this suggestion, for it is to be observed that the practical effect of such a doctrine is most demoralizing. It has reduced a very gifted architect of my acquaintance to a condition of mental imbecility. I know what kind of architecture appeals to me. If I trust my own instincts and feelings I experience certainty, and I may do something that is worth while. But if instead of basing my design upon what I feel to be true in regard to architecture I set out to produce something which is to be the expression of the age in which we live, I should become demoralized by uncertainty. I should be spending my whole time in introspection, asking myself whether this or that may claim to be a legitimate expression of the age. I should in fact be asking myself questions which no one can answer.

The end of it would be I should be reduced to complete impotence and lose my nerve in architecture, which is just what has happened to the architect to whom I have referred, who has taken this teaching very seriously. But he is the only architect I know who does take it seriously. Others pay lip-service to it, but really act upon some other assumption or, less, imagine it gives them sanction to abandon themselves to every idle fancy that enters their heads, with the result that in their hands all standards of thought and feeling in regard to architecture completely disappear. Their progress is from absurdity to absurdity until common sense finally revolts; which I take it is the reason why we are gathered here tonight.

But you will say : Every age has been an age of chaos. And to some extent this is true—though no age so far as I know has exhibited anything like so much confusion as the present one. " The world," once said Chesterton, " has always been losing its way. But the present age has not merely lost its way; it has lost the map." But the point surely is this : Though there has been some measure of confusion in every age, no other age ever proposed to itself the aim of making its architecture an expression of itself. On the contrary, in so far as architecture in the past had a conscious aim it was to give expression to what was considered best in the thought of its age, which is a very different thing.

This was certainly true of Greek architecture, of mediæval architecture and the Renaissance. The architecture of Greece did not reflect the ideals of the market-place or the turbulent life of Athenian mobocracy : nor did the architecture of the Middle Ages reflect what was materialistic in it.

The difficulty that confronts us here is that the present age is even more destitute of any accepted standard of thought than it is of a standard of architecture. It is this that accounts for our isolation and, because it appears at the present time to be in the nature of things that any architecture that is good shall be isolated, I contend that the only rational motive for architects to follow is not to seek to express the spirit of the age, but to be prophetic.

I believe that architecture has a definite contribution to make to the solution of the problems of our age. But that contribution can only be made on the assumption that it is true to the laws of its own internal being and is not deflected from its purpose by deference to pseudo-scientific theories or the idols of the market-place.

I feel well advised in advocating this policy because it is impossible to deny that a real conflict exists between what we feel to be the internal law of architecture and the demands of industrialism apart from denying the validity of our own æsthetic instincts—and if we deny the validity of our æsthetic instincts we are lost. It is, I suppose, the recognition of this conflict that finally accounts for the adherence of the profession, as a whole, to tradition, and explains why the policy has hitherto been one of compromise with, rather than surrender to, industrialism, which is the policy of the modernists.

Hitherto the conflict has presented itself in connection with the use of machinery. That in certain directions this conflict is serious is not to be denied, especially on the ornamental and decorative side of architecture. But the conflict may be exaggerated, for in many directions we all use machine-made products without any sense of æsthetic loss. A great deal of our joinery is made by machinery and is no worse for it. We are accustomed to use wood-block floors and floor-boards made by machinery. When we leave walls unplastered, as we occasionally do on the interior of a public hall, church or cottage, we use by preference machine-made bricks, for the effect is very satisfactory when they are distempered.

But it is different when we come to external work, for machine-made tiles and facing bricks look hard, while they do not weather nicely. And so on.

In some directions the use of machinery is a gain : in others it is a loss. It is important therefore to discriminate. I suppose the difference between a modernist architect and one who stands by tradition in this connection is that the former feels himself under some obligation to use machine-made products, whereas the latter does not. He has no objection to using them where they do not conflict with his æsthetic purposes. But he does not make a fetish of machinery, and he objects very much to being bullied into using things he knows to be æsthetically wrong.

Scientific inventions have rendered many things easily possible to man. But it does not follow that he is justified in availing himself of them on every occasion.

As I see things we do not want an organization to persuade architects to use machine-made products, but an organization to protect them against the necessity of using them where they conflict with their better judgment.

I said that the conflict between architecture and machinery may easily be exaggerated. The really serious conflict is that between architecture and the use of synthetic materials, for these attack architecture at its very roots.

Controversy on this point has raged round the use of reinforced concrete. Concrete is not a beautiful material, whilst it comes to look miserable where it is exposed to the weather. Architects know, however, that reinforced concrete is used a great deal by engineers, and proceed to make the illogical deduction that because it is useful in connection with engineering works it must be equally useful in connection with building.

Further, the aims of architecture and engineering are fundamentally different. The aim of engineering is to construct with a minimum of material. But architecture acknowledges no such aim.

Now I submit that these facts are destructive of the modernist position in architecture in so far as it is based upon the assumption that architecture should surrender to engineering.

But there is the further question as to whether architecture can be revived upon traditional lines; whether a respect for tradition stands in the way of the arrival of a new style. I would urge that whether such be the case or not depends entirely on our attitude towards tradition. It certainly is not the case with architects who repudiate a restricted attitude, who see architecture as one, and use tradition as a quarry from which they take anything that suits their basis, no matter to what period any particular detail may belong.

But to do this it is necessary to understand the vernacular styles where the elemental things of architecture are to be found. That few architects today are capable of design in this way is not due to any limitations imposed by tradition, but to the restricted attitude towards tradition which students imbibe in most of our architectural schools: I am pleased to say not all.

They come to feel tradition to be cramping, and this feeling accounts for the rebellion which is the explanation of the modernist movement.

But mere rebellion against the traditional forms of architecture avails nothing, for the architect who is only inspired by such a spirit of rebellion will get nowhere. His work becomes peculiar and eccentric. He tends to go from one mad extreme to the other.

For such reasons we must resist the modernist attempt to overthrow tradition, but insist that tradition be interpreted in a more liberal spirit, while simultaneously new ideas which meet with our approval should be incorporated in tradition. It will be thus by fusing new with old that we shall effect a real growth and re-establish in our midst a new and common tradition.

[In the course of his paper Mr. Penty said much more on the reinforced concrete controversy than is here printed. The omission has been made advisedly, since he is about to treat the subject in greater detail in a series of articles entitled "Architecture *versus* Engineering," the first of which is to appear in next week's issue.—ED. A.J.]

Professor Beresford Pite, in opening the debate, said: From the time of the Renaissance to the year 1800, some 400 years, the tradition was classic. The scholarship of architecture was classical scholarship. That source was not inexhaustible; by the time four centuries had run the fountain was almost dry, but by that time the tradition that architecture must be classical covered the world. It was repeating as a Renaissance exactly what had taken place under the power of ancient Rome. Then there came the Gothic revival, and this only shifted the ideal—it was essentially the same in principle. Tradition ruled it just as it ruled before what we call the Renaissance.

Now we come to the modern age subsequent to 1800. Take the year 1851. What had occurred? There had been the Napoleonic wars, which for fifteen or twenty years had upset Europe; there was a new industrialism spreading very rapidly from England over Western Europe; railways had come; science was becoming a study; and art was patronized by the Government as a subject for education. The new age had come and tradition had gone. That was a greater achievement than we have attained since. Meanwhile architecture was still speaking in traditional tones.

The Gothic revival went through many phases, and it was followed by a pseudo-Renaissance. Whether you like it or not, the work of Waterhouse and of Butterfield will stand out as a great achievement of the Gothic revival in taking a traditional art and forcing it into a modern adaptability, making it answer the purposes of modern life.

Before or about the year 1900 there had appeared on the Continent a disintegration between architecture and tradition, followed by a disintegration between painting and tradition, and after that between sculpture and tradition. The architects, first in Belgium, then in Austria, then in Germany, then in France, began to throw themselves free and embarked on a movement which was eventually labelled "Secessionist." Now we are face to face with the development of that movement. It is an attempt at the present time for us to free architecture from its clothes and to exhibit its skeleton, perhaps under a thin coat of plaster. Am I wrong in asking that in any criticism some standard other than individual taste, other than the personal subjective taste, is essential? There cannot be criticism without tradition on which to base it.

Let us view architecture as traditional construction. The architecture of the beam or the post—the architecture that was originally timber; the architecture that we find picturesquely displayed in our English half-timbered buildings—was the primeval architecture of Egypt. Then we have the architecture, the condition of construction which made the whole of Roman building. You can strip the whole of the superficial ornament from a Roman building and find underneath it a sound constructional tradition.

We have another tradition, the tradition of the cantilever, scarcely illustrated in the West, but largely present in the East. It lies underneath the structure of the Persian pointed arch, the Indian dome.

Each of those structural traditions had become architectural. We must leave it at that, and endeavour to follow them, if we can, in the hope that our constructional traditions will attain similar dignity. But with the constructural tradition presently comes a decorative element; that tradition, which was established solely for constructional purposes, for scientific purposes, gradually passes into an artistic service, so that we find the great horizontal beam and the vertical column used by the Romans for a purely representative structure, and in the same way the Roman arch used for purely decorative purposes on a wall. Scrapping that, you are scrapping ultimately a constructional tradition.

What is the position today? We accept modern construction and materials. We revolt against the played-out forms; we revolt against ornament without meaning. We are all for simplicity in these days; we are sick of the frivolity of the Houses of Parliament, and we crave for the broad simplicity of the cinema. We are now left without a tradition. What are we to work with?

Can modern construction as such claim beauty of form? I cannot answer that question except by asking whether it arouses a beautiful sensation of form. What is the quality of your enrichment going to be? Gild your stanchion, will it be any the better for it? Personally, I doubt it. What

about proportion? Will proportion do it? What is proportion apart from tradition? Nothing — absolutely nothing. The Greek proportion was justified because of tradition. Is there any abstract picturesqueness that you can evolve and apply as an element of design apart from tradition? In the absence of tradition, is any architecture left?

There is an unconscious art, and here is our problem—our problem because we are so self-conscious and cannot help it. There is no conscious art in engineering work. Those who crave for a functional architecture should reflect that all the horrors of the Midlands and the North were functional. Frivolity apart, there is no unconscious beauty in a fine engineering work, a beauty which comes upon one apart from the success with which it achieves its object.

There is a need for the intelligent appreciation of tradition in architecture, an intelligent appreciation of the relation of architecture to history. The civilized world cannot be content to live in this city of skeletonized buildings. I suggest a serious study, an analysis of motives, which would ultimately bear architectural fruit in modern buildings.

MANY members of the Architecture Club looked askance at the indefinite terms in which the motion for last Friday's supper-debate at the Architectural Association had been drawn. But "that this Club is of opinion that there is no fundamental difference between Architecture and Engineering" was at least susceptible of provocative meanings, and, perhaps on this very account, the discussion drew a number of witty sallies, and fully justified itself in the statements of clear thinking made on the part of two architect-members.

Sir Owen Williams, the proposer, showed a delightful, almost Shavian, perversity in the choice of words for the definitions of his preamble. He claimed thought to be the sphere of the engineer, action that of the architect. Of course there were architects and architects, and engineers and engineers. Engineering he associated with genesis: the engineer began at the beginning; the architect, on the other hand, was the "chief workman." When the architect theorized about his work—*before* he got his job—he was an engineer. When the engineer put his theories in motion, he was an architect. Force in motion meant work; engineering in motion meant architecture. The two functions were entirely dissimilar, and where you had dissimilarity you could not have difference. Comparison was impossible: you could not compare an elephant with a skyscraper. *Ergo*, there was no difference between architecture and engineering. (Such is one listener's attempt to unravel the thread of argument from the knots of paradox.)

Mr. Goodhart-Rendel, originally named to oppose, whom, it was thought, influenza would prevent from attending, was nevertheless present, and spoke. Remarking that he had had a contrary sense of the definitions they had just heard in his head, he offered an alternative one. Architecture was an art—he would describe it as the art of making a pattern of the facts of engineering. If you said there was no difference between architecture and engineering, you might as well say there was no difference between landscape painting and house painting. The architect's job was the selection of the good things given by engineering to produce an emotional effect. As to the arguments of the functionalists, to declare that everything that functioned well was necessarily beautiful was on a par with declaring every face to be beautiful because it had two eyes, a nose and a mouth. He thought we were given to sentimentalizing overmuch: our pleasure in a machine was in reality like that of a child over a new toy.

Mr. Marriott objected to the terms of the motion; for "difference" he would substitute "incompatibility." As it stood, he might be voting against the motion, while really in sympathy with it. He would recall to them a very good definition of architecture by Sir Reginald Blomfield: the art of ordered building—that was of ordered engineering. (Sir O. Williams: There is no engineering except ordered engineering. A voice: Engineering with Orders stuck on?)

Mr. Howard Robertson, who had come prepared, at short notice, to oppose, in Mr. Goodhart-Rendel's place, began by owning to considerable confusion of mind while listening to the proposer. He would clear the ground by suggesting that there was a very large category outside the engineer's field: what he would term building construction. You gave a drawing of a section to an engineer and usually found that when he came to such things as window cills, dampcourses, and other details, he boggled at them. The work of craftsmen was not as a rule covered by the engineer; whereas the architect did usually know about them and their doings. It was in major problems of construction that the architect thought he would rather call in an engineer.

Let them consider various classes of buildings. A factory: an engineer could do it, though it was perhaps a question whether it would be very conveniently planned. A skyscraper: in every such building of about the same size the engineering problem was, in the main, the same; how then could they explain the immense difference between one skyscraper and another unless it were due to architecture? A hospital: the humble builder could probably make a job of it; here the architect's function was the managing of a very difficult plan—he was an artist only in order. A domestic house: this, it was obvious, was practically altogether outside the realm of engineering. It must be made to reflect the personality and way of living of the owner: only the architect could do that.

All these considerations led one to the assumption that the architect had a well-defined function that the engineer had not. Let him call it a social function.

Professor Adshead, in sentences subtly inflected with humour, said that there was an attempt nowadays to make engineering a fine art. If they were to accept for the moment that there was no difference between architecture and engineering, what about fine architecture? Or ordered engineering? If they could only associate fine architecture with ordered engineering they would be taking a forward step.

Mr. Voysey (whom Sir Owen Williams had said, at the outset, he had brought with him for architectural support), having given his opinion that the fundamental difference depended upon the degree to which either engineering or architecture could give expression to emotion, made a serious plea for a larger measure of such expression. We in this age were suffering from lack of genuine emotion. We were suffering from rank materialism and atheism.

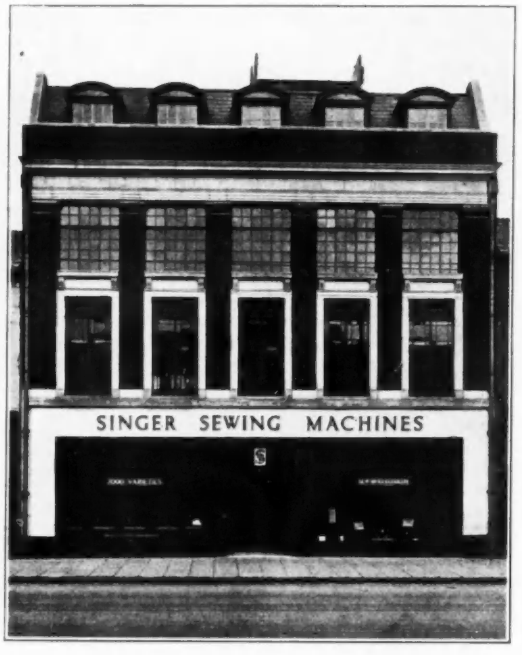
Mr. Oswald Barron said speakers seemed to be arguing about words that today meant something quite different from their original meanings. If they were going back to origins he would associate engineering not with genesis but with gins: the original engineer was probably no more than a trapper of rabbits.

Mr. Nathaniel Lloyd was divided between admiration of the dialectics he had heard and puzzlement as to what they did mean. Perhaps he could indicate architecture by postulating that there was required, under one hat, a builder, a detective to look after that builder, an engineer, an accountant and an artist: when they did get them all, including the artist, then they got architecture.

The proposer and opposer having replied, largely by recapitulation of their original points, the motion was put to the vote (after some further objection to its terms) and declared lost.

SEWING MACHINE SHOWROOMS: BIRMINGHAM

DESIGNED BY CHERRINGTON AND STAINTON



A general view of the main entrance front to Bristol Street, Birmingham.



A nearer view of the entrance doorway recessed between show windows.

THE decision of the Singer Company to erect the new headquarters in Birmingham, here illustrated and described, followed upon the difficulty of renewing the expiring leases of premises they had previously occupied for fifty years. Both the Family Trade and Manufacturing Trade departments—which correspond, roughly, to retail and wholesale—have now been housed in the same building, the planning of which had to take into account the requirements of each, and particularly the need for good working conditions for the staff.

The main building has a frontage of 46 ft. and a depth of 50 ft., and is four stories high, with a lower ground floor extending to a greater depth, as shown by the plans. These also indicate the disposition of the various showrooms, etc.

On the second floor are quarters for the central agency, while the third is chiefly used by the educational department.

The shell of the building is of reinforced concrete, with floors and roof of the same construction, in view of traffic vibration from Bristol Street, which is a main road. It is fronted with red brick, and has window architraves of Portland stone, with entablature and moulded cornice in the same material.

The shop fronts and entrance are of bronze, with Portland stone surrounds, and the lettering of the company's name is also of bronze on Portland stone.



A typical landing, showing the stairs and lift enclosure.

The floors of the hall entrance are of Nabresina and Belgian fossil marble.

The walls of the ground-floor shops have panelled oak dadoes, and all walls, where not panelled, are treated with a matt washable wall paint. All the joinery is of polished oak. Except in the main front, the windows are steel casements. The floors of landings, lavatories and kitchen are laid with terrazzo; elsewhere they are generally of jarrah blocks.

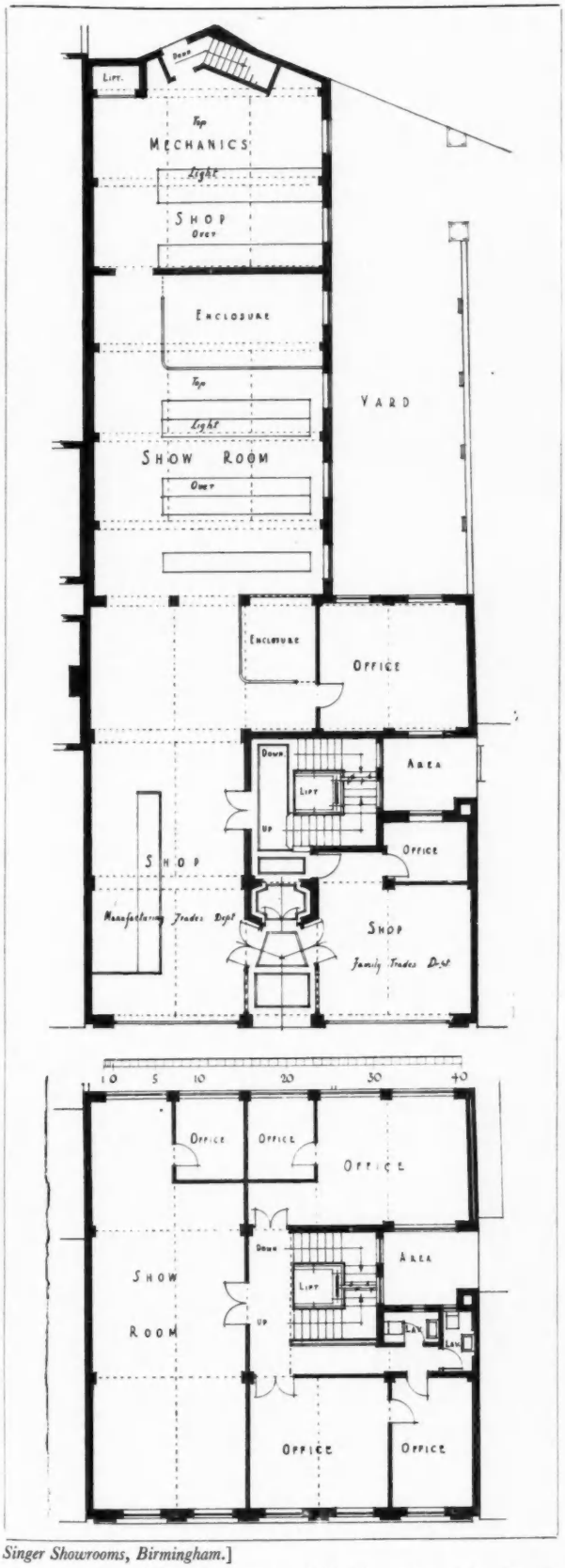
Electricity is exclusively employed for lighting, and all rooms are, in addition, plentifully equipped with plugs for electric power to drive the machines.

Heating is by hot water on a low-pressure system supplied by an oil-fired boiler under thermostatic control.

R.I.B.A. Exhibition

A selection of water-colour drawings by the late Mr. J. A. E. Lofthouse, F.R.I.B.A., and holiday sketches by Mr. T. Raffles Davidson, HON. A.R.I.B.A., are on exhibition in the R.I.B.A. Galleries, 9 Conduit Street, W.1, until Saturday, February 7, 1931.

The exhibition is open free to the public between the hours of 10 a.m. and 8 p.m. (Saturdays 5 p.m.).

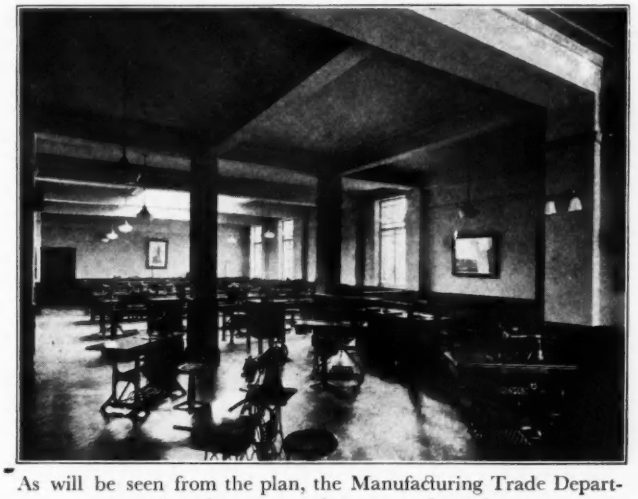


Singer Showrooms, Birmingham.]

The ground- and first-floor plans. The allocation of the departments is shown; at the rear is a workshop, top-lit.



A view in the first-floor salon of the Family Trade Department, looking towards Bristol Street.



As will be seen from the plan, the Manufacturing Trade Department broadens out at the rear, as here shown.



[*By Cherrington and Stanton.*

Another view of the Manufacturing Trade Department, taken from near the street entrance.

LETTERS FROM READERS

Building for Prosperity

SIR,—General conditions now seem to favour building, and I am proving my confidence in this by starting, in a month or two, a great new addition to our premises, running over an area of about 230 by 200 sq. ft. from Somerset Street North to Duke Street.

We shall build this building for the moment only in three basements and ground floor, but so constructed that it will be capable of taking on the additional stories up to the permitted height as soon as our business requires the additional space.

I therefore prove our confidence in two things, namely, our ability to build inexpensively now, and to fill this new addition with business as soon as it is complete.

This proposed building is the first step in the large addition which we have in mind.

H. GORDON SELFRIDGE

SIR,—"We have plenty of cloth and only lack the courage to cut it into coats."

Our "cloth" consists of all the resources of the Empire in real things; these resources have hardly been scratched as yet.

But something more than courage is required to turn them to the uses of the various peoples of the Empire. The Douglas analysis shows very clearly that, under the existing rules of the issue of new credit and its subsequent destruction, there is never at any given time enough effective demand for goods made. That is to say, the aggregate of wages, salaries, and dividends is less than the aggregate of wages, salaries, dividends, and overhead costs. Or that purchasing power is always less than prices.

If for "courage," "effective demand" be substituted, then the quotation is true.

ARTHUR WELFORD

SIR,—Mr. Barry's article in the JOURNAL for January 7 opens up extremely interesting points of view. His remarks respecting buildings, permanent or short-lived, have a direct interest.

I think it is clear that with the incessant changes brought about by inventions and fashions and new outlooks, buildings coming under these influences will, and should, reflect these bewilderingly quick changes and therefore be of a more or less transient character.

The strenuousness of those engaged in the decoration of these buildings to be up to date almost implies that they will soon be out of date again, so quickly the "up to date" changes, and probably the frequent rebuilding is good, not only for the industries concerned, but as a constant uplift and urge to the spirit of enterprise.

The prosperity of the building trade during the last decade is, I believe, largely due to the smooth running of the relations between all concerned.

Mr. Barry speaks of the "act of faith" shown in the construction of great buildings of the past; buildings erected largely, if not entirely, for posterity.

To be connected with such buildings is a privilege which affords the greatest satisfaction to every man employed.

Fine permanent civic buildings must give tone and confidence to cities. The fine monumental pile of the Port of London Offices stands as an "act of faith" in the future greatness of London's commerce, whilst the very edifice of the Bank of England signifies moral strength difficult to value.

E. W. COMLEY
(J. WHITEHEAD AND SON, LTD.)

SIR,—Mr. Gerald Barry is undoubtedly right in stressing the psychological effect of building now for better times.

Your subsequent article of January 21, giving details of the substantial decreases in the prices of materials during the last three years, adds considerable point to his contention.

There is, however, another factor which increases the inducement to build now. I refer to the greater efforts which have been made during the last few years to minimize delays in building, with consequent substantial reductions in cost and savings in interest on capital outlay, rent, and other burdens, which the building owner has to bear over and above the mere cost of building.

Intensive efforts have been made during the last few years in this direction, and are continuing to be made. Not the least encouraging sign is the greater co-operation which exists between architects, builders and sub-contractors, to this common end.

From my own experience, the application of more scientific methods in the builder's organization effects considerable economies in this direction, so that for building owners who have schemes in contemplation at the present time, there can be no doubt the soundest slogan to adopt is "Build now."

SIDNEY GLUCKSTEIN,
MANAGING DIRECTOR, BOVIS (1928), LTD.

The Architecture of Steel

SIR,—I have been wondering what unhappy experiences Mr. Barman can possibly have had that led him to the conclusions which he sets out in his article in the JOURNAL for January 14. The idea that there is some latent antagonism to the architect in the mind of the structural engineer is, surely, entirely at variance with the facts. The steel industry has been eager to co-operate with the architect, has done so in the past, and is doing so today to as full an extent as the architect desires. To say that "it seems to be essential to the ironmaster's happiness that the architect should know absolutely nothing about steel" is to express quite a distorted view of the relationship between the engineer and the architect. All the larger structural firms have produced, at great expense, elaborate handbooks which have been distributed, free to architects, and in which is given detailed information on both theory and practice. It is safe to say that no other industry has so far taken such pains to assist the consumer.

Where then is this "almost morbid secretiveness" on the part of the steelwork engineers which engenders in the architect the dark suspicion that it is all designed to render the engineer entirely indispensable to the architectural profession? The structural engineer has naturally an important place in the building industry, but it is a place unguarded by secrets, and one which can be entered by any who cares to give the necessary study and gain the necessary experience.

I am not blind to the fact that the relations between engineers and architects are not always ideal, and it is just possible that some harassed engineer, in a moment of indiscretion, may have said something about the architect "butting in" as quoted in your leading article; but his irritation, I am certain, did not arise from any desire to keep the architect at arm's length, but in all likelihood because the poor fellow found it difficult to carry on his work, through the frequent changes which the architect required, and in his haste he did not stop to consider whether the architect really was to blame. The responsibility for this trouble, which is a very serious one for the structural engineer, is not, in the majority of cases, to be laid on the architect, who is as concerned about it as the engineer is, but can usually be traced to the difficulty which the architect has in getting his client to make up his mind sufficiently early about what he wants.

There is no more certain way of increasing costs and decreasing building speed than beginning the job too soon.

I am not sure what is in Mr. Barman's mind when he speaks about closer contact between steelwork and architecture. Such blending is possible in the case of the bridge, more than in any other type of structure. Many opportunities in bridge design have been sadly missed in the past, and for

these the engineer must bear his due share of the blame, but the illustrations of the British Steelwork Association designs which are reproduced in the article show that he is repentant, and will not, if he can help it, do it again.

If, however, Mr. Barman means that steel should receive greater architectural expression in the modern building, I think he must have overlooked the difficulty that, under our existing building laws, no steel which forms part of the frame is permitted to be exposed either outside or inside the building. And it is perhaps just as well that it is so. The attempts at this sort of thing in other countries, where the designers are not hampered by legislation, may be good examples of the peculiar possibilities of steel, but are not inspiring as architecture.

J. D. STITT
(REDPATH, BROWN & CO., LTD.)

SIR,—As one who for many years has held the opinion that the steel structural engineer should work in close harmony with the architect, I was very gratified to read the article on "The Architecture of Steel" in your issue for January 14.

Just as music is "the handmaid of religion," so should structural engineering be the handmaid of architecture. The structural engineer should design his steelwork to comply with the architectural requirements of the building, and not force the architect into the undignified position of making the best job he can of clothing the steel skeleton with brickwork or masonry. Realizing that my firm has followed this policy for the last thirty years, and with the knowledge that other firms in the North have more or less done the same, I think your strictures on the stubbornness of the structural engineer are perhaps a little overdrawn.

Nevertheless, there is no doubt a great deal of truth in what you say, and I trust that as a result of your article a great deal more attention will be given to the æsthetic side of structural steelwork in the future.

THOMAS BOOTH
(JOHN BOOTH AND SONS)

SIR,—I am glad that steelmakers and architects are now getting together, which should be to the mutual advantage of both.

BENJAMIN TALBOT
(CARGO FLEET IRON CO. LTD.)

Building Legislation

SIR,—Your article and series of letters on the prospects of building in the forthcoming year prompt me to emphasize once again the great urgency for a revision of building legislation in Private Acts.

In the case of the multiple story commercial building and in factory and industrial construction, the advent of the steel frame has undoubtedly opened up a vast field for enterprise. To get the maximum benefits of this, the economics of building have to be put upon a sound basis if capital is to be attracted to the industry.

Money will follow a business proposition, but the making of this business proposition is not alone a drop in price of the constructional materials, but a vast simplification of the procedure involved in getting a site, and some definite relaxation of the height restrictions, which just make the difference between attracting and repelling capital.

The index figure for steel has now for some years given the lead in prices, and has rarely been more than 120 per cent. of pre-war. The speed of erection has been tuned up to guarantee the quickest return on dead capital.

In my opinion the vast field in commercial and domestic architecture can find an impetus in the large composite block, where every economy of construction can be pressed into service, and in which greater heights will put the economics of building into a more attractive plane. C. J. KAVANAGH

Cottage Tenders

SIR,—Architects whose work embraces the design of simple cottages (real cottages, and not the picturesque luxury cottages of *rentiers* and "week-enders") are generally faced with alternative difficulties in the way of obtaining reasonable prices.

It can be said without fear of disproof that the issue of normal bills of quantities upon orthodox lines results in the submission of high prices, and even in refusals to tender on the part of likely builders—for it is idle to deny that the well-equipped contractor is too expensive a tool to undertake isolated cottages in scattered situations, and he alone habitually tenders on quantities. The village builder confronted with such a document either gives up in despair, struggles through and produces a swingeing price, or sends it to a surveyor to price—resulting in a tender comparable to the "contractor" before mentioned.

Alternatively, tenders may be invited on plans and specifications alone, and when the work is simple, and previous buildings of generally similar design have established a standard, this method produces pretty good results and a fairly stable level of prices, but for an architect venturing into a new district where he is unknown to the local builders and they to him, it is apt to bring in erratic prices—particularly by depriving the architect of the credit due to manifest economies in simplification and straightforwardness which should be the essence of low cost.

Having been concerned in the erection of cottages in various parts of England during the past ten years, during which period I have come into close personal contact with a number of "workman-builders" in villages and lesser towns, it has struck me with ever-increasing force that each such builder is obliged to prepare piecemeal, during the course of the job, a bill of quantities of a totally different kind to the normal—one dealing not in rods and cube feet of timber, but in tons of cement, yards of sand, thousands of bricks and tiles, feet run of scantlings in definite lengths, nails, screws, tubing, and so forth. It has also struck me that not only on this ground does the ordinary bill of quantities require translation, but that grouping also might be under foundations and walling, frames for building in, carcassing timber, roof coverings, and so forth, in the order in which orders for material are actually dispensed by the builder. The preparation of these particulars by men much more highly skilled at building than at scaling and calculating is perhaps their most difficult task, and in consequence they are tempted to live (in this sense) from hand to mouth, resulting in waiting, waste and muddle.

Now it is a very simple thing to "take off" from a good set of drawings and with practical knowledge of building processes, simple bills of quantities of the materials which the builder must buy—*and nothing else*; representing in effect the serial orders to his merchants to be issued at the various stages of building. I have found many country builders whose method of pricing is the unorthodox one of arriving at these quantities and "lumping" labour on the lines that to lay so many bricks in simple work will cost so much. Quantities on these lines for a simple cottage such as that illustrated in the January 21 issue of this JOURNAL occupy only seven pages, and may be prepared in half a day; it is not suggested, of course, that they should supplant a normal specification—they should supplement it. Though not the chief object of the suggestion, their effect upon architects who might elect to prepare them would certainly be to emphasize the paramount importance of straightforward arrangement and construction in increasing speed of building and reducing cost; and that in itself might be sufficient excuse for adoption.

In putting forward this suggestion for opinions and discussion, I do not lay any claim to a great discovery, and I am aware that in some parts of the country a combined specification and quantity document approaches closely to the end described in common practice. It may, of course, be said that the supply of the "supplement"

puts more work on the architect (for I do not suggest that quantity fees should be charged), and also places on him a responsibility which should properly be the builder's. That is a separate consideration which human ingenuity could no doubt resolve—the point on which light is wanted is, would it help to secure fair prices and easy working conditions?

EDWIN GUNN

Modern Theatres and Cinemas

SIR,—In his comprehensive review, "Some Books of 1930," in your new year issue, Mr. Grahame B. Tubbs states that I have "ignored the American Continent" in my book, *Modern Theatres and Cinemas*. If he had turned to the index he would have found that a New York theatre and a Santa Barbara cinema are included. I had hoped to have many more American cinemas, but among almost a hundred of which photographs were available these were the only ones that were not purely "period reproduction" compositions.

Mr. Tubbs goes on to complain that my book gives "none of the technical information that might be expected." I do not know exactly what kind of technical information Mr. Tubbs had in mind, but to give only a single instance there is an almost unreadable account of the technical equipment of the Théâtre Pigalle in Paris.

P. MORTON SHAND

Ayot St. Lawrence Church

SIR,—It was interesting to see in the JOURNAL for January 21 two beautiful photographs and measured drawings of Ayot St. Lawrence Church.

Since this dignified building is about the only considerable work by Nicholas Revett that was ever carried out, and since it is by no means unworthy, I think something might be done to prevent the collapse of the front façade.

At the moment ivy is making the columns unsafe and the two monuments are losing their plaster. We go to infinite expense to save some Tudor cottage whose counterpart may be seen all over the country, yet this church, though unique, is too "Late" and "pseudo-Classical" to attract the attention of those committees which have to do with the restoration of churches. Perhaps Mr. Bernard Shaw, who lives in the village, might cause a stir by taking up parish work on its behalf. The interior has been stripped of its old pews and ornaments, and has a disconnected appearance; the exterior may still be saved.

By way of an addendum, can anyone explain for whose bath chair the ramp on the steps to the portico was made?

PAUL WALDEN

On the Job: Foundations

SIR,—While agreeing generally with the remarks by "The Guv'nor" on foundations, I should like to join issue with him on several points:

1: It is not necessary for "the concreting of a raft to be carried on continuously until completion if a satisfactory raft is to result." Proper precautions as to the position of joints, method of bonding old to new concrete, and suitable rebates are all that are required. The proof of this is that the majority of rafts are done in sections.

2: What does the statement, "No excavation should be carried on in the proximity of concrete work whilst in hand" mean?

3: The drawing of the reinforced concrete base shows the bloom base set in an awkward pocket, which pocket is referred to in the article as a disadvantage. Why have the awkward pocket? Why should not the base finish, say, 2 ins. below the underside of the bloom base? The depth required for this type of base is generally limited by shear considerations, and the depth of the concrete base to be considered effective in resisting shear is that below the bloom base. The rods can with advantage be carried up as shown in "The Guv'nor's" figure four, to give greater grip length.

4: Another big advantage of punning mortar under a bloom base is that the mixture being drier results in a base which is stronger and much less liable to shrinkage.

5: The detail shown in figure five might be satisfactory if the pressure under the stanchion base is very low, because the natural spread through the 6-in. reinforced concrete would reduce the pressure still further. If, however, the pressure under the bloom base is high (30 tons per sq. ft. is now permitted), the 6 in. concrete base would certainly not be stiff enough to reduce the load to a safe uniform pressure on the asphalt. In fact, if it were, there would be no need for the deep base under.

6: What does the sentence, "The reinforced concrete wall comes next in order . . . main steel structure" mean?

We do not add reinforcement to mass concrete, and the thickness required for a reinforced concrete wall is much less than one-half that of a mass wall.

A steel grillage is usually taken to mean several layers of joists, one on top of the other, each layer at right angles to adjacent layers. So what does "The Guv'nor" mean by "a steel grillage retaining wall"? If a filler joist wall supported off the steep frame is meant, this can be designed as economically in reinforced concrete.

7: Crushed ballast is a thoroughly satisfactory aggregate except that more water is required to make a workable mix. Surely the words, "Used in this state . . . it may be serious" are not meant to be taken seriously!

8: "The Guv'nor" suggests that the stem of a reinforced concrete wall should be built at the same time as the toe. This is hardly ever done, and is not necessary.

W. E. J. BUDGEN

Better Building Methods

SIR,—I am much interested in your correspondent "XX's" comments in your issue for January 21, on my speech at the dinner of the Institution of Structural Engineers.

In his letter "XX" says: "He tells us to free ourselves from the trammels of old tradition and generally adopt American methods of design and construction." With all respect to "XX," this statement is not correctly attributable to me. I was speaking to an audience composed of architects and engineers, and, having mentioned the methods of organization which had been used so successfully in constructing Thames House, I went on to plead for the more general adoption of such methods in order to bring about economies in the cost of buildings. I said nothing which could have been interpreted as advice to adopt American methods of architectural design, nor, I think, could the most meticulous critic find anything in my speech which could be construed as an attack by an engineer upon architects, as the latter portion of "XX's" letter would seem to indicate.

Neither architects nor engineers can deny that there is much to be done in improving the organization for the construction of buildings, nor would any in either profession withhold admiration for the way in which the particular work in question was organized and the economies thereby effected.

As will have been seen by your readers, the main object of my speech was to advocate scientific research into structural problems, so that practice may be brought more and more into line with scientific knowledge.

I do not imagine that "XX" would deny that progress in building construction must largely depend on exact scientific knowledge, and, indeed, the architect who would ignore the teachings of science could find no place in a profession which, throughout its history, has been so notable in adopting and assimilating new scientific knowledge.

(Sir) CLEMENT D. M. HINDLEY

AN ANALYSIS OF FLORENTINE STONEWORK

BY MYRON BEMENT SMITH

IN order to discuss the subject of Florentine stonework in the restricted space available for these articles, it has been necessary to limit the scope of the work to the Renaissance period. Analysis of the material shows that architects of this period were much concerned with the expression of the structural function of exterior walls by means of surface decoration. Their solutions, as applied to palace façades, fall into three divisions :

The first or astylar manner, free from columns or pilasters, was evolved from mediæval precedent. Story heights were marked by stringcourses and by a diminution of the projection of the rustication from the base of building to top. M. Michelozzi, though not the originator of the scheme, made its first distinguished presentation in the Riccardi-Medici palace, 1430. Some years later, 1490, G. da San Gallo, on the Gondi palace, carried this *parti* to its ultimate refinement by relating the voussoirs of the arches to the rusticated field surrounding them.

The second manner, which may be called the columnar, or better, the decorative pilaster style, was inspired from Roman buildings such as the theatre of Marcellus. Its first use in the Renaissance was by Alberti, in 1451, on the Rucellai palace. Bramante later employed it to a better advantage on the Cancellaria and Giraud palaces in Rome.

The third style originated in the Roman Renaissance, and has well been called by Gromort the Roman manner. Its distinguishing feature is the use of rusticated pilasters in one or more orders at the angles of the building, thus enclosing a plain field of wall on which the openings are usually set off by engaged orders supporting pedimented architraves. The Farnese in Rome and the Pandolfini in Florence are noteworthy instances of this type of palace.

The historical progression of these styles is not our concern, but rather the stone treatments to which they gave rise. By excluding architectural *motifs* which are not, properly speaking, wall treatments, the study is reduced to an analysis of the stonework of the exterior walls of Florentine Renaissance palaces, with particular reference to rustication, structural expression, tooling, texture, colour and scale. The text will take up the monuments in chronological sequence, giving a condensed summary of dimensions and other notes. The detail photographs, made especially for this work, show a 3 ft. scale in position, thus giving for the first time an adequate idea of the size of the stonework.

The famed *pietra forte*, the sandstone used for practically all of the Florentine work, is quarried on the south side of the Arno. The Pitti palace, for instance, was built of this stone, taken from the quarry now covered by the Boboli Gardens. *Pietra forte* is a warm buff, in varying tones, ranging from a brownstone depth to light ochre, with an occasional cold grey tint on the rare quarry seams. The texture is dense, the strata peculiarly stirred and twisted, with fine dark lines running in different directions. It is best adapted to rough-picked or point-tooled work, though it may be worked down with patience to a fine surface. It weathers darker, intensifying and enriching in colour, while never becoming too dark. An added charm of this truly beautiful stone is provoked by the heavy street dust of Florence, which collects on the lower stories of the palaces, grading out at the cornice to clean stone. The effect is that of a rendered drawing on which precipitating washes have been carried down to settle near the ground level. With possibly no exception, the stone palace façades of Florence are built of this *pietra forte*, a fact that will make unnecessary further mention of colour in connection with the details.

Another stone of the locality is *macnigno bigia*, from Fiesole, similar to the above, but much softer and with a tendency to weather very dark. Fiesole also furnished *pietra serena*, a cold grey sandstone of fine grain, used mostly in interiors, such as the Pazzi Chapel of S. Spirito.

PALAZZO RICCARDI-MEDICI, by Michelozzo di Michelozzi, 1430 (figures one and six). The first noteworthy Renaissance palace and the most brilliant use of rustication in diminishing projections. (Plate I.)

Basement Story : Coursed ashlar, rock-faced rustication. Rough pick tooling, many masons' monograms. Projection, $3\frac{1}{2}$ ins. to $12\frac{1}{4}$ ins., with average of 4 ins. Channels, $1\frac{1}{2}$ ins., with $\frac{1}{16}$ in. to $\frac{1}{8}$ in. joints midway. Course heights taken from base are : $16\frac{3}{4}$ ins., 21 ins., 23 ins. and $19\frac{3}{4}$ ins. Fortress-like effect of great strength and apparent thickness. Voussoirs of arches are brought down to a 3 ins. projection, beyond which Michelangelo's later moulding protrudes.

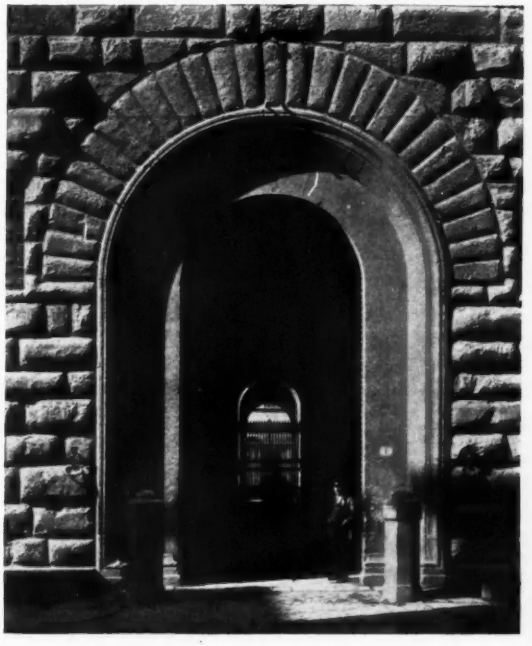


Figure one. Entrance to the Riccardi Palace : Michelozzi, architect (1430).

Second Story : Flat face rustication, fine point tooled, $1\frac{1}{2}$ ins. projection with minute radius at edges. Channels, $1\frac{1}{2}$ ins. wide, with fine joint midway. Course heights, reading down : $13\frac{1}{2}$ ins., 14 ins., 15 ins., and 17 ins., narrowing at level of voussoirs.

Third Story : Flat-coursed ashlar, fine point tooled with $\frac{1}{2}$ in. draft beside joints. Courses, reading up, are 17 ins., $9\frac{3}{4}$ ins., $16\frac{1}{2}$ ins., $9\frac{5}{8}$ ins., and $16\frac{1}{2}$ ins. Cornice is 14 ft. high, with a projection of 8 ft.

PALAZZO PITTI, built in three stages. Central part of façade by Brunelleschi, 1435. (Plate I, and "Selected Precedents" in this issue.) Palace is 600 ft. long and 119 ft. high, with a fourth story intended. The effect of this façade is of colossal arrogance and strength.

Basement Story : Rusticated ashlar, worked with a course point. The bosses sweep out in irregular curves to a projection of 6 ins. to over 24 ins. The channel faces are 1 in. wide with minute joints midway, averaging $\frac{1}{8}$ in. Courses, reading up, are $20\frac{1}{2}$ ins., $21\frac{1}{2}$ ins., etc. One stone is 27 ft. long.

Second Story : Rustication projects 7 ins. to $9\frac{1}{2}$ ins., radii more even with an approximately flat face, treated with

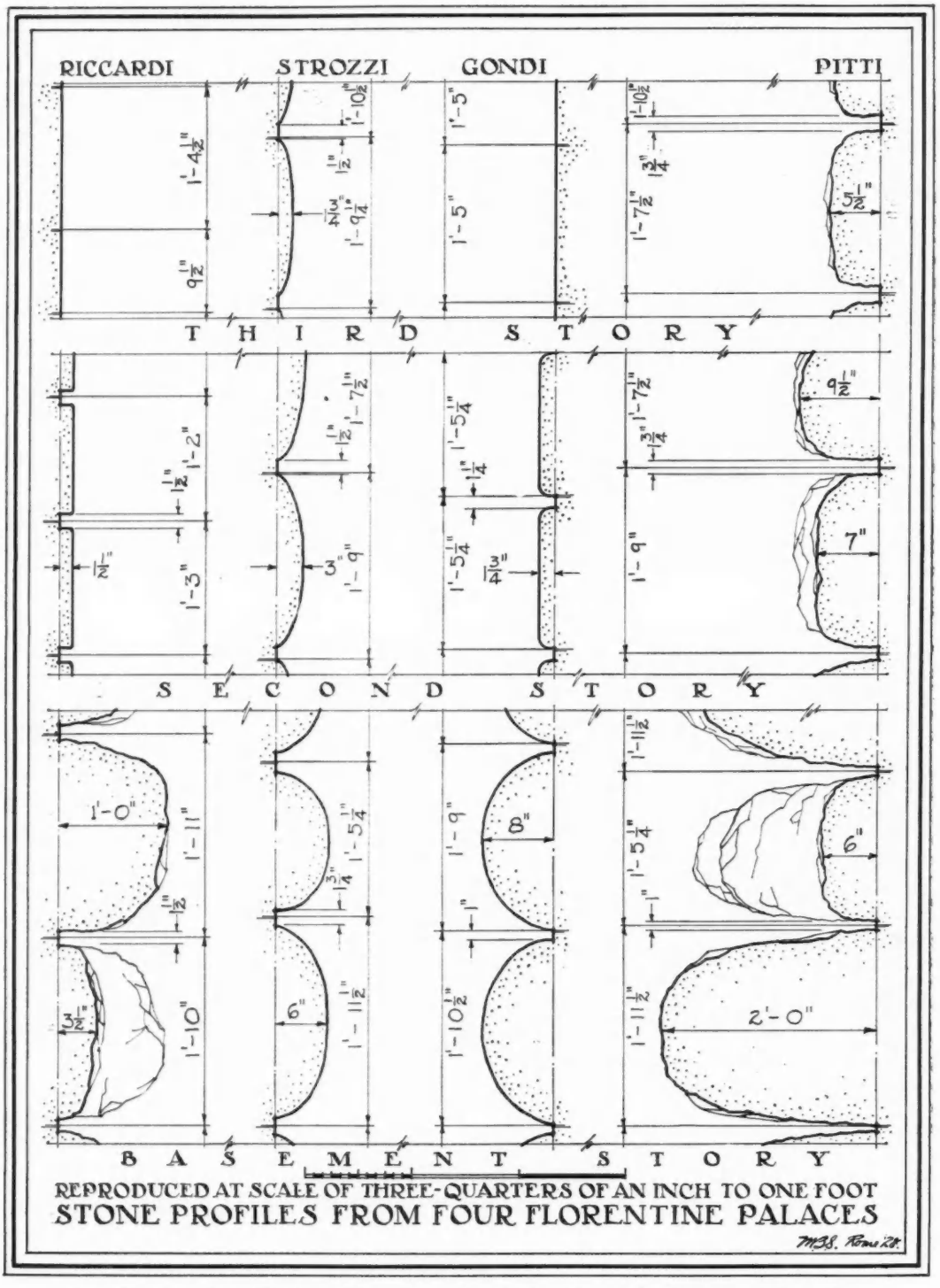


Plate I. Dimensioned sketches of the methods of rustication discussed in the accompanying article.

coarse point tooling. Channels 1¾ ins. wide with joints midway. Typical course heights, 20½ ins. and 25 ins.

Third Story: Rustication approximates 5½ ins. projection with a small radius. Channels and course heights as second story.

PALAZZO RUCELLAI, by Alberti, 1451–5 (figure two). The actual construction of the palace is believed to have been carried out by B. Rossellino. The three stories are treated the same. The basement plinth shows a rare use of *opus reticulatum*, false jointed, however. Its bosses are 9 ins. square, and project $\frac{9}{16}$ ins., ½ in. radius at edge, ½ in. channels, microscopic joints. On the basement story above, the projection of bosses is 1½ ins., ½ in. radius at edges, channels 1⅛ ins. wide with ⅛ in. joint at bottom of channel. Many blind



Figure two. Base of the Rucellai Palace : Alberti, architect (1451-5).

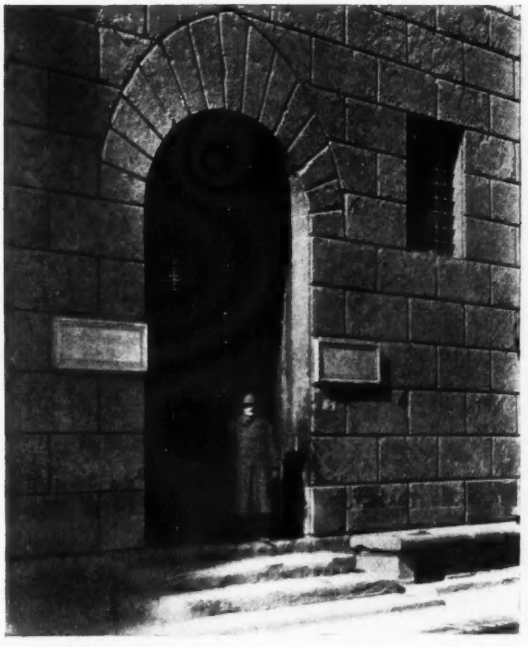


Figure three. Entrance of the Antinori Palace : manner of Michelozzi (1480).

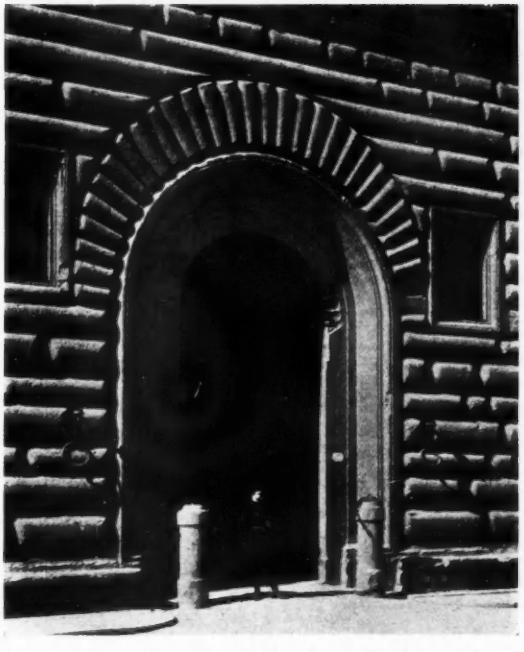


Figure four. Entrance of the Strozzi Palace : B. da Maiano, architect (1489).

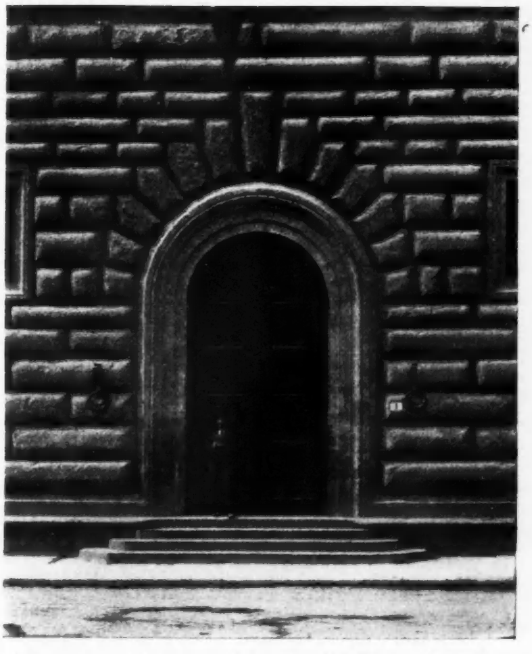


Figure five. Entrance of the Gondi Palace : G. da San Gallo, architect (1490).

joints come across the bosses. The course heights begin as 18 ins., $10\frac{1}{4}$ ins., $21\frac{1}{4}$ ins., $15\frac{1}{8}$ ins., etc. Pilasters project $2\frac{7}{8}$ ins. from channel face, and are $22\frac{7}{8}$ ins. wide with a $\frac{1}{2}$ in. draft at joints and edges, the balance of the surface fine-point tooled. Wall bosses are point tooled, but coarser. Mouldings are point and chisel worked.

PALAZZO ANTINORI, built in 1477 in Michelozzi's manner, perhaps by G. da Maiano (figures three and seven). The three stories are treated the same. Equal blocks of ashlar in 23 ins. courses are laid in fine joints. The bosses project $1\frac{1}{2}$ ins. from channels $1\frac{1}{8}$ ins. to $1\frac{1}{2}$ ins. wide, a $\frac{1}{2}$ in. radius at edges, joints at bottom of channels. The stones are about 45 ins. long. Due to the refinement of its simple wall, the effect of this palace is more graceful than the Pazzi or the Riccardi. Political conditions probably warranted the design of a less fortress-like dwelling. The stone has taken on a marvellous patina.

PALAZZO STROZZI, begun by



Figure six. The wall of the ground floor of the Riccardi Palace: Michelozzi, architect, *circa* 1430.



Figure seven. Stones at the base of the Antinori Palace: after the manner of Michelozzi, *circa* 1480.

EXAMPLES OF RUSTICATED STONEWORK IN FOUR FLORENTINE PALACES



Figure eight. The wall, near the base, of the Strozzi Palace: B. da Maiano, architect (1489).

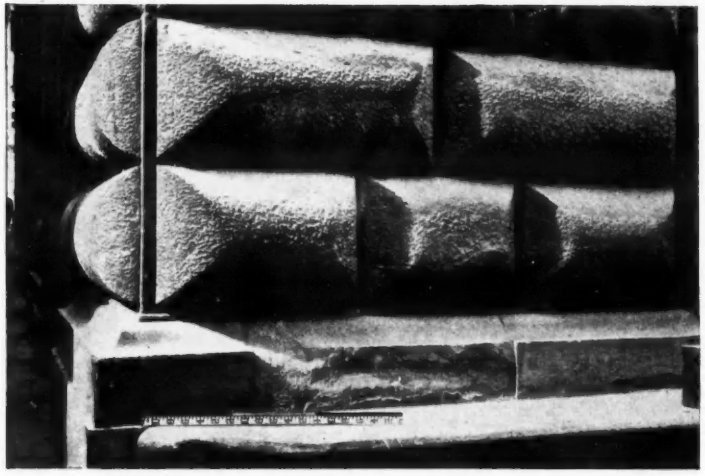


Figure nine. Stones at the base of the Gondi Palace: G. da San Gallo, architect, *circa* 1490.

In photographing all the above examples, the author set up a three-foot rule, in order to give an exact indication of the sizes of the stones employed.

Benedetto da Maiano in 1489 and carried to the cornice which, with the court, was added by Simone del Pallajuolo (Il Cronaca), *c.* 1500. (Plate I, and figures four and eight.) The diminished rustication carries up the three stories in a manner which appears monotonous when compared with the Riccardi, Pazzi or Gondi palaces. Nevertheless, this palace is generally reputed the best in Florence. The stone, *pietra forte*, is point tooled on the bulging bosses, and worked with a fine point on the moulded parts. The contrast in texture, however, is hardly sufficient. Attention is called to the profiles of the bosses, which are oval, this even in the upper story. The intersection of the curved planes at the angles is accommodated with a slight radius, sufficient to prevent a hard angle. The architect apparently had in mind an expression, by means of these bulging bosses, of the weight of the stone above, which increases as it progresses downward, bulging the stones out as cheeses in a press. The implied elasticity of the material intrigued the critic, Geymüller. The lengths of the stones are studied to a nicety; some of them are pieced, with blind joints, to give the required length.

Basement Story : Coursed rusticated ashlar, bosses projecting 6 ins. from channel face, which is $1\frac{3}{4}$ ins. to 2 ins. wide, the $\frac{1}{8}$ in. joint falling along its centre. The courses approaching the string are slightly less in projection. Heights of courses, reading up : $25\frac{1}{2}$ ins., $23\frac{1}{2}$ ins., $17\frac{1}{4}$ ins., $23\frac{1}{2}$ ins., $18\frac{3}{4}$ ins., etc.

Second Story : As basement, but with bosses projecting 3 ins. from a channel $1\frac{1}{2}$ ins. wide. Course heights, reading up : 23 ins., 21 ins., $19\frac{1}{2}$ ins., etc. Joint at bottom of channel.

Third Story : Like others, save that the bosses project, but $1\frac{3}{4}$ ins. from a 2-ins. channel face, the joint falling at the bottom of the channel. Heights, reading up : 23 ins., $19\frac{1}{4}$ ins., $19\frac{1}{4}$ ins., $22\frac{1}{2}$ ins., etc.

PALAZZO GONDI, by Giuliano da San Gallo, 1490, restored 1874. (Plate I, and figures five and nine.) One façade was never extended its full length. The stereotomy is brilliantly conceived, in particular the stepped voussoirs, the variety of surface textures of each of the three stories and the accommodation of the curved profiles of the basement bosses so as to preserve a constant projection for both thick and thin courses.

Basement Story : Elliptical bosses project 7 ins. to 8 ins., with a lug on the top of each stone to form a channel 1 in. wide, bringing the $\frac{1}{8}$ in. joint at the bottom of the boss. Intersection of the curved planes is left sharp. Tooling is coarse pointed on bosses; channels and mouldings are worked fine with a point or chisel. Course heights, from base : $22\frac{1}{2}$ ins., 21 ins., $21\frac{3}{4}$ ins., $21\frac{1}{2}$ ins., etc. Blocks up to 9 ft. long.

Second Story : Flat rusticated ashlar in courses that begin at $17\frac{1}{4}$ ins., but become narrower at window voussoirs. The faces project $1\frac{3}{4}$ ins., with a $1\frac{1}{4}$ ins. radius at edges. The channels are $1\frac{1}{4}$ ins. wide. The face of the stone is fine tooled.

Third Story : Flat-faced coursed ashlar, tooled as second story.

(To be concluded)

[Illustrations, including "Selected Precedents," by courtesy of *The Architectural Record*.]

QUESTIONS THAT ARISE

Reinforced Foundations

"Doubtful" writes : "*For various reasons I am desirous of utilizing the bearing value of the crust of a site to augment the foundations of a series of stanchions, in effect forming a raft in lieu of piling ; and I should be glad of your expert's opinion in defining the stresses in the slab and the consequent reinforcement required. The bays are approximately 20 ft. square, the average load on stanchions is 45 tons, and the bearing value of the crust $\frac{1}{2}$–$\frac{3}{4}$ ton per ft.*"

It is not quite clear whether your correspondent wishes to utilize an existing slab, or to construct one on the lines of the accompanying sketch. Assuming the latter, the simplest way to deal with the question is as follows:

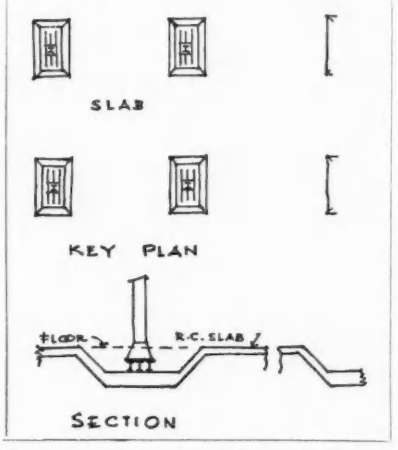
Determine the safe area over which the load from each stanchion may be distributed, which in this case is from 60 to 90 sq. ft. Taking the larger area (representing $\frac{1}{2}$ ton per sq. ft.), in determining the effective area of the slab for this loading, it is obvious that the distance between stanchions (20 ft.) determines the maximum dimension in one direction, and hence the minimum dimension of the grillage across the other direction. It is assumed that the reinforcement will be placed transversely to the grillage under the stanchions, and hence any area beyond the end extent of the grillage can be neglected for loading value.

For calculating the stresses on the slab, each section between grillages, to the extent of the distribution area decided upon, can be treated as an inverted slab or beam with the stanchion grillages as end supports and the load distributed uniformly over the slab or beam ; i.e. the equivalent stanchion load is represented by the surface reaction on the area bearing the load. The ordinary calculations for a slab or beam then apply and determine the depth of concrete necessary and the amount of reinforcement.

Should it be found necessary to utilize ground area for loading beyond the outside columns, such portions of the slab as are extended must be treated as cantilevers with the stanchions as point supporters and the load (surface reaction from the ground) as a uniformly distributed load.

The formulæ for calculating the depth and reinforcement will be found in the L.C.C. Regulations for Reinforced Concrete, sections 80 to 87, and from these the value of each member of tensile reinforcement can be obtained.

A. H. H.



Key plan and section of a series of stanchions for forming a raft in lieu of piling. (See query by "Doubtful.")

Damp Patch on Wall

D. T. writes : "*I am troubled by a damp patch in the wall above the dining-room fireplace of my house. It appears after heavy rains and spoils, with a brown stain, any paper that is put on the walls. The walling, which is of stone, is well pointed.*"

The damp patch is in all probability caused through water running down the flue and soaking into a pocket of soot. Often soot will lodge, especially where the gather over is of insufficient slope, and cannot be dislodged by the sweep's brush. The distinguishing feature of damp spots from this cause is the dark brown stain.

I suggest that your correspondent will find the cure for this by having the stack examined at the top. In a similar case, which I personally dealt with, there were no pots at all on the stack, and the top had weathered to such an extent as to form a channel for the water to run down the flue.

With a good pot, water will not enter the flue to any great extent, even in the worst storms.

W. E. L.

ANNOUNCEMENT

Messrs. F. W. Rees and Partners, chartered architects, have removed their offices to 27 and 31 High Street, Croydon. Telephone number : Croydon 1030.

THE SPECIFICATION WRITER

On the Job: Underpinning

BY THE GUV'NOR

THE foundations of almost all new buildings now extend below those of properties built fifty years ago, so that, whenever building against existing work, we find it necessary to underpin the party wall to reach the new depth required. If we are to make a satisfactory job of this operation, it must be tackled very carefully.

The shoring must be tested to make certain of proper placing and good base, and any additional sets added. Next, the thickness of the wall at various places must be taken and checked by driving holes through if possible, to ascertain the solidity of the structure. Should it prove weak and rotten, it may require repairing and all cavities built in before attempting to underpin.

Holes are now started to discover what footings there are, if any, and a decision made as to the level we intend to pin up on. A chart is of great use during this operation, as much valuable information can be gathered and a regular system adhered to. Such a chart is shown here (see figure seven). The sections must of course be set out to suit the case in hand, as steelwork may modify the layout considerably. In the example shown, we are attacking Nos. 1, 5, 9 simultaneously, coming back next for Nos. 3, 7, 11, etc., finally being able to take out the remainder when the wall has properly taken its bearing on the new work.

Having exposed the footings and cut off the projections, we drive under the wall for the first frame. Great care must be taken that the wall base is properly picked up by headtrees, and no spaces left overhead for loose material to fall and perhaps hurt someone working below. A check on the thickness of the wall above will prove whether we are holding it securely.

The sketch (figure eight) shows an example of this in the case of a wall that has been thicknessed improperly. An example is also given of planking and strutting in underpinning. In poor ground the depth of the frames (that is, the length of the poling boards) should not exceed 3 ft., and no earth surface should be exposed when leaving work overnight. Every frame should be laced to the one above, so that, should the earth start to peter out, the timbering will remain in position, allowing a repair to be made.

It is quite a usual thing to specify a backing of concrete slabs against the earth in lieu of poling boards, thus ensuring that no timber is buried in, with subsequent risk of settlement when timber rots. The method adopted is to line the back of the hole with concrete slabs, reinforced if required, the section being about 12 ins. by 6 ins., and the length to suit the excavation—say, 4 ft. 3 ins. for a 4 ft. pit, giving us 1½ ins. each end to tuck behind the boards forming the sides. These slabs, lying horizontally, need suspending until the framing is sufficiently progressed for the strutting to assist by friction (see figure nine).

Holes are sometimes made through the slabs, of about 1½ ins. diameter, and the whole (after joints being pointed and cavities stopped) grouted up with Portland cement under pressure. This method makes certain that no voids are left, and that everything under the wall is perfectly solid. The diagram further explains the above.

Underpinning is a tedious and lengthy process, but it has been found possible to speed up progress, when circumstances are favourable, by means of a system of small stanchions fixed at intervals along the length of the wall. These have base plates resting on concrete, and caps sufficiently wide to carry the thickness of the wall when erected centrally (see figure ten). They may be made short, and then brickwork built out by means of corbelling to carry a section of wall longitudinally, or two stanchions may be put in simultaneously and their heads connected with steel beams, and pinned up above as shown (see figures eleven and eleven (a)).

(*Concluded*)

THE exceptional hiding and covering power of aluminium paint is one of its most useful features. In view of the fact that one coat of a good paint which "leafs" freely is equal to two or three coats of white lead paint, the aluminium paint can be used to prevent the bleeding of colours in undercoats, and in this connection may be applied

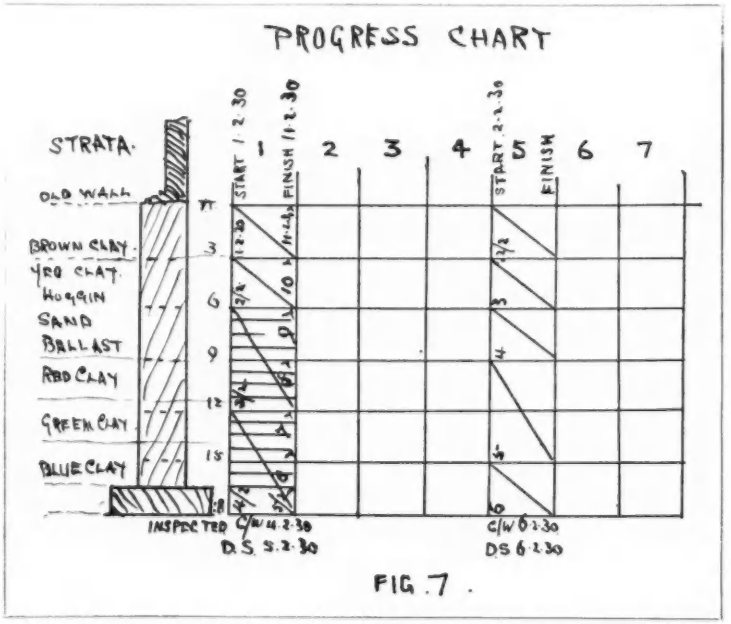


Figure seven. A progress chart for underpinning work, showing at a glance the nature and disposition of the strata encountered.

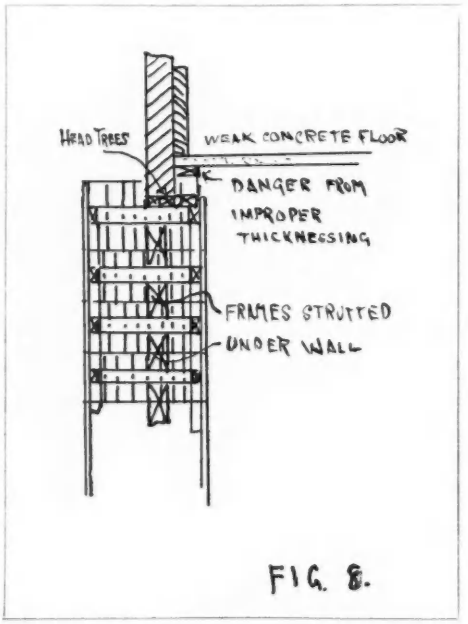


Figure eight. An example of planking and strutting in underpinning.

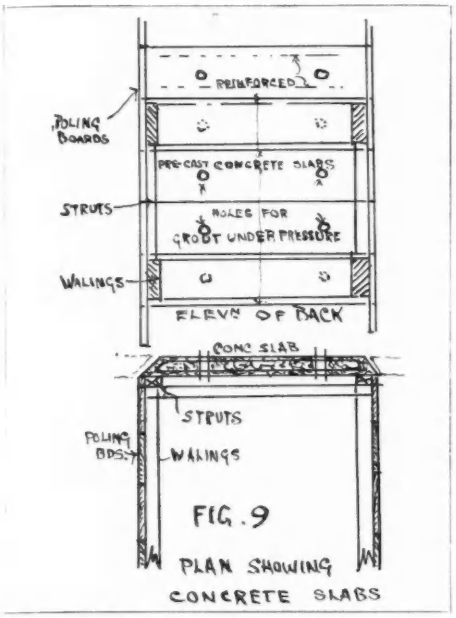
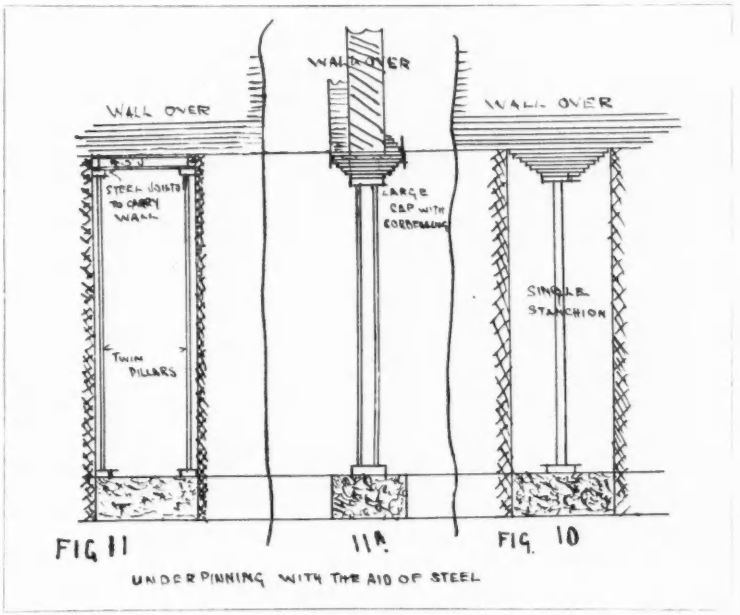


Figure nine. Method of lining excavated hole with concrete slabs.



Figures ten to eleven(a). Various methods of expediting underpinning by the employment of steel stanchions.

to wood, as well as to iron and steel. In the former case it will be found especially useful in the role of a foundation coat prior to the application of enamel upon wood which has previously been stained. To a certain extent it can also be used to prevent the bleeding of bituminous paints and wood preservatives such as creosote.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Art Treasures Overseas Loan Bill

THE House of Lords have given a second reading to the British Museum and National Gallery (Overseas Loan) Bill. It will be recalled that this Bill permits the trustees of the British Museum and National Gallery to send their art treasures overseas, but last December the second reading debate was adjourned, as considerable apprehension was aroused lest some of these priceless treasures should be damaged in transit. The Government have now promised to consider the question of safeguards, and the second reading has, therefore, not been opposed.

Charing Cross Bridge

Major Nathan asked the Minister of Transport if he would state the present position as to the Charing Cross Bridge scheme.

Mr. Morrison said he understood that the Committee set up to advise the London County Council were expected to report early in March.

Housing Progress

In the House of Commons Sir Robert Aske asked the Minister of Health if he would state the number of houses erected in England and Wales during the year to September, 1930, or any later date for which complete figures were available, giving the number built with the assistance of State subsidy and the number built without; and the numbers built during the year to the corresponding date in 1927, 1928 and 1929.

Mr. Greenwood said that the following statement gave the desired information :

Number of houses of a rateable value not exceeding £78 (£105 in the Metropolitan Police District) completed in England and Wales.

Year ended	With State Assistance.	Without State Assistance.	Total.
September 30, 1927	212,916	60,313	273,229
,, ,, 1928	101,791	64,624	166,415
,, ,, 1929	132,360	71,083	203,443
,, ,, 1930	51,324	110,375	161,699

Those figures did not include houses erected by local authorities in replacement of houses demolished under improvement and reconstruction schemes. Financial assistance under the Housing, etc., Act, 1923, was not available in respect of houses completed after September 30, 1929.

State-Assisted Houses

Mr. Ramsbotham asked the total number of houses built with and without the assistance of subsidy, respectively, in Great Britain during 1930.

Mr. Greenwood said that returns as to houses erected without State assistance were obtained only for half-yearly periods ending in March and September respectively. The last year for which complete figures could therefore at present be given was that ended September 30, 1930. During that year 161,699 houses of a rateable value not exceeding £78 (or £105 in the Metropolitan Police District) were completed in England and Wales, of which 51,324 were erected with and 110,375 without State assistance. These figures did not include houses erected by local authorities in replacement of houses demolished under improvement and reconstruction schemes.

Letting of Houses

Major Glyn asked the Minister of Health if he was in a position to give the total number of houses built in England and Wales during 1930; what were the number built under each of the Housing Acts; and what proportion were houses letting at a rental of less than 8s. a week.

Mr. Greenwood, in reply to Major Glynn, gave the same answer to the first part of his question as to that of Mr. Ramsbotham, reported above. With regard to the second part of the question, he said he was unable to state what proportion of the

houses in question were letting at a rental of less than 8s. a week.

Asked by Mr. Hurd whether she could state the number of houses completed at December 31, 1930, in agricultural parishes in England and Wales with State assistance under the Housing (Financial Provisions) Act, 1924, Miss Susan Lawrence said that the number was 18,583.

State subsidy

Sir W. de Frece asked the Minister of Health how many houses in respect of which there was any State subsidy were built in the years 1924–30, inclusively and respectively, and how many of these houses were constructed by municipal and private enterprise, respectively.

Mr. Greenwood said that the following statement gave the desired information :

Statement showing the number of houses built in England and Wales with State Assistance during each of the years 1924 to 1930 inclusive.

Year.	Built by Local Authorities.	Built by Private Enterprise.	Total.
1924 ..	17,269	35,461	52,730
1925 ..	37,360	62,137	99,497
1926 ..	68,504	76,115	144,619
1927 ..	110,486	86,103	196,589
1928 ..	57,707	46,628	104,335
1929 ..	60,804	59,219	120,023
1930 ..	49,703	2,592	52,295
Total..	401,833	368,255	770,088

Slum Clearance Areas

In reply to further questions Mr. Greenwood said he had received from local authorities in England and Wales 95 resolutions declaring areas to be slum clearance areas within the meaning of Section I of the Housing Act, 1930. Resolutions had also been passed declaring seventeen areas in London, occupied by 2,174 persons, to be slum clearance areas.

Fall in Housing Costs

Mr. Ramsbotham asked the Minister of Health whether the general fall in prices had been reflected in the cheaper construction of subsidy houses; and what was the average price of a Council subsidy house in 1930 as compared with the average price for a similar house erected by private enterprise.

Mr. Greenwood replied that there had been a substantial fall in housing costs over the last six years. The average cost of building non-parlour houses provided by local authorities in England and Wales during 1930 was £340. Information as to the cost of houses erected by private enterprise was not available.

Loan Debt of Local Authorities

Mr. Ramsbotham asked the Minister of Health if he could state the total liability to which municipalities were now committed under the different Housing Acts, as well as the total number of houses which had been constructed by local authorities and by private enterprise, respectively, giving in each case the particular housing subsidy under which these houses were being erected.

Mr. Greenwood said that the outstanding loan debt of local authorities in England and Wales in respect of housing (including Small Dwellings Acquisition) at March 31, 1929, the latest date for which figures were available, was approximately £416,000,000, and the total charges on rates for the year 1928–9 was £2,387,000. The statement (see below) gave the further information desired.

The Calton Jail Site

Mr. Mathers asked the First Commissioner of Works what was the present position in connection with the erection of Government buildings in Edinburgh.

Mr. Lansbury replied that the scheme for the erection of departmental offices on the Calton Jail site had been abandoned. Various methods of dealing with the departmental accommodation requirements in Edinburgh were at present under consideration, but no decision had yet been reached.

Scholars at the R.C.A.

Sir C. Trevelyan, President of the Board of Education, informed Mr. Campbell that the number of full-time students at the Royal College of Art for the last completed year was 386. There were 211 students attending the School of Design, but this school covered a wider field than that of preparation for employment in manufacturing industry. Of the 124 students at the College who completed their course in July last, sixteen were known to have obtained industrial employment as designers or art workers.

Act under which the houses were subsidized.	Number of houses completed at September 30, 1930.	
	By Local Authorities.	By Private Enterprise.
Housing, Town Planning, etc, Act, 1919	171,054	4,545
Housing (Additional Powers) Act, 1919	—	39,186
Housing, etc. Act, 1923	84,349	362,738
Housing (Financial Provisions) Act, 1924	308,334	6,474
Totals	563,737	412,943

THE MODERNIST MOVEMENT

BY A. TRYSTAN EDWARDS

LOOKING back on the last twenty years during which I have written rather copiously on the subject of architecture, I have sadly come to the conclusion that I am an architectural Ishmael; my hand is against every man. I do not like skyscrapers; I do not like the garden suburb; I do not like twentieth-century Tudor, and I do not like a good deal of what is known as twentieth-century Classic. And now there has been put before me something which I dislike still more, namely, the eccentric manifestations of the Modernist movement in architecture.

Before I can expect you to pay serious attention to anything which I might have to say in criticism of this movement, it is incumbent upon me to declare to you an impersonal standard of judgment, which will enable me to examine each individual example of Modernism on its merits. It would be unjust and absurd to lump together all the manifestations of Modernism as if they were homogeneous, for there are degrees of architectural wickedness among the Modernists as among the traditionalists. My complaint against the former, however, is that they have definitely embraced a fallacious theory of architecture, which makes it practically impossible for them to imbue their buildings with the full intellectual content which we find in the noblest architectural works of the past. The novelties which the Modernists have introduced are not additions to our concept of design, but a subtraction from it. They have taken something away from architecture, and while the result is odd and in a high degree arresting, it does not represent architectural progress. The Modernists plead as their excuse that before advancing towards a new style they must first of all get rid of a lot of rubbish and fustian with which the old styles had become overladen. Unfortunately, however, owing to the extreme narrowness of their architectural vision, which leaves out of account so many of the most distinguished subtleties of design, they have no standard which will enable them to determine what is fustian and what is not fustian.

This lack of critical finesse is shown in the attitude which the Modernists have chosen to adopt towards the Classic Order.

Now the Classic Order was never at any period of its history an element of construction; its function is purely an æsthetic one. The trouble about our fanatical functionists is that, as yet, they are aware only of structural function, and they have not envisaged

the possibility of æsthetic function, nor can they recognize it on the numerous occasions where it already exists. The Classic Order represents an artistic union between post and beam, so that, instead of there being two separate elements, utterly discreet and having no knowledge of each other, they become a single element of architecture, an organic whole, instinct with life itself. You may place a beam upon a number of posts, and this combination of members may express a structural fact, but the Order has not even begun to put in its distinguished appearance until there have been introduced into column and beam a number of inflectional subtleties which have nothing whatsoever to do with construction.

The Order is primarily an element of composition, and as such it has been used by the ancient Romans and by the masters of the Renaissance. The Modernists are fond of telling us that columns or pilasters should not adorn a twentieth-century façade, on the ground that they perform no structural purpose. But the same critics, had they lived in the first century A.D., would have objected to the design of the grand ceremonial Roman arches. In fact, there is scarcely a noble building in the great periods of European architecture which would not have come under their ban: the Colosseum, the Baths of Caracalla, the Pantheon, and later the beautiful buildings which constituted the Classic tradition in Italy, France and England, would have appeared incomprehensible to them. We all know that there are many columnated buildings erected in recent times which are of execrable design, but the weakness of the Modernists' position appears to me to be that, owing to their puritanical concept of use and construction in architecture, they fail to apprehend the true significance of the union between column and entablature. What they cannot understand they cannot destroy. So we may say, "Hail to the Classic Order! It will live for ever."

Let us take the next deficiency, the next conspicuous lacuna in the intellectual make-up of the Modernist. We have seen that an element of architecture of the highest renown, which has played a most important part in moulding the buildings of Europe so that they express a common culture, is incomprehensible to the Modernist, but even worse than this is his failure to include in his architectural philosophy the concept of the city. In various books and publications I have pleaded for good manners in architecture, and have pointed out that this social aspect of the art of building has found expression in the architecture of the past, and in particular the English people have at their best periods displayed a facility which amounts to genius in so relating street buildings that they form harmonious compositions. This is not a matter of style, but of character. The façade of a building does not crudely express the plan, as in the Modernist philosophy it is supposed to do, but by a number of subtle inflections it adjusts itself in order to take account of its neighbours. This is civilized architecture, and I believe that we should guard and reverence the tradition which enshrines it. If Messrs. Le Corbusier, Mendelsohn, Mallet-Stephens and the rest, were to start designing street façades having the distinguished social qualities of our eighteenth-century and early-nineteenth - century buildings, they would not, as they might imagine, be going backwards, but they would be making an architectural advance, they would receive an intellectual promotion such as in their wildest dreams they do not now contemplate, and which nobody else contemplates on their behalf.

Another element of architecture at which the Modernists look askance is composition. There is something about composition which in their opinion seems to savour of artificiality; but it may be argued, and the belief has been held by innumerable artists in past ages, that there are principles of composition which are independent of use and construction, compliance with which brings beauty to such objects as we may create. This element of beauty in architecture and in the arts generally the Modernist is apt to sneer at, or else he is bold enough to claim that by attending to use and construction he achieves this beauty already. I have attempted to show that there are principles of composition which I have described as Number, Punctuation and Inflection, invariably expressed in the forms of animate nature; but these principles, possessing such unquestioned authority, to a certain degree can find expression in works of art, which by virtue of obedience to them become imbued with vitality. But functional architecture has no knowledge of these things. A few weeks ago I attended a debate at the Architecture Club, at which the new functionalism was the main subject of discussion. Yet none of the speakers defined what it meant. May I offer my own definition? "Functional architecture is that unattractive residuum which is obtained when you deprive a building of its proper components of good manners and good composition."

[From a paper on "A Criticism of the Modernist Movement in Architecture," read by Mr. A. Trystan Edwards at a recent meeting of the Birmingham Architectural Society.]

SHOPS AND DISPLAY

THE second of the course of six non-technical lectures on Present-day Architecture was given by Mr. Howard Robertson, F.R.I.B.A., S.A.D.G., at the Architectural Association last Saturday afternoon. Mr. R. P. Gossop presided over a large audience.

Mr. Robertson, who took as his subject "Shops and Display," said that the fundamental requisite for good design, and therefore attractive design, was order. Here we had a struggle against a national tendency towards untidiness. But this weakness in our make-up was growing daily less apparent, and in architecture it was the spirit of modern design which was assisting the cause of order.

Post-war economic restrictions had promoted the science of utilizing space to its fullest advantage; they had enforced simplicity in many directions, and had destroyed the over-zealous cult of tradition. Modern design had had a purifying effect, and the virtual enforcement by necessity of modernism, however mild, had caused new ideas to flourish. A reawakened appreciation of form, rhythm, colour, and the principles of composition, had revitalised shop design and display. Window-dressing and display had become a recognized art, with its own literature, and the shopkeeper, when he built, could command, if he would, the talented services of creative designers.

Imagination in shop design, he thought, was becoming more appreciated in England, and London in particular was rivalling the Continent. Our designs were still less original and captivating, but our work was better finished. The Frenchman liked to transform his shop as fashions changed; the workmanship of French shops often reflected this fact. The English shop inside and out was obviously intended to have permanence.

On the other hand, he said, we lagged behind in technical inventiveness, and particularly in ideas. The fronts and interiors of even our latest shops presented too often a multitude of borrowings and reminiscences, but no dominating *idea.* Every piece of design, every display, and every article displayed, should have an idea behind it. It was better to present an exaggerated, or even unsound idea, than to remain purely negative. And too many of our shop designs were negative in character.

Technically, English shop-fronts sinned chiefly in respect of detail. Lighting was adequate, but often unpleasant. Globes which hung in the actual window, and glared straight into the eye, were still employed in some cases.

Batteries of lamps and reflectors behind a window vallance were now more frequent and successful; but too often those lamps glared into the shop behind, or were visible in their nakedness from the flank.

There was always much argument about the area of plate glass which was legitimate in shop-design. The shopkeepers of the lower end of Regent Street used to complain about their frontages being reduced by huge piers of rusticated masonry. And it was said that these piers were æsthetic necessities, that the massive superstructure required visual evidence of support.

With modern design and construction, properly understood, the all-glass window was a possibility, and quite an attractive one. Erich Mendelsohn in Germany, and a number of other architects, had almost solved the problem. Glass area was likely to grow rather than decrease, and already there was the Garage Marbeuf in Paris with its front conceived as one gigantic plate-glass window, and its motor cars staged within on dramatic tiers of balconies, all visible from the street, like rows of spectators seen from a theatre stage. Windows within windows, the breaking up of large glass surfaces by inset showcases, by effects of textiles and mirror glass, were more likely avenues than the return of the solid pier. The architecture of tomorrow, more airy than that of today, would demand less evidence of stability; the doom of the elephantine note in commercial architecture was gradually approaching.

There would, however, always be a demand for the limited display window, the single brightly-lit jewel of exhibition space set in an area of steel or marble. Paris trades in London, and some of the jewellery shops, exemplified this type of design, in which a few fine objects were displayed in a careful setting.

But to display an object with such emphasis entailed that the object itself should be worthy. In many types of shops the goods were not of the quality to withstand concentrated attention. Hence, the crowded window would always be with us; the cheap shop, like the cheap motor, had its clientele. And it was absurd to urge the shopkeeper in this class to ape the man who catered to an entirely different trade and class.

People today rode luxuriously on the tops of buses. But what shopkeeper, he asked, had fully realized the possibilities of display windows at bus-top level? Instead, we were invited to look at the dust-tops of the showcases and inspect the wiring of lamps. Neither the shopkeeper nor architect always thought sufficiently of the bus-top view-point, and the possible "selling punch" of good windows at this level.

In conclusion, he asked, would we ever be allowed the covered pavements of Amsterdam, Brussels, and Paris? Would the framers of our building regulations never soften their hard hearts in respect of shops? Protection for window gazers was a boon. It would assist trade as well, and the long lines of the marquises of a big shop-front would help towards an architectural unity. A few bold horizontal strokes would benefit our street design, in which each parcel of frontage, as a rule, asserted its independent verticality.

SOCIETIES AND INSTITUTIONS

THE FAILURE OF DAMS

PRACTICALLY every failure of a dam could be explained in one phrase, namely, underpressure and neglect to provide for underpressure in the design of dams, said Mr. Edward Godfrey, M.I.STRUCT.E., lecturing at a meeting of the Institution of Structural Engineers, held recently. The design of dams would never be put on a sound basis until engineers recognized underpressure as of just as much importance in proportioning a dam as the pressure of water on the up-stream face of the dam.

SHOULD ARCHITECTURE BE STATE-CONTROLLED?

The question as to whether or not architecture should be State-controlled was debated by associate members of the West Yorkshire Society of Architects, at its Leeds headquarters, on January 29.

Opening in the affirmative, Mr. P. Lingwood considered that State control of architectural design would result in a happy co-ordination of units, making for one complete and harmonious result, and eliminate the present chaos of structures of varied and clashing design. At the same time each building would have its purpose and individuality clearly expressed. The speaker advocated the setting up of boards of control on which the profession would be adequately represented.

Mr. E. M. Price, for the negative view, said that to bring out the best that was in him—which was to use his artistic ability to the best advantage—the architect should have the utmost freedom for his individuality. Modern conditions were quite difficult enough without enacting laws that would hedge the architect in by a compulsory system of control. He would be tempted to play for safety if he wished to see his building approved by any body composed of those possessing varied sympathies, thus reducing design to a monotonous level. He thought the idea was Utopian, and not likely to work out in practice.

Mr. J. R. Tolson thought that if any control were exercised, it should only apply to the exterior design, especially as to its due relationship to any adjoining buildings. He thought there should be a preponderance of architects over laymen on any such boards of control, if co-ordination were to result.

Mr. F. R. Pullan said that the suggested control would be an insult to the profession. The results would be stereotyped. Such a system would penalize those possessed of any talent for their art.

Mr. P. J. N. Penlington thought that control would result in architects "playing up" to the known predilections of the authority concerned. He was not at all sure whether the recent board set up to deal with the design of the Haig statue had resulted in any marked improvement being attained.

Mr. F. Chippendale considered that it would be difficult to obtain boards of control which would be sufficiently catholic in their tastes. In any case the rota of architect members would need constant changing. On the whole, he was opposed to the idea.

On the vote being put, the majority of those present decided against any form of control.

The Mayor of Huddersfield took the chair at another meeting of the same Society, held at Huddersfield, when Mr. Norman Culley, F.R.I.B.A., gave a discourse on "Egyptian and Western Asiatic Architecture," this being the first of a series of six lectures on period architecture to be given by members of the West Yorkshire Society in conjunction with the Huddersfield Education Department.

Mr. Culley showed by means of numerous illustrations the salient features of architecture in the various countries. Egypt he described as the land of brilliant light which illumined a matured type of architecture, chiefly of a sepulchral character, to which the world at that time could show no parallel. The art of the Egyptians, he said, was founded on a firm belief in a future life, in contrast with that of the Western Asiatics, whose sole idea was to enjoy to the full the brief span of man's existence, and as a striking commentary on this idea, very few remains of Babylonic or Assyrian architecture were now to be found.

ARCHITECTURAL DRAFTSMANSHIP

"Architectural Draftsmanship" was the subject of a lecture delivered by Mr. E. R. Jarrett, F.R.I.B.A., at a meeting of the Northern Architectural Association. The lecturer divided his subject into three broad divisions,

namely: the drawing of existing buildings; the designing of new buildings; and the constructional drawings necessary to carry out those designs.

The first division consisted, from the architect's point of view, mainly of sketches and measured drawings in ink, pencil and watercolour, for the different technique required for such media as etching, oil-painting and woodcuts made them unusual methods of expression amongst architects.

He emphasized the direct bearing of his first division upon his second. That the man who had measured and drawn, and learnt to feel his materials in three dimensions by so doing, would, when confronted with a problem in design, be in a definitely superior position to that of anyone relying on books or photographs. The lecturer defended the rendered drawing on the grounds that it again impressed upon the student that he was an artist in the solid, and not in the flat.

Passing to his third heading, Mr. Jarrett said that he did not intend to be dogmatic upon such a debatable subject as the best method of preparing working drawings. Any man with a sound knowledge of construction, who had accustomed himself to feeling his buildings in three dimensions, should be able to present his design in an able, intelligent manner to the builder.

His three divisions all hung upon one another. The measured drawing for a mental background; the design as the artist's creation; and the working drawings to ensure its being carried out with meticulous accuracy by others.

Mr. Jarrett illustrated his lecture with an excellent series of slides, showing examples of draftsmanship from such widely differing sources as Rembrandt, Canaletto, Rickards, Eric Mendelsohn, and recent winners of the Tite prize.

THE RESTORATION OF ST. GEORGE'S CHAPEL, WINDSOR

At a meeting of the Royal Society of Arts last Wednesday, the Very Reverend Albert Baillie, C.V.O., D.D., Dean of Windsor, read a paper on "The Restoration of St. George's Chapel, Windsor." The Most Hon. the Marquess of Queensberry, K.G., presided.

After describing in detail the history and many interesting features of the Chapel, the Dean said that one of the two restorations which very much affected the beauty of the exterior was that of the Kings' Beasts to the pinnacles. These Beasts were part of the original plan and they existed down to the time of Charles the Second, when they had decayed. Their weight was needed as part of the provision for the stability of the vaulting, and Wren advised their being replaced by stone pineapples. This was not done, and the flat tops had remained empty, giving an air of deadness to the whole building. The restoration of the Kings' Beasts, admirably carved by Mr. Armitage, had given an extraordinary richness and vivacity to the external view of the Chapel. The cupolas on the two chapels at the west had also been restored. These were a very distinctive part of Henry the Seventh's design.

Describing the stonework, the Dean explained that the builders of Edward the Fourth's time, and also those employed by Henry the Seventh, used excellent Teinton stone for the outside work, the same, he believed, as that used for St. Paul's. This stone had weathered very well. In a few places it had decayed, and was replaced with Bath stone, which had decayed everywhere. The only serious decay in the original Teinton stone was in the buttresses, which had been replaced. In the eighteenth century a good deal of Caen stone was used, and this had not weathered very well, except in places where it was well sheltered, as in the angle between the transept and the south wall, where the tracery of one window had stood quite intact.

In replacing the decayed stone, they had used Clipsham stone, which seemed to be even harder and better than Teinton stone. They had used this also in the ornamental work and the Kings' Beasts, so that they hoped it would stand for a very long time.



A part-view of St. George's Chapel, Windsor, from the Dean's bedroom window, showing four of the "Kings' Beasts."

MASTER CARVERS' ASSOCIATION

The thirty-third annual dinner of the Master Carvers' Association was held at the Connaught Rooms, Great Queen Street, W.C., on Tuesday of last week. Mr. F. P. Morton, the president, presided over about one hundred members, guests and friends.

After the loyal toasts, Mr. G. Grey Wornum, F.R.I.B.A., proposing that of "The Master Carvers' Association," pointed out that all the Association consisted of was twenty-seven members.

Mr. Morton, responding, said that although the membership was very small, and the Association was obviously an exclusive body, he was very pleased to state that a rule had been passed at a recent meeting that "the committee shall be empowered to elect as hon. members anyone interested in the Association (and who shall not be eligible for election as ordinary members), but hon. members shall not be allowed to vote." This, he thought, was a move in the right direction, and would enable them to add to the membership of the Association men who would be otherwise ineligible, such as Gilljam, Östberg, etc.

"Our Guests and Visitors" was proposed by Mr. W. Aumonier, vice-president, who, after making some amusing remarks about many of those present, concluded by saying that the general standard of architecture today was more interesting and on a higher level than it had ever been. If, he said, architects gave no good architecture they, also, would be unable to give good sculpture. Mr. Arthur J. Davis, F.R.I.B.A., responded.

Mr. Charles ffoulkes, O.B.E., F.S.A., Curator of the Tower Armouries, proposing the toast of "The President," spoke of the work Mr. Morton and his firm had done in carrying out the carving of the heraldry on various ships for the Admiralty.

After the speeches, a "Punch-and-Judy" show was given, followed by dancing.

Among those present were the following:

Messrs. Louis Jacob, A.R.I.B.A.; H. V. Ashley, F.R.I.B.A.; W. Newman, F.R.I.B.A.; Walter Tapper, A.R.A., F.R.I.B.A.; J. G. West, O.B.E., Senior Architect, H.M.O.W.; Darcy Braddell, F.R.I.B.A.; H. Guy Holt, F.R.I.B.A.; Arthur Keen, F.R.I.B.A.; C. D. St. Leger, M.C., A.R.I.B.A.; R. Scott Cockrill, A.R.I.B.A.; W. G. Howell, F.C.R.A.; C. E. Elcock, F.R.I.B.A.; Frederick Sutcliffe, F.R.I.B.A.; Geoffrey Lucas, F.R.I.B.A.; J. S. Heath, F.R.I.B.A.; E. Maxwell Fry, A.R.I.B.A.; Edward J. Brown, President London Cabinet Trades Federation; and H. E. Taylor, Secretary London Cabinet Trades Federation.

THE SPOLIATION OF ENGLAND

Architecture in relation to rural preservation was the subject of an address by Mr. C. D. Carus Wilson, at a meeting of the Edinburgh Architectural Association.

He said that the disfigurement of England began with the advent of railways, and had now, with the penetration of the motor car, spread in every direction. The counties round London, especially Kent, Surrey, and Sussex, were spoilt except here and there where large private estates still remained, where land had been handed over to the National Trust, where garden cities had been laid out, or where the State and local authorities had preserved open spaces. The South coast was one long straggling mass of houses and bungalows from Broadstairs to Bournemouth, except in parts of the New Forest and on the tops of the Downs above Beachy Head. England had been awakened, perhaps too late, by the Council for the Preservation of Rural England.

ENGLISH MEDIÆVAL ARCHITECTURE

Sir Banister Fletcher, P.R.I.B.A., lecturing at the London Central School of Arts and Crafts on Wednesday last, described the evolution of English mediæval architecture, as seen in the exterior and interior design of cathedrals and expressed in the arcades, doors and windows.

By the aid of lantern illustrations he explained the changes which marked the style in its onward progress from Norman to Tudor times.

LONDON INVERNESS-SHIRE ASSOCIATION

At a meeting of the Council of the London Inverness-shire Association, Mr. James E. Rhind, A.R.I.B.A., was elected hon. secretary to the Society. This is the first time an architect has occupied this position.

COMPETITION RESULTS

Municipal Offices, Coalville

The competition for the proposed new municipal buildings at Coalville has been adjudged by the assessor, Mr. Walter Brand, F.R.I.B.A., as follows :

First premium (£100), Herbert Langman, of Syston.
Second premium (£50), A. J. Wood, of Leicester.
Third premium (£25), Pick, Everard, Keay and Gimson.

Welfare Centres, Birmingham

Mr. A. T. Butler, F.R.I.B.A., the assessor for the competition for the two new welfare centres in Birmingham, at Trittiford Road, Billesley, and Warren Farm Road, Kingstanding, limited to architects with offices in Birmingham, has made his awards as follows :

Billesley Centre: First place (£100), Nicol and Nicol.
Second place, Harvey and Wicks.
Third place, Buckland and Hayward.
Kingstanding Centre : First place (£100), Nicol and Nicol.
Second place, E. Farmer.
Third place, Harvey and Wicks.

[The winning designs will be illustrated next week.]

LAW REPORTS

RESTRICTIVE COVENANTS

Peters v. *Holmes*. *Chancery Division. Before Mr. Justice Maugham*

IN this case Mr. G. C. Peters sued Mr. H. E. Holmes, a brewers' surveyor, for the specific performance of an agreement for the sale by the plaintiff to the defendant of the freehold house, Moorlands, Surrey Road, Bournemouth, for £1,300, and he also claimed damages.

The house was on the Durrant estate and was subject to restrictions prohibiting the carrying on of any trade or business whatsoever, including letting of apartments. Plaintiff's case was that on several occasions he told the defendant that the house was subject to the usual residential restrictions.

Defendant, in reply, contended that he was entitled to repudiate the contract on the ground of non-disclosure of restrictive covenants. His case was that the plaintiff said there were no other restrictions except that he must not open a "pub" or make any alterations without getting permission. He asserted that plaintiff knew he wished to let apartments and use the house for his business purposes.

His lordship said he came to the conclusion that the restriction, which prevented the defendant from letting lodgings, was not disclosed to the defendant prior to the signing of the contract. He therefore refused specification of the contract and entered judgment for the defendant with costs.

BUILDING AND ESTATE LAW

Taylor and Jutsum v. *Burston*. *Chancery Division. Before Mr. Justice Farwell*

This was an interesting case in building and estate law, and turned on the vital question whether the plaintiffs, not being parties to the original contract, made in 1876, could maintain a restrictive action against the defendant, who, no more than they, was a party to the agreement.

The plaintiffs were Mr. and Mrs. Taylor, of Trewartha Park, Weston-super-Mare, and Mr. R. S. Jutsum, who sought an injunction to restrain the defendant, Mr. W. Burston, from erecting eighteen houses, approved by the local council, on what at present was the walled garden of Trewartha House.

The plaintiffs were residents on the estate and their case was that material restrictive covenants of 1876 operated as a title and prevented the defendant carrying out his intention of erecting the houses he proposed. In 1876 Mrs. R. Davies divided her estate, retaining one portion and selling the Trewartha House portion to Mr. Henry Pethick. It was in the walled garden of this house that the defendant proposed to erect detached houses only of not less than £700 value on substantial plots.

Mr. Vaisey, K.C., for the plaintiffs, said they had a desirable view across the open space to the woods, and surrounding residents, who had purchased their houses for quiet, would find their values depreciated by outlook on the backs and garages of the new houses. Here the question was whether the plaintiffs were the parties on whom devolved the title to complain of breach of the old mutual covenants. He contended that the right of action devolved on the plaintiffs, and that covenants once created ran with the land and became annexed to it.

Sir Gerald Hurst, K.C., for the defendant, said it was essential for the plaintiffs, if they pleaded a prior building scheme, to establish that the scheme of 1876 excluded the defendants' scheme. His submission was that in this the plaintiffs failed, and further, that they failed to show that the covenants ran with the land. There was here no intention by Mrs. Davies to create a building scheme, and reciprocity of obligations was entirely absent from everybody's mind.

For the plaintiffs, Mr. H. Jones, of Messrs. Fry, Paterson and Jones, chartered architects, of Weston-super-Mare, gave evidence, and for the defence, Mr. Edward T. Gilmore, architect and surveyor to the Davies Trustees.

His lordship, in giving judgment, said to his mind the question turned wholly on the construction to be placed on the original document. From it he found that the parties covenanted for their assigns not to build houses of less than £700 value at that time, and detached, and seven were to be on Mr. Pethick's land. Later Mr. Pethick had conveyed to him by Mrs. Davies a portion of the land she had retained and he sold single plots to other people, who accepted the restrictions. On one stood Mr. Taylor's house, and Mr. Jutsum's house stood on land conveyed to Mr. Pethick. The defendant in 1928 purchased what remained of Mr. Pethick's property, with notice of the covenants. It was now alleged that if he erected eighteen houses instead of seven he would be committing a breach of covenant. Was this action maintainable by the plaintiffs ? To his lordship's mind there was a great deal of difficulty about treating the 1876 agreement as

a building scheme, which would mean that the land was divided into plots and sold to purchasers who all became liable for and enjoyed the benefit of certain covenants. He held that a restrictive covenant between two persons holding adjoining lands, though it had the clause about heirs and assigns, was for the benefit and protection of the person who took the covenant. It was essential to the establishment of a building scheme, that it be shown that the purchasers of the plots knew and appreciated that they were entering into an obligation not merely with the vendor, but with each other, or with the owners for the time being of the various plots. Here it was impossible to say that there was a building scheme in the sense that the whole of Mrs. Davies's property was sold as one composite building estate to various purchasers who made themselves liable to the purchasers of other plots and enjoyed the correlative benefit. His conclusion was that the plaintiffs had failed to prove an anterior scheme. On the other side of the matter he was of opinion that the plaintiffs' case was not sufficient. The remaining question was, whether the restrictive covenants passed with the land, and on this point his lordship found that the covenant was personal between Mrs. Davies and Mr. Pethick, and contemplated something to be done in the immediate future. What it did was to define the use of the large house and not to impose a fetter for all time. The onus was on the plaintiffs to show that the agreement was intended to operate in a way in which he thought it did not operate. Under those circumstances his judgment must be for the defendant, with costs.

COMPETITIONS OPEN

February 12.—Sending-in day. Stand at the Building Trades Exhibition, Manchester, for Venesta, Ltd. Assessors: Christian Barman, H. de C. Hastings, W. L. Wood, Henry Rutherford, and Professor A. E. Richardson. Premiums: £100 and four of £10. Conditions from the Editor, THE ARCHITECTS' JOURNAL, 9 Queen Anne's Gate; or direct from Venesta, Ltd., Vintry House, Queen Street Place, London, E.C.4.

April 1.—Sending-in day. Development of the uses of aluminium and its alloys, for the International Aluminium Bureau. Two premiums of 25,000 francs. Conditions from the Bureau International de l'Aluminium, 23 bis, Rue de Balzac, Paris, France.

April 18.—Sending-in day. Central Municipal Bank and Head Offices, Broad Street, Birmingham. Assessor: Sir Reginald Blomfield, R.A., F.R.I.B.A. Premiums, £400, £300, and £150. Conditions from Herbert H. Humphries, City Engineer and Surveyor, Council House, Birmingham. (Deposit £3 3s.)

April 30.—Sending-in day. Last day for conditions, January 31. Hospital for Infectious Diseases, Coventry, for the Coventry Corporation. Assessor: E. Stanley Hall, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

THE ARCHITECTS' DIARY

WEDNESDAY, FEBRUARY 4

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. "Competitions." By E. Berry Webber, A.R.I.B.A. **7.30 p.m.**

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Effect of Standardization on Engineering Progress." By C. le Maistre, C.B.E. Chairman: Llewelyn B. Atkinson, M.I.E.E. **8 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "English Mediæval Architecture: Piers, Towers, Spires and Roofs." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. "Recent Developments in the Design and Construction of Concrete Roads, with particular reference to Expansion and Similar Troubles." By J. H. Walker, M.INST.C.E. Chairman: Sir Henry Maybury, G.B.E., C.B. **6 p.m.**

THURSDAY, FEBRUARY 5

WEST YORKSHIRE SOCIETY OF ARCHITECTS. Biennial Dinner.

INSTITUTION OF STRUCTURAL ENGINEERS. South Wales and Monmouthshire Branch. At the Institute of Engineers, Park Place, Cardiff. "Thames House." By R. Travers Morgan, A.M.INST.C.E.

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Glass and Its Uses, and Glass Making." By R. F. Taylor, M.SC. (Illustrated by lantern slides.) **7.30 p.m.**

INSTITUTE OF METALS. Joint meeting with the Society of Chemical Industry. At the University, Bristol. "Recent Developments in Economy of Fuel for Small Boilers." By M. Harman Lewis. **7.30 p.m.**

AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE, 29 Lincoln's Inn Fields, W.C.2. "Compensation and Betterment in Regard to Town Planning Schemes." By W. R. Davidge. **7.30 p.m.**

SATURDAY, FEBRUARY 7

Sunrise, 7.38 a.m. Sunset, 5.1 p.m.

INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS. Yorkshire District Meeting. At the Town Hall, Leeds. "Notes on the Public Health Act, 1925, Part II., Streets, Sections 30 and 31." By W. Dixon. **2 p.m.**

TUESDAY, FEBRUARY 10

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Manchester and District Branch. At the Milton Hall, Deansgate, Manchester. "Panel Heating." By C. M. Oates. **7 p.m.**

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. Fourth of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

ROYAL SANITARY INSTITUTE, 90 Buckingham Palace Road, S.W.1. "Recent Methods of Sewage Treatment." By Lt.-Colonel William Butler, M.B. Chairman: Professor A. Bostock Hill, M.SC.

INSTITUTE OF FUEL. At the Engineers' Club, Manchester. "Fuel Control in the Iron and Steel Industries." By Dr. G. V. Slottman. **7 p.m.**

WEDNESDAY, FEBRUARY 11

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "New Motives for Textile Designs." By F. G. Wood. Also, demonstration by Polarized Light of Micro-Crystallization. Chairman: Sir W. Rothenstein. **8 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Mediæval Architecture: Parapets, Ornaments, and Fittings." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Lancashire and Cheshire Branch. Ordinary Meeting. At the College of Technology, Manchester. "The Modulus of Elasticity of Concrete." By Professor F. C. Lea, D.SC., M.INST.C.E., M.I.MECH.E. **7 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Ordinary Meeting at the Hotel Russell, Russell Square, W.C.2. "Boilers and Metals." By W. G. Case and W. E. Dennison. 2 p.m. Dinner 7 p.m. **2 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. Students' Meeting. **6.30 p.m.**

THURSDAY, FEBRUARY 12

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At the College of Art, Leeds. General Meeting. "Competitions." By Percy Edward Thomas, O.B.E., F.R.I.B.A. **7 p.m.**

SHEFFIELD AND SOUTH YORKSHIRE SOCIETY OF ARCHITECTS AND SURVEYORS. At the Medico-Chirurgical Library, University, Sheffield. "The Architect in History." By Martin S. Briggs, F.R.I.B.A. **6.15 p.m.**

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. Annual dinner and dance to be held at Southampton.

Secretaries of architectural and allied societies are invited to forward particulars of their forthcoming meetings and visits for publication on this page. They should be addressed to the Editor at 9 Queen Anne's Gate, S.W.1.

THURSDAY, FEBRUARY 12 (*continued*)

INSTITUTION OF STRUCTURAL ENGINEERS, Great George Street, Westminster, S.W.1. Ordinary Meeting. "Modern Buildings as Engineering Structures." By Oscar Faber, O.B.E., D.SC. **6.30 p.m.**

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Some Old Buildings and how they have been Preserved." By A. R. Powys. (Illustrated by lantern slides.) **7.30 p.m.**

VICTORIA AND ALBERT MUSEUM, Cromwell Road, South Kensington, S.W.7. Special Lecture: "Persian Decorative Art." By A. F. Kendrick. **5.30 p.m.**

INSTITUTION OF ELECTRICAL ENGINEERS. Annual Dinner to be held at the Connaught Rooms, Great Queen Street, Kingsway, W.C.2. 7 for 7.30 p.m. **7.30 p.m.**

INSTITUTE OF LANDSCAPE ARCHITECTS. At the Architectural Association, 36 Bedford Square, W.C.1. Discussion on "Conditions for Competitions." To be opened by E. Prentice Mawson, F.R.I.B.A.

SOCIETY OF ANTIQUARIES, Burlington House, Piccadilly, W.1. "A School of West Country Masons." By Sir Harold Brakspear, K.C.V.O., F.R.I.B.A.

FRIDAY, FEBRUARY 13

INSTITUTION OF STRUCTURAL ENGINEERS, Midland Counties Branch. Informal Meeting. Discussion on "Foundations," to be opened by S. L. Horde, A.M.I.STRUC.E. **6.30 p.m.**

SATURDAY, FEBRUARY 14

Sunrise 7.16 a.m. Sunset, 5.14 p.m.

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C. 1. "The Architect's Problems in a Large Building." By H. Austen Hall, F.R.I.B.A. **3 p.m.**

MONDAY, FEBRUARY 16

R.I.B.A., 9 Conduit Street, W.1. General Meeting. "The Work of Sir Robert Lorimer." By F. W. Deas, M.A., F.R.I.B.A. **8 p.m.**

BIRMINGHAM SCHOOL OF ARCHITECTURE. At the Society of Artists' Galleries, New Street, Birmingham. Annual exhibition of students' work.

TUESDAY, FEBRUARY 17

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. Fifth of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

WEDNESDAY, FEBRUARY 18

ARTS BUILDING, UNIVERSITY, Lime Grove, Manchester. "Modern Flats as a Solution to the Housing Problem." By G. Grey Wornum, F.R.I.B.A.

SOUTH-EASTERN SOCIETY OF ARCHITECTS. At the School of Art, Brighton. "Architecture in Norfolk and Norwich." By Stanley J. Wearing, F.R.I.B.A.

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Ancient Bridges." By G. H. Jack, F.R.I.B.A., M.INST.C.E. Chairman: E. Guy Dawber, A.R.A., F.R.I.B.A. **8 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Mediæval Architecture: Monasteries, Cathedrals and Churches." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

THURSDAY, FEBRUARY 19

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Piles." By C. I. Cope, B.A.I., A.M.I.C.E. **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Yorkshire Branch. At the Hotel Metropole, Leeds. "Some Further Progress in Bridge Engineering." By Professor J. Husband, M.ENG., M.INST.C.E. **7 p.m.**

FRIDAY, FEBRUARY 20

INSTITUTION OF STRUCTURAL ENGINEERS. Western Counties Branch. At the Merchant Venturers Technical College, Bristol. "Thames House." By R. Travers Morgan, A.M.INST.C.E. **7.30 p.m.**

SATURDAY, FEBRUARY 21

Sunrise, 7.2 a.m. Sunset, 5.27 p.m.

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. Visit to a London Factory. **2 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Manchester and District Branch. Visit to Astley Green Colliery.

MONDAY, FEBRUARY 23

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "Growing Pains." By H. S. Goodhart-Rendel, F.R.I.B.A. **8 p.m.**

TUESDAY, FEBRUARY 24

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS, 1 Wilbraham Place, S.W.1. "A Sketch of Old London up to the Time of the Great Fire." By John B. Thorpe. **7 p.m.**

MORLEY COLLEGE, Westminster Bridge Road, S.E.1. "The Machine and Its Future." By Professor Levy, D.SC., F.R.S.E. **8 p.m.**

WEDNESDAY, FEBRUARY 25

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Mediæval Architecture: Westminster Abbey." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

THURSDAY, FEBRUARY 26

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At the College of Art, Leeds. "Classic Forms and English Geology." By Hope Bagenal, D.C.M., A.R.I.B.A. **7 p.m.**

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "London in Tudor Times." By D. Martin Roberts, M.A. (Illustrated by lantern slides.) **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "Concrete Roads: Past, Present and Future." By J. H. Walker, M.INST.C.E. M.I.STRUCT.E. **6.30 p.m.**

TRADE NOTES

The official report of the National Fire Brigades' Association Fire Prevention Department has been issued on the fire test made on a partition consisting of "Heraklith" slabs, submitted for test by Messrs. Newman and Holt, Ltd. The partition was tested with the view to ascertaining whether it could be classified as affording "Temporary Protection (Class B.)" under the Association's standards of fire resistance. A certificate to this effect has now been granted to Messrs. Newman and Holt. In order to be thus classified the thickness of the partition under investigation is at the maker's option, but the superficial area to be tested must be approximately 80 sq. ft. The total thickness of the partition was 3½ ins. The object of the test was to record the effect of a fire for a period of one hour at a temperature increasing to approximately 1,500° Fahr. (815·5° Cent.). The fire was applied on one side of the partition, and the time allowed for the construction and drying of the partition was fourteen days. It is stated in the report that throughout the test (one hour) the partition effectively prevented any fire reaching the outer side of the partition. During the test two cracks appeared on the rendering on the outside, and some moisture exuded, but the cracks closed up without interference as the test proceeded. The maximum temperature of the test chamber was 1,790° Fahr. (976° Cent.) and recorded temperature on the outside of the partition did not exceed 105° Fahr. (40·5° Cent.).

*

In a new booklet just issued by Messrs. Lumbys, Ltd., of the Greetland Boiler Works, Halifax, is described the full complement of their various cast boilers for central heating and domestic supply. Several new features are embodied, including the first of a new series of "Solar Steelite" cast sectional boilers for central heating. This is claimed to be a well-constructed and designed boiler with a suitable proportion of heating surface to grate area, and also an ample combustion chamber. In the booklet the firm indicate how these boilers can be arranged with galvanized insulated steel casing to conserve heat. The new open fired model "O" Royal Beacon-stove and the new Hospital Radiator are also illustrated.

*

In future, the May Construction Company, Ltd., will be known as May Acoustics Ltd. This change has been rendered necessary owing to the fact that the firm have found it desirable to increase their working capital to keep pace with the steady and continuous expansion of business, both at home and abroad. It is one in name only, as both Mr. A. G. Huntley and Mr. W. W. Sparks will still continue to direct the business as formerly. The firm's Sabinite acoustic plaster has recently been specified on the following three important buildings, the contracts totalling approximately 100,000 sq. ft., viz. : The New Lever House, Blackfriars, London; New Head Office, Phœnix Assurance Co., Ltd., Lothbury, E.C. ; and His Majesty's Theatre, Pretoria, South Africa.

*

Messrs. Frigidaire, Ltd., have taken No. 141 New Bond Street for their new London showrooms. The premises have been completely reconstructed; they have a black marble and polished steel shop-front, and an electric sign displays the word "Frigidaire." Inside, the new plastic paint has been used for decorating. This modernist motif is precisely apt to the Frigidaire cabinets shown there. For modern is the word that immediately occurs to one's mind when one sees a Frigidaire. Here, one feels, is something they never dreamt of before our generation. A cabinet, very white and clean, with a hidden, silent machine producing an intense cold which, it is claimed, destroys germs, keeps food pure, and provides ice cubes to order. Even as lately as twenty years ago, people did not dream of the Frigidaire as it is today. It was regarded more as a toy than as a commercial proposition. Today there are 1,500,000 Frigidaires in use.

*

Messrs. Allen-Liversidge, Ltd., have declared a dividend at the rate of six-and-a-half per cent. per annum (less tax) for the two months ended December 31, 1930, on the preference shares. Warrants were posted on January 31, 1931. The preference share transfer books were closed from January 17 to 31, 1931, both days inclusive.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office. All inquiries concerning inventions, patents, and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated readers should apply to the Patent Office, 25 Southampton Buildings, W.C. 2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

1234. Frewen, E. J. Building-tiles. January 14.

1248. Gupwell, A. P. Metal mesh for reinforcing concrete, asphalt, etc. January 14.

1250. Toone, H. B. S., and Toone, H. S. Wood-veneered wall and floor covering materials. January 14.

1617. International Copperclad Co. Building product. January 17.

1627. Stent, D. H. Spacers for concrete pile reinforcements. January 17.

SPECIFICATION PUBLISHED

341166. Richardson, J. O. C. Method of constructing the floors of buildings.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Wykeham Senior School, Aboyne Road, Neasden, N.W.10 (pages 199–202). General contractors, E. A. Russell, Ltd. Sub-contractors : Constable, Hart & Co., Ltd., tar paving; The Sussex Brick Estates Co., bricks; John Ellis and Sons, Ltd., artificial stone; Edward Wood & Co., Ltd., structural steel; Educational Supply Association, folding and sliding partitions, folding and sliding casements, furniture and school and office fittings; Concrete, Ltd., fireproof construction; Roberts Adlard & Co., tiles; F. McNeill & Co., Ltd., bituminous roofing and roofing felt; Young and Martin, Ltd., glass; Henry Hope and Sons, Ltd., patent glazing; The Birmingham Guild, Ltd., cast lead and metalwork; Hollis Bros & Co., Ltd., wood-block flooring; Economic Fencing Co., Ltd., fencing; Wm. Sugg & Co., Ltd., gas fixtures; Gas Light and Coke Co., Ltd., gasfitting; National Radiator Co., Ltd., "Ideal" boilers; Franklin and Son, electric wiring; Morgan Crucible Co., Ltd., and F. H. Pride & Co., electric light fixtures and electric heating; Adamsez, Ltd., Shanks & Co., Ltd., and Nicholls and Clarke, sanitary fittings; May Acoustics, Ltd., acoustic panelling; Empire Stone Co., Ltd., stairtreads; Jas. Gibbons, Ltd., and Leggotts, Ltd., door furniture; Gillett and Johnson, bells; General Post Office, telephones; W. Aumonier and Sons, carving; Carter & Co., Ltd., terrazzo flooring; Eastwoods, Ltd., tiling; Barr and Sons, shrubs and trees; Jas. Gibbons, Ltd., cloakroom fittings; Arthur Lyon & Co., electric clocks; Metropolitan Water Board, water supply; Arthur J. Dix, stained glass.

New Headquarters for the Singer Sewing Machine Co., Ltd., Bristol Street, Birmingham (pages 206–207). General contractors, W. J. Whittall and Son, Ltd. Sub-contractors : A. and P. Steven, Ltd., lift; West Bromwich Casement Co., windows; The Brightside Engineering Co., heating; G. G. Walker & Co., electric lighting; Craftinwood, shopfitters; J. R. Pearson (Birmingham), Ltd., wrought ironwork, bronze name-plates, etc.; Aerocrete Units (London), Ltd., partitions; Pearce Sign Works, electric signs; Hill Bros., leaded lights; Fenning & Co., Ltd., marble; Venetian Flooring Co., terrazzo flooring; Val de Travers Asphalte Paving Co., Ltd., asphalt; F. A. Norris & Co., Ltd., fire-escape stairs; Stourbridge Glazed Brick Co., tiling; J. W. D. Pratt, Ltd., facing bricks; Binks & Co., sanitary work; Hollis Bros. & Co., Ltd., block flooring; Durato Asbestos Flooring Co., jointless flooring; Walker and Worsey, ironmongery; Holt and Willetts, hand lift; Walpamur Co., "Muromatte" wall paint; Best and Lloyd, Ltd., electric fittings.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Mr. W. O. Longbein is to erect a permanent mission hall at Bridge Road West, BATTERSEA.

The BETHNAL GREEN B.C. is to erect seventy-eight tenements on a site in Hackney Road, at a cost of £51,800.

The L.C.C. is to reconstruct the Scarsdale Road school, CAMBERWELL, at a cost of £32,000.

The COULSDON U.D.C. Housing Committee has appointed a sub-committee to consider the details of the layout of the proposed housing estate at Westleigh Avenue and Woodlands Grove, to be known as "The Woodlands Estate."

The CROYDON Corporation is preparing a reconstruction scheme for the Old Town area.

Plans passed at CROYDON: Two houses, Osborne Road, for Mr. J. H. Pearson; two houses, Devonshire Way, for Messrs. Burcote, Ltd.; thirty-six garages, Croham Valley, for Mr. G. W. Peachey; shop, London Road, for Mr. L. F. Poole; alterations and additions, 160 Selhurst Road, for Mr. D. W. Way; forty-eight houses, Croham Valley and Crest Roads, for Mr. G. W. Peachey; pavilion and porter's lodge, Nottingham Road, for Messrs. Leathart and Granger; 131 houses, Kynaston Road estate, for Mr. J. R. R. Oddy; twenty-six houses, Firsby Avenue, for Mr. P. Richardson; workshop, Springfield Road, for Mr. E. W. Pritchett; alterations and additions, "The Volunteer" public-house, Lower Church Street, and "The Purley Arms," Brighton Road, for Messrs Dawson and Sons; forty-two houses, Downsview Road, for the Corporation; showrooms, workshops and offices, Teevan Road, for Mr. A. C. Manton; sixty-one garages, Southern Avenue, for Central Estates, Ltd.; thirty-four garages, Ash Road, Oak Avenue, for Mr. W. T. Leakey; alterations and additions, 110–114 High Street, for Messrs. Berney and Son; seventeen houses, Norton Gardens, for Messrs. Truett and Steel; arcade with shops and alterations, 5–7 George Street, 2–16 North End, for Mr. G. Whittaker; four houses, Elborough Road, for Mr. W. Ernest.

The Ministry of Transport has promised a grant of £1,387,000 to the L.C.C. for the ELEPHANT AND CASTLE improvement scheme.

The Woolwich B.C. has acquired a new housing site at ELTHAM, consisting of approximately 275 acres of land, upon which 2,200 houses are to be erected. Plans for the erection of houses on the site are now under consideration.

Plans passed at HACKNEY: Workshop, rear of 264 Richmond Road, for Mr. J. Orchard; additions and alterations, 106 Downham Road, for Mr. C. Golding; alterations and additions, 20–22 Chatsworth Road, for the London Co-operative Society, Ltd.; additions and alterations, Clapton Stadium, Millfields Road, for Messrs. Wallis, Gilbert and Partners; additions and alterations, 4 Windus Road, for Messrs. Kellands, Ltd.; alterations and additions, 53 Downs Park Road, for Messrs. Reeves, Son and Rason.

The HAMMERSMITH B.C. has purchased a site in Brook Green for the erection of a new town hall.

Mr. Septimus Warwick, F.R.I.B.A., is to erect buildings for the Wellcome Foundation, Ltd., in Euston Road, MARYLEBONE.

The POPLAR B.C. Housing Committee is considering the acquisition of further building sites for housing purposes.

The L.C.C. is to modernize and enlarge the Haverstock Central School, ST. PANCRAS, at a cost of £20,000.

The TEDDINGTON U.D.C. is seeking sanction for a loan of £8,000, for the construction of an open-air swimming bath.

The WANDSWORTH B.C. Housing Committee has obtained consent to the appropriation of a portion of the dust destructor site and a site in Garratt Lane, Tooting, for housing purposes.

Plans passed at WANDSWORTH: Garages, Granville Road, Southfields, for Messrs. Sampson and Hutchcroft; bungalow, grounds of Alton Lodge, Roehampton, for Messrs. Boulton and Paul, Ltd.; alterations, Streatham Hill Theatre, for Messrs. Welch, Cachemaille-Day and Lander; church, Balham High Road, Balham, for Mr. J. B. Mendham; alterations and additions, "Ram" public-house, High Street, Wandsworth, for Messrs. Clemence & Co.; five garages, rear of premises in Tierney Road, Streatham, for Mr. W. F. Freeman; alterations Graveney Evening Institute, Tooting High Street, for Messrs. Mullen and Lumsden, Ltd.; flats, King's Avenue, Clapham, for Messrs. H. Wakeford and Son; church, Streatham Vale, for Mr. J. Hastings; two houses, Streatham Common South, for Mr. H. Watts; house, Ramsden Road, Balham, for Mr. W. A. Monk; offices, Fairfield Street, Fairfield, for the Wandsworth, Wimbledon and Epsom District Gas Co., Ltd.; alterations and additions, Huntingfield Road school, Putney, for Messrs. W. H. Gaze and Sons, Ltd.; additions to premises, Prescott Place, Clapham, for Messrs. H. Somerford and Son, Ltd.; five houses, Woodfield Avenue, for Mr. A. Soden.

The L.C.C. Education Committee is to reconstruct the Buckingham Gate Central School, WESTMINSTER, at a cost of £23,600.

SOUTHERN COUNTIES

The BOURNEMOUTH Corporation has approved estimates for the new fire station, including engine house, flats, heating, etc., at a total estimated cost of £16,500.

The BRIGHTON Education Committee has obtained sanction for a loan of £30,000 for the erection of new premises for the Lewes Road Council School.

The HERNE BAY U.D.C. Housing Committee recommends the erection of twenty houses in the vicinity of Claremont Street.

Plans passed at HERNE BAY: Two houses, Buller's Avenue, for Messrs. Hobbs Bros.; bungalow, Margate Road, for Messrs. H. Marsh and Son; house, Linden Avenue, for Messrs. Goodwin and Russell, Ltd.; bungalow, Mayfield Road, for Mr. A. W. Denny; two houses, Linden Avenue, for Mr. W. Hancock; six houses, Carlton Hill, for Messrs. Goodwin and Russell, Ltd.; garage and shops, Station Road, for Mr. W. Hancock; three flats over shops, High Street, for Mr. C. Chase.

MIDLAND COUNTIES

Plans passed at BEDFORD: House, Beresford Road, for Mr. E. E. Jeeves; two houses, Park Road, for Messrs. E. H. C. Inskip and Son; house, West Grove, for Mr. F. Corby; alteration and enlargement of showrooms, for Messrs. Wilsons and Langley; alterations, 48, 50 and 52 High Street, for Messrs. H. Payne Wyatt, Son and Partner; conversion of office to flat, Lurke Street, for Messrs. E. H. C. Inskip and Son.

The GLOSSOP Corporation has asked the Education Committee to consider the question of establishing a clinic for the treatment of children in the Hadfield area.

The HEREFORD Corporation is to erect 300 houses during the next three years.

The LONG EATON U.D.C. is to erect ninety-eight houses.

The NOTTINGHAM Corporation is to erect 528 houses and thirty-six flats on the Valley Road and Hucknall Road estate.

The OLDBURY U.D.C. is to prepare a programme for the erection of 2,500 houses.

The STOKE-ON-TRENT Corporation Housing Committee has received sanction to borrow £20,835 for the erection of fifty-eight houses on the Swan Lane site, Trent Vale, and site works in connection therewith.

NORTHERN COUNTIES

The West Riding Education Committee is to provide additional accommodation for 190 children in connection with the erection of a new school at BARWICK-IN-ELMET, at a cost of £9,000.

The BRADFORD Corporation has agreed to the proposals of Mr. T. E. Feather to erect houses at Bradford Road, Idle, and of Messrs. W. Horne and Son to erect houses at Undercliffe Road, Eccleshill.

The West Riding Education Committee is to enlarge the CASTLEFORD Grammar School, at a cost of £8,250.

The Lindsey County Education Committee is to erect an elementary school in Parker Street, CLEETHORPES, from plans prepared by Mr. Henry G. Gamble.

The West Riding C.C. is to purchase Stirk House estate, containing 315 acres of land, together with mansion house, two cottages and block of stables, situate at GISBURN, for the provision of small holdings.

The LEEDS Corporation is considering a plan for the rearrangement of Kirkstall Road depot, at an estimated cost of £10,800.

Plans passed at MORECAMBE: Two houses, Lancaster Road, Torrisholme, for Mr. A. Heathcote; two houses, Lister Grove, for Messrs. Holroyd and Kilbank; still room, Battery Inn, for Messrs. D. Thwaites, Ltd.; layout of land, Knowlys Drive and Knowlys Avenue, for Strawberry Gardens, Heysham, Ltd.; two houses, Morecambe Road, for Mr. R. N. M. Bigland; two houses, Lancaster Road, for Mr. F. Hodgeson; layout of land, Upper Marine Parade, for Messrs. Swithenbank and Lodell; layout and streets, off West End Road, for Messrs. Naylor and Robinson; layout of land, Tibicar Lane, for Mr. A. Asquith; houses, off School Lane, Heysham, for Mr. A. Sawley.

The MORECAMBE Corporation is to erect a new library on land at the corner of Queen Street and Euston Road.

The West Riding Education Committee is to erect an elementary school for 200 infants at OTLEY, at a cost of £6,500.

The PRESTON Corporation is to prepare a scheme for the erection of fifty-six houses, by direct labour.

The SALFORD Corporation has under consideration three schemes for the provision of civic buildings, the cost of each exceeding £300,000.

The West Riding Education Committee is proceeding with extensions at SKIPTON Grammar School, at a cost of £22,000.

The STRETFORD U.D.C. is to arrange a programme for erecting 750 houses within the next five years.

The WAKEFIELD Corporation is seeking sanction to borrow £78,500 in respect of the Wakefield Bridge scheme.

The WALLASEY Corporation is acquiring land at Moreton for housing displaced caravan dwellers, and is shortly to clear slum areas involving the provision of some 200 houses.

The WALLASEY Corporation has obtained sanction to borrow £25,000 for the construction of an open-air swimming bath in Harrison Drive.

The WIGAN Corporation has agreed upon a five-year programme for the erection of 1,138 houses, at an estimated cost of £480,000.

WALES

The CARDIFF Corporation has adopted a scheme for extensions at the sanatorium, at a cost of £68,000.

The GLAMORGAN Education Committee is to erect an elementary school at Glyn-Neath.

The SWANSEA Corporation has approved a scheme for surface water drainage at Port Tennant, at a cost of £18,300.

The SWANSEA Corporation Libraries Committee has appointed a sub-committee to report on suitable sites for branch libraries in the Oystermouth, St. John's, and Landore wards.

The SWANSEA Education Committee has approved preliminary sketch plans for the erection of a nursery school on the site of the old training college, at an estimated cost of £5,000, inclusive of furniture and equipment.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6½	1 1½
A_1	Abergavenny	S. Wales & M.	1 6½	1 1½
B	Abingdon ..	S. Counties	1 5	1 0½
A	Accrington	N.W. Counties	1 7	1 2½
A_2	Addlestone	S. Counties	1 5½	1 1
A	Adlington ..	N.W. Counties	1 7	1 2½
A	Airdrie ..	Scotland	*1 7	1 2½
C	Aldeburgh ..	E. Counties	1 3	11½
A	Altrincham	N.W. Counties	1 7	1 2½
B_2	Appleby ..	N.W. Counties	1 3½	11½
A	Ashton-under-Lyne	N.W. Counties	1 7	1 2½
A_2	Atherstone	Mid. Counties	1 5½	1 1
B_2	Aylesbury ..	S. Counties	1 3½	11½
B_2	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4½	1 0½
A_1	Barnard Castle	N.E. Coast	1 6½	1 1½
A	Barnsley ..	Yorkshire	1 7	1 2½
B_2	Barnstaple	S.W. Counties	1 4	1 0
A	Barrow ..	N.W. Counties	1 7	1 2½
A	Barry ..	S. Wales & M.	1 7	1 2½
B_2	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5½	1 1
A	Batley ..	Yorkshire	1 7	1 2½
A_2	Bedford ..	E. Counties	1 5½	1 1
A_2	Berwick-on-Tweed	N.E. Coast	1 6	1 1½
A_2	Bewdley ..	Mid. Counties	1 6	1 1½
B_2	Bicester ..	Mid. Counties	1 3½	11½
A	Birkenhead ..	N.W. Counties	*1 9	1 3½
A	Birmingham	Mid. Counties	1 7	1 2½
A_1	Bishop Auckland	N.E. Coast	1 6½	1 1½
A	Blackburn ..	N.W.Counties	1 7	1 2½
A	Blackpool ..	N.W. Counties	1 7	1 2½
A	Blyth ..	N.E. Coast	1 7	1 2½
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 7	1 2½
A_2	Boston ..	Mid. Counties	1 5½	1 1
A_2	Bournemouth	S. Counties	1 5½	1 1
B_2	Bovey Tracey	S.W. Counties	1 4	1 0
A	Bradford ..	Yorkshire	1 7	1 2½
A_2	Brentwood ..	E. Counties	1 6	1 1½
A	Bridgend ..	S. Wales & M.	1 7	1 2½
B_2	Bridgwater	S.W. Counties	1 4	1 0
A_1	Bridlington	Yorkshire	1 6½	1 1½
A	Brighouse ..	Yorkshire	1 7	1 2½
A_2	Brighton ..	S. Counties	1 5½	1 1
A	Bristol ..	S.W. Counties	1 7	1 2½
B_2	Brixham ..	S.W. Counties	1 3½	11½
A_2	Bromsgrove	Mid. Counties	1 6	1 1½
C	Bromyard ..	Mid. Counties	1 3	11½
A	Burnley ..	N.W. Counties	1 7	1 2½
A	Bursleem ..	Mid. Counties	1 7	1 2½
A	Burton-on-Trent	Mid. Counties	1 7	1 2½
A	Bury ..	N.W. Counties	1 7	1 2½
A_1	Buxton ..	N.W. Counties	1 6½	1 1½
A_2	CAMBRIDGE	E. Counties	1 5½	1 1
B_2	Canterbury ..	S. Counties	1 4	1 0
A	Cardiff ..	S. Wales & M.	1 7	1 2½
A	Carlisle ..	N.W. Counties	1 7	1 2½
B	Carmarthen	S. Wales & M.	1 5	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	11½
A	Carnforth ..	N.W. Counties	1 7	1 2½
A	Castleford ..	Yorkshire	1 7	1 2½
B_1	Chatham ..	S. Counties	1 4½	1 0½
B_1	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5½	1 1
A	Chester ..	N.W. Counties	1 7	1 2½
A	Chesterfield	Mid. Counties	1 7	1 2½
B_2	Chichester ..	S. Counties	1 4	1 0
A	Chorley ..	N.W. Counties	1 7	1 2½
B_2	Cirencester	S. Counties	1 4	1 0
A	Clitheroe ..	N.W. Counties	1 7	1 2½
A	Clydebank ..	Scotland	1 7	1 2½
A	Coalville ..	Mid. Counties	1 7	1 2½
A_2	Colchester ..	E. Counties	1 5½	1 1
A	Colne ..	N.W. Counties	1 7	1 2½
A_2	Colwyn Bay	N.W. Counties	1 5½	1 1
A_1	Consett ..	N.E. Coast	1 6½	1 1½
A_2	Conway ..	N.W. Counties	1 5½	1 1
A	Coventry ..	Mid. Counties	1 7	1 2½
A_2	Crewe ..	N.W. Counties	1 6	1 1½
A_2	Cumberland	N.W. Counties	1 5½	1 1
A	DARLINGTON	N.E. Coast	1 7	1 2½
A	Darwen ..	N.W. Counties	1 7	1 2½
B_2	Deal ..	S. Counties	1 4	1 0
A_2	Denbigh ..	N.W. Counties	1 5½	1 1
A	Derby ..	Mid. Counties	1 7	1 2½
A	Dewsbury ..	Yorkshire	1 7	1 2½
B	Didcot ..	S. Counties	1 5	1 0½
A	Doncaster ..	Yorkshire	1 7	1 2½
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorks	1 5½	1 1
A_2	Droitwich ..	Mid. Counties	1 5½	1 1
A	Dudley ..	Mid. Counties	1 7	1 2½
A	Dundee ..	Scotland	1 7	1 2½
A	Durham ..	N.E. Coast	1 6½	1 1½
A_2	EAST-BOURNE	S. Counties	1 5½	1 1
A_1	Ebbw Vale	S. Wales & M.	1 6½	1 1½
A	Edinburgh	Scotland	1 7	1 2½
A_1	E. Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6½	1 1½
A_2	Exeter ..	S.W. Counties	*1 6	1 1½
B_2	Exmouth ..	S.W. Counties	1 4	1 0
B	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey ..	Yorks	1 5½	1 1
A	Fleetwood ..	N.W. Counties	1 7	1 2½
B_2	Folkestone	S. Counties	1 4	1 0
A	Frodsham ..	N.W. Counties	1 7	1 2½
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 7	1 2½
B_1	Gillingham	S. Counties	1 4½	1 0½
A_2	Gloucester ..	S.W. Counties	1 6	1 1½
A_2	Goole ..	Yorkshire	1 6	1 1½
A_2	Gosport ..	S. Counties	1 5½	1 1
A_2	Grantham ..	Mid. Counties	1 5½	1 1
A_1	Gravesend ..	S. Counties	1 6½	1 1½
A	Greenock ..	Scotland	*1 7	1 2½
A	Grimsby ..	Yorkshire	1 7	1 2½
B_1	Guildford ..	S. Counties	1 4½	1 0½
A	HALIFAX	Yorkshire	1 7	1 2½
A	Hanley ..	Mid. Counties	1 7	1 2½
A	Harrogate ..	Yorkshire	1 7	1 2½
A	Hartlepools ..	N.E. Coast	1 7	1 2½
B_1	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 4	1 0
A_2	Hatfield ..	S. Counties	1 5½	1 1
B	Hereford ..	S.W. Counties	1 5½	1 0½
B	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 1½
A_1	Howden ..	N.E. Coast	1 6½	1 1½
A	Huddersfield	Yorkshire	1 7	1 2½
A	Hull ..	Yorkshire	1 7	1 2½
A	ILKLEY ..	Yorkshire	1 7	1 2½
A	Immingham	Mid. Counties	1 7	1 2½
A_2	Ipswich ..	E. Counties	1 5½	1 1
B_2	Isle of Wight	S. Counties	1 3½	11½
A	JARROW ..	N.E. Coast	1 7	1 2½
A	KEIGHLEY	Yorkshire	1 7	1 2½
B	Kendal ..	N.W. Counties	1 5	1 0½
B	Keswick ..	N.W. Counties	1 5	1 0½
A_2	Kettering ..	Mid. Counties	1 6	1 1½
A_2	Kidderminster	Mid. Counties	1 6	1 1½
B_2	King's Lynn	E. Counties	1 4	1 0
A	LANCASTER	N.W. Counties	1 7	1 2½
A_2	Leamington	Mid. Counties	1 6	1 1½
A	Leeds ..	Yorkshire	1 7	1 2½
A	Leek ..	Mid. Counties	1 7	1 2½
A	Leicester ..	Mid. Counties	1 7	1 2½
A	Leigh ..	N.W. Counties	1 7	1 2½
B_2	Lewes ..	S. Counties	1 3½	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1
A	Lincoln ..	Mid. Counties	1 7	1 2½
A	Liverpool ..	N.W. Counties	*1 9	1 3½
A_2	Llandudno	N.W. Counties	1 5½	1 1
A	Llanelly ..	S. Wales & M.	1 7	1 2½
	London (12-miles radius)		1 8½	1 3½
	Do. (12–15 miles radius)		1 8	1 3
A	Long Eaton	Mid. Counties	1 7	1 2½
A	Loughborough	Mid. Counties	1 7	1 2½
A_2	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 7	1 2½
A_1	MACCLESFIELD	N.W. Counties	1 6½	1 1½
B_1	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5½	1 1
A	Manchester	N.W. Counties	1 7	1 2½
A	Mansfield ..	Mid. Counties	1 7	1 2½
B_2	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5½	1 1
A_1	Merthyr ..	S. Wales & M.	1 6½	1 1½
A	Middlesbrough	N.E. Coast	1 7	1 2½
A_2	Middlewich	N.W. Counties	1 6	1 1½
B_2	Minehead ..	S.W. Counties	1 4	1 0
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 7	1 2½
A	Morecambe	N.W. Counties	1 7	1 2½
A_2	NANTWICH	N.W. Counties	1 6	1 1½
A	Neath ..	S. Wales & M.	1 7	1 2½
A	Nelson ..	N.W. Counties	1 7	1 2½
A	Newcastle ..	N.E. Coast	1 7	1 2½
A	Newport ..	S. Wales & M.	1 7	1 2½
A	Normanton	Yorkshire	1 7	1 2½
A_1	Northampton	Mid. Counties	1 6½	1 1½
A	North Staffs.	Mid. Counties	1 7	1 2½
A	North Shields	N.E. Coast	1 7	1 2½
A_2	Norwich ..	E. Counties	1 6	1 1½
A	Nottingham	Mid. Counties	1 7	1 2½
A	Nuneaton ..	Mid. Counties	1 7	1 2½
B	OAKHAM ..	Mid. Counties	1 5	1 0½
A	Oldham ..	N.W. Counties	1 7	1 2½
A_2	Oswestry ..	N.W. Counties	1 5½	1 1
B	Oxford ..	S. Counties	1 5½	1 0½
A	PAISLEY ..	Scotland	*1 7	1 2½
B_2	Pembroke ..	S. Wales & M.	1 3½	11½
A	Perth ..	Scotland	*1 7	1 2½
A_2	Peterborough	E. Counties	1 6	1 1½
A	Plymouth ..	S.W. Counties	*1 7	1 2½
A	Pontefract	Yorkshire	1 7	1 2½
A_1	Pontypridd	S. Wales & M.	1 6½	1 1½
A_2	Portsmouth	S. Counties	1 5½	1 1
A	Preston ..	N.W. Counties	1 7	1 2½
A	QUEENSFERRY	N.W. Counties	1 7	1 2½
A_2	READING	S. Counties	1 5½	1 1
B	Reigate ..	S. Counties	1 5	1 0½
A_2	Retford ..	Mid. Counties	1 5½	1 1
A_1	Rhondda Valley	S. Wales & M.	1 6½	1 1½
A_2	Ripon ..	Yorkshire	1 5½	1 1
A	Rochdale ..	N.W. Counties	1 7	1 2½
B_1	Rochester ..	S. Counties	1 4½	1 0½
A_1	Ruabon ..	N.W. Counties	1 6½	1 1½
A	Rugby ..	Mid. Counties	1 7	1 2½
A_2	Rugeley ..	Mid. Counties	1 5½	1 1
A	Runcorn ..	N.W. Counties	1 7	1 2½
A_2	ST. ALBANS	E. Counties	1 6	1 1½
A	St. Helens ..	N.W. Counties	1 7	1 2½
B_2	Salisbury ..	S.W. Counties	1 3½	11½
A_1	Scarborough	Yorkshire	1 6½	1 1½
A	Scunthorpe	Mid. Counties	1 7	1 2½
A	Sheffield ..	Yorkshire	1 7	1 2½
A	Shipley ..	Yorkshire	1 7	1 2½
A_2	Shrewsbury	Mid. Counties	1 6	1 1½
A_2	Skipton ..	Yorkshire	1 6	1 1½
A_2	Slough ..	S. Counties	1 5½	1 1
A_2	Solihull ..	Mid. Counties	1 6	1 1½
A_2	South'pton ..	S. Counties	1 5½	1 1
A_2	Southend-on-Sea	E. Counties	1 6	1 1½
A	Southport ..	N.W. Counties	1 7	1 2½
A	S. Shields ..	N.E. Coast	1 7	1 2½
A_2	Stafford ..	Mid. Counties	1 6	1 1½
A	Stockport ..	N.W. Counties	1 7	1 2½
A	Stockton-on-Tees	N.E. Coast	1 7	1 2½
A	Stoke-on Trent	Mid. Counties	1 7	1 2½
B_1	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 7	1 2½
A	Swadlincote	Mid. Counties	1 7	1 2½
A	Swansea ..	S. Wales & M.	1 7	1 2½
B	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6½	1 1½
B_1	Taunton ..	S.W. Counties	1 4½	1 0½
A	Teesside Dist.	N.E. Counties	1 7	1 2½
B	Teignmouth	S.W. Coast	1 5	1 0½
A	Todmorden	Yorkshire	1 7	1 2½
A	Torquay ..	S.W. Counties	1 7	1 2½
C	Truro ..	S.W. Counties	1 3	11½
B	Tunbridge Wells	S. Counties	1 5	1 0½
A	Tunstall	Mid. Counties	1 7	1 2½
A	Tyne District	N.E. Coast	1 7	1 2½
A	WAKEFIELD	Yorkshire	1 7	1 2½
A	Walsall ..	Mid. Counties	1 7	1 2½
A	Warrington	N.W. Counties	1 7	1 2½
A_2	Warwick ..	Mid. Counties	1 6	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1
A	West Bromwich	Mid. Counties	1 7	1 2½
B	Weston-s-Mare	S.W. Counties	1 5	1 0½
A_2	Whitby ..	Yorkshire	1 6	1 1½
A	Widnes ..	N.W. Counties	1 7	1 2½
A	Wigan ..	N.W. Counties	1 7	1 2½
B_1	Winchester	S. Counties	1 4½	1 0½
A_2	Windsor ..	S. Counties	1 5½	1 1
A	Wolverhampton	Mid. Counties	1 7	1 2½
A_2	Worcester	Mid. Counties	1 6	1 1½
A_2	Worksop ..	Yorkshire	1 5½	1 1
A_1	Wrexham ..	N.W. Counties	1 6½	1 1½
A_2	Wycombe ..	S. Counties	1 5½	1 1
B_1	YARMOUTH	E. Counties	1 4½	1 0½
B_2	Yeovil ..	S.W. Counties	1 4	1 0
A	York ..	Yorkshire	1 7	1 2½

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rate of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£	s.	d.
Bricklayer . . . . per hour		1	8½
Carpenter . . . . ,,		1	8½
Joiner . . . . ,,		1	8½
Machinist . . . . ,,		1	9½
Mason (Banker) . . . ,,		1	8½
,, (Fixer) . . . ,,		1	9½
Plumber . . . . ,,		1	8½
Painter . . . . ,,		1	7½
Paperhanger . . . ,,		1	8½
Glazier . . . . ,,		1	8½
Slater . . . . ,,		1	8½
Scaffolder . . . . ,,		1	4½
Timberman . . . . ,,		1	4½
Navvy . . . . ,,		1	3½
General Labourer . . . ,,		1	3½
Lorryman . . . . ,,		1	6
Crane Drivers . . . ,,		1	7½
Watchman . . . . per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

	£	s.	d.
Grey Stone Lime . . . per ton	2	8	6
Blue Lias Lime . . . ,,	2	10	6
Hydrated Lime . . . ,,	2	16	0
Portland Cement . . . ,,	2	6	0
Ferro-crete . . . ,,	2	13	6
Ciment Fondu . . . ,,	5	15	0
Thames Ballast . . . per Y.C.		8	9
¾" Crushed Ballast . . ,,		10	0
Building Sand . . . ,,		10	6
Washed Sand . . . ,,		11	6
2" Broken Brick . . ,,		9	6
¾" ,, ,, . . ,,		12	6
Pan Breeze . . . ,,		6	6
Coke Breeze . . . ,,		8	9

BRICKLAYER

	£	s.	d.
Flettons . . . . per M.	3	1	6
Grooved do. . . . ,,	3	3	6
Stocks, 1st Quality . . ,,	4	18	6
,, 2nd ,, . . ,,	4	12	6
Blue Bricks, Pressed . . ,,	9	18	0
,, Wirecuts . . ,,	8	16	0
,, Brindles . . ,,	8	0	0
,, Bullnose . . ,,	10	8	0
Red Sand-faced Facings . ,,	7	11	0
Red Rubbers for Arches . ,,	15	0	0
Multicoloured Facings . ,,	9	4	0
Luton Facings . . . ,,	8	16	0
Midhurst White Facings . ,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:			
Stretchers . . . ,,	21	10	0
Headers . . . ,,	21	0	0
Bullnose . . . ,,	28	0	0
Double Stretchers . . ,,	30	0	0
Double Headers . . ,,	27	0	0
Glazed Second Quality, *Less* . ,,	1	0	0
,, Buffs and Creams, Add . ,,	2	0	0
,, Other Colours ,, . ,,	5	10	0
2" Breeze Partition Blocks . . per Y.S.		1	9
2½" ,, ,, ,, . . ,,		2	0
3" ,, ,, ,, . . ,,		2	3
4" ,, ,, ,, . . ,,		3	0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s.	4" d.	6" s.	6" d.
Straight pipes . . per F.R.	1	1	1	6
Bends . . . each	2	10	4	4
Taper bends . . ,,	6	3	7	2
Rest bends . . ,,	5	9	8	9
Single junctions . . ,,	3	9	5	9
Double ,, . . ,,	5	9	8	9
Straight channels . . ,,	2	6	3	2
4" Channel bends . . ,,	7	8	—	—
Channel junctions . . ,,	7	0	12	6
Channel tapers. . . ,,	5	6	7	9
Yard gullies . . ,,	9	6	11	6
Interceptors . . ,,	18	6	25	9
Iron drain pipe . . per F.R.	2	3	3	5
Bends . . . each	6	0	13	0
Inspection bends . . ,,	15	3	24	0
Single junctions . . ,,	9	3	18	0
Double junctions . . ,,	14	0	27	6
Lead wool . . . lb.		6		—
Gaskin . . . . ,,		5		—

MASON

The following d/d F.O.R. at Nine Elms	£	s.	d.
Portland stone, Whitbed . . . F.C.	4	6	
,, ,, Basebed . . . ,,	4	9	
Bath stone . . . . ,,	2	11	
York stone . . . . ,,	6	9	
,, Sawn templates . . ,,	7	6	
,, Paving, 2" . . . F.S.	1	8	
,, ,, 3" . . . ,,	2	6	

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station.

	£	s.	d.
24" × 12" Duchesses . . per M.	31	0	0
22" × 12" Marchionesses . ,,	28	0	0
20" × 10" Countesses . . ,,	20	5	0
18" × 10" Viscountesses . ,,	17	0	0
18" × 9" Ladies . . . ,,	15	0	0
Westmorland green (random sizes) per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:			
20"×10" medium grey per 1,000 (actual)	26	0	0
,, green . . ,,	27	15	0
Best machine roofing tiles . . ,,	5	0	0
Best hand-made do. . . . ,,	5	10	0
Hips and valleys . . . each		9½	
,, hand-made . . . ,,		10	
Nails, compo . . . . lb.		4	
,, copper . . . . ,,		2	0

CARPENTER AND JOINER

	£	s.	d.
Good carcassing timber . . F.C.		2	6
Birch . . . as 1" F.S.			9
Deal, Joiner's, . . . ,, ,,			5
,, ,, 2nds . . ,, ,,			4
Mahogany, Honduras . . ,, ,,	1		3
,, African . . ,, ,,	1		1
,, Cuban . . ,, ,,	2		6
Oak, plain American . . ,, ,,	1		0
,, Figured ,, . . ,, ,,	1		3
,, Plain Japanese . . ,, ,,	1		2
,, Figured ,, . . ,, ,,	1		5
,, Austrian wainscot . ,, ,,	1		6
,, English ,, . . ,, ,,	1		11
Pine, Yellow . . . ,, ,,	1		0
,, Oregon . . . ,, ,,			4
,, British Columbian . ,, ,,			4
Teak, Moulmein . . ,, ,,	1		3
,, Burma . . ,, ,,	1		2
Walnut, American . . ,, ,,	2		3
,, French . . ,, ,,	2		3
Whitewood, American . ,, ,,	1		1
Deal floorings, ¾" . . Sq.	1	1	0
,, 1" . . ,,	1	5	6
,, 1¼" . . ,,	1	11	0
,, 1½" . . ,,	1	15	0
Deal matchings, ¾" . . ,,		16	0
,, 1" . . ,,	1	6	0
Rough boarding, ¾" . . ,,		18	0
,, 1" . . ,,	1	0	0
,, 1¼" . . ,,	1	8	0

Plywood, per ft. sup.

Thickness	¼"			⅜"			½"			⅝"			¾"		
Qualities	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6			
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6			
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–			
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–			
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–			
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–			

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	⅜"	½"	¾"	1"	1¼"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10		
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9		
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–		
Long screws 12"–23½" long ,,	11	1/3	2/2	2/10	5/3		
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6		
Bends . . . ,,	8	11	1/7½	2/7½	5/2		
Springs not socketed ,,	5	7	1/1½	1/11½	3/11		
Socket union . . ,,	2/–	3/–	5/6	6/9	10/–		
Elbows, square . . ,,	10	1/1	1/6	2/2	4/3		
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1		
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6		
Plain sockets and nipples ,,	3	4	6	8	1/3		
Diminished sockets ,,	4	6	9	1/–	2/–		
Flanges . . ,,	9	1/–	1/4	1/9	2/9		
Caps . . . ,,	3½	5	8	1/–	2/–		
Backnuts . . ,,	2	3	5	6	1/1		
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6		
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–		

Discounts:

TUBES.

Per cent.		Per cent.
Gas . . . 62½	Galvanized gas	. 50
Water . . . 58½	,, water	. 45
Steam . . . 55	,, steam	. 40

FITTINGS.

Per cent.		Per cent.
Gas . . . 47½	Galvanized gas	. 37½
Water . . . 42½	,, water	. 32½
Steam . . . 37½	,, steam	. 27½

SMITH AND FOUNDER—(*continued*):

	s.	d.
Rolled steel joists cut to length . . cwt.	9	6
Mild steel reinforcing rods, ⅜" . . . ,,	10	0
,, ,, ½" . . . ,,	9	9
,, ,, ⅝" . . . ,,	9	6
,, ,, ¾" . . . ,,	9	0
,, ,, ⅞" . . . ,,	9	0
,, ,, 1" . . . ,,	9	0
,, ,, 1¼" . . . ,,	9	0
,, ,, 1½" . . . ,,	9	0

Cast-iron rain-water pipes of ordinary thickness metal	F.R.	3" s.	3" d.	4" s.	4" d.
		7			10
Shoes . . . . each		2	3	3	3
Anti-splash ,, . . ,,		5	0	8	6
Boots . . . . ,,		3	3	4	6
Bends . . . . ,,		2	9	4	0
,, with access door . . ,,		—		6	9
Heads . . . . ,,		4	0	5	0
Swan-necks up to 9" offsets . ,,		4	0	6	3
Plinth bends, 4½" to 6" . ,,		4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.	5			6
Stop ends . . . . each		6			7
Angles . . . . ,,		1	7	1	11
Obtuse ,, . . . ,,		2	0	2	6
Outlets . . . . ,,		1	9	2	3

PLUMBER

	s.	d.
Lead, milled sheet . . . cwt.	23	0
,, drawn pipes . . ,,	23	6
,, soil pipe . . ,,	26	6
,, scrap . . ,,	13	0
Solder, plumbers' . . lb.	1	0
,, fine do. . . ,,	1	4
Copper, sheet . . ,,	1	0
,, tubes . . ,,	1	4

L.C.C. soil and waste pipes:	F.R.	3"	4"	6"
Plain cast . .		1 0	1 2	2 6
Coated . . . ,,		1 1	1 3	2 8
Galvanized . . ,,		2 0	2 6	4 6
Holderbats . . each		3 10	4 0	4 9
Bends . . . ,,		3 9	5 3	10 3
Shoes . . . ,,		2 10	4 4	9 6
Heads . . . ,,		4 8	8 5	12 9

PLASTERER

	£	s.	d.
Lime, chalk . . . per ton	2	8	6
Plaster, coarse . . ,,	2	10	6
,, fine . . ,,	5	10	0
Hydrated lime . . ,,	2	16	0
Sirapite . . . ,,	3	10	0
Keene's cement . . ,,	5	10	0
Sand, washed . . Y.C.		11	6
Hair . . . lb.			6
Laths, sawn . . bundle		2	4
,, rent . . ,,		3	9
Lath nails . . lb.			3½

GLAZIER

	s.	d.		s.	d.
Sheet glass, 21 oz. . . F.S.					3½
,, ,, 26 oz. . . ,,					4½
Arctic glass . . . ,,					5
Cathedral glass . . . ,,					6
Hartley's rough rolled . ,,					9
Do. wired plate . . ,,				1	3
¼" Polished plate, n/e	1	0	to	1	3
,, ,, 2 . . ,,	1	2	,,	1	7
,, ,, 3 . . ,,	1	7	,,	2	5
,, ,, 4 . . ,,	2	1	,,	2	11
,, ,, 6 . . ,,	2	3	,,	3	2
,, ,, 8 . . ,,	2	6	,,	3	6
,, ,, 12 . . ,,	2	9	,,	3	8
,, ,, 20 . . ,,	3	0	,,	3	11
,, ,, 45 . . ,,	3	3	,,	4	1
,, ,, 65 . . ,,	3	7	,,	4	6
,, ,, 90 . . ,,	3	10	,,	4	9
,, ,, 100 . . ,,	4	0	,,	5	0
Vita glass, sheet, n/e 1 . ,,				1	0
,, ,, ,, 2 . ,,				1	3
,, ,, ,, over 2 . ,,				1	9
,, ,, plate, n/e 1 . ,,				1	6
,, ,, ,, 2 . ,,				3	0
,, ,, ,, 5 . ,,				4	0
,, ,, ,, 7 . ,,				5	0
,, ,, ,, 15 . ,,				6	0
,, ,, ,,over 15 . ,,				7	6
Putty, linseed oil . . lb.					3

PAINTER

	£	s.	d.
White lead . . . . cwt.	2	8	0
Linseed oil . . . . gall.		3	3
Boiled oil . . . . ,,		4	3
Turpentine . . . . ,,		3	4
Patent knotting . . . ,,		14	0
Distemper, washable . . cwt.	3	0	0
,, ordinary . . ,,	2	5	0
Whitening . . . . ,,		4	0
Size, double . . . firkin		3	0
Copal varnish . . . gall.		13	0
Flat varnish . . . ,,		14	0
Outside varnish . . . ,,		16	0
White enamel . . . ,,	1	15	0
Ready-mixed paint . . ,,		13	6
Brunswick black . . . ,,		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12″ deep and cart away	Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away	Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away	,,	11 0
,, ,, 10′ 0″ deep and cart away	,,	11 6
,, ,, 15′ 0″ deep and cart away	,,	12 0
If in stiff clay	add ,,	3 0
If in underpinning	,, ,,	5 0
Digging, return, fill and ram	,,	5 0
Planking and strutting to sides of excavation	F.S.	1 0
,, ,, to pier holes	,,	6
,, ,, to trenches	,,	6
,, ,, extra, only if left in	,,	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	,,	1 13 6
,, ,, ,, (4-2-1)	,,	1 18 6
,, ,, ,, underpinning	,,	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, junctions	,,	1 9	4 6
Gullies and gratings	,,	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
,, ,, in cement	,,	34 0 0
,, Stocks in cement	,,	41 10 0
,, Blues in cement	,,	62 0 0
Extra only for circular on plan	,,	3 0 0
,, backing to masonry	,,	2 0 0
,, raising on old walls	,,	3 0 0
,, underpinning	,,	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	,,	1 0
,, red brick facings	,,	1 6
,, blue brick facings	,,	1 9
,, glazed brick facings	,,	4 6
Tuck pointing	,,	10
Weather pointing	,,	4
Slate dampcourse	,,	1 0
Vertical dampcourse	,,	1 3

ASPHALTER

		s. d.
½″ Horizontal dampcourse	Y.S.	5 6
½″ Vertical dampcourse	,,	7 6
½″ paving or flat	,,	5 6
1″ paving or flat	,,	6 6
1″ × 6″ skirting	F.R.	1 0
Angle fillet	,,	2
Rounded angle	,,	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do. all as last	,,	15 6
Artificial stone and do.	,,	16 6
York stone templates, fixed complete	,,	14 0
,, thresholds	,,	16 0
,, sills	,,	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	4 5 0
Do., 18″ × 9″	,,	4 2 0
Do., 24″ × 12″	,,	4 12 0
Westmorland slating, laid with diminished courses	,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	,,	4 0 0
Do., all as last, but of machine-made tiles	,,	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
,, to stanchions	,,	1 0
,, to staircases	,,	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	,,	6 9
,, ,, roofs	,,	8 3
,, ,, trusses	,,	9 0
,, ,, partitions	,,	12 0
½″ deal sawn boarding and fixing to joists	Sqr.	1 17 6
1″ ,, ,, ,, ,,	,,	2 1 6
1½″ ,, ,, ,, ,,	,,	2 7 6
1½″ × 2″ fir battening for Countess slating	,,	12 6
Do. for 4″ gauge tiling	,,	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
,, ,, ,, 2 ,,	,,	3 0
,, ,, ,, 3 ,,	,,	3 6
Stout herringbone strutting to 9″ joists	F.R.	1 0
1″ deal gutter boards and bearers	F.S.	1 4
1½″ ,, ,, ,, ,,	,,	1 8
2″ deal wrought rounded roll	F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
1¼″ do.	,,	3 4 0
1½″ do.	,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1¼″ do.	,,	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½″ deal moulded sashes of average size	F.S.	2 3
2″ ,, ,, ,,	,,	2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ⅝″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	4 3
2″ ,, ,, ,,	,,	4 6
Extra only for moulded horns	Each	9
1½″ deal four-panel square, both sides, door	F.S.	2 6
2″ ,, ,, ,,	,,	3 0
1½″ ,, but moulded both sides	,,	3 0
2″ ,, ,, ,,	,,	3 6
4″ × 3″ deal, rebated and moulded frames	F.R.	1 6
4½″ × 3½″ ,, ,,	,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	3 0
1½″ deal moulded wall strings	,,	2 6
1½″ ,, outer strings	,,	2 9
Ends of treads and risers housed to string	Each	2 0
3″ × 2″ deal moulded handrail	F.R.	1 6
1″ × 1″ deal balusters and housing each end	Each	2 6
1½″ × 1½″ ,, ,,	,,	3 3
3″ × 3″ deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	,,	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders and hoisting and fixing in position	,,	1 3 0
Do. stanchions with riveted caps and bases and do.	,,	1 2 0
Mild steel bar reinforcement ½″ and up, bent and fixed complete	,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 19 6
Do. in flashings	,,	2 2 0
Do. in covering to turrets, etc.	,,	2 9 0
Do. in soakers	,,	1 15 0
Labour to welted edge	F.R.	3½
Open copper nailing	,,	3½
Close ,,	,,	4½

Lead service pipe and fixing with pipe hooks	F.R.	½″ s. d. 1 3	¾″ s. d. 1 8	1″ s. d. 2 2	1¼″ s. d. 2 9	2″ s. d. 3 10	4″ s. d. —
Do. soil pipe and fixing with cast lead tacks	,,	—	—	—	—	—	6 0
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions	,,	3 6	4 0	5 6	8 0	—	—
Lead traps	,,	—	—	—	7 6	10 6	—
Screw down bib valves	,,	7 6	10 6	12 6	—	—	—
Do. stop cocks	,,	10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4″ cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	,,	1 6
Do. outlets	,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	,,	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	,,	5 6
Lathing with sawn laths to ceilings	,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	,,	2 6
Do. vertical	,,	2 9
Rough render on walls	,,	2 3
Render, float and set in lime and hair	,,	3 0
Render and set in Sirapite	,,	3 3
Render, backing in cement and sand, and set in Keene's cement	,,	4 6
Extra, only if on lathing	,,	9
Keene's cement, angle and arris	F.R.	8
Arris	,,	3
Rounded angle, small	,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth	,,	2
1″ granolithic pavings	Y.S.	5 0
1½″ ,,	,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed	,,	1 2 6
9″ × 3″ ,, ,, ,,	,,	1 7 6
Extra, only for small quadrant angle	F.R.	9

GLAZIER

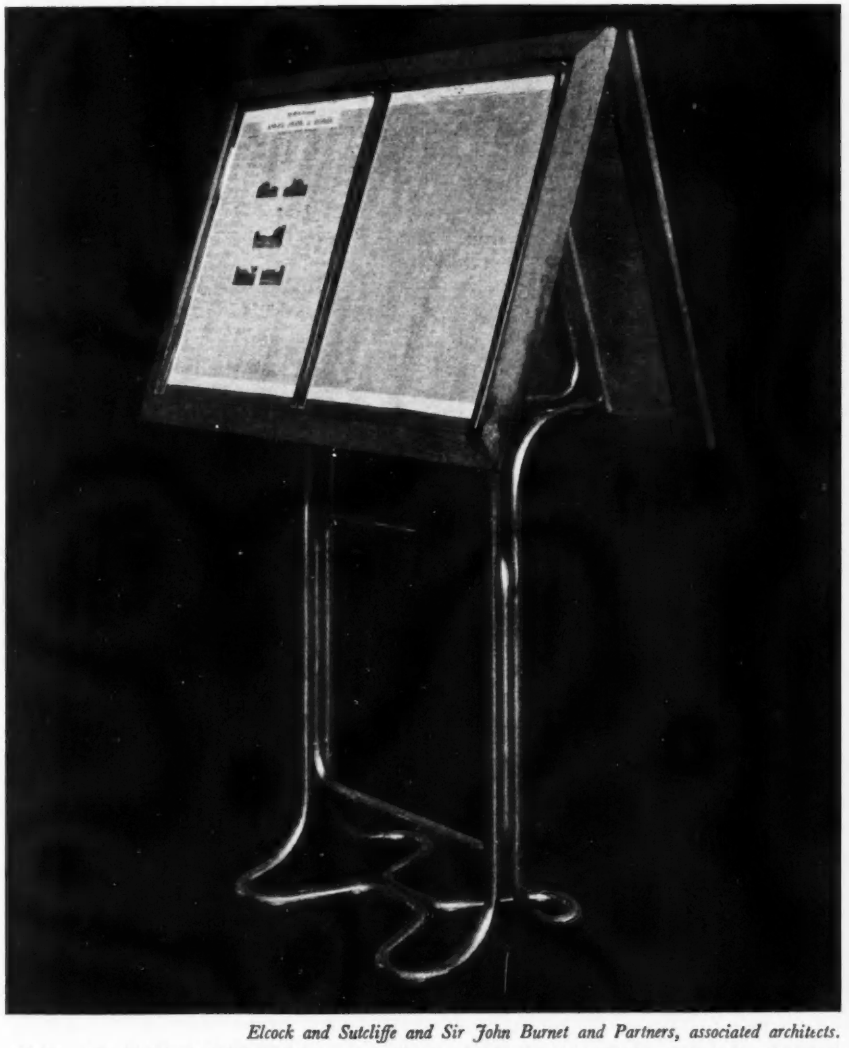
		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	,,	1 0
Arctic glass and glazing with putty	,,	1 2
Cathedral glass and do.	,,	1 3
Glazing only, British polished plate	,,	8
Extra, only if in beads	,,	2
Washleather	F.R.	4

PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	,,	1 0
Do. with washable distemper	,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3 3
Do. on woodwork	,,	3 6
Do. on steelwork	,,	3 0
Do. and brush grain and twice varnish	,,	5 6
Stain and twice varnish woodwork	,,	1 11
Stain and wax-polish woodwork	,,	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper	from ,,	3 0

"THE DAILY TELEGRAPH" OFFICES, LONDON

A READING DESK — THE NEW CLOCK



Elcock and Sutcliffe and Sir John Burnet and Partners, associated architects.

ONE OF THE NEWSPAPER READING DESKS IN THE PUBLIC OFFICE

ON the centre pages overleaf are reproduced scale detail drawings of internal and external accessories at the new offices of "The Daily Telegraph," Fleet Street, London, illustrated in our New Year issue (January 14, 1931).

The reading desk shown above is one of several types designed for the use of the public, and is adapted for the display, as separate pages, of the current issue of the newspaper.

The steel tubing furniture of today might well be considered as a translation into another material of the bentwood furniture of twenty years ago, and the similarity is particularly striking when the design of some of the more recent furniture is considered. In this case two main essentials were realised and expressed: strength and durability.

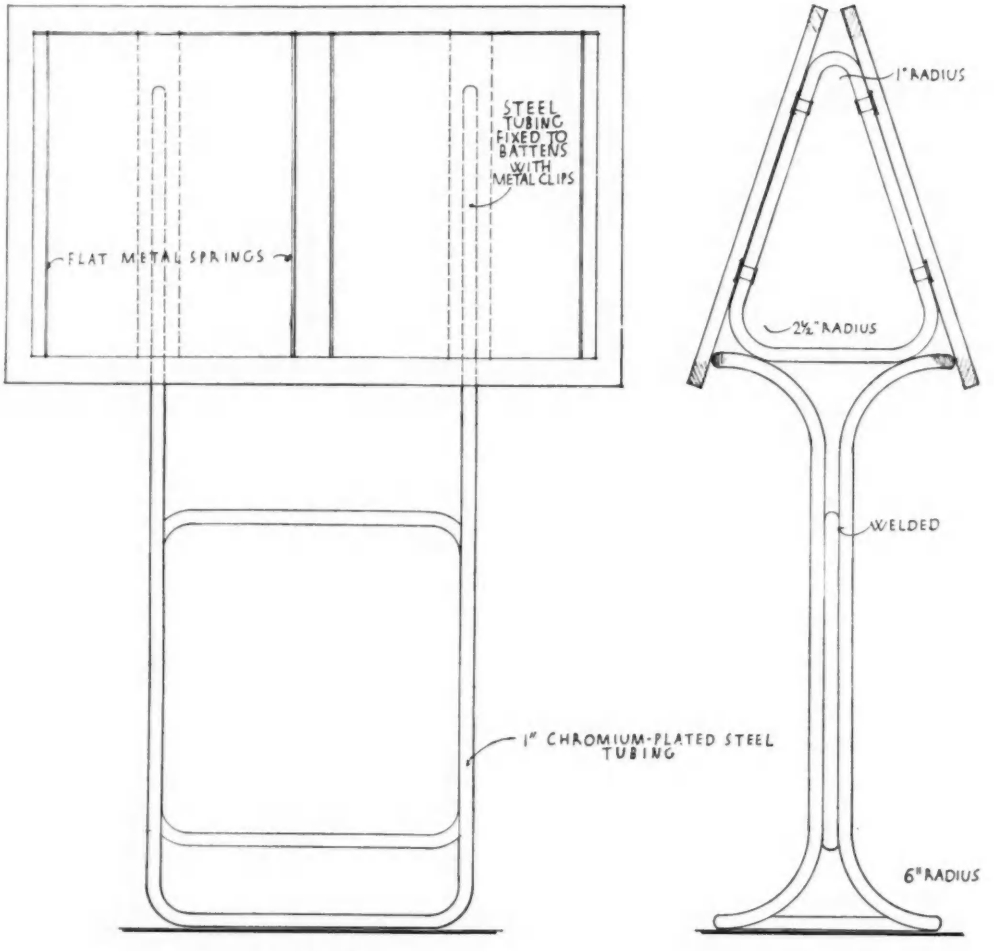
The shape is a logical vertical support for the sloping reading desk; the feet are spread to give maximum stability without in any way interfering with the comfort of the reader; and the frame itself is strengthened by the welded insertion of an additional tube. The tubes are one inch in diameter, and are chromium-plated. The reading board itself is an oak plywood panel, fixed in a hardwood frame, with flat metal springs fitted in pockets in the surrounding frame to keep the sheets in place.

A photograph and description of the clock appear on the last page of this supplement.

"THE DAILY TELEGRAPH" OFFICES

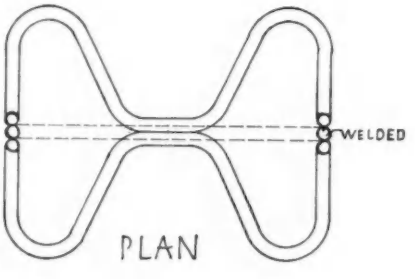
READING DESKS

INCH SCALE ω HALF FULL SIZE



FRONT

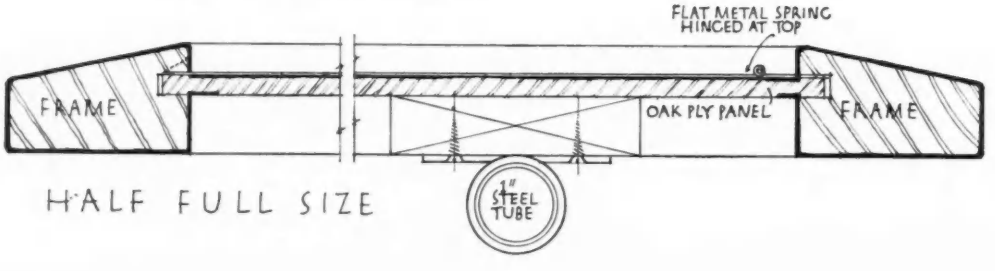
SIDE



PLAN

ELCOCK AND SUTCLIFFE
SIR J. BURNET & PARTNERS
ASSOCIATED ARCHITECTS

E.P. 43

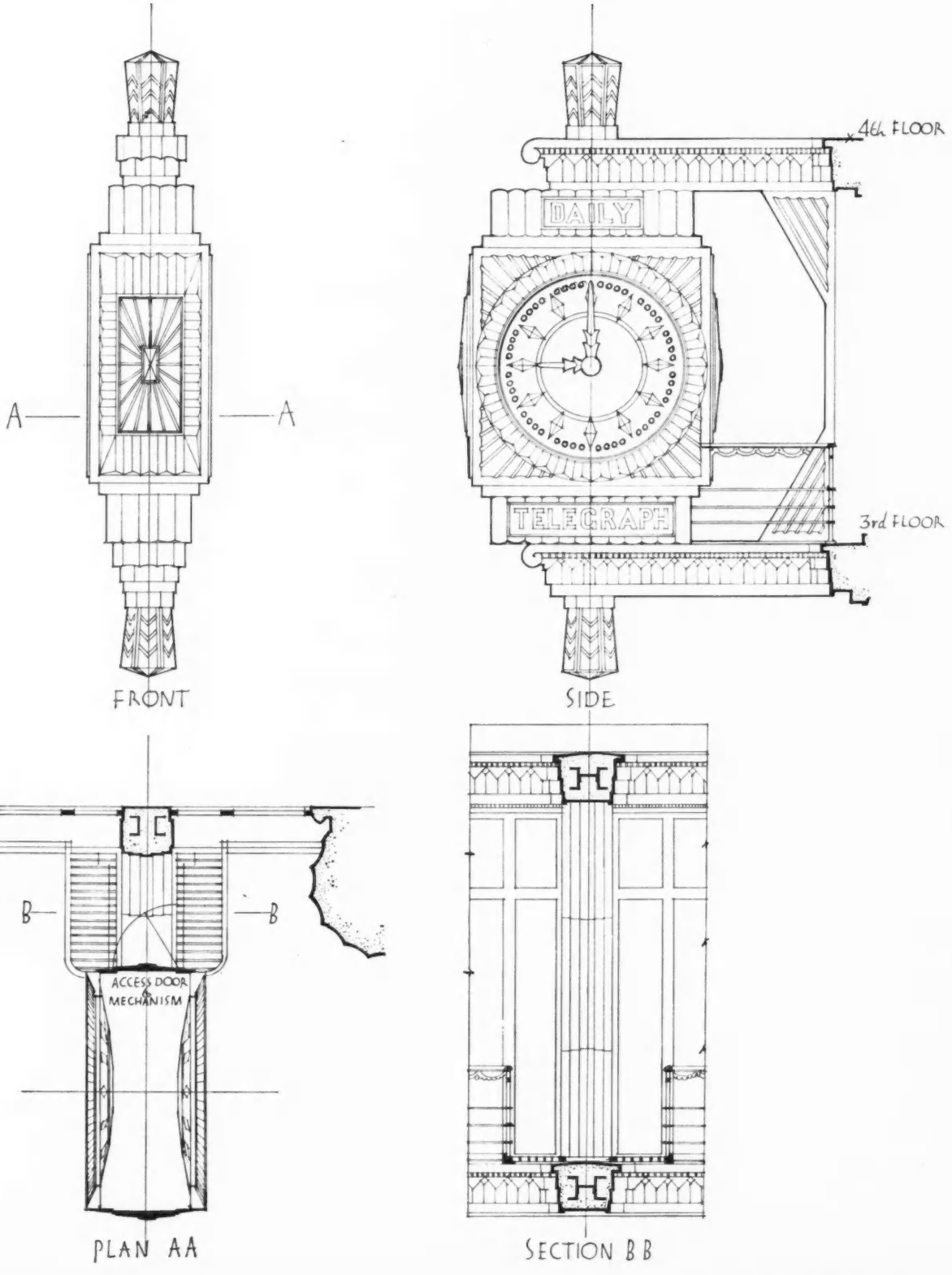


HALF FULL SIZE

For photograph and description see previous page.

"THE DAILY TELEGRAPH" OFFICES

QUARTER-INCH SCALE DETAIL OF CLOCK



FRONT

SIDE

PLAN AA

SECTION BB

ELCOCK AND SUTCLIFFE
SIR J. BURNET & PARTNERS
ASSOCIATED ARCHITECTS

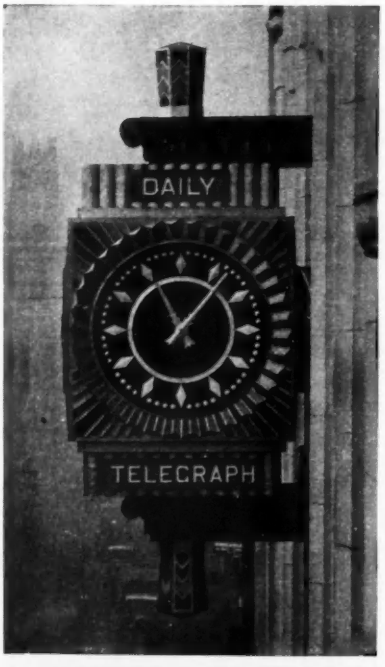
For photograph and description see following page.

SOME anxiety was felt at the time when the old "Daily Telegraph" building was pulled down that the famous, oft-consulted clock in "the street," would vanish with it. But phœnix-wise the clock has risen again, a gayer and much more decorative bird.

The main horizontal supports are on the levels of the third and fourth floors, thus making the body of the piece equal in depth to the height overall of the third floor, which is twelve feet. The total depth, however, is nearly nineteen feet, and the projection is eleven feet from the face of the building.

As shown in these photographs and, more clearly, in the drawing on the previous page, the two clock faces are dished and illuminated by concealed lighting in the outer rims; thus the faces, characters and hands are lit direct, and not, as is usual in clocks of this size and nature, from inside the case. The characters are white lozenges showing on a black ground; the hands are also white, as are the circular pellets which mark the minute divisions.

The main body of the case and its supporting bracket members are made of cast iron, in sections, finished in gold, on which the pattern of red and green enamel is worked on sunk and chamfered faces. Particularly when seen flood-lighted at night, the design gives a most rich surround to an easily-read clock-face.





THE CLOCK BY DAY AND NIGHT

MARLBOROUGH HOUSE, BRIGHTON

MEASURED DRAWINGS OF THE LIBRARY: ROBERT ADAM, ARCHITECT



THE LIBRARY, SHOWING THE FIREPLACE, WITH WEATHER-VANE DIAL ABOVE

CONTAINING authenticated work of Robert Adam, Marlborough House, Old Steine, Brighton, Sussex, then a simple double-fronted four-storied residence, was built in the first instance as a speculation with an eye to the needs of "the quality," who were then frequenting this resort of fashion. It was sold two years later to the Duke of Marlborough, who lived in it for seventeen years.

The Rt. Hon. W. Gerald Hamilton, M.P. ("Single-Speech" Hamilton), acquired the property in 1786, and commissioned Robert Adam to make considerable alterations, both externally and internally: some of his original drawings for the work are preserved in the Sir John Soane Museum.

The library, of which a photograph appears above, and measured drawings of the walls and other details on the pages overleaf, with one of the ceiling on the last page of this supplement, is on the west side of the entrance hall. It is planned as an irregular octagon, with doors and book-shelves arranged on the oblique sides. The original wind-vane indicator may be seen over the fireplace.

Since 1891 the house has been in the possession of the Brighton Education Committee, and in use as offices.

BRIGHTON EDVCATION OFFICES

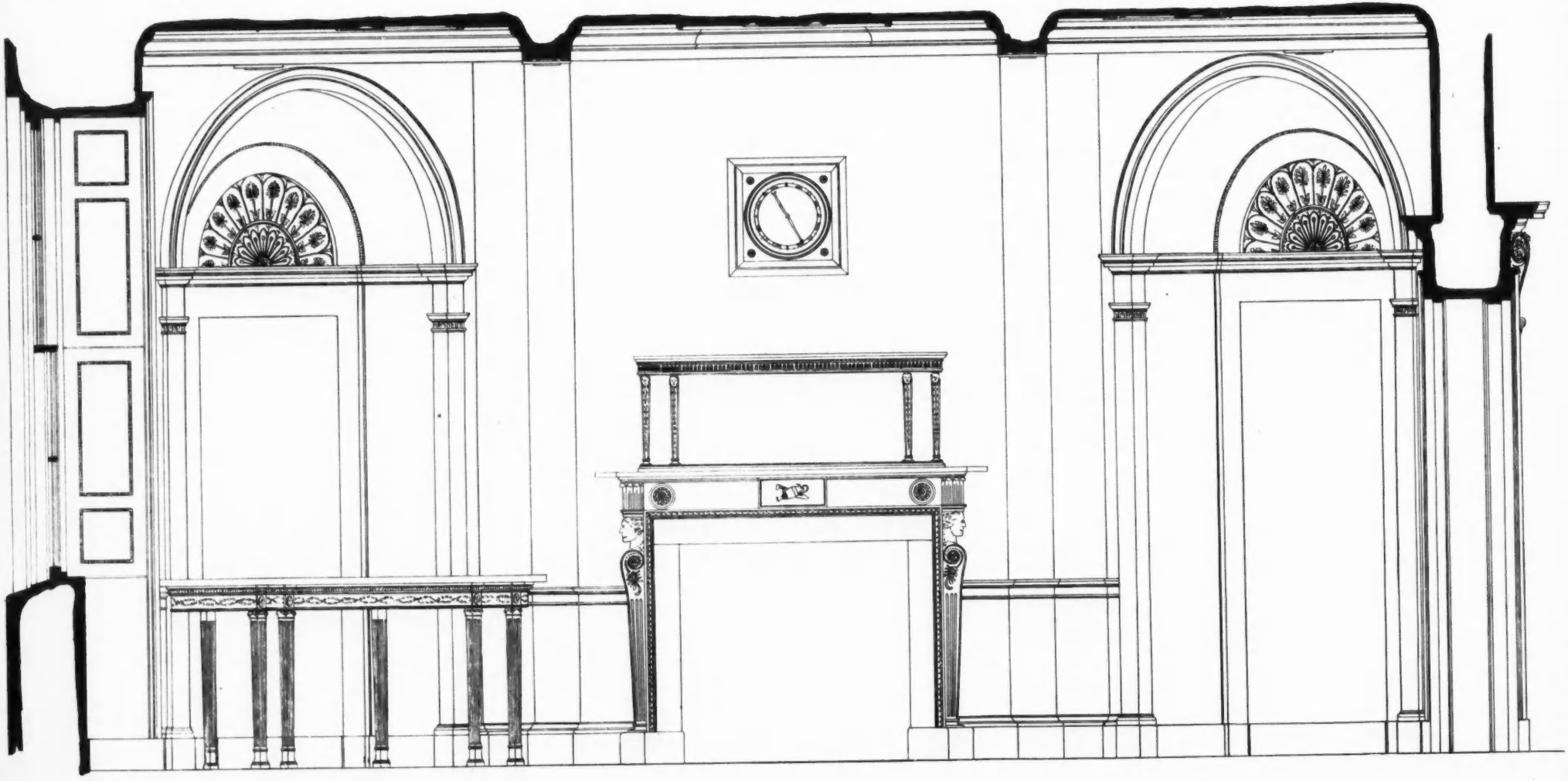
FORMERLY MARLBOROVGH HOVSE

SCALE DETAIL OF LIBRARY





ELEVATION OF WEST WALL



ELEVATION OF NORTH WALL

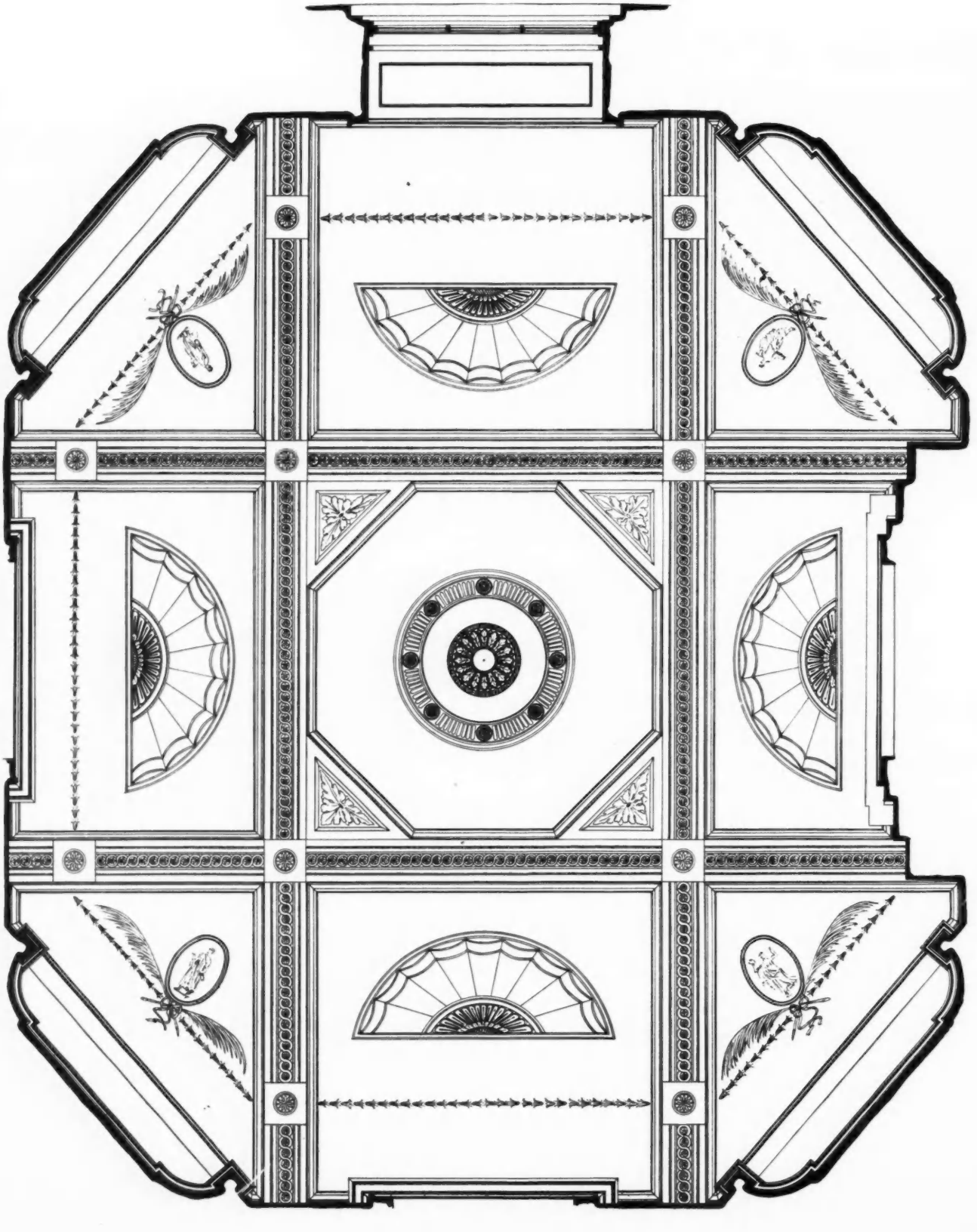
MEASURED & DRAWN BY
ERNEST LASSETTER

MARLBOROVGH HOVSE, BRIGHTON

NOW THE EDVCATION OFFICES

SCALE DETAIL OF LIBRARY

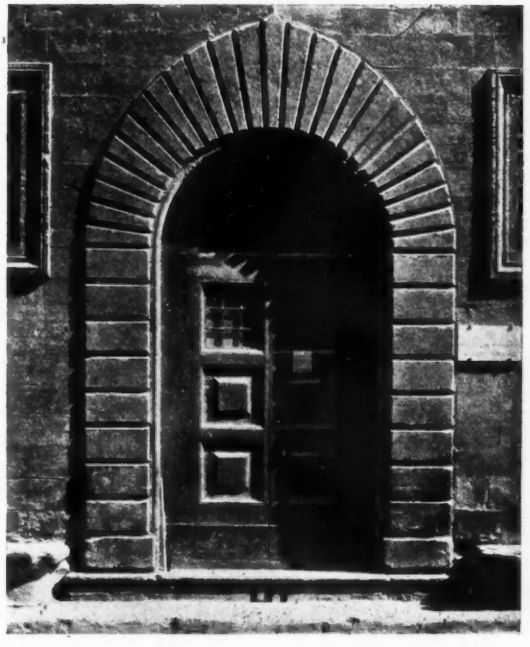




PLAN OF CEILING

SELECTED PRECEDENTS:

STONEWORK IN FLORENCE



ENTRANCE TO THE GUADAGNI PALACE, FLORENCE

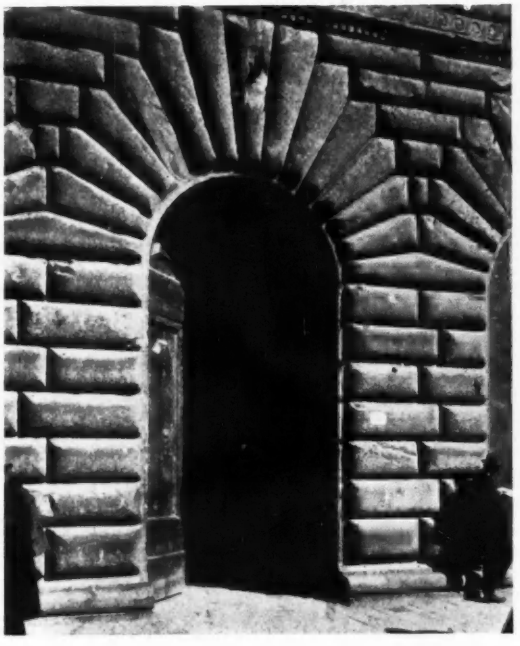
IN the above photograph and two of those reproduced overleaf may be seen examples of three portals of Florentine palaces. They are reproduced in chronological order and illustrate variations in the mason's craft current in Florence at the close of the fifteenth and opening of the sixteenth centuries.

The rusticated stones of the entrance of the Guadagni Palace (Il Cronaca: circa *1490) present a flat face, while those of the Uguccioni (built by Marietto Folfi, in 1530, from a design by Raphael) are almost semicircular in profile. With these may be compared the example at the Pandolfini (built by G. and B. da San Gallo, in the same year, also from Raphael's design); here the face is again flat, but the surface is deeply prick-tooled.*

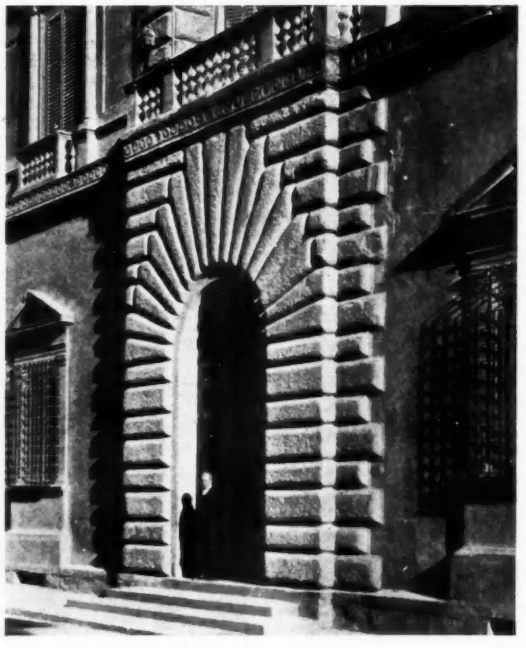
A further instance of almost semicircular profile is seen in the rusticated work, above a base of worked stone, in the photograph of one of the rear pilasters of the Vecchio Palace (Vasari: circa *1540), included to show the debased and spiritless form of much of the later work.*

—MYRON BEMENT SMITH

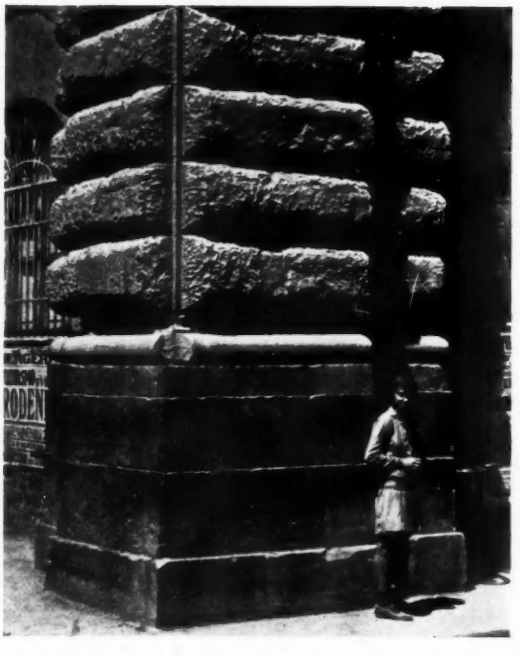
[These illustrations should be studied in conjunction with the article, "An Analysis of Florentine Stonework," the final instalment of which appears on pages 246-9 of this issue.—ED. A.J.]



ENTRANCE TO THE UGUCCIONI PALACE

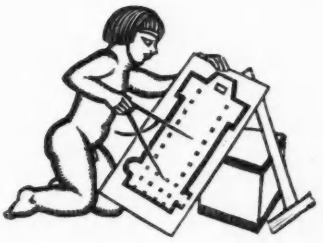


ENTRANCE TO THE PANDOLFINI PALACE



CORNER PILASTER OF THE VECCHIO PALACE

THE ARCHITECTS' JOURNAL



WEDNESDAY, FEBRUARY 11, 1931

ARCHITECTS AND THE REVIVAL

THE month of January brings us the annual speeches of the five great banking heads of this country. Year by year these speeches are eagerly awaited by business men, and men who are not in business but who realize the ever-increasing importance of economic thought in the life of today. But never before have these speeches been so universally listened to, so widely quoted from and so exhaustively discussed as they have been this present year. The reason is as obvious as the economic ills from which we are suffering are universally felt and known. Inevitably such a flood of quotation and comment must lead to distortion. Few of the people to whom the names of McKenna, Goschen and the others have been the subject of daily talk can have found the time to read these speeches in full. The popular Press, very humanly, chose its excerpts for the sake of contrast rather than to stress points of agreement. There was one point in particular on which all the speakers agreed as with one voice, and yet that very point has impressed itself on the public mind as the one on which there existed the widest possible divergence of opinion. We refer to the reiterated denunciation of the Unemployment of Money.

How was it the impression got abroad that the Bank chairmen were divided into opposite camps? Some said, with Mr. McKenna, that the present slump can only be ended if we spend more. Others, with Mr. Beaumont Pease, told us positively that the only way out lay through relentless saving. The public got hold of these two verbs and left it at that. "Which are we to do?" they asked; and since the evidence was conflicting they concluded that you were fully justified whichever you chose. But the evidence was not conflicting. Those who told us to spend our money were really telling us to spend it *upon fruitful and constructive enterprise*. Those who were for saving our money would have us save it *for* precisely such enterprise, provided always, as some of the speakers added, that current consumption be not reduced out of all proportion. The people with whom the renewal of trade must necessarily start are, to use Mr. McKenna's phrase, the "savers who continue to withhold their funds from investment." Work-shy money is at the root of our trouble today: such is the unanimous opinion of our economic leaders.

Six weeks ago we pleaded in these pages that the times were singularly opportune for the employment of money in building. We urged that architects' designs for future building developments should be "pigeon-holed no longer, but executed without further delay." That able and influential journalist, Mr. Gerald Barry, told us that the building industry was not only due to play a conspicuous part in the coming prosperity, but could play an equally great part "in setting, here and now, an example to the nation of self-help and self-confidence." During the weeks that followed, a great body of evidence has supported the contention and strengthened the plea. Sir Frank Baines showed how real estate values have failed to fall as building costs have fallen. This fall in costs, Mr. H. J. Leaning, whose experience as a surveyor is probably unparalleled, estimates at between 10 and 12½ per cent.

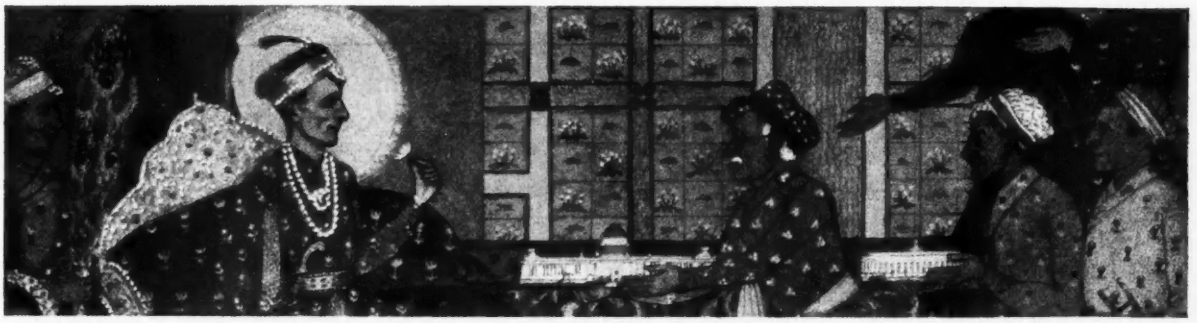
Many others have written, including Mr. Gordon Selfridge, who decided to build "here and now" an addition to his great store. Of what value is all this testimony? What use is it to architects? Readers whose clients have felt the influence of the current psychology of fear will need no answer to this question.

The evils of unemployment in the money world are now becoming startlingly obvious. The paramount security of building as a constructive investment stands out more clearly every day. Architects now know that in urging diffident clients to delay their schemes no longer they have a unanimous body of expert opinion behind them.



A PORTAL IN NEW DELHI

Sir Herbert Baker's perspective drawing of the Porch to the Princes'Chambers of the Legislative Buildings, New Delhi. The building covers an area of five acres, contains 2,500,000 cubic feet of brickwork and 350,000 cubic feet of dressed stone; and in the roofs of the Chambers and the central library 300 tons of structural steelwork were used. The colonnaded veranda which runs round the building comprises no fewer than 144 columns. The building cost almost three-quarters of a million sterling. The ceremonies and festivities in connection with the inauguration of the new capital of India—the conception of Sir Edwin Lutyens, R.A., and Sir Herbert Baker, R.A.—by the Viceroy, Lord Irwin, are now taking place.



His Excellency the Viceroy of India receiving from Sir Edwin Lutyens and Sir Herbert Baker models of their contributions to the New Delhi: a portion of a coloured cartoon by N. C. Shoosmith, presented with *The Indian State Railways Magazine.*

NEWS & TOPICS

£50,000 OF WORK—FEE: £400

A FIRM of estate agents advertised for and obtained the full-time services of a chartered architect to look after their architectural department. This man, with the help of one assistant and for a salary of £400 a year, looked after an annual turnover of £50,000 worth of work. This quite impressive total represented only a side line of the firm's business, being obtained through following up transfers of land and building property with tentative submissions of sketch-plans for the development of the newly-acquired sites. This quite respectable firm of estate agents regarded this sub-practice of architecture as a quite logical extension of their business—a legitimate piece of commercial enterprise.

★

It must be obvious to everyone who takes the profession of architecture seriously that examples such as this serve to show in what low estimation architects are suffered to stand in the commercial world, and how powerless we are as a body to prevent the segregation of qualified members for uses that are purely commercial, and result in the diversion of profits that might reasonably flow to the profession. Quite apart from the financial aspect of this case, multiplied upon every hand, there is the gradual cheapening of individual talent assessed at a beggarly money value, and the certain disintegration of the moral and ethical backbone of an art that performs high services to the community when these are free and untrammelled.

★

The work expected of such salaried architects is generally of three kinds—housing, factory work, and shop fitting—all three being branches of architectural practice that have been allowed to drift away from the profession, just as architecture and engineering have divided into separate activities. It is hard to say how architects can hope to regain what they have lost without dropping overboard a good deal of antiquated top-hamper. One thing I am certain of, and that is, that the profession must expand to include all these branches, and will die if it seeks to put a fence around what it feels it still can profitably possess.

THE SCOTTISH NATIONAL LIBRARY SITE

When the Office of Works first made public those ill-fated plans of theirs for Calton Hill, they little realized what reverberations would trouble the classic air of Edinburgh. Calton Hill is denied the officials, but that other matter of the Sheriff Court, left out of the main account, has become the centre, not so much of a controversy as of an expression of the rights of self-determination by the architects and citizens of Edinburgh. To understand the situation properly, one must understand that the present Sheriff Court, " of scholarly façade in a good state of preservation," is proposed by the Office of Works to be demolished to make way for a Scottish National Library, and rebuilt upon part of the Calton Jail site.

★

The Edinburgh Architectural Association, with the most accurate knowledge of the various sites and buildings, feels that the Sheriff Court site is too small for a National Library, and its situation on a busy bridge-head unsuitable. In a better position on High Street, adjoining St. Giles's Cathedral, they point to a site possessing ample land for extension, using which it will be possible to retain the Sheriff Court, at a considerable saving in money besides.

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Their methods of bringing the results of their examination of the problem to the knowledge of the Library Trustees, the Office of Works and the public do them and the architectural profession in Scotland the greatest credit, for their report is a masterly diagnosis of the conditions preliminary to building, and contains besides a close comparison of the accommodation of each site, comparative diagrams showing the areas of Scottish, Welsh and American national libraries, estimates of cost, and considerations of opportunities for the early development of either site. Their remarks are couched in such reasonable language and appear to be so well substantiated that it is little wonder that they have obtained a sympathetic hearing with everyone—but Trustees of the National Library. I devoutly hope that this is but a first instalment.

L.C.C. AND THE BUILDING ACT

The L.C.C. has appointed an Advisory Committee to consider what amendment to the Building Act will bring it in line with modern structural methods. The pity about an Act is that it can only be " in line " for a day before it is steadily but surely out-distanced by the progress of invention and practice. Certain powers in the London Act allow uncertain latitude on the part of examining officials, but the fact that we have in London no fluid bylaw system, capable of continuous readjustment, means that there is little incentive for the practice of methods of construction used quite freely in other countries.

★

The principles of cantilever, mushroom construction, slab concrete floors, and so on, over a wide field, may be possible by arrangement, but have otherwise no official recognition

as the economical and sound systems we know them to be. Thus we deal in Georgian walls and roofs as though we were still building in that manner. This very much discredits the reasoning power of the L.C.C. They should give away that old Act of theirs.

R.I.B.A. EXHIBITION OF RAILWAY POSTERS

Tomorrow, Thursday, there opens at the R.I.B.A. an Exhibition of Architectural Travel Posters, which will be found not only attractive on account of the examples displayed, but of special interest as illustrating the difference in the methods in this country and abroad. While the British posters are works of art by such well-known painters as Fred Taylor, Russell Flint, Philip Connard, Norman Wilkinson, the foreign ones aim primarily at securing what may be termed "full poster value."

*

This exhibition, which will remain open to the public until February 27, will be found to repay a visit. It seems incredible that the British railways, so stiff-necked as regards the design of their railway stations and other premises, should ever have been induced to traffic with the fine arts. We may be certain that they did not do so except under persuasion that it would pay; and if it pays in the one case, why not in the other? ASTRAGAL

CRITICKS:

A Reader's Way to Reconcile their Unfriendlinesses

To The Editor of THE ARCHITECTS' JOURNAL, att Westminster.

SIR,—Having lately read your Paper, called "The Architecture of Steel," wherein you acknowledge the Calamitie of our great Profession, to be, (as I understand you) the Division of Art and Skill: so that Art is the Profession of one Party (those called Architects) and Skill of another (called Engineers), whereas these two, ought to be considered, as Partners in a Marriage: But having fallen from that happy State, are so far dis-united, as not to employ Common Politeness one towards the other, so that One, though never so readie to hold out his Hand, and say, Let Art and Skill be joined together again, is rudely put out of doors, (and nothing goes forward); as much as to say, A Calamitie as shameful as can be imagin'd, which no one can deny; *indeed*

> "*Many an undertaking Critick would have built two stories higher upon worse Foundations*" (says *Tristram Shandy*);

and, conceiving that these two Partys are also each one divided into Three Partys (as I shall explain); I have pondered a Way to reconcile their Unfriendlinesses, and (to put an End to this Letter as well as to that) I have made out some new *Rules of Etiquette*, to be observed at the Meetings of these Gentlemen, and especially with their Criticks, of which I protest, the Most Humble, is

Yr Faithfull Servant,

WELLS COATES

Post scriptum: If you are minded to bring what I send you, to the sight of your Readers, I pray you, let your Printer be particular to use this Way of Spellyng, being politer than the new Fashion: for where Politeness is the Matter, it is material to the Manner, that the Occasion (and your Readers) be suited.

Written att Welwyn Garden City, in the County of Hertfordshire.

SOME *NEW RULES OF ETIQUETTE*, FOR *ARCHITECTS*, AND *ENGINEERS*, to be observed at their Meetings, and especially with their Criticks; together with a Description of the 3 Classes, of the one, and of the other, by which *Gentlemen* may the more readilie Discover, where They belong.

The *States of Partys in Division* may be, firstly, the State of *Contradiction*: secondly, the State of *Distinction*: and thirdly, the State of *Relation*.

(To which, may be added, a fourth State of Partys, which is, *Unification*.)

ITEM: *Art and Skill in Contradiction.*

To this State belong that Class of Architect, and that Class of Engineer, of whom the Critick says, of the one, his Architecture is wholly contradictory to Sense, and of the other, his Skill is utterly opposed to Beauty.

Which persons, upon meeting each other, shall bow low, at some Distance; and upon meeting their Critick, shall earnestly study, not to be seen.

ITEM: *Art and Skill in Distinction.*

To this State belong that Class of Architect, and that Class of Engineer, of whom the Critick says, *his* Art is for Art's Sake, and *his* Skill, for Skill's Sake; or to speak more properly of the latter, his Skill is concerned, only to find a Form, Perfectly suited to a Purpose (the which, *when it is also Informed by Imagination* is the true Being of Beauty).

Which persons, upon a Meeting, shall make Salutation, by Raising of Hats: and in like Manner, salute their Critick, also.

ITEM: *Art and Skill in Relation.*

To this State belong that Class of Architect, and that Class of Engineer, of whom the Critick says, they have (joining together, where Occasion allows Them) achieved a qualification of meer Skill by the discipline of Noble Proportion, that is to say, of Art.

Which persons, upon meeting their Critick, shall salute him by shaking of Hands, and likewise each other.

ITEM: *Art and Skill in Unification.*

Of this State, the Critick says, 'tis not to be achieved, but by one Mind, where what has been divided, shall Really be brought together again, being a Mind, that understands all Skill of itself, and has also Art.

Which person, if any such there be, upon meeting his Critick, shall do him all Curtesie, and leave him, going forward, on his Way.



The garden side. The walls are faced with hand-made sand-faced multi-coloured bricks, and the roof is covered with hand-made sand-faced tiles, both materials being specially selected by the architects to harmonize with Lowther Lodge, Kensington Gore, S.W., to which the new building forms an addition. Lowther Lodge, a private house built by Norman Shaw, became the headquarters of the Royal Geographical Society in 1912.

ADDITIONS FOR THE ROYAL GEOGRAPHICAL SOCIETY

DESIGNED BY KENNEDY AND NIGHTINGALE

THE new buildings of the Royal Geographical Society are an extension to Lowther Lodge, Kensington Gore, a private house built by Norman Shaw in the 'seventies. It was in 1912 that the society removed to Lowther Lodge from Savile Row, the house being purchased from Lord Ullswater (then Mr. J. W. Lowther, Speaker of the House of Commons) by the late Lord Curzon, then president of the society, during, it is said, a five minutes' conversation at the University Cricket Match.

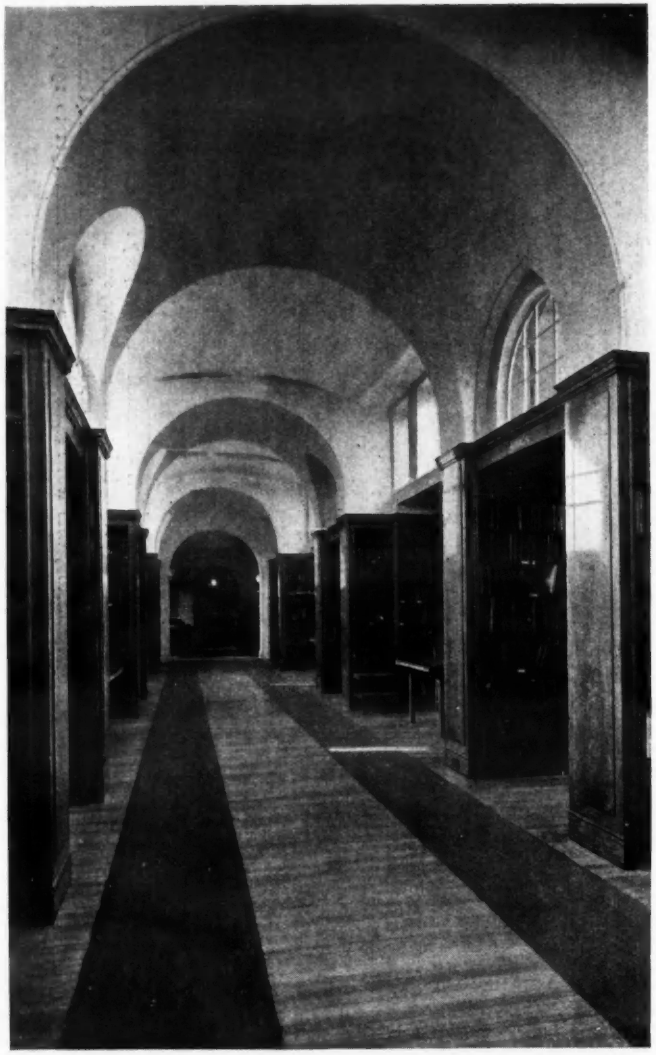
The new additions are built on the left of the old building at the corner of Kensington Gore and Exhibition Road, and include a lecture theatre to seat 850 persons, council chamber and library addition.

In designing the lecture theatre the architects have endeavoured to provide an atmosphere thoroughly in keeping with the social side of the society, an atmosphere at once sympathetic and harmonious, where travellers not necessarily trained in public speaking will feel at home while delivering lectures. This atmosphere of friendliness is reflected throughout the whole building. Adequate defence has been made in the lecture hall against the noise of traffic from the streets, and every attention has been given to the acoustics, Mr. Hope Bagenal being the acoustic consultant. Adjoining the lecture theatre is a series of ambulatories which are to act as places for meeting and discussion during receptions.

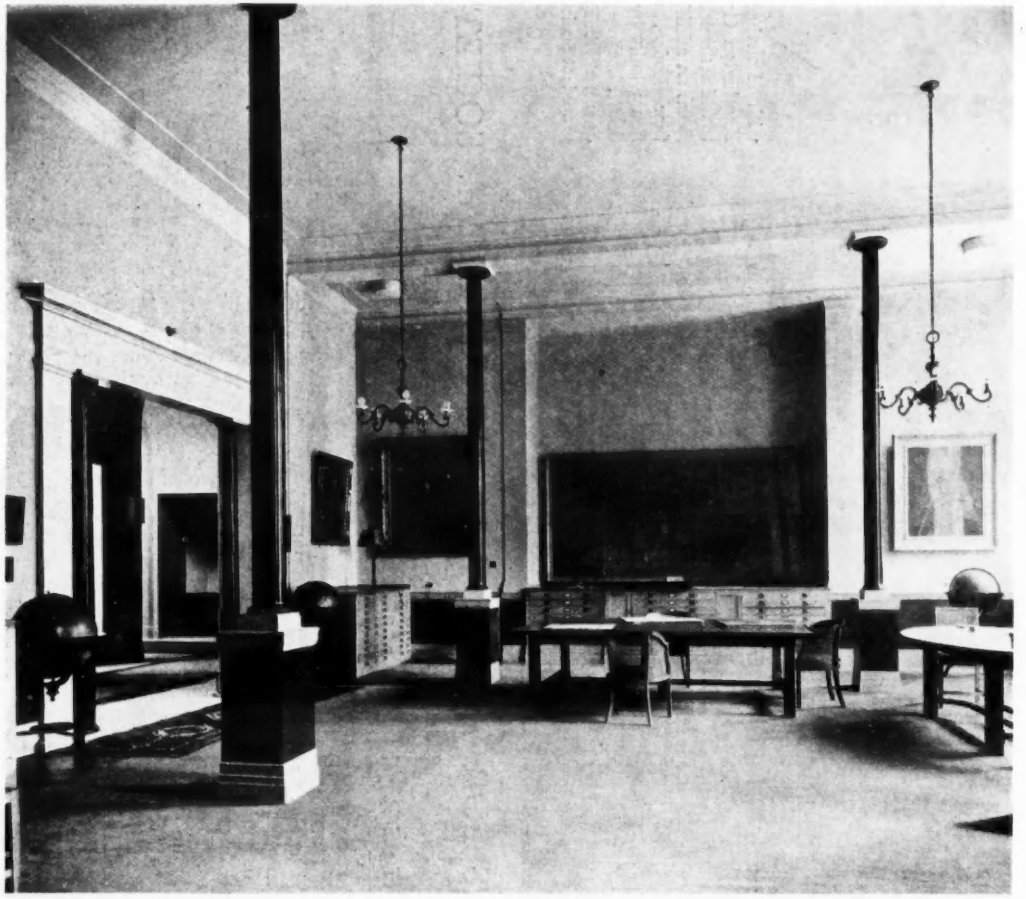
On the street façades two niches have been designed in stone to accommodate bronze statues. One of Shackleton, the famous explorer, is now being modelled by Charles Jagger.



The council chamber is decorated in light grey and white. The marble fireplace on the right is by Norman Shaw, and originally stood in the old building; above it is a portrait by Sargent of the late Earl Curzon of Kedleston, who was President of the Society from 1911 to 1914.



The library extension contains a magnificent collection of books, hitherto distributed in rooms and passages, and even in cellars. The book racks are of oak, and form the walls of the recesses, in which are writing-tables and chairs, on either side of the library. Above the racks the walls are finished white.



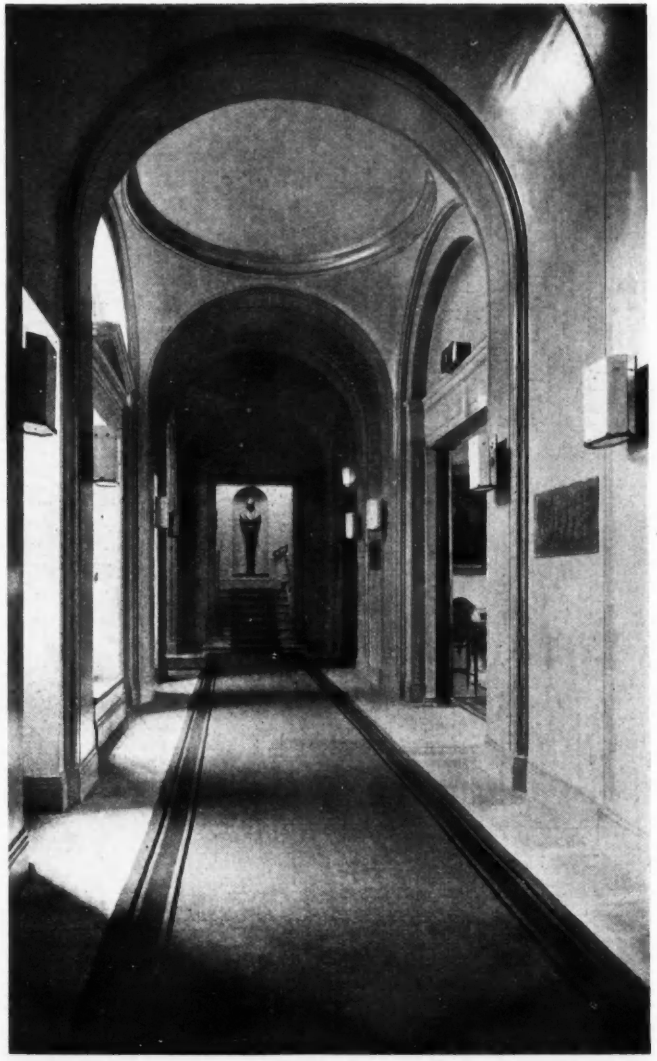
In the new map room the walls are in various shades of grey, with a dark-brown dado. The columns are a still darker brown, and have bases treated in similar colours to the dado. The maps of the Society are generally regarded as the finest unofficial collection in the world. The room overlooks the garden.

In the lecture theatre seating accommodation is provided for 850 persons. The two semicircular arched openings look from the lobby of the council chamber. Beyond the right-hand side of the illustration are the platform and the screen upon which lantern slides or moving pictures may be thrown to illustrate travellers' lectures. The colour scheme is in browns, greens and greys.

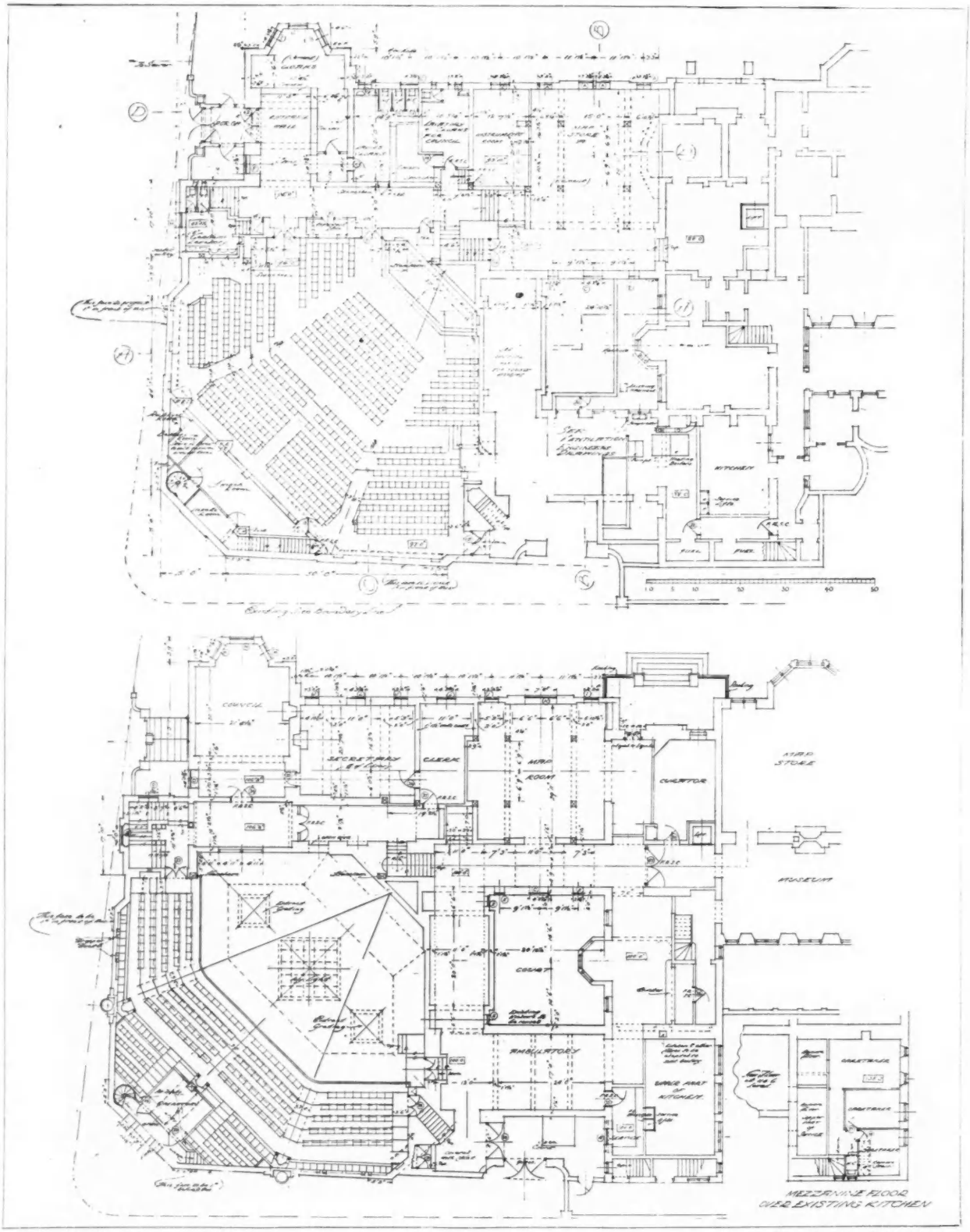


R.G.S. Additions, Kensington, S.W.]

The ambulatory looking towards the staircase leading up to the council chamber. On the walls are Assyrian reliefs collected by Sir Henry Rawlinson and presented to the Society in 1926 by his daughter-in-law, Lady Rawlinson.



[*By Kennedy and Nightingale.*



R.G.S. Additions, Kensington, S.W.] [*By Kennedy and Nightingale.*

Plans of the basement and the ground floor. The entrance, lecture theatre, and cloak rooms are at pavement level; the public rooms and ambulatory are on a level with the ground floor of Lowther Lodge, and are half-way between the floor and gallery of the lecture theatre. The secretary's room and council chamber are planned above the cloak rooms, so as not to be deprived of sunlight by Princes Court, a tall block of residential flats to the south of the site.



The seventeenth-century fountain of the Four Rivers, in the Piazza Navona, Rome, designed by Giovanni Lorenzo Bernini.



" In former times the water supply of towns was provided by public fountains which gave great architectural opportunities. The modern substitute is the scullery tap; you can't get much architecture out of a tap."

ARCHITECTURE *versus* ENGINEERING

i: The Battleground Surveyed

BY A. J. PENTY

EVER since the Great Exhibition of 1851, when the doctrine of Modernism in architecture was first thrust on the profession by a clamorous press, architects have sat uncomfortably on the horns of what has appeared to them an unescapable dilemma. Their traditions and instincts linked them with the past, disposing them to believe that if any new style of architecture was to make its appearance in the modern world it would grow out of, and be akin to, the great architectures of the past. But what their feelings and instincts asserted circumstances appeared increasingly to deny.

The styles of architecture of the past, it was said, were the expression of the conditions of the ages in which they appeared. The deduction was made that the only terms on which architecture could get out of the pit into which it had fallen and become again coextensive with civilization were that architects should cut themselves adrift from the traditions of the past and build up a new style of architecture upon a basis of engineering.

The majority of the profession, listening to their feelings and instincts rather than popular opinion, have for the most part ignored this advice. But of late years, and especially since the Paris Exhibition of 1924, the attempt has been made to induce the profession to change its attitude and to accept without equivocation the conclusions that are to be deduced from the pseudo-scientific-engineering hypothesis. It will be my purpose in these articles to defend the traditional attitude of architects towards their art.

I believe that the theory that any new style of architecture must have its foundations in engineering is fallacious, because architectural form and scientific construction do not entirely coincide. Indeed, it is to be affirmed that in so far as architecture is based upon construction it is rule-of-thumb rather than scientific construction. And for that reason it is not true, as Professor Lethaby asserts, that " there is no strife between science and the art of architecture." I hope to show that a very real conflict does exist, and that the only safe position for architects is to continue to approach architecture from the æsthetic point of view, on the assumption, to use the words of Mr. Aldous Huxley, that " art is the organization of chaotic appearance into an orderly and human universe." (*Jesting Pilate*, p. 91.)

The simplest way to prove the existence of a conflict between art and science will be by means of a few illustrations.

Consider the question of heating. It will not be disputed that an open fireplace with fire-dogs offers architectural opportunities that a closed grate does not. Yet a closed grate gives out infinitely more heat than an open fireplace, and is therefore to be considered more scientific. But the method of heating most approved by people with a purely scientific outlook is that of central heating, in connection with which architectural opportunity entirely disappears, for the aim of every architect is to keep the radiators as much out of sight as possible.

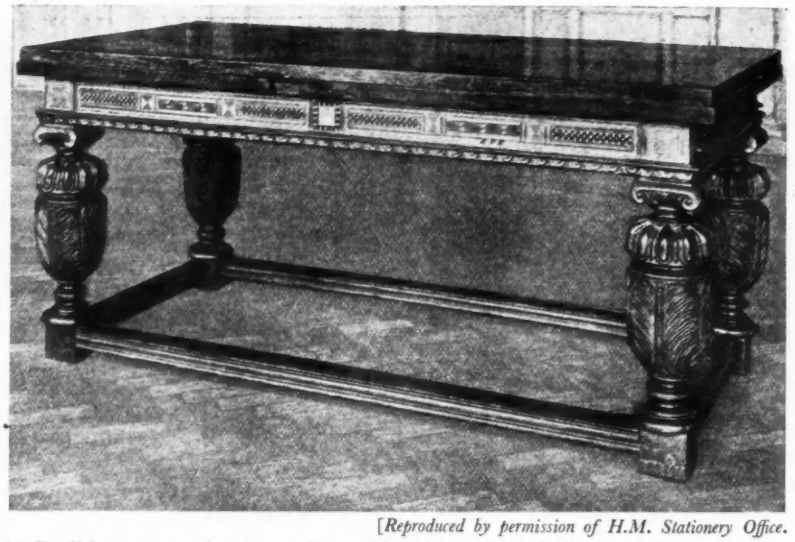
Then take the question of water supply. In former times the water supply of towns was provided by public fountains which gave great architectural opportunities. The modern substitute is the scullery tap. No doubt it is a great gain from the point of view of domestic convenience, and I suppose it is therefore to be regarded as a more scientific method of water supply than is provided by public fountains. But architecturally there is loss, for you can't get much architecture out of a scullery tap.

Consider roof construction. A king-post principal is a much more scientific thing than a hammer-beam one, for a hammer-beam principal is not self-supporting. It has to be propped up by thick walls and buttresses. Yet no one, I suppose, would affirm it offers anything like equal architectural

opportunities; and what shall we say of the saw-tooth roof, so much used in factories nowadays? It is without doubt entirely justified from a utilitarian point of view. Yet it is positively ugly, and I cannot imagine any architectural solution ever being found for the problem which it presents. There is only one thing to be done—to hide it.

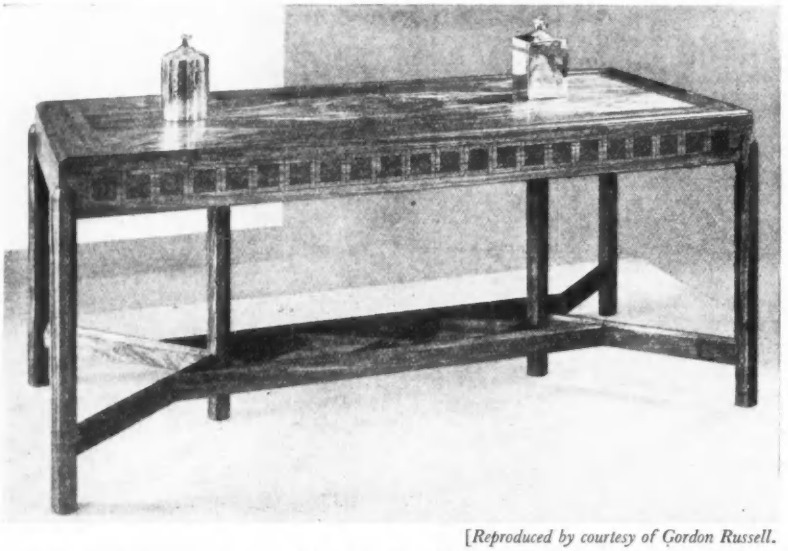
Take fortifications. The mediæval castle was a fine thing. But modern fortifications are simple earthworks. The triumph of science has here annihilated art.

Consider the design of tables. We appear to be all agreed that a table looks best when the legs are connected by rails near the floor. But such rails are inconvenient. They get in the way of our feet. Accordingly, when we are guided by purely utilitarian considerations, as in the case of a kitchen table, we omit the bottom rails which constructionally are unnecessary. But we put them in when we are out for architectural effect. There is no denying that here is a conflict between the demands of æsthetics and convenience. It is regrettable that it should be so. But there it is.



[*Reproduced by permission of H.M. Stationery Office.*

An English seventeenth-century draw-table, of oak with inlaid frieze, illustrating the tradition of substantial rails connecting the legs. (V. and A. Museum.)



[*Reproduced by courtesy of Gordon Russell.*

A modern English example, in which a variant of the old tradition of leg-rails has been followed with a difference, the design being of the present day.

Another case of conflict between scientific and æsthetic law occurs in connection with the use of mullions and leaded lights. If the mullions are executed in oak they should be 3 ins. or 3½ ins. wide, whereas if they are in deal and painted white they should not be more than 2 ins. wide, if they are to look right. Why is this? The reason obviously is that, if mullions are painted white, they are too conspicuous if made 3 ins. or 3½ ins. wide. Yet if the last word is with science and utility, deal painted mullions should be wider and not narrower than those in oak, because deal is not as strong as oak.

"*A table looks best when the legs are connected by rails near the floor. But they get in the way of our feet. In the case of a kitchen table, we omit the rails.*"



[*By courtesy of Staines.*

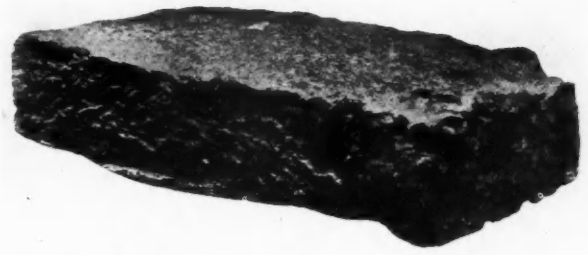
Modern kitchen table, without leg-rails.

Let us consider the scantlings of wood beams. A beam 12 ins. by 12 ins. has not the strength of one that is 16 ins. deep by 9 ins. wide, though it has an equal sectional area. Yet a 12 ins. by 12 ins. beam will look better than one 16 ins. by 9 ins.; what is more interesting is that one which is 10 ins. deep by 12 ins. wide will look better than one which is 12 ins. by 12 ins.

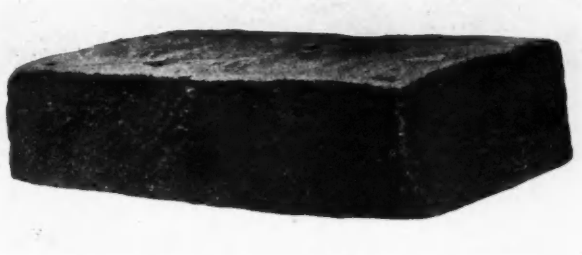
And the same is true of joists and rafters. They look best when laid flatways. The explanation is that a greater depth than width breaks the rhythm. From an engineering point of view a beam laid flatways is unscientific, and a waste of good material. But science and æsthetics are obviously not the same thing.

Take bricks. The hardest and most durable bricks are not the most beautiful. Those with a pleasing colour and texture are comparatively soft, though they may be durable enough for practical purposes. If we were guided in our practice entirely by scientific standards, I suppose we should always build in blue bricks. Consider again the relations of bricks and stone. Brick is a much more durable and permanent material than stone, as old buildings testify. Yet when we use brick and stone in combination we use stone in the places where we want to suggest strength.

Now all these contradictions or anomalies have nothing to do with our eyes getting accustomed to the scientific way of doing things, as Professor Lethaby would have us believe; for our eyes in these days are much more used to seeing the scientific than the æsthetic solution of these problems. On the contrary, they are only intelligible when we approach architecture from the æsthetic point of view.



An old Tudor brick, rough in texture, and of deep colour.



A modern multicolour facing brick, smooth and precise.

" The hardest and most durable bricks are not the most beautiful. Those with a pleasing colour and texture are comparatively soft, though they may be durable enough for practical purposes. If we were guided in our practice entirely by scientific standards, I suppose we should always build in blue bricks."

Architecture, to be really impressive, must exhibit in some degree what an American economist has called " conspicuous waste," or in other words, it must exhibit an excess of strength. An Egyptian temple, the Doric Order, a Norman cathedral, are impressive for this reason. They are massive, prodigal and lavish in their use of material. A concrete wall 4 ins. thick may satisfy all utilitarian requirements, but it can never be as impressive as a brick or stone wall 2 or 3 feet thick. There is no escaping the conclusion that the more scientific construction becomes, the less it has to say for itself in the terms of architecture.

The truth is that architecture and engineering are different things serving different ends. They acknowledge different starting-points and move towards different goals. Architecture followed the discovery of the principles of geometry, and is definitely related to it. Engineering, as we know it, on the contrary, is the product of the evolution of the science of statics, which is but a hundred years old, and is to be traced ultimately to the discovery of the law of gravitation by Sir Isaac Newton.

THE DECORATION OF BUILDINGS

SIR WILLIAM ROTHENSTEIN, M.A., Principal of the Royal College of Art, lecturing on the above subject at the R.I.B.A., on Monday of last week, began by saying that as he had no set paper to read he was privileged to make a few wandering remarks about his subject.

Very early in his life he had formed the idea that something in the nature of portraying local life, such as the life and people of the district and introducing street scenes and local characters, just as the Italian masters used to do, was going to save English painting, and he would like to see public bodies, etc., employing local artists to decorate their buildings. This, he thought, would be better than the local authorities paying a thousand guineas for a portrait of a mayor every few years, and would give painters an opportunity of dignified representation of human beings, which was seldom allowed the individual artist. He thought that such was the proper way to get people interested in art instead of the Italian and Persian Exhibitions. The local artist, instead of coming to London as the one place to earn his living, would be educated locally, and could be employed by painting the local landscape, life and people.

Speaking of the younger artists, he said that, looking back on his young days, he could not imagine that any of the group to which he belonged could have done work of the straight kind, such as that at the Tate Gallery by Mr. Rex Whistler, and that at Morley College by Edward Bawden and Eric Ravilious. It looked almost like a renaissance, and it was painful to him to know that youngsters could do this work direct on to a wall and yet have comparatively little work to do. It was no secret that at Morley College the painters were paid £5 a week for a year, and were glad to have the opportunity.

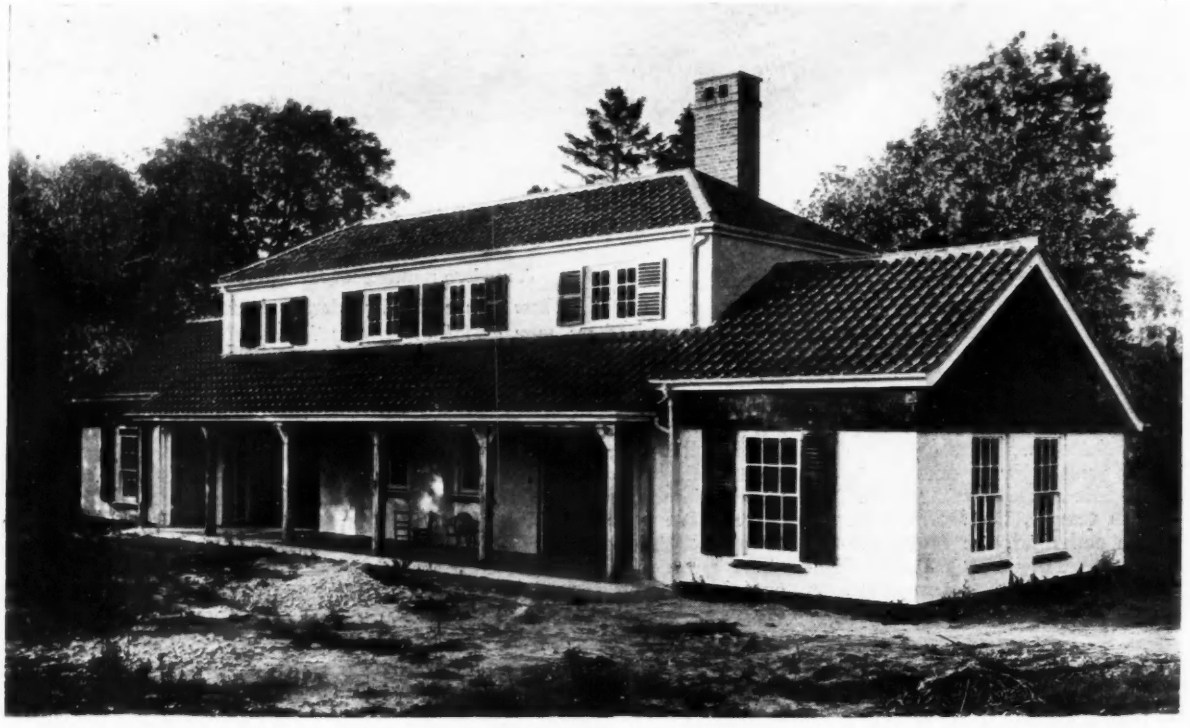
If we had decoration as a usual thing, men would learn by practice; architects would learn what artists could do, they would get to know who were the best painters, the best sculptors. He was surprised at the lack of touch which even distinguished architects had with the world of the artist. Musicians knew one another, and, to a great extent, knew what each musician could do excellently; they knew whom they respected. Architects knew what architects they could respect, but constantly one found an odd ignorance as to the capabilities of their painter contemporaries. He doubted if such a state of things could exist if work of this kind were much more common; and he thought what had happened recently showed architects that they need not be afraid of painting. He did think that the younger men today had shown a knowledge of composition and a power of carrying out elaborate compositions which had been very rare in English painting before; and not to use this asset which we had had given to us by the gods would be to waste great national wealth.

In conclusion, after showing many slides, he asked that just a little less money should be spent by architects on bricks and mortar, and a little more on their colleagues in the other arts.

Sir George Clausen, R.A., proposing the vote of thanks to the lecturer, spoke of the work Sir William had done at the Royal College of Art, and supported his appeal to the architects in hoping that they would give the younger artists a chance.

Mr. Hubert Worthington, M.A., F.R.I.B.A., who has been teaching architecture at the Royal College of Art for five years, seconding the vote, said it would be a good thing if every architect could spend five years at the Royal College; sculptors and painters were given a year's study of architecture, and they got down to it in a remarkable way. He hoped that every architect would do all in his power to help the younger men of the other arts.

Sir Banister Fletcher, P.R.I.B.A., who presided, said that, owing to the easily acquired unemployment grants, town halls, baths, wash-houses and a large number of public schools and works of that kind were being erected, all of which were capable of being decorated internally. Sir Banister suggested to his colleagues present, many of them distinguished men, who were designing those public buildings, that they should take note of what Sir William Rothenstein had said, and should make an endeavour to get their clients to employ some of the skilful young painters on their buildings, and if they were successful, then the number of unemployed in the painting profession would gradually diminish.



ELLEN TERRY

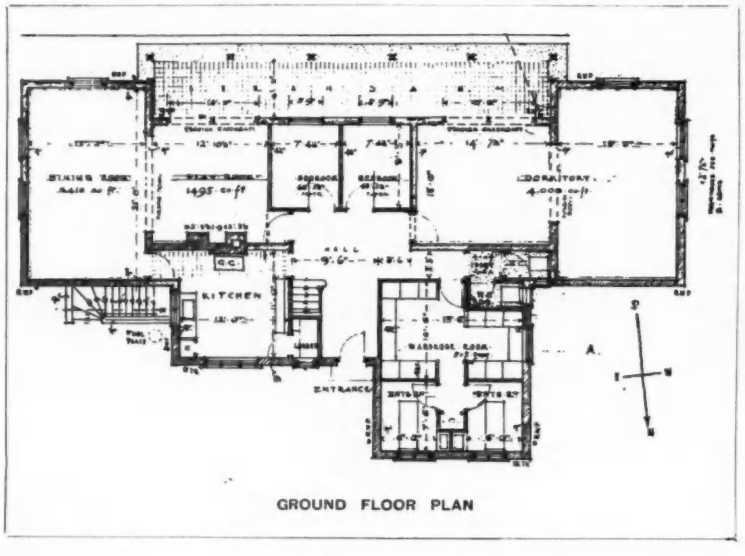
DESIGNED BY DARCY BRADDELL

THE Servers of the Blind League, among other activities, run a home for blind and mentally deficient children at Wray Park Road, Reigate. On the death of Ellen Terry, who was their first president and an ardent worker in the cause of the blind, a fund was raised to build, as a memorial to her, an annexe to provide much-needed extra accommodation to the existing home.

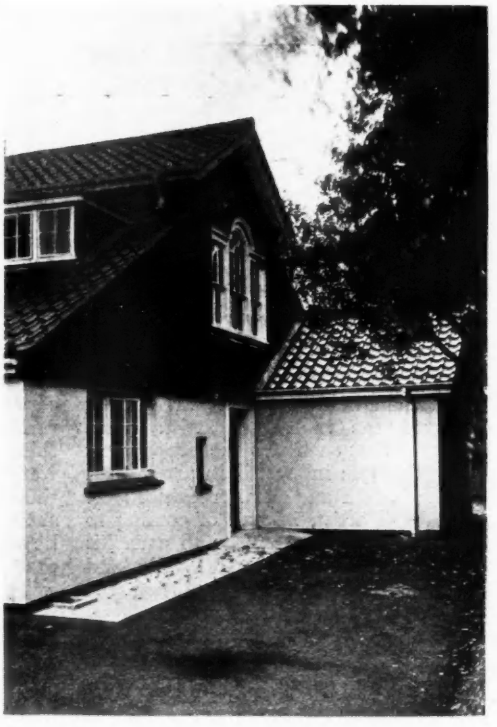
It was decided to make this an entirely separate building, though in the same grounds, so that the smaller children could be separated from the older ones. As it was for the blind it was necessary to get all the children's accommodation on the ground floor,

The south front. The roofs are covered in green glazed pantiles, and the gable ends, etc., are hung with brown hand-made sand-faced tiles. Window frames are white, shutters green.

Ground floor plan. The home has been designed to accommodate from ten to twelve blind and mentally deficient children. Notable features of the scheme are the spacious day-room, the dormitory, the large veranda and, of course, the garden.



GROUND FLOOR PLAN



The main entrance. The walls are of brick, rendered and colour-washed peach, and have a black tarred base. The wing projecting from the main front accommodates the wardrobe room and two bathrooms. The two windows on the ground floor of the main building light the kitchen and larder, respectively.



HOME, REIGATE,

AND HUMPHRY DEANE



The hall and staircase. The balusters of the stairs are painted pillar-box red, every third one being white. The door on the left leads to the kitchen; that on the right to the playroom. The latter is separated from the dining room by folding doors, an indication of which may be seen in the photograph.

In the dormitory, as in the day-room, are folding windows opening on to the veranda, so that during both night and day various stages of open-air treatment can be given to the children.

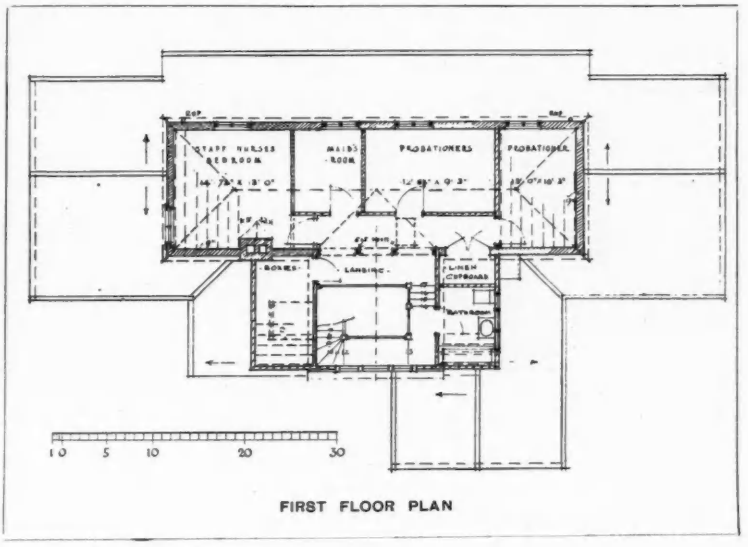
On the first floor are the staff bedrooms. All the accommodation for the children, as will be seen from the plans, is provided on the ground floor. The building is heated by radiators, a fireplace being provided only in the playroom.

and as a night nurse is always on duty, to arrange the staff bedrooms above.

The building is designed to hold from ten to twelve children, and in general principle they have one large day-room and one large dormitory, a good veranda, and, of course, the garden.

Both the day-room and the dormitory are arranged with folding screens so that they can each be divided into two rooms when required.

It was felt that although the children were blind, it would be right to do everything to create a cheerful nursery atmosphere in the building; to this end gay colour schemes were adopted throughout.



FIRST FLOOR PLAN

LETTERS FROM READERS

Building for Prosperity

SIR,—I used to think that economics was an exact science (that was because I knew nothing about it). I used to think that when leading economists and politicians made announcements in the Press on gold standards, price levels, wage levels, over-production, under-consumption and rationalization, they knew exactly what they were talking about. I now discover that they know about as much as I do.

A few years ago, under their leadership, the country set out with the magnificent slogan, "The more you produce, the more you earn." It was then discovered, after a while, that we were on the wrong track, so a plague of rationalization set in. Then we learned that what was wrong with the country was over-production and under-consumption, and now I read in my newspaper that one leading economist advises me that national thrift is the only way to salvation, and in the same week another equally important economist tells me that I must spend more to get more. I could have told him that a year ago, and so could most of your able correspondents, who are much more in touch with real life than all the politicians.

For, when you come to think of it, the whole thing is so clear to any man whose mind is not clogged with economic or political catchwords. We now have hundreds of millions lying fallow in deposit with the banks and insurance companies. Besides this, it is estimated that the deposits with Building and Saving societies have grown to three hundred and twelve millions. During this time, when people are afraid to invest, and dividends of gilt-edged securities hardly pay for the stamp paper, there must be nearly a thousand million pounds lying about doing nothing in particular.

Now, as an interesting corollary to this, we have three million men lying about doing nothing in particular, except begging, drawing the dole, or living by doing mostly useless odd jobs. The inference is obvious. Why not turn this dormant energy and potential wealth into valuable and, mark you, concrete and lasting assets, in the way of pulling down and rebuilding slum areas, clearing up the vast squalor and muddle of our cities, and reconditioning plant and factories? The Government could float a vast reconstruction loan. The response would be enormous.

But apart from the improvement in civic amenities, and the corresponding increase in health and productive efficiency, this would be the finest, and now the only practicable, way of setting the wheels of industry in motion again.

Next to agriculture, building is the largest and most extensive industry in the country. When money goes into building, it passes on by a thousand channels into every conceivable kind of industry: steelwork, furniture, fabrics, gas and electricity.

There is hardly an activity it does not touch.

But this impetus would not end with the building trade and all its ancillaries: it should set up new directions for our export trade. Though this is a subject which I would rather leave on one side for the moment, except to say that I think that the idea, which every industrial country in the world now has, that it may dump its surplus production on some other country, is at the whole root of the world depression.

The point that I wish to emphasize here is that this idea of an everlasting balance of export over import has so obsessed the minds of Englishmen that they have dedicated the whole of their national life to it. Instead of looking at their own country, putting all their surplus energy into trying to make it a better place to live in, they have been the whole time "on the make." In short, we are like a factory that has been so busy with increasing orders that it has been added to, and patched up in a muddled sort of way, and now badly needs rebuilding and replanning for modern life and production.

Yet even for those who believe in this export balance, there are new avenues of production. It is unlikely that we shall ever reach our former position in coal, iron, cotton and woollen products, for in this respect the other industrial countries of the world have taken a leaf out of our own book. Yet, with a great national campaign for building, this country should specialize on building products for the world markets.

With greater demand in this country, we could set up factories equipped and organized for mass production on a tremendous scale for cement, bricks, steel furniture, glass and electrical equipment — and always remember we have millions of tonnage in idle ships ready to carry these bulky products.

Now is the time to do it. Now is the time to consider what are the vital and what are the expiring industries, and now is the time to turn that wasting man-power and that surplus wealth into making this, our great workshop of England, a better place to work in.

And perhaps even some day we shall wake up to the fact that we have to live in this country besides make money in it.

FREDERIC TOWNDROW

The Architecture of Steel

SIR,—The difficulty I see in your proposal of the constructional steel manufacturers working in closer union with the architect is that all buildings, bridges, etc., are so rushed through that the architect has not time to consult more than one steel manufacturer, and so when it comes to placing the contract can only get one quotation from one man and, therefore, does not get the advantage of open competition. I quite agree that very often sad mistakes in construction would be avoided if there was more co-operation between the designers of steelwork and the actual manufacturers.

HENRY C. SIMPSON
(THE HORSEHAY CO., LTD.)

The Ideal School Hall

SIR,—I have read with interest the article by F. C. Happold [and H. C. Hughes—ED. A.J.] on the "Ideal School Hall" in the JOURNAL for January 28, and, while fully agreeing with his three conditions governing the planning of this important part of the school building, I feel that his subsequent solution of the problem he set himself raises too many debatable points to be titled the "Ideal" school hall.

Perhaps the chief amongst these is the planning of the combined balcony and library. The functions of a balcony and those of a library are so entirely alienated from each other that to attempt a combination must inevitably lead to failure; this is, I think, adequately proved by Mr. Happold's planning. Here the chief function of a balcony—to give an uninterrupted view of the stage from all seats—has been sacrificed to the needs of the library, with the result that the line of vision of the audience behind the first two rows is totally obscured by the people in front.

The library, too, has suffered to some extent, its arrangement being scattered, while the method of dividing it from the main body of the hall by means of movable shutters or partitions will certainly not prove sound-proof and, I fear, will be far from pleasing when viewed from the hall.

It is now generally accepted that side balconies are practically useless, even when built to a proper rake, the awkward angle of the seats to the stage being most unsatisfactory, especially in a comparatively narrow hall.

Let the balcony, then, fulfil its purpose and be unhampered by the library. Dispense with the side balconies; widen and lengthen the hall a little and form

a cantilevered balcony across the rear portion, properly raked and stepped to ensure a clear view of the stage from all seats. An open roof with exposed trusses should be substituted for the flat roof with lantern lights, this being more suitable both from the æsthetic and the acoustic points of view.

With the stage extended and widened to the new width of the hall, and a movable partition screened by curtains placed in the proscenium opening, an excellent room is formed for the accommodation of the library. Bookcases can be placed along the long uninterrupted walls, while a window on the hall axis, together with a top-light, will provide adequate natural lighting. With the library in this position, the hall is easily accessible for use as a working library, whilst, with proper arrangement, the bookcases will in no way interfere with theatrical productions. The stage apron should be extended 6 ft. into the hall, thus providing sufficient accommodation for conducting morning prayers, roll call, etc.

Although it is not possible, here, to give more than a brief criticism of Mr. Happold's plan, I feel that should a hall be modelled along the lines indicated above, the result will much more nearly approach the ideal state of combined beauty and efficiency.

A. G. ALEXANDER

Better Building Methods

SIR,—Sir Clement D. M. Hindley takes exception to my remarks on his recent speech at the annual dinner of the Institution of Structural Engineers.

Since writing my letter I have read a fuller account of his speech published in your JOURNAL, and fail to see how I have done him an injustice.

I would suggest that he has overlooked the main arguments which I brought forward to support my contentions.

Function, utility and scientific accuracy as ends in themselves will never produce great architecture, nor bring greater happiness to the worker —two very desirable ends.

The spire of Salisbury and the towers at Lincoln and Durham were built without, we believe, elaborate formulas in graphic statics, and they have stood a very long time. To merely "free ourselves from the trammels of old tradition" which produced such great and lasting work, seems to me to be a crude way of expressing the true path of progress. Tradition is tradition because it is founded on the best of all preceding ages, and no amount of tall talk on function, utility and scientific progress can justify any system which begins by sweeping away the established usages of countless ages. Sir Clement said in his speech that "the engineer had opened his eyes to æsthetic considerations." This is not particularly evident in most recent examples of engineering.

If the whole end of architecture and engineering is function, economy, scientific accuracy and speed, then we may say farewell to most "æsthetic considerations." X. X.

On the Job: Wet Sites

SIR,—Your contributor of the article bearing the above title, in the issue of January 21, refers to the growing practice amongst engineers of using proprietary waterproofing compounds with concrete, in order to tank out basements in wet ground, and because of the rapid extension of this practice it is desirable to examine the suggestion that it might be an advantage to have the waterproofing compound mixed with the cement before delivery to the site, so as to reduce the risk of its omission by carelessness or oversight. It has been our experience that although, here and there, an architect or engineer or builder might prefer to have this mixing done at the cement works, it is generally considered preferable to have the waterproofing compound added on the job, and there are good reasons for this.

In the first place Portland cement is a material that must be used fresh, and unless the already waterproofed cement is ordered in driblets there is a danger of the surplus, over immediate requirements, lying about on the job and getting stale. Undue caution in ordering these supplies may lead to a shortage at a crucial stage in the progress of the work.

So far as our own material is concerned, it is hardly correct to say that if the waterproofing powder is omitted from a batch of concrete there is nothing to warn the supervisor of that fact; concrete which contains an adequate proportion of the waterproofing powder possesses certain characteristics of appearance and behaviour, both when in the dry mix and when plastic, and given good intent and proper organization there is no greater danger of the waterproofing powder being omitted from the concrete than there is of the cement being left out.

It also has to be remembered that it is not always necessary to use the same proportion of the waterproofing compound for the whole of any one job, and as it would be very confusing to have separate consignments of cement waterproofed with various percentages, it would either involve extravagance by the use of the maximum proportion for the whole of the work, or a skimping of the waterproofing compound if the cement were ordered with the admixture of less than this maximum quantity.

We would like also to state that although, as your contributor remarks, the percentage of the waterproofing compound to the cement is small, in the case of our brand of waterproofer the percentage is always specified by weight, and as it is a powder which is less than half the weight of an equal bulk of cement, a percentage of five by weight is actually more than eleven per cent. by bulk, and this is one reason for the efficacy of what might otherwise seem a small proportion.

KERNER-GREENWOOD AND CO., LTD.

Modern Theatres and Cinemas

SIR,—An apology is due from me to Mr. P. Morton Shand for an inaccuracy in reference to his book, *Modern Theatres and Cinemas*, in my survey of the books of 1930.

Mr. Shand complains that I said that he "ignores the American Continent"; which I did, and the phrase should have been qualified by an "almost," as he gave two examples from the United States among the forty-nine theatres illustrated. I still feel that Mr. Shand has approached the problem from the point of view of the layman, as is evident from his criticism of the contributions of United States architects to cinema design.

Although the decorations of the American cinemas are in most cases purely "period," great contributions have been made there to the technique of cinema design, especially in relation to planning, and I think that any comprehensive book on the subject should have taken more notice of work from the other side of the Atlantic. In a fuller review of this most attractive book I have dealt in greater detail with some of the points raised. I gladly apologize to Mr. Shand for the inaccuracy of which he complained.

GRAHAME B. TUBBS

[A review of *Modern Theatres and Cinemas* will be published in our next issue.—ED. A.J.]

Architectural Students

The Board of Architectural Education recently presented to the Council of the R.I.B.A. their annual statistics for 1930. The figures show that in the fifteen schools recognized for exemption from the R.I.B.A. Intermediate and Final Examinations and in the eleven schools recognized for exemption from the Intermediate examination only, there are in attendance no fewer than 1,683 students, of whom 140 are women. This figure represents students who are actually taking school courses leading to exemption from the R.I.B.A. examinations, and does not include those students who are taking part-time or evening courses not so recognized.

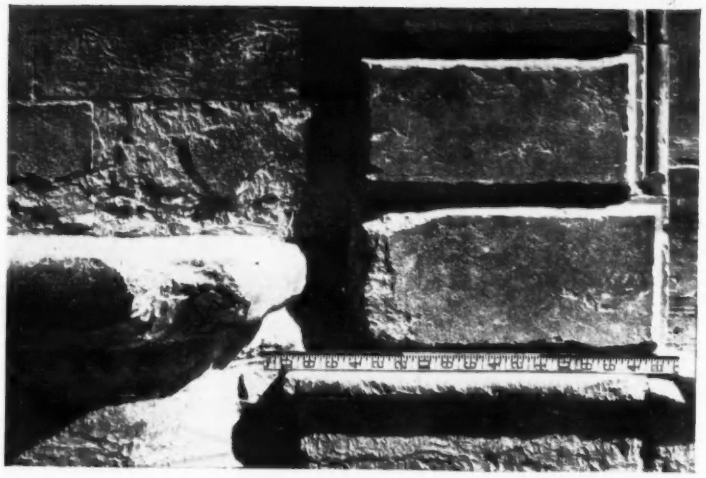


Figure thirteen. Base and doorway surround of the Guadagni Palace : Il Cronaca, architect (*circa* 1490).

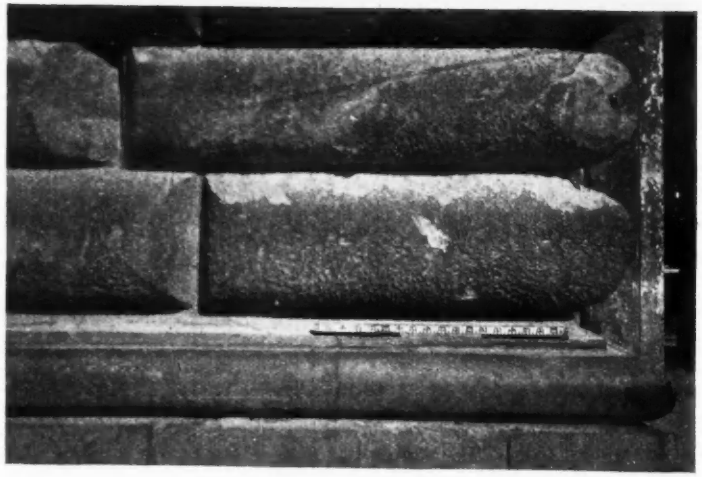


Figure fourteen. Base of the Uguccioni - Fenzi Palace : Raphael, architect (*circa* 1530).

EXAMPLES OF RUSTICATED STONEWORK IN FOUR FLORENTINE PALACES

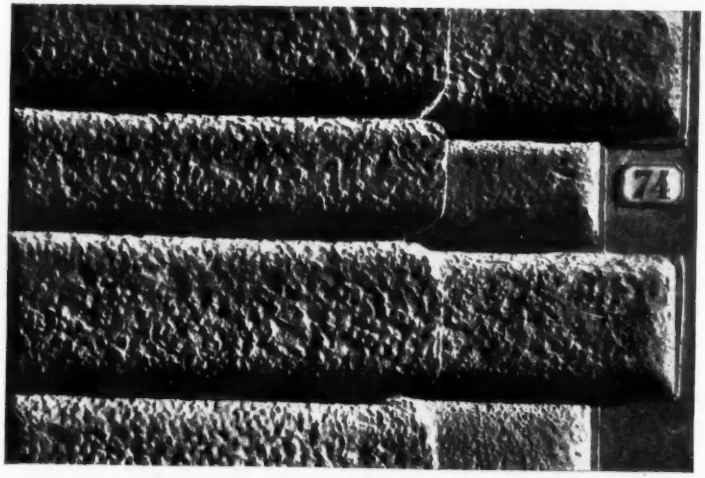


Figure fifteen. Rustication at the portal of the Pandolfini Palace : Raphael and San Gallo, architects (*circa* 1530).

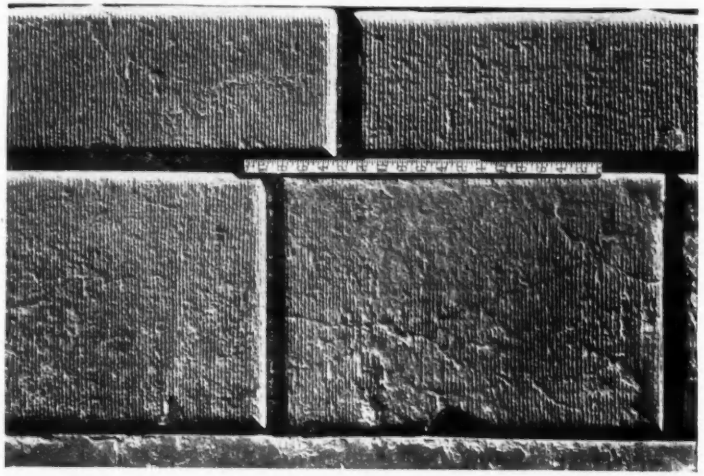


Figure sixteen. Wall, near base, of the Nonfinito Palace : Buontalenti, architect (*circa* 1592).

In photographing the above examples, the author set up a three-foot rule, in order to give an exact indication of the sizes of the stones employed.

AN ANALYSIS OF FLORENTINE STONEWORK: ii

BY MYRON BEMENT SMITH

PALAZZO GUADAGNI, attributed to Simone del Pallajuolo (called Il Cronaca), 1490. (Plate II, figure thirteen and "Selected Precedents" in this issue.) The high basement story is of flat-faced ashlar in 12-in. courses, with the doorways and angles set off by rustication. The upper stories are decorated with *sgraffito*. The rustication of the doorways is in a style different from that of the angle. The angles are drafted with a $\frac{3}{8}$-in. chisel, the field left slightly coarser, with point tooling. The rustication is worked with a finer point than the walls, though the difference is hardly appreciable.

PALAZZO UGUCCIONI-FENZI, from a design by Raphael, built by Marietto Folfi in 1530. (Plate II, figure fourteen and "Selected Precedents" in this issue.) The narrow basement shows a strong and well-conceived scheme of interrelated arches and wall. It is worthy of the closest study. Although the bosses of the rustication project $7\frac{1}{2}$ ins., the same as the Palazzo Gondi, the effect here is of greater projection, as the profiles more closely approximate a semicircle. Another detail that adds to the effect of strength is the treatment of the corners, returning the bosses on themselves instead of bringing them down to a channel face as was done on previous Florentine work. Attention is directed to the narrow part of the voussoirs, where, in order to keep the front of the boss in line, it was necessary to make the section profile most abrupt. The course heights, reading up, are 21 ins., $18\frac{1}{2}$ ins., $18\frac{1}{2}$ ins., $18\frac{1}{2}$ ins., etc. The $\frac{1}{16}$-in. joint comes at the top of the boss. The channel lug is $\frac{7}{8}$ in. wide. The point tooling on the bosses was done a bit coarser than on the Palazzo Gondi. The moulded parts show careful point and chisel work, giving a good contrast of surface.

PALAZZO PANDOLFINI, from a design by Raphael, built in 1530 by G. and B. da San Gallo. (Plate II, figure fifteen and "Selected Precedents" in this issue.) The cornice has the date 1520 in its inscription. The *pietra forte* is used for trimming the walls of painted stucco. Dust has worked into the stucco and stone to such an extent that they resemble each other in colour save for the cornice, which has preserved the buff colour of the stone. The most interesting detail of the stonework is the portal. The rustication is deeply prick-tooled on the bosses, while the moulded parts are finished with a fine point and a $\frac{1}{2}$-in. to $\frac{3}{4}$-in. draft at the edges. The bosses project $4\frac{1}{2}$ ins. from channels, which vary from $1\frac{1}{4}$ ins. to $1\frac{1}{2}$ ins. in width. The lugs are on the bottom of the stones as appears in the quoining. The heights of the stones, reading up, are: $20\frac{1}{2}$ ins., $15\frac{1}{2}$ ins., $20\frac{1}{2}$ ins., $15\frac{1}{2}$ ins., $19\frac{3}{4}$ ins., $15\frac{1}{2}$ ins., etc. Here, as on the Uguccioni, the bosses return on themselves at the angle.

FORTEZZA DA BASSO, built in 1534 by Antonio San Gallo the younger, (figure ten). A fortress wall of great

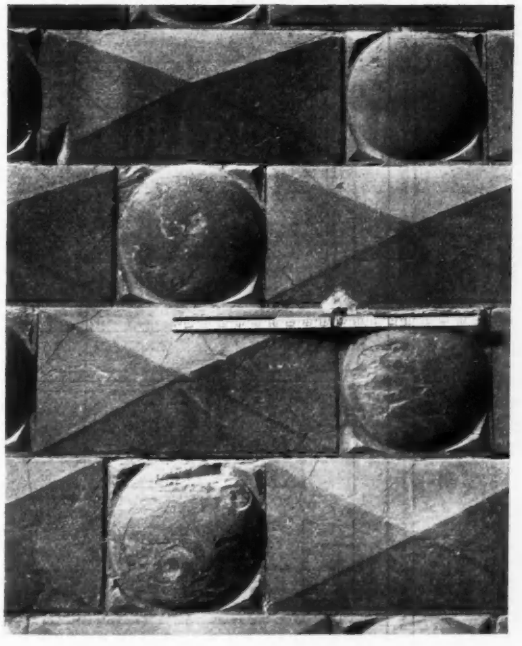


Figure ten. Wall of the Fortezza da Basso: Antonio San Gallo, architect (*circa* 1534).

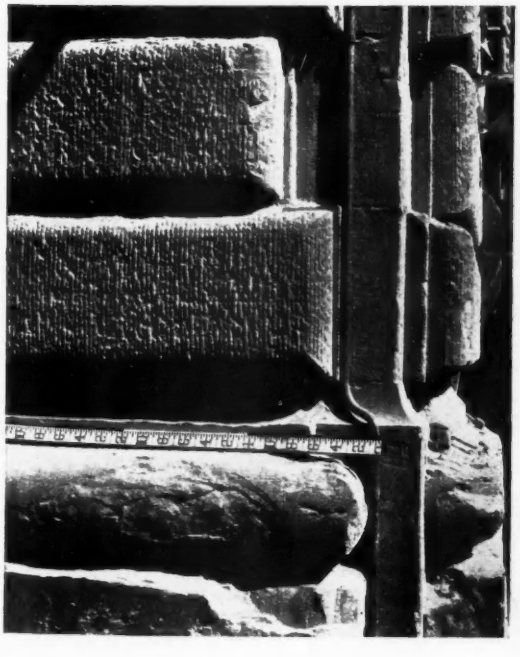


Figure eleven. Angle pilasters of the Nonfinito Palace: Buontalenti, architect (*circa* 1592).

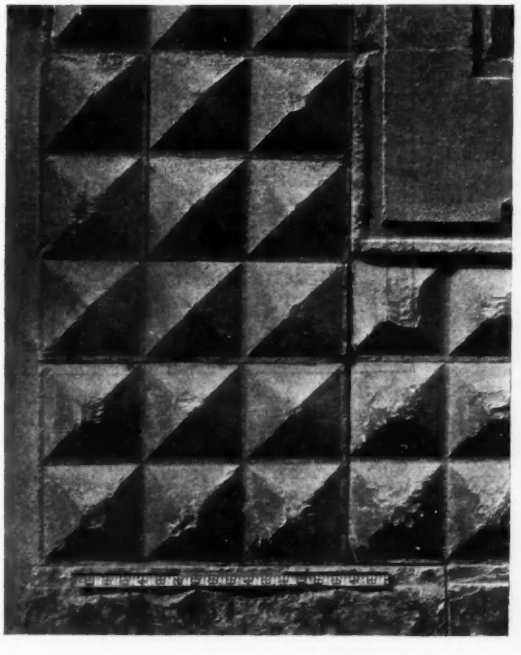


Figure twelve. Wall of the church of SS. Trinita: Buontalenti, architect (*circa* 1580).

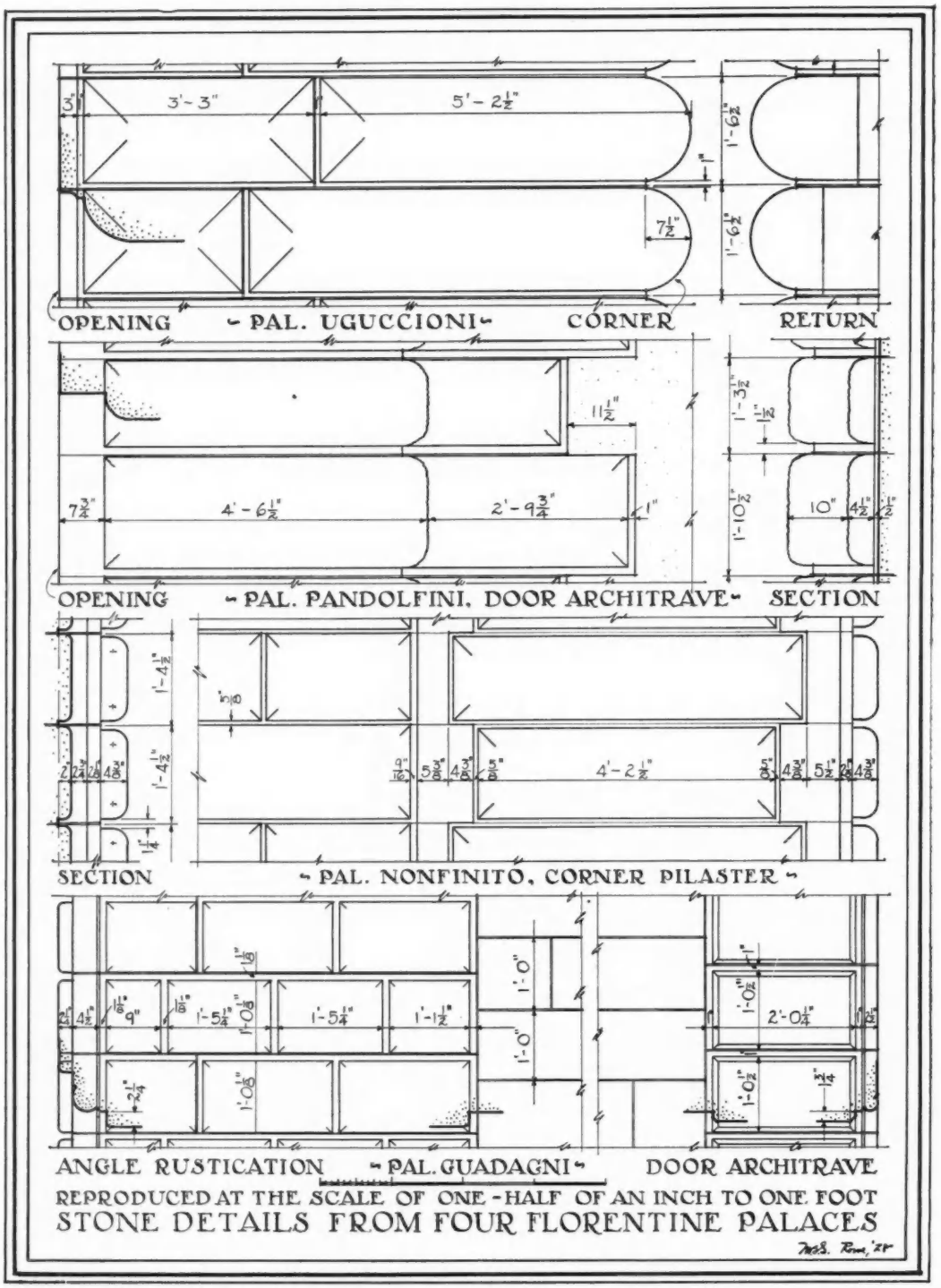


Plate II. Dimensioned sketches of stone courses taken from four of the palaces analysed in the accompanying article.

interest. The ball and the apex of the rectangular stone project $3\frac{3}{4}$ ins. The courses are 17 ins., the long stone measures 36 ins. The channel is $\frac{7}{8}$ in. wide. The stone is worked with a fine point save at the edges, where a $\frac{1}{2}$-in. draft follows the angles.

PALAZZO NONFINITO, basement by Ber. Buontalenti, 1592. Upper story by Vinc. Scamozzi, 1602. Court by Luigi Cigoli. (Plate II, figures eleven and sixteen.) The basement walls are rusticated coursed ashlar, with an involved rusticated pilaster treatment at the corner. The wall stones project 2 ins. from a channel face $\frac{5}{8}$ in. wide. The edges of the bosses are rounded on a 1 in. radius, while the surface is tooled with vertical broaching in grooves $\frac{3}{8}$ in. on centres. At the corner the pilaster bosses project $4\frac{3}{8}$ ins. The

broaching matches that of the side walls. An excellent contrast of surface is maintained.

CHURCH OF SS. TRINITA, façade by Bern. Buontalenti, *c.* 1580 (figure twelve). Square diamond bosses, grained with the slopes, drafted along the arrises. The apparent lack of bonding is explained by the false jointing, there being up to six bosses on a stone. This obviously is a veneer treatment.

(*Concluded*)

[Illustrations, including "Selected Precedents," by courtesy of *The Architectural Record*.]

QUESTIONS THAT ARISE

Rubber Flooring

K. S. A. writes: "*I have laid a concrete floor in a village hall, and screeded it for wood-block flooring. The committee now require parts of this laid with rubber flooring. I am told that this material is difficult to keep down unless the screed is bone dry. How can I make a searching practical test?*"

The best test to ascertain the dryness of a cement screed is made with calcium chloride crystals, laid on a thick sheet of paper under a piece of glass, the edges between the glass and the floor being puttied up to exclude the air.

If the floor is damp the crystals will disappear in about two days.

A rougher method is to lay a piece of roofing paper on rubber flooring, about a yard square, on the cement for about twenty-four hours. On lifting it, the screeding will show dampness, if any still remains in the floor. A. T.

Decorating Ceilings

M. J. writes: "*Is it possible to distemper direct upon a pattern ceiling paper? The foreman painter connected with a firm of builders, who are carrying out some decorative work under my supervision, says that the paper will curl when the distemper is applied. He also informs me that this will also happen to another ceiling when washed off and prepared. This ceiling is covered with lining paper. I am not keen on stripping, for if this is done an extra will be incurred by cutting out and making good quite a large amount of plasterwork. Will two coats of distemper effectively cover a pattern paper?*"

Your correspondent would be advised to incur an extra on cutting out defective plaster, rather than risk decoration on papered ceilings.

The majority of papers, when washed off, are liable to curl, and it is always advisable to specify that the paper is to be stripped.

If I have any new ceilings covered with lining paper, I specify that the paper should be treated with one sharp coat of flatting (all turps) and finished with a coat of distemper, or whitening. This will provide a seal, which should allow the work to be washed off for future redecoration.

I have seen two coats of distemper applied to a pattern paper without success, and I am sure that it would not be satisfactory unless the pattern was very faint.

However, I advise stripping in all cases, unless the paper has been previously treated with a coat of flatting. W. A. D.

Neon Lights

R. S. writes: "*Can your expert tell me why the intensely bright advertisement lettering one sees so frequently today is called neon light, and how the current is arranged?*"

Neon lights are formed from tubes of gas exhausted to a high vacuum by a complicated process, including the use of liquid air.

Neon gas (hence the name) is then admitted, and when the current is first passed through the tube all colours appear, but after a few hours it settles down to a brilliant red. The current is of high frequency and requires a transformer.

For such tubes, glasses of various colours may be used, as well as other gases, and the basket of flowers advertisement outside Messrs. Atkinsons' perfume store in Bond Street, W.1, show some of these in combination. This sign was illustrated in THE ARCHITECTS' JOURNAL for November 20, 1929, page 788. D. E. W.

Damp Wall

N. C. writes: "*I recently inspected some shops with the upper floors let as flats, where the roof was of asphalt on wood joists, and the whole of the front walls on the upper floor were damp, commencing at ceiling level. The dampness has spread in places along the ceiling, and in some of the worst cases run almost to the skirting. The main façade is finished above the roof level with a balustrade formed of Bath stone. I have examined the skirting of the asphalt flat, and found that it is well tucked into a groove below the balustrade, and also the stonework is well pointed. The walls are of hollow construction, with 9 ins. solid brickwork from above the ceiling to the underside of balustrade, a height of 3 ft. The facings are good, sand-faced, red bricks.*

"*I have been told that it is necessary to have a damp course under the balustrade, and even if there was no balustrade, to the parapet wall at roof level. I should be glad to have an opinion as to the necessity for this.*"

In the case quoted by your correspondent, the cause of the dampness to the external walling on the upper floor points to the omission of a damp course, and this is undoubtedly a case where one is required.

The Bath stone balustrade will absorb water, and the 9 ins. parapet walling, unless rendered, cannot be relied upon to keep out the weather where the roof is of timber construction, unless faced with brick with a good surface.

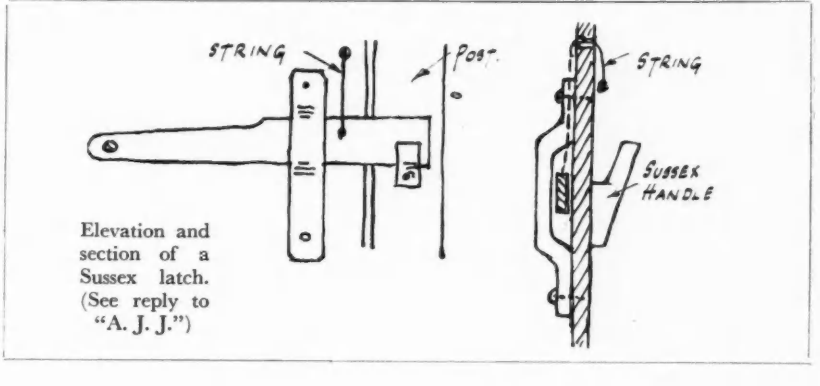
Where a flat roof is of concrete, and a good solid thickness is obtained where the concrete is tailed into the wall, a damp course is not necessary; but where the roof is of timber, even if beam filling is executed (and this is sometimes not done), I have noticed a great tendency for the water to penetrate. In these cases I consider a damp course at roof level a necessity. J. E. K.

Sussex Latch

A. J. J. writes: "*A client has asked me to arrange for Sussex latches to be fixed to the doors of a row of farm cottages I am erecting for him. I cannot find such a latch in any manufacturer's catalogue. Does he require a form of Norfolk latch?*"

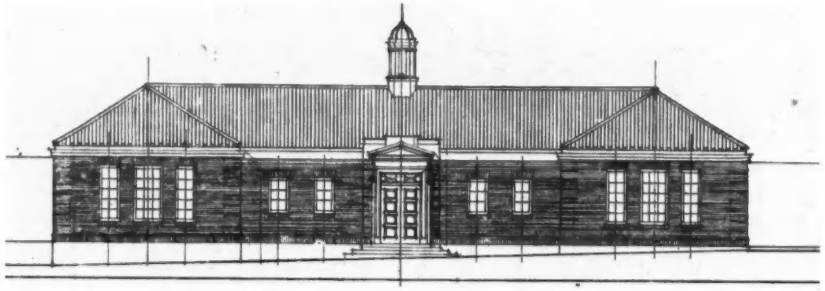
Sussex latches are sometimes found fixed to some of the doors of the old farm buildings in the Southern Counties, and are formed of wood operated by a piece of string, as shown on the accompanying sketch.

This is probably the form your client has in mind. It should be noted that the "string" should be of strong leather, or a porpoise hide bootlace. T. C.

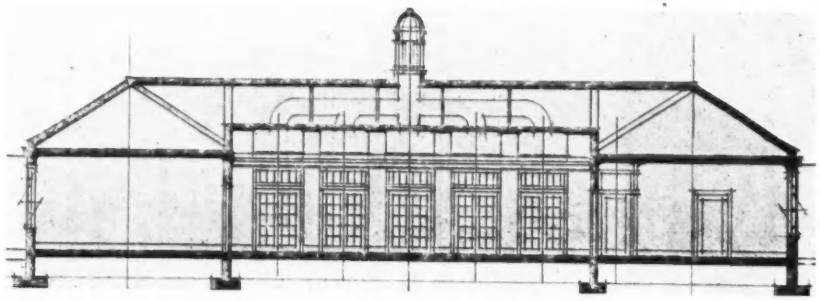


Elevation and section of a Sussex latch. (See reply to "A. J. J.")

BIRMINGHAM INFANT WELFARE CENTRES: FIRST PRIZE DESIGNS



The Centre at Billesley : the north-east or main elevation facing on to Trittiford Road.



Billesley : longitudinal section, S.W. aspect, through staff and waiting-rooms, corridor, and doctor's room.

AS briefly announced in our last issue, the assessor, Mr. A. T. Butler, F.R.I.B.A., issued his award for this competition as follows :

Trittiford Road, Billesley :

(1st) Messrs. Nicol and Nicol (£100).
(2nd) Messrs. Harvey and Wicks (£50).
(3rd) Messrs. Buckland and Haywood (£25).

Warren Farm Road, Kingstanding :

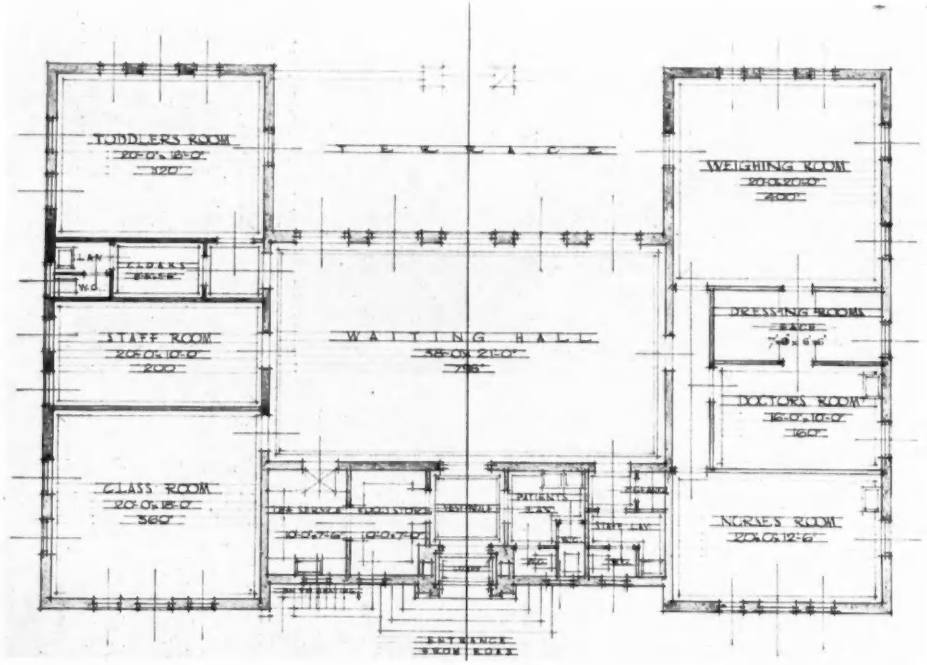
(1st) Messrs. Nicol and Nicol (£100).
(2nd) Mr. E. Farmer (£50).
(3rd) Messrs. Harvey and Wicks (£25).

We illustrate this week some of the drawings for each centre submitted by the winners of the first prize in both competitions. The awards in each have been approved by the Maternity and Child Welfare Committee of the Birmingham City Council.

The conditions for both centres were identical, and there were only differences of aspect to be dealt with. The sites were both practically level, but that at Trittiford Road was a corner one with a north-easterly aspect, while that at Kingstanding had other properties on either side, and the main frontage faced south-west.

The accommodation required was specified in detail and in area, and a limit of cost of £5,000 was imposed; in each case the competition being limited to architects practising in the Birmingham area.

As will be seen from the illustrations, the planning is very similar, and, indeed, the layouts differ mainly in their adaptation to comply with the aspects. In each case the accommodation is all on one floor, and the winning competitors have adopted brick as their principal material. In both cases a shed was to be provided for perambulators.

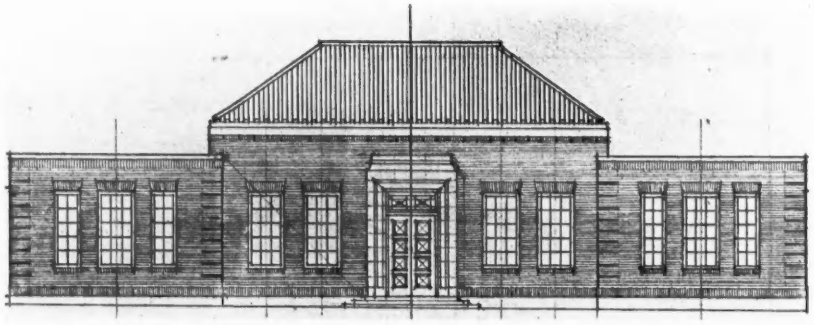


[*By Nicol and Nicol.*

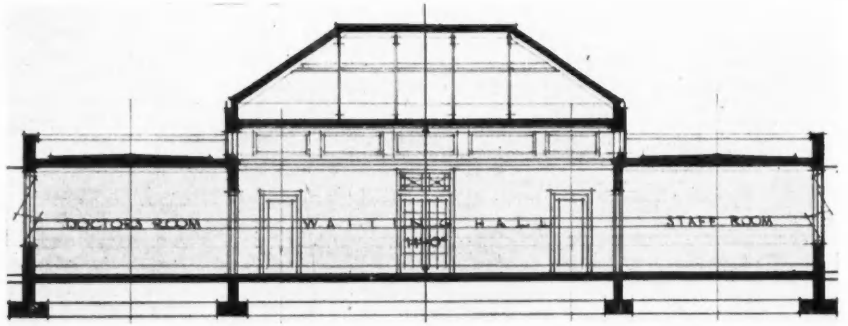
Billesley : the ground plan, showing the disposition of the various departments and the arrangements for circulation, with the waiting hall as a clearing centre.

Competitions; and Women Architects

COMPETITIONS formed the subject of a paper read to the Liverpool Architectural Society on Wednesday of last week by Mr. E. Berry Webber,



The Centre at Kingstanding : the main south-westerly front to Warren Farm Road.

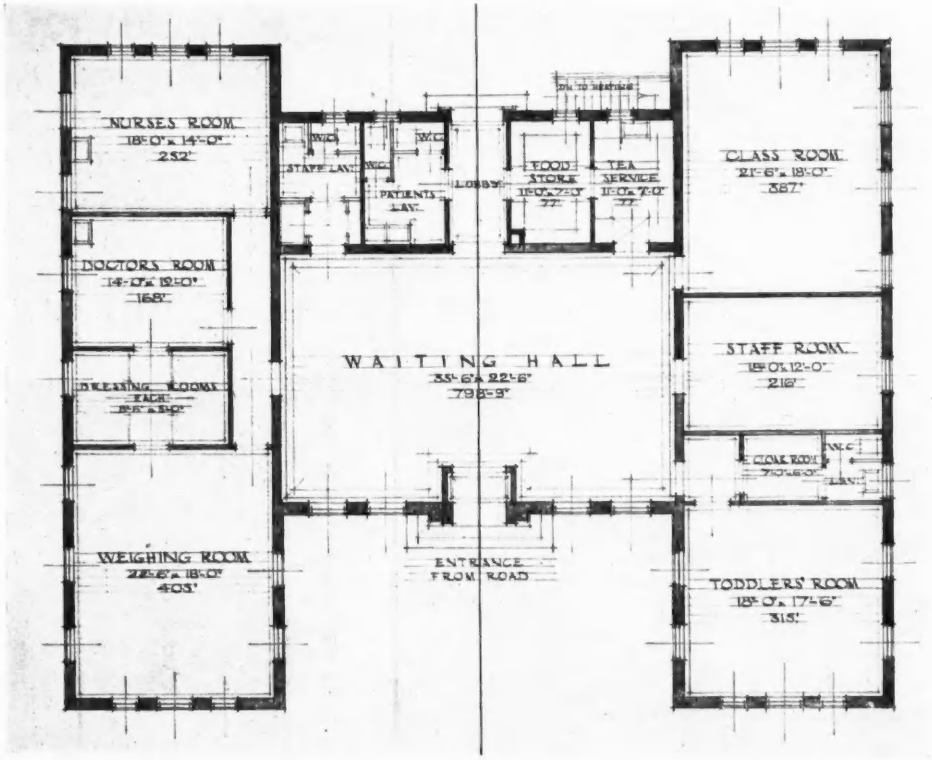


Kingstanding : longitudinal section, N.E. aspect, through doctor's, waiting, and staff rooms.

chairman of the Competitions Committee of the R.I.B.A., and himself a very successful winner of competitions. In the course of his address, he pointed out several of the perils to architects arising out of the extension of bureaucratic control in this country.

It would be a bad thing for architecture, he said, if the competitive system were abolished. Competitions gave young men and women glorious opportunities unparalleled in any other profession. But there were tendencies abroad which must be carefully watched. The Government's unemployment grants scheme, for instance, had killed in the last few months what would probably have been very fine competitions. The grant was a weird and wonderful thing with the condition that 90 per cent. of unskilled labour must be employed. What branch of the building trade was unskilled?

The second antagonist was the Government department. The quality of the new work being done by the official architect was praiseworthy, but the time would come when the choice would have to be made between the outside and the official architect. Thirdly, there was a section of the profession that thought architectural competitions not quite nice.



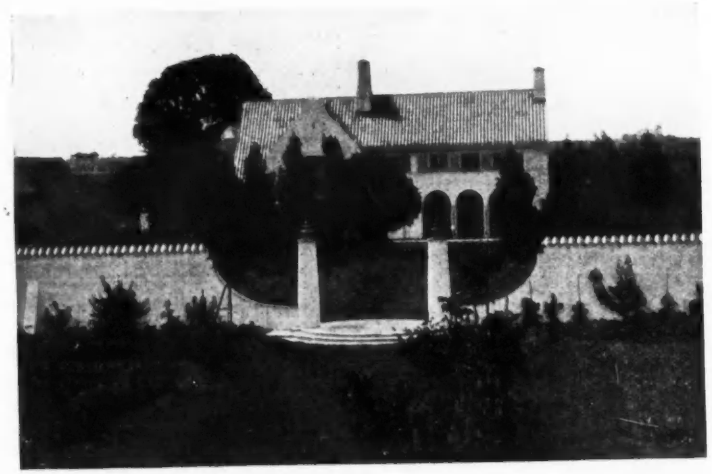
[*By Nicol and Nicol.*

Kingstanding : the ground plan, the general principles of which have much in common with the Billesley scheme, except that service and lavatory quarters are behind the waiting hall.

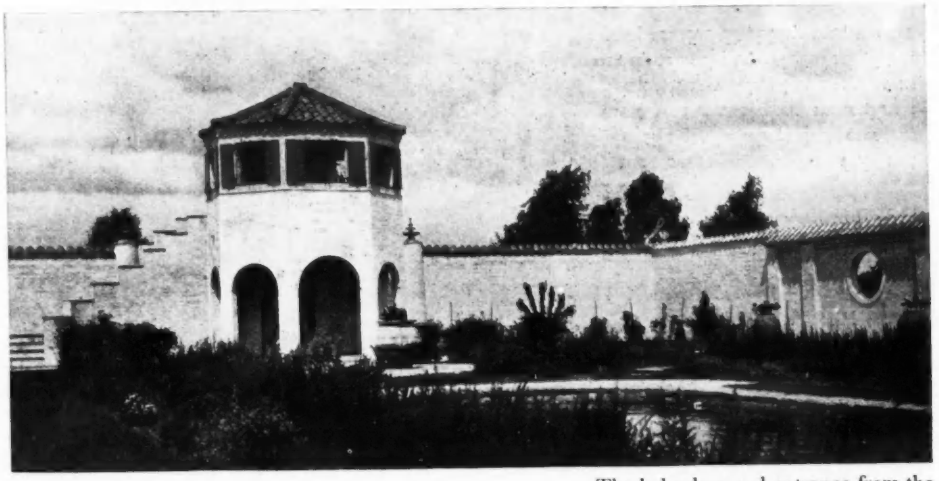
The president of the society, Professor Patrick Abercrombie, who also addressed the meeting, said competitions enabled genius to come rapidly to the front. He deplored the tendency among local authorities to enlarge the staffs of official architects. Official architecture was not likely to produce the brilliant results obtained from the competitive method.

It is significant that Mr. Webber recognized modern conditions by the inclusion of the words " and women " in the speech summarized above. On the same day, in the neighbouring city of Manchester, the arrival of the woman architect received further recognition. Mr. J. T. Halliday, F.R.I.B.A., president of the Manchester Society of Architects, was the luncheon-guest of the Soroptimists, and paid a tribute to the brilliancy of some of the women who have studied in the Manchester School. Their average skill, he said, has probably been higher than that of the men.

At the same time, he did not exclude the probability that creative greatness was more often masculine : since creative work, however, was seldom done and very seldom required, this comparative disability counted for little.



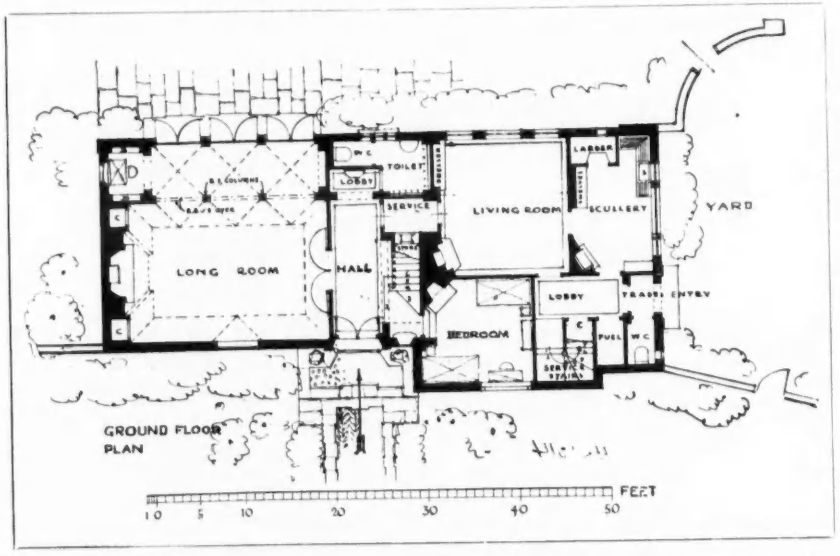
A view of the guest house from the walled garden. The walls are built of bricks which have been whitened; the window shutters are pale Antwerp blue; and the roof is covered with jade green Dutch tiles.



The belvedere and entrance from the main garden. The materials for the walls and roof are the same as those used for the guest house. Specially shaped pantiles adorn the tops of the walls; plain ones form the coping.

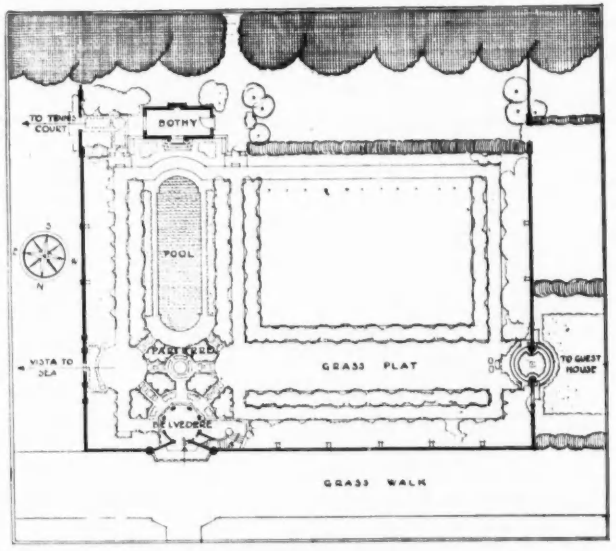
A GUEST HOUSE AT BEMBRIDGE, I.O.W.

DESIGNED BY P. D. HEPWORTH



In addition to the accommodation shown on this ground-floor plan, the upper story contains four bedrooms, two bathrooms, balcony and lavatory accommodation.

ONE of the many interesting features of the February issue of *The Architectural Review* is the Guest House at Bembridge, Isle of Wight, overlooking the sea. The house has been planned in two divisions: *a:* the owner's quarters, consisting of a large sitting-room on the ground floor, with gallery and writing recess, and three bedrooms on the upper floor; *b:* the quarters of the resident service couple, with a living-room, kitchen, and two bedrooms.



The layout plan of the main and walled gardens. The guest house lies approximately 150 feet west of the gardens.



THE SMALLER HOUSE

BY HERBERT A. WELCH

On this page are published some extracts from the paper read by Mr. Welch under the title, "The Treatment of the Smaller House," at Manchester. The two houses here illustrated, show some efforts of the speculative builder in Manchester. The designs are probably neither better nor worse than may be seen in the suburbs of many other towns.



Housing Statistics

SINCE 1919 statistics available go to show that up to 1930 not less than 1,560,000 houses known as "subsidy" houses have been built.

If considered only in terms of numbers this is a creditable performance. A shortage, however, still exists, the extent of which will be apparent when the returns from the local authorities based upon the five-year plan are dealt with by the Ministry. Meanwhile we may be sure *that much remains still to be done.*

An Improving Outlook

A comparatively few years ago we were, as a nation, not much concerned so long as we got the houses. In order to redeem its promises the Government urged local authorities and they in turn pressed their surveyor, who in turn harassed the builder, to speed up progress. Utility and "delivery of the goods" were then our main, if not our only, requirements. We have by this time received and used the "goods" in sufficient numbers and for the length of time necessary to enable us to estimate their value as an asset. I believe it fair to say that in a few cases they have realized our expectations and we are pleased; that in the majority of cases they are mediocre and we are disappointed; but that in a very great number of cases they are frightfully bad and we are ashamed. Happily the outlook is improving and we are at long last beginning to realize that the priceless legacy of the old country cottages and the beautiful countryside left to us by our forefathers must be treated by us with greater respect than our fathers and grandfathers treated them. I think that there are definite indications of an awakening in public interest, and the future is to that extent the brighter.

Spoliation of the countryside by haphazard development and badly-designed buildings must first be checked and then stopped, not alone by legislation but by the strongest weapon we possess—an enlightened public opinion. In this respect it is encouraging to note that the Ministry of Health in its *Housing Manual*, published in 1927, is alive not only to what was then taking place, but also to how in the future we might redress the balance of bad work.

We are also indebted to the efforts of the C.P.R.E., who have focussed public attention upon the subject of bad and haphazard development and who have given illustrations side by side of what is and what might have been. By this simple and direct process it is easy for the lay mind to grasp the full possibilities of the subject. The public spirit this movement has bred, too, is of vast importance.

Roads and Houses

Roads for transport and houses for habitation are at present among the first essentials of life, and as such they exercise a constant influence upon our minds and upon our lives. Equally, if not of even greater importance, they are exerting an influence upon the younger minds and will continue to do so for generations. Let us therefore resolve to make all our new work—whether large or small—satisfying at least, and pleasing if within our power.

If not within *our* power there are always within easy access minds specially trained or endowed by nature with the gifts we lack. Let us consult them, *not* "before we make mistakes," but in order to avoid making them.

Good Design

What constitutes a good design? In its abstract form it is difficult to define, but, generally speaking, the simple straightforward treatment in elevation of any plan will be preferable to any form of "dressing up." To keep as low as practicable the height of the building from ground level to eaves of roof, small houses, the form of which is long and horizontal, will generally look better than when their form is vertical. Materials and features should be carefully chosen and arranged to produce harmony. Team work is essential, and neither of the units should shout out for pre-eminence in the scheme at the expense of the other units. Each has its proper place and should keep it.





Mr. Herbert Welch, in a part of his paper not reported above, said that the above illustrations were "two of Manchester's 'housing' efforts. The designs in the right-hand photograph are of the 'villa' type, much too 'busy' in appearance, and the materials are hard, colourless and uninteresting. In that on the left the houses are much too near the road; the designs are crude and the materials dreadful. Who would have thought they had been erected during the past few years?"

THE SKETCH CLUB

TWENTY-SECOND SESSION

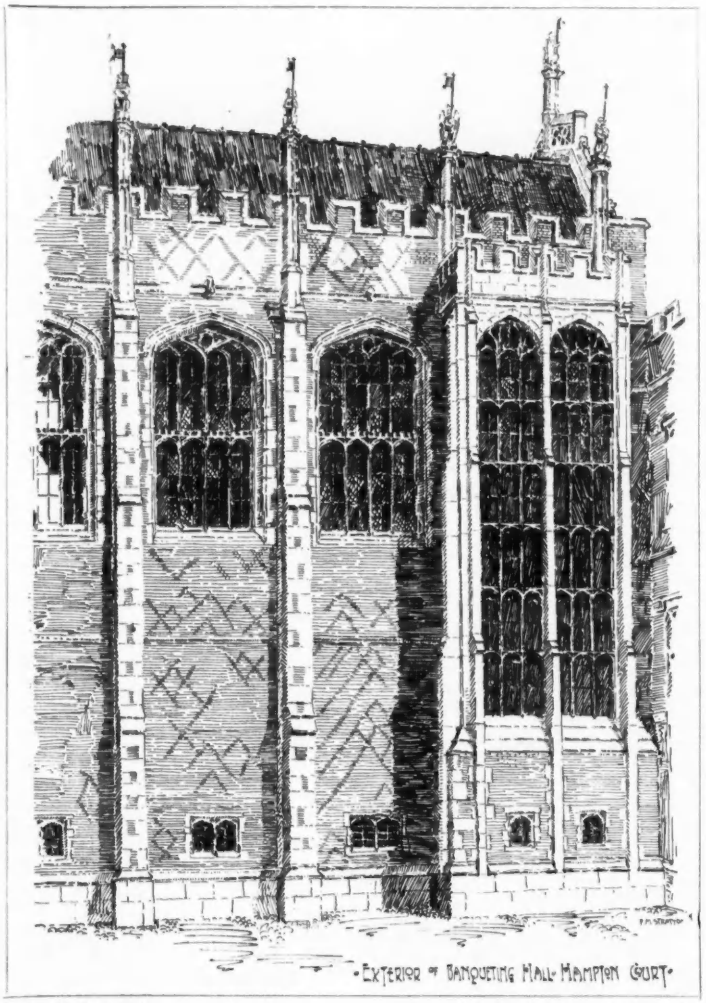
AGAIN the material submitted to the scrutiny of the hanging committee has been gathered from near and far, and again they have selected Eastern ecclesiastical architecture for representation—this time by sketches from the pencil of a Serbian artist, who has recorded impressions of two of the monasteries which are features of the southern portion of that little-known country.

For the rest there are examples of secular work: a detail of a classic in brick—Hampton Court Palace—and several of the domestic order, the majority in Cornwall, a country mainly of stone.



By Geo. A. Boyle. (Pencil : 6⅞″ × 9⅞″).

At St. Ives, Cornwall : An Impression.



By P. M. Stratton. (Pen-and-ink : 10¾″ × 16″).

Exterior of the Banqueting Hall, Hampton Court Palace.



By Chas. E. Compton. (Water-colour : 6¾″ × 9½″).

The Keigwin Arms, Mousehole, Cornwall (A.D. 1057).



By R. A. F. Riding. (Pencil : 8″ × 5¼″).

Old Houses, Petersham Road, Richmond, Surrey.



By Chas. E. Compton. (Watercolour : 11½″ × 7½″).

Newlyn, Cornwall : the Harbour and Pier.



By Ljub. Ivanovic. (Pencil : 10¾″ × 7½″).

The bell-tower at Berovo, one of the monasteries of Southern Serbia.



By Ljub. Ivanovic. (Pencil : 10¾″ × 7½″).

St. Naum (c. 905), *S. Serbia. Restored under the Emperor Dušan* (1331–5).

THE ANCIENT MONUMENTS BILL

DISCUSSION IN COMMITTEE

IN the House of Lords, on the Ancient Monuments Bill in Committee, several interesting points were raised.

Clause 1 provides that the Commissioners of Works may prepare and confirm schemes for preserving the amenities of ancient monuments. Lord Cranworth moved an amendment to provide that the schemes should be for any area comprising, or adjacent to, the site of the monument to be preserved for a distance of not more than 200 yards from the lateral extremities of the site.

Lord Ponsonby, for the Government, in opposing the amendment, said it was very undesirable that any restrictive limit should be stated in the Bill. Two hundred yards would be absolutely hopeless in cases like those of Stonehenge or Hadrian's Wall, while in other instances it might be excessive. A matter of that sort must be left to the discretion of the Commons.

The amendment was withdrawn.

Lord Ponsonby moved to omit Clause 10, which gives the Commissioners power to prohibit by order the exportation from Great Britain of any ancient monument or any part thereof. He said that it was very difficult to find how the clause could be enforced. The Office of Works were still very apprehensive with regard to the export of any building of interest from this country, or its removal from the place where it was originally erected. Engineering could now do all sorts of things, and they must be prepared for such removal being possible. But on a very close examination of the powers he had at present, the First Commissioner of Works was advised that he could intervene to prevent this taking place at the moment when the house was vacated and uninhabited. As no house could very well be demolished without being vacated, the First Commissioner could step in and issue a preservation order to prevent it being exported. The Office of Works considered that, as the law stood, they had sufficient power to prevent anything in the nature of the export of a building of interest. With regard to the detaching of parts of buildings, such as panelling, it was extremely difficult to deal with that matter, and he doubted whether it would be possible to regulate anything so far-reaching in any Act of Parliament.

Lord Noel Buxton asked for an assurance that the policy suggested by Lord Ponsonby would be carried out. There might be cases where the Office of Works would have no knowledge until it was too late. Would not Parliament be more discreet by embodying this proposal in the Bill?

Lord Ponsonby said the Office of Works were quite sure they had power to stop the export of these buildings. All that arose now was whether they had sufficient machinery to be made aware of the intention on the part of any owner to do this. That might be a point of some difficulty. The Commissioners of Works had the assistance up and down the country of archæological societies who were constantly watching these things. Now that public attention had been drawn to these matters, if there should be an intention on the part of any owner to part with a really valuable historic house, the Office of Works would certainly hear of it in time to issue a preservation order.

The omission of Clause 10 was agreed to.

Lord Raglan moved an amendment to allow cathedrals and churches to be scheduled as ancient monuments.

Lord Ponsonby said he had much sympathy with the amendment, but it must be admitted that the Deans and Chapters of the cathedrals had discharged their trust extraordinarily well, except during the nineteenth century, when there were such things as the work done at the west end of St. Albans Abbey and the introduction of a certain number of monstrosities in some other cathedrals. On the whole, they had done their best to preserve them as great national monuments.

The amendment was negatived.

In Committee on the Bill to authorize the Trustees of the British Museum and the Trustees of the National Gallery to make loans of objects comprised in the Collections in the Museum and Gallery for exhibition oversea, an amendment was carried limiting the objects to be lent to "objects representative of British arts and crafts."

Lord Mersey moved an amendment to provide that any object loaned must have been produced in Great Britain subsequent to the year 1600. He said that he wished especially to protect the early panel pictures and the early English things which had not only an artistic but also a historical value, such as the Coronation Stone in Westminster Abbey, the Domesday Book, the panel pictures of the early English kings and Caxton's printing press.

Lord Lee of Fareham, who supported the amendment, said that works prior to 1600 were often so extremely rare that they ought not to be loaned at all. This country was celebrated in the fifteenth century for alabaster figures, which were exceedingly fragile and would be almost bound to suffer if they were sent unnecessarily on their travels.

Lord Amulree, for the Government, opposed the amendment, which, however, was carried.

In Parliament

The Haig Statue

MR. SMITHERS asked the First Commissioner of Works whether he would consider the advisability of inviting another artist to carve the Haig Statue.

Mr. Lansbury said he had given the matter of the national memorial to Earl Haig careful consideration, and had decided to ask Mr. Hardiman, whose models on two occasions had been approved by the appointed assessors, to execute the memorial. He was satisfied that Mr. Hardiman would produce a statue which would be a credit both to the sculptor himself and to the subject of his work.

Mr. Smithers asked whether, in view of the precedent of the duplication of the statues of Lord Roberts, the Prince Consort and General Gordon, he could now consider having a copy of the statue in Edinburgh, which was approved by Lord Haig himself, set up in London.

Mr. Lansbury said that this matter had received considerable consideration from a number of quite prominent men in the arts, and their decision was as he had stated.

Sir B. Falle asked whether a free vote of the House would be allowed on the matter.

Mr. Lansbury said that the facts were that the assessors, who were appointed before he took office, reported somewhere about eighteen months ago and approved of the model. These was some dissension raised as to that model, and the assessors were called together to discuss modifications with the artist. As a result, another model was submitted (Cries of: "Far worse!"). Whether it was worse or whether it was better, the fact remained that the assessors, who were Lord D'Abernon, Sir William Goscombe John, Mr. Daniel, Sir Herbert Baker and Mr. Reynolds-Stephens, all of whom were nominated by the Royal Academy, the National Gallery, the Royal Society of British Artists, and the Royal Society of Sculptors, had unanimously approved Mr. Hardiman's work with some slight modification. The military advisers, and three personal friends of the late Lord Haig—Sir Noel Birch, Sir Walter Braithwaite, and Sir Herbert Lawrence—also agreed with the assessors. That was the last word so far as he was concerned.

Sir N. Grattan-Doyle asked whether, in view of the general dissatisfaction

with the statue, the First Commissioner would take into consideration the question of eliminating the horse altogether.

Mr. Lansbury said he was sorry to say "No."

Government Buildings in Whitehall

Mr. Lansbury also stated that he hoped to introduce at once a short Bill dealing with certain aspects of the proposal to erect new Government buildings in Whitehall. He was unable, however, to make any announcement in regard to the date of starting building operations, as this date would depend entirely on the financial situation.

Housing Progress

Sir Robert Aske asked the Minister of Health if he would state the number of houses built with State assistance by local authorities and by private enterprise, respectively, in the years ended September, 1929, and September, 1930.

Mr. Greenwood said that the following statement gave the desired particulars so far as houses in England and Wales were concerned :

Year ended Sept. 30.	Number of houses completed with State assistance during the year.		
	By Local Authorities	By Private Enterprise.	Total.
1929 ..	60,367	71,993	132,360
1930 ..	49,052	2,272	51,324

Mr. Greenwood said that the final costs of the houses included in direct labour schemes of local authorities in England and Wales during 1930 had not been ascertained. The average prices of houses included in contracts let by local authorities during that year were, for non-parlour houses, £338, and for parlour houses, £403.

SOCIETIES AND INSTITUTIONS

R.I.B.A. ELECTION OF MEMBERS

AT a recent meeting of the Council of the R.I.B.A. the following members were elected :

As Fellows (7).
Cole, E. R. F.
Douglass, H. A.
Drake, F. M.
Hughes, B.
Mallard, F. A.
Rees, V. O.
Atkins, N. H.

As Associates (2).
Bowden, F. I.
Waugh, H. L.

As Licentiates (80).
Adams, J.
Barker, H. C.
Bateman, J. A.
Bell, E. C.
Bell, G. J.
Beverley, S.
Birkinshaw, J. J.
Black, H. L.
Browne, T. L.
Chilton, J. E.
Clamp, J.
Connabeer, C. R.
Corner, A. G.
Cox, W. T.
Crispin, S. J.
Curtis, H. V. C.
Dadd, C. J. T.
Davies, D. B. P. E.
Davies, H. C.
Dent, N.
Dodd, H. D.
Donger, W. J.
Franklin, H. J.
Frost, E.
Gibbs, C. G.
Gilmore, J. N.
Griffiths, A. N.
Harris, E. J.
Harris, H. A.
Harrison, P.
Harrison, S.
Henry, J. P.
Hill, E.
Hobbs, C. C. A.
Hughes, F.
Jones, M. C.
Kemp, H. G.
Lawton, T. A.
Lees, A. E.
Leeson, A. E.
Liddiatt, E. T.
Loveday, L.
Lovegrove, H. W. W.
Lucas, B. E.
McConville, H.
McDonald, E.
Mackenzie, A. F.
McMillan, D. S.
Mair, A.
Mann, S. D.
Maxfield, W. R.
Metcalf, A. W.
Mooney, W. G.
Moseley, L.
Nichols, D. G.
Ovenston, T. C.
Parkinson, E. W.
Percy, W. G.
Pinckney, R. A. P.
Prosser, A. W. G.
Reid, C. F.
Richardson, H. B.
Roberts, N. V.
Robertson, R. M.
Robson, M. C.
Rogers, W. R. H. R.
Ross, D.
Scrivener, A. R.
Shipley, G. H.
Stewart, J.
Stillman, A. C. H.
Surridge, H. R.
Sutcliffe, E.
Tregoning, E. B.
Wetherell, J. R.
Whettam, J. C. P.
Whitney, E. S.
Wilkins, C. W.
Wyeth, J. H.
Wylde, F. C.

MODERN CONTINENTAL ARCHITECTURE

A lecture on "Modern Continental Architecture," by Professor C. H. Reilly, F.R.I.B.A., was delivered at Nottingham, on February 4, under the auspices of the Nottingham and Derby Architectural Society, in conjunction with the Thoroton Society and the Nottingham Society of Artists. Mr. G. M. Eaton, F.R.I.B.A., presided.

Professor Reilly said he felt that England was lagging behind a little in the modern movement in architecture which was sweeping over Europe. People were breaking away from the old style. Something had happened to the world. It was apparent in all the arts, in painting, and in sculpture particularly. People were trying to give greater significance to their work. We were as great experimentalists in sculpture as any country, but in architecture were much more conservative.

He stated that the impulse to create seemed greater than the impulse to represent, and pointed out that the adherents of the modern architecture were leaving the Gothic and Renaissance forms and designing buildings entirely devoid of ornament, which were purely functional. There was a readiness to abolish anything which could be called sentimental. Buildings were becoming efficient pieces of machinery, designed specially for the purpose for which they were required.

PSYCHOLOGY OF DESIGN

At a meeting of the Associates' Section of the Edinburgh Architectural Association, a paper was read by Mr. William Davidson, F.R.I.B.A., on "Psychology of Design."

Referring to modern architecture, Mr. Davidson said that the present crude attempts to produce something entirely new could not last in their baldest forms, for the human mind craved refinement and decorative arrangements, and sooner or later the new movement, with its tireless repetitions of commonplace geometric forms, would give place to more normal types.

Speaking of modern functional domestic work of the extremist forms, he stated that it required no great skill to produce a house like a concrete pill-box with gun emplacements, or like a submarine with greenhouse sunparlours, and it would be easy for the most cultured and confirmed traditionalist to produce such buildings if he believed it right or if it gave him any pleasure to do so. He also stated that he considered that the modernists had seized on function and economy as arguments to support their case, which he was unable to defend on æsthetic grounds.

In a decade or two these extreme examples would, he said, appear quaint and amusing, but would play little or no part in the real evolution of British architecture. They did not express the real spirit of the age, but only a brief passing phase of the minds of a minority.

ENGLISH MEDIÆVAL ARCHITECTURE

Sir Banister Fletcher, P.R.I.B.A., at the London Central School of Arts and Crafts on Wednesday last, continued his series of lectures on English Mediæval Architecture. He described the evolution of piers; the development of mouldings; towers, which he referred to as one of the most beautiful creations of mediæval architecture; spires, which were not due to a constructive necessity, but were a concession to religious symbolism; and, finally, the different types of timber roofs.

MR. WILLIAMS-ELLIS SPEAKS OUT

Local government, on which the quality of life in any place increasingly depended, was wholly inadequate to its duties and responsibilities, said Mr. Clough Williams-Ellis, F.R.I.B.A., speaking at a meeting of the Dorking and Leith Hill Preservation Society. If, he continued, we had the same standards of municipal efficiency and seemliness as the Germans or Scandinavians, we should find most English towns "under entirely new management."

He thought that even town-planning schemes, upon which we had built high hopes of better things, were largely a delusion, unless they were implemented on the spot with zeal and intelligence—as we were beginning painfully to discover.

QUANTITY SURVEYORS' COMMITTEE

A Quantity Surveyors' Committee has been formed by the Council of the Incorporated Association of Architects and Surveyors. It is composed of prominent practising quantity surveyors.

The committee has held an inaugural

meeting, and is considering the important question of publicly-advertised appointments, including staff appointments, minimum fees for public works, and other important matters. It is hoped that arrangements will be made to co-operate with the quantity surveyors' committee of the Surveyors' Institution.

ENGINEERING PROGRESS

Mr. C. Le Maistre, C.B.E., in a paper read before the Royal Society of Arts last Wednesday, touched upon a few of the most interesting points in the standardization of engineering progress, which had been developing during the past thirty years.

DEVON AND CORNWALL SOCIETY

The fourth annual dance organized by the students of the Devon and Cornwall Architectural Society was held at Plymouth on January 15 and proved a great success.

A representative gathering of 123 persons attended, including Messrs. A. V. Rooke, F.R.I.B.A., E. G. Catchpole, A.R.I.B.A., deputy city architect, W. W. Wood, F.R.I.B.A., head of the Plymouth School of Architecture, and A. Watts, A.R.I.B.A.

LAW REPORTS

PROVISO FOR DETERMINING LEASE: QUESTION OF BREACHES OF COVENANT

Simons v. *Associated Furnishers, Ltd. Chancery Division. Before Mr. Justice Clauson.*

THE main point in this action was one of construction of the proviso for determining the lease. The plaintiff, Mr. F. S. Simons, of Merthyr Tydfil, sought a declaration against the defendants, Associated Furnishers, Ltd., that a lease made in December 1925 was still subsisting and binding on defendants, notwithstanding a purported determination by them. Defendants by their defence said the lease had been determined, and they set up a counter-claim for alleged trespass and damages to the premises.

Plaintiff, a solicitor, granted a lease of certain premises in High Street, Merthyr Tydfil, to the defendants in December, 1925, for a term of seventeen years and five months, determinable at the expiration of five or ten years on giving six months' previous notice in writing. It contained the usual repair covenants, with a proviso that defendants should not be required to keep the premises in a better state than they were in at the commencement of the term. Defendants gave notice to determine the lease at the end of the five years, and when that notice was given there were covenants which had been broken, but which had been made good before the notice expired. Plaintiff's case was that in order to make the notice valid there ought not to have been any breaches of covenant existing at the time the notice was given. The covenant ran as follows: "The demise shall cease to be void without prejudice to the remedies of either party against the other in respect of any antecedent claim for breach of covenant." Upon this covenant plaintiff submitted that in its true construction defendants must show that at the date of the notice determining the lease, it had been duly performed, which plaintiff contended was not the case, and that therefore defendants were liable.

Defendants, in reply, said plaintiff had accepted all rents when paid, and in this way had waived any breach of covenant of payment of rent. Defendants further denied that the work in the schedule of dilapidations was work necessary under the covenant. They contended that they had carried out all the repairs required by the covenant by the date of the expiration of the notice which determined the lease.

His lordship, in giving judgment, said he accepted the evidence that the building contractor had done everything required to be done by the dilapidations schedule by February 28, and he held that by that time the premises were in such a state of repair as was required by the covenants. There was here a further point which emerged for decision, viz., the fact that at the moment the notice was given there were unremedied breaches of covenant which prevented the notice being effective to determine the term, it being clear for the purposes of this case that before the end of the five years came all those breaches had been remedied. The difficulty arose from the fact that at the end of the clause in question in the lease there were the words, "but without prejudice to the remedies of either party against the other in respect of any antecedent claim for breach of covenant." His lordship came to the conclusion and held that the true meaning of the clause was that it would have been complied with if at the end of five years there did not exist any cause of action in respect of performance of covenants or payment of rent. In his opinion all the conditions had been fulfilled to enable the term to be effectually determined by the defendants. They had complied with all the necessary conditions to entitle them to treat the term as determined, and he therefore dismissed the plaintiff's action with costs.

His lordship dismissed the counter-claim, defendants abandoning it, as they had achieved their object of having the lease determined.

FLAT ALLEGED TO BE INHABITABLE

Rhoades v. *Richards. King's Bench Division. Before Mr. Justice Horridge and a Special Jury.*

IN this case the plaintiff's claim for rent was not disputed, but the defendant alleged that he was justified in repudiating the tenancy agreement on the ground of the presence of noxious insects in the kitchen and bathroom, and he put forward, in the alternative, a claim for £117 odd.

The plaintiff was Mrs. Rita Rhoades, of St. Mary Abbotts Terrace, Kensington, and she brought her action against Mr. Henry W. H. Richards, chief electrical engineer of the London and North-Eastern Railway, to recover £58 16s., the second instalment of rent, payable in advance, of a furnished flat at Iverne Court, Kensington, and 30s. in respect of dilapidations.

Defendant having admitted the rent, the onus was on him to prove his counter-claim.

Mr. Monckton, K.C., his counsel, said his client held the flat under a tenancy agreement, and one of the conditions was that the flat should be reasonably fit for human habitation. The rent the defendant paid was seven guineas a week, and his case was that the kitchen and bathroom lavatory were infested by insects which went under the name of silver fish. Defendant took possession in March, 1929, and as soon as traces of these insects were discovered, the place was scrubbed and disinfectants were used, but the insects were not got rid of. The defendant eventually called upon the plaintiff's agents, Messrs. March and Parsons, and defendant's solicitors also wrote them. Messrs. March and Parsons replied that plaintiff had no knowledge of the alleged nuisance, and had never before had any complaints. The sanitary authorities were communicated with, and the flat was visited by an inspector, who reported that he found large numbers of the insects in the scullery under the linoleum and behind the wallpaper, as well as in the bathroom. It was true that the plaintiff's agents wrote saying their client would carry out all the requirements of the Public Health Department, but he contended that defendant was justified in coming to the conclusion that it was not the sort of place a man paying seven guineas a week could be expected to live in with his wife and family. A nuisance notice was served on the plaintiff's agents, and as plaintiff did nothing within four days the defendant left the flat and went to an hotel.

Mr. Fortune, for the plaintiff, argued that as the plaintiff had expressed her

willingness to do everything that was necessary, defendant had no justification for leaving the flat.

Plaintiff called evidence to show that the insects were not a nuisance, and that the premises were always fit for habitation.

The jury found that the premises were not fit for human habitation when the defendant entered.

His lordship then entered judgment accordingly, awarding the defendant £46 odd on his counter-claim, with costs.

OBITUARY

EDWARD H. NEW: 1871–1931

On Tuesday of last week the death occurred at Oxford of Mr. Edmund Hort New, HON. A.R.I.B.A., the well-known black-and-white artist.

Born at Evesham in 1871, Mr. New, who was the son of a solicitor, studied at the Birmingham Municipal School of Art, under E. R. Taylor and A. J. Gaskin, and later joined the teaching staff of the School. Afterwards, he devoted his life to the production of drawings and illustrations, and he will be best remembered as illustrator of the *Compleat Angler*. His works also included illustrations for *The Life of William Morris* (1899), *Some Impressions of Oxford* (1909), *Evesham* (written and illustrated, 1904), *The New Loggan Series of Plates of the Oxford Colleges* (1907–1929), and contributions to *The Studio* and *The Architectural Review*.

In addition to his work as illustrator and his drawings, Mr. New was the designer of a large number of book plates. He had a comprehensive and intimate knowledge of architecture, and has lectured extensively on art. An exhibition of his work was held at the R.I.B.A. in 1924.

COMPETITIONS OPEN

February 12.—Sending-in day. Stand at the Building Trades Exhibition, Manchester, for Venesta, Ltd. Assessors: Christian Barman, H. de C. Hastings, W. L. Wood, Henry Rutherford, and Professor A. E. Richardson. Premiums: £100 and four of £10. Conditions from the Editor, THE ARCHITECTS' JOURNAL, 9 Queen Anne's Gate; or direct from Venesta, Ltd., Vintry House, Queen Street Place, London, E.C.4.

April 1.—Sending-in day. Development of the uses of aluminium and its alloys, for the International Aluminium Bureau. Two premiums of 25,000 francs. Conditions from the Bureau International de l'Aluminium, 23 bis, Rue de Balzac, Paris, France.

April 18.—Sending-in day. Central Municipal Bank and Head Offices, Broad Street, Birmingham. Assessor: Sir Reginald Blomfield, R.A., F.R.I.B.A. Premiums, £400, £300, and £150. Conditions from Herbert H. Humphries, City Engineer and Surveyor, Council House, Birmingham. (Deposit £3 3s.)

April 30.—Sending-in day. Last day for conditions, January 31. Hospital for Infectious Diseases, Coventry, for the Coventry Corporation. Assessor: E. Stanley Hall, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

THE ARCHITECTS' DIARY

WEDNESDAY, FEBRUARY 11

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "New Motives for Textile Designs." By F. G. Wood. Also, demonstration by Polarized Light of Micro-Crystallization. Chairman: Sir W. Rothenstein. **8 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Mediæval Architecture: Parapets, Ornaments, and Fittings." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Lancashire and Cheshire Branch. Ordinary Meeting. At the College of Technology, Manchester. "The Modulus of Elasticity of Concrete." By Professor F. C. Lea, D.SC., M.INST.C.E., M.I.MECH.E. **7 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Ordinary Meeting at the Hotel Russell, Russell Square, W.C.2. "Boilers and Metals." By W. G. Case and W. E. Dennison. 2 p.m. Dinner 7 p.m. **2 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. Students' Meeting. "Some Notes on the Inspection of and Testing of Railway Materials." By A. T. Black. Chairman: Alexander Newlands, C.B.E., M.INST.C.E. **6.30 p.m.**

THURSDAY, FEBRUARY 12

R.I.B.A., 9 Conduit Street, W.1. Exhibition of Architectural Travel Posters. Until February 27. 10 a.m. to 8 p.m. (Saturdays, 10 a.m. to 5 p.m.). **10 a.m.**

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At the College of Art, Leeds. General Meeting. "Competitions." By Percy Edward Thomas, O.B.E., F.R.I.B.A. **7 p.m.**

SHEFFIELD AND SOUTH YORKSHIRE SOCIETY OF ARCHITECTS AND SURVEYORS. At the Medico-Chirurgical Library, University, Sheffield. "The Architect in History." By Martin S. Briggs, F.R.I.B.A. **6.15 p.m.**

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. Annual dinner and dance to be held at Southampton.

INSTITUTION OF STRUCTURAL ENGINEERS, Great George Street, Westminster, S.W.1. Ordinary Meeting. "Modern Buildings as Engineering Structures." By Oscar Faber, O.B.E., D.SC. **6.30 p.m.**

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Some Old Buildings and how they have been Preserved." By A. R. Powys. (Illustrated by lantern slides.) **7.30 p.m.**

VICTORIA AND ALBERT MUSEUM, Cromwell Road, South Kensington, S.W.7. Special Lecture: "Persian Decorative Art." By A. F. Kendrick. **5.30 p.m.**

INSTITUTION OF ELECTRICAL ENGINEERS. Annual Dinner to be held at the Connaught Rooms, Great Queen Street, Kingsway, W.C.2. 7 for 7.30 p.m. **7.30 p.m.**

INSTITUTE OF LANDSCAPE ARCHITECTS. At the Architectural Association, 36 Bedford Square, W.C.1. Discussion on "Conditions for Competitions." To be opened by E. Prentice Mawson, F.R.I.B.A.

SOCIETY OF ANTIQUARIES, Burlington House, Piccadilly, W.1. "A School of West Country Masons." By Sir Harold Brakspear, K.C.V.O., F.R.I.B.A.

SOUTH WALES INSTITUTE OF ARCHITECTS (Central Branch) and INSTITUTE OF BUILDERS (S.W. Branch). At the Engineers' Institute, Park Place, Cardiff. "Swedish Architecture of Today." By F. R. Yerbury. **7 p.m.**

FRIDAY, FEBRUARY 13

INSTITUTION OF STRUCTURAL ENGINEERS, Midland Counties Branch. Informal Meeting. Discussion on "Foundations," to be opened by S. L. Horde, A.M.I.STRUCT.E. **6.30 p.m.**

SATURDAY, FEBRUARY 14

Sunrise 7.16 a.m. Sunset, 5.14 p.m.

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "The Architect's Problems in a Large Building." By H. Austen Hall, F.R.I.B.A. **3 p.m.**

MONDAY, FEBRUARY 16

R.I.B.A., 9 Conduit Street, W.1. General Meeting. "The Work of Sir Robert Lorimer." By F. W. Deas, M.A., F.R.I.B.A. **8 p.m.**

BIRMINGHAM SCHOOL OF ARCHITECTURE. At the Society of Artists' Galleries, New Street, Birmingham. Annual exhibition of students' work.

TUESDAY, FEBRUARY 17

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. Fifth of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

LONDON MASTER ASPHALTERS' ASSOCIATION. Eleventh Annual Dinner, to be held at the Restaurant Frascati, Oxford Street, W.1. 6.30 for 7 p.m. **7 p.m.**

WEDNESDAY, FEBRUARY 18

ARTS BUILDING, UNIVERSITY, Lime Grove, Manchester. "Modern Flats as a Solution to the Housing Problem." By G. Grey Wornum, F.R.I.B.A.

SOUTH-EASTERN SOCIETY OF ARCHITECTS. At the School of Art, Brighton. "Architecture in Norfolk and Norwich." By Stanley J. Wearing, F.R.I.B.A.

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Ancient Bridges." By G. H. Jack, F.R.I.B.A., M.INST.C.E. Chairman: E. Guy Dawber, A.R.A., F.R.I.B.A. **8 p.m.**

WEDNESDAY, FEBRUARY 18—*continued.*

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Mediæval Architecture: Monasteries, Cathedrals and Churches." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

THURSDAY, FEBRUARY 19

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Piles." By C. I. Cope. B.A.I., A.M.I.C.E. **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Yorkshire Branch. At the Hotel Metropole, Leeds. "Some Further Progress in Bridge Engineering." By Prof. J. Husband, M.ENG., M.INST.C.E. **7 p.m.**

FRIDAY, FEBRUARY 20

INSTITUTION OF STRUCTURAL ENGINEERS. Western Counties Branch. At the Merchant Venturers Technical College, Bristol. "Thames House." By R. Travers Morgan, A.M.INST.C.E. **7.30 p.m.**

SATURDAY, FEBRUARY 21

Sunrise, 7.2 a.m. Sunset, 5.27 p.m.

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. Visit to a London Factory. **2 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Manchester and District Branch. Visit to Astley Green Colliery.

MONDAY, FEBRUARY 23

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "Growing Pains." By H. S. Goodhart-Rendel, F.R.I.B.A. **8 p.m.**

TUESDAY, FEBRUARY 24

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS, 1 Wilbraham Place, S.W.1. "A Sketch of Old London up to the Time of the Great Fire." By John B. Thorpe. **7 p.m.**

MORLEY COLLEGE, Westminster Bridge Road, S.E.1. "The Machine and Its Future." By Professor Levy, D.SC., F.R.S.E. **8 p.m.**

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. Sixth of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

WEDNESDAY, FEBRUARY 25

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Mediæval Architecture: Westminster Abbey." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

THURSDAY, FEBRUARY 26

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At the College of Art, Leeds. "Classic Forms and English Geology." By Hope Bagenal, D.C.M., A.R.I.B.A. **7 p.m.**

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "London in Tudor Times." By D. Martin Roberts, M.A. (Illustrated by lantern slides.) **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "Concrete Roads: Past, Present and Future." By J. H. Walker, M.INST.C.E. M.I.STRUCT.E. **6.30 p.m.**

SATURDAY, FEBRUARY 28

Sunrise, 6.47 a.m. Sunset, 5.39 p.m.

MONDAY, MARCH 2

R.I.B.A., 9 Conduit Street, W.1. General meeting. Presentation of the Royal Gold Medal. **8.30 p.m.**

TUESDAY, MARCH 3

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1 Seventh of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

WEDNESDAY, MARCH 4

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Safety in Factories." By Sir Gerald Bellhouse. **8 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At the Swedenborg Hall, 20 Hart Street, Bloomsbury, W.C.1. "Public Baths and Washhouses: Engineering Equipment and Data." By W. E. Fretwell and E. Shutt. **7 p.m.**

LONDON CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "English Mediæval Architecture: The Tower of London." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

THURSDAY, MARCH 5

WEST YORKSHIRE SOCIETY OF ARCHITECTS, 62 Woodhouse Lane, Leeds. Students' evening. "An Arbitration Case." Bozart *v.* Phillin and Rammin. **7 p.m.**

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Fashions in Furniture." By E. Hawking. **7 p.m.**

AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE 29 Lincoln's Inn Fields, W.C.2. "Housing Act, 1930." By E. W. Eason. **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Yorkshire Branch. At the Metropole Hotel, Leeds. "Acoustics." By C. A. Harding, A.R.I.B.A. 7 p.m. South Wales and Monmouthshire Branch. At the Institute of Engineers, Park Place, Cardiff. "Concrete Roads: Past, Present and Future." By J. H. Walker, M.I.STRUCT.E. 7 p.m. **7 p.m.**

SATURDAY, MARCH 7

Sunrise, 6.32 a.m. Sunset, 5.51 p.m.

TUESDAY, MARCH 10

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. Eighth of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At the Borough Polytechnic, Borough Road, S.E.1. "Domestic Hot Water Supply." By H. L. Egerton. 7 p.m. Manchester and District Branch At Milton Hall, Deansgate, Manchester. "Malleable Fittings." By H. R. Hiscott. 7 p.m. **7 p.m.**

TRADE NOTES

Those about to select a decorative wall-paper will be interested in a new booklet just issued by the Merchant Trading Co., Ltd., on Salubra and Tekko. It contains one or two of the many patterns, all of which should appeal to the most fastidious taste. The reader is invited to soil any one of the patterns—let it dry—and then go at it with a scrubbing brush and soap and water: to experiment by exposing any of the samples to strong sunlight. One may wonder, the firm point out, why Salubra and Tekko are so durable. It is, they state, very simple. "It is because only the purest oil colours are used in the manufacture of Salubra and Tekko that these wall coverings are fast to light and can be washed clean as and when required. They should be lightly scrubbed with a fairly stiff brush, soap and water." There is, it is stated, nothing new or experimental about these wall coverings. In several first-class hotels throughout the British Isles there are rooms decorated with Salubra and Tekko hung twenty or more years ago. Among them and other buildings are Savoy Hotel, London; Grand Pump Room Hotel, Bath; Daly's Theatre, London; Palais de Danse, Wimbledon; Fuller's, Limited, London; L.M.S. Railway Hotels; Majestic Hotel, Harrogate; British and Dominions Film Corporation, Elstree.

*

Messrs. L. G. Hawkins & Company, Ltd., of 30-35 Drury Lane, Kingsway, London, W.C.2, are embarking on a large-scale marketing scheme in connection with a paint-spraying apparatus known throughout this country and America as Sprayit. No matter whether there are large surfaces to paint or small units to finish—old work or new; or whether paint, lacquer, or enamel is used, there is, it is claimed, a Sprayit that will exactly meet requirements: a model that will give faster, cheaper, and better painting, and actually cut brushing costs in two. Six portable models, both electric and gasoline engine driven, are manufactured, that range in size and price to meet every purse and purpose.

*

Up to the present time the use of natural rock asphalt for flooring purposes has been restricted to commercial and engineering premises, where colour is of no importance. This restriction has now been overcome by the introduction of Colourphalt, an asphaltic compound, manufactured and laid by the Limmer and Trinidad Lake Asphalt Co. Colourphalt is made in six different permanent colours, viz., red, brown, grey, stone, green and bright green, and is specially recommended by the firm for the floors of balconies, schools, billiard rooms, bathrooms, hospital wards, banks, etc. The application of Colourphalt is similar in every way to that employed in the laying of ordinary black natural rock asphalt, and it is claimed to be dustless, impervious and hard wearing. The finished surface, the manufacturers state, presents a smooth and polished appearance, and when laid is easily kept in good trim. In most cases, they state, it will only be found necessary to wash the surface down, after use, with a wet mop or use the special polish supplied.

*

The British Thomson-Houston Co., Ltd., have opened a new Mazda lamp depot at 38 Friar Lane, Leicester. Large stocks of all types and sizes of Mazda lamps will be carried, and prompt attention will be given to all orders and inquiries. The firm have obtained an important order from the L.C.C. for two 20,000 kw. turbo-alternators, complete with feed pumps, heaters, evaporators and condensing plant. These sets will be installed in the Greenwich Station Power for supplying power to the L.C.C. tramways.

*

Messrs. W. H. Gaze and Sons, Ltd., have secured the following contracts: New Offices, etc., at Kew Toll House for the Port of London Authority; enlargement of School at Roehampton for the London County Council; Admission Villa at Banstead Mental Hospital for the London County Council.

*

At the British Industries Fair, Birmingham, this year, there will be an exhibit of rubber floors which will interest every potential purchaser of this modern type of floor. The Macinlop exhibit will comprise a series of colour panels of distinctive design and great variety of tasteful colours. The range will include marbled and plain effects, in colours which will give every opportunity for modern ideas in decorative art to be expressed on floors. Another interesting item in the Macinlop exhibit will be the rubber-covered table and counter. This type of fitting is becoming very popular in restaurants, cafés, hotels, cinemas, and passenger ships. It is claimed to provide an attractive and almost stainless surface, which is kept clean with a damp cloth and requires nothing for upkeep.

*

Bank News

The net profits of the Westminster Bank Limited for the past year, after providing for bad and doubtful debts, and all expenses, amount to £1,821,888. This sum, added to £506,304 brought forward from 1929, leaves available the sum of £2,328,192. The dividend of 10 per cent. paid in August last on the £4 shares, and 6¼ per cent. on the £1 shares, absorbs £656,945. A further dividend of 10 per cent. is now declared in respect of the £4 shares, making 20 per cent. for the year; and a further dividend of 6¼ per cent. on the £1 shares will be paid, making the maximum of 12½ per cent. for the year. £150,000 has been transferred to rebuilding account, £200,000 to contingent fund, and £200,000 to officers' pension fund, leaving a balance of £464,301 to be carried forward.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office. All inquiries concerning inventions, patents and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated readers should apply to the Patent Office, 25 Southampton Buildings, W.C.2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

2024, 2025. James, W. H. C. Building construction. January 21.

2284. Smith, W. H. Floors, ceilings, etc. January 23.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:

Royal Geographical Society's Headquarters, Kensington Gore, S.W. (pages 235–238). General contractors, Holland & Hannen and Cubitts, Ltd. Sub-contractors: Richard Crittall & Co., Ltd., heating; Jas. Gibbons, Ltd., windows and door furniture; Binfield Brick and Tile Works, bricks and tiles; Clark and Fenn, Ltd., fibrous plaster; Higgins and Griffiths, Ltd., lighting; Hollis Bros. & Co., Ltd., oak floors; Maple & Co., Ltd., seating and upholstery; Art Pavements and Decorations, Ltd., jointless floors; Redpath, Brown & Co., Ltd., steelwork; the Rom River Co., Ltd., reinforcing bars; Val de Travers Asphalte Paving Co., Ltd., asphalt; Hycolite Liquid Wallpaper Manufacturing Co., Ltd., paint.

The Ellen Terry Memorial Home, Wray Park Road, Reigate (pages 242–243). General contractors, Atkinson and Potter Brothers. Sub-contractors: Excel Asphalte Co., Ltd., asphalt; Langley's, pantiles; Docker's, Induroleum flooring; E. E. Pope, central heating and plumbing; G. Matthews, grates; National Radiator Co., Ltd., boilers; John Bolding and Sons, Ltd., sanitary fittings; Jones Lock Co., door furniture; Henry Hope and Son, Ltd., window furniture; Educational Supply Association, Ltd., Esavian folding windows.

ANNOUNCEMENTS

Mr. J. Walter Dudding, L.R.I.B.A., has removed his offices from Old Queen Street to 1 Carteret Street, Queen Anne's Gate, S.W.1, where he will be glad to receive trade catalogues.

Messrs. Emden, Egan & Co., chartered architects, of 7 Garrick Street, W.C.2, have taken into partnership Mr. W. H. Arend, who has been associated with the firm for over nineteen years.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Middlesex Education Committee has acquired a site in Bromyard Avenue, ACTON, for the erection of a secondary school.

BARKING U.D.C. Health Committee has instructed the architect to invite tenders for the erection of the new infectious diseases hospital.

BARKING U.D.C. has received sanction to borrow £1,100 for laying out the Lodge Lane playing field.

Plans passed at BARKING: Alterations and additions, 78 East Street, for Mr. R. Reed; pattern shop, London Road, for the London Scottish Foundry, Ltd.; garage and store, Alfred's Way, for Messrs. Samuel Rogers.

The BERMONDSEY B.C. is to erect fourteen flats in Horney Lane, at a cost of £8,605.

Mr. W. J. King, architect, has submitted to the Hendon R.D.C., for approval, plans for the erection of a cinema in Station Road, EDGWARE.

Middlesex Education Committee is acquiring a site in Staines Road, FELTHAM, for the erection of an elementary school.

The FRIERN BARNET U.D.C. is to construct an open-air swimming bath, at a cost of £16,600.

Middlesex Education Committee has purchased land in Pinkwell Lane, HAYES, for the erection of an elementary school.

Plans passed at ILFORD: Eighteen houses, Otley Drive, for Mr. J. Aldridge; shops and showroom, Ley Street, for Mr. W. J. Lewis; twenty houses, Tanners Lane, six houses, Otley Drive, and twelve houses, Bentley Drive, for Mr. J. Aldridge; forty houses, Charter Avenue, for Mr. J. H. Lohden; eight houses, Merton Road, for Mr. G. F. Siegerts; additions to offices, High Road, for Messrs. Shipwright and Partners; eight houses, Kingston Road, and four houses, Cavenham Gardens, for Messrs. Belfrage, Saville and Hooper; shop, Grove Road, for Messrs. W. H. G. Heath; four houses, Field View Gardens, for Mr. T. Anders; two houses, Frimley Road, for Mr. F. Parrish; eight houses, Lincoln Gardens, for Mr. A. P. Griggs; eleven houses, Woodford Avenue, and sixteen houses, Westcliffe Gardens, for Mr. T. Anders; alterations to canteen, Howards Works, Uphill Road, for Messrs. Hammond and Miles, Ltd.; alterations, 153-157 Becontree Avenue, for Messrs. Haines and Warwick, Ltd.; roads and sewers, Fairfield Road, for Messrs. Kemsleys; house, Westrow Gardens, for Messrs. J. W. Moore and Son; rebuilding 58-58a High Road, for Mr. H. Wilson; shop alterations 115 Ilford Lane, for Mr. K. Ashton; offices and workshops, Barley Lane, for Mr. G. F. Siegerts; shop additions, 113 Ilford Lane, for Messrs. B. Bailey & Co.; shop additions, Ilford Lane, for Mr. H. G. Needham; shops and houses, Aldborough Road, for Messrs. Haines and Warwick, Ltd.; alterations, "Papermakers' Arms" public-house, Roden Street, for Mr. W. Stewart; shops, High Road, for Mr. J. Heathcote; seven houses, Aldborough Road, for Messrs. Baskett and Brown; store and houses, Becontree Avenue, for Mr. A. Hulbert; twenty houses, Sunnymede Drive, for Mr. T. Anders; shops and houses, Green Lane, for Mr. E. E. Meredith.

The KENSINGTON B.C. has approved plans of a cinema building to be erected in Drayton Gardens.

The KENSINGTON B.C. is seeking sanction for a loan of £150,500 for widening Kensington High Street.

The KENSINGTON B.C. is to clear and erect flats on the Talbot Grove area, at a cost of £43,500.

Plans passed at LEWISHAM: Additions, "Prince of Wales" public-house, Perry Rise, Forest Hill, for Messrs. Charrington & Co., Ltd.; houses, Grove Park Road, Grove Park, for Messrs. W. R. Hindmarsh & Co.; workshop buildings, rear of 174 Hither Green Lane, for Mr. P. B. Dannatt; building, site of 156-158 High Street, and three houses, Clarendon Road, for Mr. G. T. Harman; eight houses, Bellingham Road, for Mr. J. Watt.

Plans have been prepared by Mr. George Coles for the erection of a cinema at LEYTON.

The LOUGHTON U.D.C. is seeking sanction for a loan of £5,000 for the construction of an open-air swimming bath.

A cinema is to be erected at Fair Green, MITCHAM, for Majestic Theatre (Mitcham), Ltd., from plans prepared by Mr. S. B. Pritlove.

Middlesex Education Committee has purchased fourteen acres in Cannon Lane, PINNER, for the erection of a secondary school and an elementary school.

Middlesex Education Committee is acquiring a site at Duke's Avenue, PINNER, for the erection of an elementary school.

Mr. Cecil Masey is preparing plans for the reconstruction of the Grand Palace Cinema, POPLAR.

The POPLAR B.C. has voted an estimate of £138,537 for the demolition and rebuilding of Poplar baths.

Plans have been prepared by Mr. Martin Hatfield for the erection of a cinema in ST. ALBANS for Mr. Louis Morris.

The SOUTHWARK B.C. has approved plans, submitted by Mr. H. W. Binns, for a cinema building proposed to be erected on the site of 124-132 Walworth Road, S.E.

Messrs. E. and W. Hunt are in negotiation with the Westminster City Council with regard to the erection of buildings for the Law Land Co., Ltd., on the Lancaster House site, Wellington Street, and Savoy Street, STRAND.

Middlesex Education Committee has obtained a site in Dudden Hill, WILLESDEN, for the erection of a technical and art school.

SOUTH-WESTERN COUNTIES

The EXETER Corporation is to erect 334 houses and sixteen flats on the Burnt House Lane estate.

MIDLAND COUNTIES

The BIRMINGHAM Education Committee is to improve structurally various elementary schools, at a cost of £40,000.

The BIRMINGHAM Corporation is purchasing a site in Bristol Road, Northfield, for the erection of swimming baths.

The BIRMINGHAM Corporation is to obtain sites for two branch fire stations and provide firemen's quarters at Perry Barr.

The BIRMINGHAM Education Committee is to erect a junior day technical school near Denbigh Street, Bordesley Green.

The BIRMINGHAM Corporation has acquired a site in Highfield Road, Yardley Wood, for the erection of a branch library.

The BIRMINGHAM Education Committee has obtained land in Bandywood Road, on the Kettlehouse estate, for the erection of an elementary school.

DERBYSHIRE C.C. has decided to proceed with widenings on the Derby-Buxton trunk road at a cost of £250,000.

The Church Authorities have acquired a site on the Priory Estate, DUDLEY, for the erection of a church.

Messrs. Mitchells and Butler are to build an hotel on the Priory estate, DUDLEY.

Plans passed at DUDLEY: Alterations and extensions, Church Schools, Halesowen Road, Netherton, for the Rev. Kemp; bakery, Priory estate, for the Dudley Co-operative Society, Ltd.; extensions, Dibdale Street, for the Scrim Manufacturing Co.; extension to bedding manufactory, Scott's Green, for Messrs. F. Flanagan and Sons.

The KENILWORTH U.D.C. is to raise funds for the preservation of the ruins of Kenilworth Abbey.

The NOTTINGHAM Corporation has prepared a comprehensive clearance and rehousing scheme for a population of over 7,000 persons.

The NOTTINGHAM Corporation has passed plans, submitted by Mr. A. J. Thraves, for the erection of a cinema in Central Avenue, West Bridgford.

NORTHERN COUNTIES

The BOLTON Education Committee has passed plans for the erection of an elementary school, with a swimming bath, in Whitecroft Road, at an estimated cost of £50,000.

The BRADFORD Education Committee is in negotiation with the Grammar School governors regarding the proposals for the erection of new premises, at an estimated cost of £189,000.

The DEWSBURY Education Committee is to enlarge the technical college, at a cost of £19,000.

EARLSTONE (LANCS.) U.D.C. has passed plans submitted by Mr. Lionel A. G. Prichard, of Liverpool, for the erection of a cinema in Railway Street.

The HUDDERSFIELD Corporation has approved a comprehensive scheme, estimated to cost over £250,000, for the redevelopment of a slum area and making a new road from High Street to Chapel Hill.

The Public Assistance Committee of the HULL Corporation recommends the provision of a large hospital at Anlaby Road, the cost being estimated at £285,000.

The HULL Corporation is to proceed with the scheme for new waterworks at Kelleythorpe, at a total cost of £766,000.

The HULL Corporation proposes to purchase 158 acres of land at Winestead, for the erection of a mental colony.

At a meeting of the HULL Watch Committee, the city architect submitted sketch plans of the new fire station, inspector's house, and twelve houses for firemen at East Hull. It was decided that the plans be approved, that working drawings and quantities be prepared, and that the City Architect be instructed to obtain tenders for the erection of the buildings.

The HULL Corporation Baths Committee has decided upon a scheme for the proposed new swimming bath at the rear of the existing open-air baths in Albert Avenue, at an estimated cost of £44,000.

Plans passed at HULL: Sixteen houses, Stephenson Street, for Mr. H. Barnett; house, Marfleet Lane, for Mr. K. Braithwaite; eight houses, Lodge Street, for Mr. J. E. Barnett; ten houses, Boothferry Road, for Mr. F. Curson; eight houses, Hall Road extension, for Mrs. Z. Lawrence; 301 houses, Kirklands Road, for Mr. F. R. Waller; layout of fifty houses, Murrayfield Road, for Messrs. A. H. Evans & Co.; tennis and bowling club, James Reckitt Avenue, for Mr. J. J. Fisher; four shops, Spring Bank West, for Mr. F. R. Waller; two shops, Huntley Drive, for Messrs. A. H. Evans & Co.

The LANCASTER Corporation has prepared a five-year programme for the erection of 800 houses.

The LANCASTER Corporation has been approached by the Commissioners of the Port of Lancaster as to certain matters in connection with the improvement of the port, having regard to the Commissioners' lack of funds, and the Corporation has appointed a special committee to consider the whole subject.

The LANCASTER Corporation has decided to purchase certain properties of the late Lord Ashton, including his mansion and grounds, for the sum of £38,500. Part of the land will be used for housing, and a committee has been appointed to consider and recommend as to the development of the remainder.

The LEEDS Corporation has prepared a programme for the erection of 5,000 houses during the next five years.

The MANCHESTER Corporation Electricity Committee is purchasing land on the Carrington estate, for the erection of a power station.

The OLDHAM Corporation is to expedite the proposed unemployment scheme for the erection of a public washhouse at Hollinwood.

WALES

The CARDIFF Corporation is to construct two reinforced concrete bridges on the North Orbital road.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

NOTE: At the time of going to press a general reduction of ½d. per hour is confirmed; and several districts have been regraded. The regrading is here shown, but ½d. should be deducted from all the rates quoted.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6½	1 1½
A_1	Abergavenny	S. Wales & M.	1 6½	1 1½
B	Abingdon ..	S. Counties	1 5	1 0½
A	Accrington	N.W. Counties	1 7	1 2½
A_2	Addlestone	S. Counties	1 5½	1 1
A	Adlington ..	N.W. Counties	1 7	1 2½
A	Airdrie ..	Scotland	•1 7	1 2½
C	Aldeburgh ..	E. Counties	1 3	11½
A	Altrincham	N.W. Counties	1 7	1 2½
B_2	Appleby ..	N.W. Counties	1 3½	11½
A	Ashton-under-Lyne	N.W. Counties	1 7	1 2½
A_2	Atherstone	Mid. Counties	1 5½	1 1
B_2	Aylesbury ..	S. Counties	1 3½	11½
B_2	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4½	1 0½
A_1	Barnard Castle	N.E. Coast	1 6½	1 1½
A	Barnsley ..	Yorkshire	1 7	1 2½
B	Barnstaple	S.W. Counties	1 5	1 0½
A	Barrow ..	N.W. Counties	1 7	1 2½
A	Barry ..	S. Wales & M.	1 7	1 2½
B_1	Basingstoke	S.W. Counties	1 4½	1 0½
A_2	Bath ..	S.W. Counties	1 5½	1 1
A	Batley ..	Yorkshire	1 7	1 2½
A_2	Bedford ..	E. Counties	1 5½	1 1
A_2	Berwick-on-Tweed	N.E. Coast	1 6	1 1½
A_2	Bewdley ..	Mid. Counties	1 6	1 1½
B_2	Bicester ..	Mid. Counties	1 3½	11½
A	Birkenhead	N.W. Counties	•1 9	1 3½
A	Birmingham	Mid. Counties	1 7	1 2½
A_1	Bishop Auckland	N.E. Coast	1 6½	1 1½
A	Blackburn ..	N.W.Counties	1 7	1 2½
A	Blackpool ..	N.W. Counties	1 7	1 2½
A	Blyth ..	N.E. Coast	1 7	1 2½
B_2	Bognor ..	S. Counties	1 4	1 0
A	Bolton ..	N.W. Counties	1 7	1 2½
A_2	Boston ..	Mid. Counties	1 5½	1 1
A_2	Bournemouth	S. Counties	1 5½	1 1
B_2	Bovey Tracey	S.W. Counties	1 4	1 0
A	Bradford ..	Yorkshire	1 7	1 2½
A_2	Brentwood	E. Counties	1 6	1 1½
A	Bridgend ..	S. Wales & M.	1 7	1 2½
B_2	Bridgwater	S.W. Counties	1 4	1 0
A_1	Bridlington	Yorkshire	1 6½	1 1½
A	Brighouse ..	Yorkshire	1 7	1 2½
A_2	Brighton ..	S. Counties	1 5½	1 1
A	Bristol ..	S.W. Counties	1 7	1 2½
B_2	Brixham ..	S.W. Counties	1 3½	11½
A_2	Bromsgrove	Mid. Counties	1 6	1 1½
C	Bromyard ..	Mid. Counties	1 3	11½
A	Burnley ..	N.W. Counties	1 7	1 2½
A	Bursiem ..	Mid. Counties	1 7	1 2½
A	Burton-on-Trent	Mid. Counties	1 7	1 2½
A	Bury ..	N.W. Counties	1 7	1 2½
A_1	Buxton ..	N.W. Counties	1 6½	1 1½
A_2	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 4	1 0
A	Cardiff ..	S. Wales & M.	1 7	1 2½
A	Carlisle ..	N.W. Counties	1 7	1 2½
B	Carmarthen	S. Wales & M.	1 5	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	11½
A	Carnforth ..	N.W. Counties	1 7	1 2½
A	Castleford ..	Yorkshire	1 7	1 2½
B	Chatham ..	S. Counties	1 5	1 0½
B	Chelmsford	E. Counties	1 5	1 0½
A_2	Cheltenham	S.W. Counties	1 5½	1 1
A	Chester ..	N.W. Counties	1 7	1 2½
A	Chesterfield	Mid. Counties	1 7	1 2½
B_2	Chichester ..	S. Counties	1 4	1 0
A	Chorley ..	N.W. Counties	1 7	1 2½
B_2	Cirencester	S. Counties	1 4	1 0
A	Clitheroe ..	N.W. Counties	1 7	1 2½
A	Clydebank ..	Scotland	1 7	1 2½
A	Coalville ..	Mid. Counties	1 7	1 2½
A_2	Colchester ..	E. Counties	1 5½	1 1
A	Colne ..	N.W. Counties	1 7	1 2½
A_2	Colwyn Bay	N.W. Counties	1 5½	1 1
A_1	Consett ..	N.E. Coast	1 6½	1 1½
A_2	Conway ..	N.W. Counties	1 5½	1 1
A	Coventry ..	Mid. Counties	1 7	1 2½
A_2	Crewe ..	N.W. Counties	1 6	1 1½
A_2	Cumberland	N.W. Counties	1 5½	1 1
A	DARLINGTON	N.E. Coast	1 7	1 2½
A	Darwen ..	N.W. Counties	1 7	1 2½
B_2	Deal ..	S. Counties	1 4	1 0
A_2	Denbigh ..	N.W. Counties	1 5½	1 1
A	Derby ..	Mid. Counties	1 7	1 2½
A	Dewsbury ..	Yorkshire	1 7	1 2½
B	Didcot ..	S. Counties	1 5	1 0½
A	Doncaster ..	Yorkshire	1 7	1 2½
B_2	Dorchester	S.W. Counties	1 4	1 0
A_2	Driffield ..	Yorks	1 5½	1 1
A_2	Droitwich ..	Mid. Counties	1 6	1 1½
A	Dudley ..	Mid. Counties	1 7	1 2½
A	Dundee ..	Scotland	1 7	1 2½
A	Durham ..	N.E. Coast	1 6½	1 1½
A_2	EAST-BOURNE	S. Counties	1 5½	1 1
A_1	Ebbw Vale	S. Wales & M.	1 6½	1 1½
A	Edinburgh	Scotland	1 7	1 2½
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6½	1 1½
A_2	Exeter ..	S.W. Counties	•1 6	1 1½
B_1	Exmouth ..	S.W. Counties	1 4½	1 0½
A_3	FELIXSTOWE	E. Counties	1 5½	1 1½
A_3	Filey ..	Yorks	1 5½	1 1
A	Fleetwood ..	N.W. Counties	1 7	1 2½
B_2	Folkestone	S. Counties	1 4	1 0
A	Frodsham ..	N.W. Counties	1 7	1 2½
B_2	Frome ..	S.W. Counties	1 4	1 0
A	GATESHEAD	N.E. Coast	1 7	1 2½
B_1	Gillingham	S. Counties	1 4½	1 0½
A_2	Gloucester ..	S.W. Counties	1 6	1 1½
A_2	Goole ..	Yorkshire	1 6	1 1½
A_2	Gosport ..	S. Counties	1 5½	1 1
A_2	Grantham ..	Mid. Counties	1 5½	1 1
A_1	Gravesend ..	S. Counties	1 6½	1 1½
A	Greenock ..	Scotland	•1 7	1 2½
A	Grimsby ..	Yorkshire	1 7	1 2½
B_1	Guildford ..	S. Counties	1 4½	1 0½
A	HALIFAX	Yorkshire	1 7	1 2½
A	Hanley ..	Mid. Counties	1 7	1 2½
A	Harrogate ..	Yorkshire	1 7	1 2½
A	Hartlepools	N.E. Coast	1 7	1 2½
B	Harwich ..	E. Counties	1 5	1 0½
B_2	Hastings ..	S. Counties	1 4	1 0
A_2	Hatfield ..	S. Counties	1 5½	1 1
B	Hereford ..	S.W. Counties	1 5½	1 0½
A_3	Hertford ..	E. Counties	1 5½	1 1½
A_1	Heysham ..	N.W. Counties	1 6½	1 1½
A_1	Howden ..	N.E. Coast	1 6½	1 1½
A	Huddersfield	Yorkshire	1 7	1 2½
A	Hull ..	Yorkshire	1 7	1 2½
A	ILKLEY ..	Yorkshire	1 7	1 2½
A	Immingham	Mid. Counties	1 7	1 2½
A_2	Ipswich ..	E. Counties	1 5½	1 1
B_2	Isle of Wight	S. Counties	1 3½	11½
A	JARROW ..	N.E. Coast	1 7	1 2½
A	KEIGHLEY	Yorkshire	1 7	1 2½
B	Kendal ..	N.W. Counties	1 5	1 0½
B	Keswick ..	N.W. Counties	1 5	1 0½
A_2	Kettering ..	Mid. Counties	1 6	1 1½
A_2	Kidderminster	Mid. Counties	1 6	1 1½
B_2	King's Lynn	E. Counties	1 4	1 0
A	LANCASTER	N.W. Counties	1 7	1 2½
A_2	Leamington	Mid. Counties	1 6	1 1½
A	Leeds ..	Yorkshire	1 7	1 2½
A	Leek ..	Mid. Counties	1 7	1 2½
A	Leicester ..	Mid. Counties	1 7	1 2½
A	Leigh ..	N.W. Counties	1 7	1 2½
B_2	Lewes ..	S. Counties	1 3½	11½
A_2	Lichfield ..	Mid. Counties	1 6	1 1½
A	Lincoln ..	Mid. Counties	1 7	1 2½
A	Liverpool ..	N.W. Counties	•1 9	1 3½
A_2	Llandudno	N.W. Counties	1 5½	1 1
A	Llanelly ..	S. Wales & M.	1 7	1 2½
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 7	1 2½
A	Loughborough	Mid. Counties	1 7	1 2½
A_2	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 7	1 2½
A_1	MACCLESFIELD	N.W. Counties	1 6½	1 1½
B	Maidstone ..	S. Counties	1 5	1 0½
A_2	Malvern ..	Mid. Counties	1 5½	1 1
A	Manchester	N.W. Counties	1 7	1 2½
A	Mansfield ..	Mid. Counties	1 7	1 2½
B	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5½	1 1
A_1	Merthyr ..	S. Wales & M.	1 6½	1 1½
A	Middlesbrough	N.E. Coast	1 7	1 2½
A_2	Middlewich	N.W. Counties	1 6	1 1½
B_2	Minehead ..	S.W. Counties	1 4	1 0
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 7	1 2½
A	Morecambe	N.W. Counties	1 7	1 2½
A_2	NANTWICH	N.W. Counties	1 6	1 1½
A	Neath ..	S. Wales & M.	1 7	1 2½
A	Nelson ..	N.W. Counties	1 7	1 2½
A	Newcastle ..	N.E. Coast	1 7	1 2½
A	Newport ..	S. Wales & M.	1 7	1 2½
A	Normanton	Yorkshire	1 7	1 2½
A_1	Northampton	Mid. Counties	1 6½	1 1½
A	North Staffs.	Mid. Counties	1 7	1 2½
A	North Shields	N.E. Coast	1 7	1 2½
A_2	Norwich ..	E. Counties	1 6	1 1½
A	Nottingham	Mid. Counties	1 7	1 2½
A	Nuneaton ..	Mid. Counties	1 7	1 2½
A_3	OAKHAM ..	Mid. Counties	1 5½	1 1½
A	Oldham ..	N.W. Counties	1 7	1 2½
A_2	Oswestry ..	N.W. Counties	1 5½	1 1
B	Oxford ..	S. Counties	1 5	1 0½
A	PAISLEY ..	Scotland	•1 7	1 2½
B_2	Pembroke ..	S. Wales & M.	1 3½	11½
A	Perth ..	Scotland	•1 7	1 2½
A_2	Peterborough	E. Counties	1 6	1 1½
A	Plymouth ..	S.W. Counties	•1 7	1 2½
A	Pontefract	Yorkshire	1 7	1 2½
A_1	Pontypridd	S. Wales & M.	1 6½	1 1½
A_2	Portsmouth	S. Counties	1 5½	1 1
A	Preston ..	N.W. Counties	1 7	1 2½
A	QUEENSFERRY	N.W. Counties	1 7	1 2½
A_2	READING	S. Counties	1 5½	1 1
B	Reigate ..	S. Counties	1 5	1 0½
A_2	Retford ..	Mid. Counties	1 5½	1 1
A_1	Rhondda Valley	S. Wales & M.	1 6½	1 1½
A_2	Ripon ..	Yorkshire	1 5½	1 1
A	Rochdale ..	N.W. Counties	1 7	1 2½
B_1	Rochester ..	S. Counties	1 4½	1 0½
A_1	Ruabon ..	N.W. Counties	1 6½	1 1½
A	Rugby ..	Mid. Counties	1 7	1 2½
A_2	Rugeley ..	Mid. Counties	1 5½	1 1
A	Runcorn ..	N.W. Counties	1 7	1 2½
A_2	ST. ALBANS	E. Counties	1 6	1 1½
A	St. Helens ..	N.W. Counties	1 7	1 2½
B_2	Salisbury ..	S.W. Counties	1 4	1 0
A_1	Scarborough	Yorkshire	1 6½	1 1½
A	Scunthorpe	Mid. Counties	1 7	1 2½
A	Sheffield ..	Yorkshire	1 7	1 2½
A	Shipley ..	Yorkshire	1 7	1 2½
A_2	Shrewsbury	Mid. Counties	1 6	1 1½
A_2	Skipton ..	Yorkshire	1 6	1 1½
A_2	Slough ..	S. Counties	1 5½	1 1
A_2	Solihull ..	Mid. Counties	1 6	1 1½
A_2	South'pton	S. Counties	1 5½	1 1
A_2	Southend-on-Sea	E. Counties	1 6	1 1½
A	Southport ..	N.W. Counties	1 7	1 2½
A	S. Shields ..	N.E. Coast	1 7	1 2½
A_2	Stafford ..	Mid. Counties	1 6	1 1½
A	Stockport ..	N.W. Counties	1 7	1 2½
A	Stockton-on-Tees	N.E. Coast	1 7	1 2½
A	Stoke-on Trent	Mid. Counties	7	1 2½
B	Stroud ..	S.W. Counties	1 5	1 0½
A	Sunderland	N.E. Coast	1 7	1 2½
A	Swadlincote	Mid. Counties	1 7	1 2½
A	Swansea ..	S. Wales & M.	1 7	1 2½
A_3	Swindon ..	S.W. Counties	1 5½	1 1½
A_1	TAMWORTH	N.W. Counties	1 6½	1 1½
B_1	Taunton ..	S.W. Counties	1 4½	1 0½
A	Teesside Dist.	N.E. Counties	1 7	1 2½
A_3	Teignmouth	S.W. Coast	1 5½	1 1½
A	Todmorden	Yorkshire	1 7	1 2½
A_1	Torquay ..	S.W. Counties	1 6½	1 1½
C	Truro ..	S.W. Counties	1 3	11½
B	Tunbridge Wells	S. Counties	1 5	1 0½
A	Tunstall	Mid. Counties	1 7	1 2½
A	Tyne District	N.E. Coast	1 7	1 2½
A	WAKEFIELD	Yorkshire	1 7	1 2½
A	Walsall ..	Mid. Counties	1 7	1 2½
A	Warrington	N.W. Counties	1 7	1 2½
A_2	Warwick ..	Mid. Counties	1 6	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1
A	West Bromwich	Mid. Counties	1 7	1 2½
A_2	Weston-s-Mare	S.W. Counties	1 6	1 1½
A_2	Whitby ..	Yorkshire	1 6	1 1½
A	Widnes ..	N.W. Counties	1 7	1 2½
A	Wigan ..	N.W. Counties	1 7	1 2½
B_1	Winchester	S. Counties	1 4½	1 0½
A_2	Windsor ..	S. Counties	1 5½	1 1
A	Wolverhampton	Mid. Counties	1 7	1 2½
A_2	Worcester	Mid. Counties	1 6	1 1½
A_2	Worksop ..	Yorkshire	1 5½	1 1
A_1	Wrexham ..	N.W. Counties	1 6½	1 1½
A_2	Wycombe ..	S. Counties	1 5½	1 1
B_1	YARMOUTH	E. Counties	1 4½	1 0½
B_2	Yeovil ..	S.W. Counties	1 4	1 0
A	York ..	Yorkshire	1 7	1 2½

• In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rate of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	8
Carpenter	,,		1	8
Joiner	,,		1	8
Machinist	,,		1	9
Mason (Banker)	,,		1	8
,, (Fixer)	,,		1	9
Plumber	,,		1	8
Painter	,,		1	7
Paperhanger	,,		1	8
Glazier	,,		1	8
Slater	,,		1	8
Scaffolder	,,		1	4
Timberman	,,		1	4
Navvy	,,		1	3
General Labourer	,,		1	3
Lorryman	,,		1	5½
Crane Drivers	,,		1	7
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	8	6
Blue Lias Lime	,,	2	10	6
Hydrated Lime	,,	2	16	0
Portland Cement	,,	2	6	0
Ferro-crete	,,	2	13	6
Ciment Fondu	,,	5	15	0
Thames Ballast	per Y.C.		8	9
¾" Crushed Ballast	,,		10	0
Building Sand	,,		10	6
Washed Sand	,,		11	6
2" Broken Brick	,,		9	6
¾" ,, ,,	,,		12	6
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

BRICKLAYER

		£	s.	d.
Flettons	per M.	3	1	6
Grooved do.	,,	3	3	6
Stocks, 1st Quality	,,	4	18	6
,, 2nd ,,	,,	4	12	6
Blue Bricks, Pressed	,,	9	18	0
,, Wirecuts	,,	8	16	0
,, Brindles	,,	8	0	0
,, Bullnose	,,	10	8	0
Red Sand-faced Facings	,,	7	11	0
Red Rubbers for Arches	,,	15	0	0
Multicoloured Facings	,,	9	4	0
Luton Facings	,,	8	16	0
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:				
Stretchers	,,	21	10	0
Headers	,,	21	0	0
Bullnose	,,	28	0	0
Double Stretchers	,,	30	0	0
Double Headers	,,	27	0	0
Glazed Second Quality, *Less*	,,	1	0	0
,, Buffs and Creams, Add	,,	2	0	0
,, Other Colours ,,	,,	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	9
2½" ,, ,, ,,	,,		2	0
3" ,, ,, ,,	,,		2	3
4" ,, ,, ,,	,,		3	0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

		4" s.	4" d.	6" s.	6" d.
Straight pipes	per F.R.	1	1	1	6
Bends	each	2	10	4	4
Taper bends	,,	6	3	7	2
Rest bends	,,	5	9	8	9
Single junctions	,,	3	9	5	9
Double ,,	,,	5	9	8	9
Straight channels	,,	2	6	3	2
¾" Channel bends	,,	7	8	—	
Channel junctions	,,	7	0	12	6
Channel tapers	,,	5	6	7	9
Yard gullies	,,	9	6	11	6
Interceptors	,,	18	6	25	9
Iron drain pipe	per F.R.	2	3	3	5
Bends	each	6	0	13	0
Inspection bends	,,	15	3	24	0
Single junctions	,,	9	3	18	0
Double junctions	,,	14	0	27	6
Lead wool	lb.		6	—	
Gaskin	,,		5	—	

MASON

The following d/d F.O.R. at Nine Elms

		s.	d.
Portland stone, Whitbed	F.C.	4	6
,, ,, Basebed	,,	4	9
Bath stone	,,	2	11
York stone	,,	6	9
,, Sawn templates	,,	7	6
,, Paving, 2"	F.S.	1	8
,, ,, 3"	,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station.

		£	s.	d.
24" × 12" Duchesses	per M.	31	0	0
22" × 12" Marchionesses	,,	28	0	0
20" × 10" Countesses	,,	20	5	0
18" × 10" Viscountesses	,,	17	0	0
18" × 9" Ladies	,,	15	0	0
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	26	0	0
,, green	,,	27	15	0
Best machine roofing tiles	,,	5	0	0
Best hand-made do.	,,	5	10	0
Hips and valleys	each			9½
,, hand-made	,,			10
Nails, compo	lb.			4
,, copper	,,		2	0

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	6
Birch	as 1" F.S.			9
Deal, Joiner's,	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, Plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		1	6
,, English ,,	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.	1	1	0
,, ⅞"	,,	1	3	6
,, 1"	,,	1	5	6
,, 1¼"	,,	1	11	0
,, 1½"	,,	1	15	0
Deal matchings, ⅝"	,,		16	0
,, ¾"	,,		17	6
,, 1"	,,	1	6	0
Rough boarding, ¾"	,,		18	0
,, 1"	,,	1	0	0
,, 1½"	,,	1	8	0

Plywood, per ft. sup.

Thickness	3/16" AA.	3/16" A.	3/16" B.	¼" AA.	¼" A.	¼" B.	⅜" AA.	⅜" A.	⅜" B.	½" AA.	½" A.	½" B.
Qualities	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

		¼"	½"	1"	1¼"	2"
Tubes, 2'–14' long, per ft. run		4	5½	9½	1/1	1/10
Pieces, 12"–23½" long,	each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long	,,	7	9	1/3	1/8	3/–
Long screws 12"–23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket union	,,	2/–	3/–	5/6	6/9	10/–
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/–	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/–	2/–
Flanges	,,	9	1/–	1/4	1/9	2/9
Caps	,,	3½	5	8	1/–	2/–
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs	,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

	Per cent.		Per cent.
Gas	62½	Galvanized gas	50
Water	58¾	,, water	45
Steam	55	,, steam	40

FITTINGS.

	Per cent.		Per cent.
Gas	47½	Galvanized gas	37½
Water	42½	,, water	32½
Steam	37½	,, steam	27½

SMITH AND FOUNDER—*continued.*

		s.	d.
Rolled steel joists cut to length	cwt.	9	6
Mild steel reinforcing rods, ⅜"	,,	10	0
,, ,, ½"	,,	9	9
,, ,, ⅝"	,,	9	6
,, ,, ¾"	,,	9	0
,, ,, ⅞"	,,	9	0
,, ,, 1"	,,	9	0
,, ,, 1¼"	,,	9	0
,, ,, 1½"	,,	9	0

		3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		7		10
Shoes	each	2	3	3	3
Anti-splash ,,	,,	5	0	8	6
Boots	,,	3	3	4	6
Bends	,,	2	9	4	0
,, with access door	,,	—		6	9
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	4	0	6	3
Plinth bends, 4½" to 6"	,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		6
Stop ends	each		6		7
Angles	,,	1	7	1	11
Obtuse ,,	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		s.	d.
Lead, milled sheet	cwt.	23	0
,, drawn pipes	,,	23	6
,, soil pipe	,,	26	6
,, scrap	,,	13	0
Solder, plumbers'	lb.	1	0
,, fine do.	,,	1	4
Copper, sheet	,,	1	0
,, tubes	,,	1	4

L.C.C. soil and waste pipes:		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	5	3	10	3
Shoes	,,	2	10	4	4	9	6
Heads	,,	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	8	6
Plaster, coarse	,,	2	10	6
,, fine	,,	5	10	0
Hydrated lime	,,	2	16	0
Sirapite	,,	3	10	0
Keene's cement	,,	5	10	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz.	F.S.					3½
,, ,, 26 oz.	,,					4½
Arctic glass	,,					5
Cathedral glass	,,					6
Hartley's rough rolled	,,					9
Do. wired plate	,,				1	3
¼" Polished plate, n/e 1	,,	1	0	to	1	3
,, ,, 2	,,	1	2	,,	1	7
,, ,, 3	,,	1	7	,,	2	5
,, ,, 4	,,	2	1	,,	2	11
,, ,, 6	,,	2	3	,,	3	2
,, ,, 8	,,	2	6	,,	3	6
,, ,, 12	,,	2	9	,,	3	8
,, ,, 20	,,	3	0	,,	3	11
,, ,, 45	,,	3	3	,,	4	1
,, ,, 65	,,	3	7	,,	4	6
,, ,, 90	,,	3	10	,,	4	9
,, ,, 100	,,	4	0	,,	5	0
Vita glass, sheet, n/e 1	,,				1	0
,, ,, ,, 2	,,				1	3
,, ,, ,, over 2	,,				1	9
,, ,, plate, n/e 1	,,				1	6
,, ,, ,, 2	,,				3	0
,, ,, ,, 5	,,				4	0
,, ,, ,, 7	,,				5	0
,, ,, ,, 15	,,				6	0
,, ,, ,, over 15	,,				7	6
Putty, linseed oil	lb.					3

PAINTER

		£	s.	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		3	3
Boiled oil	,,		4	3
Turpentine	,,		3	4
Patent knotting	,,		14	0
Distemper, washable	cwt.	3	0	0
,, ordinary	,,	2	5	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready-mixed paint	,,		13	6
Brunswick black	,,		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12″ deep and cart away	Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away	Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away	,,	11 0
,, ,, 10′ 0″ deep and cart away	,,	11 6
,, ,, 15′ 0″ deep and cart away	,,	12 0
If in stiff clay	add ,,	3 0
If in underpinning	,,	5 0
Digging, return, fill and ram	,,	5 0
Planking and strutting to sides of excavation	F.S.	1 0
,, ,, to pier holes	,,	6
,, ,, to trenches	,,	6
,, ,, extra, only if left in	,,	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	,,	1 13 6
,, ,, ,, (4-2-1)	,,	1 18 6
,, ,, ,, underpinning	,,	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, junctions	,,	3 9	4 6
Gullies and gratings	,,	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
,, ,, in cement	,,	34 0 0
,, Stocks in cement	,,	41 10 0
,, Blues in cement	,,	62 0 0
Extra only for circular on plan	,,	3 0 0
,, backing to masonry	,,	2 0 0
,, raising on old walls	,,	3 0 0
,, underpinning	,,	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	,,	1 0
,, red brick facings	,,	1 6
,, blue brick facings	,,	1 9
,, glazed brick facings	,,	4 6
Tuck pointing	,,	10
Weather pointing	,,	4
Slate dampcourse	,,	1 0
Vertical dampcourse	,,	1 3

ASPHALTER

		s. d.
½″ Horizontal dampcourse	Y.S.	5 6
½″ Vertical dampcourse	,,	7 6
½″ paving or flat	,,	5 6
1″ paving or flat	,,	6 6
1″ × 6″ skirting	F.R.	1 0
Angle fillet	,,	2
Rounded angle	,,	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do. all as last	,,	15 6
Artificial stone and do.	,,	16 6
York stone templates, fixed complete	,,	14 0
,, thresholds	,,	16 0
,, sills	,,	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	4 5 0
Do., 18″ × 9″	,,	4 2 0
Do., 24″ × 12″	,,	4 12 0
Westmorland slating, laid with diminished courses	,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	,,	4 0 0
Do., all as last, but of machine-made tiles	,,	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
,, to stanchions	,,	1 0
,, to staircases	,,	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	,,	6 9
,, ,, roofs	,,	8 3
,, ,, trusses	,,	9 0
,, ,, partitions	,,	12 0
½″ deal sawn boarding and fixing to joists	Sqr.	1 17 6
1″ ,, ,, ,, ,,	,,	2 1 6
1½″ ,, ,, ,, ,,	,,	2 7 6
⅞″ × 2″ fir battening for Countess slating	,,	12 6
Do. for 4″ gauge tiling	,,	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
,, ,, ,, 2 ,,	,,	3 0
,, ,, ,, 3 ,,	,,	3 6
Stout herringbone strutting to 9″ joists	F.R.	1 0
1″ deal gutter boards and bearers	F.S.	1 4
1½″ ,, ,, ,, ,, ,,	,,	1 8
2″ deal wrought rounded roll	F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
1¼″ do.	,,	3 4 0
1½″ do.	,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1¼″ do.	,,	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½″ deal moulded sashes of average size	F.S.	2 3
2″ ,, ,, ,, ,,	,,	2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1½″ heads, 1″ inside and outside linings, ⅝″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	4 3
2″ ,, ,, ,, ,,	,,	4 6
Extra only for moulded horns	Each	9
1½″ deal four-panel square, both sides, door	F.S.	2 6
2″ ,, ,, ,, ,,	,,	3 0
1½″ ,, but moulded both sides	,,	3 0
2″ ,, ,, ,, ,,	,,	3 6
4″ × 3″ deal, rebated and moulded frames	F.R.	1 6
4½″ × 3½″ ,, ,, ,,	,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	3 0
1⅛″ deal moulded wall strings	,,	2 6
1⅛″ ,, outer strings	,,	2 9
Ends of treads and risers housed to string	Each	2 0
3″ × 2″ deal moulded handrail	F.R.	1 6
1″ × 1″ deal balusters and housing each end	Each	2 6
1½″ × 1½″ ,, ,,	,,	3 3
3″ × 3″ deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	,,	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders and hoisting and fixing in position	,,	1 3 0
Do. stanchions with riveted caps and bases and do.	,,	1 2 0
Mild steel bar reinforcement ½″ and up, bent and fixed complete	,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 19 6
Do. in flashings	,,	2 2 0
Do. in covering to turrets, etc.	,,	2 9 0
Do. in soakers	,,	1 15 0
Labour to welted edge	F.R.	3½
Open copper nailing	,,	3½
Close ,,	,,	4½

		½″ s. d.	¾″ s. d.	1″ s. d.	1¼″ s. d.	2″ s. d.	4″ s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 3	1 8	2 2	2 9	3 10	—
Do. soil pipe and fixing with cast lead tacks	,,	—	—	—	—	—	6 0
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions	,,	3 6	4 0	5 6	8 0	—	—
Lead traps	,,	—	—	—	7 6	10 6	—
Screw down bib valves	,,	7 6	10 6	12 6	—	—	—
Do. stop cocks	,,	10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4″ cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	,,	1 6
Do. outlets	,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	,,	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	,,	5 6
Lathing with sawn laths to ceilings	,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	,,	2 6
Do. vertical	,,	2 9
Rough render on walls	,,	2 3
Render, float and set in lime and hair	,,	3 0
Render and set in Sirapite	,,	3 3
Render, backing in cement and sand, and set in Keene's cement	,,	4 6
Extra, only if on lathing	,,	9
Keene's cement, angle and arris	F.R.	8
Arris	,,	3
Rounded angle, small	,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth	,,	2
1″ granolithic pavings	Y.S.	5 0
1½″ ,, ,,	,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed	,,	1 2 6
9″ × 3″ ,, ,, ,,	,,	1 7 6
Extra, only for small quadrant angle	F.R.	9

GLAZIER

		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	,,	1 0
Arctic glass and glazing with putty	,,	1 2
Cathedral glass and do.	,,	1 3
Glazing only, British polished plate	,,	8
Extra, only if in beads	,,	2
Washleather	F.R.	4

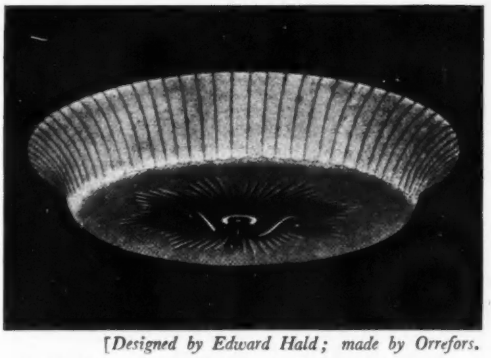
PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	,,	1 0
Do. with washable distemper	,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3 3
Do. on woodwork	,,	3 6
Do. on steelwork	,,	3 0
Do. and brush grain and twice varnish	,,	5 6
Stain and twice varnish woodwork	,,	1 11
Stain and wax-polish woodwork	,,	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper	from ,,	3 0

SWEDISH GLASS LIGHT FITTINGS

EXAMPLES OF MODERN DESIGN AND CRAFTSMANSHIP IN ENGRAVED CRYSTAL GLASS





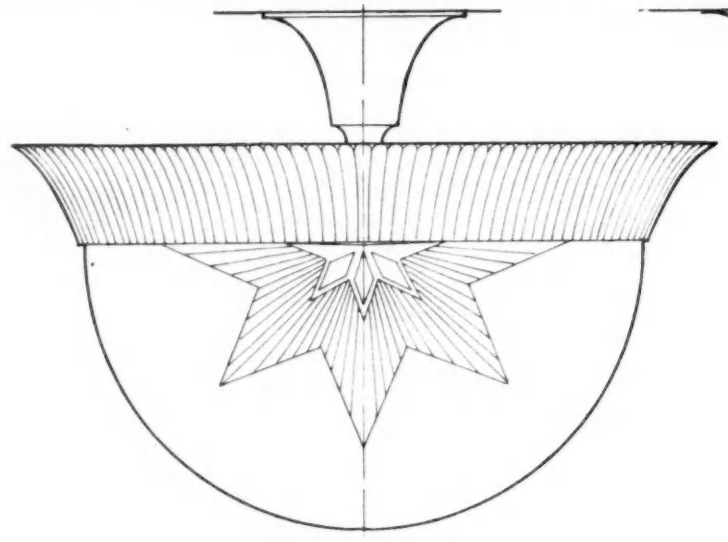
[Designed by Edward Hald; made by Orrefors.

TYPICAL HANGING ELECTRIC LIGHT FITTINGS

THE modern development of engraving for the decoration of art glassware in Sweden dates back some fifteen years. At that time its manufacture was practically extinct, and very few skilled craftsmen were available. But when artists such as Simon Gate and Edward Hald turned their attention to the creation of designs in this medium, the industry was given a fresh stimulus.

The engraver's only tool is a rapidly rotating copper disc, impregnated with oil and emery, against which the glass is held, so that it cuts the lines and cavities of the pattern. According to the nature of the ornamentation, different wheels are selected from a kit numbering about ninety and ranging in diameter from about 1·5 to 200 millimetres.

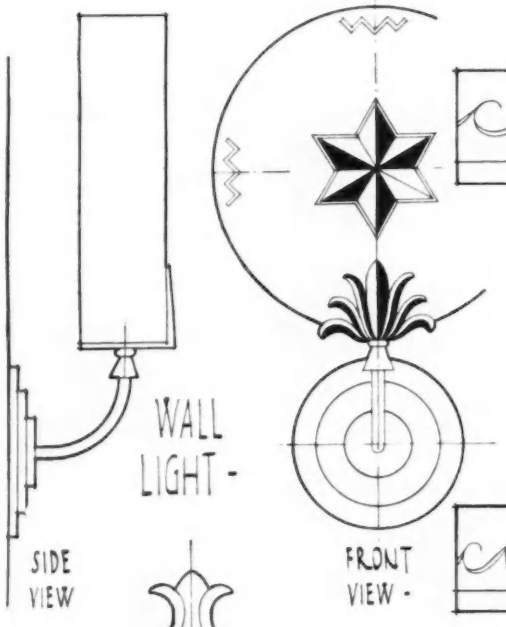
Examples of several types of work are reproduced in the photographs and drawings of this supplement: in two instances the same objects figure in both. The table lamp in the drawing is the design of Gate; the remainder are by Hald.



CEILING FITTING

· CRYSTAL GL
· ELECTRIC FIT
· SWEDISH DESIGN ·

SCALE · QUARTER FULL S



WALL LIGHT -

SIDE VIEW

FRONT VIEW -

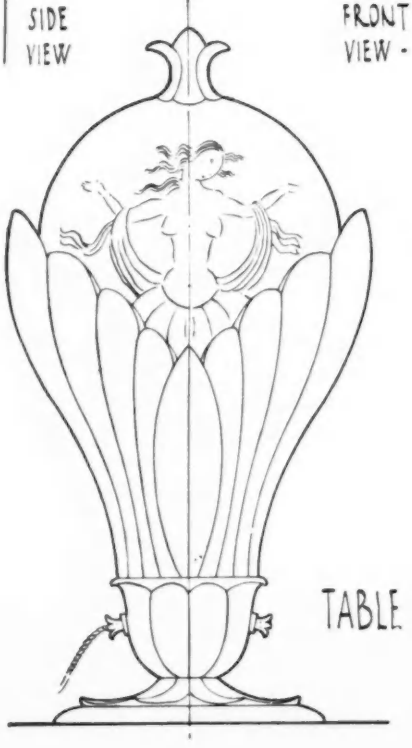
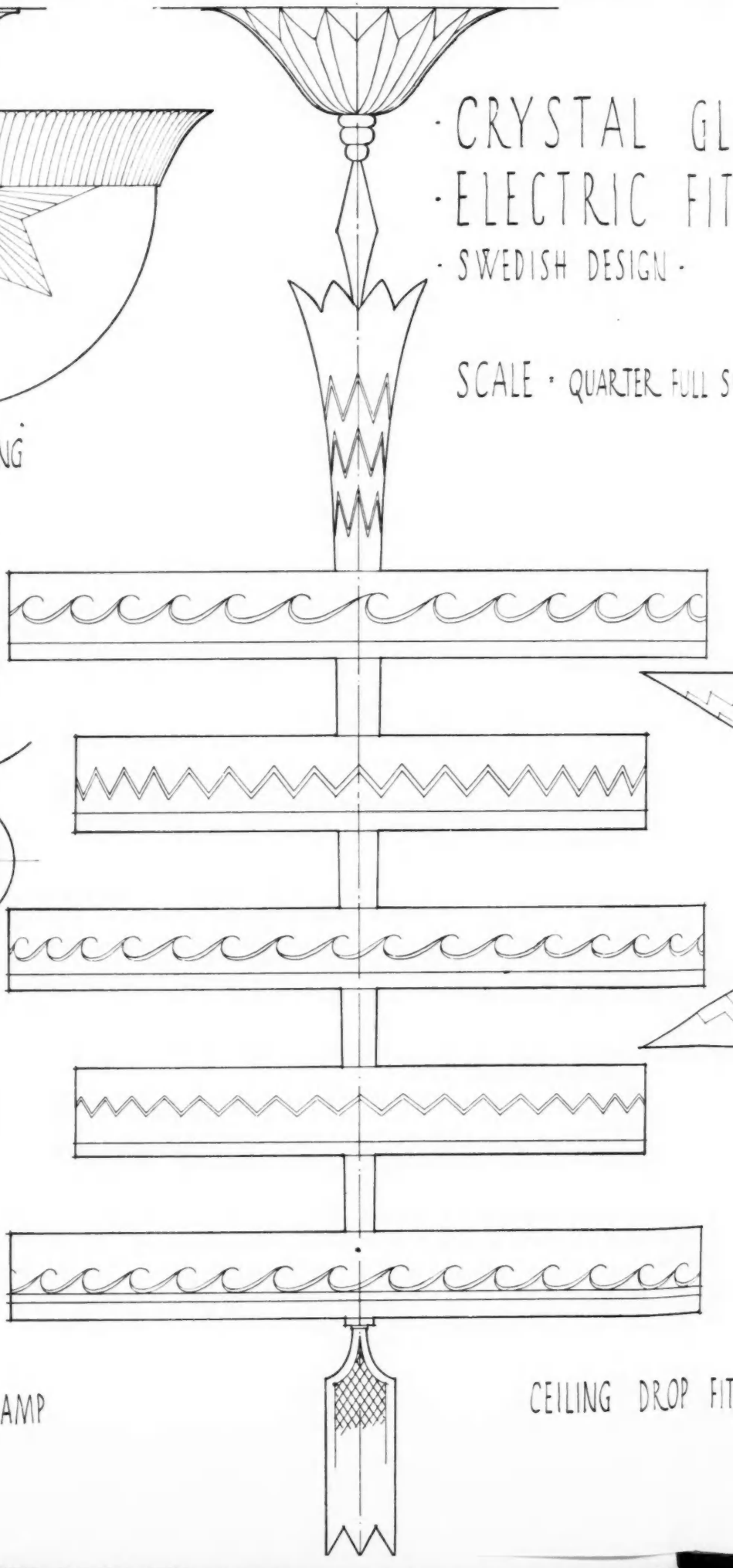


TABLE LAMP

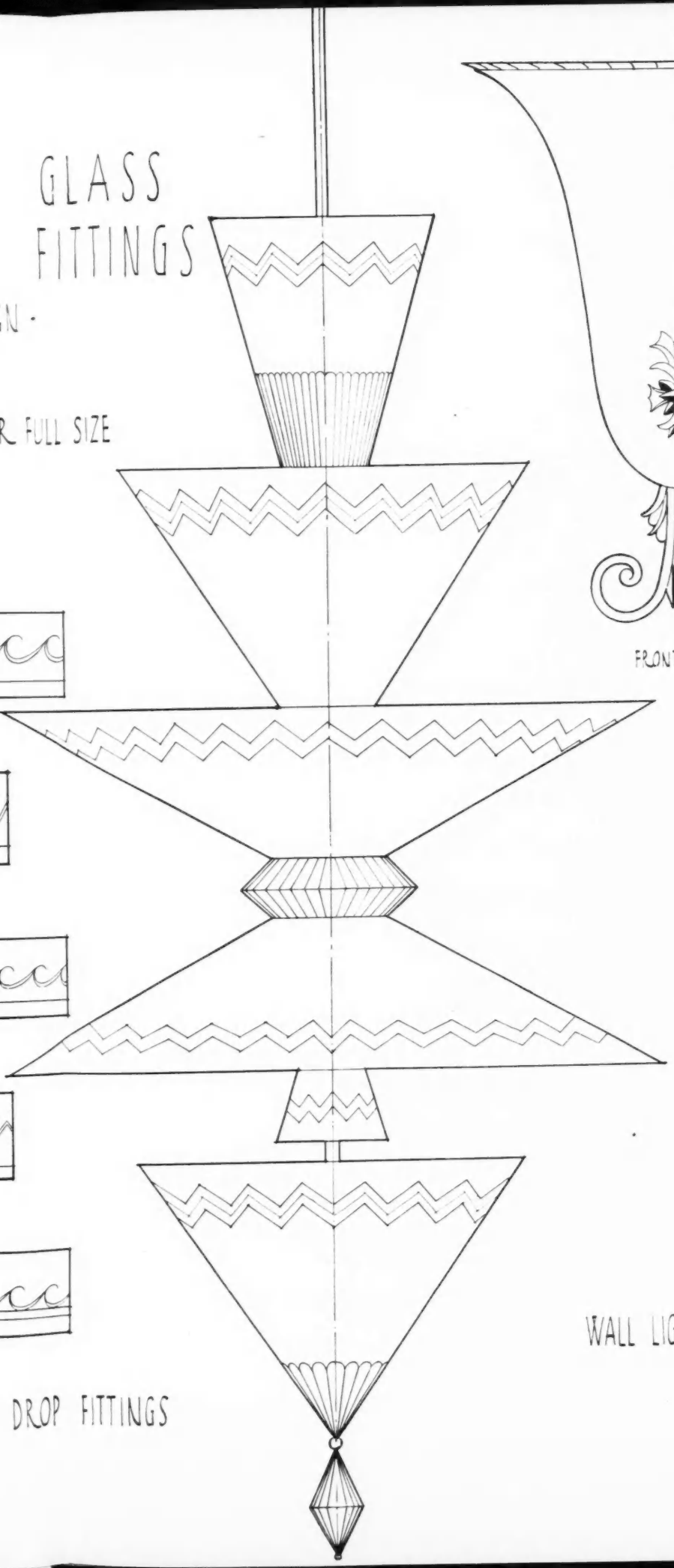


CEILING DROP FIT

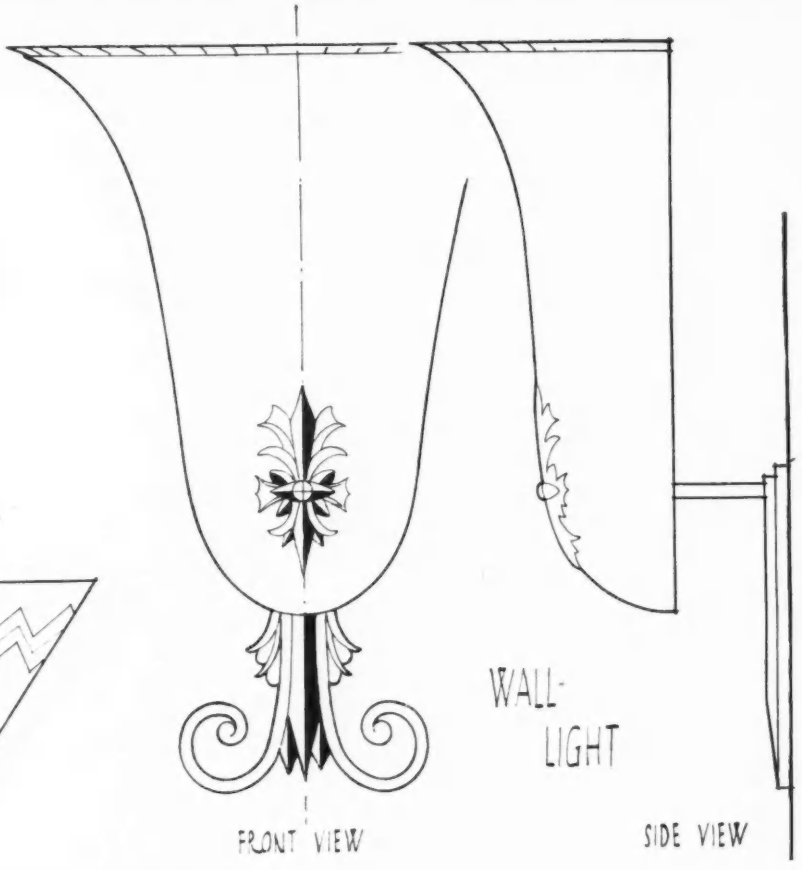
GLASS FITTINGS

N -

R. FULL SIZE



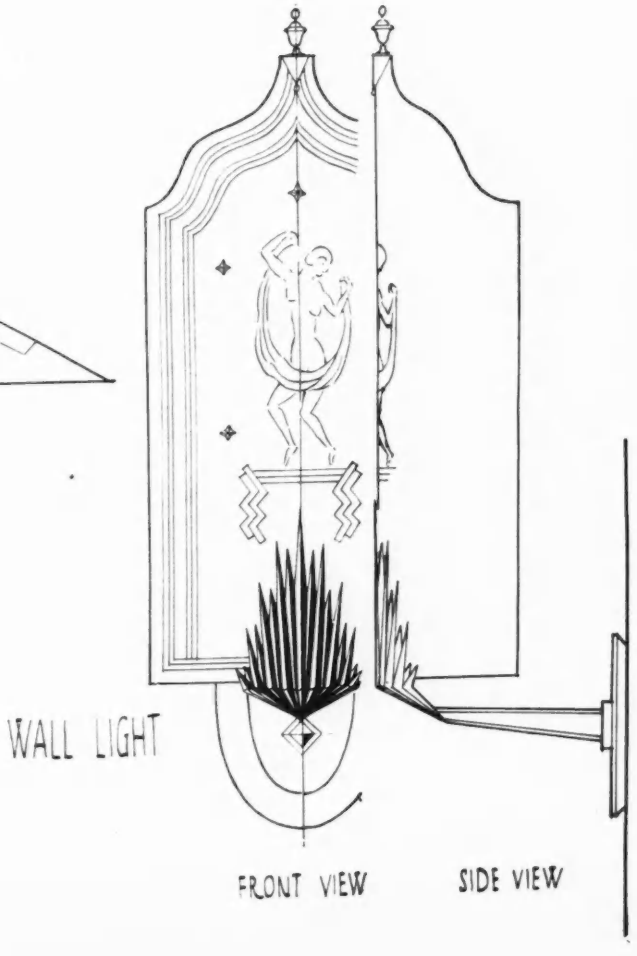
DROP FITTINGS



WALL-
LIGHT

FRONT VIEW

SIDE VIEW

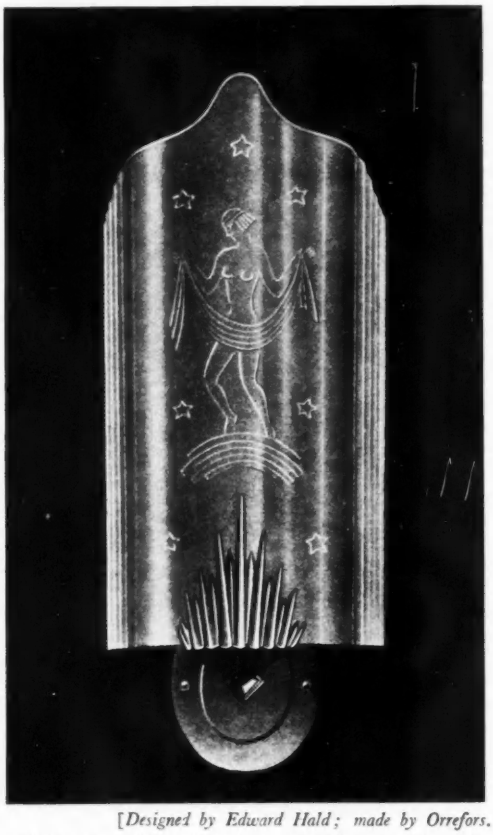


WALL LIGHT

FRONT VIEW

SIDE VIEW



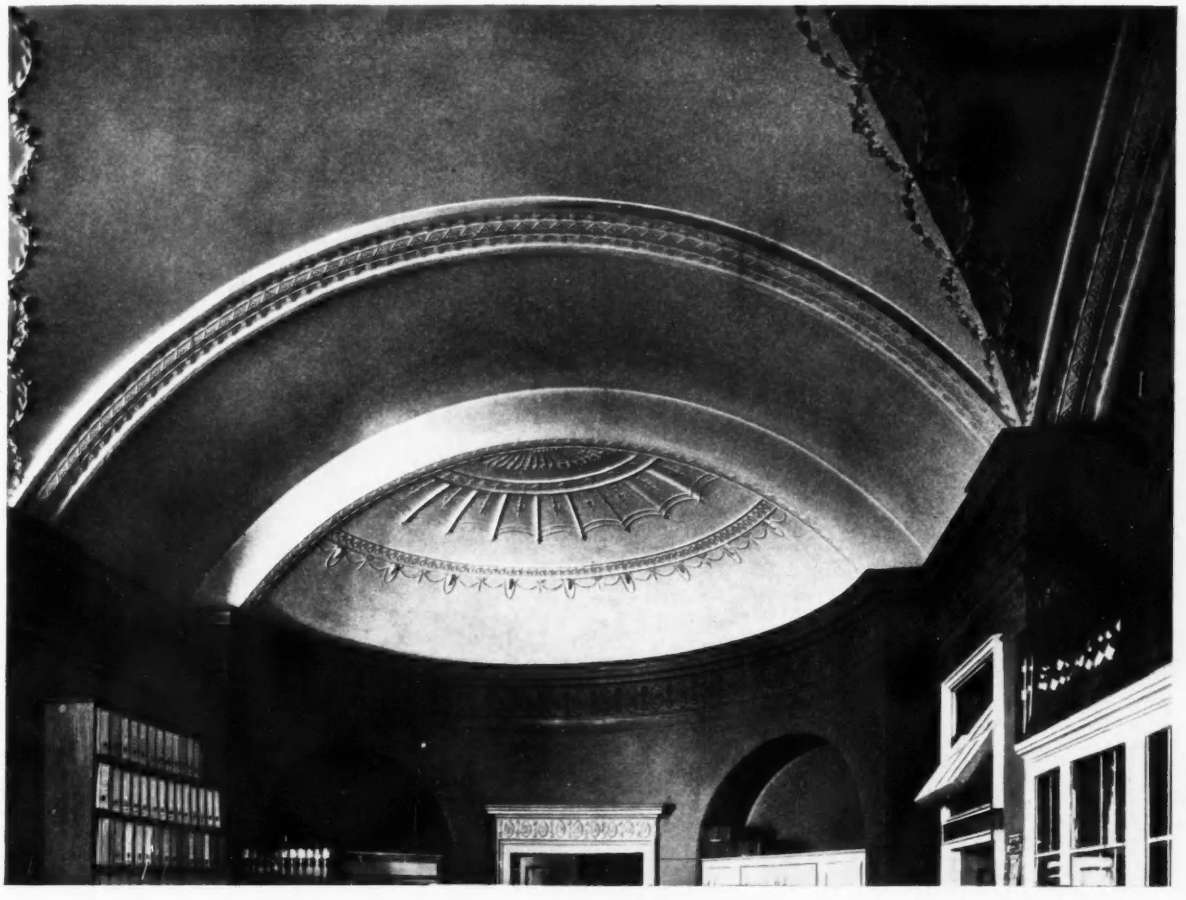


[*Designed by Edward Hald; made by Orrefors.*

TWO OF THE WALL LIGHTS OF WHICH DRAWINGS ARE REPRODUCED OVERLEAF

MARLBOROUGH HOUSE, BRIGHTON

MEASURED DRAWINGS OF THE DINING-ROOM: ROBERT ADAM, ARCHITECT



THE UPPER PART OF THE DINING-ROOM, SHOWING THE DECORATION OF THE CEILING

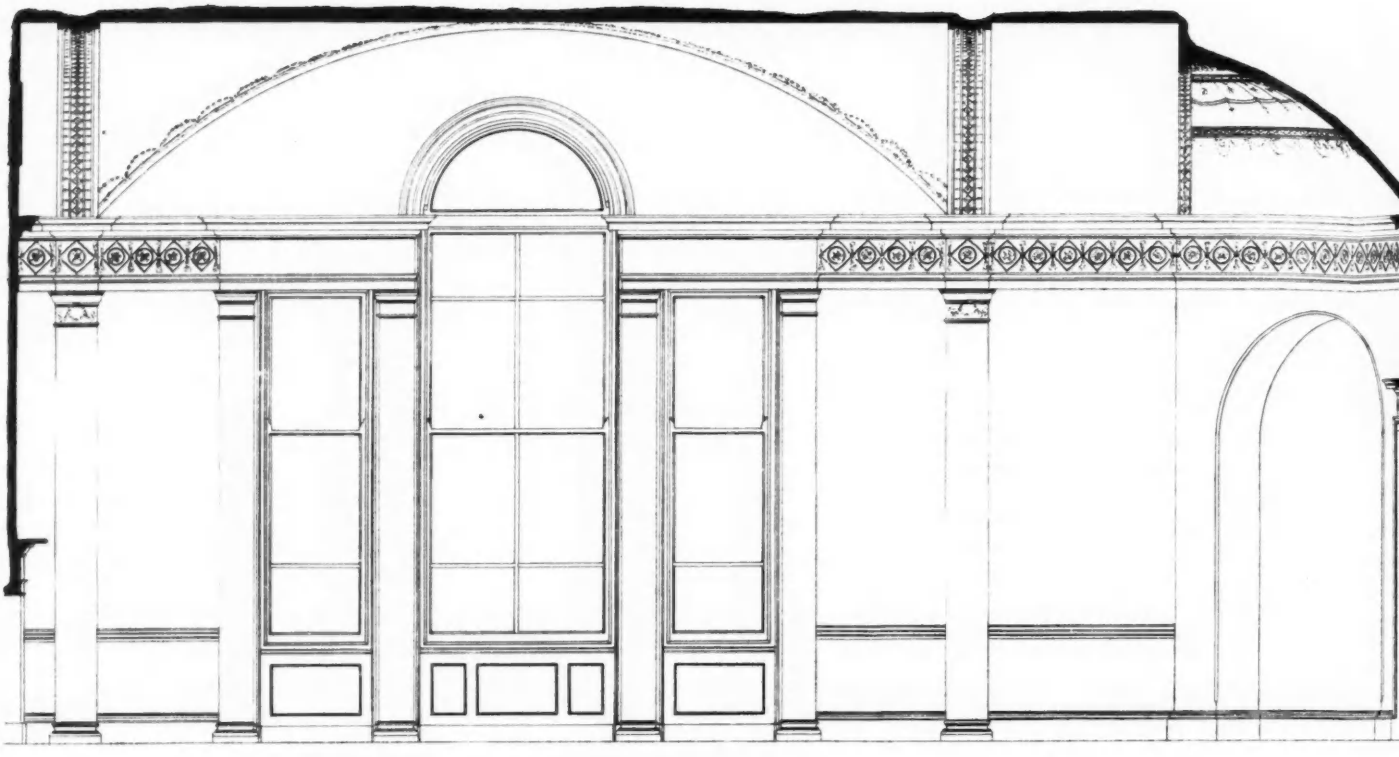
THE measured drawings, reproduced overleaf to a scale of ¼-inch to one foot, complete the set of which one of last week's supplements, devoted to the library, formed part.

Brief particulars were then given of the early history of this house, of which the features illustrated represent authenticated work of Robert Adam, some of his drawings for it being preserved in the Sir John Soane Museum.

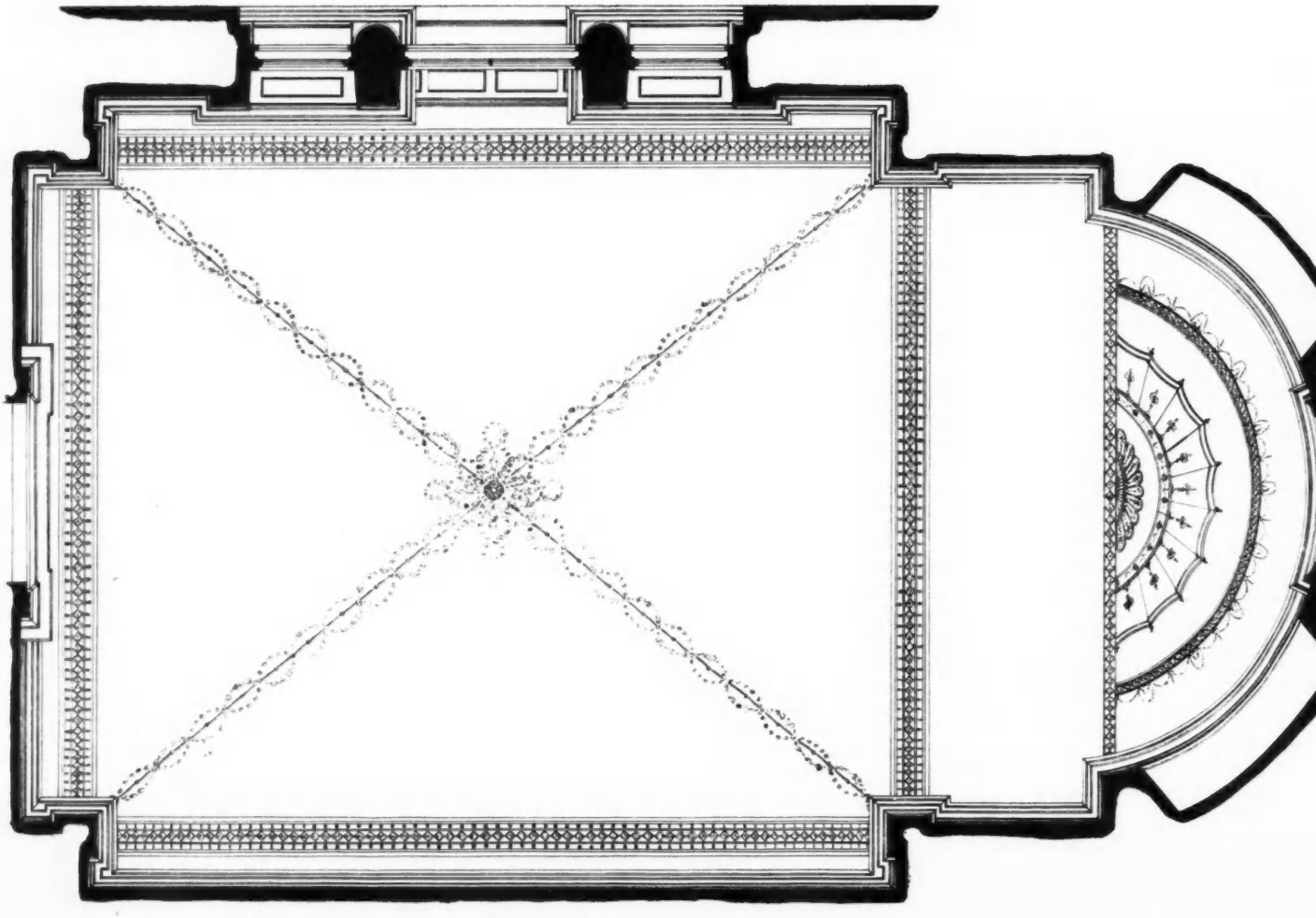
As will be seen from the above view and the drawings, the ceiling of the dining-room is particularly interesting. It has a semicircular domed recess at the south end, and an intersecting vault over the remainder, the whole ornamented with characteristic Adam decoration.

It is suggested that the house, probably the oldest in the Steine, and at present in use by the Brighton Education Committee as offices, might well be preserved as a rendezvous for the numerous learned societies of the town. Though it has not received all the consideration it deserved, it has hitherto suffered no serious damage, and only trifling restorations would be required.

MARLBOROVGH HO
SCALE DETAIL OF



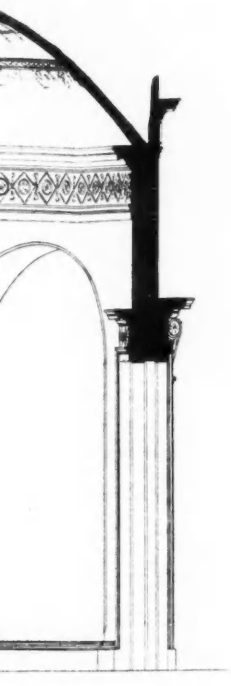
ELEVATION OF EAST WALL

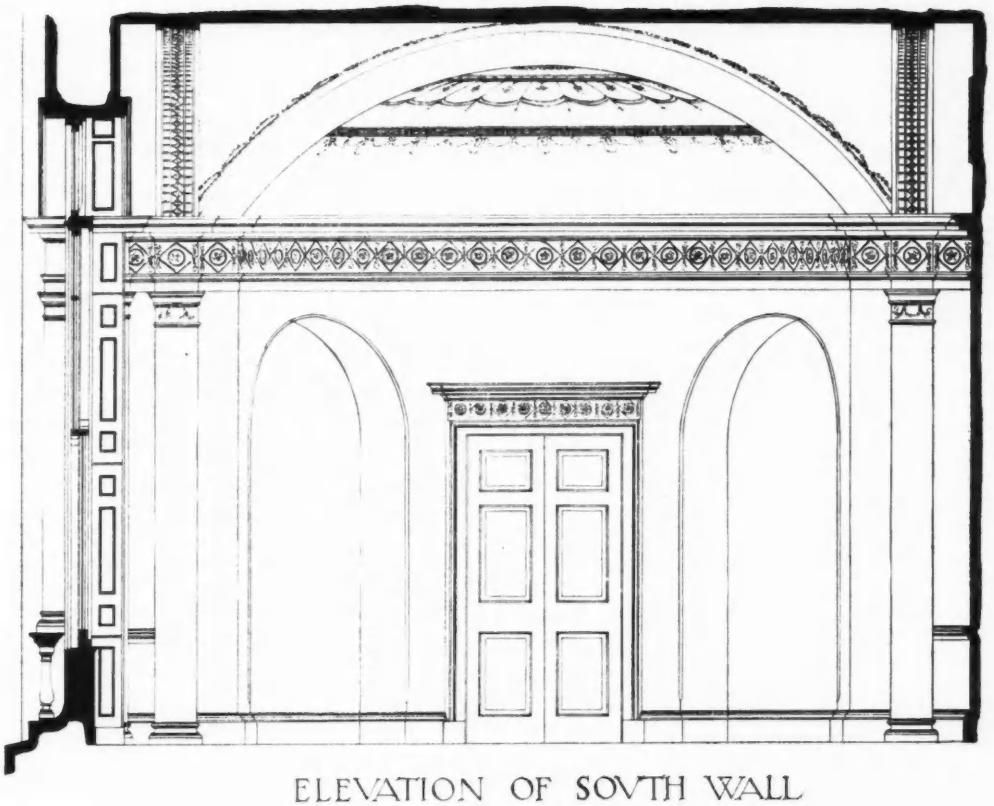


PLAN LOOKING VP

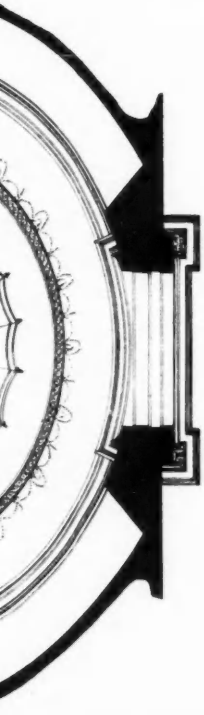
HOVSE, BRIGHTON

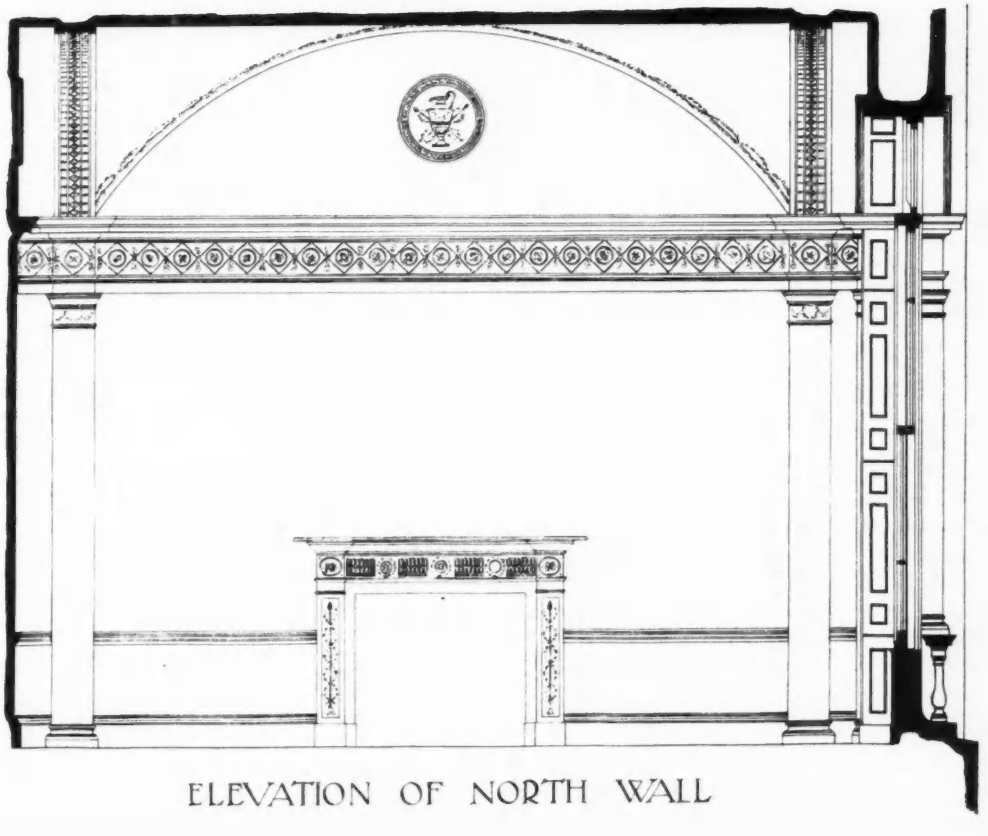
AIL OF DINING ROOM





ELEVATION OF SOVTH WALL



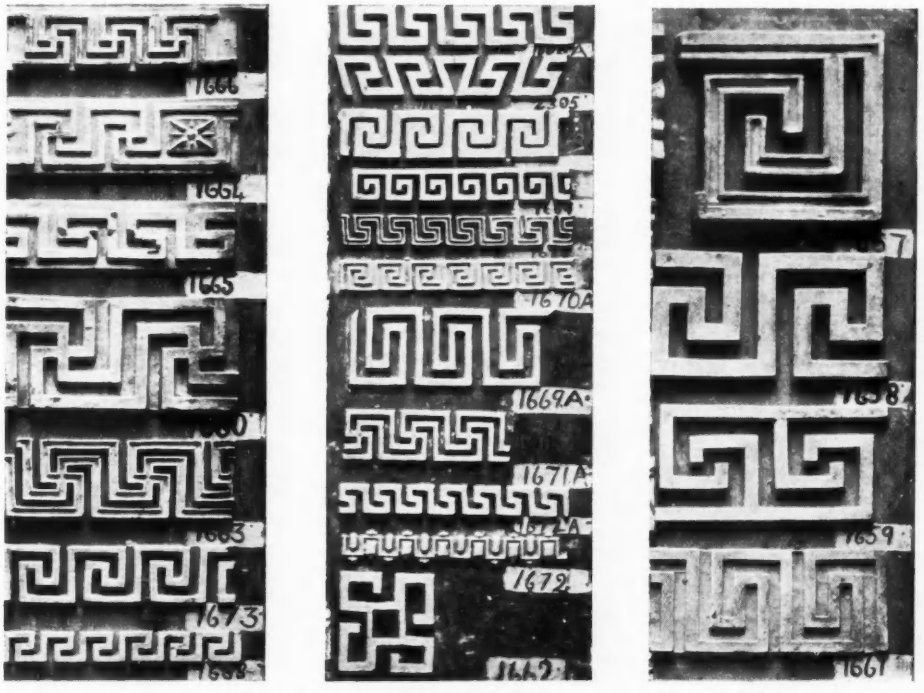


ELEVATION OF NORTH WALL

MEASURED & DRAWN BY
ERNEST LASSETTER

SELECTED PRECEDENTS:

XVIII CENTURY STOCK ENRICHMENTS



VARIANTS OF THE KEY PATTERN OR GREEK FRET

IN the plaster workers' shops one may read the story of architectural enrichment at its best and worst, and, even allowing for the saddening effect of dusty plaster, the evidences of past decoration do not fill the observer with a desire to make further use of them—until, travelling backward through time, one reaches the eighteenth century and comes upon the moulds that represent the enormous output of stock enrichments created by the Brothers Adam and their compeers.

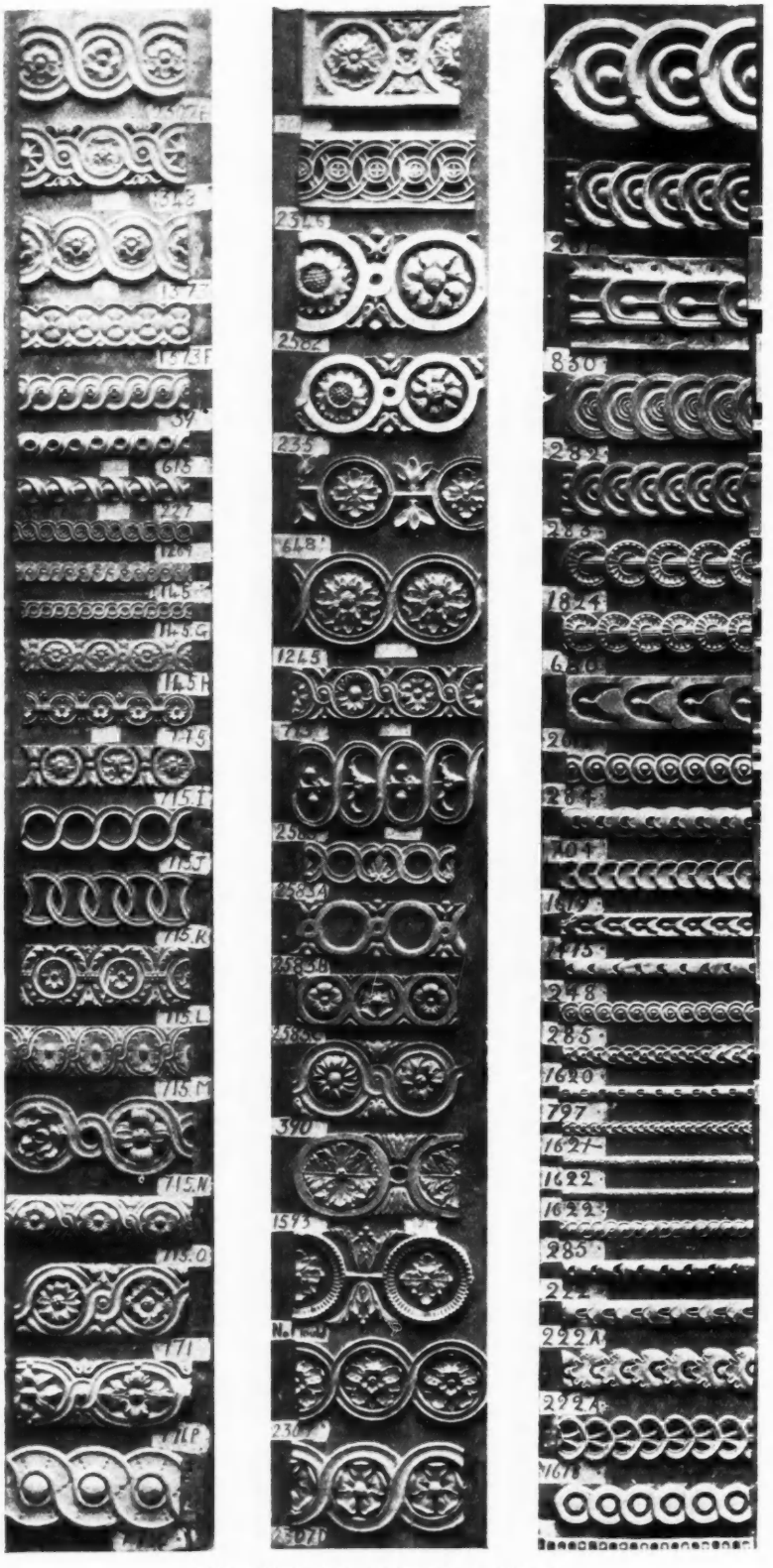
Today it is considered bad form to use stock mouldings; they are usually thought to be meretricious. Economy prevailing, there is, indeed, an absence of any form of enrichment in the smaller house. Nevertheless, there are many who would welcome the opportunity of giving additional significance where such would be counted a gain, and who feel the lack of contrast between the entertaining rooms of the house and those more day-to-day apartments.

To such as these, granting them perspicacity and a sense of fitness, the stock mouldings of the eighteenth century offer a fairly extended field of simple enrichment. Nothing is so capable of infinite variety as the key pattern or Greek fret, and upon other themes, of scallop, wave dentil, husk, bead and reel, egg and dart, and so on, invention has evolved pattern upon pattern, until it might nearly be said that nothing was ever designed but had its progenitor in this richly-decorated past.

In the workshops of Messrs. George Jackson and Sons, who have been making plaster decoration since the days when first it became habitual to cast the work away from the job, and fix it by means of screws or canvas to the ceiling framing, one may see the hardwood moulds, finely chiselled in reverse to a degree of perfection that no succeeding generation has called for. Herewith are reproduced examples. On this page are a great variety of key or fret patterns, some of them quite exquisitely wrought and surprisingly fresh; on that overleaf are all sorts of running designs worked on the theme of overlapping discs.

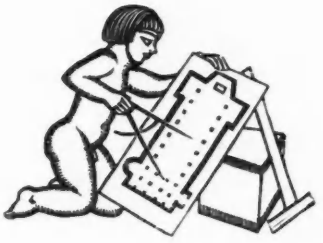
If it is remembered how the decoration of that period, even though it was profuse, discovered its best virtue in contrast with plain, coloured surfaces, it will be realized that decoration today has found its way back to simplicity after a long struggle, and may therefore indulge itself, when indulgence is to its purpose, with enrichments of appropriate delicacy.

Of course the difficulty of using such stock ornament lies in the process of design which makes ornament the outcome of other factors that determine its character and size. Glancing at the samples, one realizes what extraordinary variety is at one's disposal, and the job of fitting the right ornament into a simple scheme is seen to be a good deal easier than one might at first imagine.



VARIANTS OF THE DISC MOTIF

THE ARCHITECTS' JOURNAL



WEDNESDAY, FEBRUARY 18, 1931

PAINTING AND ARCHITECTURE

WE are indebted to Sir William Rothenstein for such a talk on the decoration of buildings as has not been heard for many a year at the R.I.B.A.; and we can think of no better way of thanking him than that of attempting to publish to a still wider audience the means by which architects and artists may draw together to their greater joy in life and to the advancement of living architecture.

We all know with what solemn respect the subject of "mural decoration" is treated by those who commission, be they architects or clients, and by the general awe-stricken public. "Be sure, that where you find solemnity, humbug is not far to seek." So with mural decoration or wall-painting. It is the humbug of great ideas, abstractions and virtues that has deprived it of the life that it might bring to building, until it has been abjured by every architect who declines to risk failure; or being used, can please only the ignorance of those who can mistake pomposity for grandeur.

One must realize, first, that painting, if it is to remain alive and communicative, must no longer look to the private patron for employment, but to the public bodies which have replaced the individual in this changing social fabric. This being so, the architect is involved more closely in the responsibility of providing painting with its vehicle of expression, and painters with their means of living. This last is no necessity imposed upon our profession if painting can be proved to have nothing to offer; but if it can, we are denying both ourselves and painters wherever we are content to leave behind us dead walls of inadequate thumb-rule decoration, when they might have been alive with colour and meaning.

The whole attitude towards wall-painting is wrong. It has been spoilt by solemnity and humbug. The solemnity of inadequate minds before the paintings of the past that have been classed as masterpieces: the humbug of those who pretend that greatness and truth died with the ancients. From these have sprung the collectors, the buyers and the sellers; and painting, as something that plain men might enjoy without affectation, has been led through gilded doorways out of sight and touch.

"If you want to have anything in the way of living art, give up paying a thousand pounds for a portrait of your mayor once every ten years, and have decent decorations, done by local artists, introducing local life and scenes." That is the whole point. We are frightened at the prospect of wall-paintings; and wonder how on earth we shall be able to bring about greatness in our time; and imagine all manner of difficulties of technique, wall preparation and what-not to be overcome.

But in reality the prospect of working with painters is an enthralling one; there are no difficulties to be encompassed if we are out to decorate walls with painting, instead of aping the old masters, and we may well leave greatness to take care of itself. Life and good spirit are all that we need bother about.

If we can take decoration simply and use it where we can, without appreciation or solemnity, people will learn by practice to expect more and better decoration; and, as the habit spreads, architects will learn what artists can do; they will get to know who are the best painters and the best sculptors, and we will have the prospect of local schools of painting active all over the country, instead of this wasteful concentration of unused talent to be found in London today. Those men destined by their ability for the tasks demanding the finest work will, as now, come up to London, but not because London is looked upon as the only possible place for artists to be in, for it won't be. Painting will be flourishing everywhere, and we shall be living, as the good books tell us the Italians of the Renaissance lived, surrounded with fine and great things.



NOT SO QUIET ON THE EMBANKMENT FRONT

A few months ago the news spread that hostilities were to commence in the region of the Victoria Embankment. An army of men, under the banner of a housebreaking firm, fully equipped with the implements of modern demolition warfare, commandeered the Hotel Cecil for its headquarters; after much hard fighting, both night and day, through the elemental English weather, they will, it is stated, shortly emerge victorious. A reinforcement of men will then take over the battleground and proceed to erect new offices for Shell-Mex, plans for which have been prepared by Messrs. Joseph. What of the surrounding district? The above photograph discloses many notable London landmarks. Cleopatra's Needle can be seen on the left; then the bridges at Charing Cross (the L.C.C. are now considering to whom the design for its successor should be given); Westminster, and Lambeth; between the two last-mentioned bridges is London County Hall, practically facing, on the other side of the river, Big Ben and the Houses of Parliament.

NEWS & TOPICS

THE FUTURE OF THE REGISTRATION BILL

ONCE again there are to be discussions as to the composition of the registering body under the Architects (Registration) Bill. This decision was arrived at after some debate last week in the Standing Committee of the House of Commons which is considering the Bill. The Order Paper was littered with Labour amendments to whittle down the control proposed to be given to the R.I.B.A., and, in the interests of the future of the Bill, it is obvious that Lt.-Col. Moore did the right thing in agreeing to a week's adjournment for consultation. Indeed, had he not done so, the Committee proceedings might well have become so protracted as to render impossible the passage of the measure into law this session. By the time these words appear in print, the result of the consultations will probably be known. At present it appears as if compromise is essential if the Bill is to become law.

THE NEW GOVERNMENT BUILDINGS IN WHITEHALL

Mr. Lansbury's proposal for another large Government block in Whitehall is going to meet opposition from several quarters, and upon more counts than one. The site covers part of Whitehall Gardens and Montague House, and is set back from Whitehall and the line of the Embankment as the result of a certain amount of opposition and a certain measure of official enlightenment. About an acre is reserved as open space on Whitehall, and three-quarters of an acre on the Embankment.

★

Opposition concentrates primarily upon questions of æsthetics and open space, and regards with especial concern the encroachment on the Embankment Gardens, which are in some way dedicated and intended to be kept as open space. The value of a long sweep of unbroken frontage on the building line of Whitehall Court would be lost if the building were to come forward to the Scotland Yard line. This seems to me to be true, though the damage to the whole composition is not so certain as would be the loss of the gardens. The really delicate adjustment with existing compositions will take place on the Whitehall front. The problem there is worthy a very first-rate architect's skill.

★

The opposition that uses economy as a weapon need not bother with such trifles as these. Here it is a question of monetary values, and whether it is right to use land worth £15 a foot for Government purposes when it can be got cheaper a little farther away. One cannot hope to justify the need for a new building. Mr. Lansbury will do that. One can feel, however, that it would be a matter for regret if the Government were to move out of Whitehall and sell the land for the uses of commerce. Why, the whole place is sanctified to Government use for ever! I hope Mr. Lansbury wins—with concessions.

A KNOTTY POINT IN REGIONAL PLANNING

There has been recently an exchange of letters in *The Week-End Review* centreing round a very interesting and knotty problem of regional planning. The gist of the discussion might be said to form a vote of censure upon Hendon R.D.C. for removing from their town-planning scheme certain lands scheduled as regional open spaces. The chairman, defending his council's action, pointed out that the provision of regional open space, in addition to other forms of open space more immediately the concern of the local ratepayers, was more than he or his council could hope to promise without risking their immediate dissolution. Even when they were entirely in agreement with the principle of the green girdle round London, and prepared to pay their share through the county, unless the county made its attitude toward regional open spaces definite, the lesser authority could not afford to mortgage its resources for an unknown amount for an uncertain time into the future.

★

Now it is certainly true that the present system of local government imperfectly wedded to town planning does allow of responsibilities being shifted. Joint committees may draw up regional plans, indicating regional open spaces where they are most required by the whole region, but unless, and sometimes even though, they are joint statutory committees, those open spaces are still to be bought by the local planning authority. The county may help—is indeed empowered to help and contribute—but the county is not the regional planner by necessity, and we await, I think, some better form of statutory regional planning, with money in its *regional* pocket, to pay for what it proposes, drawn from the town as well as the country, and including with the unbuilt-upon country the rich and highly-developed town.

REPLANNING ROME

Readers of *The Town Planning Review* have been regaled month by month with plan upon plan for the redevelopment of Italian towns and cities. Now comes, in culmination, the great Mussolini plan for Rome, prepared by the Roman architect, Signor Piacentini, and presented to the Duce as a programme to be realized by 1946. One may imagine what traffic difficulties are to be overcome in the narrow streets which lie at the busiest part of the town, and it will be interesting to see what is to be done to relieve the pressure. I believe there is to be some form of subway, among other things. The problem of the Corso Umberto, which is the centre of greatest congestion, is to be solved by the creation of a new centre, the Foro Italico, leading from the Piazza Venezia, where Mussolini's office is situated, to the Capitol, and to the beginning of a new motor road connecting Rome with the sea. The railway system is to be greatly modified, termini being replaced by " through " stations and the tracks sunk below ground, and connected together by means of a tube system. The completed plan, based upon a population of 2,000,000 —twice the present number—will reduce the density of population in the city to 100 persons per acre.

ARCHITECTURAL DRAUGHTSMANSHIP

At a time when the ubiquitous photograph threatens to oust the architectural sketch for the purposes of illustration, it is pleasant to find a group of young men who exhibit such zeal for draughtsmanship as is shown in an exhibition of students' holiday work now being held at University College. The Architectural Society, composed of members of the school, is run entirely by the students without direction from the principal. I was struck by the amount of careful workmanship displayed. Not one of the drawings was slipshod, and all showed good judgment in

the choice of subject. Pencil sketches predominate, though there are also some admirable watercolours. Yet I could not help wishing that some of the students had sought to emulate the technique of Professor Richardson, whose swift penmanship has always seemed to me to be extraordinarily suitable for architectural illustration in the twentieth century. For today, in draughtsmanship as in everything else, we want to get essential results quickly. But such facility can only be the result of long practice, and the students may be congratulated upon the skill which they show in tackling difficult subjects.

AN ARCHITECTS' PANEL FOR THE PEAK DISTRICT

I was pleased to see that an architects' panel has been formed to look after that part of the Peak district lying between Penistone and Ashbourne, and better pleased to know that they are making smoother their way by issuing a pamphlet setting out their purposes, together with hints on how to build decently without added expense. Education is what we are after in the long run, and education as a preliminary will do more than anything else to increase the work of the panels.

★

One phrase of their invocation seems to ring doubtfully. "To build in harmony with the district does *not necessarily mean an increase of cost*" suggests to me the likelihood of the reverse proving the case. I suggest that they might take the risk and say that it does NOT increase the costs —and then find out how not to make it do so, still remaining harmonious.

EMPIRE (AND OTHER) TIMBER

There was recently published in *The Times* a letter, an extract from which read as follows :

> The real obstacle to the greater use of Empire soft woods in this country is the out-of-date conservatism of the British architect. It is the latter who specifies Danzig and Christiania deals, in ignorance of the fact that Christiania deals have not been obtainable for forty years, and that, generally speaking, Danzig timber is now of very inferior quality. Also, although Douglas fir is now, in building sizes, the cheapest timber obtainable, it is constantly being rejected by architects in favour of Russian and Swedish timber because of the supposed lack of breaking strain of Douglas fir.

This shows a complete lack of knowledge of modern architectural practice. No competent specifier quotes the obsolete Christiania for Oslo as a port of origin of timber; or any port at all beyond the general statement : "Baltic or White Sea." He confines himself to carefully stating the quality of the timber to be admitted to the job, leaving the buying of it to the builder; if it is up to standard, the origin is immaterial. In some cases it may be desirable to exclude all but British-grown timber, and then it is usual to specify Columbian or Douglas fir. I have never heard that sound Douglas fir is considered inferior to similar quality Swedish wood or that architects refuse it, and to level in the public press a charge of fossilized ignorance against the whole profession is manifestly unjust.

SOMETHING FOR NOTHING

Newcastle Education Committee last week approved a recommendation to architects that provision for cinema installations should be made in all new schools, *provided that no additional cost should be involved*, which would be all very well if the building regulations did not at the same time regard the cinema with so much delicacy as to ask for all manner of little safeguards, costing more than nothing. Still, I have not the slightest doubt that architects will perform the miracle.

ASTRAGAL

THE ARCHITECTS (REGISTRATION) BILL

Summary of Last Week's Proceedings in Committee

BY OUR SPECIAL PARLIAMENTARY REPRESENTATIVE

THE first meeting of the Standing Committee of the House of Commons which is considering the Architects (Registration) Bill was held on Tuesday, February 10. After nearly two hours' discussion, the proceedings were adjourned for a week, to permit of consultations as to the registering body.

When the Committee opened, Mr. McShane moved to omit from Clause 2 (Interpretation) the words "The expression 'the Institute' means the Royal Institute of British Architects."

Lt.-Colonel Moore, who is sponsoring the Bill, submitted that the amendment was out of order, because Parliament had decided at the second reading last November that the Council of the R.I.B.A. should be charged with the power and the responsibility of maintaining the register of the new body of architects, and that the Board of Architectural Registration, which had functioned for twenty-five years, had been accepted as part of the Bill without discussion or amendment.

The Chairman (Sir S. Roberts) said he was of opinion that this and other amendments in Mr. McShane's name came within the scope of the title of the Bill.

Mr. McShane said it would be obvious that the series of amendments which he proposed to move were of such a character that they would fundamentally settle whether it should be the R.I.B.A. that should be the registration body or whether it should be an independent body, such as he described in his proposed new clause :

> (1) For the purposes of this Act there shall be established an Architectural Council for the United Kingdom (in this Act referred to as "the Council") which shall be a body corporate by that name with perpetual succession and a common seal, and power to acquire and hold land without licence in mortmain.
>
> (2) The provisions contained in the First Schedule to this Act shall have effect with respect to the constitution and proceedings of the Council. The seal of the Council shall be authenticated in manner prescribed by the Council, and any document purporting to be sealed with the seal so authenticated shall be receivable as evidence of the particulars stated in that document.

Mr. McShane went on to point out that under the proposals of this Bill and of the preceding Bill the R.I.B.A. was to be the controlling authority in regard to registration. Obviously that was a fairly serious proposition. It meant that they would control the present and the future entrants. If this Bill was to be of any value it ought to protect the community, it ought to protect the profession, particularly the poor entrants into the profession, and it ought to protect other allied or kindred societies. The protection of the community was left under this Bill in the hands of one particular professional association. Would it protect the profession itself? It might; but anyone who knew how these things tended to crystallize and harden as the years went by would admit that, if this Bill were passed in its present form, architecture itself might well be stifled.

He need not refer to the case of Sir Herbert Barker and the British Medical Association. What hope was there for any poor lad whose native talent and genius might well entitle him to be admitted ? That, in itself, was a sufficient reason for opposing the Bill as at present framed. He was not in agreement with the proposal that a particular professional body should have control. It would be a danger to the public to allow this close corporation to be established.

[The constitution of the new Architectural Council proposed by Mr. McShane is, according to a later amendment, as follows :—

One representative for each five hundred or portion of five hundred fellow, associate, or licentiate members of the R.I.B.A., to be elected on the passing of this Act and thereafter annually in the same proportion by the Council of the said Institute.

One representative for each five hundred or portion of five hundred fellow, associate, or licentiate architect members of the Incorporated Association of Architects to be elected on the passing of this Act and thereafter annually in the same proportion by the Council of the said association.

One representative for each five hundred, or portion of five hundred, persons on the Register not being members of either the said Institute or the said Association to be elected in manner prescribed by the Council within twelve months of the passing of this Act and thereafter annually, except that for the period of twelve months from the coming into force of this Act, after consultation with such of the bodies mentioned in the First Schedule of this Act as represent to the Minister of Health that they desire to be consulted in the matter, the Minister shall appoint nine persons not being members of either the said Institute or Association who at the passing of this Act are deemed by him to possess any of the qualifications mentioned in paragraphs (a), (c), (d), and (e) of section five of this Act.

Provided that—

(a) No representative so elected shall be a member of both the said Institute and the said Association ;

(b) Representatives elected at any time subsequent to twelve months from the coming into force of this Act shall be persons on the Register.

The president and a vice-president for the time being of the following bodies :

The Royal Institute of British Architects.
The Incorporated Association of Architects and Surveyors.
The Institution of Civil Engineers.
The Chartered Surveyors' Institution.
The Institution of Structural Engineers.
The Institution of Municipal and County Engineers.
The Society of Engineers.
The Institute of Builders.
The National Federation of Building Trades Employers.
The National Federation of Building Trades Operatives.
Six persons (not being persons on the Register) appointed or re-appointed annually as follows :
One by the President of the Board of Trade.
One by the President of the Board of Education.
One by the Minister of Health.
One by the Scottish Board of Health.
One by the First Commissioner of Works.
One by the Government of Northern Ireland.]

Lt.-Colonel Moore, opposing the amendment, said that Mr. McShane had painted a totally incomplete picture and, indeed, a totally misleading picture, of the situation as it was and as it would be under the Bill. The Council of the R.I.B.A. was in no sense the controlling authority on the question of registration. It was only a part, though a large part, of the general body of architects. All that the Council of the R.I.B.A. were concerned with was the maintenance of the register set up under the Bill. They were the oldest and the biggest architectural body in the world. They had been charged with the general standard of architecture by Royal Charter for the last one hundred years. They had sixty-three allied branches and associations all over the Empire. They had a membership of over 10,000. They had opened the gates of architecture to the poorest sections of the community. Surely it was reasonable to expect that a body so adequately equipped for the maintenance of the register should be the body chosen by the rest of the architectural profession.

"What," proceeded Lt.-Colonel Moore, "does the amendment mean ? It means that the Council of the R.I.B.A. is removed from the responsibility—that is the wrong word—from the maintenance of keeping the register, and that a new council is to be created. The proposed new schedule means that a new body of a few years' standing, called the Incorporated Association of Architects and Surveyors, should have representation, as they are entitled to, on this new Council, but some are cut off and are not to be represented.

"The Architectural Association of London, with hundreds of practising architects, the Association of Architects, Surveyors and Technical Assistants, and the sixty-three allied architectural societies of the R.I.B.A. are cut out altogether. The Royal Incorporation of Architects in Scotland, the Manchester Society of Architects, the Northern Architects' Association, the Birmingham Architects' Association, the Wessex Society of Architects and the South-Eastern Society of Architects, are cut out.

"Why should this new body of five or six years' standing contend that they should have more representation than that to which they should reasonably be entitled, and at the same time leave out all the numerous bodies to which I have referred ?

"I have seen these amendments before in other forms. It is obvious that most, if not all, of them emanate from the Incorporated Association of Architects and Surveyors. Hon. members should know exactly of what this society consists. It was formed about 1925. It was at first a faculty, but the faculty broke up, and this incorporated association came into existence largely, as far as I can make out, for the purpose of fighting this Bill. As far as we can ascertain, the membership of this body varies from 500 to 1,000. Supposing we give them 1,000, which is the very outside. The R.I.B.A. has over 10,000."

Lt.-Colonel Moore added that the Council of the R.I.B.A., in taking on the duty, which was onerous and which did not bring them in anything financially, of maintaining the register, were following the principle adopted already by the Law Society and the dental profession. The Royal Institute was prepared to run the register out of running expenses, and every penny else went in bursaries and scholarships for the poor boy. This Bill was devised to ensure that the community, if it went to a registered architect, would be sure that that man had the qualifications for giving adequate services.

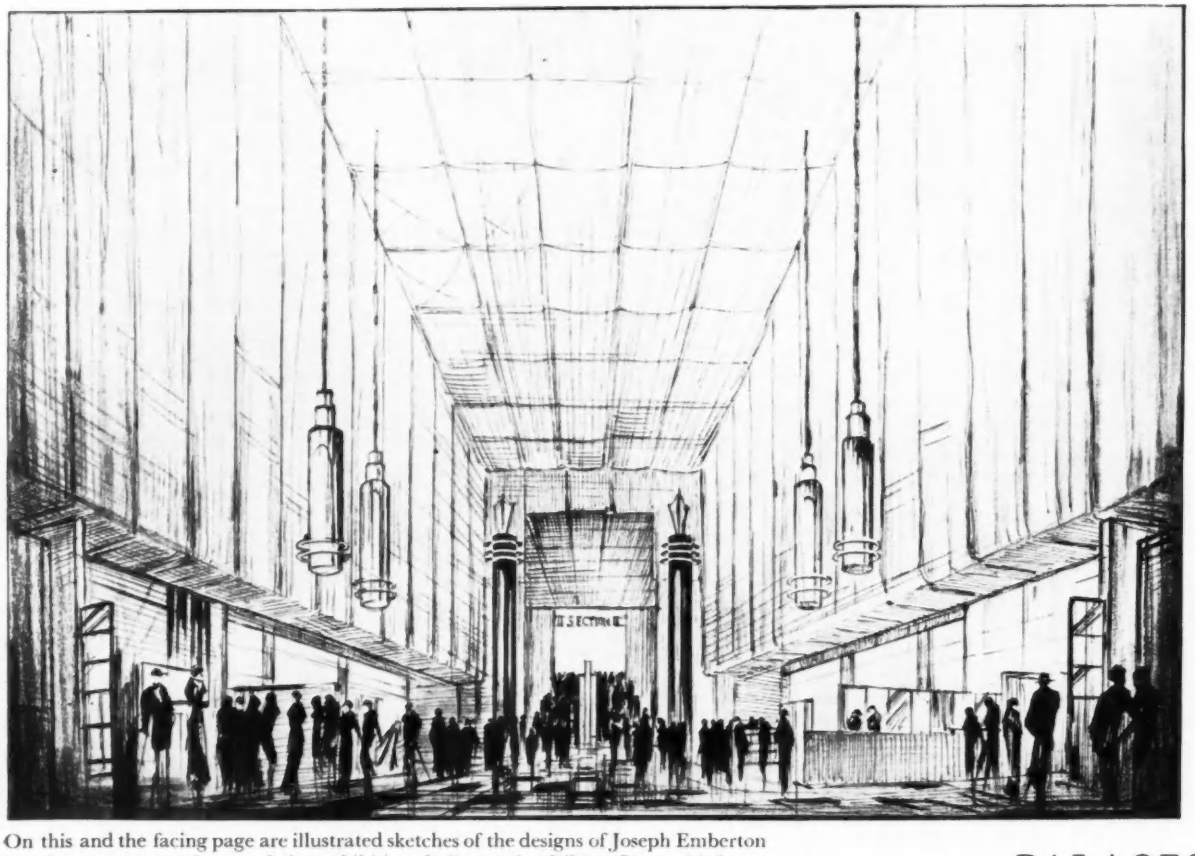
Mr. Broad (Edmonton, Labour) supported the amendment, and said that the main object of the R.I.B.A. should be to foster architecture. He did not want to see a close corporation set up which was likely to regard as infamous conduct the association of its members with any body whose members had not passed through some examination. They did not want to see a repetition of what had occurred in the medical profession in the case of Sir Herbert Barker.

Later, in reply to Mr. P. Harris (Bethnal Green, Liberal), Mr. McShane said he was inclined to accept any reasonable amendment. He was wedded to two principles, first, registration, and secondly, that a separate body should, as in the case of the Royal Society of Teachers, be elected.

Mr. Harris : "I thank the hon. member. He has cleared the air. It is now merely a question of the composition of the registration council. I suggest to my hon. friend that the council suggested in his schedule is rather a motley body and rather cumbersome."

After further debate, Lt.-Colonel Moore said, "I should like to make it quite clear that there is no desire on the part of the R.I.B.A. or any other society to restrict in any way the just and proper representation of any body on the admission committee and other boards. Amendments appear on the paper which seek to alter the basis of representation, and we are perfectly prepared to consider them and to compromise where it can be shown that they are based on justice and fair-play."

Mr. McShane suggested that they should adjourn for a week to consult with the various bodies concerned in order, if possible, to arrive at some compromise. This was agreed to.



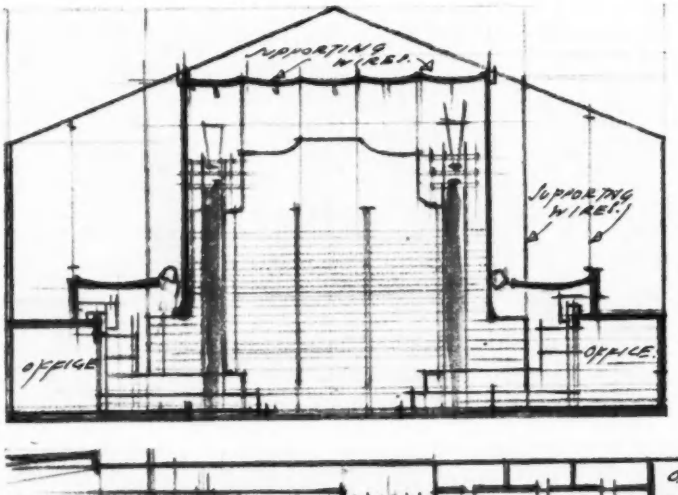
On this and the facing page are illustrated sketches of the designs of Joseph Emberton for the treatment of two of the exhibition halls at the White City. Unfortunately, the designs have been modified to some extent in the finished work. The exhibition was opened by H.M. the Queen on Monday last.

PALACES

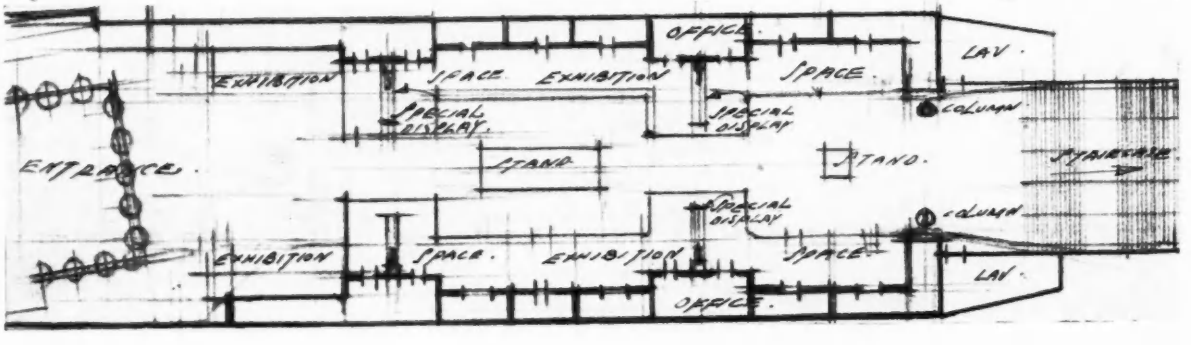
The Exhibition Pavilions

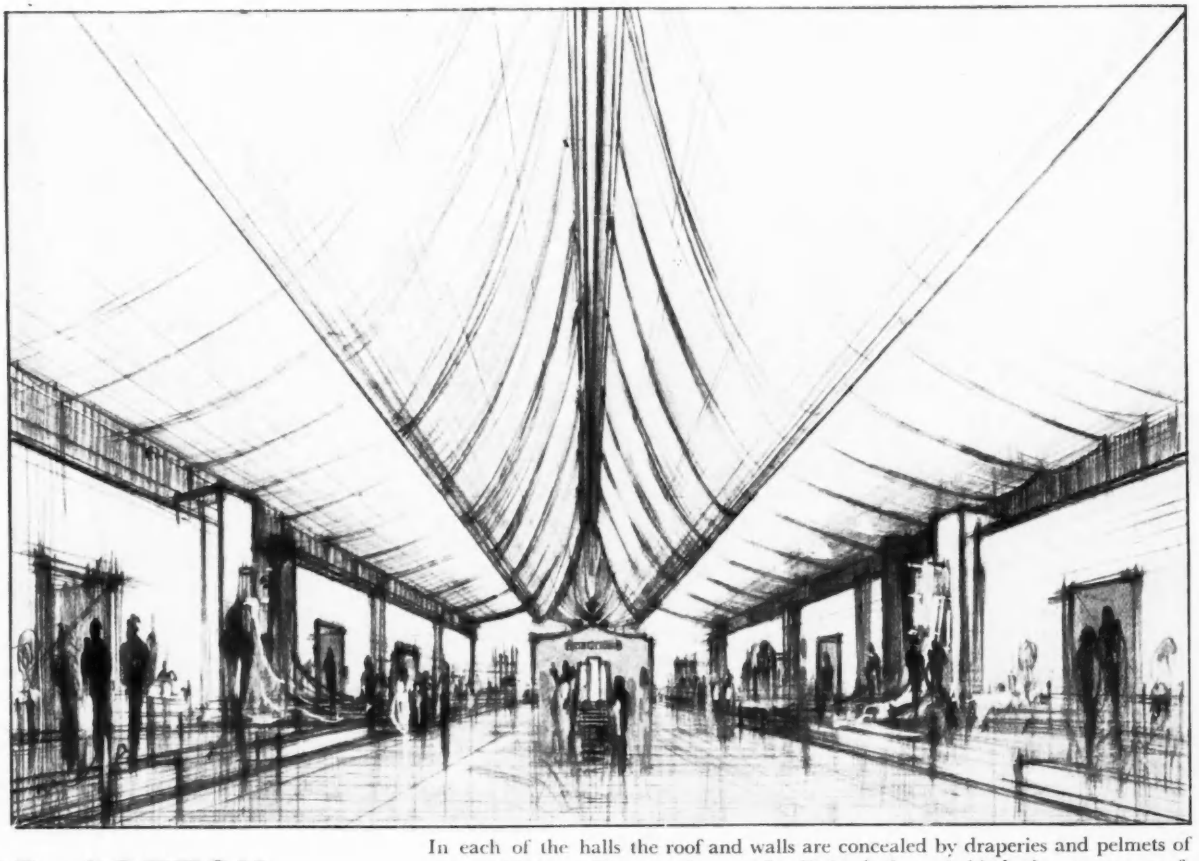
DESIGNED BY

ATTEMPTS to design exhibition halls and stands now wear a very different and more satisfactory aspect. In the past the idea generally received was to crowd the stands into even the smallest vortices of the floor space. In fact, the plan in many cases seemed to have no other aim than the collision of masses of people rising and falling, at flux and reflux, against and between the exhibits, and confining these masses so that they precipitated themselves somewhat in the manner of a cataract. The natural result of this whirlpool or vortex treatment was the prodigious torture which is sufficiently



Section and plan of the hall shown above. Throughout, a very modern note is struck.





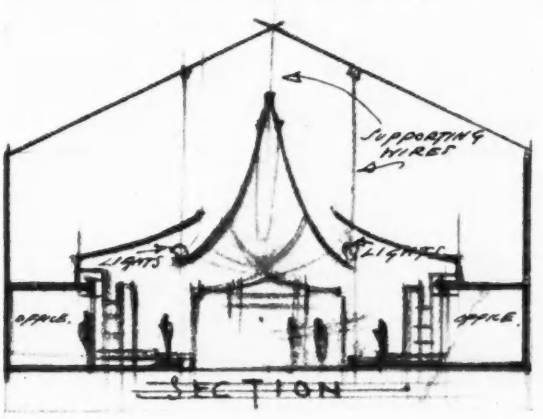
In each of the halls the roof and walls are concealed by draperies and pelmets of cotton fabrics. The stands are floodlighted from behind the canvas roofs immediately above them. Attractive variations of the main theme of decoration are evident as one passes from one section of the exhibition to another.

OF COTTON

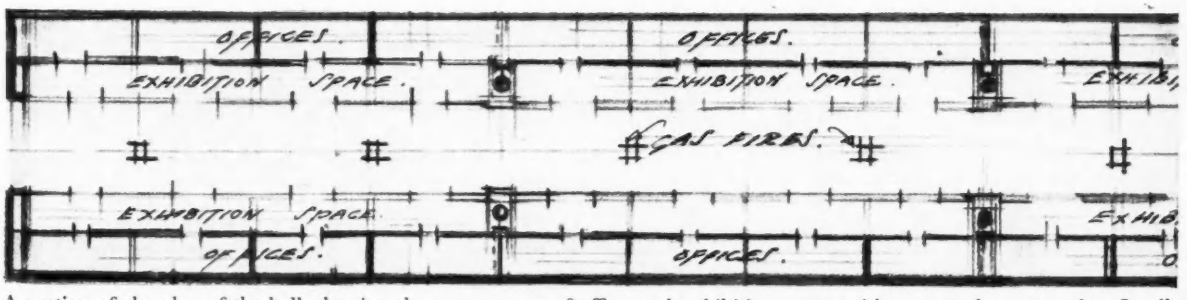
at the White City

JOSEPH EMBERTON

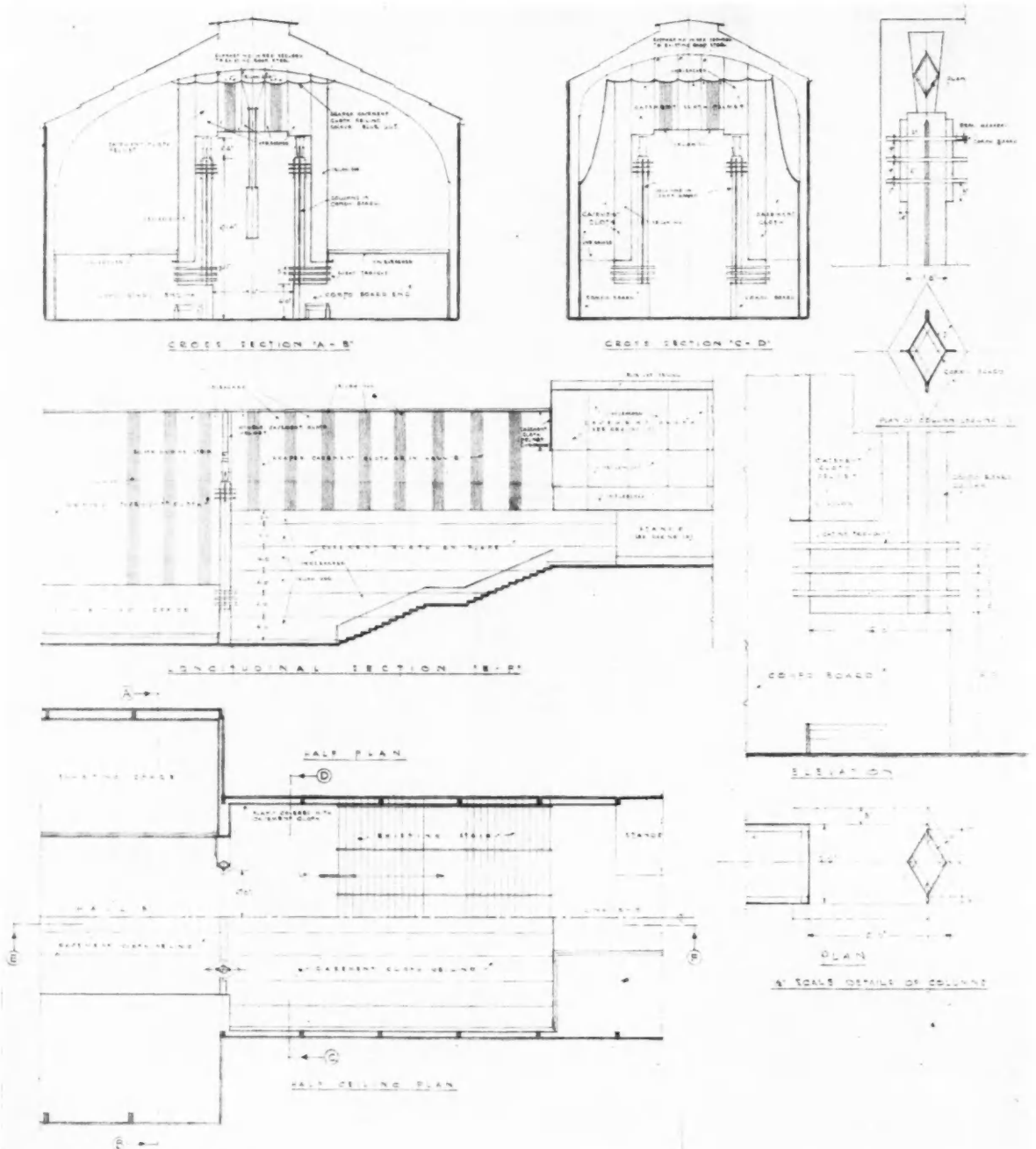
well known by most of our readers. Emberton and others have shown that, in a great measure, we could become rid of these annoyances. His designs for the halls and stands at the British Cotton Textile Exhibition, which opened at the White City, London, on Monday last, are not only bold and simple in architectural treatment, but provide workmanlike plans and generous spaces for the visiting public, in striking settings of gaiety and colour. Unfortunately, his designs have been modified to some extent in the finished work. Internally, draperies and pelmets of cotton fabrics conceal the



This section sketch of the hall shown above illustrates the methods adopted for supporting the draperies and lighting the exhibits. Generous floor space is provided for the visiting public.



A portion of the plan of the hall, showing the arrangement of office and exhibition space, with a central promenade. In all, the hall has three identical bays, of which rather more than two are here shown.



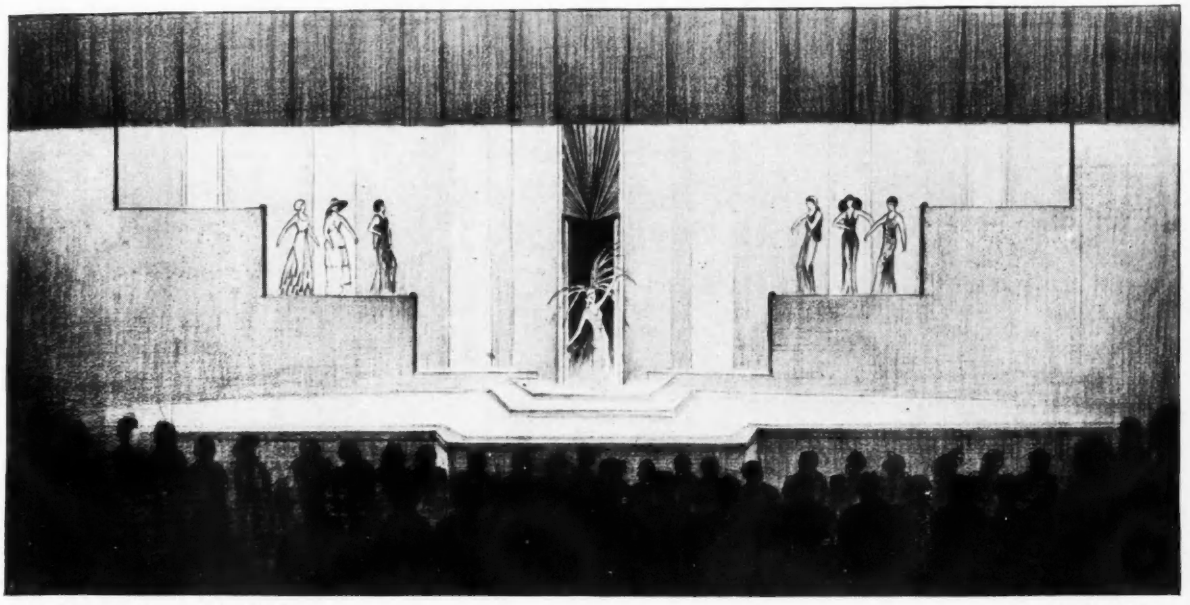
Decorations and Stands at the White City.] [*By Joseph Emberton.*

Scale details of some of the decorative features : conceptions in draped casement cloth, and compo board, animated with colour.

normal roof and walls of the exhibition buildings, colour and illumination being made to play an outstanding part in each decorative scheme. In the entrance hall are eight great flame-coloured lanterns, giving out over 10,000 candle power of light, and each two feet taller than a man. In the other halls there is no visible source of light, for flooding illumination has been arranged above the canvas roofs of the displays.

This is the first time the cotton trade has promoted a united show. It is, in fact, Lancashire's New Year earnestness to win back her former world supremacy in textile manufacture. At the White City the eight halls lend themselves with peculiar aptness to showing the processes of a highly stratified industry, and in their original plan help in a way to avoid the display of heaped-up masses of exhibits having no relation one to another. Beginning with the bale of raw cotton, the story is unfolded step by step, and the visitor sees how it becomes first thread, then cloth, then a material undergoing the multitudinous processes of bleachers, dyers and printers; and then the methods by which the finished product is marketed at home and abroad.

The culminating feature of the exhibition is the monster mannequin parade, which is demonstrating daily the finest products of Lancashire mills in a



The Mannequin Stage, White City.] [*By Joseph Emberton.*

The mannequin parade takes place on a stage comparable in size with that of a big London theatre. With its novel lighting and other effects, the parade possesses the grandeur of the most ambitious productions of musical comedy.

setting possessing the splendour of the most spectacular theatrical production. The great tiered and turreted stage, on which the mannequins present the choicest of cotton fabric gowns, is bathed in the light of 500 lamps, giving a total of over 50,000 candle-power.

In addition to these hidden lamps, a number of powerful spotlights play on the mannequins as they move about the proscenium, garnishing the scene with an intricate background of mingling shadows. Novel colour lighting effects also are introduced for the first time. It is understood, in fact, that over five times as much electric power is needed to light the Exhibition as has been used for any other purpose at the White City.

A complete overhaul of the heating arrangements has been undertaken; generally the stands are heated by a hot-water system and the public areas by gas heaters. The exhibition closes on February 27.

THE ARCHITECT'S PROBLEMS

THE third of the Architectural Association's series of seven public lectures on Present-day Architecture was given by Mr. H. Austen Hall, F.R.I.B.A., at 34 Bedford Square, W.C., last Saturday afternoon, when he discussed the architect's problems in the planning of large buildings. Sir Francis Goodenough, C.B.E., presided.

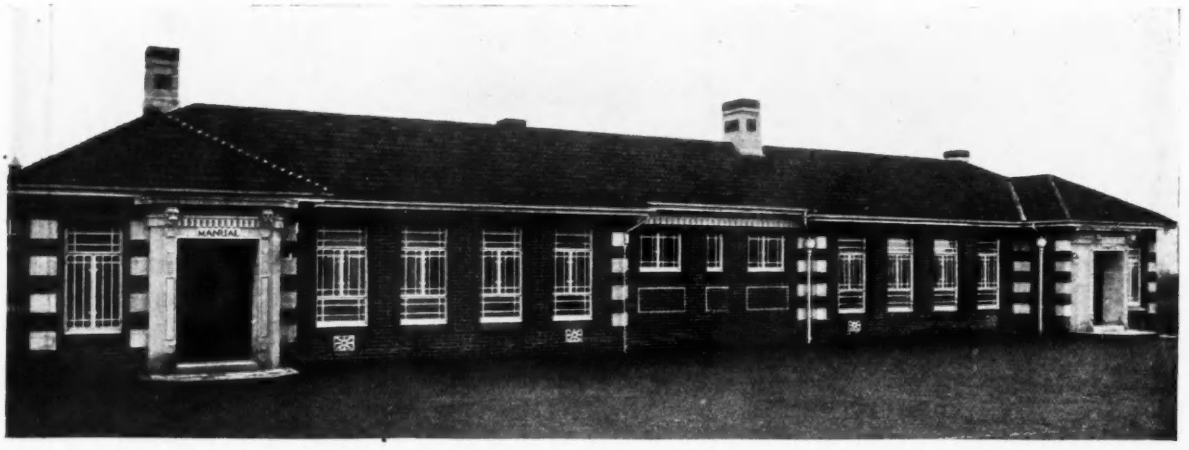
Mr. Hall began by saying he believed that the chief requirement of an architect in these days was a talent for experience, for he must be able to realize the lives of all persons who live in his buildings or come into contact with them in any way. The extent to which this capacity for experience had been developed in recent times would be grasped if we compared the plans which were produced in Georgian times with those of our large public buildings of today.

Somerset House was the most important building erected in England during the latter half of the eighteenth century, and yet the internal arrangements showed a complete disregard of the most elementary requirements of good planning as we now understand the term. Sir William Chambers was the most scholarly architect of his time, and we could appreciate the greatness of his conception, but his talent for experience was architectural and formal, rather than human and intimate. He cared little for the amenities of life: for the people who worked in these great offices, or those whose business took them there for any reason.

It was well known that the simplest plans were the most difficult to produce. The reason was that a long process of elimination had taken place during the period of incubation. The actual method of work was to indulge the imaginative faculties to their fullest extent in the first conception, and then to apply the cold douche of reason to the resultant scheme. The architect's problems in designing a modern building of any size, he continued, could hardly be described in a few words. The initial work of preparing sketch plans for the development of the site was complicated by the absurd rights of light that still obtained in England, and in no other country in the world. Owing to these so-called rights of light, it was impossible to say exactly what could be done with the site the architect had to deal with until many weary months had been spent in negotiation with adjoining owners, involving great delay and expense and constituting a form of blackmail on all progressive enterprise.

Referring to the criticism of buildings, the lecturer said all unaware of the struggle that the building had entailed, the public, at their leisure, contemplated the newest contribution to the amenities of their city and dismissed it with a word of praise or criticism. One person did not like its simple modern lines perhaps and wished it could be classified by the aid of textbook orders or styles. Or another critic despised its traditional tendencies and asked wherein was the progress of art if the cobwebs of the past were to be thus perpetuated. The capacity for criticism of value was a rare accomplishment, especially in architecture, which was hopelessly confused with questions of age and style and personal prejudice.

Architecture was expressed in three dimensions, and the public should, he said, accustom themselves to appreciate the æsthetic quality of a good plan as well as its more obvious advantages.



The front elevation of the Manual and Domestic Science Centre. The materials are multi-coloured facing bricks, pointed in white cement, with dressings of Elm Park (Bath) stone, and Roman roof-tiles.

DOMESTIC CENTRE AND INFANT SCHOOL, CAERLEON

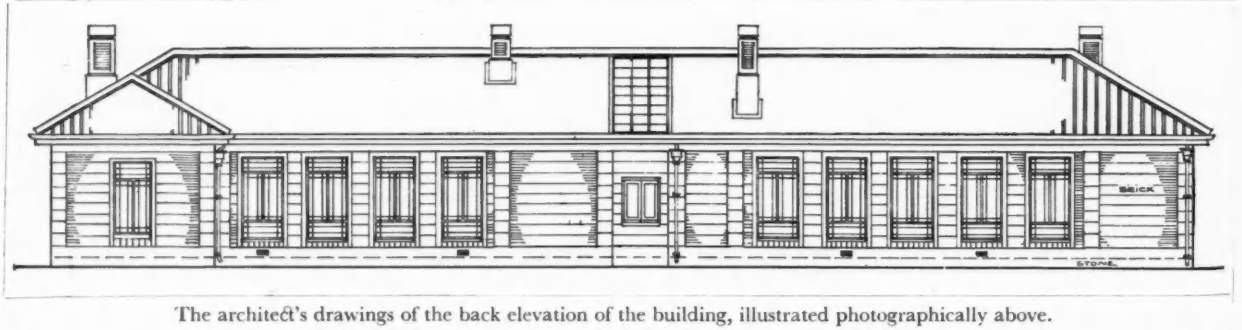
DESIGNED BY C. EDWARD TEBBS

THE complete scheme, of which the main features are here illustrated, comprised a new infant school, cookery and domestic centre, gymnasium, and additions and alterations to the existing schools. The buildings were dedicated on March 18, 1930, by the Right Rev. the Bishop of Monmouth.

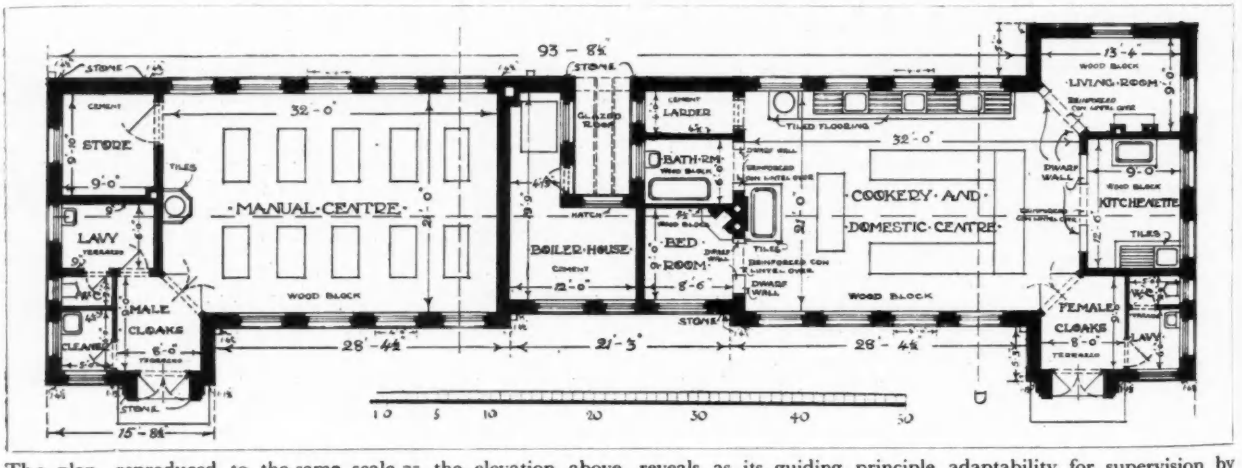
The chief aim in the new buildings has been the provision of an abundance of light and air. In the case of the infant schools the latrines have been brought into the school at the ends of the main corridor, but are disconnected therefrom by means of cross-ventilated lobbies.

Externally, the buildings, though necessarily of modern treatment, have been given a certain Roman flavour to suggest the traditions of the ancient Roman city of Caerleon.

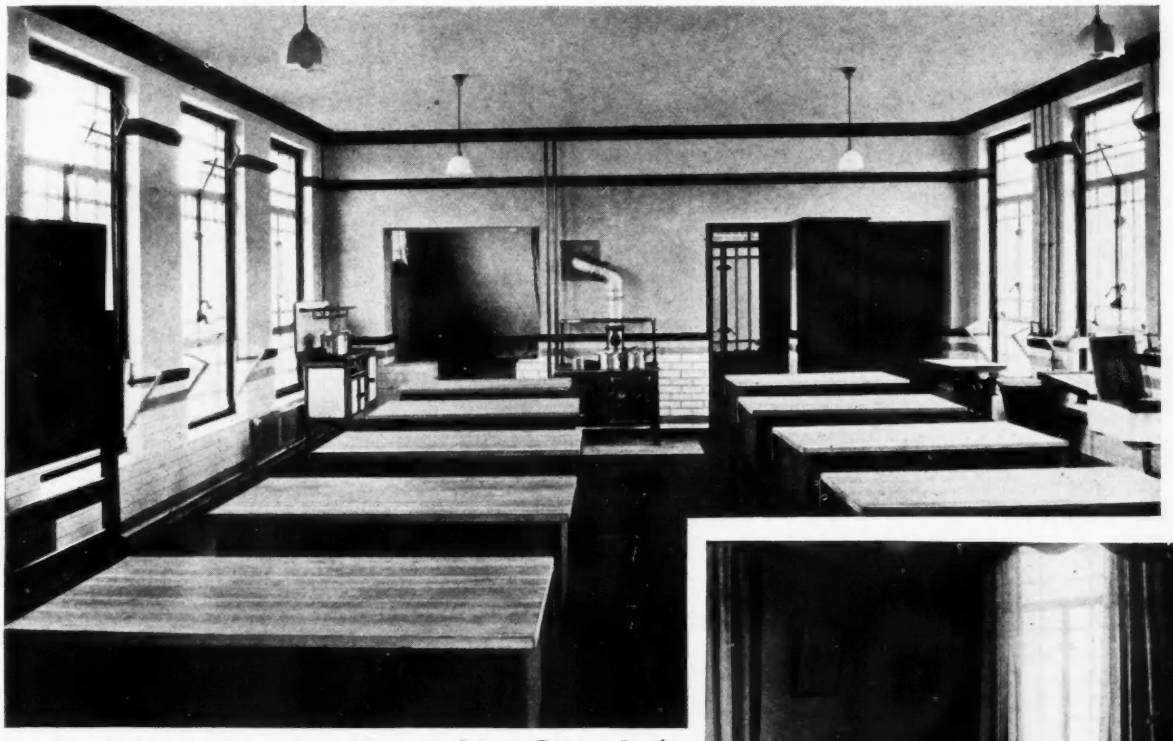
The facings are of multi-coloured rustic bricks, pointed in white cement, and the dressings are of hard, Elm Park (Bath) stone. The roofs are covered with multi-coloured Roman tiles.



The architect's drawings of the back elevation of the building, illustrated photographically above.

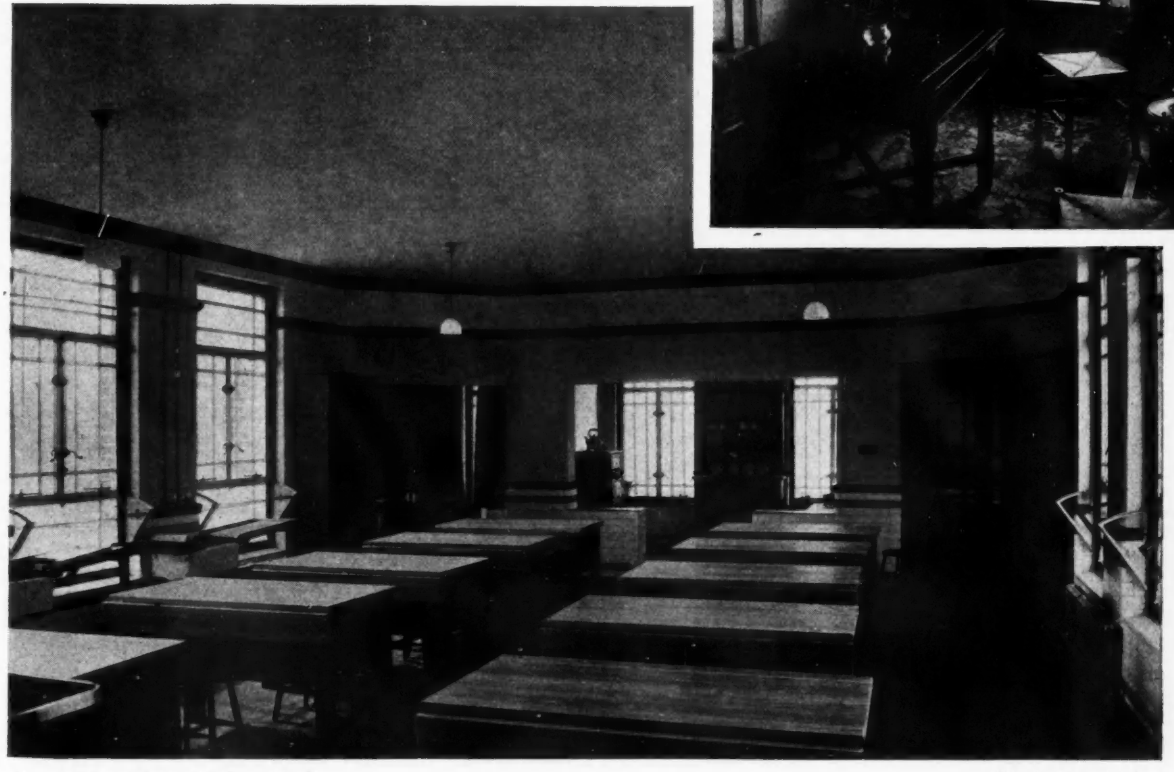


The plan, reproduced to the same scale as the elevation above, reveals, as its guiding principle, adaptability for supervision by single demonstrators.



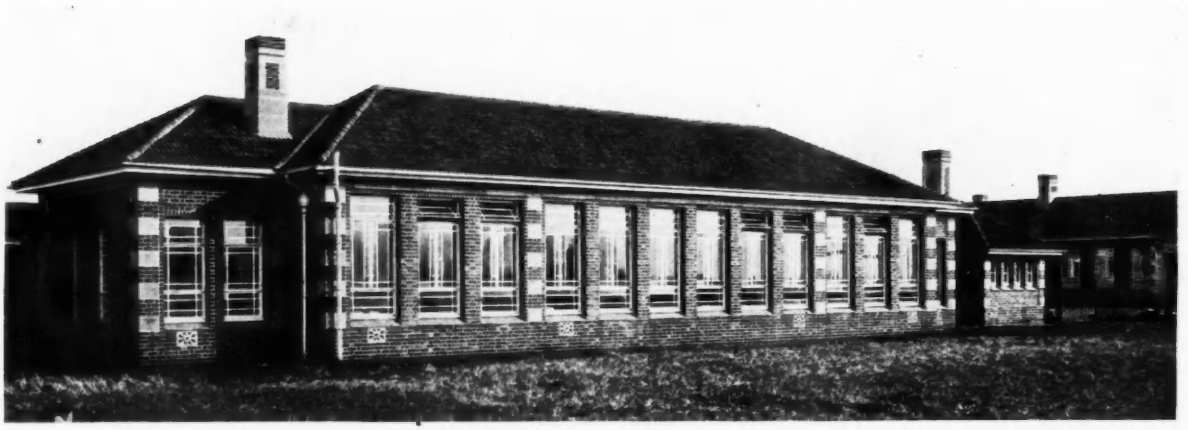
One end of the central room in the Domestic Science Centre. In the left-hand far corner is the demonstration bedroom, and to the right of it is the bathroom.



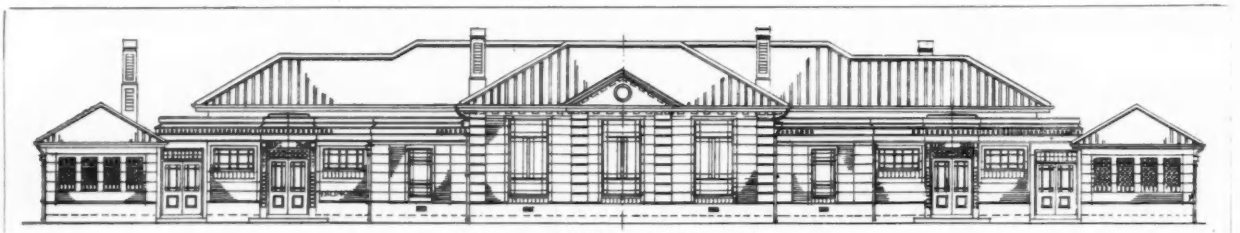


Domestic Science Centre, Caerleon, Mon.] [*By C. Edward Tebbs.*

The other end of the room pictured above. Here the demonstration rooms are a sitting-room and a kitchenette. By means of this arrangement, while a class is learning the general rudiments at the benches, parties of pupils have facilities for applying theory to practice, all directly under central supervision. The view inset shows the sitting-room at close quarters.



The back elevation of the Infant School. The materials are the same as in the Domestic Science Centre; in both buildings the large area of the steel casement windows testifies to the regard for light and ventilation.



The architect's drawing of the front elevation of the Infant School illustrated above.

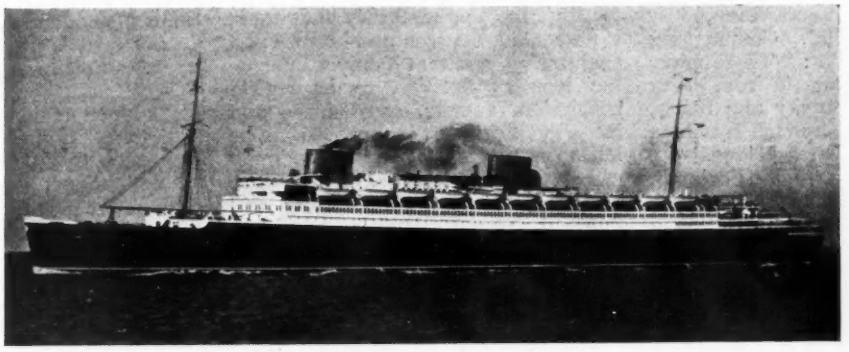
Infant School, Caerleon, Mon.] [*by C. Edward Tebbs.*

This plan, to the same scale as the elevation drawing above, further illustrates the consideration for hygiene. For instance, the lavatories at either end are brought under cover of roofs contiguous with that of the main building, but at the same time cross-ventilation is secured by means of the intervening lobbies.

Internally, hall and corridors and cloakrooms have tiled dadoes, and the floors are of pitchpine wood block and terrazzo. The latrine partitions are tiled and the w.c. partitions are in terrazzo. The classrooms have buff brick bases, with green slate-board dadoes over, framed in Columbian pine; in fact, the whole of the joinery, including that in coved skirtings and cornices, is in stained Columbian pine. The windows reach nearly to floor level, so that the seated pupils may see the view of the beautiful Valley of the Usk.

The domestic science centre, with its demonstration sitting-room, bedroom and kitchenette, is planned entirely on the open-access system to give complete control by one demonstrator. The walls are tiled in white, with terrazzo cappings to dwarf walls. Central heating is installed throughout the buildings.

ARCHITECTURE *versus* ENGINEERING



The new German crack liner *Bremen.*

" The funnels of steamships are raked. That is done for the sake of appearance. . . . The funnels you see are sham ones, concealing smaller ones which do the work and are correct for the purposes of combustion."

ii: Engineers and Æsthetics

BY A. J. PENTY

SUFFICIENT was said in the first of these articles to prove that strife does exist between architecture and engineering. If, therefore, we are to produce buildings which give us æsthetic pleasure—and to give æsthetic pleasure must always be the aim of architecture—we cannot follow the strict scientific law. Engineers themselves are perfectly aware of this discrepancy, and they do not appear to have any qualms of conscience about departing from the strict scientific law to obtain effect.

Ships have often been cited as examples of how beauty results from an exclusive concentration upon purely utilitarian aims. But a naval architect told me that this is not true. " There are," he said, " many things about ships that are done for the sake of appearances. You will have observed that the funnels of steamships are raked. That is done for the sake of appearance. Funnels which are raked are not as satisfactory from a constructional point of view as they would be if they were plumb."

Then he went on : " In liners, one of the funnels is invariably a dummy, built entirely for effect, while the others are larger than is necessary. The funnels you see are sham ones, concealing smaller ones which do the work and are correct for the purposes of combustion."

" Well," I said, " it seems to me that engineers are worse than architects. I confess to having added dummy flues to chimneystacks to improve their appearance, but I was never guilty of building a dummy chimney-stack."

When on a recent occasion I made use of this illustration to prove that utility and æsthetics are not the same thing, the objection was made that the dummy funnels of liners were a concession to the prejudice of emigrants, for I was told that Eastern Europeans refused on one occasion at Glasgow to embark in a liner that had only two funnels, because they thought that such a ship could not be seaworthy. To this I reply that, though this may excuse the existence of dummy funnels, it does not excuse their being larger than is necessary in diameter nor their being made to rake, while, as the extra funnels undoubtedly improve the appearance of liners, the argument of Professor Lethaby would not be so plausible were it customary to put only two instead of three funnels.

Again, supporters of the scientific theory of architecture are fond of citing the Forth Bridge as an example of how beauty naturally follows from the determination to be downright and utilitarian. Doubtless the bridge is impressive, but it must remain an open question as to whether we are impressed by its beauty or its magnitude. I am



By courtesy of B. T. Batsford *(see page 285).*

The Grosses Schauspielhaus, Berlin, designed by Hans Poelzig, being a theatre, displays the theatre's absence of windows.

" No man who is dead to æsthetics will ever succeed in producing anything beautiful, however scientific may be his knowledge of construction."

disposed to think the latter is the case, for I doubt very much if the Forth Bridge ever awakened in anyone an æsthetic emotion. William Morris, whose opinion we must respect, thought it anything but beautiful. Commenting on it in 1889, he said : " There never will be an architecture of iron, every improvement being uglier and uglier, until we reach the supreme specimen of all ugliness—the Forth Bridge."

Replying to this attack, Sir Benjamin Baker said things which, if they are not entirely satisfactory as an answer to Morris, at any rate dispose of the idea that beauty can be left to take care of itself—on the supposition that the Forth Bridge is a thing of beauty. He said :

" It would be a ludicrous error to suppose that Sir John Fowler and I neglected to consider the design from the artistic point of view. We did it from the first. An arched form is admittedly graceful, and we approximated our bridge to that form as closely as we could without suggesting false construction and shams."

Commenting on this, Mr. Trystan Edwards said : " That is to say, the engineers made the underside of their great cantilevers in the form of arches, simply because they considered this form to be elegant. A slight acquaintance with the science of statics is sufficient to prove that the compressional members of the cantilevers could have assumed a hundred different shapes and yet have shown the requisite mechanical strength and economy of materials." (Letter to THE ARCHITECTS' JOURNAL for February 3, 1926.) The decision to use one particular form rather than the other alternatives must therefore have been arbitrary, and in nowise a deduction from scientific data.

In the light of the foregoing reasons it is, I submit, impossible for architects to subscribe to the theory that there is no conflict between architecture and engineering, and that if only we pursue the idea of function to its logical conclusion, namely, convenience and integrity of construction, beauty can be left to take care of itself. I simply cannot understand how anyone can entertain the idea that beauty will follow the pursuit of utilitarianism and the neglect of æsthetics.

If our manufacturing towns are not downright and utilitarian they are nothing. Nobody there gives any thought to beauty. If, therefore, this theory were true, these towns should exhibit a degree of beauty unrivalled by any city in the past. But we know such is not the case. On the contrary, these towns are unrivalled in their ugliness. And there is but one deduction to be made—that beauty will not accrue to people who are æsthetically dead.

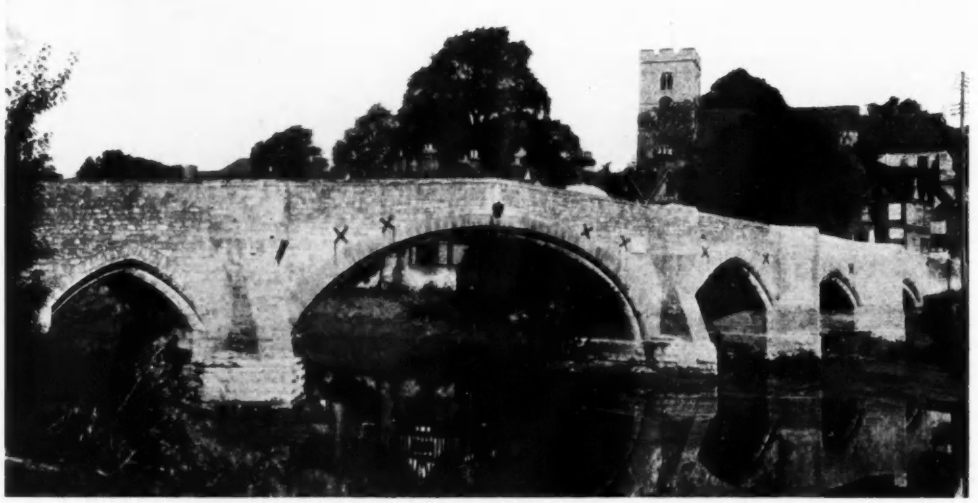
Granted that a man is æsthetically alive and is ignorant of scientific construction, he may get good results by basing his designs upon construction and materials, because his instincts are good, though his theory is faulty. But no man who is dead to æsthetics will ever succeed in producing anything beautiful, however scientific may be his knowledge of construction. We must insist upon the primacy of æsthetics.

The fact that students are taught to approach architecture from this point of view is the one element of truth in a classical training, and explains why, when this training is not accompanied by pedantry, its results may be good. When Professor Lethaby urges that buildings should be as simple and straightforward in design as a ship, he is, I submit, on firm ground. He exalts a standard of taste which, to me at any rate, is acceptable. But when he urges that in order to achieve such a result architects must turn their backs upon æsthetics and be downright and utilitarian, he is giving expression to an opinion that cannot be maintained, for all constructional devices are not beautiful, and many things perfectly satisfactory as architecture are anything but scientific in their construction. What is more, he is not up to date in his science, or he would not demand that architecture should conform to a single principle.

Sir William Bragg tells us that scientists today provisionally accept conflicting theories which seem valid and proved in the absence of a higher synthesis. Thus, in optics they use the wave theory or the particle theory, according to the range of experiences they wish to consider. " On Mondays, Wednesdays and Fridays we adopt one hypothesis; on Tuesdays, Thursdays and Saturdays, the other. We know that we cannot see clearly and fully in either case, but are perfectly content to work and wait for the complete understanding."

And what is most important of all for us, he adds : " The scientific worker is the last man in the world to throw away hastily an old faith or convention, or to think that discovery must bring contempt on tradition." (*Craftsmanship and Science*, p. 28.)

It is not the voice of science but the voice of popular pseudo-science and advertising agents that our modernist architects listen to.



A fourteenth-century bridge : Aylesford, River Medway, Kent.

" An arched form is admittedly graceful . . . the engineers made the underside of their great cantilevers in the form of arches, simply because they considered this form to be elegant."



The Forth Bridge, looking down through the lattice girders.

"Doubtless the bridge is impressive, but it must remain an open question as to whether we are impressed by its beauty or its magnitude. I am disposed to think the latter is the case."

QUESTIONS THAT ARISE

Extra Work

"Architect" writes: "*I am at present engaged upon some work in connection with alterations and additions to a large country house, the contract figure for which is just over £3,000. The price is a lump sum one, with bills of quantities. My client wishes an addition 8 ft. wide by 8 ft. long to a new library on the ground floor, and a new bedroom on the first floor—the extra work being worth about £200. The library which he originally approved, he has suddenly decided, is not of sufficient capacity. I forwarded the builder a drawing showing the variations, and asked him to proceed with the work as an extra on the contract, valued at the prices in the bills, but he replies that the extra is so large that he cannot proceed without giving a lump sum price for the extra work. The form of contract is that issued by the R.I.B.A. How far can I go in enforcing extra work?*"

The distance an architect can go in ordering extra work other than the usual small variations and unforeseen extras, such as drainage and foundations, rests in the hands of the builder, and needs to be dealt with very tactfully by the architect.

By small variations I mean the usual extra money spent upon details, the shifting of door openings, etc., and the various small items from which the builder gathers the profit under the heading of "Day Work."

If your querist's client wishes to make further additions to the contract to the extent of £200, he should have met the builder and ascertained how he felt towards carrying out the extra work at the rates contained in the priced bills.

Builders are only too pleased to carry on with further work if they are making a satisfactory profit.

If the builder feels that he has been doing none too well, probably a small extra on his prices for various items affected will suffice rather than obtaining a lump sum price for the extra work. It is a mistake, however, to send a variation drawing and order him to proceed.

What would your querist have done if the works were being carried out for a lump sum price, without quantities? He would certainly have had to ask the builder for a price for the extra work. W. A. D.

The Editor invites readers' enquiries on all matters connected directly or indirectly with architectural practice. These enquiries are dealt with by a board of experts, to which additions are constantly being made as and when the need arises. Readers must enclose name and address, and should send their enquiries to the Editor at 9 Queen Anne's Gate, S.W.1.

Cement Gun

M. G. writes: "*I should be glad to have your expert's opinion on the cement gun and its method of working. I believe it originated in America, and then came to this country. Is this supposition correct?*"

The cement gun came to this country from America. It is a very simple apparatus consisting of two cone-shaped receptacles, one above the other, like a tin hour-glass on wheels. The upper cone is filled with cement and sand, and this mixture falls into the lower cone and is pumped from it, by compressed air, through a tube. Just before it leaves the nozzle a smaller tube supplies water, so that a proper mixture is sprayed upon the wall.

In the United States and Sweden this method is used for coating wooden houses, and for this a fine mesh metal lathing is nailed over the wood sheeting, which forms a key for the sprayed cement.

One machine and two men can cover about 1,500 square feet in six hours. The coat will be about 1 in. thick and will need no trowelling to finish the surface. W. E. L.

Linoleum Dadoes

T. L. writes: "*What is the best way to form linoleum dadoes on brick walls, with plaster surface above? Wood cover strips can be used top and bottom, and at angles, but preferably not intermediately as smaller panelling, as it is not desired. Can ordinary linoleum be used?*"

The linoleum should be fixed by adhesive solution (usually casein) to a smoothly rendered surface; if laid out for expansion before fixing, intermediate joints can be butted and should not open unduly. Ordinary linoleum can be used. E. G.

LETTERS FROM READERS

The Architecture of Steel

SIR,—In your leading article "Steel," and your article "The Architecture of Steel," you accuse the steel trade of the malpractices of obscurantism and of resisting the overtures of the architectural profession for collaboration.

Several prominent members of the steel trade have replied, but the profession has remained silent. Why?

If the relations between the architectural profession and the steel structural trade are as bad as you say they are, surely some architects might have availed themselves of this opportunity to add their pleas to yours for betterment.

As they have not done so, is it possible that they have a truer conception of these relations than you have, and that, like myself, they classify your editorial and article as provocative ebullitions, developed from wrong premises, which the trade may be left to subdue?

From my thirty-eight years' experience of the steel structural industry (which practically covers its history), I say that the relations between the architectural profession and the steel trade are, and always have been, as cordial as any business relationship can be.

The accusation of resisting overtures has no solid foundation. I do not suppose that the architectural profession, as a profession, will welcome, or even accept, your idea of "collaboration" between itself and a trade, but, ever since steel construction was steel construction, the trade has welcomed inquiries from the profession and has done everything possible to supply the fullest information.

To some extent this answers the charge of obscurantism, but this charge may be rebutted more fully.

Shortly after the first steel beams were rolled in 1884, a *Section Book* was published. This book gave tables of the safe loads for these steel beams, but in addition it gave particulars of the material and also the formulæ for the calculations. This book was the forerunner of the long series which has been published during the past forty years by the leading firms of steel makers and fabricators. Today there is nothing in any of the building or engineering trades to compare with the mass of non-proprietary technical information contained in the volumes, called *Section Books* or *Handbooks*, which are placed at the disposal of the architectural profession by the steel structural industry.

Notwithstanding your indictment, I am confident that the amicable relations between the architectural profession and the steel trade will continue to the mutual benefit of both.

W. BASIL SCOTT
(REDPATH, BROWN & CO., LTD.)

Building for Prosperity

SIR,—Mr. Towndrow is right. Economic "laws" are not as those of the Medes and Persians, for they have changed throughout history; they are changing now, and will do so in future. They are not natural laws at all, and are more accurately termed rules.

Eminent economists not only differ in matters of detail, but are opposed in matters of principle; for one example only, take views on the subject of gold as expressed by Professor Gustav Cassel and by Professor Lionel Robbins in *The Times* Annual Financial Review of February 10.

The inquiring layman is driven therefore to study the first principles of credit finance for himself, and to draw his own conclusions.

But Mr. Towndrow is following a false scent when he speaks of "nearly a thousand million pounds lying about doing nothing in particular" in the form of bank deposits waiting to be lent.

Contrary to popular belief, banks do not lend deposits; they are already debts due to the banks and will be repaid to them by industry, which must collect those sums from the public in prices.

"Every bank loan and every purchase of securities (by a bank) *creates* a deposit, and every repayment of a bank loan and every bank sale destroys one. All that is done by the banks when they create money is to increase the amount of debts due to and from themselves." (Rt. Hon. R. McKenna, *Post War Banking Policy*.)

Therefore, all deposits originate in bank loans; they are debt and must be repaid, they cannot be lent again.

Banks, by Acts of Parliament, have a monopoly of creating money as a debt due to themselves, and "the Government independently of the action of the Bank of England are no less passive than the Public as regards the volume of money." (McKenna, as above.)

Therefore, when a bank makes a loan or overdraft, it writes the deposit figures up, not down. It is like pumping air into a tyre, not taking it out, and the air (credit) is really supplied by the borrower who is to do the work—the bank certainly did not possess it. An impartial public inquiry as to the real ownership of the air would give interesting and fruitful results.

May I suggest to Mr. Towndrow a different angle of view of the problem, and what is the true scent?

Purchasing power equals wages, salaries, and dividends. Price equals wages, salaries, and dividends, plus overhead costs, of which the most important is the repayment of bank loans.

Price is therefore always more than purchasing power, which makes the sale of a large proportion of manufactured goods impossible.

How to equate prices with purchasing power? It will not be done under the existing system of bank fed "debt" credit, however freely credit may be given.

But is credit, which is really created by the producers and consumers of the nation, a debt? ARTHUR WELFORD

Exploitation of Salaried Architects

SIR,—In your issue for February 11 Astragal called attention to the instance of a firm of surveyors and estate agents undertaking a large amount of architectural work and getting it executed through the engagement of a salaried architect at a very low remuneration. While this particular case is a glaring example of unsatisfactory methods, it is also an index of the large amount of architectural work now being dealt with outside the field of private practice. Unfortunately the present instance is by no means solitary, and these changes mean that new laws must be evolved and existing laws adapted to meet the new conditions.

The Association of Architects, Surveyors and Technical Assistants is following these developments with close observation and has called attention to them on various occasions, but the profession generally does not realize how great is the erosion which is taking place.

The R.I.B.A. Code of Professional Practice states that "the businesses of auctioneering and house agency are inconsistent with the profession of an architect." This is not merely a statement of prejudice, but is rather a rule in the interest of clients or employers. Those who endeavour to combine several different occupations generally get involved with conflicting interests and cannot give the impartial or undivided attention which an employer is entitled to expect.

The fact that a firm of auctioneers and surveyors has to engage an architect is, in itself, an admission that such work can only be dealt with by one who has had special training and experience in the design and erection of buildings.

Auctioneers and surveyors have rules of conduct, but it is evident that some of them have little respect for architects or their rules of conduct. If there is to be mutual respect (which is most desirable), then auctioneers and surveyors must not attempt to exploit

architects by the use of methods which can only be described as "sweating."

The first step towards meeting these new forms of practice is to secure proper remuneration for all salaried architects in all circumstances. This will go a long way towards promoting respect, and the whole profession should unite upon a matter which is of vital interest.

A. SEYMOUR REEVES
(SECRETARY, A.A.S.T.A.)

Cottage Tenders

SIR,—Mr. Edwin Gunn's plea, in your issue for February 4, for a simpler form of bill of quantities than the recognized system for cottages is tantalizing.

Cottages, small houses and the like make up about 75 per cent. of the building work in this country. With few exceptions quantities are supplied, consequently I should imagine it must incense quantity surveyors to think they take no part in this work. The reason may be, as Mr. Gunn says, because a different kind of quantities is necessary than the ordinary.

Mr. Gunn says these quantities should take the form of so many tons of cement, cubic yards of sand, thousands of bricks and tiles, feet run of scantlings in definite lengths, nails, screws, tubing and so forth, such that the builder would not only be able to price them from quotations but enable him to issue orders therefrom for the materials.

It may interest Mr. Gunn to learn that Mr. T. Sumner Smith advocated a method on somewhat similar lines in his book on *Concise Costing for Houses*, and set forth in the preface thereto the following observations: "They can serve a fourfold purpose: first, as a basis for an accurate estimate for the intended structure; secondly, for ordering materials and their assembly on the site at the proper time; thirdly, for analysing and recording costs; lastly, as a schedule of prices for the adjustment of variations on the contract in an expeditious and equitable manner."

If I am right in my surmise, I believe Mr. Sumner Smith applied his system to other kinds of building. But their introduction was inopportune, for at that time builders could select and choose their jobs at their own price. They objected to them on the ground that 1: costing could not be applied to the building industry, and that 2: anyone with but a slight knowledge of building could price them, therefore it offered an inducement for anyone with a little knowledge of building to set up in business; and that 3: quantity surveyors generally did not possess the requisite knowledge to prepare quantities on these lines.

There has been a change in several directions within the last ten years. Costing is now an accomplished fact in the building industry; novices would stand but little chance in the stress of competition today, and there has been a great improvement in quantity surveying, despite the fact that quantities are still turned out which may be classed as good, bad and indifferent.

Speaking as one with a knowledge of contracting, builders would prefer to tender for small works from bills of quantities than from drawings and specification. And builders understand less a drawing and a specification from an estimating standpoint than they do a bill of quantities, hence the reason of erratic tenders from drawings and specifications.

LYNN C. DOYLE

Panels and Preservation

SIR,—Mr. William Davidson's letter in the JOURNAL for January 28 shows so admirable a spirit that his criticisms are welcomed and his views claim full consideration.

The one great fact to which we, who are discussing the subject, are directed is that a vast quantity of dreadful building is being done and is defiling the countryside deplorably. This point is agreed by all who know the country with, I suppose, complete unanimity. There is one class of the community to which the public should feel it could turn in this emergency: the architectural profession. If not to the skilled man, then to whom?

The article in the JOURNAL for January 7 describes the effect of work being done in the Witney area. With this experience it is held that wherever this work is taken up in a similar manner, it will mean a good deal of unpaid work. The alternative is to leave the committee of appreciative, far-seeing and enthusiastic laymen, who have an earnest desire to preserve the characteristic beauties of this lovely country, to do the best they can without technical guidance. They give up their time and energy to the work, so that it seems a small matter to ask a skilled architect to do similarly and to throw in the fact that he has his skill.

That it will benefit the architectural profession in the long run there is no doubt. This is not held up as an unworthy point of persuasion; it is a statement of the actual effect of the interest created in the public mind and the improvement in the taste and intentions of the ordinary man who wants to build, brought about by the patient and persevering work of the town-planning committees, the result of which will mean a more universal practice of employing architects.

The analogy of the medical profession must be left with "we are sure," as to define the point would require much evidence.

It is disappointing to find a bad piece of architecture, whether a simple dwelling or a pretentious building enterprise, having been designed and carried out by a "qualified architect." There are such men who criticize the colleague, who regards architecture as of paramount importance, as an idealist; an impractical dreamer who spells architecture with a big A; and as a professional man almost unworthy to be entrusted with building projects. It is to this class that reference is made when the "influence of the great architectural schools" is mentioned. We must keep our own house in order. The qualified architect should be a designer primarily, surely. If he should be a competent organizer, or business man who employs less fortunate and perhaps younger men to design and supervise the buildings architecturally, then he might be called by some other name.

Because you can take half-a-dozen architects who, acting individually as committee advisers, would give half-a-dozen different points of view, the healthy thing to do is to change the personnel at certain definite periods, giving each man, say, six months' appointment. Although the directions given by each architect would differ from those of the others, there is no doubt that the general effect on the work would be approximately the same, and building work would benefit. It is suggested, therefore, that instead of one man undertaking to advise a committee for an indefinite period, it would be much better for the effect on the work and to distribute the task among a number of architects so that the burden does not fall heavily on one, to appoint a number of architects to act on a rota.

The object of these efforts is of such unanimously agreed importance that it behoves all professional and dilettante persons, genuine and earnest in their desire to preserve the country's character, to contribute of their best and to their utmost to accomplish that end. The scheme that is certainly having good results in the Witney area is admittedly imperfect, so that suggestions for modifications or ideas for better schemes produced in the helpful and welcome spirit of Mr. Davidson's letter would be greeted with great satisfaction.

THOMAS RAYSON

Women Architects

SIR,—It has been brought to my notice that an eminent member of the Council of the R.I.B.A., in answer to an inquiry, recently gave as his opinion that architecture had not been proved to be a suitable profession for women, as none were in practice for themselves without male help. Women were

all right for the sketch plans, but not for the hard facts of working drawings.

Now, I have no wish to enter the blind alley controversy of the respective capabilities of men and women, but I merely wish to correct a misstatement which might prevent other women from adopting a career which I have found not only congenial but also not unlucrative.

I admit that the greater part of my commissions have been of domestic character, but I understand that many male colleagues also suffer from this disability, and I feel sure that those of us who, like Spinlove, have weathered the storms of a Honeywood File, will come safe to port when entrusted with work of a different nature.

C. CLARE NAUHEIM, B.A. (ARCHT.)

THE NEW FORM OF CONTRACT

Its Alterations Analysed

THE following analysis of the new Form of Contract, by W. E. Watson, the hon. secretary of the Practice Standing Committee, is reprinted from the *Journal of the R.I.B.A.*

1 : To those who use the Form of Contract as printed, the most noticeable alteration is that all the blanks which previously were interspersed throughout the document are now assembled at the end in the appendix; there are alternative clauses, which should be crossed out, in the body of the document, viz. Clauses 11, 17, 25 (d) if not required, and 26.

2 : Definite percentage cash discounts are laid down (Clauses 15 and 24, Sub-Contractors and Provisional Sums), and where an architect invites tenders under such clauses before the main contract is entered into, he should request the parties tendering to allow for such discounts for cash payments in the event of a contract being entered into.

3 : The usual procedure whereby architects when certifying in favour of contractors upon the employer certify also in favour of sub-contractors upon the general contractor is recognized as being the most desirable, and continuance of this system will best comply with the new Contract Form.

4 : *Scope of Contract.* (Clause 1.).—This clause clarifies the position as between architect and contractor, and while not in any way further hampering an architect in his control of works generally, it devolves upon him a responsibility not to exact from the contractor a degree of work or labour not reasonably in consonance with the contract documents or those upon which the tender was based. Notice is required to be given by the contractor to the architect, and such notice when received should receive immediate attention—i.e. within seven days. Failure to observe this formality may give a contractor substantial grounds whereupon to claim for extra payment, and in this connection attention is directed to the arbitration clauses.

5 : *The Arbitration Clauses.*—26 (A and B) are provided in this omnibus form in duplicate, because representatives failed to agree upon one satisfactory to all interests. The A clause is substantially the builders' clause, and B contains the same provisions as in the 1909 Form.

6 : *Local Authorities, etc.*—Clause 4 is comparable with the provisions of the 1909 Form, the difference being that where a specification is loosely worded a contractor may prefer a claim for extra payment.

7 : *Setting Out of Works.*—This Clause 5 goes somewhat further than the provisions of the 1909 Contract in so far that an onus is cast upon an architect to satisfy himself as to the accuracy of the setting out of works at ground level.

8 : *Materials and Workmanship.*—Is comparable to the earlier provision, save that the document upon which the tender was based is to prevail; that impossible markets should not be specified, and that the normal specification clause as to tests is now embodied in the Contract Form.

9 : *Prices for Extras.*—Clause 10 provides that opportunity shall be given to a contractor to be represented when the employer's surveyor is on the works, and that the contractor shall be supplied with a copy of a measured bill on or before the date of the architect's certificate thereon.

Where day works are not provided for in schedule they are to be in accordance with the local day work charges of the Building Employers' Association for the district.

The prices of the original bills determine the value of items omitted, provided that if omissions vary the conditions for the execution of remaining items they shall be valued on a reasonable basis at local current prices.

A paragraph provides that the accounts are to be completed within three months of completion of the job unless otherwise stated in the appendix.

10 : *Bills of Quantities.*—Clause 11 provides that no burden shall be cast upon a contractor by a subsequent document further than that upon which he tendered. Quantities are to be prepared upon a recognized basis such as the standard method of measurement, and as in the earlier form, the clause is given in two sections, one of which should be crossed out.

11 : *Sub-Contractors.*—Clause 15 deals with sub-contractors nominated by the architect, and he may certify direct in their favour upon the employer, thereby indemnifying the contractor for responsibility and reducing the retention moneys in proportion. Such sub-contractors must, as before, enter into a sub-contract with the general contractor. A discount for cash payment previously recognized in principle is now stated to be 2½ per cent., and no more. Payment to sub-contractors is due by a general contractor within fourteen days of the architect's certificate, and upon request the contractor shall satisfy the architect that previous certificates in favour of sub-contractors have been honoured, in default whereof the architect may exercise his discretion as above detailed; the exercise of such discretion does not, however, create privity of contract as between employer and sub-contractor.

12 : *Damage to Persons and Property.*—Clause 16 contains the provisions of the earlier form, and it excludes the responsibility of the contractor where any damage is within the control of the employer.

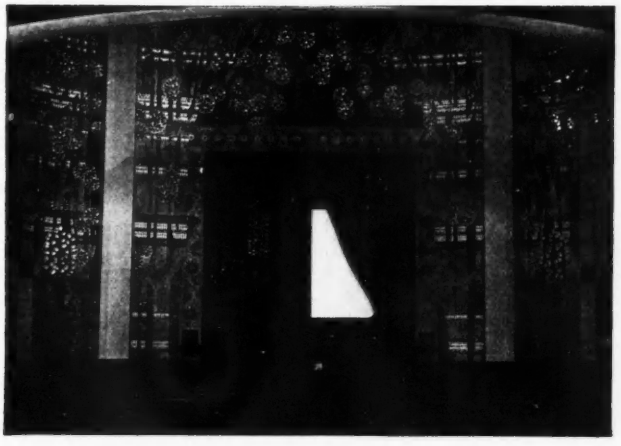
13 : *Insurance.*—Clause 17 contains alternative paragraphs as before, one of which should be crossed out; an addition in case of fire is a provision of 8½ per cent. to cover architects' and surveyors' fees consequent upon any rebuilding.

14 : *Determination of Contract by Contractor.*—Clause 23 covers the provisions of the earlier form, but puts them on a basis more comparable with the basis of the earlier "Suspension of Works by Contractor" Clause, and it further provides that, in addition to detailed remedies, the contractor shall have a lien upon unfixed materials as security for payment.

15 : *P.C. Provisional Sums and Artists.*—Clause 24 contains an important addition designed to provide that where a consequential contractor has facility for performing works which are normally covered by provisional items, he should be given an opportunity to tender on the usual basis; so as to safeguard the employer, however, the quantities for tender should contain a schedule whereby before a contract is entered into the contractor can state what particular sub-contract trades he is in a position to tender for.

16 : *Certificates and Payment.*—Clause 25 (d) contains a new provision, and it should be struck out if not required. It provides for deposit of retention moneys in the joint names of employer and contractor, and its purpose is definitely to assure to the contractor recovery of such moneys in case of any default by the employer.

LITERATURE



A rather exotic-Modernist screensurround in the Gambetta Theatre, Paris. Designed by Henri Sauvage. [*From* Modern Cinemas and Theatres.]

MODERN CINEMAS AND THEATRES

THE *Architecture of Pleasure* is the title of a new series to be published by Messrs. Batsford; Mr. P. Morton Shand has written the first volume, which is called *Modern Theatres and Cinemas*, and is concerned with one of the few classes of commercial building that has been produced in great numbers since the war: the material from which to select is therefore great.

In the author's opinion, the most vital contribution has come from Germany, and it is from that country that the majority of the illustrations are taken. In spite of financial difficulties, or possibly because of them, some very fine work has been done there, and much of it shows great freshness of treatment, whether it be in the manner of the uncompromising modernism of Mendelsohn or the Viennese neo-Baroque-cum-Chinese of Kauffman. It is in Germany, too, that the possibilities of light as a decorative medium, both for interiors and exteriors, has been most fully explored. There is, surely, no class of building to which its application is more fitting than to cinemas. Asplund's velvet-walled neo-Pompeiian Skandia at Stockholm, which is justly considered to be one of the most noteworthy cinemas, receives special notice.

Among the several "legitimate" theatres given is the new Pigalle in Paris, which is the "last word" in technical equipment, both behind the curtain and in front, and is, besides, very advanced in its decorations. The new Savoy Theatre is conspicuous among the excellent selection of English examples, which also includes the New Victoria Cinema, possibly our best contribution to theatre decoration. Other English work includes the Twickenham and Imperial Institute cinemas and the theatre at Welwyn Garden City, all of which show that our architects are capable of doing as good work as their foreign *confrères* when given the opportunity, which, alas! is but seldom. The author illustrates two examples only of work from the United States, which is rather surprising, as although most American work is purely "period" in its decoration, it has made great advances in planning, and it is there that the very large house with a single balcony has been evolved.

The tendency today is for the larger type of house to be made suitable for use as either theatre or cinema. It is more than likely that the distinction between music-hall or revue theatre and the cinema will vanish. A new type of composite entertainment is evolving in America and here, which is part music-hall and part "pictures." Such houses as the Capitol, the Paramount or the Roxy (all in New York) hold 6,000 persons, and in the entertainment given (at any rate before the introduction of the "talkie") the film is the least important item. The chief attractions are elaborate ballets, spectacular revue scenes and parts of the more popular operas. Shows on so lavish a scale can be given at moderate prices only if the seating capacity is great.

Mr. Shand's book is for the layman rather than the architect, as there are few plans or sections. The latter will, nevertheless, enjoy it as a stimulating piece of propaganda in favour of the employment of good architects on a class of building that might have more influence on public taste than any other. A. P. Herbert's *The Water Gipsies* reminds one of the enormous influence that "the pictures" have over the thoughts and even the actions of a large part of our democracy; among the younger generation this influence is greater even than that of the more lurid of the Sunday newspapers.

GRAHAME B. TUBBS

Modern Theatres and Cinemas. By P. Morton Shand. London: B. T. Batsford. Price 15s. net. [See also illustration on page 279.]

CHARING CROSS BRIDGE

THE question of Charing Cross Bridge being still an open one, and as it is not unreasonable to contemplate that, before a final decision is reached, the impending review of London's traffic problems will disclose new factors vitally affecting a scheme of this importance, Mr. Arthur Keen's book on *Charing Cross Bridge* appears most opportunely.

Mr. Keen has dealt with his subject in an historical manner, starting with a brief summary of the earlier views on the improvement of London and the more important developments that have actually taken shape. Despite these developments, it has to be admitted that, speaking broadly, London has grown up in a haphazard way, and it is only by accident that some of its streets offer the beauty and interest which we find in them.

It is emphasized that the question of a new bridge at Charing Cross is intimately related to the need for improving the river frontage on the Surrey side, from the County Hall to at least as far as Blackfriars Bridge, and that an embankment should take the place of the present ragged and irregular buildings. Mr. Keen wisely avoids dealing in detail with the difficult problems involved in the replanning of the adjacent areas that a bridge in this position demands, but the reader has ample opportunity for studying these in the illustrations of numerous schemes that have been submitted from time to time by architects and engineers.

The schemes are very clear and explicit and afford readers an opportunity of comparing them with the "official" scheme in order to realize how the latter fails in providing an adequate solution of the bridge problem from every aspect.

As a review of what has been done, bringing us up to date in this subject, Mr. Keen's book could hardly be improved on; but when he comes to the question of the suitable procedure for the future, the opinion that "it is useless to wait for future developments to unfold themselves before making the scheme" may be challenged as short-sighted.

The present crucial situation as regards London's traffic problem seems to demand immediate activity in the preparation of a comprehensive plan, together with appropriate zoning regulations, and the dominant position of Charing Cross in regard to such a plan makes it obvious that the proposed bridge and its approaches can only be considered as a vital part of the programme taken as a whole.

H. V. LANCHESTER

Charing Cross Bridge. By Arthur Keen, F.R.I.B.A. London: Ernest Benn, Ltd. Price 21s. net.

THE SPECIFICATION WRITER

Rural Cottage Specifications: Type ii. Northern England

BY EDWIN GUNN

COTTAGES intended for areas where stone-built dwellings are the old tradition—slate-roofed in the west, and pantiled in east-coast districts.

SPECIFICATION

WALLS.—External walls to be built as cavity walls 10 ins. thick, composed of an outer wall of precast concrete slabs, composed of fine gravel or crushed stone and Portland cement, and an inner wall of 4 ins. porous concrete slabs, bonded to partitions, which are to be 3 ins. slabs, all plastered internally. External concrete slabs to be cast so as to course with inner slabs, and bonded with a row of galvanized wall ties at each coincident horizontal joint. All slabs to be set in cement mortar and external joints to be well filled and struck off flush so as not to accentuate the regular jointing. A course of 4 ins. closers to be laid where shown, to bring up levels, and a similar course of brick-on-edge with inner slabs to preserve levels for tying.

Chimneys throughout and stacks above roof to be built of brick.

Oversailing weatherings to ground floor windows, doorways, and chimney cap to be formed with three courses of slates, breaking joint, in cement and tilted so as to throw water away from walls.

Window and door frames to be built in flush with external wall face, and internal jambs of openings to be lined with slate set in cement so as to seal the cavity.

On completion of work all exterior wall faces to be given a thick slurry in two coats with waterproofed cement (for directions see Specification Type 1 —issue for January 21) from ground line to eaves or gable soffit. Chimney stacks to be similarly coated, care being taken to protect roof surface from splashes or stains.

Where masonry finish is usual the slurried face may be left as final finish; where distemper or whitening is usual, whiten after hardening as described for Type 1.

ROOF.—Cover the roof with third quality Welsh grey-blue slates, 16 ins. by 8 ins., or smaller size, each slate centre-nailed with two yellow composition slate-nails to $1\frac{1}{2}$ ins. by $\frac{3}{4}$ ins. sawn battens, spaced to $6\frac{1}{2}$ ins. gauge, or to allow equal lap if size is less.

Verges to oversail 3 ins. and to be tilted up over an undercloak of similar slates, laid butt-joint in cement on walls.

Slating at verges to be bonded with slate-and-half width slates in alternate courses. Eaves and ridge to have proper half courses for doubling. Cover the ridge with blue Staffordshire half-round ridge tiles, set and pointed in cement. Eaves soffit projecting 9 ins. to be closed in 1 in. grey asbestos-cement sheet, screwed up to rafter feet and underside of tilting fillet with $\frac{3}{4}$ in. brass screws. Gutters to be 5 ins. half-round supported on rafter brackets screwed to rafters with brass screws before commencement of slating.

Alternative: East Coast.—Cover the roof with hard, well-burnt pantiles from an approved kiln, with strong nibs and good collars, laid to a lap of 3 ins. on $1\frac{1}{4}$ ins. by 1 in. sawn fir laths, well nailed to spars.

Put row of three rent plasterers' laths up each row of tiles from eaves to ridge, nailed to the battens, and bed tiles thereon upon mortar fillet. Cover ridge (and hips, if any) with red half-round ridge tiles, bedded in mortar and pointed in cement, spaces in hollows of tiles being filled with pieces of tile.

Verge tiles to be well wetted and bedded down in cement as a projecting undercloak of plain tiles laid on wall.

WINDOWS.—Windows to be casements or Yorkshire slides, sashed in panes about 10 ins. by 8 ins. sight size, having 4 ins. by 3 ins. rebated frames and 6 ins. by 3 ins. projecting, sunk, weathered and twice-throated oak sills. Yorkshire slide windows, if used, to be made in two sashes, each three panes wide, one fixed and the other to slide, bottom outer-guides being $\frac{1}{2}$ in. oak pins firmly driven into oak sill.

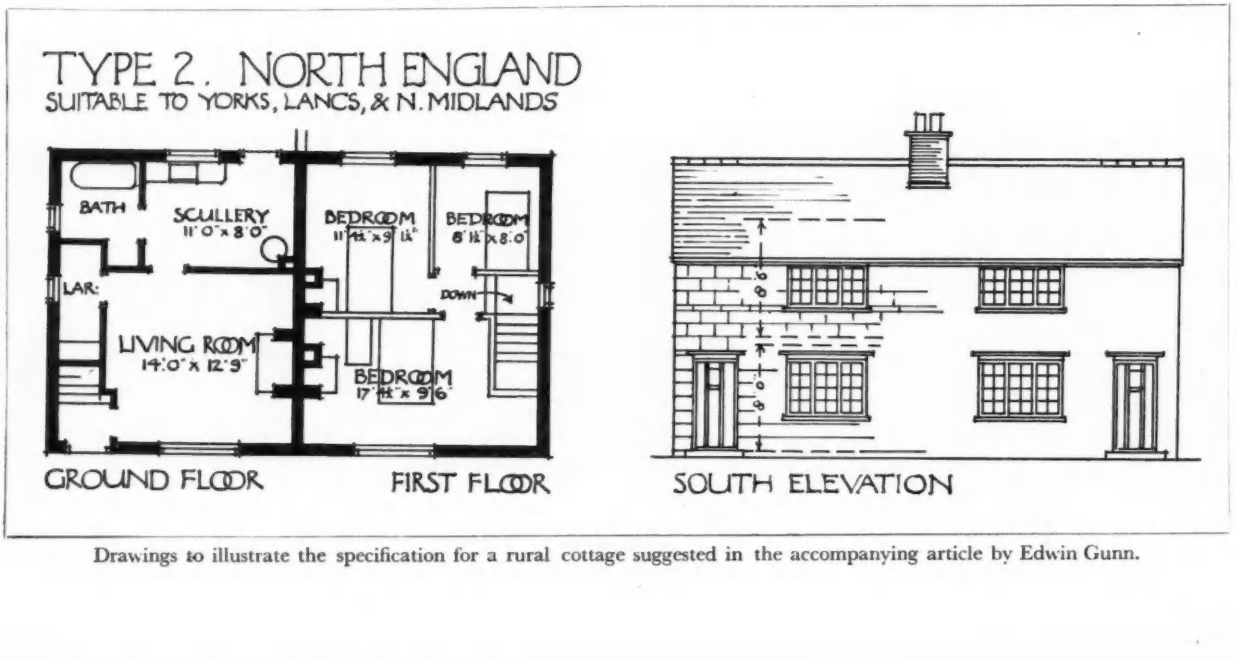
EXTERNAL DOORS to be similar to internal doors, but covered externally with $\frac{3}{4}$ in. boarding and twice-splayed cover fillets nailed on.

EXTERNAL PAINTING.—Gutters and down pipes to be painted two coats grey bituminous paint. Casements and frames: three coats good white lead paint, finished broken white. External doors: three coats, finished selected strong bright tint.

Dyed Wood Fibre in Plaster

BY CHARLES H. BUTCHER

WHEN wood fibre has been dyed with dyestuffs such as are used for textile dyeing, and is mixed with ordinary wall plaster, the *coloured* particles of fibre may be subsequently exposed at the surface of the hardened plaster to give a variety of decorative effects. Wall plaster made in this way, moreover, has none of the "dead"



Drawings to illustrate the specification for a rural cottage suggested in the accompanying article by Edwin Gunn.

appearance normally associated with plasters which have been coloured by the addition of mineral pigments such as oxide of iron and ultramarine, the general effect produced being a mottled one in which only a closer inspection of the wall surface will reveal the individual colour components.

In such plasters, which may contain any proportion of wood fibre up to 1 per cent. by weight, or 15 per cent. by volume, some of the colours used can be made dominant by employing dyes which have a tendency to "bleed," the intensity of these colours being softened by the use of a certain proportion of fibre of very small grain which has been treated with dyes which are quite "fast" in the presence of moisture. The fact that the wood fibre used does not take up the dye evenly is also in its favour, but the general effects produced can be enhanced in decorative value by surface treatment akin to that used for Portland cement stucco, where the protuberance of a rough texture casts shadows upon the depressions in the surface to give varying intensities of light and shade.

A rough texture can be produced by brushing the surface of the plaster with a scrubbing brush just before it takes its final set. When the fibre content is increased beyond one per cent. by weight, however, the surface can no longer be trowelled, but may be "patted" into position and stippled with a wire brush to give some resemblance to tapestry. On the other hand, if the surface of the plaster is trowelled quite smooth and is not brushed to expose the wood fibre, a variety of effects may be obtained by using only those dyes which will "bleed" in the presence of the excess moisture carried by the plaster during its setting period, for here the colours used will then run into the plaster surrounding each individual particle of fibre.

The most striking effects are obtained by using fibres of two or more different colours, the predominating colour being uniformly distributed throughout the body of the plaster, and set off by secondary colours introduced in the form of very fine particles. The mottled effects thus produced are pleasing, and have no tendency to become "blotchy."

Wood fibre for use in preparing these plasters can be obtained in a ready-dyed condition by arrangement with the wood fibre importers or a firm of dyers, but if only small quantities are required it is quite a simple matter to dye a batch of the common commercial material which is used as a component of some jointless floorings; the only equipment required is an old gas-heated copper or wash boiler, and no particular skill is needed beyond that possessed by an intelligent plasterer.

The dye bath is prepared by dissolving the dye in cold water, using 3 lb. of dye to each 100 lb. of wood fibre, the water used being equal to three times the volume of the fibre as measured when the latter is well shaken down. This bath is heated nearly to boiling, and the fibre is then added and stirred up. A small quantity of common alum (2 lb. of alum to each 100 lb. of wood fibre) is then added for the purpose of "fixing" the dye, after which the fibre is allowed to remain in the bath for forty to sixty minutes to complete the dyeing process, and is then removed, rinsed in cold water and drained, and allowed to dry ready for mixing with the plaster in its dry condition.

Commercial wood fibre is generally marketed in two grades—a "soft" and almost white flour, and a "coarse" or rather yellowish material, similar to sawdust. The former will be found most suitable for the predominating colours; the latter for the secondary colours. Of suitable dyes there are many to choose from, as an inquiry to any of the dyestuff manufacturers will soon show. The dyes used need not be absolutely fast to light to give satisfactory results, for if the plaster is evenly exposed it will fade at approximately the same rate over the whole of the wall surface, and fading will never reach any serious proportions.

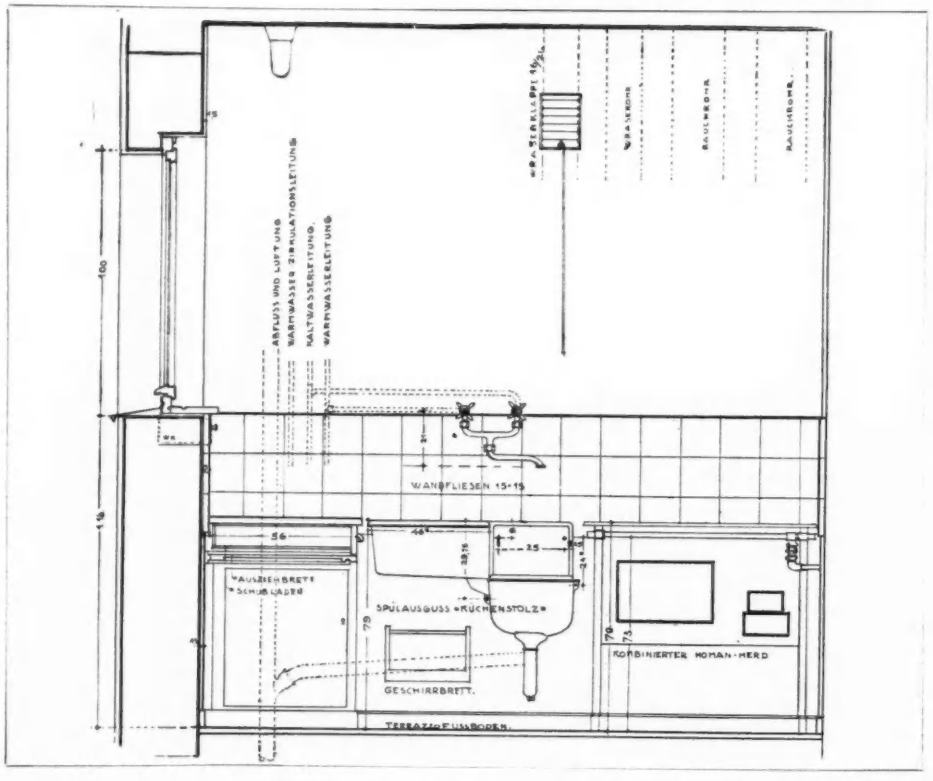
A slight efflorescence may appear during the drying-out period, which may slightly affect the brilliance of the individual colours employed; this, however, is easily remedied by washing the hardened surface with soap and water. A thick solution of laundry soap is recommended for this purpose, the soap reacting with the lime which is present in the plaster to form gelatinous products which seal the pores, and so prevent further trouble of this kind.



[*By courtesy of* Die Baugilde.

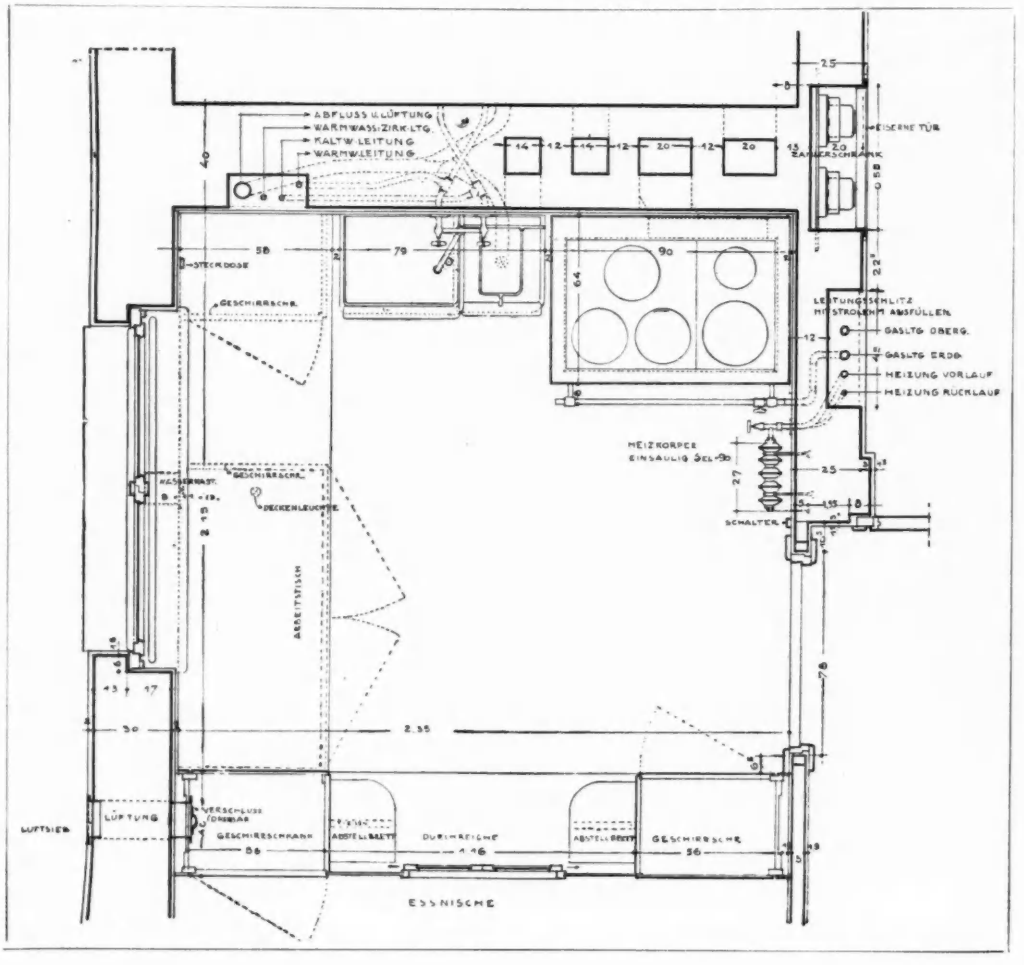
Bad Dürrenberg residential estate, near Leipzig (Alexander Klein, architect): a typical fitted kitchen. On the left is a built-in work-bench, with drawer and recess beneath for rubbish-pail. The draining-board at its far end discharges into the combined rinsing and washing-up sink, above which is a hot- and cold-water faucet. The gas-range includes a hot-plate and ovens. The floor is of terrazzo, and the surround of sink and range is tiled. Working drawings appear on the next page.

THE photographs and drawings appearing on this and the following pages show the compact designing of the domestic quarters in a modern German residential estate housing 1,000 families, mainly in flats, four to a house.

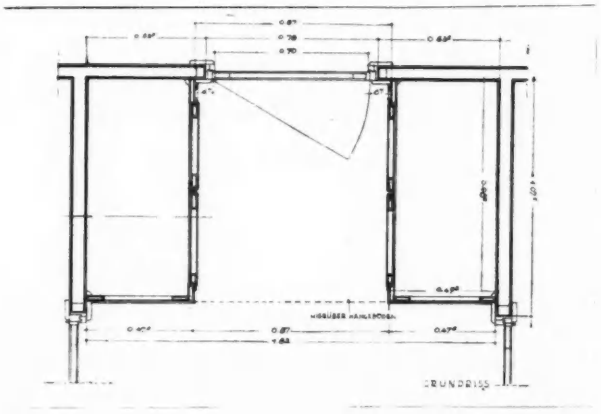


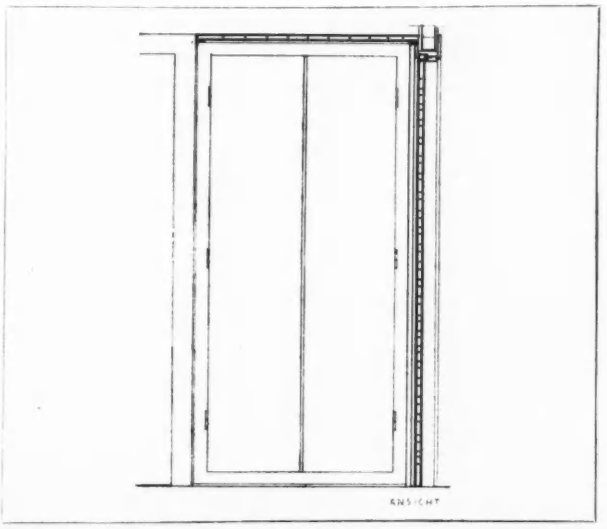
Bad Dürrenberg residential estate, near Leipzig (Alexander Klein, architect): working drawings of the fitted kitchen illustrated on the previous page. This elevation shows not only the disposition of the fittings, but the run of the various services (see dotted lines). The water-supply arrangements read, in order: waste and ventilation pipe; hot-water circulation lead; cold-water main; hot-water main. In the upper wall is shown a ventilator, with ventilation ducts and smoke-ducts adjacent. These also appear in the plan reproduced below, from which, also, the arrangement of the gas and radiator systems will become clear.

[*By courtesy of* Die Baugilde.]



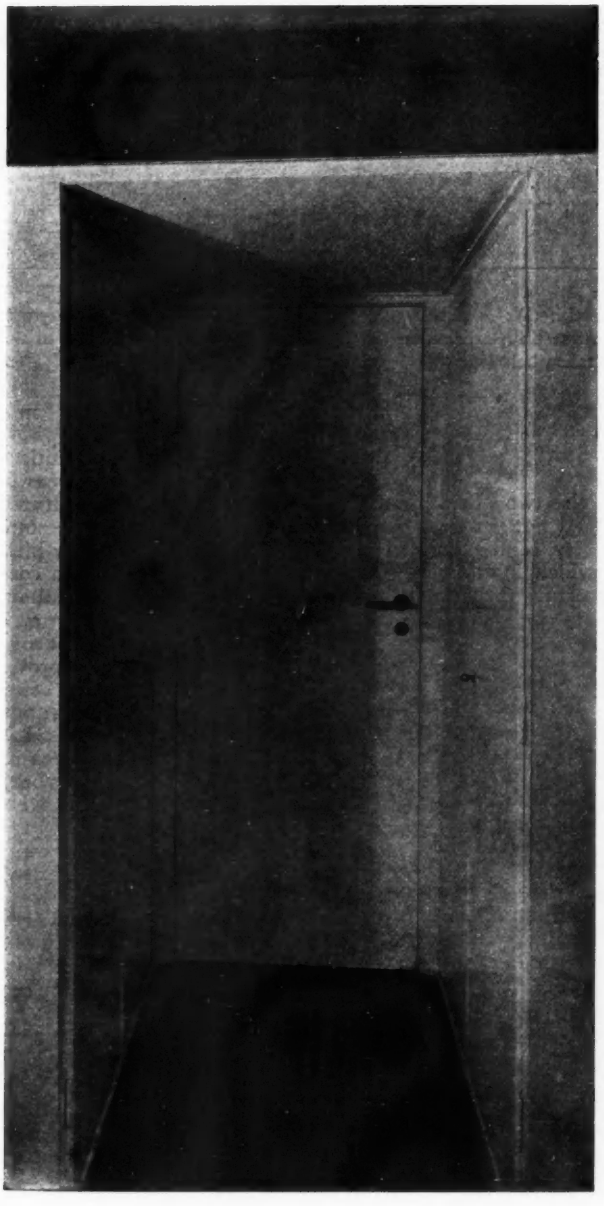
Plan of the kitchen illustrated above and on the previous page. This drawing throws further light on the manner in which the services are standardized for flat-construction purposes. In the right-hand top corner is shown a meter-chamber, and below are seen the gas main and branches, and the flow-and-return serving the radiator. On the left is the work-bench, with cupboards beneath. In the wall at the bottom of the drawing is a serving-hatch to the adjacent dining recess: this is further illustrated on pages 289 and 290.



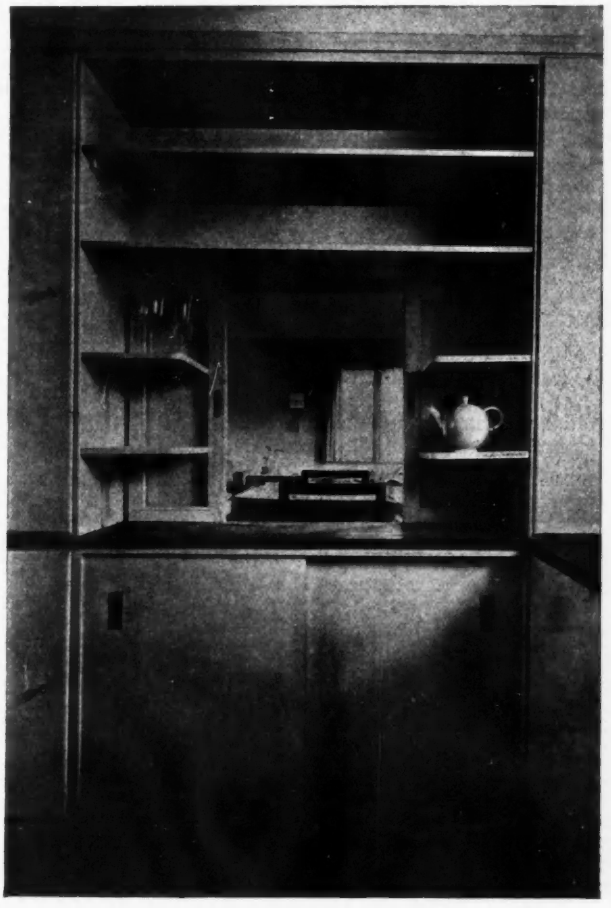


The two drawings reproduced on this page show the plan of the vestibule, of which a photograph is reproduced below (left); and the elevation of one of the pair of built-in hanging cupboards. Within, there is a high shelf for hats, with hangers for clothes below. The doors are hung folding.

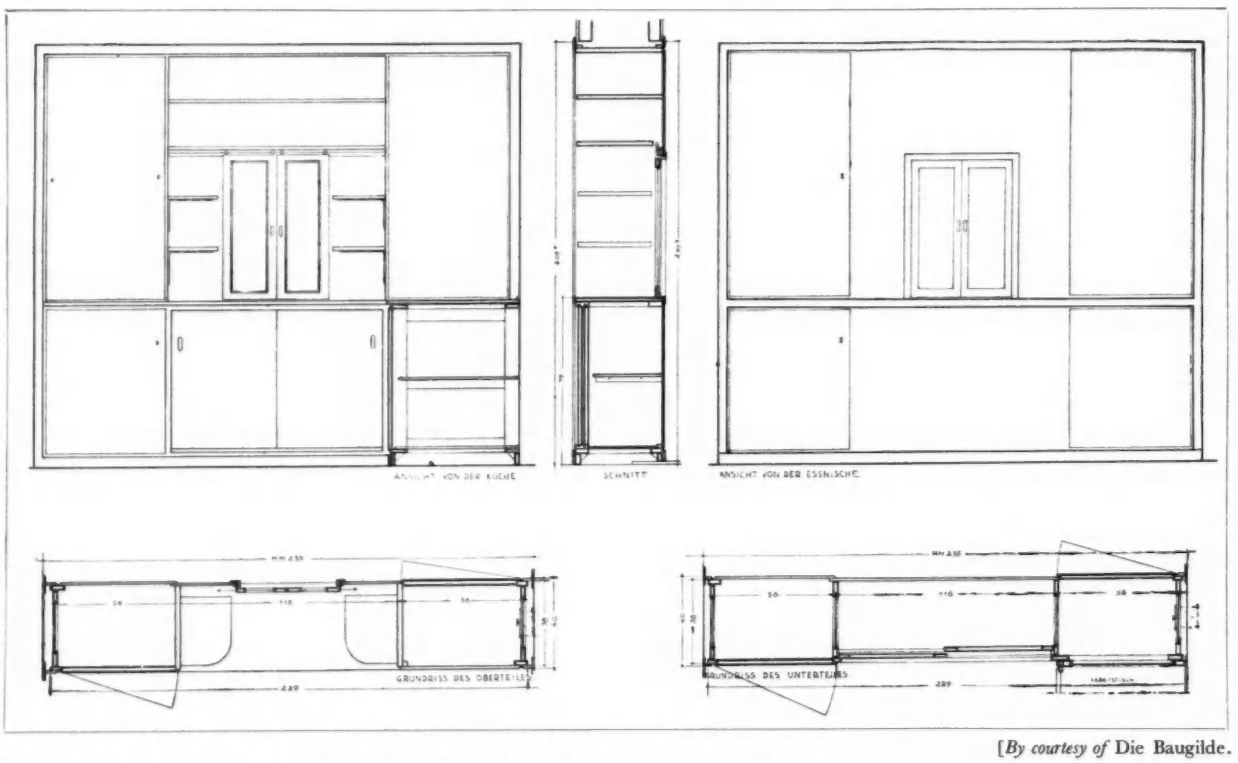
[*By courtesy of* Die Baugilde.]



Bad Dürrenberg residential estate, near Leipzig (Alexander Klein, architect) : vestibule with built-in cupboards. This is a photograph of the space-economizing device of which drawings appear above.



Bad Dürrenberg residential estate, near Leipzig (Alexander Klein, architect) : a view, looking towards the dining recess, through the serving-hatch from the kitchen. This shows the opposite wall to that illustrated on page 287. The hatch has shelves above and on either side, and a pair of glazed sliding windows close the opening. Below the counter are cupboards with sliding doors. Drawings appear on the following page.



[*By courtesy of* Die Baugilde.

Bad Dürrenberg residential estate, near Leipzig (Alexander Klein, architect) : drawings of the serving-hatch of which a photograph appears on the previous page. Above are : elevation from the kitchen; section; and elevation from the dining recess. A plan at the upper shelf level, and a horizontal section, taken below counter level, appear below.

IN PARLIAMENT

[BY OUR SPECIAL CORRESPONDENT]

New Buildings for the League of Nations

MR. GILLETT, Secretary to the Overseas Trade Department, in reply to questions, said that the supervision of the construction of the new buildings for the League of Nations was in the hands of the Building Committee, appointed in accordance with the Assembly resolution of September 25, 1924. The Committee invited all firms who wished to compete for contracts to register their names for approval for the reception of invitations to tender. The procedure to be adopted was widely circulated to British firms and was also published throughout the Press, both general and technical, in Great Britain. He was informed that up to the present four contracts had been put out to tender by the Committee. For the two contracts for preliminary drainage and general levelling no British firm was registered and Swiss firms obtained the contracts. Only one of the British firms registered in respect of the contract for excavation, foundation work, etc., submitted a tender and the contract was obtained by an *ad hoc* group of five firms consisting of three Swiss, one French and one Italian. The fourth contract, for heating and ventilation, for which two British firms are registered, had not yet been allocated. The majority of the contracts, in respect of which invitations would be issued to all the firms registered, had still to be put out to tender.

Five Years' Building Scheme

Mr. Wellock asked the Minister of Health if he would give the latest figures of the number of houses, including re-housing schemes under the Act of last year, that local authorities in England and Wales of a population of not less than 20,000 proposed to build during the next five years.

Mr. Greenwood said that the programme so far received from 246 local authorities provided for the erection of 325,998 houses, including houses to be built under the Housing Act, 1930, during the next five years.

Housing Schemes for Slum Areas

Mr. Simon asked the Minister of Health to state how many schemes for improvement areas and clearance areas, respectively, under the Housing Act, 1930, had been finally approved by him; how many local inquiries had been held in connection therewith; and how many houses were included in any contract for new houses let under the Act.

Mr. Greenwood said that resolutions had been passed declaring 98 areas in England and Wales to be clearance areas under the Act. Those resolutions did not require approval by him. Local inquiries had been held in connection with clearance or compulsory purchase orders which had been submitted in respect of six of those areas. Proposals for dealing with improvement areas under the Act were being prepared or were under consideration by a number of local authorities, but no resolution declaring any area to be an improvement area had yet been actually communicated to him. He was unable to give separately the number of houses included in contracts let by, or in direct labour schemes of, local authorities for the purposes of the Act of 1930. 3,180 houses authorized up to January 1 last would be available, if required at the time of completion, for the reception of persons displaced under the Act, but had not in general been as yet allocated for that purpose.

Unemployed in the Building Industry

Miss Bondfield, Minister of Labour, stated that at January 26, 1931, there were 220,360 insured persons classified as belonging to the building industry unemployed in Great Britain.

(*For Registration Bill discussion, see page 270*)

SOCIETIES AND INSTITUTIONS

THE WORK OF SIR ROBERT LORIMER

LORIMER was known as a Gothic man, and, said Mr. F. W. Deas at the R.I.B.A. on Monday night, he must begin his description of Lorimer's work by clearing away any misconception which such a description involved. It was, he continued, no eclectic admiration for pointed arches, or crockets, or finials, or any other externals of the style that filled Lorimer. What filled him, and filled him passionately, was the spirit of which these things chanced to be the expression, the spirit that inspired the crusader, chivalry, the mediæval handicrafts, the very costume of the day. No less was it the inspiration of phases of Chinese art of which Lorimer was so wholehearted an admirer and, rather than Gothic with its somewhat narrow implications, he would use the word Romantic as defining his temperament.

The next point was that there was no parallel in English domestic work to the typical Scots house of the end of the seventeenth century, from which came Lorimer's inspiration in his vernacular. Those who were unfamiliar with Scots building would have to put away all expectation of English domestic qualities generally or the balanced symmetry of recent fashion particularly. He asked those present to base their judgment on more primitive essentials, on the success or failure of the treatment of forms and masses and their relation to one another.

So great was Lorimer's interest in the crafts that it would not have been surprising had he turned to one of them as his medium of expression. Perhaps what took him further and made him an architect was, as much as anything, the influence of his summer home, Kellie Castle. In this house, dating from an early period, but mainly of the end of the seventeenth century, he found the work of the craftsman in stone, in wood, in hand-modelled plaster, even in decorative painting, fused to a dignified yet appealing whole.

Lorimer was apprenticed to Rowand Anderson, then the acknowledged head of architecture in Scotland, and a man strong, direct and purposeful alike in character and work. In his office Lorimer laid the solid foundations upon which, when he went to Bodley's, he began the development of that individual expression which was nature's gift to him.

Mr. Deas then dealt with Lorimer's work in six sections, in the following order :—1 : New houses; 2 : alterations and additions; 3 : churches; 4 : war memorials; 5 : other buildings; 6 : details in all materials.

In conclusion, he said : Full of imagination and initiative, Lorimer was the most persistent and methodical of note-takers on everything that interested him. Full of humour, he was intensely serious. Bursting as he often was with enthusiasm, he would temper it to the client's purse and his own footrule. A very Martha in household details, he could create the Scottish National War Memorial. We need make no attempt to anticipate what niche in the Architects' Pantheon posterity would allot to him, but he thought no one would fail to feel that the contemporary world was sadly the poorer for his all too early passing.

R.I.B.A. COUNCIL MEETING

Following are some notes from a recent meeting of the R.I.B.A. Council :

The Aerodromes Committee : The Council approved the interim report of the Aerodromes Committee. The report will be published in the *R.I.B.A. Journal* at an early date.

Presentation to the R.I.B.A. Collection : The Council accepted, on behalf of the Institute, a letter from Antonio Canova, presented by Messrs. B. T. Batsford, Ltd., for inclusion in the R.I.B.A. collection, and passed a hearty vote of thanks in favour of Messrs. Batsford.

The Royal Sanitary Institute Congress, 1931 : The Council appointed Mr. H. D. Searles-Wood, F.R.I.B.A., and Mr. G. A. Boswell, F.R.I.B.A., President of the Glasgow Institute of Architects, as the R.I.B.A. delegates at the Royal Sanitary Institute Congress to be held at Glasgow from July 4 to 11, 1931.

The Fellowship : The Council, by a unanimous vote, elected Mr. W. M. Page, L.R.I.B.A., Past-President of the New Zealand Institute of Architects, to the Fellowship under the terms defined in the Supplemental Charter of 1925.

Reinstatement : The following ex-members were reinstated :—As Associates : Messrs. Walter Phillips Wynne-Williams and J. E. Rhind. As Licentiates : Messrs. Arthur Howard Dickinson and Horace Hampton J. Walden.

Retired Fellowship : The following members were transferred to the Retired Fellowship :

Thomas Martin Cappon (elected Fellow 1898).
John Cadwallader Dewhurst (elected Associate 1895, Fellow 1921).
William Eaton (elected Associate 1890, Fellow 1929).
George Hastwell Grayson (elected Associate 1897, Fellow 1911).
Sidney Vincent North (elected Associate 1900, Fellow 1907).

Resignation : The following resignation was accepted with regret :—Mr. C. H. Edwards, L.R.I.B.A.

Election of Students : The following Probationers were elected as Students of the R.I.B.A. :—

Intermediate Examination.

Adams, J. S.
Alcock, H.
Aldred, D. W.
Ardin, A. J.
Armstrong, A. G.
Bacon, C.
Barrett, T.
Bashforth, A.
Baxter, A. J.
Bentley, S.
Bott, C. S.
Bozier, G. A.
Calton, J. N.
Chamberlaine, D.
Coleman, J. N.
Cooper, E. C.
Cusworth, H.
Dark, A. J.
Davies, E.
Dixie, F. H.
Dumble, A.
Dyer, L. S.
Dyer, S.
Edleston, R. C.
Edleston, W. E.
Edwards, E. G. W.
Edwards, P. W.
Elvin, H.
Everest, A. L.
Eyre, O. F. C.
Farquhar, R. E.
Fermaud, L. H. A.
Foreman, M.
Fowler, W. R.
Freeborn, E. E.
Gardner-Medwin, R. J.
Gingell, C.
Godsall, H. V.
Goodair, A. G.
Haddock, H. M.
Haines, S. M.
Hall, D. M.
Hardcastle, A. J.
Harding, H.
Harrison, J. E. K.
Harvey, H. J.
Hasker, F. L.
Head, P. E.
Henry, G. A.
Hewitt, F. A.
Hill, J. J.
Hives, E. G. V.
Hodgess, S. I.
Hope, J. L.
Ingham, W.
Jarratt, H. S.
Johnson, C. P.
Jones, A. H. D.
Jones, D. A.
Jones, J. R.
Keeping, C. M. G.
Kemp, A. S.
Lack, K. R.
Lister, C. L.
Macfarlane, A. A.
Mason, S. C.
Mellor, H. V.
Millard, L. W.
Moore, E. C.
Moore, T. E.
Morrison, D. C.
Moseley, H. G.
Neil, C. A. W.
Olley, B. W. J.
Owen, G.
Penman, L. R.
Potter, R. J.
Potterton, G. E.
Ratcliffe, B. F.
Reid, J. G.
Reid, K. C.
Richardson, M. S.
Roberts, E. A.
Robertson, D. L.
Robins, S. E.
Saint, A.
Sanderson, W. H.
Scherrer, E. C.
Scott, W. J.
Soulsby, G. E.
Surtees, J.
Templeman, K. F.
Tippetts, R. W.
Walker, H.
Watson, P. A.
Watson, W. I.
Williams, H.
Wood, A. H.
Woodcock, P.

Liverpool School of Architecture.

Berger, L.
Freeborn, E. E.

University of Manchester.

Smith, D.

University of Cambridge.

Hayes, J. H.

University of London.

Burton, H. A.
Starling, E. F.
Tatchell, R. F.

Leeds College of Art.

Drury, G. B.
Lambert, A.
Reekie, R. F.
Ripley, S.
Towers, J. E.

Southend School of Architecture.

Elvin, H.

University of Sydney.

Esplin, T.
Peden, Barbara C. W.
Thompson, E. L.
Turner, Helen A. W.
Ward, D. R.

WEST YORKSHIRE SOCIETY OF ARCHITECTS

Mr. Norman Culley, Huddersfield, presided at the bi-annual dinner of the above society, held at the Great Northern Hotel, Leeds.

In proposing the toast of the "R.I.B.A., W.Y.S.A., and other Allied Societies," Mr. Gerald Veale, F.C.A., remarked that the profession of architecture was harnessed to the service of

all other callings. Doctors could bury their mistakes, but architects had to stand responsible for their buildings, whether good or bad. The speaker asked why there should exist such abortions as disfigured our cities and countryside? The public already owed a great debt to architects, but it only asked that the debt might be increased. Why should they have any slums at all? Was it vain to hope that, at a time when social services were being ministered to by an orgy of expenditure that had never been known, members of their profession should be given the direction of work now left to the jerry-builder? That course would, at any rate, give control to those who had some little regard for the souls of men.

Mr. Henry M. Fletcher, V.P.R.I.B.A., in responding, said how effectively such functions as the present one drew tighter the bonds which united the allied societies and the Institute. Speaking of their work in such industrial districts as that of West Yorkshire, he considered that the old saw, "Smoke means brass," should be amended. Smoke was waste of brass. It meant ill-health and often serious illness, also exaggerated laundry bills. It also meant inefficient fuel, and led to depression and loss of working hours. He congratulated Leeds upon its admirable school of architecture, and Mr. Addison, the head of that school, upon the award to him of the R.I.B.A. Athens bursary.

Mr. Norman Culley, F.R.I.B.A., President of the W.Y.S.A., in further response, said that the allied societies required the support and co-operation of the Royal Institute, and paid a tribute to the work being done by Mr. MacAlister in that direction. Each allied society had to extend a protecting influence over the architecture within its area. Every architect erected to himself a monument in the buildings for which he was responsible, and they in West Yorkshire were endeavouring to create in the public mind a knowledge and appreciation of good architecture. It was his pleasure to refer to the generous action of Mr. William Nicholson, of Leeds, who had increased his annual gift of £200 to £240 for the purpose of enabling their associate members to travel and study abroad.

In proposing "The Cities and Towns of West Yorkshire," Mr. Sydney D. Kitson, F.R.I.B.A., suggested that, although architects might not be given an absolutely free hand in such matters, he appealed for a closer co-operation between local authorities and the profession. An outstanding and fortunate result of such team-work could already be seen in progress; he referred to the magnificent Leeds Headrow scheme which, when completed, he felt sure would be a credit to the city.

The Deputy Lord Mayor of Leeds, in responding, said he thought that the city of Leeds and other West Yorkshire towns could hold up their heads as being progressive in the matters of new streets and housing schemes. Their society had made an offer to his council of assistance and advice in matters bearing upon any new civic projects which it might have in view, and he hoped that in a short time advantage would be taken of the society's generous offer.

Mr. Thomas Canby, Deputy Mayor of Huddersfield, also spoke.

Proposing "Commerce and Architecture," Mr. B. R. Gribbon, Hon. Secretary of the Society, said that the commercial world was beginning to find out that good architecture was an asset and not a liability. The better-class stores now saw that a little artistry infused into their buildings was to their advantage. The client often came to the architect with his schemes all ready cut and dried, but that was a mistake, as he was already predisposed in their favour. The architect should be consulted independently of these, so that he could take an unbiassed view of the problem.

Mr. H. J. C. Johnson, President of the National Federation of Clay Industries, in response, thought that professional and business men should take a brighter view of the country's condition. The majority of public dinner speeches were far too pessimistic in tone. He prophesied an early return to more prosperous conditions in which the profession would participate to its advantage.

In giving the toast of the guests, Colonel Harold W. Barker, of Bradford, referred to the presence amongst them of Dr. Maxwell Telling, and drew a parallel between the two professions, both of which called for unswerving and persistent research. He thought that, as instanced in Sir Christopher Wren, architects should not altogether omit a study of science and engineering which had such a fortunate result in that case.

Dr. Maxwell Telling, in response, said there were some diseases doctors could not cure, and others which architects could not cure; and he had heard it said that Leeds was an example of the latter kind: that no dose of architectural medicine would serve to effect an æsthetic cure. They were, however, making an excellent start in the demolition of wide areas of unsightly buildings, to make room for what he felt would be a fine civic improvement.

ARCHITECTURE AND ENGINEERING

Discussing the engineering problems in modern buildings, Dr. Oscar Faber, O.B.E., at a meeting of the Institution of Structural Engineers last Thursday, said the only method of coping with them properly was for the control of the building to be in the hands of an architect and an engineer acting in collaboration. The engineering aspect would be concerned chiefly with such questions as foundations, steel frame, retaining walls, floors, mansards, domes, including reference to such problems as wind resistance, expansion and contraction, the work to be carried out so as to ensure the safety of surrounding streets and buildings and other structures.

After speaking on the rebuilding of the Bank of England, Mr. Faber said experience on several recent big buildings had brought out an interesting point, that it was desirable to have a main inlet ventilation shaft, fairly long, and of substantial construction. In the Lloyds Bank head office, this had the effect that when the outside air was 90 deg. it had already been cooled to about 80 deg. before it reached the air conditioning plant, so that the duty thrown upon the refrigerating machinery was much reduced, and as the latter was expensive this was an important consideration.

The system of warming buildings by a gentle radiant heat from the ceiling, he continued, had many advantages as compared with the older method of warming by radiators. A room heated by low temperature ceiling panels required redecorating at much less frequent periods than when heated with radiators.

Another point was that heat transmitted by convection reached the occupants only by first heating the air and then moving the warm air to the occupant, so that if windows were opened at both ends of the room, and warm air expelled rapidly by draught, the occupants received very little feeling of heat. With ceiling panels, convection played only a negligible part in heat transmission, because the warm air under the heating panel was already at the highest point in the room, and so remained there, and the heat was transmitted to the occupants by a pure system of radiation, and was felt even though the windows were opened at both sides and a draught of cold air passed through the room.

ARCHITECTS AND SURVEYORS

Proposing the toast of "The Chartered Quantity Surveyors' Institution," at the annual dinner of the Lancashire and Cheshire branch of that body, held at Liverpool, Professor Patrick Abercrombie, F.R.I.B.A., said the connection between architects and surveyors was very interesting and important. But there was a definite distinction, and he could not see any object in a new association of architects and surveyors. Sir Edwin Lutyens had said that the

association of architects and surveyors in one society had always seemed to him wholesome, and that Sir Christopher Wren, when appointed architect of St. Paul's Cathedral, was called surveyor of St. Paul's. But in those days the two professions were mixed, whereas at present they were clearly distinct.

Mr. E. H. Leeder, responding, said the membership of the Chartered Surveyors' Institution numbered 8,000.

THE ARCHITECTURE OF ROME

On Thursday, February 12, Mr. R. Goulburn Lovell, A.R.I.B.A., lectured on "The Architecture of Imperial Rome" at the Margate School of Art. This was the fourth of a series of ten weekly lectures on the history of architecture.

He dealt chiefly with the buildings produced during the 200 years of the golden age of the Roman Empire. Particular attention was drawn to the plans of the palaces, basilicas and baths, and a comparison was made between the forcefulness of Roman architecture and the simplicity of the architecture of Greece.

BUILT-UP AREAS

Speaking of built-up areas at Birmingham University, Mr. H. Humphries said it was the most difficult section of town-planning that could be undertaken.

So far, except in some towns which possessed certain Private Act legislation, urban authorities had had very little power even to control and guide such redevelopment as might take place in built-up areas.

It was essential, if town planning or replanning in built-up areas were to be carried out on proper lines, that further legislation extending many of the provisions of the Town Planning Acts, together with certain other specially required provisions, should be passed.

COMPETITIONS OPEN

April 1.—Sending-in day. Development of the uses of aluminium and its alloys, for the International Aluminium Bureau. Two premiums of 25,000 francs. Conditions from the Bureau International de l'Aluminium, 23 bis, Rue de Balzac, Paris, France.

April 18.—Sending-in day. Central Municipal Bank and Head Offices, Broad Street, Birmingham. Assessor: Sir Reginald Blomfield, R.A., F.R.I.B.A. Premiums, £400, £300, and £150. Conditions from Herbert H. Humphries, City Engineer and Surveyor, Council House, Birmingham. (Deposit £3 3s.)

April 30.—Sending-in day. Hospital for Infectious Diseases, Coventry, for the Coventry Corporation. Assessor: E. Stanley Hall, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

June 16.—Sending-in day. Last day for conditions, February 25. Offices for the Ingham Infirmary, South Shields. Limited to architects within the area of the Northern Architectural Association. Assessor: George Reavell, O.B.E., F.R.I.B.A. Premiums, £250, £100 and £50. Conditions from John Potter, Secretary, Ingham Infirmary, South Shields. (Deposit £2 2s.)

THE ARCHITECTS' DIARY

WEDNESDAY, FEBRUARY 18

R.I.B.A., 9 Conduit Street, W.1. Exhibition of Architectural Travel Posters. Until February 27. 10 a.m. to 8 p.m. (Saturdays, 10 a.m. to 5 p.m.). **10 a.m.**

ARTS BUILDING, UNIVERSITY, Lime Grove, Manchester. "Modern Flats as a Solution to the Housing Problem." By G. Grey Wornum, F.R.I.B.A.

SOUTH-EASTERN SOCIETY OF ARCHITECTS. At the School of Art, Brighton. "Architecture in Norfolk and Norwich." By Stanley J. Wearing, F.R.I.B.A.

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Ancient Bridges." By G. H. Jack, F.R.I.B.A., M.INST.C.E. Chairman: E. Guy Dawber, A.R.A., F.R.I.B.A. **8 p.m.**

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. Honan Night.

ILLUMINATING ENGINEERING SOCIETY. At the Home Office Industrial Museum, Horseferry Road, Westminster, S.W. 1. Discussion on: "Problems in Illuminating Engineering." **7 p.m.**

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Mediæval Architecture: Monasteries, Cathedrals and Churches." By Sir Banister Fletcher, F.R.I.B.A. **6 p.m.**

THURSDAY, FEBRUARY 19

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Piles." By C. I. Cope, B.A.I., A.M.I.C.E. **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Yorkshire Branch. At the Hotel Metropole, Leeds. "Some Further Progress in Bridge Engineering." By Prof. J. Husband, M.ENG., M.INST.C.E. **7 p.m.**

INSTITUTION OF MECHANICAL ENGINEERS. At the Engineers' Club, Manchester. "Machinery and Methods of Manufacture of Sheet Glass." By Dr. W. E. S. Turner. **7.15 p.m.**

SOCIETY OF ANTIQUARIES, Burlington House, Piccadilly, W. 1. "The Upper and Lower Palæolithic Implements from Kimington, North Lincolnshire." By J. P. T. Burchell. **8.30 p.m.**

INSTITUTE OF PATENTEES. At Caxton Hall, Caxton Street, Westminster, S.W. 1. "The Art and Craft of Invention." By W. A. Benton. **8 p.m.**

KENT EDUCATION COMMITTEE. At the Wesleyan Schoolrooms, Hawley Square, Margate. Fifth of ten lectures on the History of Architecture. "The Origin of Christian Architecture." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, FEBRUARY 20

LONDON SOCIETY. At the Royal Society of Arts John Street, Adelphi, W.C.2. "Modern Architectural Possibilities." By Howard Robertson, F.R.I.B.A. **5 p.m.**

ELECTRICAL DEVELOPMENT ASSOCIATION. At the Royal Society of Arts, John Street, Adelphi, W.C.2. "Electrical Methods—Ventilation and Air Conditioning." By T. I. Bernard. **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Western Counties Branch. At the Merchant Venturers Technical College, Bristol. "Thames House." By R. Travers Morgan, A.M.INST.C.E. **7.30 p.m.**

SATURDAY, FEBRUARY 21

Sunrise, 7.2 a.m. Sunset, 5.27 p.m.

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. Visit to a London Factory. **2 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Manchester and District Branch. Visit to Astley Green Colliery.

MONDAY, FEBRUARY 23

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "Growing Pains." By H. S. Goodhart-Rendel, F.R.I.B.A. **8 p.m.**

TUESDAY, FEBRUARY 24

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS, 1 Wilbraham Place, S.W.1. "A Sketch of Old London up to the Time of the Great Fire." By John B. Thorpe. **7 p.m.**

MORLEY COLLEGE, Westminster Bridge Road, S.E.1. "The Machine and Its Future." By Professor Levy, D.SC., F.R.S.E. **8 p.m.**

UNIVERSITY OF LONDON, King's College, Strand, W.C. Sixth of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

CHADWICK PUBLIC LECTURES. At the Royal Sanitary Institute, 90 Buckingham Palace Road, S.W. 1. "Silicosis Prevention Methods." By E. A. Elsby, B.SC. Chairman: Sir William J. Collins, K.C.V.O. **8 p.m.**

WEDNESDAY, FEBRUARY 25

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Mediæval Architecture: Westminster Abbey." By Sir Banister Fletcher, F.R.I.B.A. **6 p.m.**

Secretaries of architectural and allied societies are invited to forward particulars of their forthcoming meetings and visits for publication on this page. They should be addressed to the Editor at 9 Queen Anne's Gate, S.W.1.

THURSDAY, FEBRUARY 26

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At the College of Art, Leeds. "Classic Forms and English Geology." By Hope Bagenal, D.C.M., A.R.I.B.A. **7 p.m.**

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "London in Tudor Times." By D. Martin Roberts, M.A. (Illustrated by lantern slides.) **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "Concrete Roads: Past, Present and Future." By J. H. Walker, M.INST.C.E., M.I.STRUCT.E. **6.30 p.m.**

KENT EDUCATION COMMITTEE. At the Wesleyan Schoolrooms, Hawley Square, Margate. Sixth of ten lectures on the History of Architecture. "Early Gothic Buildings." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

SATURDAY, FEBRUARY 28

Sunrise, 6.47 a.m. Sunset, 5.39 p.m.

MONDAY, MARCH 2

R.I.B.A., 9 Conduit Street, W.1. General meeting. Presentation of the Royal Gold Medal. **8.30 p.m.**

TUESDAY, MARCH 3

UNIVERSITY OF LONDON, King's College, Strand, W.C. Seventh of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

SOUTH EASTERN SOCIETY OF ARCHITECTS. At the Technical Institute, Tunbridge Wells. "Architectural Acoustics." By C. W. Glover, L.R.I.B.A., A.M.INST.C.E. **6 p.m.**

WEDNESDAY, MARCH 4

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Safety in Factories." By Sir Gerald Bellhouse. **8 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At the Swedenborg Hall, 20 Hart Street, Bloomsbury, W.C.1. "Public Baths and Washhouses: Engineering Equipment and Data." By W. E. Fretwell and E. Shutt. **7 p.m.**

LONDON CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "English Mediæval Architecture: The Tower of London." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

THURSDAY, MARCH 5

WEST YORKSHIRE SOCIETY OF ARCHITECTS, 62 Woodhouse Lane, Leeds. Students' evening. "An Arbitration Case." Bozart *v.* Phillin and Rammin. **7 p.m.**

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Fashions in Furniture." By E. Hawking. **7 p.m.**

AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE, 29 Lincoln's Inn Fields, W.C.2. "Housing Act, 1930." By E. W. Eason. **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Yorkshire Branch. At the Metropole Hotel, Leeds. "Acoustics." By C. A. Harding, A.R.I.B.A. 7 p.m. South Wales and Monmouthshire Branch. At the Institute of Engineers, Park Place, Cardiff. "Concrete Roads: Past, Present and Future." By J. H. Walker, M.I.STRUCT.E. 7 p.m. **7 p.m.**

KENT EDUCATION COMMITTEE. At the Wesleyan Schoolrooms, Hawley Square, Margate. Seventh of ten lectures on the History of Architecture. "Late Gothic Buildings." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

SATURDAY, MARCH 7

Sunrise, 6.32 a.m. Sunset, 5.51 p.m.

TUESDAY, MARCH 10

SOUTH EASTERN SOCIETY OF ARCHITECTS. Joint Luncheon of Architects and Builders, to be held at the Lion Hotel, Guildford, followed by address on "Building Laws," by Major W. E. Watson, F.R.I.B.A. **1 p.m.**

UNIVERSITY OF LONDON, King's College, Strand, W.C. Eighth of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At the Borough Polytechnic, Borough Road, S.E.1. "Domestic Hot Water Supply." By H. L. Egerton. 7 p.m. Manchester and District Branch, At Milton Hall, Deansgate, Manchester. "Malleable Fittings." By H. R. Hiscott. 7 p.m. **7 p.m.**

WEDNESDAY, MARCH 11

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Some Aspects of Contemporary Decoration." By Arthur J. Davis, F.R.I.B.A. Chairman: J. C. Squire. **8 p.m.**

UNIVERSITY OF LONDON, King's College, Gower Street, W.C.1. Last of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

LONDON CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "English Mediæval Architecture: The English Home." By Sir Banister Fletcher. **6 p.m.**

THURSDAY, MARCH 12

SHEFFIELD, SOUTH YORKSHIRE AND DISTRICT SOCIETY OF ARCHITECTS AND SURVEYORS. At the University, Sheffield. "Planning." By E. Berry Webber, A.R.I.B.A. **6.15 p.m.**

ARTS BUILDING, UNIVERSITY, Lime Grove, Oxford Road, Manchester. "Repair of Ancient Buildings." By C. R. Peers, F.R.I.B.A., C.B.E.

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Early Panelled Rooms." By H. Warren Wilson, A.R.C.A. **7 p.m.**

OBITUARY

WILLIAM CAMPBELL : 1859–1931

WE regret to record the death, after a brief illness, of Mr. William Campbell, F.R.I.B.A. A native of Hanley, he had lived in the district the whole of his life. The firm of William Campbell and Son, architects, Hanley, of which he was the head, and in which he was actively engaged up to the time of his death, was established by him about thirty-five years ago.

He was a founder member and the first treasurer of the North Staffordshire Architectural Association, of which he subsequently became a vice-president. In this connection he took a particular interest in the junior members, and was always ready to help them with assistance and advice.

In addition to being one of the oldest members of the North Staffordshire Field Club, he was a member of the council and chairman of the sketching section. He had a wide knowledge of archæology and often read papers to the Field Club, while the excursions he led were always extremely interesting, especially when including visits to ancient and historic buildings, in which he took a deep interest.

He was elected to the Fellowship of the R.I.B.A. in 1930.

SIR ARTHUR DORMAN : 1848-1931

On Thursday last, the death occurred, at his home, Grey Towers, Nunthorpe, Yorkshire, of Sir Arthur John Dorman, Bt., for many years chairman of Messrs. Dorman, Long & Co., Ltd.

Born at Ashford, Kent, in 1848, the son of Charles Dorman, he was educated at Christ's Hospital and in Paris. In 1866, when the then Mr. Arthur Dorman was eighteen years of age, he came to the North of England and was apprenticed to C. G. Johnson, of the ironmaking firm of Richardson, Johnson & Co., of South Stockton. Ten years later he entered into partnership with the late Albert de Lande Long, and thus was founded the firm of Dorman, Long & Co., Ltd. They acquired the West Marsh and Britannia Ironworks, and began the manufacture of rolled joists and other sectional material—first from iron and other open-hearth material. Subsequently, sheet and wire works and a bridge-building and constructional department were added to the undertaking.

In 1899 the firm amalgamated with Bell Bros., Ltd., with the specific object of producing open-hearth steel from Cleveland iron; so successful was this enterprise that it led to large developments, including the erection of a steel plant at Redcar.

During past years Dorman Long & Co., Ltd., have undertaken many large contracts, the chief of which is the Sydney Harbour Bridge, with a span of 1,650 feet, the largest in the world. The contract for the supply and erection of this bridge was put up for world competition and was secured in February, 1924. Sir Arthur Dorman was present at the laying of the foundation stone in the same year, and he had hoped to be present at the opening ceremony in the latter part of this year. His work in the supply of munitions during the war was recognized in 1918, when he was created a K.B.E.; five years later he was made a baronet.

In brief, the career of Sir Arthur Dorman deserves the greatest admiration for the enterprise he has shown in bringing to the front the supremacy of British constructional work.

He married, in 1873, Clara, the daughter of Mr. George Lockwood, a well-known shipbuilder, and had four sons and three daughters. Only two of the sons are now alive; one of them, Mr. Arthur Dorman, is the managing director of Dorman Long & Co., Ltd. The other, Mr. Bedford L. Dorman, a barrister, succeeds to the baronetcy.

TRADE NOTE

Among the exhibits of Messrs. Holophane, Ltd., at the British Empire Trade Exhibition at Buenos Aires are the firm's latest units, the Hedralite and the Pagoda. In the Hedralite fittings the principle involved is the adoption of a series of geometrically shaped prismatic glass panels, by means of which fittings of various designs and sizes may be built up. The system employs four distinct geometrical figures—squares, rectangles, right-angled triangles and equilateral triangles, the dimensions of each bearing a definite relation one to the other; and by means of two or more of these shapes an infinite variety of fittings designs may be obtained. Owing to the definite relationship of the lengths of the sides of the Hedralite glass panels, the firm are able to produce standard die-cast corners and utilize standard lengths of metal strip, by the combination of which fittings of various designs and sizes may actually be built up from the finished parts. The Pagoda prismatic panel glassware also offers great variety in the construction of fittings of modern design. Single panels may be used as bracket fittings or the panels can be constructed to form continuous lengths for cornice or luminous column or lintel lighting, ceiling panel lighting, or for luminous panels on the walls. A variety of modern pendant fittings employing these panels may be similarly constructed. These panel fittings may be used with one or more lamps, and in the larger combinations a number of lamps can be fitted in cascade, which lamps may alternate in colour to give colour-lighting effects. Not only are the firm exhibiting, but some of their flood-lighting units are being used to illuminate the exteriors of several of the general buildings in the exhibition. The Hedralite and Pagoda units are also being used for illuminating a number of the pavilions. The exhibition is of considerable interest to the Holophane Company, who are very well known in South America, as the largest street-lighting installation in the world—viz. that of Buenos Aires—is equipped with over 30,000 Holophane refractors.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office. All inquiries concerning inventions, patents, and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W. 1. For copies of the full specifications here enumerated readers should apply to the Patent Office, 25 Southampton Buildings, W.C. 2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

3012. Bennetts, J. H., and Green, G. J., and Green and Sons, G. J. Plaster, etc., units and facings for building construction. January 30.

2811. Constructions Metalliques Fillod. Metallic building construction. January 26.

3164. Roberts, E. W. Tile for roofing, etc. January 31.

2780. Siegwart Fireproof Floor Co., Ltd. Reinforced concrete flooring. January 28.

SPECIFICATION PUBLISHED

342240 Hood, A. Reinforced-concrete piling walls.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

British Cotton Textile Exhibition, 1931, White City, Shepherds Bush (pages 272-275). General contractors : Beck and Pollitzer, Ltd., Harrods, Ltd., John Edgington & Co., Ltd., Whiteleys, Ltd., and Piggott Bros., Ltd. Sub-contractors : Thos. Potterton (Heating Engineers), Ltd., central heating; H. and C. Davis & Co., Ltd., gas fire enclosures; Gas, Light and Coke Co., gas fixtures; W. C. Tackley, electric wiring; Louis Dernier and Hamlyn, Ltd., special fittings; Troughton and Young, Ltd., electric light.

New School Buildings, Caerleon, Mon. (pages 276-278). General contractors : John G. Thomas and Sons; Charles Gibbons, sculptor. Sub-contractors : Star Brick Co., facing bricks; South Wales Portland and Lime Co., "Snowcrete" cement; Colthurst and Symonds, roof tiles; Edward Perman, central heating system and plumbing.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The BARKING U.D.C. recommends the erection, by direct labour, of 146 houses and flats on the Upney estate, at an estimated cost of £65,200.

The Board of Education has approved the plans of the Surrey Education Committee for the erection of an elementary school at High View, BEDDINGTON, at an estimated cost of £16,120.

Messrs. J. W. Heath and Sons are to build twenty-four houses in Chudleigh Road, BROCKLEY.

The Board of Education has approved the plans of the Surrey Education Committee for the erection of a junior mixed school at CHEAM COMMON, at an estimated cost of £16,000.

The Improvements Committee of the L.C.C. is to proceed with the widening of CHELSEA bridge, at a cost of £659,000.

Seventy-two flats are to be erected on the site of Belvedere House, King's Avenue, CLAPHAM PARK, by H. Wakeford and Sons.

Plans passed at EAST HAM :—House, Essex Road, for Mr. A. Upsdale; seven houses, Dersingham Avenue, for Mr. T. Anders; five houses, Sheringham Avenue, for Mr. S. W. Bedford; twenty-two garages, Sandford Road, for Mr. R. Slater; alterations, 365-7 Barking Road, for Mr. S. Slater; fourteen garages, repair shop and builder's workshop, 14 Morris Avenue, for Messrs. J. Harris and Sons.

Plans passed at ELTHAM :—Fourteen houses, Green Lane, for Mr. Frederick H. Jones; thirty houses, Middle Park Avenue, for Mr. W. E. Wright; shop premises, 132 and 134 High Street, for Messrs. William Harbrow, Ltd.; milk distributing depot, corner of Green Lane and Sidcup Road, for United Dairies, Ltd.

The Surrey Education Committee is to acquire a site on the Hinchley Wood estate, ESHER, for the erection of a central school.

Twenty-seven houses are to be erected in Kidbrooke Park Road, GREENWICH.

The HACKNEY B.C. is to extend substations and mains at a cost of £48,330, and recommends the appointment of Mr. J. A. Bowden, F.R.I.B.A., as architect for the buildings.

The L.C.C. Education Committee is to enlarge the Haverstock central school, HIGHGATE.

Plans passed at LEWISHAM :—Eight houses, Bellingham Road, for Mr. A. E. Thomas; thirty-nine houses, Manor Lane, and thirty-six houses, Verdant Lane, for Mr. B. G. Utting; eighteen houses, Callander Road, for Mr. A. E. Thomas; eighteen houses, Mottingham High Road, for Messrs. Sykes and Pomfret.

Plans have been passed by the Surrey Education Committee for the erection of a council school in Poplar Road, MERTON, at an estimated cost of £18,480.

The L.C.C. is to develop another section of the St. Helier estate, MORDEN, by the erection of 968 houses and flats at a cost of £553,790. Also, it is to erect a further nineteen shops on the same estate, at a cost of £33,725.

Plans passed at STREATHAM :—Eleven houses, De Montfort Road, for Mr. Hugh Macintosh; six shops, Leigham Court Road, for Mr. Percy W. Meredith; two houses, Hoadly Road, for Mr. Hugh Macintosh; seven houses, Valleyfield Road, and three houses, Strathdale, for Mr. R. Thomas Grove.

The SURREY Education Committee has prepared sketch plans of the following secondary schools :—Coulsdon Boys' School; Coulsdon Girls' School; Tiffin Girls' School, Kingston; Bushey Mead Boys' School, Merton; and Boys' School, Wallington.

The SURREY C.C. has scheduled five bridges for immediate widening and reconstruction at a cost of £44,500; and five for widening at a later date, at a cost of £75,000.

SOUTHERN COUNTIES

Approval has been given to the plans of the Surrey Education Committee for the erection of an elementary school at CHIPSTEAD VALLEY, at a cost of £13,300.

The Oxford Corporation has passed plans submitted by the Sunnyside Estate Co., for the development of their estate at COWLEY.

The DARTFORD U.D.C. has prepared a modified specification for the erection of 100 houses on the Heath Lane estate.

Plans passed at DARTFORD :—Ten houses, Stanham Road, for Mr. W. J. Brise; two houses, Princes Road, for Messrs. H. C. Wright & Co., Ltd.; six bungalows, Heathlands Rise, for Mr. G. H. Giles.

The OXFORD Corporation has passed plans submitted by Sir Giles Gilbert Scott for a proposed extension to Lady Margaret Hall, Benson Place.

The PORTSMOUTH Corporation has approved the lay out of the new mental colony at Portsdown Hill, and has decided to proceed now with the erection of six villas, administration block and central kitchen.

SOUTH-WESTERN COUNTIES

Messrs. F. W. Woolworth & Co., Ltd., are to reconstruct their premises at Castle Street, BRISTOL, at a cost of £25,000.

The PLYMOUTH Corporation has prepared modified plans for the erection of thirty houses and sixteen flats in Vicarage Road, and has passed plans for the erection of eight houses at North Prospect.

The PLYMOUTH Corporation has asked the city architect to prepare a scheme for the reconstruction of Hoegate Street Baths.

The PLYMOUTH Education Committee has passed plans, by the city architect, for the erection of a secondary school, at a cost of £55,000.

Plans passed at TORQUAY :—Additions and alterations, 66 Union Street, for Mr. F. Stephens; six houses, Warberry Vale Estate, for Mr. H. I. Heard; eight houses, Court Netherleigh Building Estate, Bronshill Road, for Messrs. Stuckey and Davey; alterations and additions, Riva Lodge, Croft Road, for Mr. H. Bligh; alterations and additions, Ockenden Home, Warren Road, for the trustees to the Devon and Exeter Hospital; additions, Shedden Hall, Shedden Road, for Mr. W. Cutchey; eight houses, Quinta Lane, for Mr. F. Maule.

MIDLAND COUNTIES

The ROWLEY REGIS U.D.C. is to prepare slum clearances for areas in Cradley Heath and Tividale.

The SMETHWICK Corporation Watch Committee has approved the erection of houses for firemen on a site adjoining the fire station in Rolfe Street.

STOKE-ON-TRENT Corporation is to construct a pavilion and bowling green in Longton Park.

STOKE-ON-TRENT Corporation is seeking sanction to borrow £124,190 in respect of the erection of 266 houses at Lightwood Chase, Longton.

Plans passed at STOKE-ON-TRENT : Eight houses, Poplar Grove, Hanley, for Messrs. Holloway & Co.; twelve houses, Ridgway Road, Hanley, for Messrs. Holloway & Co.; two bungalows, off Drubbery Lane, Longton, for Mr. A. Lilley; two houses, Victoria Road, Tunstall, for Mr. H. Brereton; two houses, Werrington Road, Townsend, for Mr. J. W. S. Harrington; four houses, Bucknall Road, for Mr. E. A. Bird; four houses, Cemetery Road, Shelton, for Mr. H. Cooper; roller skating rink, Bath Street, for Messrs. A. Birkett and J. Grant; twelve houses, Ridgway Road, for Messrs. Holloway & Co.; eight houses, Drubbery Lane, Dresden, for Mr. S. Haynes; alterations and additions, Dale Hall Pottery, for Messrs. J. Maddock and Sons, Ltd.; two houses, Victoria Road, for Mr. H. Brereton; alterations, Ash Green, Trentham, for the District Bank, Ltd.

NORTHERN COUNTIES

The NORTON R.D.C. recommends the erection of twenty houses in various parishes.

The OLDHAM Corporation is to erect 1,500 houses during the next five years.

The PRESTON R.D.C. has passed plans submitted by Mr. Barker Crabtree, architect, for the erection of a cinema at Penworthan.

Plans passed at RIPON : House, Palace Road, for Mr. T. F. Spence; house, Whitcliffe Lane, for Mr. F. D. Wainwright; slaughterhouse, Bondgate Green Lane, for Mr. J. Gaunt.

Plans passed at SHEFFIELD : House, Dalewood Drive, for Mr. C. H. Stacey; six houses, Cardoness Road, for Messrs. T. W. Knowles and Son; house, Marlcliffe Road, for Mr. B. F. Glossop; house, Hutcliffe Wood Road, for Mr. A. Yeardley; house, Cemetery Road, for Mr. L. Connelly; two houses, Watt Lane, for Messrs. T. W. Knowles and Son; forty-six houses, Wisewood estate, for the Corporation Estates Committee.

Plans passed at SHIPLEY : Conversion of twenty-two back-to-back houses into thirteen through houses, New York, for Mrs. Pollard; twenty-four houses, Lynfield Mount, Acacia Drive, and Vicarage Road, for Mr. A. Booth; eight garages, Redburn Road, and six houses, Grove Avenue, for Mr. J. Chippindale.

The West Riding Education Committee is to erect a senior school for 200 pupils at SWINEFLEET, at a cost of £9,650.

The TYNEMOUTH Corporation has obtained sanction to borrow £34,523 for the erection of houses, and £4,772 for the construction of roads in connection with the Council's proposed scheme for the erection of 104 houses at Balkwell.

Plans passed at TYNEMOUTH : House and shop, St. George's Road, Cullercoats, for Mr. J. R. Wallace; three houses, Highbury Place, for Messrs. F. R. N. Haswell and Son; four houses, Fern Avenue, for Messrs. Cackett, Burns, Dick and Mackellar.

The WEST HARTLEPOOL Corporation is to construct a retaining wall, promenade and bandstand, at a cost of £22,250.

The YORK Education Committee has received sanction to borrow £7,084 for buildings and £475 for furniture required for extensions at the Knavesmire Council school.

The YORK Corporation Housing Committee recommends the purchase of ten acres of land on Huntington Road from Sir Edwin Airey, for housing purposes.

The YORK Corporation Mental Deficiency Committee has approved the proposals of the East Riding and York Joint Board for the Mentally Defective to adapt Brandesburton Hall for use as a home for mental defectives, and for the erection of a new pavilion for the accommodation of males on the estate, at an estimated cost of £18,000.

Plans passed at YORK : House and shops, Albemarle Road, for Mr. T. Chippendale; indicator buildings, Knavesmire, for York Race Committee; two houses, Westminster Road, Clifton Green estate, for Messrs. R. J. Pulleyn and Sons; additions, 312 Tadcaster Road, for Mr. H. D. Taylor; additions, Wellington Row, for Messrs. Armstrong Oiler Co., Ltd.; four houses, Millfield Lane, for Mr. T. Harrison; rebuilding, 15 St. Sampson's Square, for Messrs. Dodsworth, Ltd.; additions, 7 Heworth, for the trustees of Heworth W. M. Chapel; house, Heworth Road, for Mr. C. F. Spence; additions, Hull Road, for Mr. P. Lazenby; shop, Curzon Terrace, for Mr. F. B. Griffin; twelve houses, Poplar Street, for Messrs. Relton Bros.; additions, "Trafalgar Bay" Inn, Nunnery Lane, for S. Smith's Old Brewery (Tadcaster), Ltd.; shop, Leeman Road, for Minster Tobacco Co.; house, Rawcliffe Lane, for Mr. C. C. Holt; house, Brockfield Estate, for Messrs. A. H. Earnshaw and Son.

EASTERN COUNTIES

Plans passed at CHELMSFORD :—Four houses, Sandford Road, for Mr. W. J. Wade; house, Lady Lane, for Mr. W. Campen; hall, Victoria Road, for the Girls' Friendly Society; gospel hall, Grove Road, for the trustees of the Peculiar People; garages and workshops, French's Square, for Messrs. Cleale and Hadler.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I	II
			s. d.	s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0¾
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11¼
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0¾
B_2	Aylesbury ..	S. Counties	1 3	11¼
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_3	Barnard Castle	N.E. Coast	1 5	1 0¾
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0¾
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0¾
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1¼
A_2	Bewdley ..	Mid. Counties	1 5½	1 1¼
B_2	Bicester ..	Mid. Counties	1 3	11¼
	Birkenhead	N.W. Counties	*1 8½	1 3¾
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W.Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11¾
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0¾
A_2	Bournemouth	S. Counties	1 5	1 0¾
B_2	Bovey Tracey	S.W. Counties	1 3½	11¾
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1¼
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_1	Bridgwater	S.W. Counties	1 3½	11¾
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0¾
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11¼
A_2	Bromsgrove	Mid. Counties	1 5½	1 1¼
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11¾
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0¾
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11¾
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11¾
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank ..	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0¾
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0¾
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0¾
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1¼
A_2	Cumberland	N.W. Counties	1 5	1 0¾
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11¾
A_2	Denbigh ..	N.W. Counties	1 5	1 0¾
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11¾
A_2	Driffield ..	Yorks	1 5	1 0¾
A_2	Droitwich ..	Mid. Counties	1 5½	1 1¼
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_3	EAST-BOURNE	S. Counties	1 5	1 0¾
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1¼
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0¾
A_2	Filey ..	Yorks	1 5	1 0¾
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11¾
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11¾
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1¼
A_2	Goole ..	Yorkshire	1 5½	1 1¼
A_2	Gosport ..	S. Counties	1 5	1 0¾
A_2	Grantham ..	Mid. Counties	1 5	1 0¾
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11¾
A_2	Hatfield ..	S. Counties	1 5	1 0¾
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_3	Hertford ..	E. Counties	1 5	1 0¾
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0¾
B_2	Isle of Wight	S. Counties	1 3	11¼
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1¼
A_2	Kidderminster	Mid. Counties	1 5½	1 1¼
B_2	King's Lynn	E. Counties	1 3½	11¾
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1¼
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11¼
A_2	Lichfield ..	Mid. Counties	1 5½	1 1¼
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3¾
A_2	Llandudno	N.W. Counties	1 5	1 0¾
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2¾
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0¾
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0¾
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0¾
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1¼
B_2	Minehead ..	S.W. Counties	1 3½	11¾
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11¾
A	Morecambe	N.W. Counties	1 6½	1 2
A_1	NANTWICH	N.W. Counties	1 5½	1 1¼
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1¼
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_3	OAKHAM ..	Mid. Counties	1 5	1 0¾
A_2	Oldham ..	N.W. Counties	1 5½	1 1¼
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1¼
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11¼
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1¼
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0¾
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0¾
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0¾
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0¾
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0¾
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1¼
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11¼
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1¼
A_2	Skipton ..	Yorkshire	1 5½	1 1¼
A_2	Slough ..	S. Counties	1 5	1 0¾
A_2	Solihull ..	Mid. Counties	1 5½	1 1¼
A_2	South'pton	S. Counties	1 5	1 0¾
A_2	Southend-on-Sea	E. Counties	1 5½	1 1¼
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1¼
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_3	Swindon ..	S.W. Counties	1 5	1 0¾
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_3	Teignmouth	S.W. Coast	1 5½	1 0¾
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1¼
A_2	Wellingborough	Mid. Counties	1 5½	1 1¼
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1¼
A_2	Whitby ..	Yorkshire	1 5½	1 1¼
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0¾
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1¼
A_2	Worksop ..	Yorkshire	1 5	1 0¾
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0¾
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11¾
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£	s.	d.
Bricklayer . . . . per hour		1	8
Carpenter . . . . ,,		1	8
Joiner . . . . ,,		1	8
Machinist . . . . ,,		1	9
Mason (Banker) . . . ,,		1	8
,, (Fixer) . . . ,,		1	9
Plumber . . . . ,,		1	8
Painter . . . . ,,		1	7
Paperhanger . . . ,,		1	8
Glazier . . . . ,,		1	8
Slater . . . . ,,		1	8
Scaffolder . . . . ,,		1	4
Timberman . . . . ,,		1	4
Navvy . . . . ,,		1	3
General Labourer . . . ,,		1	3
Lorryman . . . . ,,		1	5½
Crane Drivers . . . ,,		1	7
Watchman . . . . per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

	£	s.	d.
Grey Stone Lime . . . per ton	2	8	6
Blue Lias Lime . . . ,,	2	10	6
Hydrated Lime . . . ,,	2	16	0
Portland Cement . . . ,,	2	6	0
Ferro-crete . . . ,,	2	13	6
Ciment Fondu . . . ,,	5	15	0
Thames Ballast . . . per Y.C.		8	9
¾" Crushed Ballast . . ,,		10	0
Building Sand . . . ,,		10	6
Washed Sand . . . ,,		11	6
2" Broken Brick . . ,,		9	6
½" ,, ,, . . ,,		12	6
Pan Breeze . . . ,,		6	6
Coke Breeze . . . ,,		8	9

BRICKLAYER

	£	s.	d.
Flettons . . . . per M.	3	1	6
Grooved do. . . . ,,	3	3	6
Stocks, 1st Quality . . ,,	4	18	6
,, 2nd ,, . . ,,	4	12	6
Blue Bricks, Pressed . . ,,	9	18	0
,, Wirecuts . . ,,	8	16	0
,, Brindles . . ,,	8	0	0
,, Bullnose . . ,,	10	8	0
Red Sand-faced Facings . . ,,	7	11	0
Red Rubbers for Arches . ,,	15	0	0
Multicoloured Facings . . ,,	9	4	0
Luton Facings . . . ,,	8	16	0
Midhurst White Facings . ,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:			
Stretchers . . . ,,	21	10	0
Headers . . . ,,	21	0	0
Bullnose . . . ,,	28	0	0
Double Stretchers . . ,,	30	0	0
Double Headers . . ,,	27	0	0
Glazed Second Quality, *Less* . ,,	1	0	0
,, Buffs and Creams, Add . ,,	2	0	0
,, Other Colours ,, . ,,	5	10	0
2" Breeze Partition Blocks . . per Y.S.		1	9
2½" ,, ,, ,, . . ,,		2	0
3" ,, ,, ,, . . ,,		2	3
4" ,, ,, ,, . . ,,		3	0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s.	4" d.	6" s.	6" d.
Straight pipes . . per F.R.	1	1	1	6
Bends . . . each	2	10	4	4
Taper bends . . ,,	6	3	7	2
Rest bends . . ,,	5	9	8	9
Single junctions . . ,,	3	9	5	9
Double ,, . . ,,	5	9	8	9
Straight channels . . ,,	2	6	3	2
¾" Channel bends . . ,,	7	8	—	
Channel junctions . . ,,	7	0	12	6
Channel tapers . . ,,	5	6	7	9
Yard gullies . . ,,	9	6	11	6
Interceptors . . ,,	18	6	25	9
Iron drain pipe . . per F.R.	2	3	3	5
Bends . . . each	6	0	13	0
Inspection bends . . ,,	15	3	24	0
Single junctions . . ,,	9	3	18	0
Double junctions . . ,,	14	0	27	6
Lead wool . . . lb.		6	—	
Gaskin . . . . ,,		5	—	

MASON

	£	s.	d.
The following d/d F.O.R. at Nine Elms			
Portland stone, Whitbed . . F.C.	4	6	
,, ,, Basebed . . ,,	4	9	
Bath stone . . . ,,	2	11	
York stone . . . ,,	6	9	
,, Sawn templates . . ,,	7	6	
,, Paving, 2" . . . ,,	F.S.	1	8
,, ,, 3" . . . ,,	2	6	

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station.

	£	s.	d.
24" × 12" Duchesses . . per M.	31	0	0
22" × 12" Marchionesses . ,,	28	0	0
20" × 10" Countesses . . ,,	20	5	0
18" × 10" Viscountesses . ,,	17	0	0
18" × 9" Ladies . . ,,	15	0	0
Westmorland green (random sizes) per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:			
20" × 10" medium grey per 1,000 (actual)	26	0	0
,, green . . ,,	27	15	0
Best machine roofing tiles . ,,	5	0	0
Best hand-made do. . . ,,	5	10	0
Hips and valleys . . . each		9½	
,, hand-made . . ,,		10	
Nails, compo . . . lb.		4	
,, copper . . . ,,		2	0

CARPENTER AND JOINER

	£	s.	d.
Good carcassing timber . . F.C.		2	6
Birch . . . as 1" F.S.		9	
Deal, Joiner's, . . . ,, ,,		5	
,, ,, 2nds . . ,, ,,		4	
Mahogany, Honduras . . ,, ,,	1	3	
,, African . . ,, ,,	1	1	
,, Cuban . . ,, ,,	2	6	
Oak, plain American . . ,, ,,	1	0	
,, Figured ,, . . ,, ,,	1	3	
,, Plain Japanese . . ,, ,,	1	2	
,, Figured ,, . . ,, ,,	1	5	
,, Austrian wainscot . ,, ,,	1	6	
,, English ,, . . ,, ,,	1	11	
Pine, Yellow . . . ,, ,,	1	0	
,, Oregon . . . ,, ,,		4	
,, British Columbian . ,, ,,		4	
Teak, Moulmein . . ,, ,,	1	3	
,, Burma . . ,, ,,	1	2	
Walnut, American . . ,, ,,	2	3	
,, French . . ,, ,,	2	3	
Whitewood, American . ,, ,,	1	1	
Deal floorings, ¾" . . Sq.	1	1	0
,, 1" . . ,,	1	3	6
,, 1¼" . . ,,	1	5	6
,, 1½" . . ,,	1	11	0
,, 1¾" . . ,,	1	15	0
Deal matchings, ¾" . . ,,		16	0
,, ¾" . . ,,		17	6
,, 1" . . ,,	1	6	0
Rough boarding, ¾" . . ,,		18	0
,, 1" . . ,,	1	0	0
,, 1¼" . . ,,	1	8	0

Plywood, per ft. sup.

Thickness .	⅛"	¼"	⅜"	½"
Qualities .	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch .	4 3 2	5 4 3	7½ 6 4½	8½ 7 6
Alder .	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6
Gaboon Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –
Figured Oak 1 side	8½ 7 –	10 8 –	11½ – –	1/6 – –
Plain Oak 1 side	6½ 6 –	7½ 7 –	9½ – –	1/0 – –
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –

	lb.	d.
Scotch glue		8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	⅜"	½"	¾"	1"	1¼"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10		
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9		
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–		
Long screws 12"–23½" long ,,	11	1/3	2/2	2/10	5/3		
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6		
Bends . . ,,	8	11	1/7½	2/7½	5/2		
Springs not socketed ,,	5	7	1/1½	1/11½	3/11		
Socket union . ,,	2/–	3/–	5/6	6/9	10/–		
Elbows, square . ,,	10	1/1	1/6	2/2	4/3		
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1		
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6		
Plain sockets and nipples ,,	3	4	6	8	1/3		
Diminished sockets ,,	4	6	9	1/–	2/–		
Flanges . . ,,	9	1/–	1/4	1/9	2/9		
Caps . . . ,,	3½	5	8	1/–	2/–		
Backnuts . . ,,	2	3	5	6	1/1		
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6		
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–		

Discounts:

TUBES.

	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . . .	55	,, steam .	40

FITTINGS.

Gas . . .	47½	Galvanized gas .	37½
Water . . .	42½	,, water .	32½
Steam . . .	37½	,, steam .	27½

SMITH AND FOUNDER—*continued.*

	s.	d.
Rolled steel joists cut to length . . cwt.	9	6
Mild steel reinforcing rods, ⅜" . . . ,,	10	0
,, ,, ½" . . . ,,	9	9
,, ,, ⅝" . . . ,,	9	6
,, ,, ¾" . . . ,,	9	0
,, ,, ⅞" . . . ,,	9	0
,, ,, 1" . . . ,,	9	0
,, ,, 1¼" . . . ,,	9	0
,, ,, 1½" . . . ,,	9	0

Cast-iron rain-water pipes of ordinary thickness metal .	3" F.R. s.	3" d.	4" s.	4" d.
		7		10
Shoes . . . . each	2	3	3	3
Anti-splash ,, . . . ,,	5	0	8	6
Boots . . . . ,,	3	3	4	6
Bends . . . . ,,	2	9	4	0
,, with access door . . ,,	—		6	9
Heads . . . . ,,	4	0	5	0
Swan-necks up to 9" offsets . ,,	4	0	6	3
Plinth bends, 4½" to 6" . ,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal .	F.R.	5		6
Stop ends . . . . each		6		7
Angles . . . . ,,	1	7	1	11
Obtuse ,, . . . ,,	2	0	2	6
Outlets . . . . ,,	1	9	2	3

PLUMBER

	s.	d.
Lead, milled sheet . . . cwt.	23	0
,, drawn pipes . . ,,	23	6
,, soil pipe . . ,,	26	6
,, scrap . . ,,	13	0
Solder, plumbers' . . lb.	1	0
,, fine do. . . ,,	1	4
Copper, sheet . . ,,	1	0
,, tubes . . ,,	1	4

L.C.C. soil and waste pipes:	3" F.R.	3" s.	4"	4" s.	6"	6" s.
Plain cast . .		1 0	1	2	2	6
Coated . . ,,		1 1	1	3	2	8
Galvanized . . ,,		2 0	2	6	4	6
Holderbats . . each		3 10	4	0	4	9
Bends . . . ,,		3 9	5	3	10	3
Shoes . . . ,,		2 10	4	4	9	6
Heads . . . ,,		4 8	8	5	12	9

PLASTERER

	£	s.	d.
Lime, chalk . . . per ton	2	8	6
Plaster, coarse . . ,,	2	10	6
,, fine . . ,,	5	10	0
Hydrated lime . . ,,	2	16	0
Sirapite . . . ,,	3	10	0
Keene's cement . . ,,	5	10	0
Sand, washed . . . Y.C.		11	6
Hair . . . . lb.			6
Laths, sawn . . . bundle		2	4
,, rent . . . ,,		3	9
Lath nails . . . lb.			3½

GLAZIER

	s.	d.		s.	d.
Sheet glass, 21 oz. . . F.S.					3½
,, ,, 26 oz. . . ,,					4½
Arctic glass . . ,,					5
Cathedral glass . . ,,					6
Hartley's rough rolled . ,,					9
Do. wired plate . . ,,				1	3
¼" Polished plate, n/e . ,,	1	0	to	1	3
,, ,, 2 . ,,	1	2	,,	1	7
,, ,, 3 . ,,	1	7	,,	2	5
,, ,, 4 . .	2	1	,,	2	11
,, ,, 6 . ,,	2	3	,,	3	2
,, ,, 8 . ,,	2	6	,,	3	6
,, ,, 12 . ,,	2	9	,,	3	8
,, ,, 20 . ,,	3	0	,,	3	11
,, ,, 45 . ,,	3	3	,,	4	1
,, ,, 65 . ,,	3	7	,,	4	6
,, ,, 90 . ,,	3	10	,,	4	9
,, ,, 100 . ,,	4	0	,,	5	0
Vita glass, sheet, n/e 1 . ,,				1	0
,, ,, ,, 2 . ,,				1	3
,, ,, ,, over 2 . ,,				1	9
,, ,, plate, n/e 1 . ,,				1	6
,, ,, ,, 2 . ,,				3	0
,, ,, ,, 5 . ,,				4	0
,, ,, ,, 7 . ,,				5	0
,, ,, ,, 15 . ,,				6	0
,, ,, ,,over 15 . ,,				7	6
Putty, linseed oil . . lb.					3

PAINTER

	£	s.	d.
White lead . . . . cwt.	2	8	0
Linseed oil . . . . gall.		3	3
Boiled oil . . . . ,,		4	3
Turpentine . . . ,,		3	4
Patent knotting . . . ,,		14	0
Distemper, washable . . cwt.	3	0	0
,, ordinary . . ,,	2	5	0
Whitening . . . . ,,		4	0
Size, double . . . firkin		3	0
Copal varnish . . . gall.		13	0
Flat varnish . . . ,,		14	0
Outside varnish . . ,,		16	0
White enamel . . . ,,	1	15	0
Ready-mixed paint . . ,,		13	6
Brunswick black . . ,,		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

	£ s. d.
Digging over surface n/e 12″ deep and cart away . . . Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away . . Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away . . ,,	11 0
,, ,, 10′ 0″ deep and cart away . . ,,	11 6
,, ,, 15′ 0″ deep and cart away . . ,,	12 0
If in stiff clay . . . . . add ,,	3 0
If in underpinning . . . . . ,, ,,	5 0
Digging, return, fill and ram . . . . . ,,	5 0
Planking and strutting to sides of excavation . . . F.S.	1 0
,, ,, to pier holes . . . . . ,,	6
,, ,, to trenches . . . . . ,,	6
,, ,, extra, only if left in . . . . ,,	3½
Hardcore, filled in and rammed . . . . . Y.C.	14 0
Portland cement concrete in foundations (6-1) . . . . ,,	1 13 6
,, ,, ,, (4-2-1) . . . ,,	1 18 6
,, ,, ,, underpinning . . ,,	2 2 0
Finishing surface of concrete, spade face . . . . . Y.S.	9

DRAINLAYER

	4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately) . . . . . F.R.	1 8	2 6
Extra, only for bends . . . . . Each	2 8	3 9
,, junctions . . . . . ,,	3 9	4 6
Gullies and gratings . . . . . ,,	17 6	19 9
Cast iron drains, and laying and jointing . . . F.R.	5 6	7 0
Extra, only for bends . . . . . Each	12 0	18 6

BRICKLAYER

	£ s. d.
Brickwork, Flettons in lime mortar . . . . . Per Rod	32 0 0
,, ,, in cement . . . . . ,,	34 0 0
,, Stocks in cement . . . . . ,,	41 10 0
,, Blues in cement . . . . . ,,	62 0 0
Extra only for circular on plan . . . . . ,,	3 0 0
,, backing to masonry . . . . . ,,	2 0 0
,, raising on old walls . . . . . ,,	3 0 0
,, underpinning . . . . . ,,	10 0 0
Fair Face and pointing internally . . . . . F.S.	3
Extra only for picked stock facings . . . . . ,,	1 0
,, red brick facings . . . . . ,,	1 6
,, blue brick facings . . . . . ,,	1 9
,, glazed brick facings . . . . . ,,	4 6
Tuck pointing . . . . . ,,	10
Weather pointing . . . . . ,,	4
Slate dampcourse . . . . . ,,	1 0
Vertical dampcourse . . . . . ,,	1 3

ASPHALTER

	s. d.
½″ Horizontal dampcourse . . . . . Y.S.	5 6
½″ Vertical dampcourse . . . . . ,,	7 6
⅝″ paving or flat . . . . . ,,	5 6
1″ paving or flat . . . . . ,,	6 6
1″ × 6″ skirting . . . . . F.R.	1 0
Angle fillet . . . . . ,,	2
Rounded angle . . . . . ,,	2
Cesspools . . . . . Each	5 0

MASON

	£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete . . . . . F.C.	1 1 6
Bath stone and do. all as last . . . . . ,,	15 6
Artificial stone and do. . . . . ,,	16 6
York stone templates, fixed complete . . . . . ,,	14 0
,, thresholds . . . . . ,,	16 0
,, sills . . . . . ,,	1 3 6

SLATER AND TILER

	£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″ . . . . . Sqr.	4 5 0
Do., 18″ × 9″ . . . . . ,,	4 2 0
Do., 24″ × 12″ . . . . . ,,	4 12 0
Westmorland slating, laid with diminished courses . . . ,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course . . . . . ,,	4 0 0
Do., all as last, but of machine-made tiles . . . . ,,	3 11 0
Fixing only, lead soakers . . . . . Doz.	9
Stripping old slating and clearing away . . . . . Sqr.	10 0

CARPENTER AND JOINER

	£ s. d.
Flat boarded centering to concrete floors, including all strutting Sqr.	2 12 0
Shuttering to sides and soffits of beams . . . . . F.S.	1 0
,, to stanchions . . . . . ,,	1 0
,, to staircases . . . . . ,,	2 0
Fir and fixing in wall plates, lintols, etc. . . . . F.C.	5 0
Fir framed in floors . . . . . ,,	6 9
,, ,, roofs . . . . . ,,	8 3
,, ,, trusses . . . . . ,,	9 0
,, ,, partitions . . . . . ,,	12 0
½″ deal sawn boarding and fixing to joists . . . . Sqr.	1 17 6
1″ ,, ,, ,, ,, ... ,,	2 1 6
1½″ ,, ,, ,, ,, ... ,,	2 7 6
½″ × 2″ fir battening for Countess slating . . . . ,,	12 6
Do. for 4″ gauge tiling . . . . . ,,	16 0
Stout feather-edged tilting fillet . . . . . F.R.	6
Patent roofing felt, 1 ply . . . . . Y.S.	2 6
,, ,, ,, 2 ,, ... ,,	3 0
,, ,, ,, 3 ,, ... ,,	3 6
Stout herringbone strutting to 9″ joists . . . . . F.R.	1 0
1″ deal gutter boards and bearers . . . . . F.S.	1 4
1½″ ,, ,, ,, ,, ... ,,	1 8
2″ deal wrought rounded roll . . . . . F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off . . . . . Sqr.	2 15 0
1¼″ do. . . . . ,,	3 4 0
1½″ do. . . . . ,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall . . . . . F.S.	1 10
1¼″ do. . . . . ,,	2 1

CARPENTER AND JOINER—*continued.*

	s. d.
1½″ deal moulded sashes of average size . . . . . F.S.	2 3
2″ ,, ,, ,, ,, ... ,,	2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ⅝″ parting beads, and with brass-faced axle pulleys, etc., fixed complete . . ,,	4 3
2″ ,, ,, ,, ,, ... ,,	4 6
Extra only for moulded horns . . . . . Each	9
1½″ deal four-panel square, both sides, door . . . . F.S.	2 6
2″ ,, ,, ,, ,, ... ,,	3 0
1½″ ,, but moulded both sides . . . . . ,,	3 0
2″ ,, ,, ,, ,, ... ,,	3 6
4″ × 3″ deal, rebated and moulded frames . . . . F.R.	1 6
4½″ × 3½″ ,, ,, ,, ... ,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers . . . . . F.S.	2 0
1½″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages . . ,,	3 0
1½″ deal moulded wall strings . . . . . ,,	2 6
1½″ ,, outer strings . . . . . ,,	2 9
Ends of treads and risers housed to string . . . . Each	2 0
3″ × 2″ deal moulded handrail . . . . . F.R.	1 6
1″ × 1″ deal balusters and housing each end . . . Each	2 6
1½″ × 1½″ ,, ,, ,, ... ,,	3 3
3″ × 3″ deal wrought framed newels . . . . . F.R.	1 6
Extra only for newel caps . . . . . Each	7 6
Do., pendants . . . . . ,,	7 6

SMITH AND FOUNDER

	£ s. d.
Rolled steel joists cut to lengths, and hoisting and fixing in position . . . . . Per cwt.	17 0
Riveted plate or compound girders and hoisting and fixing in position . . . . . ,,	1 3 0
Do. stanchions with riveted caps and bases and do. . . ,,	1 2 0
Mild steel bar reinforcement ½″ and up, bent and fixed complete . ,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g. . . . . F.S.	1 0
Wrot-iron caulked and cambered chimney bars . . . Per cwt.	1 15 0

PLUMBER

| | £ s. d. | | |

DANIEL NEAL'S SHOWROOMS, LONDON, W.

SCALE DETAIL DRAWINGS OF ONE OF THE STAIRCASES FROM GROUND TO FIRST FLOORS



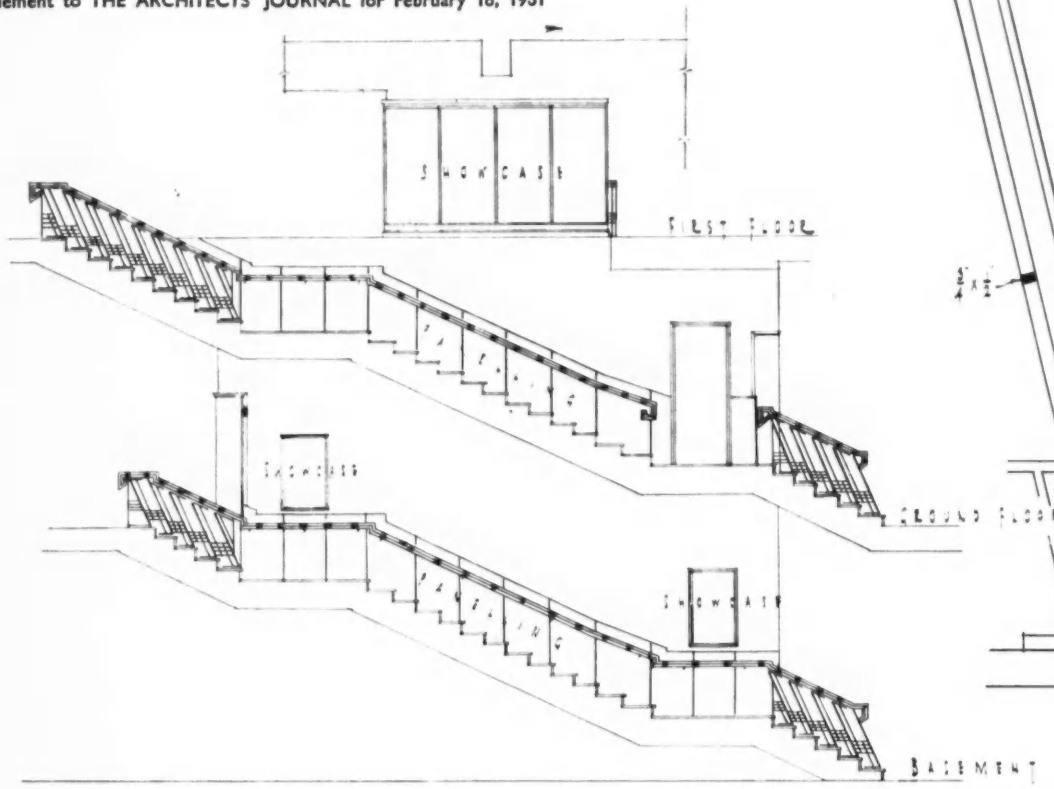
THE STAIRCASE FROM ABOVE AND BELOW



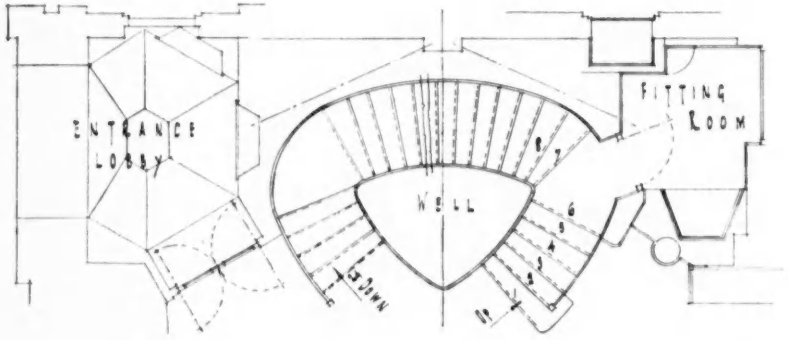
P. J. Westwood, Architect

THERE are two staircases, of one of which photographs appear above and scale drawings overleaf. This plan was necessitated owing to the dividing of the shop premises by a drive serving residential flats above. The staircases are constructed of two-inch teak risers, treads, and strings, with an iron balustrading, painted blue with slight gold spraying. The wall panelling is of selected walnut veneers with inlet display cases. The handrail is ebonized black. On the quarter-landings are doorways to the manager's office in the one case, and a fitting-room in the other.

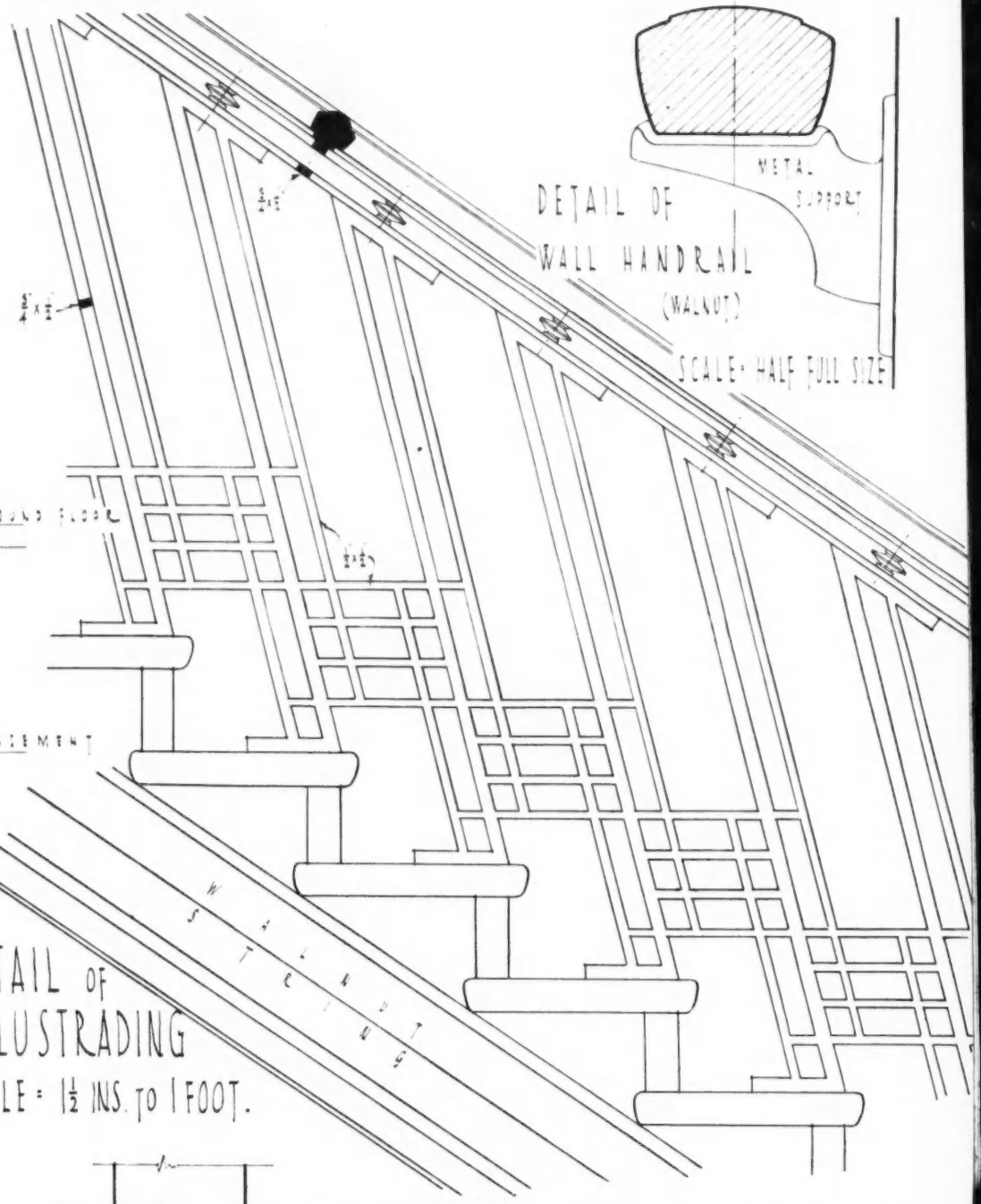
The showrooms were illustrated and described in the issue for December 24 last. They occupy the basement, ground and first floors of that part of Orchard Court, a large block of residential flats, facing to Portman Square, Baker Street, W.



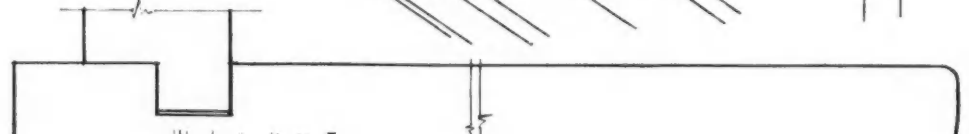
EXTENDED ELEVATION OF BALUSTRADE TO WALL
SCALE = ⅛ IN. TO 1 FOOT.



PLAN OF STAIRCASE AT GROUND FLOOR
SCALE = ⅛ IN. TO 1 FOOT.

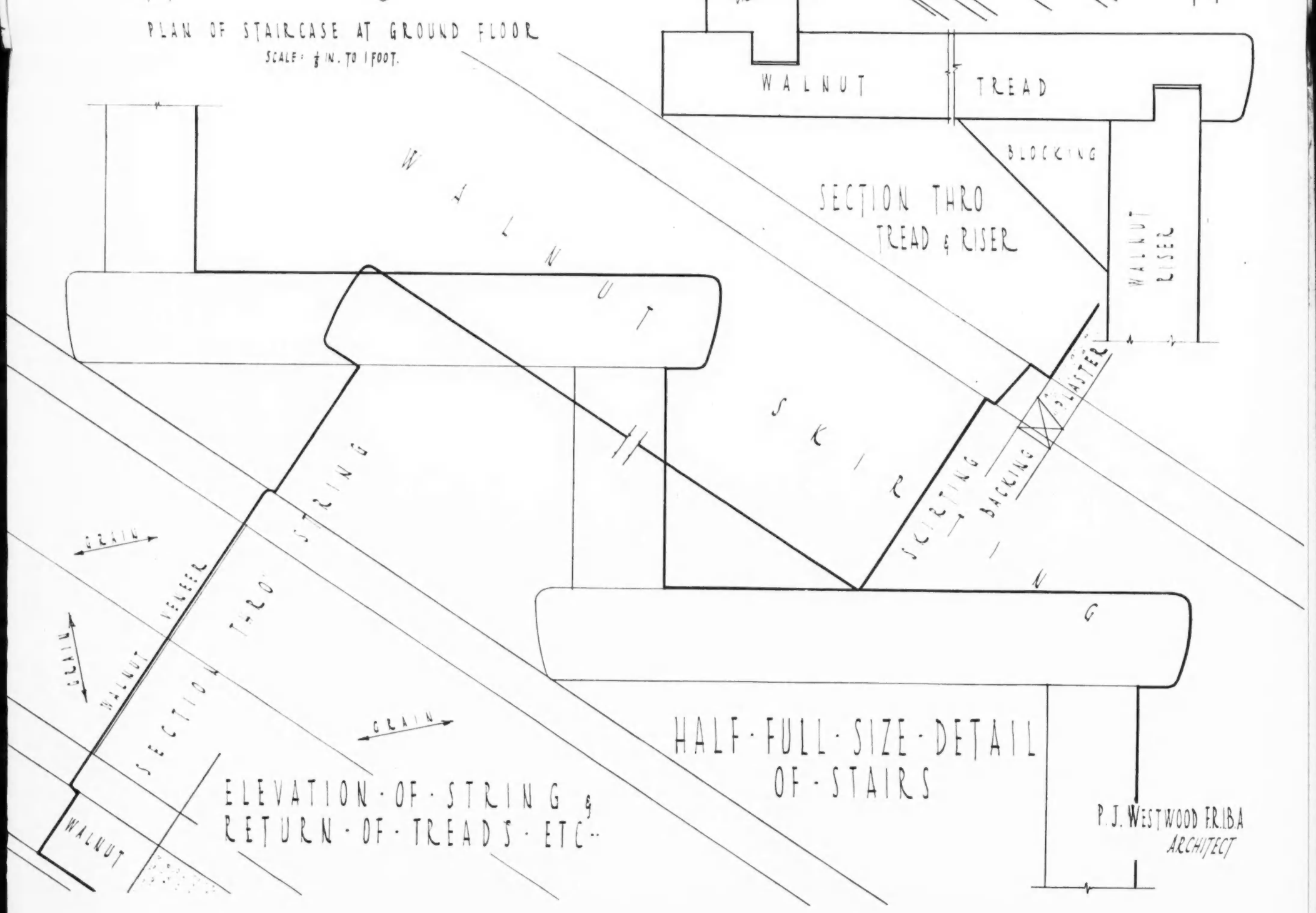


DETAIL OF BALUSTRADING
SCALE = 1½ INS. TO 1 FOOT.



PLAN OF STAIRCASE AT GROUND FLOOR

SCALE: ½ IN. TO 1 FOOT.



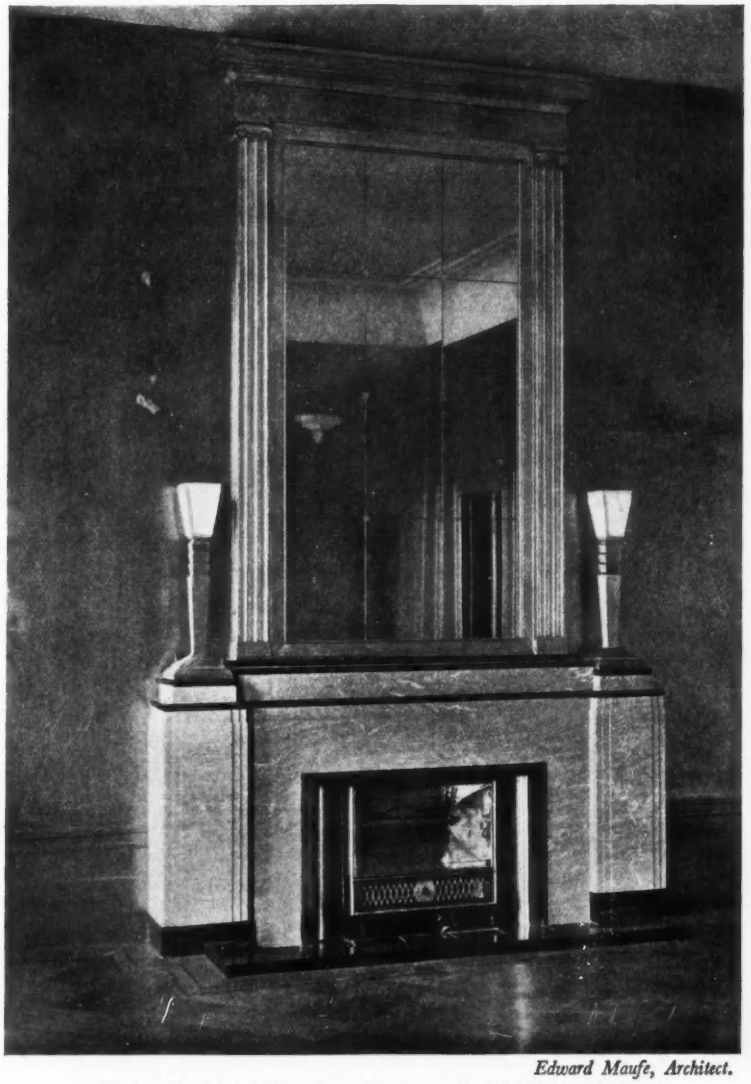
ELEVATION · OF · STRING & RETURN · OF · TREADS · ETC..

HALF · FULL · SIZE · DETAIL OF · STAIRS

P. J. WESTWOOD F.R.I.B.A
ARCHITECT

FIREPLACE & MIRROR IN A BAYSWATER HOUSE

SCALE DETAIL DRAWINGS OF FIXTURES AT No. 37 PORCHESTER TERRACE, LONDON, W.



Edward Maufe, Architect.

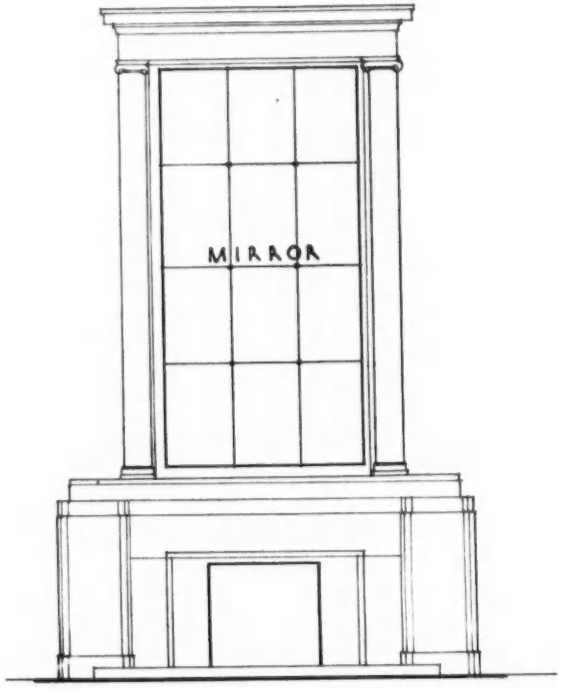
A PHOTOGRAPH OF THE COMBINED FEATURE

THE mirror over the fireplace—the "overmantel" of our grandfathers—has lately fallen into some disrepute among the anti-tradition section of designers, but such an example as this goes to show how pleasant a feature it may be if thoughtfully considered in relation to the room of which it forms a part.

The mirror sits squarely on the top of the fireplace surround, which is built up of marble—lunel generally, with shelves of bleu belge. The carved hardwood surround to the mirror is finished with silver leaf and lacquered pale gold to match the walls of the room. The flat Ionic caps to the pilasters are, however, worked in plaster, finished similarly. The mirror glass is of pale gold, and the pieces are butt-jointed with polished edges.

The drawings overleaf show the fireplace and mirror to a scale of one-third inch to one foot, with details of the joinery surround and caps and pilasters to a scale of two-thirds full size.

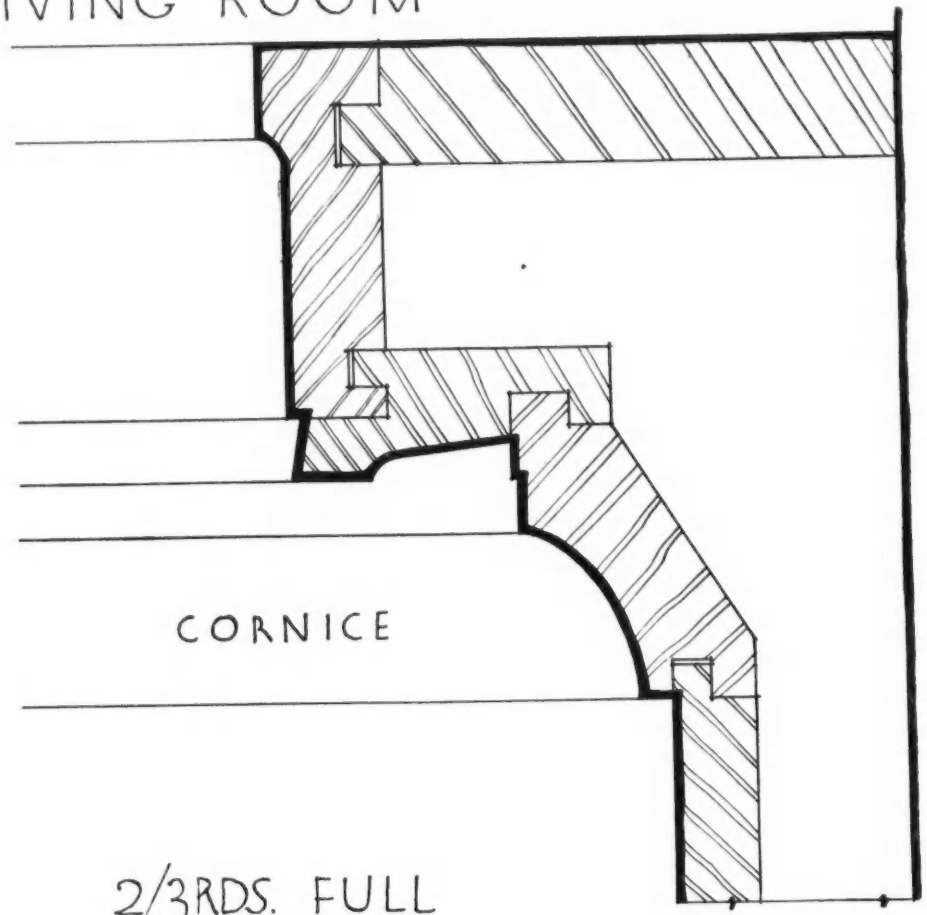
37 PORCHESTER TERRACE, W.
MIRROR IN LIVING ROOM



ONE-THIRD-INCH SCALE ELEVATION SHOWING MIRROR IN POSITION OVER LUNEL MARBLE FIREPLACE

0 1 2 3 4 5 6 7 8 9 10

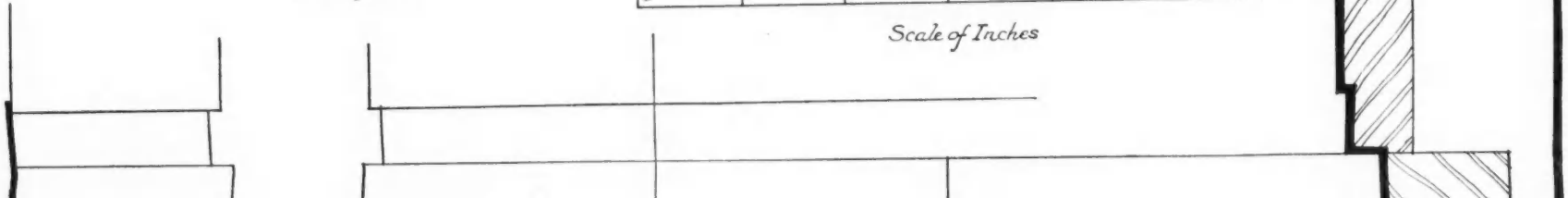
Scale of Feet

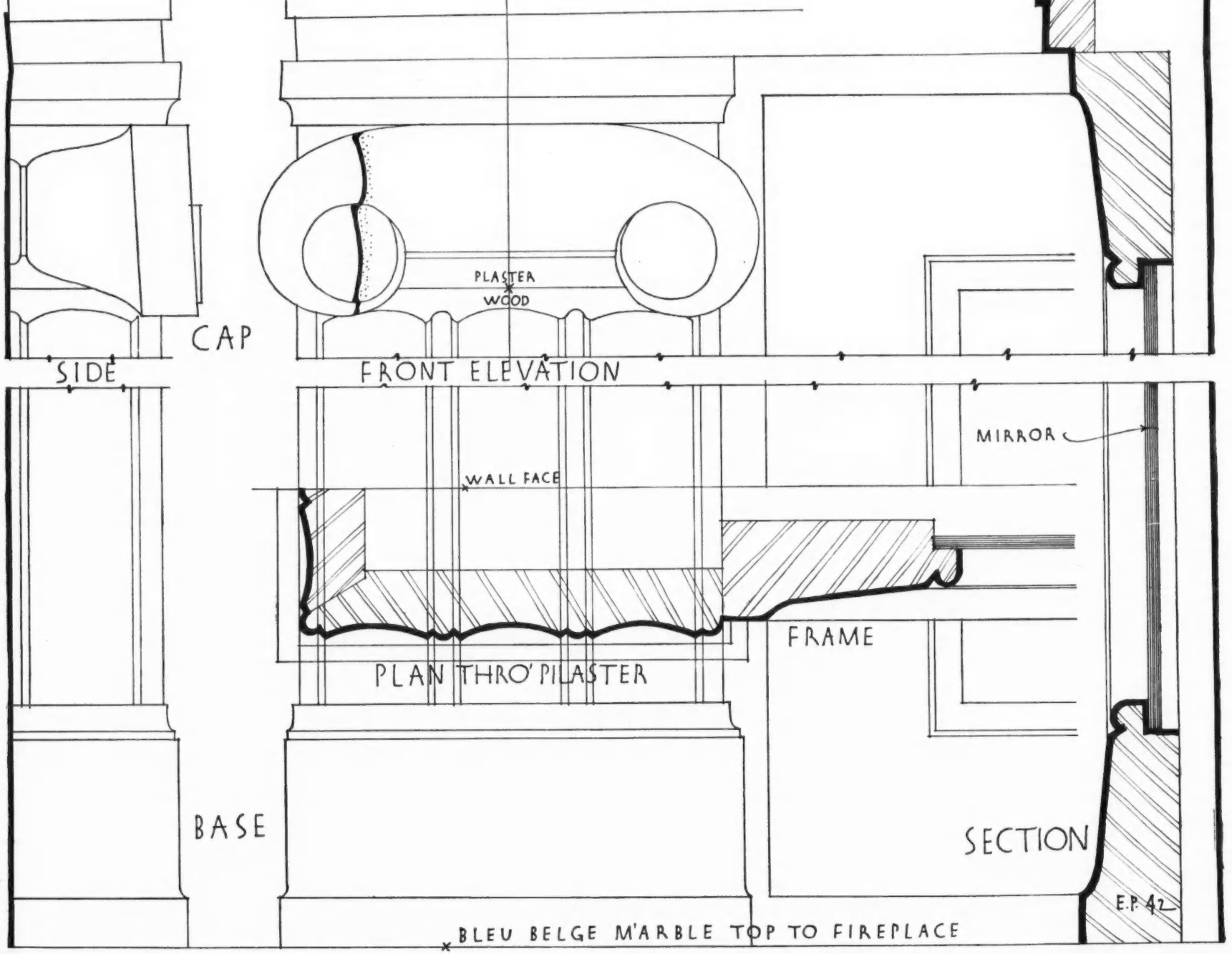


2/3RDS. FULL SIZE DETAILS

0 1 2 3 4 5 6

Scale of Inches





Edward Maufe, Architect.

SELECTED PRECEDENTS:

BAY WINDOWS AT STAMFORD, LINCS.



AN ADEQUATE RESOLUTION

ON this page and the next are shown two examples of bay windows forming a duality, the one adequately resolved, the other inadequately.

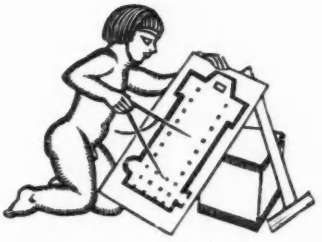
In the house illustrated above, the bays are one floor less in height than the house itself, and the continuous cornice and string, together with the substantial entrance doorway, are successful in maintaining the unity of the design. The wrought ironwork has sufficient elaboration to keep the eye interested, and the modest gateway is obviously more suited to a house of this type than an affair with wrought oversail, while the stone piers and finials have just the right weight and, in combination with the semicircular steps, support the ironwork firmly.

The house illustrated overleaf would have been very much less satisfactory if the site had been a wider one. The doorway, though good enough in itself and of refined character, would then have been too insignificant for its key position, unless some point of interest had been created over it. The size of the dormer windows is nicely calculated to give a feeling of massiveness to the roof.



AN INADEQUATE RESOLUTION OF THE BAY-WINDOW PROBLEM

THE ARCHITECTS' JOURNAL



WEDNESDAY, FEBRUARY 25, 1931

THE NEW FORM OF CONTRACT

THE R.I.B.A. have now made public the draft of a new form of contract intended to supersede the familiar 1909 form. Since it is in draft form we are permitted to offer what criticisms may arise from a comparison between it and the form now in use. We realize that no criticism can be based upon use, and, quite rightly we think, we offer the viewpoint of architects. Contractors will voice their own opinions. So, we trust, will employers.

In the first place, we cannot agree that necessity exists for violent revision of the 1909 form, for, despite a generally expressed disapproval of certain conditions, it was usually accepted without comment by individual contractors, and carried out with discretion by architects.

Be that as it may, the new form *does* introduce serious changes, which, though obviously intended by the Practice Committee of the R.I.B.A. to give the contractor a fair contract, do, nevertheless, throw new responsibilities on the architect, while at the same time they narrow the range of his authority.

Clauses 1 and 10, read together, will be seen to raise difficulties for the architect, which represent such opportunities on the contractor's part for claims for extras that the schedule of prices may well be endangered, and cease to be the firm basis it now is.

For instance, even if the architect retains his " sole discretion " under Clause 1 (*b*, *c*, *d*, *e*, *f*), 3 and 14, the remainder of Clause 1, providing that, arising from architects' instructions, or lack of them, the contractor is to be paid not only for extra work but for *expense and loss*, would create real difficulties, especially when the further qualification of " extra work " prices contained in Clause 10 is taken into account. The power of the architect to decide when work is to be charged as day work is taken from him, and he is now called upon *by the contract* to make extremely difficult decisions bearing upon the rates at which work is to be charged under varying conditions.

In face of these, what is to become of the schedule of prices, and their valuable authority in the adjustment of the final bill ?

It looks as though an attempt to allow varying conditions in a contract subject to variations has upset the whole tenor of the form that used the quantities as the basis of the contract. It was seldom possible to vary a schedule in favour of the employer : these clauses that cut out the schedule of prices from the reckoning, and enable the builder to resort to day work prices, swing the contract in a dangerous degree in the opposite direction.

Meanwhile, the onus of delicate decisions, easily questioned, lies with the architect, and may well lead to arbitration, so seldom resorted to under the present form.

Clause 5 again throws another needless responsibility on the architect, who has now to verify the setting-out by a given time, although the contractor is still called upon to make good his own errors. This is ambiguous, to say the least.

The clause that follows contains another phrase capable of double reading. The term " as far as procurable " attempts to substitute a more reasonable demand in place of the specification of abnormal or impossible markets, but it may throw on to the architect the onus of proving that what he *has* specified *is* procurable, and cause him difficulty thereby.

Another source of trouble may be found in Clause 15 (*c*), which definitely recognizes the cash discount of 2½ per cent. now generally prevailing. The architect must see that 2½ per cent., and only this amount, is allowed on all goods under provisional sums, and should this not be stipulated in the order 2½ per cent. will have to be added as an extra.

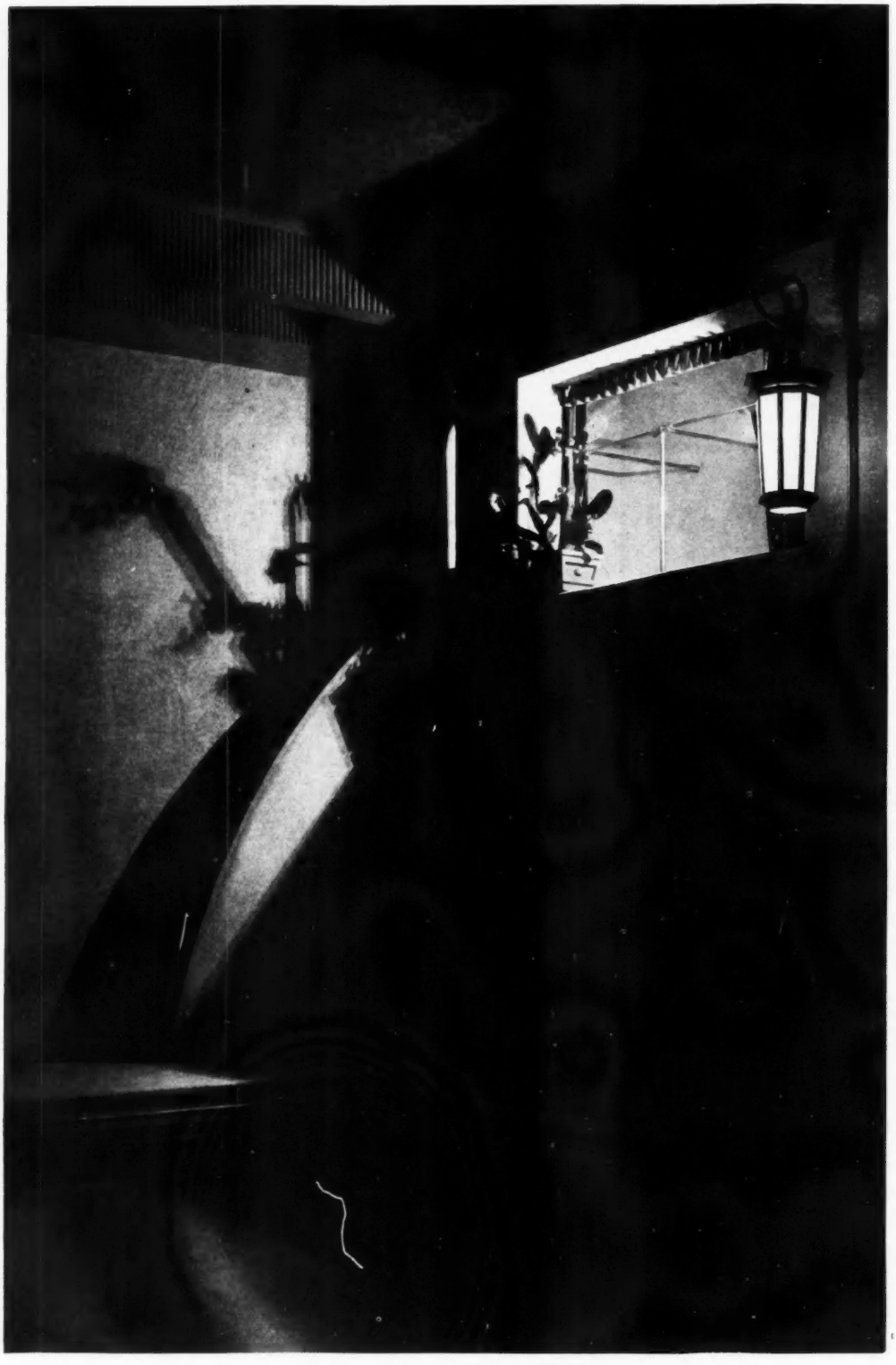
The first clause crops up again over " delay and extension of time." The old clause is followed, except that instead of the words " or by reason of authorized extras or additions " there have been substituted the words " or by reason of architects' instructions," which it will be remembered are many, onerous and a fruitful source of extras.

The inclusion of goods delivered and stored on the site in each certificate for payment will be easy of abuse, and could, in case of abuse, retard efficiency to a considerable extent. Another responsibility is added to the architect.

Finally, it should be noted how the employer stands in relation to the contractor in the determination of contract. It seems to us that consideration for the contractor has entirely overstepped the bounds of reason. It will be interesting to hear what employers have to say of their position under this clause.

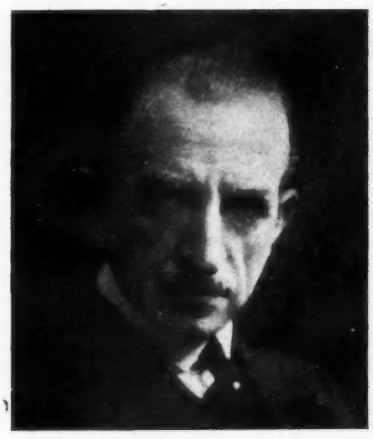
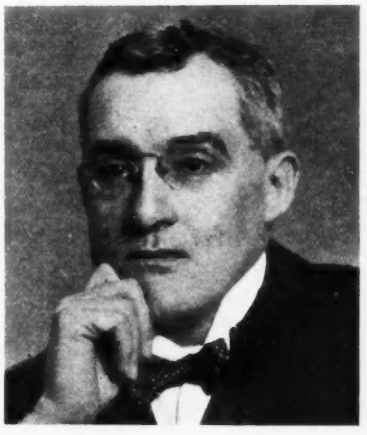
If architects will gather the measure of their reduced status under this proposed form of contract, let them read it through, having crossed out the arbitration clause (B). It will be seen to have dwindled most alarmingly.

*** The new clauses were analysed in last week's issue, page 284. Readers are invited to express their views in letters for publication.



A BLUE LAGOON IN LONDON

A corner of the pool of the Ladies' Carlton Club swimming bath, Halkin Street, W., designed by Clough Williams-Ellis and further illustrated and described on pages 305–7 of this issue. The ceiling is coloured a deep blue, which is reflected in the water; the walls are pale apricot. The rainbow stairs, of double plywood sides, lead up to children's dressing-boxes. Above is a garage.


Personalities of the Architects (Registration) Bill now before the Standing Committee of the House of Commons. Left to right: Lt.-Col. Moore, who is sponsoring the Bill, Sir Samuel Roberts, Chairman of the Committee, and Mr. J. J. McShane, who moved various important amendments which were summarized on page 271 of our last issue.

NEWS & TOPICS

THE REGISTRATION BILL: ANOTHER ADJOURNMENT

YET again the Standing Committee of the House of Commons which is considering the Architects (Registration) Bill has adjourned in order, if possible, to bring about an agreement between promoters and critics. Much, however, has already been done. The R.I.B.A. is no longer to be the registering authority. Its place is to be taken by an "independent, composite body," made up of representatives of the various organizations on whose behalf Labour members have pleaded, and representatives of Government Departments. But none of these are to be compelled to come in against their will. All that now remains is to decide as to proportions and members. Ten days' adjournment will probably prove sufficient for this purpose.

INNS OF COURT AND THE LONDON SQUARES ACT

According to a letter to *The Times* from "An Old Bencher," the London Squares Preservation Act, which is a measure that has, in general, our whole-hearted support, raises much trepidation in the breasts of loyal members of the Inns of Court. It is because this Act, in seeking to sterilise all open spaces from future encroachment by building, and to dedicate them to the purposes of "ornamental pleasure ground or ground for rest and recreation," overlooks the right of the Inns to continue to look after their own property as they have done so well in the past.

★

The Inns are nearly the oldest open spaces in London, the progenitors of the formal squares that followed, practically the model upon which London has been moulded. Despite their age, and the necessity for extension that time brings with it, the open spaces have remained open spaces. Conservatism has triumphed, to present us today with the beauty that every member of the Inns most jealously guards from every form of change, which is even more than the danger contemplated by this Act. Since it splits authority, where existing authority is provedly enlightened, it might be better that the Inns should be excepted from the scope of the Act, and left for another hundred or so years—to look after their own open spaces.

THE GLOVES OFF IN SHEFFIELD

Sheffield is still the theatre of wordy warfare between architects, local and metropolitan, and architects and city fathers. We don't mince words, we architects, when we come to describe buildings we never built, and those of a past age. The protagonists in this battle are outspoken to a degree that makes wonderful reading. "Sheffield architects were provincial men . . . doing all sorts of different jobs instead of sticking to architecture." "The Mappin Art Gallery is . . . the stale end of the Greek revival." "The citizens of Sheffield have been concerned with one thing since the Industrial Age started—making money." It would be difficult to put it more tersely or with less verbal wrappings than this. All of which, very distressing in itself, no doubt, is exactly the medicine for Sheffield citizens—the sort of thing that will make them look questioningly round the town to see what all the trouble is about and, I hope, finding it in plenty.

PORT OF MANCHESTER PROPAGANDA

I had occasion recently to feel very disappointed with the efforts of a certain north-country industrial port to boom its particular virtues to manufacturers. Now come to me two booklets from Trafford Park Estates, Ltd., that are all that the other was not, and more than one could normally hope to expect. First of all the compilers of the report have said to themselves: What do manufacturers want? Sites. What do they want to know? Costs, facilities, labour supply, ease of extension, position in relation to markets.

★

These questions the compilers have answered in two books: the one containing nothing but magnificently and clearly reproduced aerial maps of Trafford Park, and the minimum of succinct information; the other, a good deal more of information, statistical and otherwise, of the port of Manchester and its position in relation to England and the world. In neither book is there any claptrap talk or padding, and in both the arrangement conduces to a rapid ascertainment of fact. In particular I was impressed by an aerial panorama showing the whole of the estate that other views show in detail. From

this one can, of course, obtain the clearest information, but, in addition, all water is coloured blue. I may say finally that the production is, to the very last degree, excellent. Bravo, Manchester !

SIR JOSHUA REYNOLDS ON LOCAL MATERIALS

An acknowledgment is made to THE ARCHITECTS' JOURNAL for the help given in preparing the regional plan for the south part of the Lake District, which was published last month. The report has been drawn up by Mr. R. H. Mattocks, of Leeds. It contains much of interest, and is especially notable for the apt quotations. For example, in the section warning all concerned that the chief object in the rural areas of the Lakes should be to render all buildings inconspicuous, Sir Joshua Reynolds is quoted : " If you would fix upon the best colour for your house, turn up a stone, or pluck up a handful of grass by the roots, and see what is the colour of the soil where the house is to stand, and let that be your choice."

★

It is pointed out that many times the number of houses already built in the Lake District could easily be absorbed without any serious loss of amenity, if they were all built in well-designed groups and on selected sites near the main roads. About one-fifth of the houses erected at the Lakes since the war have been placed by local authorities on specially selected sites, but the other four-fifths have been spread over in haphazard fashion at the will of the private builders.

ARCHITECT–PEERS

The Victorians had a pleasant habit of shuffling the names of a few artists into the honours list among the names from the Services and the political packs. Thus it happened that Lord Tennyson and Lord Leighton even reached the Upper Chamber. But nowadays, though the coroneted owners of the Press are numerous, the arts as a whole need spokesmen and representatives in the House of Peers. I think they would add the distinction and freshness so often lacking in the debates of that assembly. They are trained by the exercise of their profession in the habit of order, in creative expression, in making the best of materials available, and in giving a nobility of arrangement to the common things of life.

★

They are statesmen in stone. Many of their buildings are political deeds, like the New Delhi. Many of their acts are concerned with the maintenance of a high standard of art and public taste, as in the activities which have helped to produce the Persian Exhibition. May I suggest to the Government that the country shall be graced with a few architect-peers ?

ASTRAGAL



From Charing Cross Bridge.] [*By Arthur Keen.*

A view of the north side of the Victoria Embankment taken from Charing Cross Bridge. On the left of the photograph is the Hotel Cecil, the demolition of which is now nearing completion, as will have been observed from the frontispiece to our last issue. The Savoy Hotel is on the right of the Cecil. Farther along are seen Cleopatra's Needle and part of Waterloo Bridge.

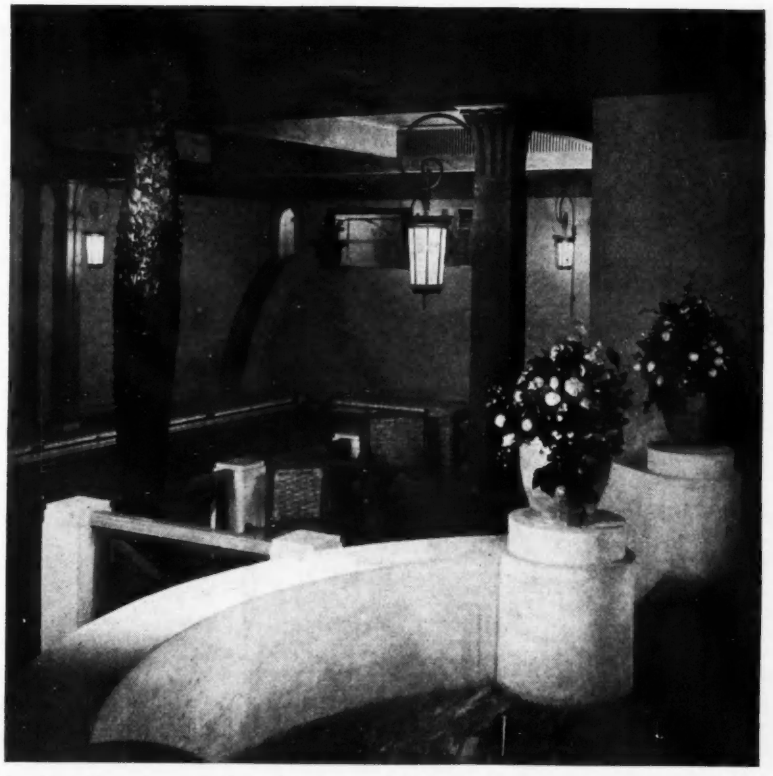
SWIMMING BATH

At the Ladies' Carlton Club

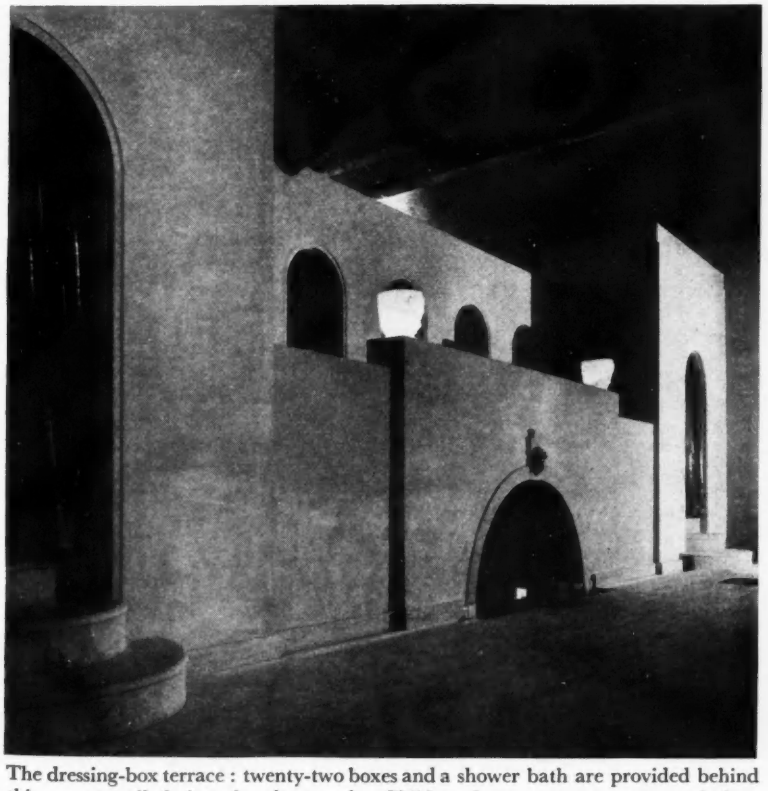
DESIGNED BY
CLOUGH WILLIAMS-ELLIS

NOS. 4 and 5 Grosvenor Place, W., have been converted into premises for the Ladies' Carlton Club. Separated from them by a private court were the Duke of Westminster's old stables in Halkin Street; on this site has taken place the conversion here illustrated. In the semi-basement has been formed a swimming bath, while the floor above is adapted as a garage for fifty members' cars.

The planning includes a small entrance hall, octagonal and symmetrical, but with unequal sides. This is the centre of circulation. The longer sides have double glazed doors, through one pair of which entrance is made. Those opposite lead to the steps descending directly to the deep end of the bath; those on the right, to a short flight ascending to the tea terrace overlooking the bath; those on the left to the staircase descending to the garage and ascending to the caretaker's flat. The doors in the shorter sides, which are glazed with mirrored sheet glass, and embellished with javelin heads, fixed above the architrave, give access to the office, lavatories and store-rooms. The walls are pale apricot, the ceiling a yet paler shade of the same tint, while the woodwork is picked out in green and gold. There is a "dancing wave" cornice, concealing strip lighting, and an octagon-domed ceiling, with the javelin motif repeated at its angles. The floor is covered with rubber, including the octagonal brushing mat.



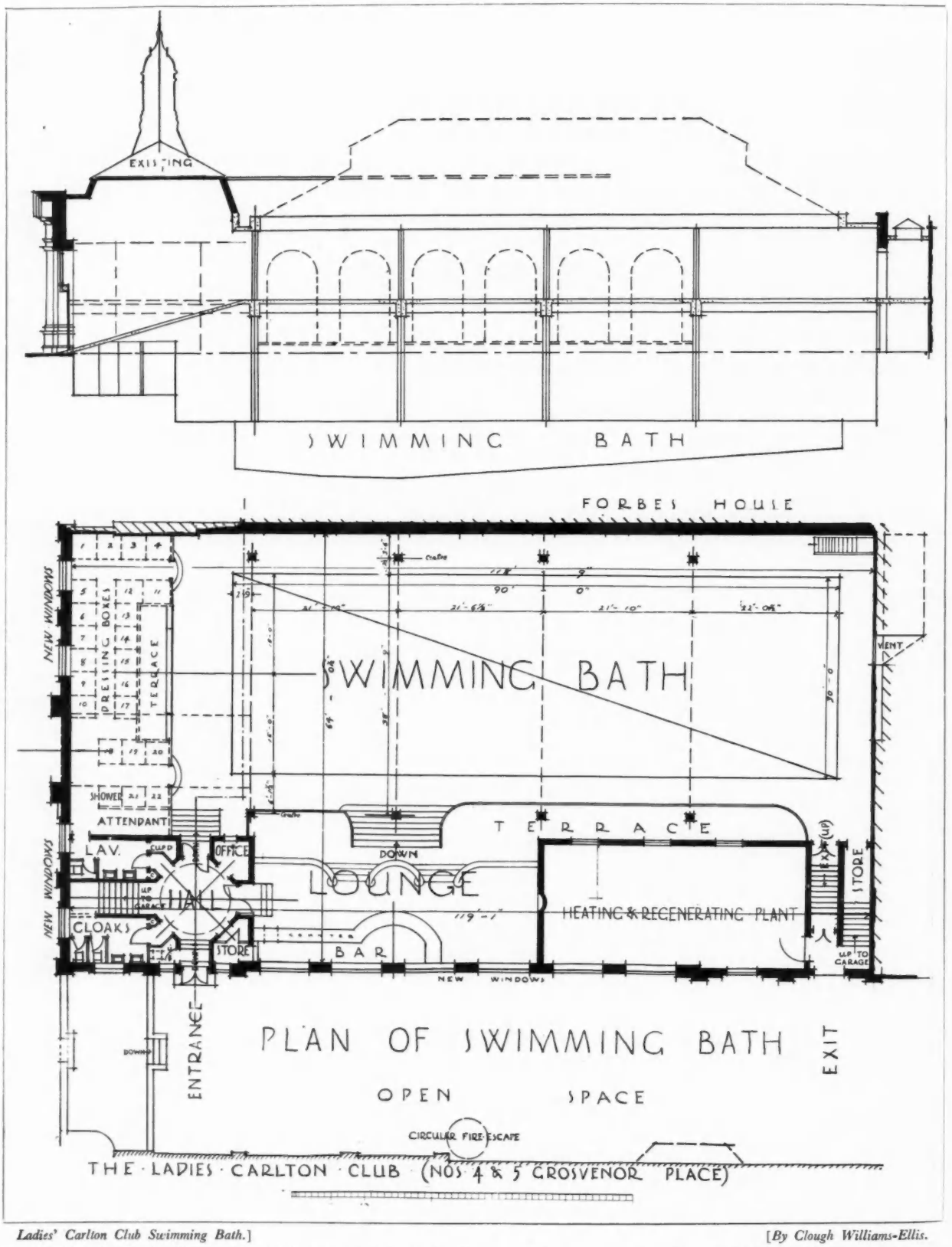
Looking down towards the swimming pool from the lounge and tea terrace. The Venetian lamps play an important part in the decorative scheme.



The dressing-box terrace : twenty-two boxes and a shower bath are provided behind this screen-wall facing the deep end. Children have separate accommodation.

The swimming bath itself has a deep blue ceiling, the colour of which is reflected in the water. The pillars are scarlet, with caps of gold. When it is added that the walls are apricot, the hanging curtains of jade green American cloth, and that Venetian lanterns occupy a prominent place in the decorative scheme, some idea will be conveyed of the symphony of light and colour mirrored in the pool.

Wherever possible, the brick walls of the original building have been retained, but the bath itself goes down below them, and this portion of the work has been carried out in reinforced concrete. The tea terrace has brick piers and balustrades of wood, and the deep, rainbow stair that figures prominently in the photographic study forming the frontispiece to this issue are carried out in double plywood.



Ladies' Carlton Club Swimming Bath.] [*By Clough Williams-Ellis.*

Plan and longitudinal section. The pool is some 90 ft. by 30 ft. Entrance is by means of the octagonal hall fully described in the text. The floor above the bath forms a garage accommodating fifty motor-cars.



[*By Clough Williams-Ellis.*

Ladies' Carlton Club Swimming Bath.]

A general view of the bath, taken from near the foot of the corner rainbow stairway illustrated in the frontispiece to this issue. Behind the tea terrace is seen the dwarf wall of the lounge, which is served by a bar. The dressing-boxes are behind the screen with central arch on the right. The colour-scheme is described in the text on page 305.

THE ARCHITECTS (REGISTRATION) BILL

[BY OUR SPECIAL PARLIAMENTARY REPRESENTATIVE]

STANDING Committee "A" of the House of Commons met again on Tuesday, February 17, to consider further the Architects (Registration) Bill. They had before them the report of the negotiations on the subject of the proposed new body which is to keep the register of architects, and, after a short debate, they once more adjourned in order that, if possible, an arrangement might be arrived at as to the composition of that body.

Lt.-Col. Moore, who is in charge of the Bill, recalled the fact that when the Committee adjourned on the last occasion it was for the purpose of further discussion on a fundamental proposal regarding the body which was to control the register. There had been, since the adjournment, a meeting between the critics and the sponsors of the Bill. He desired to thank the critics of the Bill for the very reasonable and constructive spirit in which they had met them. A good deal of concession had been made by the promoters of the Bill in that they had agreed to a fundamental change in the constitution of the body controlling the register. That body was now to be, as desired by the critics of the Bill and by certain other members of the Committee, an independent composite body, set up for the purpose of controlling and maintaining the register. A further concession had been made that there should be proportionate representation according to the strengths of the new bodies to be represented on the new authority. That matter was also being arranged. A concession had also been made to what might be termed the "frontier" organisations or associations, such as engineers, builders and so forth, provided they made application. They did not want to compel any body which did not require or desire representation on this new authority to come in, but if they made application then they would be submitted to the Committee in a new clause.

They had, continued Lt.-Col. Moore, further arranged for the representation of Government departments. The only point at issue when the negotiations terminated was that of numbers and representations, and he suggested that, if they got through the first four clauses of the Bill that day, it would show the Committee that they had made an advance and that their work had not really been wasted. These clauses really were not of vital importance, except that they included this new organization to be called the Architectural Board of Registration, and he suggested that, having finished with those four clauses, the Committee might then adjourn for a further consultation between the critics of the Bill and its promoters to consider the point of the numbers and representation, which had not yet been definitely settled.

Mr. Harris, for the Liberals, thought it ought to be made clear that the Committee was not bound by these negotiations, which were quite informal. A good many of the interests concerned, however, were satisfied as to the terms of the agreement reached, and they were there to get on with the business, and to see how far that Committee supported those suggestions.

Mr. McShane, the Labour member for Walsall, who has been one of the chief critics of the R.I.B.A., said he would be no party to trying to whittle down the powers of the Committee. Mr. Harris had occupied the chair at the informal conference on the previous Thursday, which had lasted two-and-a-half hours, and at which great progress was made. His (Mr. McShane's) recollection was that they decided that the Committee should be asked to adjourn again without discussion of the first four clauses.

Mr. Winterton (Loughborough, Labour) moved that the Committee do now adjourn. He submitted that it would be for the convenience of the Committee if they adjourned in order to clear up some of the points which had been raised. He could understand the anxiety of the promoters to get the Bill through, but "more haste, less speed." He feared that if they proceeded now they would get into all sorts of difficulties and entanglements.

Mr. Blindell (Holland-with-Boston, Liberal) also supported the adjournment, but hoped that on the next occasion they would be able to function as a Committee and consider the Bill clause by clause, and not be dragged there only to find that an unauthorized sub-committee was doing their work, and that they were being dragged after it. After some further desultory debate, the Committee adjourned until Thursday, February 26.

[We are given to understand by Mr. D. H. Bramall, solicitor to the Incorporated Association of Architects and Surveyors, with reference to the report of Lt.-Col. Moore's speech to the Committee on the Architects (Registration) Bill, reported in our last issue, that that body has never been a faculty, and that its membership totals approximately 1800.—ED., A.J.]

CATHEDRAL DESIGN TODAY

BY A. R. POWYS

IN the following notes the author points out that it would be foolish in designing a modern cathedral to attempt to rival the elaboration of Lincoln or to expose in it the nakedness of a factory. His ideal design would be of a Gothic style and would cling to tradition.

A cathedral should provide space for the proper conduct of diocesan and daily services, for the celebration of Holy Communion on great and small occasions, and for the holding of massed services; it should contain chapels ready to be associated with definite diocesan activities, and convenient for the reception of memorials to those who die and deserve commemoration.

Further, it is good closely to associate with a new cathedral church offices and committee rooms, in addition to the chapter house, so that the principal church of the diocese may become the vital centre of organization even as of worship. With these offices there should be a library.

Among all buildings, one, dedicated to the service of God and to religion, should be monumental; that is to say, it should be built to last, well finished and, as far as possible, made from materials known to be durable. The experience of mankind shows that those buildings where the construction depends for stability on the direct "compression" of its parts, and not on tensional members, are most nearly permanent. Experience also shows that iron is better avoided as a building material. And again, brick resists the effects of weather better than any other walling material that can be used with reasonable regard to cost. Yet the examination of old churches in England shows that stone lasts well inside a building: therefore, because it has long been and still is the first material that is thought of for work inside an English cathedral, it is suggested it should be used in building the inner parts and wall faces. And as regards roofing material, probably the most lasting, and the one which is least expensive in upkeep, when readily accessible, is a covering of well-fired hand-made tiles.

A man who leaves the parts of a monumental building without the signs of the contemporary tradesman's skill shows little knowledge of the appropriate relationship between the cost of a work and the proper pride in good and perhaps elaborated finish. The prevailing economic conditions and the present cost of building bear on this matter; it will be admitted by all that it would be as foolish in a modern cathedral to attempt to rival the elaboration of, say, the choir at Lincoln, as it would also be to expose in it the nakedness found in modern factory buildings.

Always in considering such a building, "style" has to be considered. The authors of my ideal design would approach this disputed matter in the following way. They would lean back on tradition; but by that word wouldn't mean revival of a past style. Being Englishmen, they would think of a great Gothic building when, in conversation, a cathedral is mentioned. Therefore, the design could be described as a "Gothic" building.

Today, the cultural approach to architecture outweighs the traditional so completely that it may be said that hardly any tradition remains in the design of the parts of a building. Revival seems to rule almost alone. With full awareness of the talk about, and the appearance of the so-called "Modern" style, they should attempt to cling to such tradition as remains.



A general view of the church from S.E. The small bell-tower provides, at its base, a stairway from choir vestry to organ gallery. The materials are brick, white Hollington stone and double Roman roofing tiles.

ST. MARY'S CHURCH, PYPE HAYES, NEAR BIRMINGHAM

DESIGNED BY EDWIN F. REYNOLDS (WOOD, KENDRICK AND REYNOLDS)

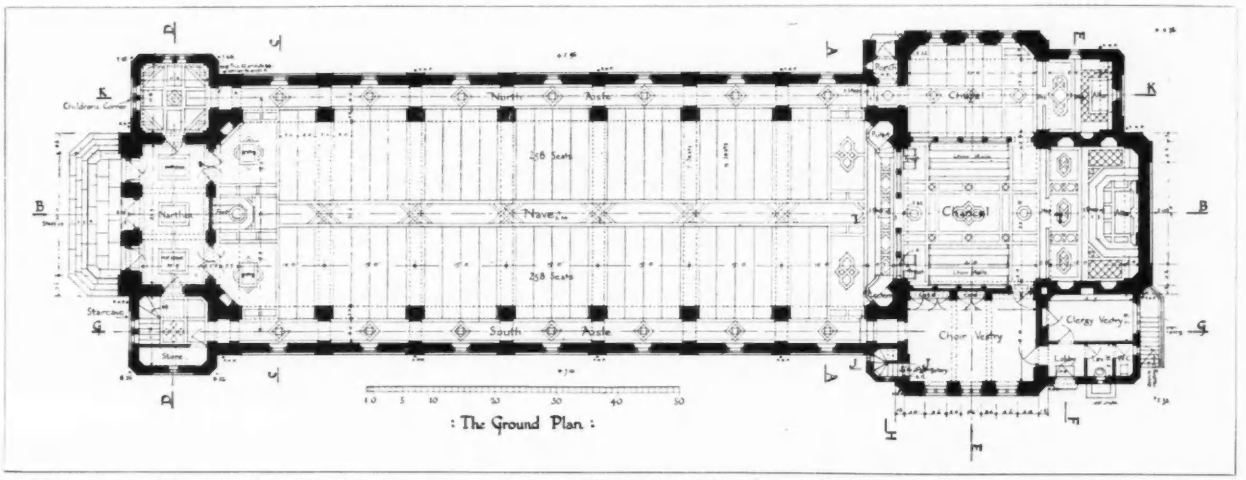
ST. MARY'S CHURCH, Pype Hayes, Erdington, was consecrated last July, in a newly developed district of Birmingham. About 600 seats were required, and in order to give unobstructed views these have been mainly placed in a large nave, with narrow aisles for passage only.

The exterior is of brick, with white Hollington stone copings, weatherings, window frames and panels, left with sawn face. The bricks are 2¼ ins. thick, with wire-cut face, and the arches are turned with similar bricks 1 in. thick. The roofs are covered with double Roman tiles, specially made with large rolls.

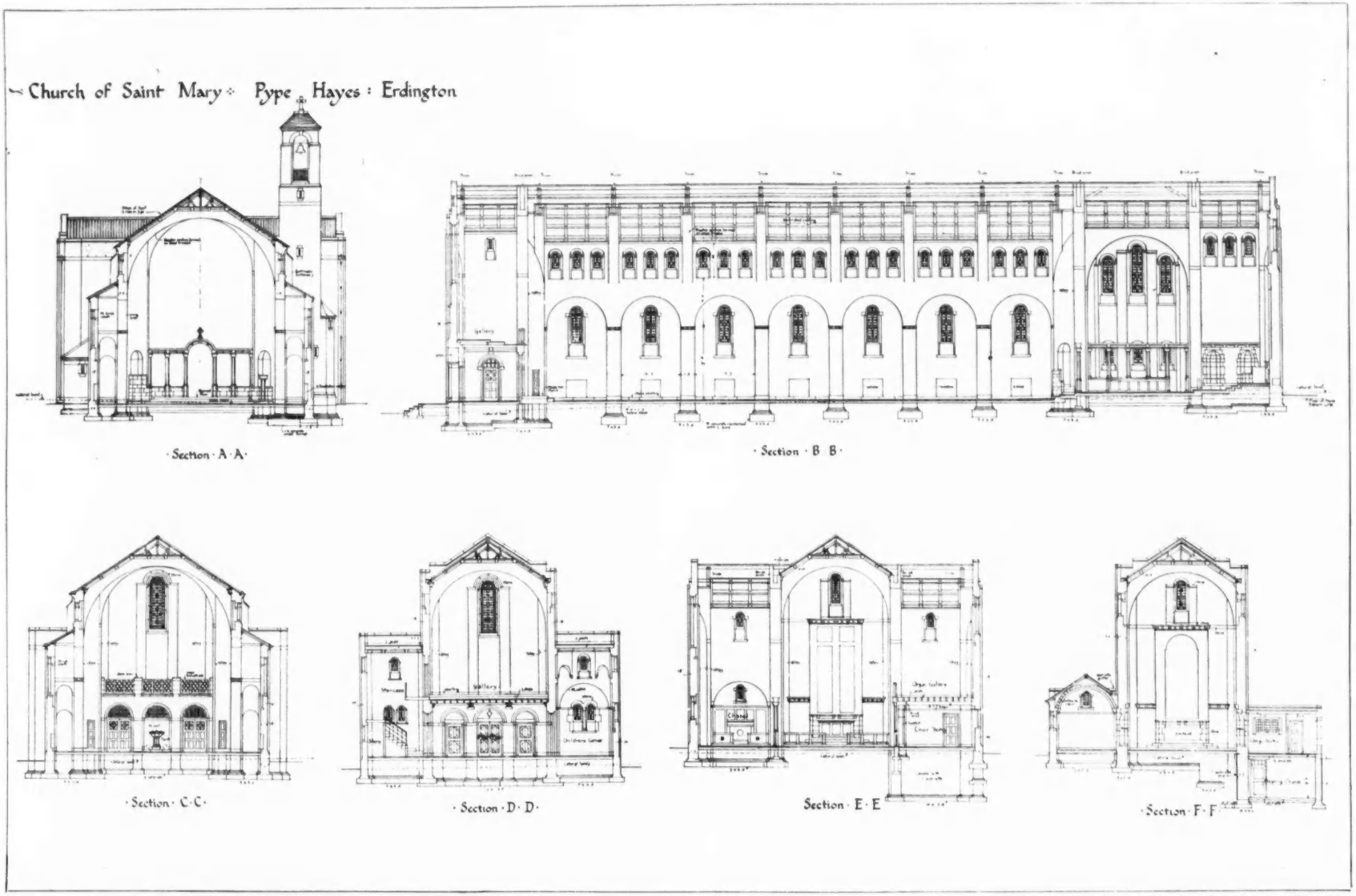
The internal walls are plastered with a mixture of Leighton Buzzard sand and lime putty, together with Guiting stone dust, left from a wood float, to give a mellow tone without further colouring. Red Hollington stone was used for plinths, caps and springers, and also for the font, pulpit, lectern, screens, communion-rails, retables, sedilia and credence. All these fittings were designed as essential parts of the building, and all were executed by the builders, the font being given by them. Roof timbers are of Oregon pine, decorated with painted patterns in red, black and white on green, the boarding being left its natural colour. The pavements generally are formed of grey York stone, green Westmorland slate, and 9 in. by 9 in. quarries, burnt to varied colour. Various kinds of obscured glass were used in the leaded lights to give texture, but no colour except amber is used to accentuate the pattern. The net contract figure for the church was £13,837.



The doorway at the west end. The church placed diagonally with the roads bounding the site, and axially with another leading to this end.



The nave provides for 516 chairs, with narrow access aisles at either side, the chapel, a small gallery, and the choir, 30 each : total, 606.

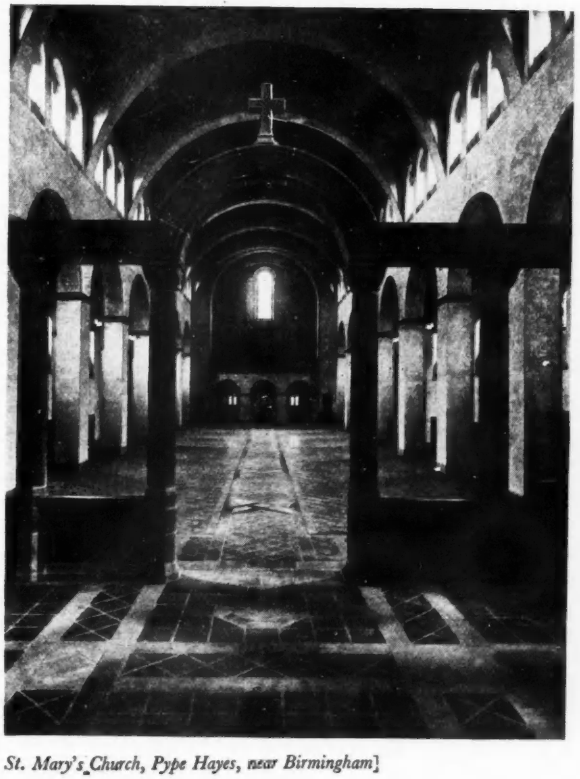


St. Mary's Church, Pype Hayes, near Birmingham.] [*By Edwin F. Reynolds* (*Wood, Kendrick and Reynolds*).

Longitudinal and cross-sections, reproduced to the same scale as the plan on the preceding page. The nave has lofty arcades of semicircular arches on square piers, with transverse arches and barrel vaults over the aisles. The clerestory consists of forty-two windows, three to a bay, and the arches of the roof spring from the base of the clerestory. The lower parts of these arches are corbelled over in brickwork, and the upper parts are constructed with steel trusses. The purlins are framed with strutting pieces, and carry the roof boarding without rafters. The west end has a triple entrance into a spacious narthex, with brick walls and timbered ceiling, and a staircase leads up to the gallery above it.

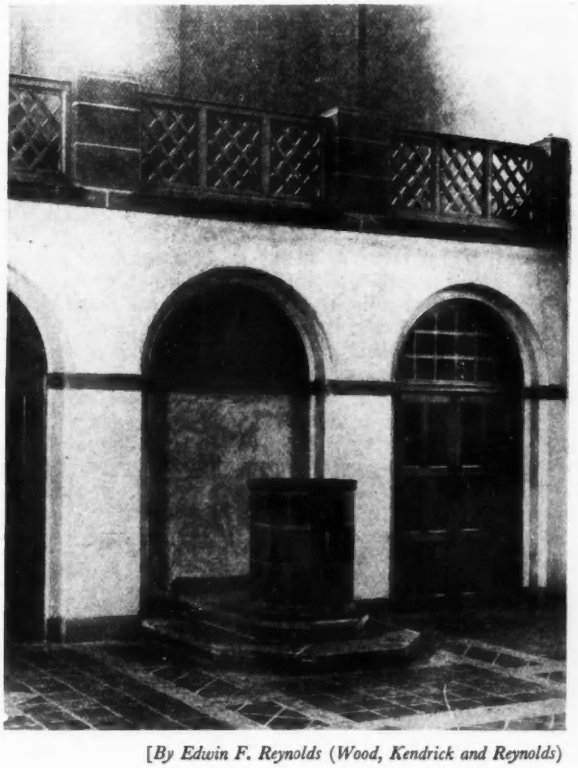


A general view of the interior, looking towards the altar. The chancel, which has two splayed piers, with pulpit and lectern in front of them, is enclosed by screens of red Hollington stone. The east end has still to be completed with a great dossal and choir stalls.



St. Mary's Church, Pype Hayes, near Birmingham]

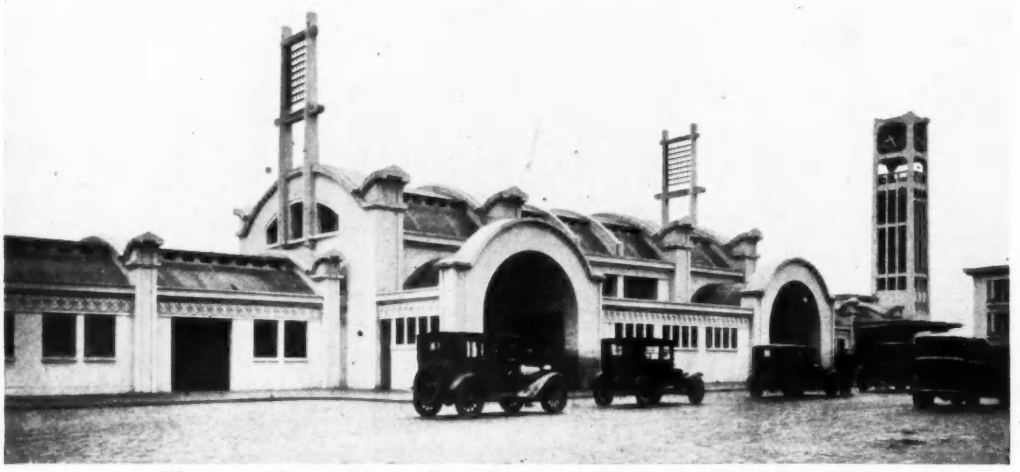
Looking down the nave, towards the west gallery through the chancel screen; a corner of the pulpit is seen on the right.



[*By Edwin F. Reynolds (Wood, Kendrick and Reynolds)*

The west entrance, showing the three doors, with gallery above, and the font, built of stone, like pulpit and lectern.

ARCHITECTURE *versus* ENGINEERING



The new railway station at Lens, France, designed in reinforced concrete.

"*Concrete structures are often nowadays designed with imagination and a sense of proportion. They may look well in photographs but they are not satisfactory in execution; for the colour and texture . . . are anything but pleasing.*"

iii: The Case for and against a Concrete Architecture

BY A. J. PENTY

THE object of those who seek to identify architecture with engineering is to persuade architects to abandon the use of traditional building materials in favour of a concrete architecture on the assumption that it is to concrete that the future belongs.

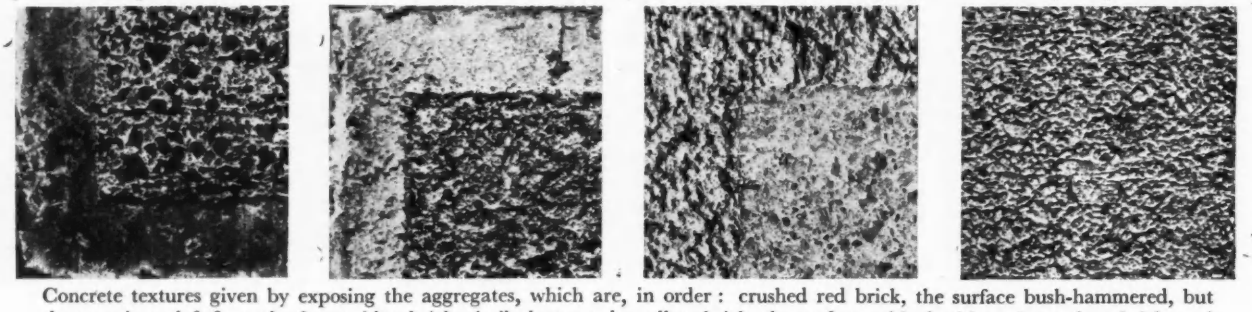
Now concrete, reinforced or not, is a very useful material when used with discretion. It is useful for specific purposes: for the construction of fireproof floors, staircases, foundations, etc. But there is a limit to its usefulness, while, generally speaking, architects are persuaded it is an inartistic material. They have a feeling that its use is somehow subversive of architectural tradition as they understand it; and so, in spite of all the propaganda to promote its more general use, architects remain unconvinced. They have no objection to using it in the unseen parts of their buildings. They prefer to keep it out of sight.

Professor Lethaby regards this as merely prejudice and deplorable. "Modern armoured concrete," he tells us, "is only a higher power of the Roman system of construction. If we could sweep away our fear that it is inartistic and boldly build a railway station, a museum or a cathedral, wide and simple, amply lighted, we might be interested in building again almost at once. This building interest must be aroused."

Considering that the chances are that most of us will never be called upon to build a railway station, a museum or a cathedral, it is not easy to see why the erection of such buildings in reinforced concrete should be necessary to arouse the building interest, quite apart from the fact that great strides have been made in the revival of architecture during this last thirty years by using ordinary building materials, while the public are by no means as indifferent to the need of architecture as they were. Why the advocates of reinforced concrete should ignore the great improvement that has taken place I cannot understand.

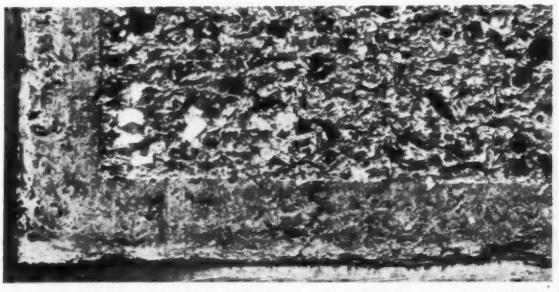
In spite of the fact that Professor Lethaby is known to be an architect of exquisite taste and has not lacked prestige, he has nevertheless not been successful in influencing more than an insignificant minority of the profession in their attitude towards reinforced concrete. And it is my contention that the profession are entirely right in refusing to listen to such advice, for, as I shall show, there are very serious æsthetic and practical objections to a more general use of concrete.

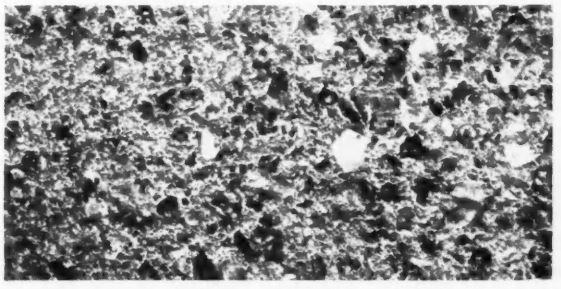
First, as regards the æsthetic objection. Concrete structures are often nowadays designed with imagination and a sense of proportion. They may look well in



Concrete textures given by exposing the aggregates, which are, in order: crushed red brick, the surface bush-hammered, but the margin as left from the form; blue brick, similarly treated; yellow brick, the surface rubbed with carborundum brick, and the margin bush-hammered; yellow brick, wire-brushed.

"*Scratching the surface with a wire brush improves the texture—or, better still, the aggregate is exposed.*"



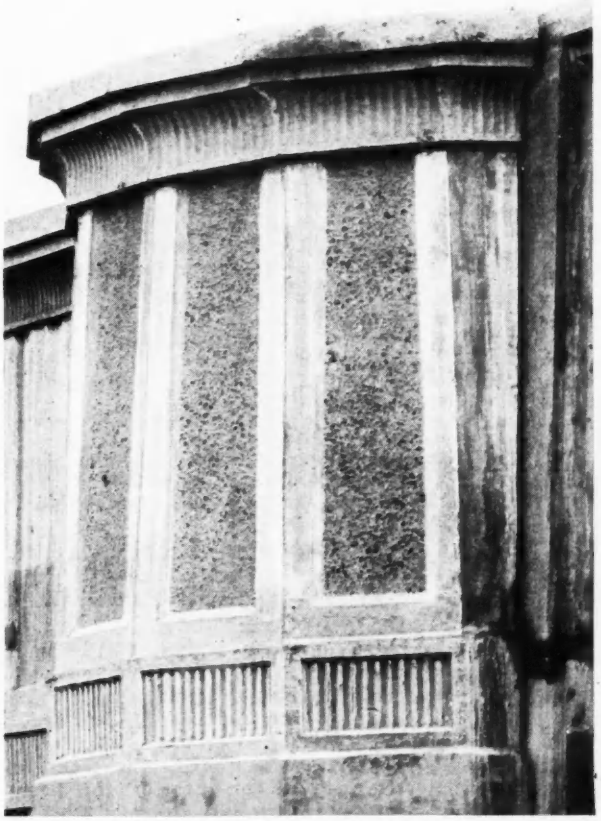


Concrete textures with the flint aggregates—crushed flints and flint gravel, respectively—exposed, the surface having been bush-hammered.

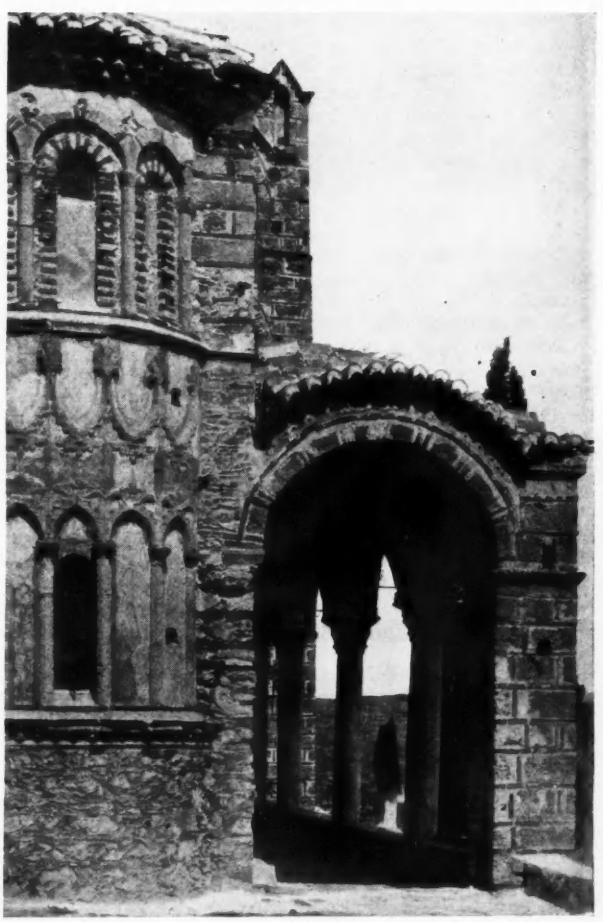
" Various devices are resorted to . . . But none of these things can prevent concrete coming to look miserable when it has had a taste of the weather."

photographs but they are not satisfactory in execution; for the colour and texture of concrete buildings are anything but pleasing. Various devices are resorted to in attempts to remedy these defects. Scratching the surface with a wire brush improves the texture —or, better still, the aggregate is exposed. But none of these things can prevent concrete coming to look miserable when it has had a taste of the weather.

It may be doubted whether the æsthetic objection to the use of concrete will ever be overcome except in low buildings where colour-wash can be used. In high buildings this is impracticable. Colouring matter mixed with the concrete may be used, and if it is not too thoroughly mixed an effect of broken colour is produced that may



Parapet of the reinforced concrete Lea Valley Viaduct (Sir John Simpson and Maxwell Ayrton, architects; Sir E. Owen Williams, engineer). Flint aggregate, the panels bush-hammered, the remaining surfaces untouched.



The early-fifteenth-century church of the convent of Pantanassa, Mistra, Greece, an example of Byzantine construction and decoration in brick and stone: the mortar joints are very broad—from 1¾ ins. to 2½ ins.

" The supposition is that the Byzantine builders based their architectural treatment upon brick, stone, marble and mosaic because they felt . . . the utter impossibility of getting fine architectural effect out of concrete monolithic construction."

for the moment be pleasing. But colouring matter does not prevent the concrete from weathering badly. When stone weathers, it is improved; but it is different with concrete, which will not give graduated shades. The same objection also applies to the use of artificial stone in the manufacture of which Portland cement is employed.

Assuming, however, that this objection could be overcome, a concrete architecture would nevertheless be very restricted in its scope. It would, like stucco architecture in the past, be destitute of the effects that are produced by the natural beauty of the traditional building materials, by the brick, stone, timber and marble which it seeks to replace; for a great deal of beauty in architecture comes from the beauty of material.

When the advocates of reinforced concrete tell us that if the old builders had known of reinforced concrete they would not have hesitated to make the fullest use of it, they talk without their book; for the Romans used concrete, but they cased it with brick, stone and marble. Are we to suppose that the possibility of constructing buildings entirely in concrete never occurred to them, or that it did and they rejected the idea on æsthetic grounds? The latter seems much more probable.

Further, it is significant that after the Roman decline, when architecture sprang into a new life under the Byzantines, the æsthetic possibilities of concrete were not exploited. It may be assumed that the æsthetic possibilities of concrete were not exploited by them because they knew there weren't any, and, being perfectly clear in their minds about this, they reserved concrete for the unseen parts while they used the traditional building materials for architectural embellishment.

The supposition is that the Byzantine builders based their architectural treatment upon brick, stone, marble and mosaic because they felt, as we do, the utter impossibility of getting fine architectural effect out of concrete monolithic construction; and they did not hesitate to act upon their feelings.

But there are practical as well as æsthetic objections to a general use of concrete—recognized by engineers, but ignored by architects who are "concrete mad."

Buildings constructed of concrete are cold in winter and hot in summer. Concrete is a transmitter of sound; it is difficult to alter and very difficult to fix to. Its use is full of pitfalls and requires the most careful supervision during construction. These defects are fatal to any general use of concrete in building. More than one idealist has let himself in by identifying the use of concrete with the cause of progress and evolution and thinking too little about it as a building material. But the greatest objection of all to reinforced concrete is that it has come to stay in a sense that is not generally appreciated. Reinforced concrete structures can only be taken down at enormous cost. It costs from 25 to 30 per cent. of the original building costs to take down a reinforced concrete erection, while the old material is practically valueless. This is a very serious objection to the use of concrete, for it means that a time will come when the countryside will be ruined by derelict concrete buildings that it will not be worth anybody's while to take down. In cities this great cost will often stand in the way of future improvements by making the cost of rebuilding prohibitive—a fact, incidentally, which, when it becomes generally known, must affect ground values. This fact raises the question as to whether it is in the public interest for buildings to be erected in concrete, whether, instead of altering building regulations to encourage their erection, regulations should not be made forbidding them.

If concrete architecture were worthy of posterity there might be something to be said for rendering it so indestructible. But considering that nothing built in concrete can be said to be of permanent interest, architects are assuming a grave responsibility when they use such a form of construction. What is even more reprehensible is that this form of construction is recommended especially for the erection of factories, railway stations, aeroplane sheds and other modern buildings that are built to satisfy temporary requirements and within a short time may become obsolete, unnecessary or require drastic alteration.

IN THAT CONTINGENCY

The following abstracts of inquiries represent two of those recently submitted to the Building Research Station and their replies thereto:

Protection of Wood Panelling

A CONTRACTOR reported that, in several buildings recently carried out, it had been necessary to place radiators behind wood panelling, with a bronze grille in front. It was stated that the usual practice was to back the wood with asbestos cement sheeting, but that this had not been successful, and the wood had been badly pulled about by the excessive heat of the radiators.

The same trouble had been experienced, but to a lesser degree, in the case of window linings behind which hot water pipes had been fixed. Advice was required in the selection of a substitute material for asbestos cement or, alternatively, a suggestion for better methods which would minimize deterioration of the woodwork.

Asbestos cement sheeting would not be expected to give very satisfactory results, as it has poor heat-insulating properties. For window linings it might be possible to use slab cork or several thicknesses of one of the insulating wall boards.

The same materials might be used for protecting panelling near radiators, and it might be feasible to leave an air space between the insulation and the wood which would, to some extent, be ventilated from the air of the room itself. The woodwork, however, would still be subject to considerable heat from the hot air currents passing in front, and under these conditions excessive desiccation is almost inevitable with the attendant troubles due to shrinkage and warping.

In addition, improvements may be obtained by suitable seasoning and possibly by the use of plywood for the panels near the radiators or, alternatively, by allowing ample clearance to enable the panels to move in their frames.

Corrosion of Steelwork

A contractor reported that when one of the floors of a building undergoing structural alterations was dismantled it was found that the steel joists were badly corroded and in some places almost perforated. The old floors were constructed of rolled steel joists embedded in coke breeze concrete, with coke breeze floor slabs spanning the cavities between the joists.

The dismantled floor had been subjected to a good deal of water, which no doubt percolated into the floor slabs and on to the steel. The latter, however, did not appear to be rusted in the usual way, and information was desired as to whether other floors of the same construction, but not subjected to water, would be liable to be affected in the same way.

The question of corrosion of steel by breeze and clinker concretes is dealt with fully in *Building Research Special Report No. 15*.

The conclusions of this report indicate that, with certain types of concrete, with coal residues as aggregate, there is some danger of corrosion of steel, even under dry indoor conditions, and consequently some apprehension must be felt as to the conditions of other floors in the building in question.

It would be anticipated that the rate of corrosion would be much increased where water had access to the floors, but it might be advisable to examine the conditions of the steel in a number of places in the "dry" floors.

LETTERS FROM READERS

The Architecture of Steel

SIR,—The letter from Mr. W. Basil Scott, published in your last issue, provokes me to avail myself of the opportunity of adding my pleas to yours for a betterment of the past relations between the architectural profession and the structural steel trade; such as is apparently outlined in the memorandum of that wideawake body, the British Steelwork Association.

Mr. Basil Scott is quite in error when he suggests that we architects classify "your editorial and article as provocative ebullitions, developed from wrong premises." I am anxious to avoid raking up past unpleasant experiences which necessitated placing important contracts for the structural steelwork of three big hotels with Continental structural steel firms instead of with English firms; but any efforts that can be made now to prevent any such recurrence should be warmly supported by all right-thinking Englishmen, and I, for one, wish to compliment you on your fair and proper appreciation of the facts, as set out in your editorial and article.

R. GOULBURN LOVELL

Scarborough Competition

SIR,—As no extracts from the assessor's report are given along with the illustrations published in most cases, and many of the 116 competitors will be too far away to come over, the following may interest them, and perhaps others, as this is the first competition, I believe, ever held for a Nursery School, new buildings at all being not numerous :

1 : "Many competitors failed to give a satisfactory disposition of the buildings on the site."

Many competitors acted on the suggestion that the playgrounds should be, if possible, not too close to the buildings, and utilized all the site along with the gardens asked for. Some left the unused portion, which had to be coloured pink, adjacent to the hatched portion, that some day is to be taken in and used for future extensions, so as to increase that area—a very practical proposition. It will be noticed that all four "mentioned" schemes left the pink area at the far inaccessible end. Inquiry of the promoters, as to its use there, elicited the information that the Corporation are now negotiating for the purchase of the field on the south side, and then they will be able to continue the private road round the far end. Of course, no competitor knew, but it would have saved a lot of puzzling if it had been settled before the competition.

2 : "Few showed a working acquaintance with practical nursery planning."

More than 100 of the 116 did not, and I only saw one scheme that showed it, and also a sufficient knowledge of the actual working that would have allowed of the school being run according to the best practice without alteration somewhere; but it was not one of the mentioned ones. Practically all followed the requirement and showed an ordinary slipper bath ! !

A trained teacher who heard of this competition said that there ought to be one of their number to assist in judging, as architects never understood their requirements. They ought to. This was conveyed to the promoters, but they said they were in the hands of the R.I.B.A.

H. T. D. (COMPETITOR)

On the Job : Wet Sites

SIR,—As suppliers of waterproofing materials, we are glad to say we are in complete agreement with your contributor, "The Guv'nor," who stated in his article published in your issue for January 21, that, owing to many drawbacks the use of asphalt was declining in favour of the use of waterproofing compounds for tanking sites, and the fact that we have been able to eliminate the human element to a remarkable degree undoubtedly accounts for the largely increased use of our own particular material for this purpose.

We cannot, however, agree that there is nothing to warn the supervisor of the fact that our waterproofer has been omitted, for it is a red liquid that colours the gauging water when included, and its omission would obviously be noticeable. It is also possible with our material to mix sufficient gauging water to permit the supervisor giving his attention to other matters for quite long periods, and this he can do confident in the knowledge that every drop of gauging water saturating the mix carries with it the correct proportion of waterproofer to ensure automatically an even distribution throughout the whole batch of cement or concrete, without need of stirring or other attention.

FOR CHEMICAL BUILDING PRODUCTS, LTD.,
THOMAS PARKER, DIRECTOR

On the Job : Foundations

SIR,—Noting the criticism of the above in your issue for February 4, signed W. E. J. Budgen, I give below such explanations as I think necessary, in the form of eight replies to the questions Mr. Budgen raised :—

GENERALLY. ON THE JOB
(JOB VIEWPOINT)

1 : All joints in concrete work form a danger point, however well designed. Any clerk of works will agree that it is very difficult to ensure that a joint left over a period is properly cleaned and grouted before resumption of work, and that necessary continuity rods have been left, and are doing their work. We cannot always obtain perfection, but should aim at such wherever possible.

2 : The same reason as above. The danger of fouling the concrete work in progress.

3 : The pocket is the usual method of design, and we have to deal with these matters on the job as we find them.

4 : See reply number eight, below.

5 : Figure five does not show bloom base in conjunction. This, however, is covered by the statement "reinforced if necessary." Deep base is referred to as in cases where the concrete has been sunk deeper than required by design to obtain good bearing at bottom.

6 : Next in order of thickness and as a self-supporting structure. Relative thicknesses of course depend upon relative heights and stresses. The article is self-explanatory to the man on the job. Steep frame is not a general term.

7 : There is an element of danger in using ballast improperly crushed in small beams.

8 : The same reasoning applies as in reply number one. Continuous work is understood to mean day by day. For first-class results this is essential.

THE GUV'NOR

Cottage Tenders

SIR,—I am uncertain whether Mr. Gunn, in his letter under the heading of "Cottage Tenders," in the JOURNAL for February 4, really wishes to reduce the cost of building, or to suggest a means of helping incompetent builders to prepare their estimates.

If I understand his suggestions correctly, I feel that they only tend to turn the architect into a quasi-quantity surveyor, and add unnecessary labour to complicate the worries and troubles of his present-day business.

The average builder is quite capable of preparing a tender, or having the tender prepared for him, by the simple means of taking off quantities from plans and specifications provided. That is assuming he wants the work, and to attain this end he must take the trouble and bear the expense of preparing his tender.

During the progress of the works the builder necessarily resorts to booking his labour, and booking and dealing with his material in tons of cement, thousands of bricks, pounds of paint, etc.

Mr. Gunn suggests that a supplementary bill be attached to the specification, prepared by the architect, setting

out the quantities of material required for the job.

So the architect has to decide how many hundredweights of cement, number of tins of paint, etc., are necessary to carry out the works.

Mr. Gunn optimistically suggests that for a cottage it is so simple, and would only take half a day to prepare. Perhaps so, but the architect would be taking, in addition, a heavy load of responsibility which builders would view with mixed feelings.

If Mr. Gunn really has a " cat in the bag " he has let it out when he says that it is so very simple taking out these quantities.

If this is so, surely the builders, who are dabbling with bricks and mortar daily, would find the task much simpler.

Some weeks ago I met a builder, plus his very formidable retainer, the costing clerk, to agree some prices in connection with extra decoration work. They gazed darkly upon me when I proposed quite a liberal measured price per yard super, and inquired whether I knew how many pounds of paint had been used in this particular portion of the work. I did not, but, delving into my pocket, I unearthed a small memorandum and, during a lengthy silence, worked out the approximate number of pounds that should have been used. Of course, the builder said that I was wrong—there were half as many pounds again.

The point is small, but I dread to think of the assault which would have to be withstood by architects in defence of a bill containing quantities for a dozen different materials.

I have no suggestions to make upon the subject of the reduction of building costs. The gradual lowering of prices of material, coupled with competitive tender, will gradually force down the cost of building.

The real assistance the architect can provide is a well-written specification, unhedged by the bolstering and catch phrases which have crept into these documents, and intended to cover descriptions to which insufficient thought has been given. WILLIAM DOWNE

SIR,—May I ask your permission to say that I know nothing about the matters of objection to which Mr. Lynn C. Doyle refers to in your issue for February 18. The National Federation of Building Trades Employers of Great Britain and Ireland and the Institute of Builders, in agreement with the Surveyors' Institution, issued in 1922 what is known as *The Standard Method of Measurement of Building Works*. One was justified in presuming that, since it bore the stamp of authority and was produced at much expense and labour, they would not only insist, but compel its adoption by all, and that no other method would be accepted. Mr. Lynn C. Doyle may have overlooked this fact.

Unfortunately, this has not worked out in practice. To my knowledge there were up to recently, and there may still be, contractors who have not heard of, let alone seen, " The Standard Method." Even the Surveyors' Institution, in their pamphlet *The Chartered Quantity Surveyor and His Work*, admits by implication that it has not been universally adopted by chartered quantity surveyors, nor by all the chartered quantity surveyors in London.

All this would seem to indicate that builders have not confidence in their own work, nor have some quantity surveyors either. As a result of hybrid and nondescript quantities there is to all intents and purposes as much chaos as in 1922.

Reverting to the pamphlet issued by the Surveyors' Institution, it would seem illogical of them to imply that candidates for examination must possess a knowledge of " The Standard Method," yet not compel its adoption by the members.

It also does seem strange that the National Federation of Building Trades Employers does not insist upon its adoption.

Mr. Edwin Gunn, along with others, has put the case for a simpler form of quantities than the standard for cottages. We know what was the result of hybrid, nondescript and standard quantities in regard to tenders for cottages in the past. Undoubtedly there is a need for quantities for cottages, and as the country cannot afford another failure, the question is : What is to be done ?

T. SUMNER SMITH

SIR,—I have read Mr. Edwin Gunn's suggestions and Mr. Lynn C. Doyle's comments with interest. But my own experience, which embraces both the preparation of quantities in ordinary form, the preparation of lists of materials required for the works, and the pricing of both these forms, forces me to the conclusion that matters are not so simple as they sometimes appear to be.

To take a very simple illustration : even experts are not in entire agreement as to the constituent parts of a yard of concrete *in situ*, reduced to volumes by measure of each; and with aggregates bought by weight, but used by volume, such as in the case of broken stone, the margin for error may on account of wide variations in specific gravity be very considerably increased.

But to carry it a stage farther, assume that it is desired to prepare correct lists of materials on which to base an accurate estimate for a small house having faced brickwork and brick dressings, and that for the moment it is the brickwork that we are dealing with. To find the total number of bricks required, it is first of all necessary to proceed in exactly the same way as a surveyor, and measure accurately, deducting all voids, lintols, plates and so forth. But before we can reduce these measurements to brick count, we must know the exact size of the bricks used and the thickness of mortar joints, and make some careful calculations. We thus arrive at the sum total of bricks—assuming them all to be common; but as this is not the case we have to classify them, and the classification may involve a rectification of the sum total.

We next measure the facings, and if the facing brick is of the same size and laid with the same thickness of joint as the common, we may, after making allowance for headers in bond, get our first useful result—the correct number of common bricks. But if these sizes vary, a further calculation is necessary.

We have still to classify the facings and must deduct all specials for heads, sills, strings, cornices, chimney cappings and the like, and then for some types of facings reduce the remainder to stretchers, headers and quoins, and may even have to order right- and left-hand quoins where the rustication is itself weathered and the bond demands it.

Next, all the special bricks need a similar classification, and what with internal and external angles, stops, self returns, octagons, squints, seats, etc. etc., the items may easily embrace fifty variations in quite a small house; sometimes many more. Our half-day will have been more than ordinarily well spent if, at the end of it, we can write the brick orders, to say nothing of some more difficult ones to follow.

Quantities did not assume their present form by accident, and their preparation requires training, experience and skill. They are best left to quantity surveyors.

J. R. TAYLOR

The Ancient Monuments Bill

SIR,—Private practising architects will be glad to see from the report on page 256 of your issue for February 11 that Lord Raglan's amendment, to allow cathedrals and churches to be scheduled as ancient monuments, was defeated.

Such a proposal could only be made on the assumption that all the best brains and scholars in the profession were official architects.

Much as we should like to believe this, we doubt it. This question of official control is becoming a very serious problem for the private architect. In one town we know of, the staff of the City architect alone is probably as great as the staffs of all other architects in the said City, added together.

Quite apart from any economic considerations, it is obvious that the best traditions of architecture as an art cannot be served by the extinction of the

private architect who works untrammelled by dictation from groups of men most of whom neither know of nor care for quality of design or progress, apart from commercial transactions.

WILLIAM DAVIDSON

Steel Roof Construction

SIR,—Mr. Penty's articles on "Architecture *versus* Engineering" promise to be stimulating.

I cannot, even at this stage, allow his remarks on roof construction to go unchallenged, and whilst I am not prepared for an æsthetic discussion on such an antiquated device as a hammer-beam I enclose, at random, an illustration of a steel roof construction which is certainly not devoid of architectural qualities.

Is this not a case where architecture and engineering merge in the solution of a most difficult problem—a problem from which cost cannot be eliminated?

C. J. KAVANAGH
(BRITISH STEELWORK ASSOCIATION)

Smoke Prevention

SIR,—I was very pleased to read in your issue for January 28 a letter from Mr. Arnold Marsh in reply to my previous letter. I think that, apart from a certain number of Mr. Marsh's statements which I feel I must correct, our views are much more in common than would appear on the surface.

I agree with Mr. Marsh's wish "that coal should be carbonized before use, and the volatiles collected as wealth-producing substances rather than allowed to escape into the atmosphere as health-destroying products." I would go further: I would like to see all products of combustion which at present escape into the atmosphere retained and turned to some profitable use. Unfortunately this is not practicable today. Recent reports of companies manufacturing solid smokeless fuel say that by-products are already a drug on the market, and any wholesale extension of the manufacture of volatile products can only be effected at a heavy loss to the firms concerned, or by a considerable increase in the price of the solid fuels produced.

I cannot agree with the arguments put forward by Mr. Marsh on the grounds of economy. Even when coke is lower than house coal in price per ton, the following points must be taken into consideration:—

1: Owing to the high draught required, it is most difficult to maintain a small fire with gas coke, even when a special attachment is fitted to the grate.

2: Practically five buckets of coke have to be carried for every two buckets of coal.

3: There is generally a much higher percentage of ash in coke than in coal. It is also of smaller particle size and, being more diffused, it flies about the room more easily, causing extra trouble in cleaning.

4: While gas coke is sometimes lower in price than good house coal, low temperature coke is usually slightly dearer.

Turning to the questions of national economy, mentioned by Mr. Marsh, I think the following points should be taken into consideration. It seems deplorable that three million tons of potential fuel should escape annually into the atmosphere in the form of soot. Since these figures were published in 1925, however, great strides have been made as regards smoke consumption in various works in this country, and manufacturers of domestic appliances have also not been backward in studying this question. I am sorry that I do not quite follow the statement that this three million tons of soot becomes ten million tons of smoke; surely ten million tons of smoke is altogether out of proportion to the amount of coal consumption in this country? I have consulted several eminent scientists, and they cannot enlighten me.

The nation should certainly do everything to conserve its diminishing coal reserves, but it must be remembered that for every ton of smokeless fuel consumed, 33 cwts. of coal must be used in its manufacture.

Perhaps the main point which has been overlooked in our previous correspondence is that damaging products are given off not only by raw coal, but by any solid "smokeless" fuel. Soot in itself is not harmful either to human beings or to buildings. Most of the trouble laid at the door of the "smoke nuisance" is caused by sulphur fumes, which are given off more or less equally by coal or coke; in fact, while the quantity may be slightly less in the case of coke, the product is more harmful, containing as it does a larger proportion of sulphur trioxide, which combines readily with water to make sulphuric acid.

It is true that when soot settles on a building the surface is roughened and noxious fumes are thus easily retained to work damage, but a great deal of the dirt which settles on town buildings comes from the dust incidental to a city. In this connection it must be remembered that coke fires make a larger amount of fine ash than coal, and this has a similar effect to soot.

My Federation is most anxious to make any contribution towards solving the smoke problem, but it feels that this cannot be done merely by condemning the burning of raw coal as such, but by seeking methods of obtaining more efficient combustion of raw coal and developing smokeless fuels.

There is room for great improvement in the present methods of burning raw fuel and of producing and burning solid smokeless fuel. I understand that the Government Fuel Research Board have made some experiments regarding the open coal fire, and their work on the subject of solid smokeless fuel is, of course, well known.

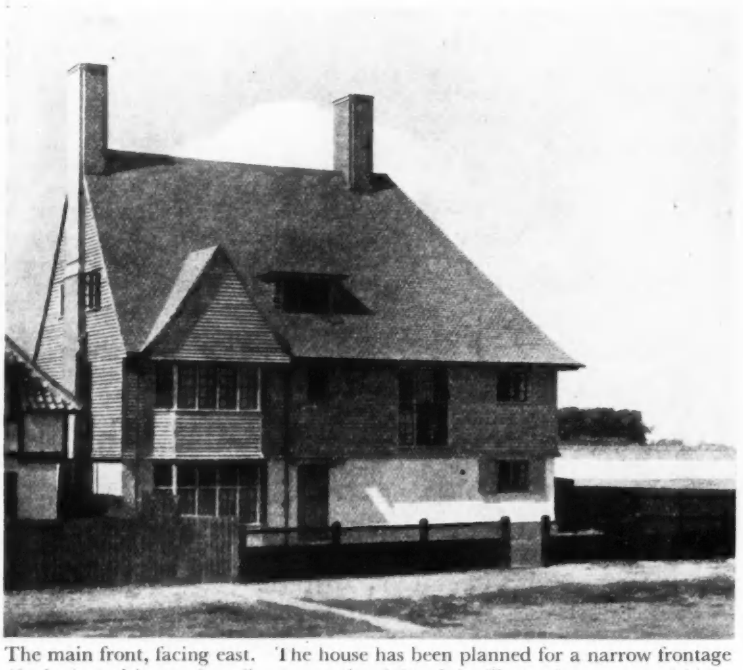
If I might make the suggestion, why should not the National Smoke Abatement Society and this Federation, together with any other interested organizations, co-operate to study these two problems?

We have certainly two aims in common, the welfare of the coal industry and the reduction of the amount of harmful products emitted into the atmosphere.

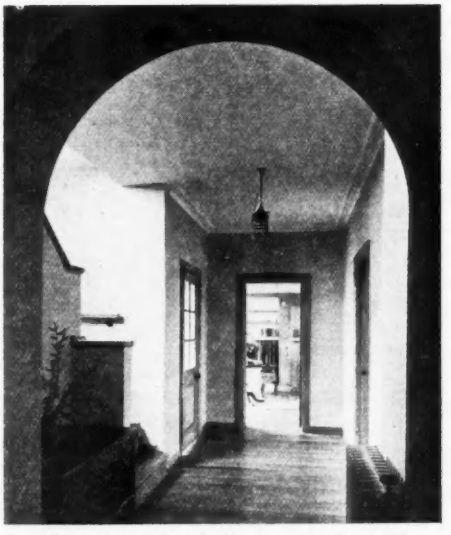
GEORGE GENTRY
(SECRETARY, THE COAL MERCHANTS FEDERATION OF GREAT BRITAIN)



Festival Hall at Frankfurt; see the letter from Mr. C. J. Kavanagh, printed on this page.



The main front, facing east. The house has been planned for a narrow frontage (60 feet), and its south wall, seen on the right of the illustration, comes within a few feet of the scullery and other windows of the adjoining house.

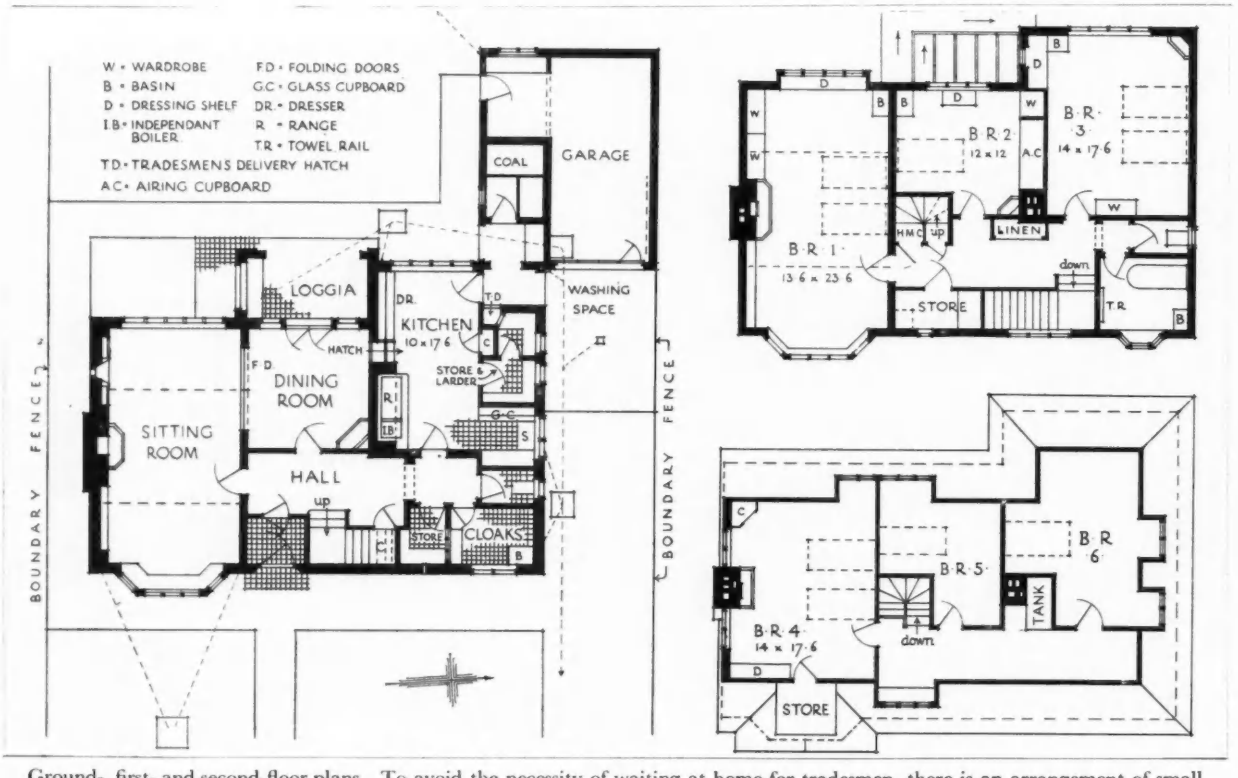


Looking along the hall, towards the sitting-room. The staircase has a solid plastered wall, instead of balusters, with a wide flat oak capping in lieu of handrail.

HOUSE AT

DESIGNED BY
(KNAPP-FISHER,

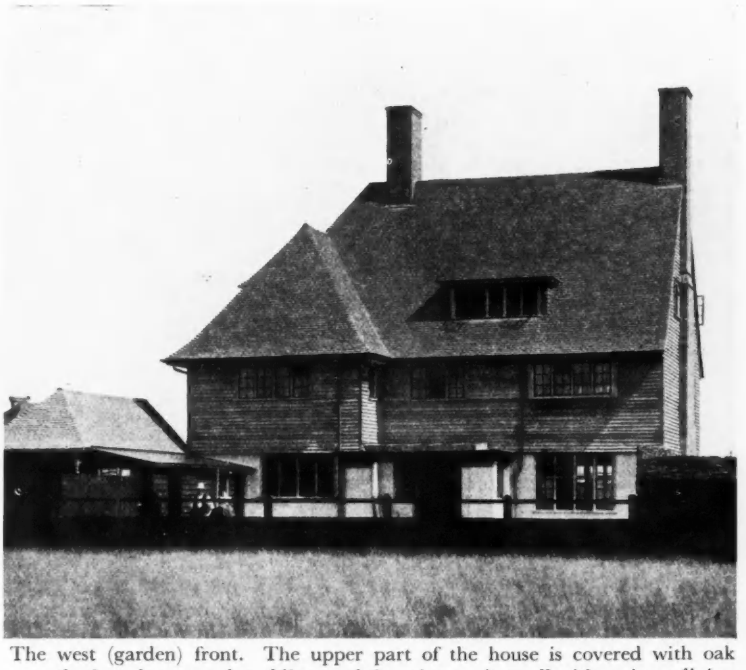
"MANISTY," Littlestone-on-Sea, Kent, has been designed for the Rev. J. M. Hardwick, with ease of working as the main consideration. Downstairs there are the rooms usual in a house of this sort, but the upper story comes as something of a surprise, as the staircase leading to it is shut off by an ordinary door. All the upstairs woodwork is stained a quiet grey tone, and the walls, in rough plaster, are left plain cream colour. The large attic room originally projected had to be sacrificed for extra bedrooms, but a wide "quarter deck" passage, with a seat in the window alcove, affords



Ground-, first- and second-floor plans. To avoid the necessity of waiting at home for tradesmen, there is an arrangement of small cupboards in the wall near the back door. Each of the principal tradesmen has a latchkey, and all the cupboards open internally to the larder.



In the dining-room the woodwork is of oak, including the outer surround to the fireplace. The door on the right gives on to the hall.



The west (garden) front. The upper part of the house is covered with oak weatherboards on wood studding, and there is a cavity wall with an inner lining of breeze blocks behind; the lower walls are of plaster, cream coloured.

LITTLESTONE, KENT

A. N. RUSSELL
POWELL AND RUSSELL)

magnificent views of the sea. An interesting feature of the house is the large drying cupboard which has been specially planned for the airing of mattresses—an important matter in a seaside house only intermittently occupied. The doors are so hung that the whole width can be thrown open and mattresses put on without folding them : they are held in position by movable metal rods, and four can be aired at once. At other times the cupboard serves for ordinary drying purposes.

The kitchen has been planned so that all the vital points are within a radius of a few steps from the centre.



The sitting-room, the principal room in the house, is panelled in oak, in order to conform to a general scheme of decoration. The inner fireplace surround is tiled. On the extreme left of the photograph can be seen part of the large bay window, overlooking the main front.

LITERATURE

THE ENGLISH PARISH CHURCH

IN some ways, among all the published volumes of the English Heritage Series, this must have been the most difficult to write. For, owing to the changes of the sixteenth century, the old parish churches are not, in any other than the architectural sense, a heritage of the whole nation in the same way as, say, the English Crown. Consequently the author is bound to approach his subject from a point of view of his own, and it is to Mr. Powys's credit that—except, confessedly, in one passage—this is never unduly stressed.

Fortunately, by far the most important part of the work is concerned with a period about which general agreement is fairly possible, or where controversy may be of a purely scientific kind, and here the author shows the breadth of judgment and detailed knowledge that we should expect. To give one instance, he sees that the formidable collection of abuses that can be produced, especially with regard to the administration of funds and the upkeep of fabric, represents, after all, only one side of the picture. From his technical knowledge of the fate of neglected buildings he concludes that, on the whole, the parish churches were *not* neglected, or they would not have survived, and also that the very diversion of funds for other purposes may, in the end, have secured the more efficient normal working of parish life.

On the architectural side, although there is a good deal to interest the expert, the author aims chiefly at supplying the amateur with enough information to enable him to draw conclusions for himself and, to this end, he gives five excellent diagrams illustrating the probable development of a typical, although imaginary, parish church. Among other points of value he reminds us that, in mediæval times, there was no difference in principle between ecclesiastical and general architecture save that which use and the need for greater size and dignity required; also, that Norman and Saxon architecture were not so diverse as we may think, and that Saxon features sometimes reappeared a century or so after the Conquest. Interesting, if not always convincing, explanations of such features as "squints" are given, and a delightful chapter on "Chantries and Chantry Priests" will enlighten many on a matter still widely misunderstood.

In Chapter III, Mr. Powys has much that is illuminating to say about the very varied uses to which mediæval parish churches were put. He shows how the efforts of authority to suppress "Ales," feasts, markets and plays within the sacred buildings were only partly successful, and he even breathes a sigh that they *were* successful in the end. While sympathizing with his idea that these customs showed an intermingling of the Church with the life of the people, we may point out that this desirable feature can be expressed in other ways. Meanwhile, we are indebted to this chapter for some of those brief but glowing descriptions of mediæval life which help to make this book a pleasure to read. F. D.

The English Parish Church. By A. R. Powys, with an introduction by the Rt. Hon. Lord Ferrers. London: Longmans Green & Co., Ltd. Price 3s. 6d. net.

SPECTACULAR BRIDGE CONSTRUCTION

IT is amazing to read in Dorman Long's book on *Bridges* that, until the economic exploitation of iron and steel in the latter half of the last century, there had been no appreciable advance in scientific bridge-building since the days of Rome. Bridges with spans of a magnitude that would have been regarded as fantastic fifty years ago are practical structures in these days of steel.

It is not remarkable therefore that, as one of the pioneers of the iron and steel industry, Dorman Long & Company should stand today in the front rank of the world's bridge builders, and it is as a record of their achievements in this branch of engineering that this volume is produced. It does not attempt, however, to deal exhaustively with the company's bridge-building activities, but examples have been chosen to show the versatility and resource of the bridge engineer in overcoming difficulties and bringing a contract to a successful conclusion, in spite of adverse working conditions.

One of the most spectacular pieces of work carried out by the firm was in connection with the new Tyne Bridge. A special clause was included in the contract to the effect that no material whatever was to be hoisted from the river, which had at all times to be kept clear for traffic. This necessitated the use of a novel method of erection which, it is believed, had never been employed before in Great Britain, and which was watched with the greatest interest by technical experts from all over the country.

The following description of the method employed is reprinted from the book:

The first or lowest members of the arch on either side were supported on a temporary steel cradle while they were being put in place, and in this way the two halves of the arch were built up from the abutments to a height at which they could be conveniently anchored by wire ropes at about road level. After serving its purpose on the Gateshead side, this cradle was dismantled and re-erected on the Newcastle side, where it was used for a similar operation.

Before removal of the cradle, each half arch was tied back from panel point twenty-one by means of eight steel ropes each eight ins. in circumference, to the ends of the approach spans. The cables were attached to the trusses by means of a U-bolt working on a steel pin. Threaded on the legs of the U-bolt were cast steel sockets in which the ends of the cables had been spread and then run in with white metal. The nuts on each leg of the U-bolt provided the means of adjustment necessary to ensure each set of cables being the same length and therefore taking an equal share of the load, and measurement of stresses on the cables was carried out by periodical vibration tests.

The next stage was the erection, on the ends of the approaches, of temporary steel masts 70 ft. high, built on pins and free to rotate, from the tops of which sixteen wire back-stay ropes were carried down for each half arch to an anchorage in the approach span web members at a point 150 ft. back from the base of the mast. From the river side of each mast, eight ropes were taken to panel point seventeen, and when these were in place the first position cables were removed. When the arch erection had proceeded to a sufficient height, more cables were put from the masthead to panel point thirteen, and those to panel point seventeen were removed. The cables, sixteen on each side, remained in this position until the final closing, at which time each set was supporting a load of about 2,000 tons. These cables were all of one type and specification, each being $2\frac{3}{4}$ ins. in diameter, and composed of 217 wires in eight layers, with a breaking load of 350 tons and a working load of 90 tons.

The foregoing paragraph deals with the support of the arch during erection, whilst the diagrams themselves show clearly the "cranework" required to raise the huge members, some of which exceed 20 tons in weight. The sections of steelwork were supplied to the cranes with the minimum of handling. A 20-ton derrick crane with a special jib 115 ft. long picked them out of the railway wagons on the quayside and deposited them on to a bogie, pulled by a winch along a narrow-gauge track or runway, laid on top of the bridge cross-girders in the line of one of the footpaths. Carried on the back of the ribs of each half-arch was a 30-ton electric standard Scotch derrick, mounted on a steel gantry to give a level

platform. This derrick reached out over the bogie on the runway, picked up each piece of steelwork, slung at the correct angle, and lowered it to fit easily and accurately into place with the minimum of time and effort. When the 30-ton crane had worked out to the limit of its reach, it erected a 5-ton derrick at the extreme point of the steelwork. This 5-ton derrick then dismantled the 30-ton crane and re-erected it alongside itself, and the crane, before proceeding with the erection of the steelwork, dismantled the 5-ton derrick and laid it down ready to repeat the whole process a little later. This scheme of operations continued until the final stages, when the two 30-ton cranes were able to co-operate in the erection of the central members.

At this stage it only remained to bring the two halves together, and this extremely delicate operation was performed in the following manner.

The arch ribs had been built, and were held suspended so that the centre of the span was at a level 6 ins. above its final true position, and when erection was complete, except for the centre panel of the bottom boom, a 5-in. pin was inserted into the gap between the two halves in the plane of the top booms, and by means of an ingenious jacking arrangement the halves, pivoting on their own main bearings, were lowered until they met, and the arch temporarily became of the three-hinged type. The process of lowering the halves was performed very simply. A telescopic steel saddle, actuated by four 200-ton hydraulic jacks, was placed close to the anchorage, under each group of backstay cables supporting an arch rib. By jacking the saddles up or down, and thus deflecting the cables out of a true line from construction mast to anchorage, an appreciable movement could be produced at the centre of the span, and in this way, assisted by constant telephonic communication between the top of the arch and each set of jacks, the closing was accurately carried out.

This operation, which was marked by the firing of maroons and breaking of flags on the bridge itself, took place six months after the date on which the construction of the arch was started.

After the completion of the arch, the work, if not of such a spectacular nature, continued to be of great interest to engineers all over the country.

The firm's biggest undertaking is, of course, the Sydney Harbour Bridge, now nearing completion.

LAW REPORT

LIABILITY FOR WORK

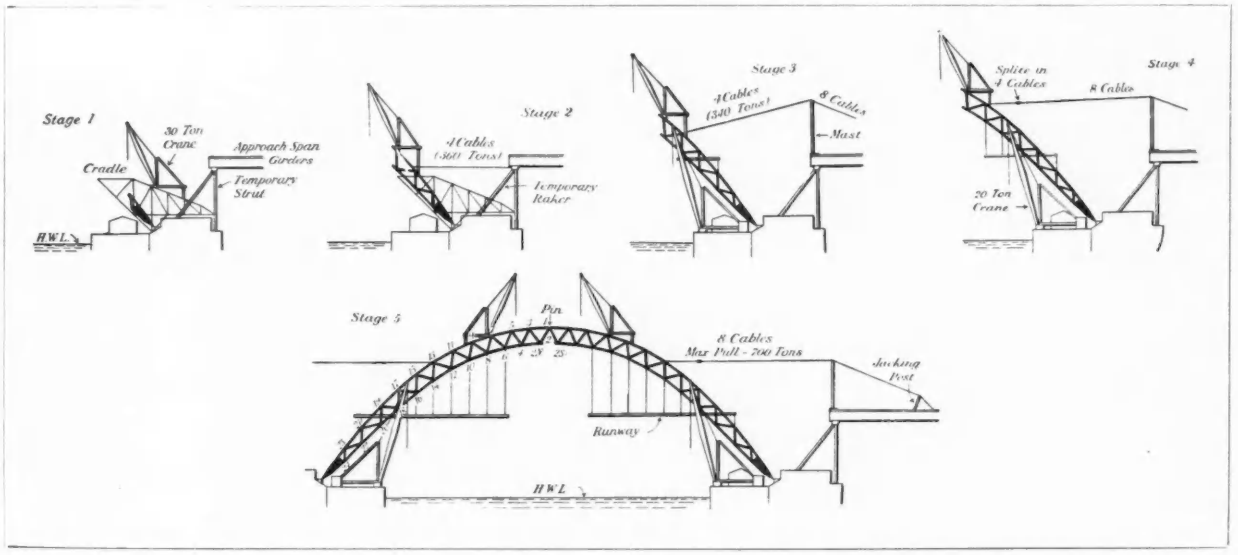
Planter v. *Martin. King's Bench Division Before Mr. Justice MacKinnon*

INTERESTING points arose out of this action in regard to the liability of a lessee for repairs to a structure, when statutory notices were served. The plaintiff, Mr. J. Planter, sued Mrs. E. Martin for damages for alleged breaches of covenant in a lease.

Plaintiff's case was that the defendant, under a lease of March, 1925, took the dwelling-house at 193 Sutherland Avenue, London, W., for fourteen years at a rental of £150. She covenanted to pay all charges and outgoings imposed upon the premises and to keep them in substantial repair. There was, however, a provision that she should not in any period of seven years be called upon to pay more than £100. Plaintiff said that during the tenancy the defendant not having done the necessary work he was called upon under dangerous structure and nuisance notices to carry out work which cost him £97 odd, and he now sought to recover that amount from the defendant, contending that she was liable under the covenant to pay "all outgoings."

Defendant, in reply, said she had spent over £100 in repairs, and submitted that the plaintiff as owner was liable for work done under the statutory notices.

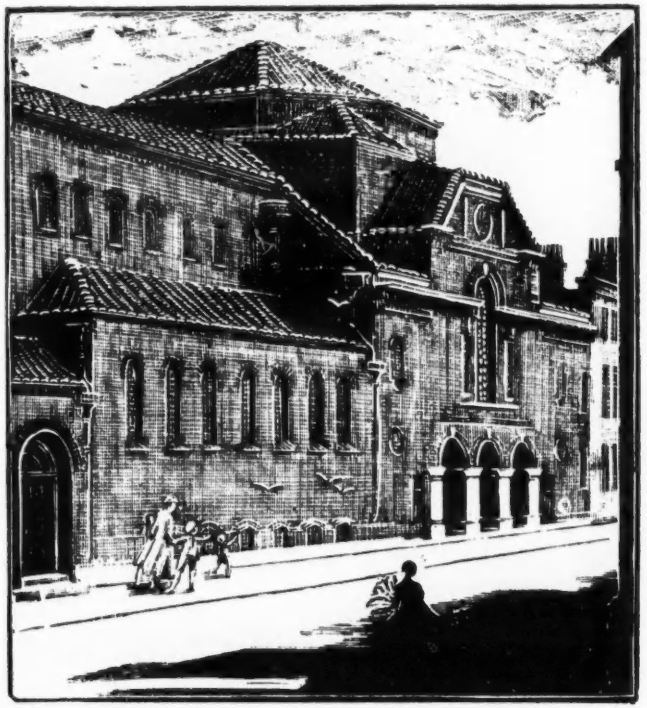
His lordship, after hearing long legal arguments, said in his opinion there was no covenant by the lessor to carry out any repairs at all. He was satisfied so far as the defendant was concerned that she had spent £100 on repairs to the house during the first seven years and therefore she had complied with the obligation imposed upon her in that respect. The other question in the case was a more important one. From the legal arguments and cases cited it was clear that the expenses to which the owner was put, which had been occasioned by reason of the obligation put upon him by the Act of Parliament to do repairs, were to be regarded as "outgoings." That being so the plaintiff was entitled to recover them. As there was no dispute as to the amount, he gave judgment for the plaintiff for £92 odd with costs, disallowing a fee of about £5 paid by plaintiff to the surveyors he consulted, which his lordship said could not be recovered.



Diagrams showing the method adopted of erecting the arches of the Tyne Bridge.

THE SKETCH CLUB

TWENTY-THIRD SESSION



By Miss M. Frith. (Wood-engraving : 4½″×5″)
The Ninth Church of Christ, Scientist, Marsham Street, S.W.

MAINLY English studies are here exhibited, and mainly they are executed in the architect's favourite sketching medium—pencil. The exceptions in matter are a pair of secular subjects by the same Serbian artist who contributed monastic ones to the last session; one of the exceptions in style is a woodcut. The art of wood-engraving, once widely in vogue for illustrations of all kinds, even in the daily press, is now chiefly pursued by enthusiastic amateurs. Among them many architects are probably numbered; it would give the hanging committee pleasure to consider examples.



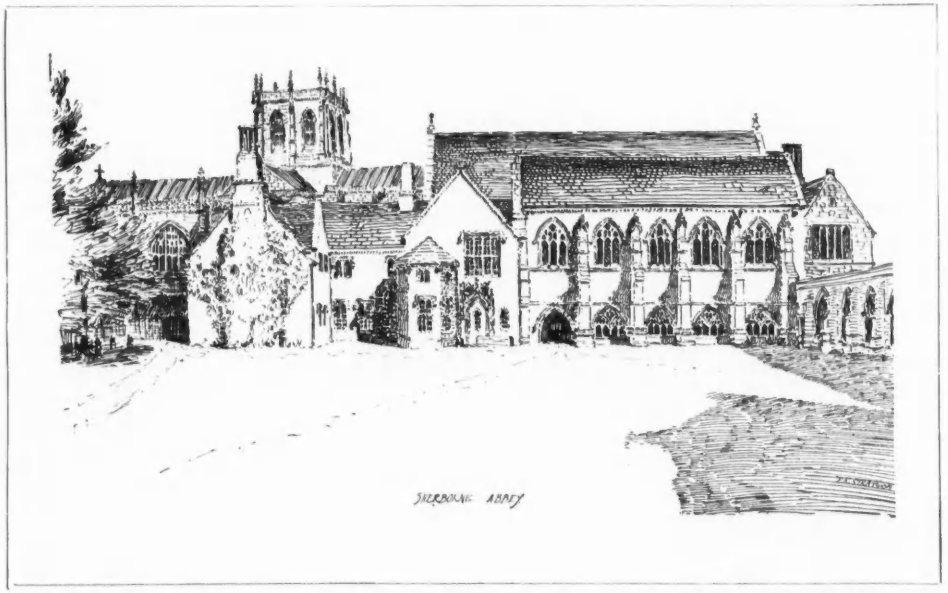
By Ljub. Ivanovic.
(Pencil : 6¾″×11″)
The Tower of Zletovo, S. Serbia.



By Ljub. Ivanovic.
(Pencil : 5½″×9″)
A Street in Ochrida, S. Serbia.



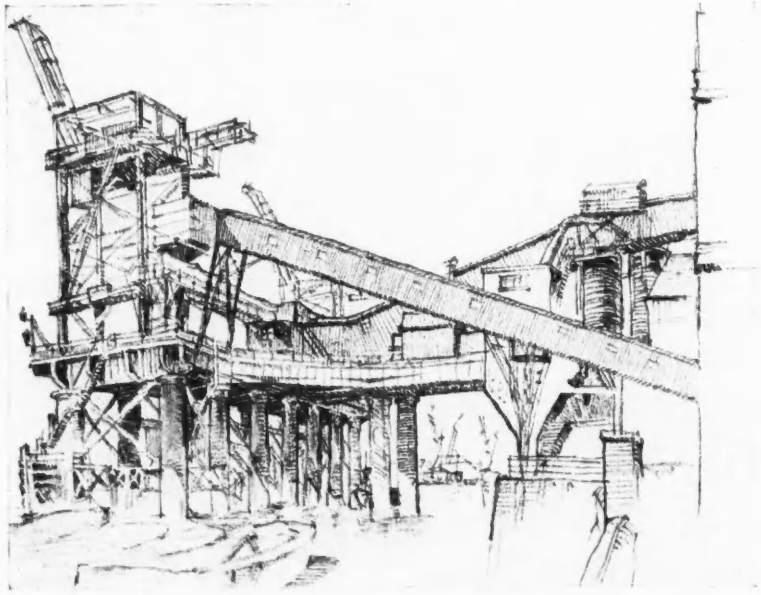
By D. Bethune Williams. (Pencil : $4\frac{3}{4}'' \times 7\frac{1}{2}''$)
All Souls Church, Langham Place, W.



By P. M. Stratton. (Pen and ink : $16\frac{1}{4}'' \times 11\frac{1}{4}''$)
Sherborne Abbey, Dorsetshire.



By D. Bethune Williams. (Pencil : $5'' \times 8\frac{3}{4}''$)
The Katharina of London, unloading at Rye.



By J. Cumingham.
(Pencil : $9\frac{1}{2}'' \times 7\frac{1}{4}''$)
Coal Jetty at Greenwich, S.E.



By D. Bethune Williams.
(Pencil : $8'' \times 6''$)
Church Square, Watch Bell Street, Rye, Kent

IN PARLIAMENT

[BY OUR SPECIAL PARLIAMENTARY REPRESENTATIVE]

Safeguarding Rural Amenities

A SECOND reading has been given in the House of Commons to the Surrey County Council Bill, which is a striking example of an attempt by a local authority to safeguard the amenities of the area under its control. The Bill seeks to give the County Council powers to control ribbon development alongside arterial roads, to safeguard rural amenities, to preserve beauty spots and views, and to exercise supervision over the erection of petrol-filling stations. Many members supported the Bill and commended the Surrey County Council for their progressive spirit.

New Government Offices for Whitehall

At question-time, Mr. Bracken asked the First Commissioner of Works whether he had consulted with the Fine Arts Commission concerning the design for the new Government offices in Whitehall.

Mr. Lansbury said that the Royal Fine Arts Commission had been consulted as to the building line to be adopted on the Embankment side of the site. The commission for the design of the building would later on be entrusted to an architect in private practice. The precise method of selection had not yet been settled.

Housing Conditions in London

Major Nathan asked the Minister of Health if, in view of the special problem which London presented as regarded housing, he would set up a Royal commission or select a departmental committee for the purpose of inquiring into the position and making recommendations, with a view to improving housing conditions in London generally, and particularly in the congested areas of East London.

Mr. Greenwood replied in the negative. He added that the Housing Act, 1930, placed on the London County Council the responsibility for reviewing housing conditions in London, and he did not at present consider that the adoption of Major Nathan's proposal would accelerate either the provision of new houses or the clearance of slums.

Slum Clearance Schemes

Mr. Graham White asked the Minister of Health if he would state the number of slum-clearance schemes that had been submitted to and approved by him since the passage of the Housing Act, 1930; and whether he was satisfied that adequate progress was being made in this respect.

Mr. Greenwood said that 107 areas had been declared to be clearance areas. These declarations did not require his approval. Although considerable progress had been made, he was not yet prepared to say whether he was satisfied that it was, on the whole, adequate.

Government's Housing Policy

Sir K. Wood asked the Minister of Health whether he had any statement to make to the House as to new proposals relating to house building; when the conference of employers, employees, and producers of raw materials was to be called by him; and if he could state the purpose of the conference and the expenditure involved.

Mr. Greenwood said that the housing policy of the Government was contained in the Acts of 1924 and of last year. The Building Industry Committee and the Inter-Departmental Committee on the Prices of Building Materials, formed in October, 1924, and in April, 1923, respectively, were still available for consultation, but while it had not yet become necessary for him to confer formally with either of these Committees in connection with the operation of the 1930 Act, watch was being kept upon prices and other factors in house building.

SOCIETIES AND INSTITUTIONS

R.I.B.A. GOLD MEDAL

THE R.I.B.A. Gold Medal for the promotion of architecture will be presented to Sir Edwin Cooper, A.R.A., F.R.I.B.A., at the R.I.B.A., 9 Conduit Street, W.1, on Monday next, at 8 p.m.

NORFOLK AND NORWICH ASSOCIATION OF ARCHITECTS

The annual meeting of the Norfolk and Norwich Association of Architects was held at Curat House, Norwich, on Friday, February 6. Mr. E. H. Buckingham, the President, occupied the chair.

The President, in his annual address, dealt principally with the work of the R.I.B.A. and the allied societies, going fully into details of the Betterment scheme which is bound up with the Registration Bill now before Parliament. He explained the purpose of the reopening of the Licentiate Class and the safeguards which had been adopted in connection with such reopening. He pointed out that all applications to the Institute for admission to the Licentiate Class had to be referred to the allied society of the district in which the applicant was practising before the application was placed before the R.I.B.A. for consideration. He also dealt with the representation of the allied societies on the Council of the R.I.B.A., stating that he had been very much impressed at the council meetings by the attention paid to the view expressed by the representatives of the allied societies.

Finally, he addressed a word to the younger members, pointing out that the work of the allied societies was becoming more onerous every year and that those who shouldered the responsibility for this work needed all possible support from these young men. The Betterment scheme and the other work of the allied societies were largely for the architects of the future and a very important matter to the younger members. He hoped they would make up their minds to assist their Association in every possible way, which was after all for their own ultimate benefit.

Prizes for measured drawings were awarded to Messrs. F. M. Dewing and R. O. Bond, and a valuable and helpful criticism of the students' work was contributed by Mr. Theodore G. Scott.

Mr. Dann gave a brief report of the architecture classes which have been commenced at the School of Art. There were now ten members in the class; work was proceeding very satisfactorily, and he had great hopes for the success of the venture.

It was announced that the Dean of Norwich had consented to give a public lecture on behalf of the Association at Stuart Hall, Norwich, on Friday, February 27, entitled "Parish Church Architecture in the Middle Ages."

The officers for the ensuing year were elected as follows: President, Mr. E. H. Buckingham, F.R.I.B.A.; past president, Mr. S. J. Wearing, F.R.I.B.A.; vice-presidents, Messrs. J. Page, A.R.I.B.A., C. Upcher, F.R.I.B.A.; honorary secretary, Mr. E. W. B. Scott, F.R.I.B.A.; council members, Messrs. T. G. Scott, F.R.I.B.A., A. G. Berry, F.R.I.B.A., and E. J. Tench, F.R.I.B.A.; associate member of Council, Mr. G. Anderson; honorary auditor, Mr. E. H. Skipper, A.R.I.B.A.

The meeting closed with a vote of thanks to the honorary secretary.

NEW SCOTTISH ACADEMICIAN

Mr. James A. Morris, F.R.I.B.A., of Ayr, at the statutory general assembly of the Royal Scottish Academy, was raised to the rank of Academician.

WELSH SCHOOL OF ARCHITECTURE

Mr. H. Norman Edwards, Chairman of the South Wales Institute of Architects (Central Branch), presiding at the annual prize distribution of the Welsh School of Architecture, Cardiff, said

that though the school had been founded only ten years ago the number of pupils had increased from six to sixty. Not only were students attending from all parts of this country, but even from as far as the Malay States. The quality of the work done was shown by the fact that there were five successes in the architectural competition held at the Welsh National Eisteddfod, 1930.

Reporting on the work of the School of Architecture, Mr. W. S. Purchon, M.A., A.R.I.B.A. (Principal), said he deeply appreciated the great source of strength which the R.I.B.A., acting through its Board of Architectural Education, had been to the school since its inauguration.

The prizes, certificates and diplomas for the session 1929–30 were presented by the Lord Mayor of Cardiff, as follow :

Lord Mayor's prize for third-year students [£2 2s.]. (Presented by Alderman Wm. Charles, J.P., ex-Lord Mayor) : Mr. Norman D. Ayres.

President's prize for first-year students [£3 3s.]. (Presented by Mr. T. Alwyn Lloyd, F.R.I.B.A.): Mr. Cyril H. Francis.

Second prize, for first-year work. (Presented by Mr. W. S. Purchon, A.R.I.B.A.) : Mr. W. Roberts.

Working drawings prize [£2 2s.]. (Presented by Mr. Ivor Jones, A.R.I.B.A.) : Equal, Messrs. Francis K. Aitken and F. W. Honeywell.

Prize for fifth-year theses [£2 2s.]. (Presented by Mr. T. Alwyn Lloyd, F.R.I.B.A.) : Equal, Messrs. Francis K. Aitken and C. A. E. Thatcher.

Architectural sketching prize [£2 2s.]. (Presented by Mr. H. Teather, F.R.I.B.A.) : Mr. H. J. W. Lewis.

Architectural construction prize [£2 2s.]. (Presented by Mr. H. Budgen, F.R.I.B.A.) : Mr. Wm. J. Davies.

Batsford prize for architectural history and theory of design [£2 2s.]. (Presented by Messrs. B. T. Batsford, Ltd.) : Mr. G. D. Ll. Richards.

Sketch design prize [£2 2s.]. (Presented by Mr. E. C. M. Willmott, A.R.I.B.A.) : Mr. H. J. W. Lewis.

Prize for draughtsmanship [£2 2s.]. (Presented by Mr. Percy Thomas, O.B.E., F.R.I.B.A.): Mr. John W. Bishop.

Certificate in architecture (carrying with it exemption from the R.I.B.A. Intermediate Examination) : Messrs. Norman D. Ayres, John T. Darch, William J. Davies, and Gordon D. L. Richards.

Diploma in architecture (carrying with it exemption from the R.I.B.A. Final Examination, with the exception of the subject of Professional Practice) : Messrs. Francis K. Aitken (with distinction); Leonard R. Richards (with distinction); John W. Bishop (with distinction); Carl A. E. Thatcher (with distinction); Olwen M. E. Price (with distinction); Frederick W. Honeywell; Ivor F. B. Richards; and Glyn P. Llewellyn.

The South Wales Institute of Architects, Central (Cardiff) Branch Prizes, Session 1929–30.

Design, second year [£2 2s.] : Mr. Frederic G. Allen.

Design, third year [£3 3s.] : Mr. William J. Davies.

Design, fourth year [£4 4s.] : Mr. John P. Ward.

Design, fifth year [£5 5s.] : Mr. John W. Bishop.

Measured drawings [£3 3s.] : Mr. Frederic G. Allen.

Measured drawings [£2 2s.] : Mr. William J. Davies.

SOUTH WALES INSTITUTE OF ARCHITECTS : EASTERN BRANCH

The annual meeting of the above branch was held at Newport on February 10, preceded by tea, presided over by Mr. Johnson Blackett, A.R.I.B.A., chairman of the branch.

The President of the South Wales Institute, Mr. T. Alwyn Lloyd, F.R.I.B.A., and the Honorary Secretary of the Institute, Mr. Ivor P. Jones, A.R.I.B.A., were present and addressed the meeting, urging the importance of carrying on the branch activities; and several members spoke to the same effect. Various suggestions were made for increasing the interest of local practising and junior architects.

The following were elected as officers for the branch for the year 1931-2 : Chairman, Mr. Johnson Blackett; hon. treasurer, Mr. C. E. Compton; hon. secretary, Mr. J. E. Lenton; committee : Col. E. H. Fawckner, and Messrs. Colin L. Jones, Horace Jones, C. E. Tebbs and C. F. Ward; representatives of associates and students on committee : Messrs. H. B. Rowe and J. P. Harris. The following were elected representatives of the branch on the council of the South Wales Institute of Architects : Messrs. C. F. Bates, J. Blackett, Colin Jones and J. E. Lenton.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION

The above Association held its first annual dinner at the South-Western Hotel, Southampton, on February 12, when a company of 160 were present. Mr. J. Arthur Smith, F.R.I.B.A., who, with Mrs. Smith, had previously held a reception, presided.

Lt.-Col. R. F. Gutteridge, F.R.I.B.A., vice-president of the Association, proposing "The Borough and University College of Southampton," said he hoped the Bargate would be satisfactorily dealt with before this year was out, and the dock extension would also be in hand.

The Mayor of Southampton, in response, said, in regard to the Bargate, they had accepted the design of Mr. H. P. Cart de Lafontaine, and he hoped the work, which would be carried out during the year, would greatly help to solve the traffic problem.

The Principal of University College said he thought they had done a prophetic thing in coupling the College with the town, as he felt sure that what benefited the one would benefit the other.

The Bishop of Southampton, proposing "The R.I.B.A. and its Allied Societies," which, he said, included in particular the H. and I.W. Architectural Association, expressed the hope that in the building of new churches the architectural profession might be more busy than at present seemed apparent.

Sir Banister Fletcher, P.R.I.B.A., whose name was coupled with the toast, said he stood there as the representative of some 15,000 architects, practising in all parts of the British Empire. They must look at all the past work architects had produced, and if all they had done were taken away from the earth, it would be a very poor place. Speaking of ordinary buildings, he said that any architect could produce homely and less expensive designs than many of the houses put up without professional advice. The Royal Institute hoped to pass a Bill which would make it impossible for people to spoil the countryside with the ugly type of buildings which had been springing up. He congratulated the president on that first annual dinner, and the county on having an association like that to carry on the great traditions of their craft.

Mr. J. Arthur Smith, president of the Association, who also responded, said what a pleasure it was to have so many distinguished guests at that, their first, annual dinner. The Association endeavoured to co-operate with the Institute in all matters of policy and in the education of the public in regard to architecture and the advancement of their profession. They realized that they had a great responsibility, and endeavoured to discharge it to the best of their ability and to maintain worthily the best traditions of the profession.

Other toasts were "The Building Trades," proposed by Mr. T. Alwyn Lloyd, F.R.I.B.A., and responded to by Mr. Arthur Francis, F.I.O.B.; and "The Visitors," for whom Ald. W. Mouland and Mr. G. C. Lawrence, F.R.I.B.A., responded. Acknowledgment was also made of the arrangements made for the dinner by the hon. sec., Mr. A. L. Roberts.

THE NEW ARCHITECTURE

In declaring open the exhibition of the students' work of the Birmingham School of Architecture, held in the Galleries of the Royal Society of Artists, Mr. Guy Dawber, F.R.I.B.A., said that in the teaching of architecture, while keeping abreast of all modern and changing methods of construction, they must recollect that all architecture had been a long series of evolution. Any violent changes such as they saw abroad today were bound to have a reaction. They must be very careful of new theories, of the dull repetition of the shibboleths of fashion, and be practical as well as beautiful in their work. Art never stood still; the conditions and demands of life continually changed, and the rapid developments of science had introduced elements that must be dealt with in the design of buildings.

A great change had swept over the Continent today, he continued, and a

new architecture had evolved—if it could be called so—which was likely to submerge all our old faiths. Much of this ultra-modern work—this striving after the uncommon—was bizarre and brutal, and repellent in every way to our ideas of ordered simplicity and dignity. In our own country, however, modern architecture had developed on simpler and safer lines, and tradition and common sense had not been thrown overboard. In architecture, he thought, the traditionalist would ultimately triumph.

In much of this new architecture there was a deliberate neglect of the study of the past, so that they saw today buildings designed without the least imagination or inventive skill—a mere clothing in the flimsiest of architectural garments of the bold construction of the engineer. In his opinion, it was a fatal mistake for the architectural profession to discard the study of old examples and only encourage that of the contemporary work of the moment; but he understood that was the tendency of much of the teaching of today. A great deal was missed by eliminating the study of old buildings. Let them look at the works of the greatest architects in this country today. Let England be their background in design, and let them try to carry on the great tradition of building in the eighteenth century.

He did not suggest they should be mere copyists, for the conditions and materials at their command today would make that a mere sham and an absurdity; but when they built, whether in town or country, let them try to carry on the spirit and tradition of good buildings and good manners so typical of that time, which was so eminently English and which we seemed in some danger of losing.

TRADITION AND MODERNISM IN ARCHITECTURE

A lecture on the above subject was given by Mr. Stephen Walsh, A.R.I.B.A., at a meeting of the Northern Architectural Students' Club.

The lecturer commenced by reviewing the architecture of the nineteenth century in England, and described the temporary arrest of the direct Renaissance tradition, caused by rigid adherence to classical orders from the textbooks and lack of unity between plan and elevation.

He said that the architecture of the middle of the century onwards was influenced by three important factors.

First, Romanticism, which identified beauty with the barbarously picturesque, and the ideals of Pugin and Ruskin, who extolled the Gothic as the only truly moral and therefore beautiful style.

Secondly, Stuart and Revett's *Antiquities of Athens* and the Neo-Grec movement; thirdly, the industrial revolution and its resultant suppression of nearly all æsthetic considerations in architecture.

Mr. Walsh described the attempt of William Morris and the Pre-Raphaelites to revive the tradition of craftsmanship, and from them traced the tradition of the use of local materials in domestic architecture through Webb, Norman Shaw and Sir Edwin Lutyens to modern times. He mentioned the attempt of James Mackintosh of Glasgow to throw off all tradition and to commence again from the beginning. This movement had little success in this country, but found favour abroad and was now returning.

The architect was faced with the problem that local materials were more expensive than mass-produced materials brought from a distance.

Architecture had been dominated for far too long by an exaggerated respect for the antique. But bearing in mind its traditions, it must develop as logically and sanely as modern problems demanded. The process must be one of evolution, not of revolution.

BRIDGE BUILDING

Examples of bridge construction during the last 800 years were shown and some comments on the effect of ancient and modern practice were made by Mr. G. H. Jacks, F.R.I.B.A., at the Royal Society of Arts, last Wednesday, when he read a paper entitled "The Art of the Bridge Builder."

After tracing in detail the history of bridges from the eleventh to the eighteenth centuries, Mr. Jacks said the sacrifice of beauty in bridges and buildings during the nineteenth century was due to the full force of human endeavour having been concentrated on utility, a worthy aim in itself, but so bound up with financial considerations as to exclude the possibility of a display of taste in design, and, worse still, it had the effect of killing individuality in the craftsmen.

Utility first and last, joined with the one aim of profit earning, had given birth to mass production and standardization, even in bridges, and consequently dull uniformity, to the exclusion of the chief charm of workmanship, spirit and character.

Technical training nowadays was largely devoted to instruction in methods calculated to produce results by short cuts, with the minimum expenditure of energy. The aim was to produce standard patterns with precision in the least possible time; originality got little chance.

This had resulted in many young engineers and architects copying ready-made standard types, rather than using their own initiative. The natural genius which they possessed had been subordinated to a kind of "mass" genius. Other people's ideas, as condensed in the textbooks, were looked upon as the last word; and so long as their work was in accordance with "the book" they considered themselves justified. They dared not be original; it was dangerous. Happily, however, there were distinct signs of a better outlook in the near future.

The Title page and Index of THE ARCHITECTS' JOURNAL *for the half-year July–December, 1930, are now ready, and may be obtained free of charge on application to the Publisher, 9 Queen Anne's Gate, London, S.W.1.*

DORIC ARCHITECTURAL CLUB

The annual general meeting of the Doric Architectural Club was held at Oxford.

The work of the last year was reviewed and gave considerable satisfaction. The number of members has been greatly increased, and the balance sheet now shows a substantial amount in hand, whereas at the end of last year it showed a slight deficit.

The following officers were elected for the ensuing year: Chairman, Mr. T. F. Thomson, A.M.T.P.I.; vice-chairman, Mr. S. N. Bertram, A.R.I.B.A.; hon. treasurer, Mr. F. T. Pritchard; hon. secretary, Mr. K. A. Stevens; hon. assistant secretary, Mr. N. F. Rogers; committee: Messrs. Bott, Gerrard, Johnson, Pritchard, Surman, Stevens, and Thomson.

MONASTICISM AND CHURCH ARCHITECTURE

Sir Banister Fletcher, P.R.I.B.A., lecturing on English Architecture at the Central School of Arts and Crafts, London, dealt with the rise of monasticism and its introduction to England; the monasteries and cathedrals, parish churches and chapels. Sir Banister, after speaking of the English monasteries, described graphically three of England's famous cathedrals—Canterbury, Lincoln and Winchester—and explained the evolution of the parish church.

LONDON MASTER ASPHALTERS AT DINNER

The eleventh annual dinner of the London Master Asphalters' Association was held at the Restaurant Frascati, Oxford Street, W.1, on Tuesday of last week. The president, Mr. Leslie A. Brown, presided over a gathering of about 200 members and guests.

Mr. Wilfred Travers, O.B.E., F.R.I.B.A., proposing the toast of "The Association," said the public knew very little about asphalt, and he suggested that it would be a better policy to educate

them rather than the architect, builder or surveyor. He thought that if there was a future for any material which was a product of British industry that material was asphalt.

Mr. Brown, responding, referred to the death, during the last twelve months, of two founder members of the Association, Messrs. Thomas Faldo and George Mitchell, both of whom were very respected members of their trade, as well as his personal friends. Mr. A. H. Hutchinson was another member who had passed away. Speaking of the work of the Association, he said they hoped to educate, in the near future, both the client and public in the uses of asphalt, and it was his intention, in regard to workmanship, materials and prices, to raise it to something worth while.

Proposing "The Guests," Mr. G. J. Spicer said that the Northern Master Asphalters' Association, some of whose members were present, was in no way connected with the London Association, but they had one thing in common, namely, the supply of the genuine material. On the question of educating the public regarding asphalt, raised by Mr. Travers in the previous toast, he said that the only way to get at the public was through the architect, builder, or surveyor. The bad state of industry today was gauged by the fact that the cost of asphalt was 50 per cent. above pre-war level, but the prices were the same as pre-war level. They were striving to give the best material and charge the least for it, so he therefore hoped that architects, builders, surveyors and quantity surveyors would assist them in their aim.

The responses to the toast were given by Messrs. C. W. Mathewman and W. H. Greer.

During the evening a gold cigarette case was presented to Mr. T. H. Knight, president for 1929, by Mr. Brown, on behalf of his fellow-members, as a token of the appreciation held by them for the valuable services he had rendered during his term of office.

COMPETITIONS OPEN

April 1.—Sending-in day. Development of the uses of aluminium and its alloys, for the International Aluminium Bureau. Two premiums of 25,000 francs. Conditions from the Bureau International de l'Aluminium, 23 bis, Rue de Balzac, Paris, France.

April 18.—Sending-in day. Central Municipal Bank and Head Offices, Broad Street, Birmingham. Assessor: Sir Reginald Blomfield, R.A., F.R.I.B.A. Premiums, £400, £300, and £150. Conditions from Herbert H. Humphries, City Engineer and Surveyor, Council House, Birmingham. (Deposit £3 3s.)

April 30.—Sending-in day. Hospital for Infectious Diseases, Coventry, for the Coventry Corporation. Assessor: E. Stanley Hall, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

THE ARCHITECTS' DIARY

WEDNESDAY, FEBRUARY 25

R.I.B.A., 9 Conduit Street, W.1. Exhibition of Architectural Travel Posters. Until February 27. 10 a.m. to 8 p.m. (Saturdays, 10 a.m. to 5 p.m.). **10 a.m.**

CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Mediæval Architecture: Westminster Abbey." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

SOUTH-EASTERN SOCIETY OF ARCHITECTS, Croydon Chapter. At the Y.M.C.A. Buildings, Northend, Croydon. "American Architecture." By C. S. Spackman, L.R.I.B.A. **8 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. Students' Meeting. Cinematograph film on "The Building of Imperial Chemical House." **6.30 p.m.**

THURSDAY, FEBRUARY 26

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At the College of Art, Leeds. "Classic Forms and English Geology." By Hope Bagenal, D.C.M., A.R.I.B.A. **7 p.m.**

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "London in Tudor Times." By D. Martin Roberts, M.A. (Illustrated by lantern slides.) **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "Concrete Roads: Past, Present and Future." By J. H. Walker, M.INST.C.E., M.I.STRUCT.E. **6.30 p.m.**

MARGATE SCHOOL OF ART. At the Wesleyan Schoolrooms, Hawley Square, Margate. Sixth of ten lectures on the History of Architecture. "Early Gothic Buildings." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

INSTITUTION OF ELECTRICAL ENGINEERS, Savoy Place, Victoria Embankment, W.C.2. "The Birth of Electrical Engineering." By Professor W. Cramp, D.SC. **6 p.m.**

FRIDAY, FEBRUARY 27

INSTITUTION OF STRUCTURAL ENGINEERS, Midland Counties Branch. At the Chamber of Commerce Buildings, New Street, Birmingham. "Some Notes on the Construction of an American Factory." By A. Lakeman. **6.30 p.m.**

SATURDAY, FEBRUARY 28

Sunrise, 6.47 a.m. Sunset, 5.39 p.m.

MONDAY, MARCH 2

R.I.B.A., 9 Conduit Street, W.1. General meeting Presentation of the Royal Gold Medal. **8.30 p.m.**

TUESDAY, MARCH 3

UNIVERSITY OF LONDON, King's College, Strand, W.C. Seventh of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

SOUTH-EASTERN SOCIETY OF ARCHITECTS. At the Technical Institute, Tunbridge Wells. "Architectural Acoustics." By C. W. Glover, L.R.I.B.A., A.M.INST.C.E. **6 p.m.**

WEDNESDAY, MARCH 4

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Safety in Factories." By Sir Gerald Bellhouse. **8 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At the Swedenborg Hall, 20 Hart Street, Bloomsbury, W.C.1. "Public Baths and Washhouses: Engineering Equipment and Data." By W. E. Fretwell and E. Shutt. **7 p.m.**

CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "English Mediæval Architecture: The Tower of London." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

THURSDAY, MARCH 5

WEST YORKSHIRE SOCIETY OF ARCHITECTS, 62 Woodhouse Lane, Leeds. Students' evening. "An Arbitration Case." Bozart *v.* Phillin and Rammin. **7 p.m.**

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Fashions in Furniture." By E. Hawking. **7 p.m.**

AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE, 29 Lincoln's Inn Fields, W.C.2. "Housing Act, 1930." By E. W. Eason. **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Yorkshire Branch. At the Metropole Hotel, Leeds. "Acoustics." By C. A. Harding, A.R.I.B.A. 7 p.m. South Wales and Monmouthshire Branch. At the Institute of Engineers, Park Place, Cardiff. "Concrete Roads: Past, Present and Future." By J. H. Walker, M.I.STRUCT.E. 7 p.m. **7 p.m.**

MARGATE SCHOOL OF ART. At the Wesleyan Schoolrooms, Hawley Square, Margate. Seventh of ten lectures on the History of Architecture. "Late Gothic Buildings." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, MARCH 6

ROYAL SANITARY INSTITUTE. At the Guildhall, Swansea. Discussion on "Housing" to be opened by J. M. Morris, M.D., followed by Ernest Morgan, A.R.I.B.A. **5.30 p.m.**

SATURDAY, MARCH 7

Sunrise, 6.32 a.m. Sunset, 5.51 p.m.

ROYAL SANITARY INSTITUTE. Meet at the Guildhall Yard, Swansea, for visits to insanitary, reconditioned and new houses; the new Townhill School; the new Mental Hospital or Llansamlet Sewage Pumping Station. **10 a.m.**

TUESDAY, MARCH 10

SOUTH-EASTERN SOCIETY OF ARCHITECTS. Joint Luncheon of Architects and Builders, to be held at the Lion Hotel, Guildford, followed by address on "Building Laws," by Major W. E. Watson, F.R.I.B.A. **1 p.m.**

UNIVERSITY OF LONDON, King's College, Strand, W.C. Eighth of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At the Borough Polytechnic, Borough Road, S.E.1. "Domestic Hot Water Supply." By H. L. Egerton. 7 p.m. Manchester and District Branch, At Milton Hall, Deansgate, Manchester. "Malleable Fittings." By H. R. Hiscott. 7 p.m. **7 p.m.**

WEDNESDAY, MARCH 11

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Some Aspects of Contemporary Decoration." By Arthur J. Davis, F.R.I.B.A. Chairman: J. C. Squire. **8 p.m.**

UNIVERSITY OF LONDON, King's College, Strand, W.C. Last of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "English Mediæval Architecture: The English Home." By Sir Banister Fletcher. **6 p.m.**

THURSDAY, MARCH 12

SHEFFIELD, SOUTH YORKSHIRE AND DISTRICT SOCIETY OF ARCHITECTS AND SURVEYORS. At the University, Sheffield. "Planning." By E. Berry Webber, A.R.I.B.A. **6.15 p.m.**

ARTS BUILDING, Lime Grove, Oxford Road, Manchester. "Repair of Ancient Buildings." By C. R. Peers, F.R.I.B.A., C.B.E.

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Early Panelled Rooms." By H. Warren Wilson, A.R.C.A. **7 p.m.**

SOUTH WALES INSTITUTE OF ARCHITECTS (CENTRAL BRANCH) AND INSTITUTE OF BUILDERS (SOUTH WALES BRANCH). At the Engineers' Institute, Park Place, Cardiff. "The Design and Construction of Modern Cinemas." By George Coles, F.R.I.B.A. **7 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "The Strength of Compression Members." By Ewart S. Andrews, B.SC., M.INST.C.E. **6.30 p.m.**

MARGATE SCHOOL OF ART. At the Wesleyan Schoolrooms, Hawley Square, Margate. Eighth of ten lectures on the History of Architecture. "Italian Renaissance and Its Architects." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, MARCH 13

INSTITUTION OF STRUCTURAL ENGINEERS. Lancashire and Cheshire Branch. At the College of Technology, Manchester. "Special Rust and Acid Resisting Steels." By W. H. Hatfield, D.SC., M.I.MECH.E. **7 p.m.**

SATURDAY, MARCH 14

Sunrise, 6.16 a.m. Sunset, 6.3 p.m.

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Third of six non-technical lectures on Present-day Architecture: "The Preservation of the Countryside, especially in relation to Building." By A. B. Knapp-Fisher, F.R.I.B.A. **3 p.m.**

MONDAY, MARCH 16

R.I.B.A., 9 Conduit Street, W.1. General Meeting. "The Treatment of Old Buildings." By C. R. Peers, F.R.I.B.A., C.B.E. **8 p.m.**

WEDNESDAY, MARCH 18

CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "English Mediæval Architecture: Monasteries, Cathedrals and Churches." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

THURSDAY, MARCH 19

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Reformers in Furniture Design." By Percy A. Wells. **7 p.m.**

CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Reinforced Concrete." By A. van Osenbruggen. **7.30 p.m.**

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At Bradford. General Meeting. **7 p.m.**

MARGATE SCHOOL OF ART. At the Wesleyan Schoolrooms, Hawley Square, Margate. Ninth of ten lectures on the History of Architecture. "French Renaissance and its Architects." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

SATURDAY, MARCH 21

Sunrise, 6.0 a.m. Sunset, 6.15 p.m.

CENTRAL SCHOOL OF ARTS AND CRAFTS. Visit to a Factory in East London. **2 p.m.**

MONDAY, MARCH 23

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "Beauty." By Professor R. M. V. Gleadowe. **8 p.m.**

TUESDAY, MARCH 24

IDEAL HOMES EXHIBITION (DAILY MAIL), Olympia, Kensington, W. Until April 17. 10 a.m. to 9 p.m. **10 a.m.**

DESIGN AND INDUSTRIES ASSOCIATION. At the London School of Economics, Houghton Street, Aldwych, W.C.2. "The Modern Film." By John Grierson. **8 p.m.**

TRADE NOTES

Following are notes on some of the exhibits at the British Industries Fair, now being held simultaneously in London and Birmingham :

The Croft Granite, Brick and Concrete Co., Ltd., are exhibiting, at the Birmingham section, cast stone and Croft Adamant marble, a material in which the veinings and colourings extend throughout the entire thickness. This material can be obtained in plain slab form for wall panelling, etc., or it can be turned, moulded, carved or cast.

The stand of the Asbestos Cement Building Products, Ltd., at the Birmingham section, is mainly comprised of Everite asbestos cement flue pipes and fittings. A special display is made by the firm of industrial fittings, including a large dust box and 4-ft. diameter pipes. Special Everite ducts for acid fumes are also shown. These should be of great interest to the chemical industry and managers of by-product works. Among the exhibits of unusual interest in connection with domestic gas-fired apparatus are the following : Everite geyser shelves, Everite slip sockets, Everite bentees, and gas-cooker canopies.

The exhibits of associated and subsidiary companies of Imperial Chemical Industries Ltd. at the Birmingham section are of particular interest. The Nobel Chemical Finishes, Ltd., merits particular attention because of the company's policy of showing definite articles—scales, safes, fire extinguishers, etc.—which have been finished in their materials by the actual manufacturers. This year some entirely new finishes are exhibited for the first time, in addition to a large number of applied examples of the Belco and Necol finishes. The principal exhibit of the Cassel Cyanide Co. is an improved form of the Cassel cyanide case-hardening furnace. This is shown working under heat, and is available for the making of samples and for demonstration purposes. Case-hardening is, in fact, done literally while you wait—in a few minutes. The Cassel pack-hardening compound is also shown, and a Cassel heat-treatment salt. There is also shown a machine known as the Cyanofumer for the production of hydrocyanic acid, used for the fumigation of citrus trees.

Unity electric water heaters of every description are being shown by Messrs. Young, Osmond and Young, Ltd., at the London section. The Unity principle is claimed to be simplicity itself. It is said that once the water is hot it keeps hot, and that as it is drawn off, cold water enters at the bottom and the electricity comes on automatically and starts heating it up ; and so the operation is repeated. It is also claimed that the inner tank is always full, so that the Unity is absolutely safe, and, furthermore, that the heating element cannot be damaged. Briefly, then, it is claimed that in the Unity electric water heater is "the perfect supply, running itself, regulating itself; giving never a second's trouble but a lifetime's satisfaction —and at an amazingly low cost for current, no matter where you live." If installed in the bathroom the Unity can be arranged to supply the bath and the kitchen below. It can be installed over cloakroom basin or over the basin in a bedroom.

The Gas Industries Section is again occupying a prominent position at Birmingham, and covers an area of 41,000 sq. ft. There are over seventy exhibitors in this section, and they have adopted a uniform colour scheme of green and yellow. The British Commercial Gas Association, on behalf of the whole industry, have set up a central bureau in the gas section, at which visitors are able to obtain information on any industrial or domestic problem from the experts in attendance. Photographs of gas appliances which have been installed all over the country are on show, and useful literature is available. A striking feature of the bureau is the series of oil paintings round the outside of the stand. These illustrate the numerous uses for gas in the factory for motor-car manufacture, printing, heat treatment, biscuit baking; for lighting, heating, cooking and refrigerating in the home; and the use of its by-products—dyestuffs, chemicals, road tar, fertilizers and fuels.

At the Birmingham Fair (Canadian Section), the Anglo-Colonial Trading Corporation, Ltd., are exhibiting the Donnacona insulating and building board and the Riverbank (eelgrass) building blanket. Donnacona is a product of Messrs. Price Bros. & Co., Ltd., of Quebec, and is made in three thicknesses—½ in., 1 in., and 2 ins. It is claimed to be vermin proof and to resist rot, water and damp. It can be sawn like timber and is easily fixed and decorated. Donnacona possesses two distinctly different surfaces, one rough-cast, which can be left undecorated, and one smooth which can, of course, be papered. The rough side also is claimed to form an excellent key for plaster. Riverbank (eelgrass) building blanket is a product of the Riverbank Manufacturing Co., of New Glasgow, Nova Scotia. It is claimed to be an efficient material for the absorption of sound, and to afford protection against heat and cold. It is made from eelgrass (a seaweed), sandwiched between strong Kraft paper. It is also claimed to be proof against vermin and insect life by reason of its natural iodine content, and to be fire resistant.

Messrs. Rowe Bros. & Co., Ltd., of Pall Mall, Liverpool, specialists in high-class sanitary appliances, heating and lighting fittings, ranges and grates, etc., announce that for the convenience of their clientele in London and the south they have opened a London branch at Bush House, Aldwych, W.C.2. Telephone No. : Temple Bar 6340. Telegrams : Rowbroslim, Estrand, London.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office. All inquiries concerning inventions, patents and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated readers should apply to the Patent Office, 25 Southampton Buildings, W.C.2. The price is 1s. each.]

LATEST PATENT APPLICATION

3500. Donald, C. Steel-frame buildings. February 3.

SPECIFICATION PUBLISHED

342267. Carpenter, R. F., and Anderson, T. F. Partition structures for buildings or the like.

ABSTRACT PUBLISHED

340168. International Copperclad Co. (Assignees of Shakespeare, W. M.). Roofing materials.

THE BUILDINGS ILLUSTRATED

Following are the names of the specialists, general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Swimming Bath, Ladies' Carlton Club, 4 and 5 Grosvenor Place, W. (pages 302, 305–307). General contractors, Walter Lawrence and Sons, Ltd. Sub-contractors : Messrs. Jenkins, artificial stone ; Roberts Adlard & Co., special roofings; North British Rubber Co., patent flooring; Waterex Co., Ltd., waterproofing materials; Bearans and Sons, Ltd., boilers, central heating, and plumbing; Tyler and Freeman, Ltd., electric wiring; Gillum and Jones, electric light fixtures; Boobyers, Ltd., door furniture; James, Ltd., casements; E. and A. Brown, decorative plaster; Haywards, Ltd., metalwork.

St. Mary's Church, Pype Hayes, Birmingham (pages 309–311). General contractors, C. Bryant and Son. Sub-contractors : Blockleys, Ltd., bricks; E. C. and J. Keay, Ltd., structural steel; Rudders and Paynes, Ltd., roof tiling; Pearce and Cutler, Ltd., leaded lights and steel casements ; Ashwell and Nesbit, central heating; Reynolds and Bradwell, electric wiring; Best and Lloyd, Ltd., electric light fixtures; Walker and Worsey, door furniture; Charles Carr, Ltd., bells; Birmingham Guild, Ltd., balustrading to iron staircases; Bryan's Adamanta, Ltd., plaster; William Bloye, decorative plaster and carving stonework; C. Bryant and Son, stone pulpit, lectern and communion rails; Bennet Furnishing Co., chairs.

Messrs. Buckland and Haywood, FF.R.I.B.A., have taken offices at 5 Verulam Buildings, Gray's Inn, London, W.C. Telephone number : Chancery 7873–4.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The L.C.C. is to clear a further section of the Teale Street area, BETHNAL GREEN, and provide re-housing, at a cost of £175,000.

The FULHAM B.C. Electricity Committee has instructed the consulting engineers to proceed with the requisite detailed plans, drawings and designs of the first section of the extension of the power station.

The L.C.C. has passed amended plans submitted by the Gaumont-British Picture Co., for the erection of a cinema building upon a site abutting Loampit Vale, Molesworth Street and Rennell Street, LEWISHAM.

Plans passed at LEWISHAM: Rebuilding, 180–186 High Street, for Messrs. North, Robin and Wilsdon; eleven houses, Grove Park Road, for Messrs. W. R. Hindmarsh & Co.; rebuilding, 116–118 Rushey Green, for Mr. P. J. Bartlett; twenty houses, New Road, for Mr. W. J. Brise; houses, Thornsbeach Road, for Mr. G. T. Harman; ten houses, Cliffview Road, for Mr. A. McDougal; layout of streets, Tewkesbury Lodge Estate, Forest Hill, for Mr. H. Macintosh.

The L.C.C. Education Committee is to modernize and enlarge the VAUXHALL central school, at a cost of £12,200.

The Herts Education Committee is to proceed with the erection of an elementary school at Leggats Way, WATFORD.

Plans passed at WATFORD: House, Cassiobury Drive, for Mr. W. E. Prince; office and buildings, St. Albans Road, for Messrs. Lavers; two houses, Woodland Drive, for Messrs. Richards & Co.; alterations and additions, Ashby Road, for the Watford Board of Guardians; two houses, North Western Avenue, for Mr. F. W. Brockett; addition, Whippendell Road, for the Sun Engraving Co.; store, Kensington Avenue, for Mr. J. B. Merchant.

The L.C.C. Education Committee is to enlarge the St. Martins School of Art, WESTMINSTER, at a cost of £10,720.

The L.C.C. has decided to oppose the proposal for the erection of Government buildings in Whitehall Gardens and the Victoria Embankment, WESTMINSTER, because land intended to be preserved as an open space will be encroached upon. The proposed buildings, which will cost over two million pounds, are to house various Government departments.

The Surrey Education Committee has obtained approval from the Board of Education of plans for the extension of the WIMBLEDON Technical College.

The WIMBLEDON Corporation has passed plans for the erection, by the Wimbledon Public Utility Society, of a block of three-storied flats on land between the Southern Railway and Toynbee Road.

SOUTHERN COUNTIES

Plans passed at HASTINGS: Four houses, Hughenden Road, for Mr. R. Hodgson; alterations, 38 George Street, for Mr. P. H. Oxley; bungalow, Parker Road, for Messrs. Jeffery and Bowcock; three shops, Bexhill Road, St. Leonards, for Mr. H. H. Ford; bungalow, Beaufort Road, St. Leonards, for Messrs. Jeffery and Bowcock; additions, 31 Warrior Square, St. Leonards, for Messrs. Ward, Son and Wray; additions and alterations, 13 Wellington Place, for Hastings and East Sussex Building Society; ten houses, Abbey Drive, for Mr. H. H. Ford; alterations, "London Trader" public-house, East Beach Street, for Messrs. Fremlins, Ltd.; house, Harold Road, for Messrs. Jeffery and Bowcock; fifteen houses, Beaconsfield Road, for Mr. H. E. Jenkins; shopfronts, 63 Cambridge Road, for Mr. J. Woolcock; conversion of house into shop, Bexhill Road, St. Leonards, for Bexleigh Estates, Ltd.; shopfront, 32-33 White Rock, for Messrs. Bainbridge and Son; house, Charles Road West, St. Leonards, for Mr. G. F. Miller; alterations, 81 Queen's Road, for Messrs. Ward, Son and Wray; alterations, 32 and 33 Havelock Road, for Mr. H. W. Coussens; bungalow, Bexhill Road, St. Leonards, for Mr. H. Burleigh; conversion into self-contained flats, 65 Marina, St. Leonards, for Mr. H. J. Richardson; alterations, 38 London Road, St. Leonards, for Messrs. Callow and Callow; alterations, 47 Robertson Street, for Messrs. H. N. Barnes, Ltd.; alterations and additions, Queen's Hotel, Harold Place, for Mr. H. W. Matthews.

The Kent C.C. has prepared a revised scheme for the development of the first section of a mental colony at LEYBOURNE GRANGE, at a cost of £69,400.

Plans passed at OXFORD: Ten houses, Monmouth Road, for Messrs. Kingerlee and Son; two houses, Highfield Avenue, Headington, for Messrs. Pontin & Co.; house, Belbroughton Road, for Messrs. S. Hutchins and Sons; studio, Walton Street, for Oxford University Press; house, Sandfield Road, for Mr. A. W. Lee; additions to four cottages, for the trustees of Donnington Hospital, Newbury; additions to house, Cowley Road, for the Rev. J. C. Orr; two houses, Northfield Road, Heading, for Messrs. S. H. Stevens.

Plans passed at PORTSMOUTH: Shop, house and workshop, Northern and Spur Roads, Cosham, for Messrs. J. Lay & Co.; ten houses, Merrivale Road, for Mr. H. Dye; alterations, 60 St. George's Square, for Pinks Supply Co., Ltd.; extensions, The Parade Hotel, Clarence Parade, for Messrs. Brickwood & Co., Ltd.; forty-two houses, Lovett Road, for Messrs. Brittan and Wallis; five houses, Tangier Road, Copnor, for Messrs. Westbrook & Co.; business premises, Twyford Avenue, for Mr. H. G. Cook; five houses, Randolph Road, for Mr. R. J. Winnicott; licensed premises, Southampton Road, Wymering, for Messrs. Long & Co.; shop and flats, Palmerston Road, for Messrs. Montague Burton, Ltd.; five houses, London Avenue, for Mr. F. W. Devenish; five houses, Kirby Road, for Mr. W. Ford; alterations, "St. Mary's Arms," St. Mary's Road, for Messrs. Geo. Peters, Ltd.; hotel, Tangier Road, for Messrs. Brickwood & Co.

The Surrey Education Committee has approved plans for the erection of a central school at Kingfield, WOKING, at a cost of £21,700.

SOUTH-WESTERN COUNTIES

The BARNSTAPLE Corporation is to construct an open-air swimming bath, at a cost of £6,600.

The PLYMOUTH Corporation has purchased thirty acres of land at St. Budeaux for housing purposes.

Plans passed at PLYMOUTH Eight houses, Dale Gardens, for Messrs. Baskerville and Jewell; twelve houses, Torr View Avenue, for Mr. T. H. Morrish; almshouse, Embankment Road, for the trustees of Hele's Charity; four houses, Beechfield Road, for Mr. W. Andrews; four houses, Elmfield Road, for Mr. R. T. Pearce; four houses, Underhill Road, for Mr. W. H. Webb; two houses, Breen Park Road, for Mr. J. F. Woodley; two bungalows, Breen Park Road, for Mr. E. J. Morrish; six houses, Raynham Road, for Messrs. W. R. Littleton and Son; layout of land, between Seymour Road and Mannamead Hill, for Seymour Estates; three houses, Church Street, Stoke, for Mr. S. Cohen; three houses, new street off Victoria Road, St. Budeaux, for Messrs. A. E. Searle and Son.

EASTERN COUNTIES

The BRAINTREE U.D.C. is to erect a fire station in Drury Lane.

The COLCHESTER Corporation is to erect fifty-two houses, by direct labour, on the Old Heath estate, at an estimated cost of £17,668.

Plans passed at COLCHESTER: House, Lexden Road, for Mr. O. S. Locke; house, Victoria Road, for Miss M. C. Sinzininex; two houses, Audley Road, for Mr. W. H. Smith; two houses, Nelson Road, for Mr. F. Humm; house, Victoria Road, for Mr. T. J. Smith; conversion of house into flats, Queen's Road, for Mr. W. Hughes; house, King Harold Road, for Mr. W. H. S. Allport; bakehouse, rear of premises, in Long Wyre Street, for Mr. W. F. Archer.

MIDLAND COUNTIES

The CHESTERFIELD Corporation proposes to erect 1,098 houses within the next five years.

Plans passed at CHESTERFIELD: Six houses, Holme Road, Stonegravels, for Mr. A. Clarke; two houses, Holme Bank, for Messrs. Robinson and Sons, Ltd.; conversion of Tapton House into mixed school, for Chesterfield Education Committee; two houses, Hawksley Avenue, for Mr. W. Bargh; two houses, Storforth Lane, for Mr. A. Smith.

The Leicestershire Education Committee is to erect an elementary school for 500 pupils, at COALVILLE.

The DERBY Corporation recommends the erection of 429 houses, by direct labour, on the Sinfin estate, at an estimated cost of £143,000.

The LEICESTERSHIRE C.C. is seeking sanction to borrow £31,000 for extending the county offices.

The MARKET BOSWORTH R.D.C. is to erect seventy houses in various parishes.

Plans passed at MARKET HARBOROUGH: Two houses, Hill Crest Avenue, for Messrs. G. Jarman and Sons; congregational manse, Hill Crest Avenue, for the Congregational Chapel trustees; house, St. Mary's Road, for Messrs. R. and W. H. Symington & Co., Ltd.; additions, 134 Coventry Road, for Mr. G. W. Billing.

Mr. Ernest Stevens is to build a new hospital at PEDMORE and present it to the Stourbridge Corporation.

The SMETHWICK Corporation is to obtain tenders for the erection of 146 houses on the Warley estate.

The WALSALL Corporation is to extend the maternity hospital at Bloxwich at an estimated cost of £16,000, including furnishing.

The WALSALL Corporation has approved of the development of the James Street and Ann Street areas, which are now to be cleared.

The WALSALL Corporation has approved plans and estimate of £56,950 for the provision of new baths.

The WEDNESBURY Corporation is to erect thirty houses on the Fallings Heath estate.

The Warwickshire Education Committee is to erect a junior school at WYKEN, at a cost of £15,500.

NORTHERN COUNTIES

Messrs. Catternall and Swarbrick are to erect an hotel on the South Promenade, BLACKPOOL, at a cost of £12,000.

Plans passed at BOLTON: Eight houses, Sharples Avenue, for Messrs. A. H. Price and Groves; six houses, Boot Lane, for Mr. J. H. Sharples; six houses, Brook Hey Avenue, for Mr. William Turner; five houses, Radcliffe Road, for Messrs. Wilfred Andrew, Ltd.; twenty houses, Crompton Way and Firwood Lane, for Messrs. Turner Brothers; extension to school, Bury Road, for the trustees of Breightmet Wesleyan Church.

The BOSTON R.D.C. is to erect fourteen houses in various parishes.

The Lancaster Corporation has decided to construct a new reservoir at LANGTHWAITE, near Lancaster, at an estimated cost of £250,000.

The Lancashire Education Committee is to erect a training college at Edge Hill, ORMSKIRK.

The ROCHDALE Corporation is seeking sanction for a loan of £17,000 for the erection of dwellings for firemen; and a loan of £37,000 for a fire station.

E

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_2	Aylesbury ..	S. Counties	1 3	11¼
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1¼
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W.Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11¾
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11¾
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1¼
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11¾
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11¼
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11¾
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11¾
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11¾
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank ..	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1¼
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11¾
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11¾
A_2	Driffield ..	Yorks	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1¼
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1¼
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey ..	Yorks	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11¾
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11¾
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1¼
A_2	Goole ..	Yorkshire	1 5½	1 1¼
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11¾
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11¼
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1¼
A_2	Kidderminster	Mid. Counties	1 5½	1 1¼
B_2	King's Lynn	E. Counties	1 3½	11¾
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1¼
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11¼
A_2	Lichfield ..	Mid. Counties	1 5½	1 1¼
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2¾
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1¼
B_2	Minehead ..	S.W. Counties	1 3½	11¾
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11¾
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1¼
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1¼
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1¼
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1¼
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1¼
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1¼
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11¼
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1¼
A_2	Skipton ..	Yorkshire	1 5½	1 1¼
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1¼
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1¼
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1¼
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1¼
A_2	Wellingborough	Mid. Counties	1 5½	1 1¼
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1¼
A_2	Whitby ..	Yorkshire	1 5½	1 1¼
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1¼
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11¼
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter . . . . ,,	1 8
Joiner . . . . ,,	1 8
Machinist . . . . ,,	1 9
Mason (Banker) . . . . ,,	1 8
,, (Fixer) . . . . ,,	1 9
Plumber . . . . ,,	1 8
Painter . . . . ,,	1 7
Paperhanger . . . . ,,	1 8
Glazier . . . . ,,	1 8
Slater . . . . ,,	1 8
Scaffolder . . . . ,,	1 4
Timberman . . . . ,,	1 4
Navvy . . . . ,,	1 3
General Labourer . . . . ,,	1 3
Lorryman . . . . ,,	1 5½
Crane Drivers . . . . ,,	1 7
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . ,,	2 10 6
Hydrated Lime . . . ,,	2 16 0
Portland Cement . . . ,,	2 6 0
Ferro-crete . . . ,,	2 13 6
Ciment Fondu . . . ,,	5 10 0
Thames Ballast . . . per Y.C.	8 9
¾″ Crushed Ballast . . . ,,	10 0
Building Sand . . . ,,	10 6
Washed Sand . . . ,,	11 6
2″ Broken Brick . . . ,,	9 6
¾″ ,, ,, . . . ,,	12 6
Pan Breeze . . . ,,	6 6
Coke Breeze . . . ,,	8 9

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . ,,	3 3 6
Stocks, 1st Quality . . . ,,	4 18 6
,, 2nd ,, . . . ,,	4 12 6
Blue Bricks, Pressed . . . ,,	9 18 0
,, Wirecuts . . . ,,	8 16 0
,, Brindles . . . ,,	8 0 0
,, Bullnose . . . ,,	10 8 0
Red Sand-faced Facings . . . ,,	7 11 0
Red Rubbers for Arches . . . ,,	15 0 0
Multicoloured Facings . . . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . . ,,	21 10 0
Headers . . . . ,,	21 0 0
Bullnose . . . . ,,	28 0 0
Double Stretchers . . . ,,	30 0 0
Double Headers . . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . ,,	5 10 0
2″ Breeze Partition Blocks . . per Y.S.	1 9
2½″ ,, ,, ,, . . ,,	2 0
3″ ,, ,, ,, . . ,,	2 3
4″ ,, ,, ,, . . ,,	3 0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4″ s. d.	6″ s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . ,,	6 3	7 2
Rest bends . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¼ Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers. . . ,,	5 6	7 9
Yard gullies . . ,,	9 6	11 6
Interceptors . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . ,,	5	—

MASON

The following d/d F.O.R. at Nine Elms	s. d.
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . ,,	4 9
Bath stone . . . ,,	2 11
York stone . . . ,,	6 9
,, Sawn templates . . ,,	7 6
,, Paving, 2″ . . . F.S.	1 8
,, ,, 3″ . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station.

	£ s. d.
24″ × 12″ Duchesses . . per M.	31 0 0
22″ × 12″ Marchionesses . . ,,	28 0 0
20″ × 10″ Countesses . . ,,	20 5 0
18″ × 10″ Viscountesses . . ,,	17 0 0
18″ × 9″ Ladies . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20″×10″ medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . lb.	4
,, copper . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . as 1″ F.S.	9
Deal, Joiner's, . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . ,, ,,	1 1
Deal floorings, ⅜″ . . . Sq.	1 1 0
,, ½″ . . . ,,	1 3 6
,, 1″ . . . ,,	1 5 6
,, 1¼″ . . . ,,	1 11 0
,, 1½″ . . . ,,	1 15 0
Deal matchings, ⅜″ . . . ,,	16 0
,, ½″ . . . ,,	17 6
,, 1″ . . . ,,	1 6 0
Rough boarding, ¾″ . . . ,,	18 0
,, 1″ . . . ,,	1 0 0
,, 1½″ . . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	⅜″			½″			¾″			¾″		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼″	½″	1″	1½″	2″
Tubes, 2′–14′ long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12″–23½″ long, each	10	1/1	1/11	2/8	4/9
,, 3″–11½″ long ,,	7	9	1/3	1/8	3/–
Long screws 12″–23½″ long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3″–11½″ long ,,	8	10	1/5	1/11	3/6
Bends . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket union ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

Per cent.		Per cent.
Gas . . . 62½	Galvanized gas .	50
Water . . . 58½	,, water .	45
Steam . . . 55	,, steam .	40

FITTINGS.

Per cent.		Per cent.
Gas . . . 47½	Galvanized gas .	37½
Water . . . 42½	,, water .	32½
Steam . . . 37½	,, steam .	27½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ⅜″ . . . ,,	10 0
,, ,, ½″ . . . ,,	9 9
,, ,, ⅝″ . . . ,,	9 6
,, ,, ¾″ . . . ,,	9 0
,, ,, ⅞″ . . . ,,	9 0
,, ,, 1″ . . . ,,	9 0
,, ,, 1¼″ . . . ,,	9 0
,, ,, 1½″ . . . ,,	9 0

Cast-iron rain-water pipes of ordinary thickness metal .	3″ s. d. F.R. 7	4″ s. d. 10
Shoes . . . . each	2 3	3 3
Anti-splash ,, . . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9″ offsets . ,,	4 0	6 3
Plinth bends, 4½″ to 6″ . ,,	4 0	5 6
Half-round rain-water gutters of ordinary thickness metal .	F.R. 5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse ,, ... ,,	2 0	2 0
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	23 0
,, drawn pipes . . . ,,	23 6
,, soil pipe . . . ,,	26 6
,, scrap . . . ,,	13 0
Solder, plumbers' . . . lb.	1 0
,, fine do. . . . ,,	1 4
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3″	4″	6″
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . ,,	3 9	5 3	10 3
Shoes . . ,,	2 10	4 4	9 6
Heads . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . ,,		1 3
¼″ Polished plate, n/e 1 . ,,	1 0 to	1 3
,, ,, 2 . ,,	1 2 ,,	1 7
,, ,, 3 . ,,	1 7 ,,	2 5
,, ,, 4 . ,,	2 1 ,,	2 11
,, ,, 6 . ,,	2 3 ,,	3 2
,, ,, 8 . ,,	2 6 ,,	3 6
,, ,, 12 . ,,	2 9 ,,	3 8
,, ,, 20 . ,,	3 0 ,,	3 11
,, ,, 45 . ,,	3 3 ,,	4 1
,, ,, 65 . ,,	3 7 ,,	4 6
,, ,, 90 . ,,	3 10 ,,	4 9
,, ,, 100 . ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		1 3
,, ,, ,, over 2 . ,,		1 9
,, ,, plate, n/e 1 . ,,		1 6
,, ,, ,, 2 . ,,		3 0
,, ,, ,, 5 . ,,		4 0
,, ,, ,, 7 . ,,		5 0
,, ,, ,, 15 . ,,		6 0
,, ,, ,,over 15 . ,,		7 6
Putty, linseed oil . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 4
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12″ deep and cart away	Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away	Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away	,,	11 0
,, ,, 10′ 0″ deep and cart away	,,	11 6
,, ,, 15′ 0″ deep and cart away	,,	12 0
If in stiff clay	add ,,	3 0
If in underpinning	,, ,,	5 0
Digging, return, fill and ram	,,	5 0
Planking and strutting to sides of excavation	F.S.	1 0
,, ,, to pier holes	,,	6
,, ,, to trenches	,,	6
,, ,, extra, only if lett in	,,	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	,,	1 13 6
,, ,, ,, (4-2-1)	,,	1 18 6
,, ,, ,, underpinning	,,	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, junctions	,,	3 9	4 6
Gullies and gratings	,,	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
,, ,, in cement	,,	34 0 0
,, Stocks in cement	,,	41 10 0
,, Blues in cement	,,	62 0 0
Extra only for circular on plan	,,	3 0 0
,, backing to masonry	,,	2 0 0
,, raising on old walls	,,	3 0 0
,, underpinning	,,	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	,,	1 0
,, red brick facings	,,	1 6
,, blue brick facings	,,	1 9
,, glazed brick facings	,,	4 6
Tuck pointing	,,	10
Weather pointing	,,	4
Slate dampcourse	,,	1 0
Vertical dampcourse	,,	1 3

ASPHALTER

		s. d.
½″ Horizontal dampcourse	Y.S.	5 6
½″ Vertical dampcourse	,,	7 6
½″ paving or flat	,,	5 6
1″ paving or flat	,,	6 6
1″ × 6″ skirting	F.R.	1 0
Angle fillet	,,	2
Rounded angle	,,	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do. all as last	,,	15 6
Artificial stone and do.	,,	16 6
York stone templates, fixed complete	,,	14 0
,, thresholds	,,	16 0
,, sills	,,	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	4 5 0
Do., 18″ × 9″	,,	4 2 0
Do., 24″ × 12″	,,	4 12 0
Westmorland slating, laid with diminished courses	,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	,,	4 0 0
Do., all as last, but of machine-made tiles	,,	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
,, to stanchions	,,	1 0
,, to staircases	,,	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	,,	6 9
,, ,, roofs	,,	8 3
,, ,, trusses	,,	9 0
,, ,, partitions	,,	12 0
½″ deal sawn boarding and fixing to joists	Sqr.	1 17 6
1″ ,, ,, ,, ,,	,,	2 1 6
1½″ ,, ,, ,, ,,	,,	2 7 6
2½″ × 2″ fir battening for Countess slating	,,	12 6
Do. for 4″ gauge tiling	,,	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
,, ,, ,, 2 ,,	,,	3 0
,, ,, ,, 3 ,,	,,	3 6
Stout herringbone strutting to 9″ joists	F.R.	1 0
1″ deal gutter boards and bearers	F.S.	1 4
1½″ ,, ,, ,, ,, ,,	,,	1 8
2″ deal wrought rounded roll	F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
1¼″ do.	,,	3 4 0
1½″ do.	,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1½″ do.	,,	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1¼″ deal moulded sashes of average size	F.S.	2 3
2″ ,, ,, ,,	,,	2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ⅝″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	4 3
2″ ,, ,, ,,	,,	4 6
Extra only for moulded horns	Each	9
1¼″ deal four-panel square, both sides, door	F.S.	2 6
2″ ,, ,, ,,	,,	3 0
1½″ ,, but moulded both sides	,,	3 0
2″ ,, ,, ,,	,,	3 6
4″ × 3″ deal, rebated and moulded frames	F.R.	1 6
4½″ × 3½″ ,, ,, ,,	,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	3 0
1½″ deal moulded wall strings	,,	2 6
1½″ ,, outer strings	,,	2 9
Ends of treads and risers housed to string	Each	2 0
3″ × 2″ deal moulded handrail	F.R.	1 6
1″ × 1″ deal balusters and housing each end	Each	2 6
1½″ × 1½″ ,, ,,	,,	3 3
3″ × 3″ deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	,,	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders and hoisting and fixing in position	,,	1 3 0
Do. stanchions with riveted caps and bases and do.	,,	1 2 0
Mild steel bar reinforcement ½″ and up, bent and fixed complete	,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 19 6
Do. in flashings	,,	2 2 0
Do. in covering to turrets, etc.	,,	2 9 0
Do. in soakers	,,	1 15 0
Labour to welted edge	F.R.	3½
Open copper nailing	,,	3½
Close ,,	,,	4½

Lead service pipe and fixing with pipe hooks	½″ s. d.	¾″ s. d.	1″ s. d.	1¼″ s. d.	2″ s. d.	4″ s. d.
	F.R. 1 3	1 8	2 2	2 9	3 10	—
Do. soil pipe and fixing with cast lead tacks	,, —	—	—	—	—	6 0
Extra, only to bends	Each —	—	—	—	2 3	6 6
Do. to stop ends	,, 7	9	1 0	1 3	2 0	—
Boiler screws and unions	,, 3 6	4 0	5 6	8 0	—	—
Lead traps	,, —	—	—	7 6	10 6	—
Screw down bib valves	,, 7 6	10 6	12 6	—	—	—
Do. stop cocks	,, 10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4″ cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	,,	1 6
Do. outlets	,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	,,	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	,,	5 6
Lathing with sawn laths to ceilings	,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc.	,,	2 6
Do. vertical	,,	2 9
Rough render on walls	,,	2 3
Render, float and set in lime and hair	,,	3 0
Render and set in Sirapite	,,	3 3
Render, backing in cement and sand, and set in Keene's cement	,,	4 6
Extra, only if on lathing	,,	9
Keene's cement, angle and arris	F.R.	8
Arris	,,	3
Rounded angle, small	,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth	,,	2
1″ granolithic pavings	Y.S.	5 0
1½″ ,, ,,	,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed	,,	1 2 6
9″ × 3″ ,, ,, ,,	,,	1 7 6
Extra, only for small quadrant angle	F.R.	9

GLAZIER

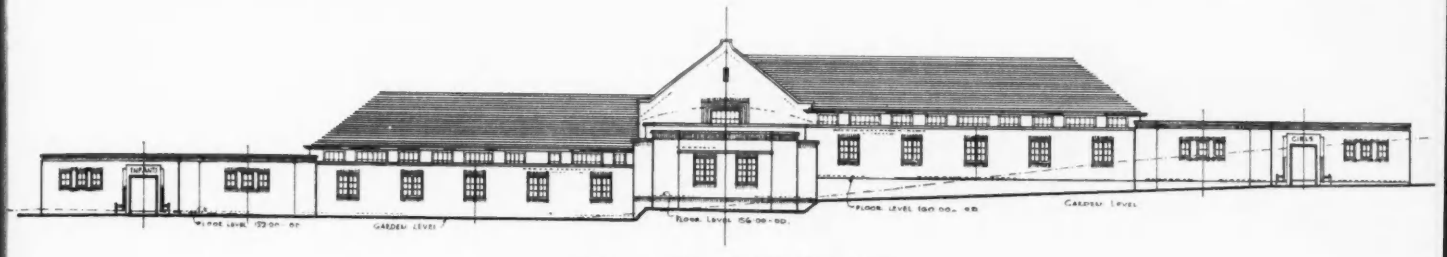
		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	,,	1 0
Arctic glass and glazing with putty	,,	1 2
Cathedral glass and do.	,,	1 3
Glazing only, British polished plate	,,	8
Extra, only if in beads	,,	2
Washleather	F.R.	4

PAINTER

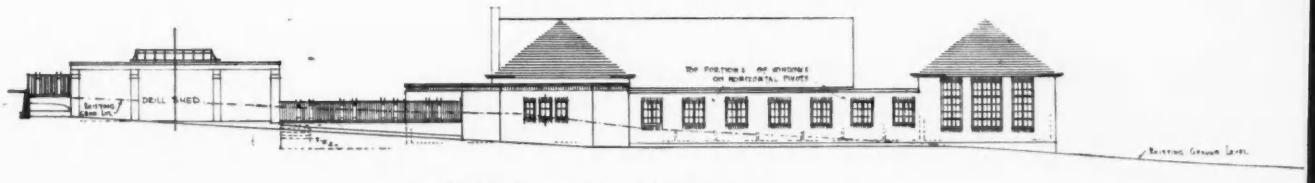
		s d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	,,	1 0
Do. with washable distemper	,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3 3
Do. on woodwork	,,	3 6
Do. on steelwork	,,	3 0
Do. and brush grain and twice varnish	,,	5 6
Stain and twice varnish woodwork	,,	1 11
Stain and wax-polish woodwork	,,	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper	from ,,	3 0

SCARBOROUGH JUNIOR AND INFANTS' SCHOOLS

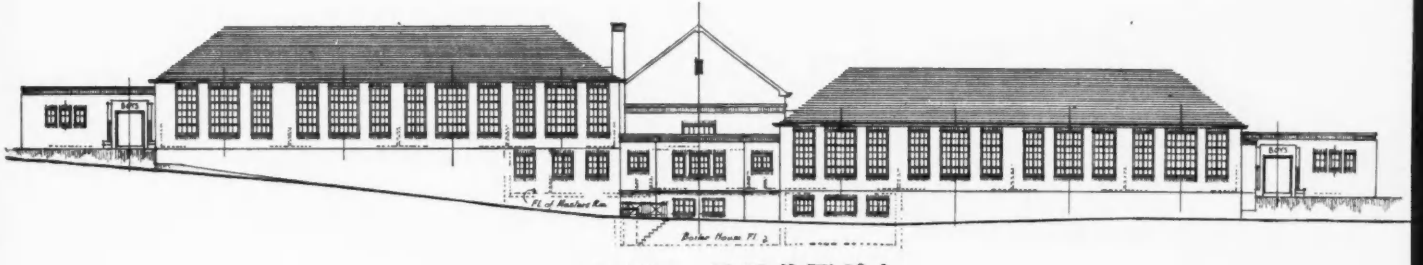
DESIGNS SUBMITTED IN COMPETITION BY H. CLIFFORD HOLLIS AND F. J. AMOTT, WINNERS OF THE FIRST PRIZE



NORTH ELEVATION



WEST ELEVATION



SCALE. ONE INCH EQUALS 32 FEET

SOUTH ELEVATION

JUNIOR AND INFANTS' SECTION: THREE OF THE ELEVATIONS

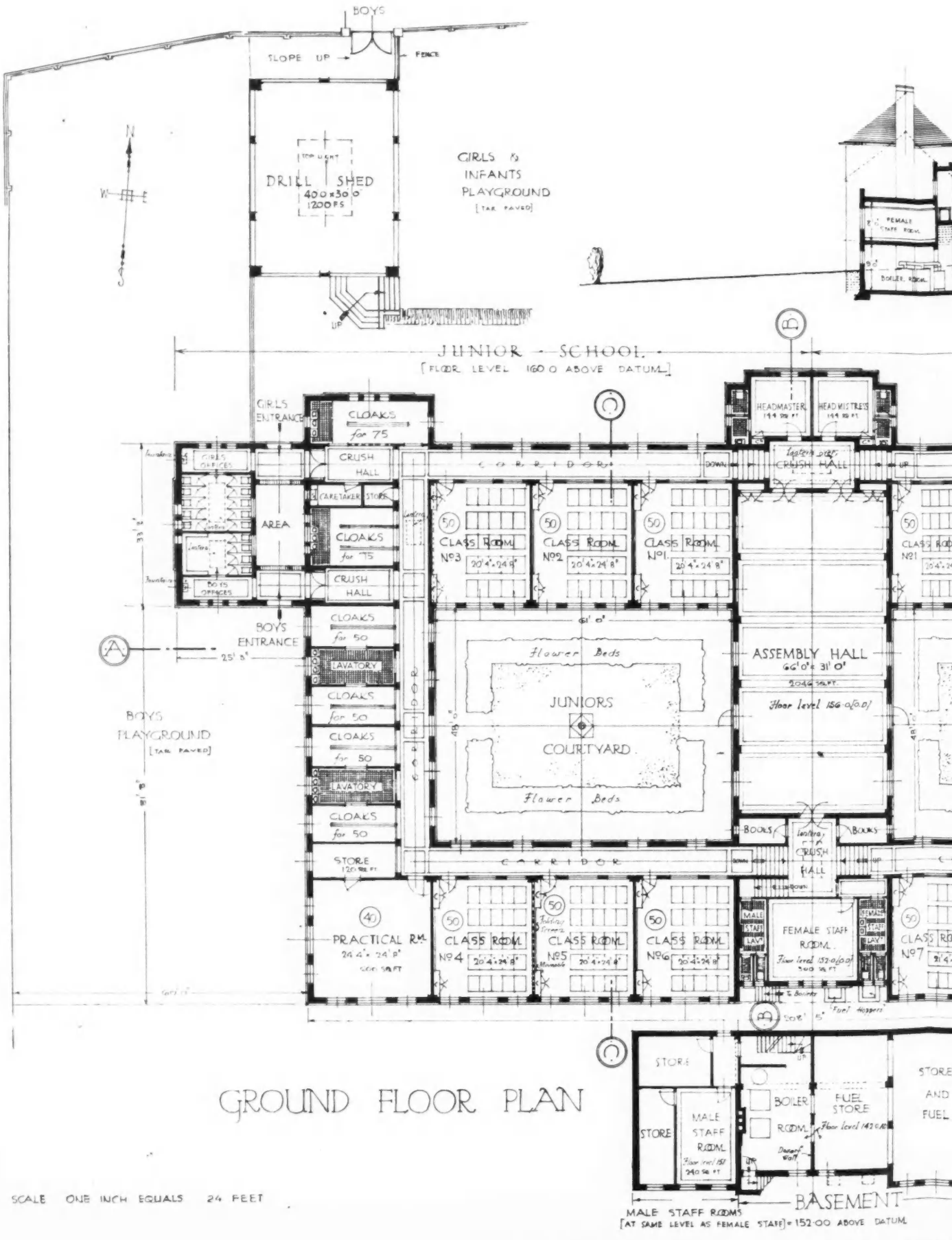
IN this Competition for Junior and Infants' Schools, with a separate Nursery block, all of specified accommodation, at Seamer Road, on the Edgehill Estate, Scarborough, the assessor, Morris Thompson, F.R.I.B.A., made his award as follows: First premium (£100), H. Clifford Hollis and F. J. Amott, London; second premium (£60), Percy Brockbank, Southend; third premium (£40), Harrison and Ash, Newcastle-on-Tyne. One hundred and sixteen designs were submitted. A selection of the drawings of that placed first is reproduced to the scales indicated.

The planning was conditioned by the site sloping down from N.W. to S.E. (about 40 ft. between boundaries) and by the fact that cottages exist upon it (see block plan on last page). The winning competitors got over these difficulties by placing the main building on the central position of the space, where the slope is less severe, and arranging its two departments at different levels. While economizing in excavation, this involved the use of steps, but these do not occur in the classroom corridors.

The classrooms all have a southerly aspect, and the circulation thereto from the cloakrooms is direct, by closed corridors, while the central hall is accessible from both departments. The playgrounds are placed to the north and west of the building, the larger coming between it and the private road, from which the scholars enter, and disturbance to any classrooms which may be in use during recreation periods is thus minimized.

The Nursery School was a somewhat novel requirement, and very few of the plans submitted displayed acquaintance with the working of such a department, particularly as regards bath and lavatory arrangements for very young children needing constant supervision (see the interesting letter from a competitor included under "Letters from Readers" in this issue). As will be seen from the drawings on the last page, the siting here proposed is ideal, being open to the south, while the building is, again, isolated from disturbance, and lends itself to organization.

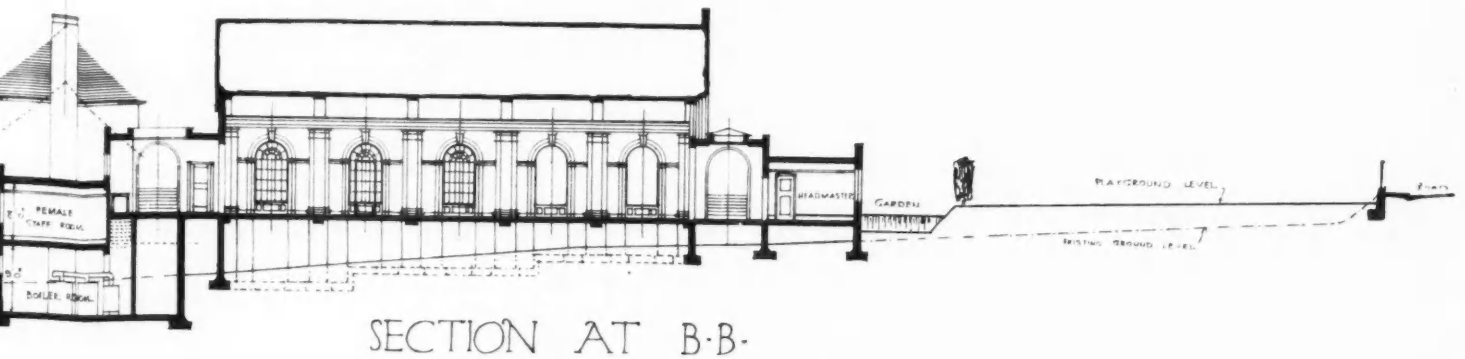
Two entrances are provided: on the west for children arriving in the company of older scholars, and on the east, direct from the road, for those brought and fetched by parents, probably in perambulators. There is a large open veranda surrounding, on three sides, the nursery playground, and some of the play-rooms have sliding folding screens. The necessary provision is made for gardens and for future extension, as stipulated.



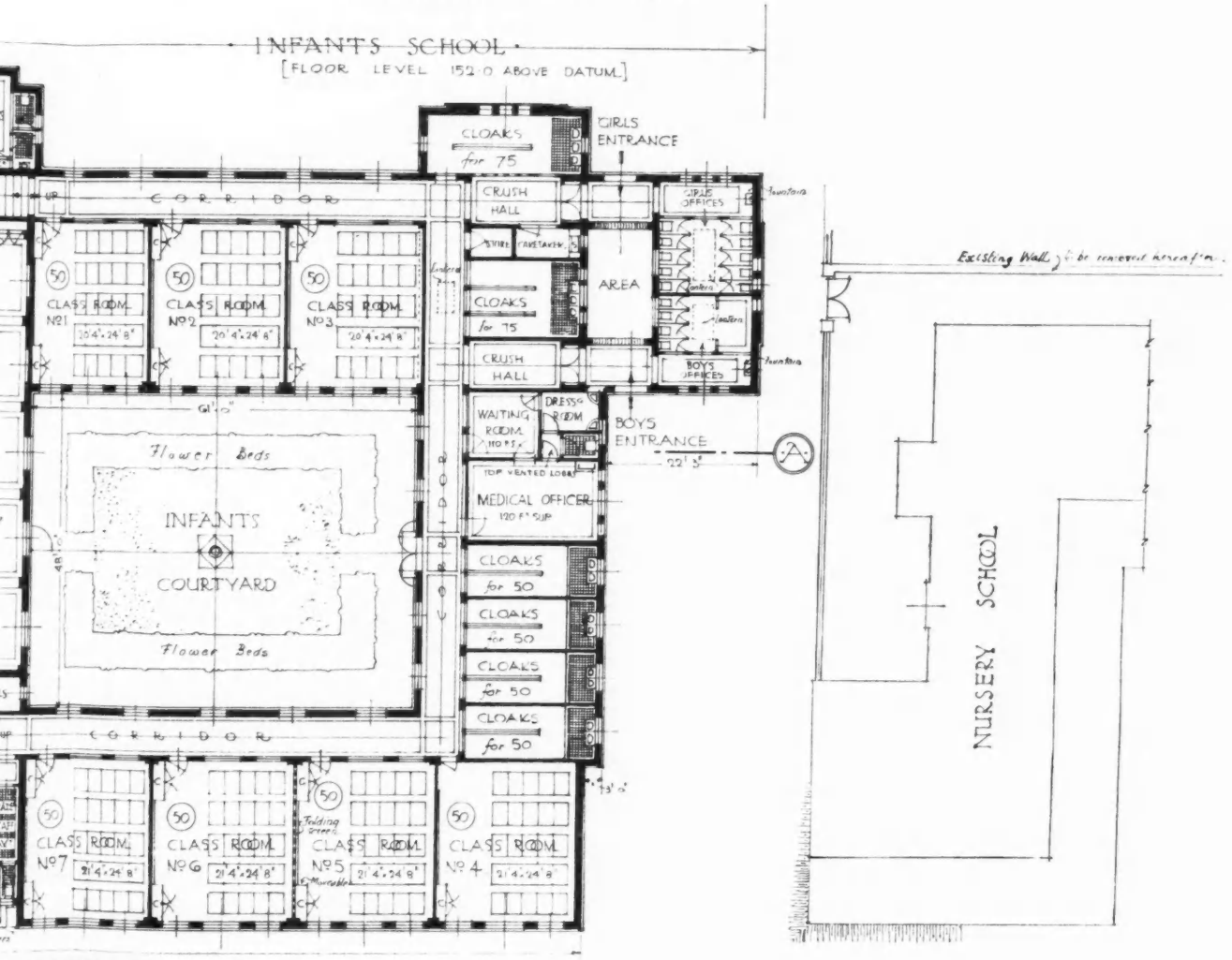
GROUND FLOOR PLAN

SCALE ONE INCH EQUALS 24 FEET

JUNIOR AND INFANTS' SECTION: PLAN AND CROSS-SECTION

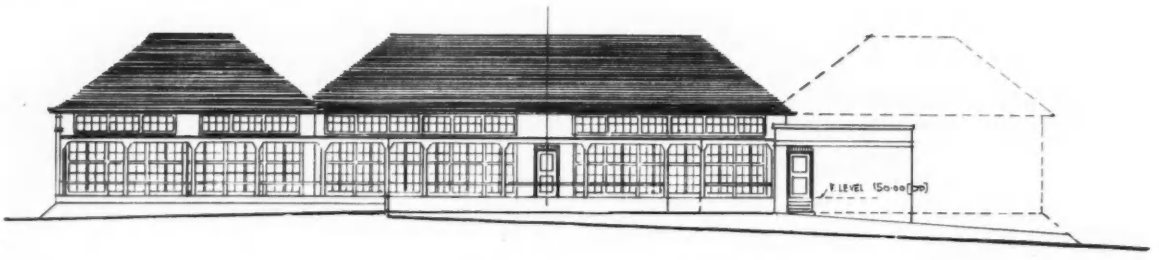


SECTION AT B·B·

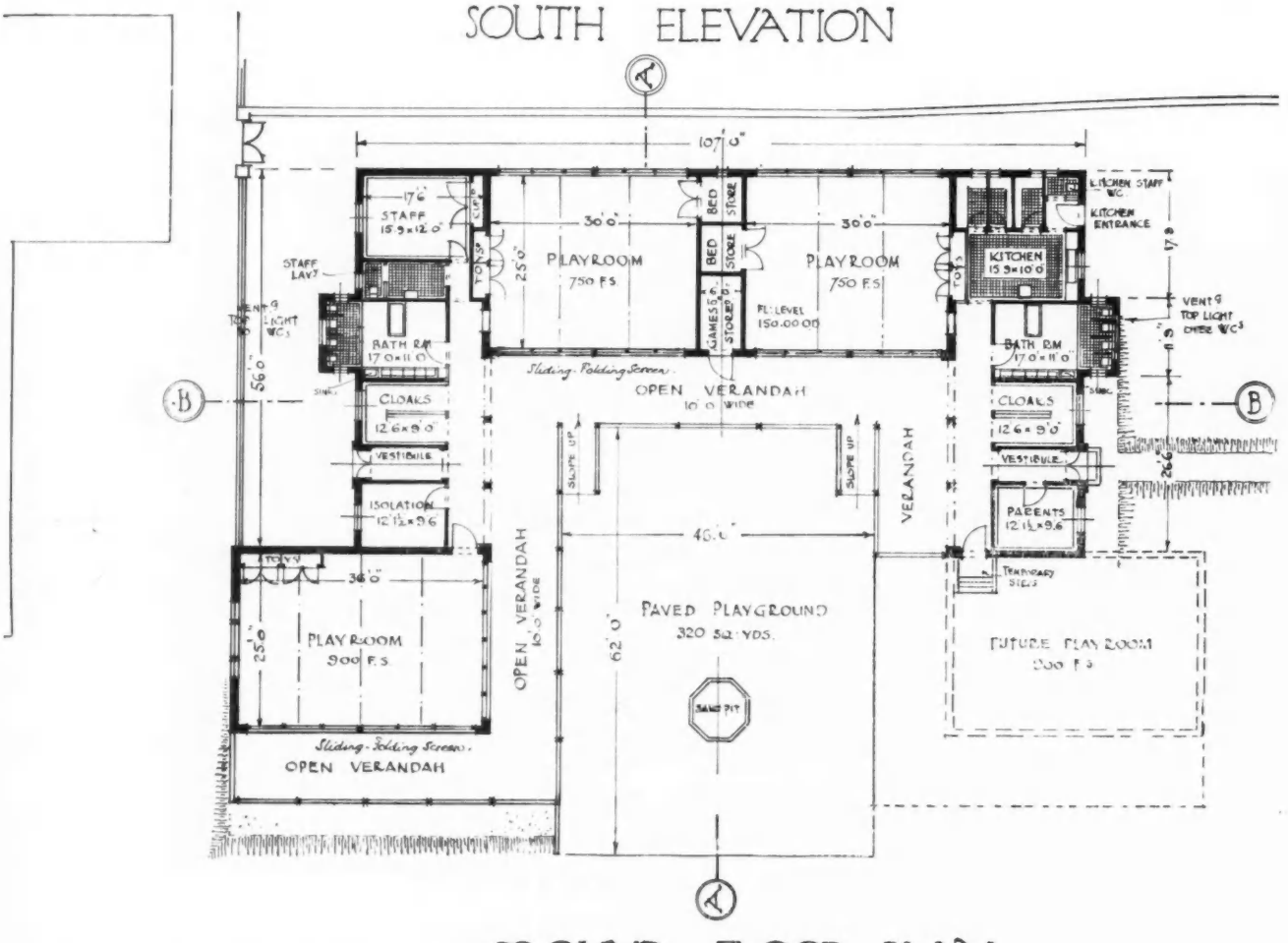




SS-SECTION LOOKING FROM THE EAST



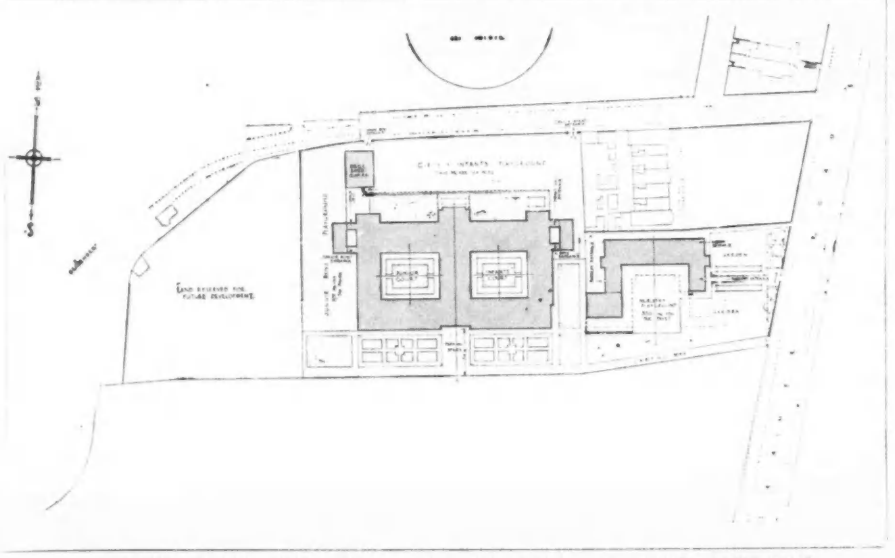
SOUTH ELEVATION



SCALE ONE INCH EQUALS 24 FEET

GROUND FLOOR PLAN

NURSERY SECTION: PRINCIPAL ELEVATION AND PLAN



BLOCK PLAN, SHOWING THE RELATION OF THE SECTIONS

WORKMEN'S FLATS IN SWEDEN

PHOTOGRAPHS AND DRAWINGS OF THE BOSTRÓM SCHEME, GOTHENBURG



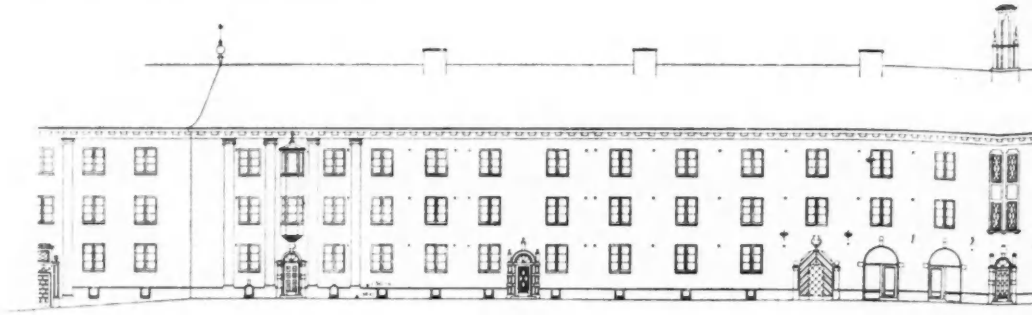
Andrew Person, Architect.

THE CENTRAL FEATURE OF THE COURTYARD FAÇADE

THE Boström dwellings at Gothenburg are typical of working-class blocks of flats as built in Sweden today. Being a charity, the scheme is necessarily severely restricted in the amount of accommodation it offers, but otherwise it bears a close resemblance to the best type of Swedish municipal blocks of the same sort.

The community aspect of it is interesting: note, on the ground-floor plan printed overleaf, the public vestibule, with stairs leading up to the charming meeting hall on the floor above. Public lavatories adjoin, and a one-room office is on the other side of the vestibule. At the rear of the block is a short row of shops.

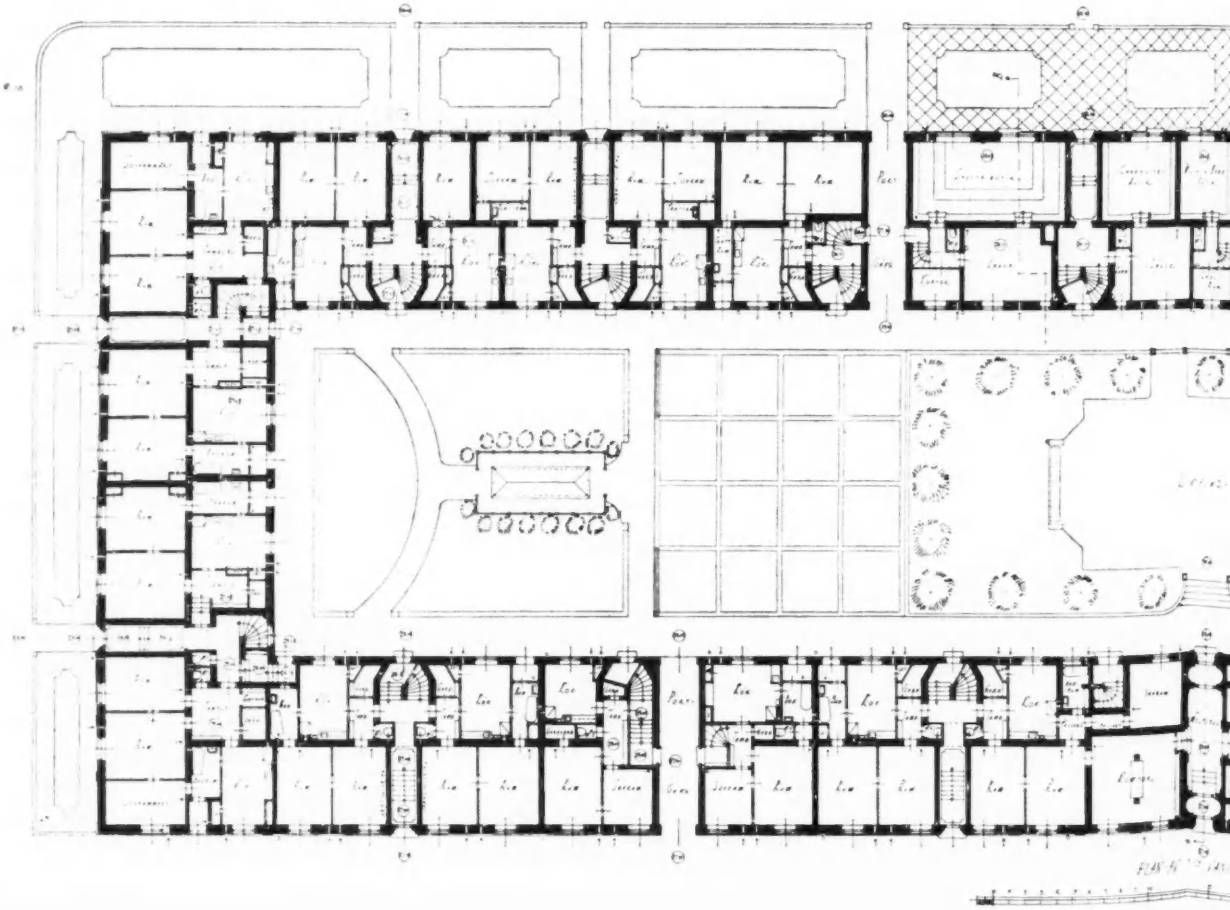
Most of the flats contain two rooms and a kitchen, and then fall into a number of main types, the planning of which is illustrated on the back page of this supplement. A one-room apartment, of which there are a small number, is also shown. The detail photograph above is of the entrance feature, viewed from the courtyard.



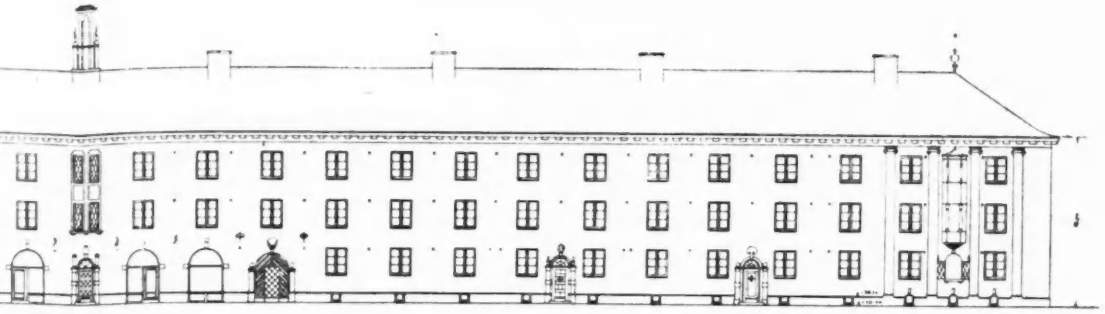
THE OXHAGSGAT



THE KUNGSLADUGÔRDS



PLAN OF THE G

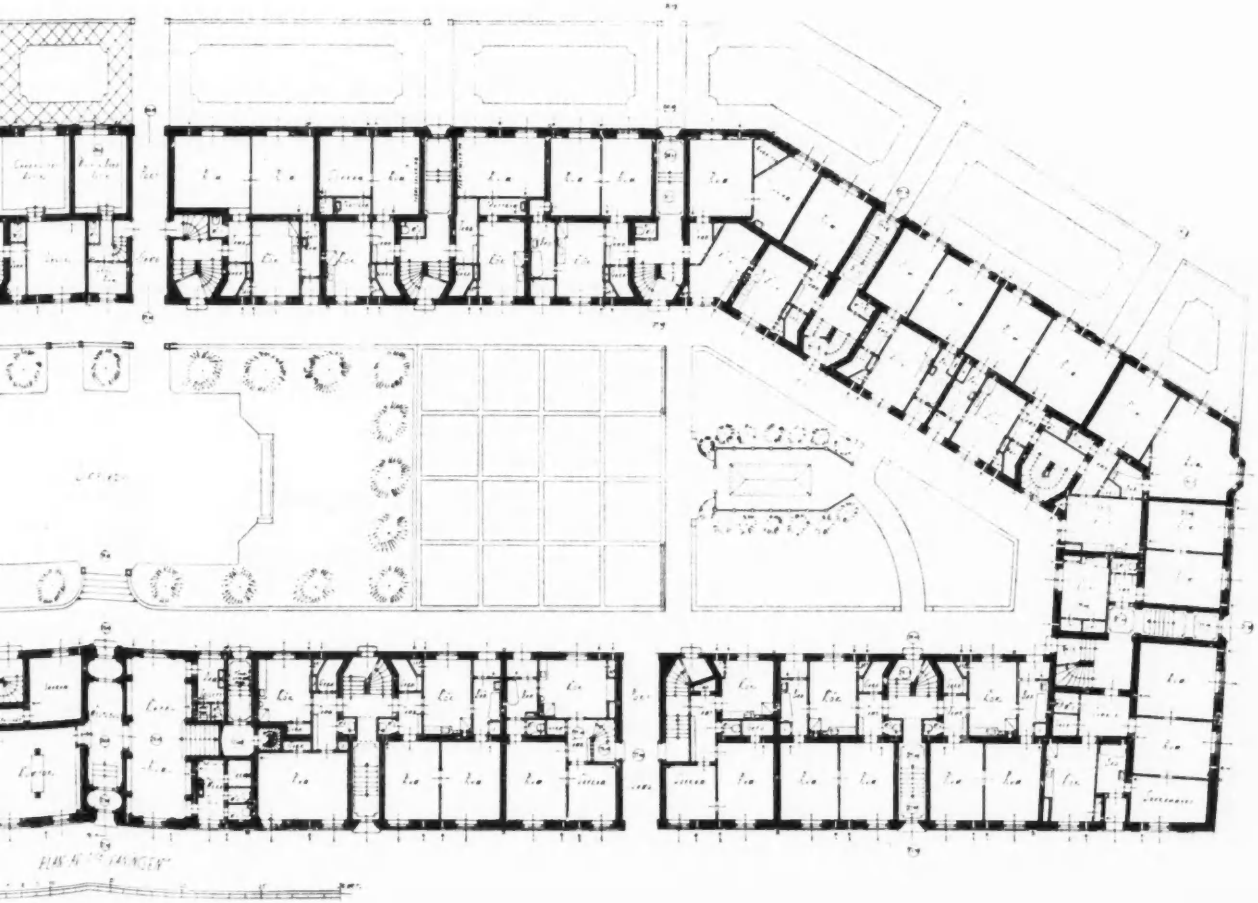


FASAD MOT OXHAGSGATAN

XHAGSGATAN FRONT

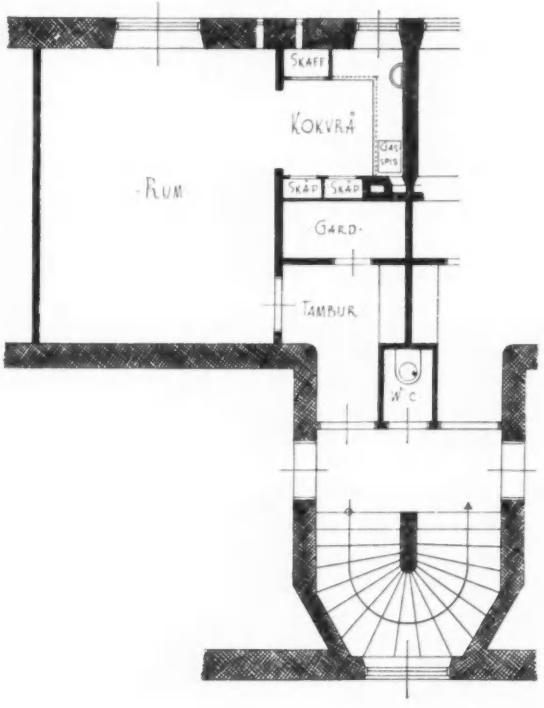


LADUGÅRDSGATAN FRONT

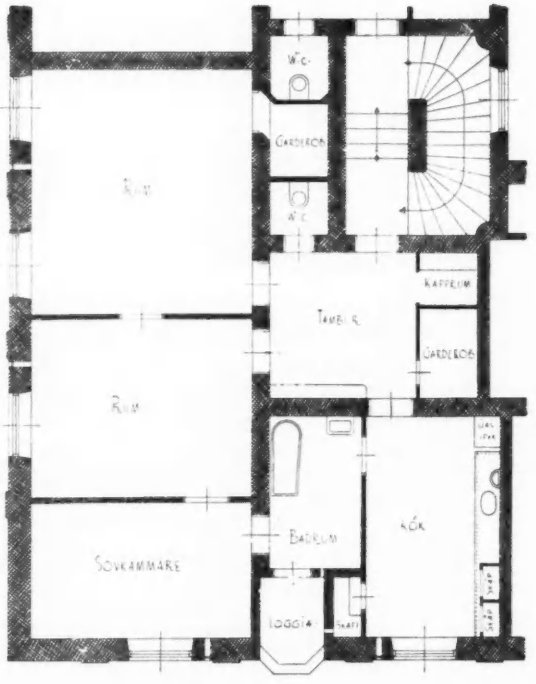


OF THE GROUND FLOOR

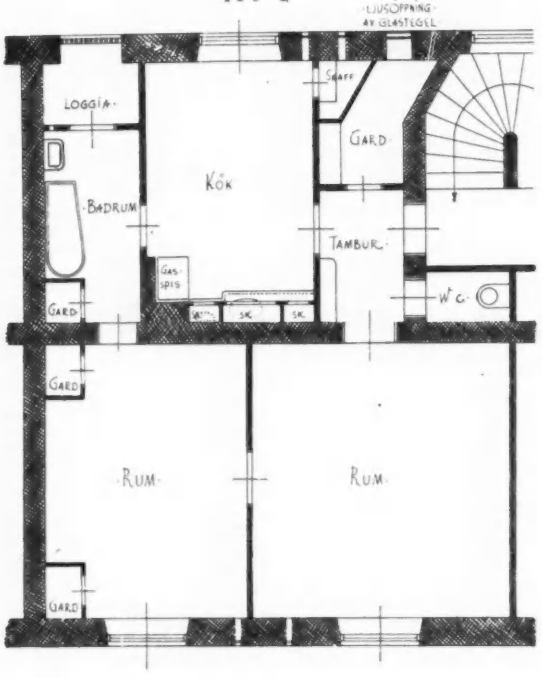
TYP A



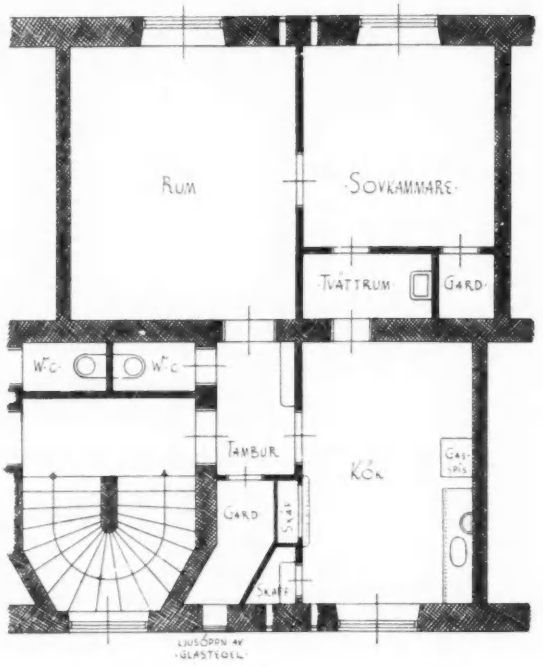
TYP F



TYP E



TYP C



PLANS OF TYPICAL FLATS

SELECTED PRECEDENTS:

OCTAGONAL CUPOLAS



AT
GLYNDE HOUSE,
LEWES, SUSSEX



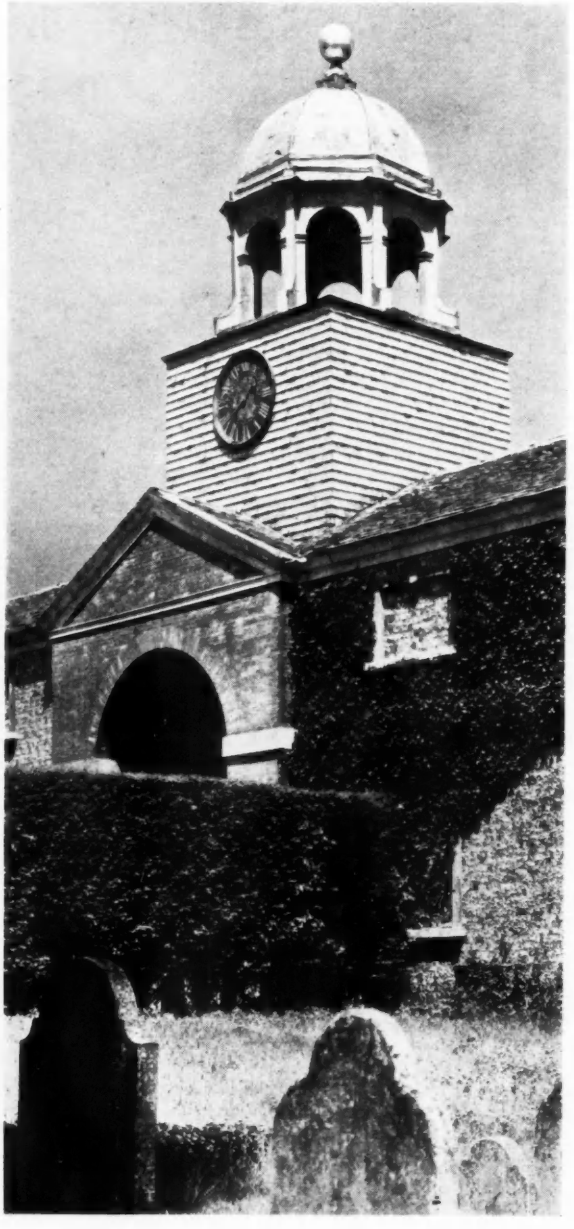
AT
TUNBRIDGE WELLS,
KENT

SOME time ago a series of three cupolas was given in English Precedent, *from Bromley College and Mereworth Castle in Kent, and from Coleshill House in Berkshire. Here are two more of the octagonal sort, as represented by Sir Roger Pratt's Coleshill example, both being the crowning feature of a gabled roof.*

A comparison of these two is particularly interesting in that in the Glynde House cupola most of the architectural refinements are concentrated in the arcaded octagon, whereas in the other it is with the square clock-case that the designer has taken the greater care. Here the arches and imposts are quite rudimentary, and there is no attempt to link up the octagon with the square by means of buttresses. Where buttresses are used (or scrolls like those at Coleshill), the crowning cornice has to break forward over each: these breaks lend additional interest to the Glynde design.

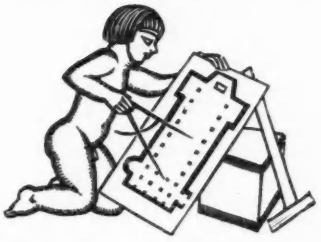


CHURCH OF
KING CHARLES THE MARTYR,
TUNBRIDGE WELLS, KENT:
THE CUPOLA,
SEEN FROM THE PANTILES



GLYNDE HOUSE,
LEWES, SUSSEX
(JOHN MAURICE, ARCHITECT, 1765):
THE CUPOLA TO
THE STABLE BLOCK

THE ARCHITECTS' JOURNAL



WEDNESDAY, MARCH 4, 1931

REGISTRATION

ARCHITECTURAL Registration has been politics for a quarter of a century. Being politics, it can be supported by arguments political and ethical, the preponderance of one or other of these aspects in the argument for registration having done it disservice in times past.

The fact that registration has been felt for so long by the weightiest opinion among practising architects to be a pressing need is not to be taken lightly. When the R.I.B.A. was a relatively small body such a thing was impossible, yet in those days the R.I.B.A. was the only disciplined architectural force, the only body adhering to high principles of professional and artistic conduct; and by reason of this discipline and cohesion under a code of rules, it was vested by public opinion with authority and honour.

Not content that its members should regard the practice of architecture as a high calling, the R.I.B.A. very rightly saw its mission as an extension of the principles of their art and practice over as wide a field as possible. Their works they saw to be surrounded by a vast sea of ignorance and malpractice, and their influence limited upon every hand by their lack of numbers and by the professional nature of their calling, which made general appeal out of the question.

One thing could be done, and this they did well. Architectural education under the R.I.B.A. was entirely revolutionized and an obsolete system of unguided individualism was replaced by organized schools of architectural training, leading to admission by carefully prepared examination to the ranks of qualified membership of the R.I.B.A.

This was a great thing to do, for it not only raised the conception of architecture among those who approached it as students, but it brought into the Institute a greatly increased membership of well-trained men, and enhanced its prestige as a governing body.

Architecture at its best has for a long time been represented to the public by the R.I.B.A., but since architecture cannot be separated for practical purposes into good and bad, and since we hope always as architects that our good works will multiply and cover the land with order and beauty, the wish to spread the benefits of education are part of our being, with the converse wish to make an end of ugly building and malpractice everywhere. Hence the idea of registration is latent in every extension of architectural education. You cannot define architecture and not wince when you find its travesty being paraded as the genuine article, in good faith and bad, by ignorance and charlatanism. Registration under the circumstances of the society in which we live today is a necessity.

Even so, and despite the fact that the R.I.B.A. has shown that its real authority is so little questioned that it has now drawn to its ranks every other outside body of importance, and stands fully representative of the profession at large, the Standing Committee before whom the Registration Bill in its present form is being debated appears determined to deny the *nominal* control of the Register to the R.I.B.A.

It might be thought that without such control recognizably vested in the R.I.B.A. registration would not be worth the candle. Nor would it be if registration were what it is represented to be by those who dislike or fear it. But registration is a need that is felt now, and will recur, even if the present Bill were to be dropped, in five, in ten years to come. It is a logical outcome of the progress of a great profession whose basis is order.

Therefore, though this present Bill will not recognize the R.I.B.A. to be supreme, it should be supported and passed. The strength which belongs to the body is still there, and no basis of representation which the Committee could evolve and pass can do other than leave the R.I.B.A. with a predominant control over architecture.

The causes which led to the formation of the movement for Registration still operate, pressing with ever-growing weight upon the profession in general and upon the vast majority of architects in the provinces in particular.

The principles of Registration are accepted in every dominion of the Empire, in nearly every State of the U.S.A., and in almost every civilized country in the world. It is time that the parent body, before it celebrates its centenary, should give a name to the great authority it has for so long unquestionably wielded.



IN THE BANKING QUARTER

A progress photograph, taken under the inclement weather conditions of last week-end, of the new headquarters for the National Provincial Bank, Princes Street, E.C., now nearing completion, from the designs of Sir Edwin Cooper. A further example of Sir Edwin's work—the Baggage Hall, Tilbury—is reproduced on pages 340–342 of this issue.

NEWS & TOPICS



Leon Berger, the winner of the Honan travelling scholarship of the Liverpool Architectural Society. He is twenty-two years of age and a fourth-year student of the Liverpool School of Architecture. A first and a second prize were won by him in the competitions for designs for street decorations for the Liverpool and Manchester Railway Centenary celebrations held during last year.

THE ARCHITECTS (REGISTRATION) BILL

SEVERAL sittings of the House of Commons Committee which is considering the Architects (Registration) Bill, and several essays in private negotiation between its promoters and opposers, have failed to secure the measure of agreement necessary to make smooth its passage. On Thursday the Committee heard Lt.-Colonel Moore's statement that, despite many concessions made, the opponents have not been placated. The negotiations broke down over the inclusion in the Bill, or otherwise, of the Board of Architectural Education, and no indication is forthcoming from them of a spirit of reasonableness on the question of the influence to be exercised by the Board. Mr. McShane, Mr. Winterton and others assert that the Board is a mere instrument of the R.I.B.A., and they are displaying a spirit of implacable hostility not only to the Board but to all other organizations, such as the Architectural Association, whom they suspect of connection with the R.I.B.A.

AN ENGINEER ON THE BILL

Sir Owen Williams asked some uncomfortable questions about the working of the Architects (Registration) Bill, in last week's *Times*.

> The Bill provides for nothing other than conferring upon those who can be registered the right to call themselves registered. . . . To those who practise bad architecture the broad appellation of "architect" is to be surrendered. . . . Various associations of auctioneers, estate and house agents and so forth are given the recognition of a specific right to do everything else that a registered architect can do under the Bill except to call themselves registered. . . . The registered architect has no other rights except that of paying fees and being generally regimented.
>
> The controlling of the registration is now suggested to be by an independent body on which the "representation will be proportionate to the strength of the organizations represented, and the engineers' and builders' organizations would be allowed representation." . . . If the latter organization is of sufficient strength it would predominate, and the registration of architects would be largely controlled by those engaged in a trade from which the architect is deemed by his client to be independent.

Coming from Sir Owen Williams's clear mind, these criticisms of registration are worth reproducing without further comment.

DESIGN IN INDUSTRY

Right glad I am to see the D.I.A. returning to its muttons with such gusto. The inaugural luncheon, number one of a series intended to bring home to manufacturers the absolute necessity of design in industry, was a success. The manufacturers were there, the Press was there, and from the principal speeches hard facts were not lacking.

Readers of this JOURNAL know what is meant by design in industry, but do they realize what will happen to British industry that neglects design—not only the design of the artists, but the design of order, the making of things fit that look fit—that capture the eye because they look fit? Things are not hopeless: witness this new movement on the part of the D.I.A., and witness, also, the fear which grips enough of our manufacturers to make them take action against the Jugo-Slavs, the Parisians and Swedes, whose cheap and cheerful wares have been playing skittles with Hanley and Stoke, and many another centre. But indefinite action is not enough. There must be some real fusing of industry and design, and this is what, I hope, may be one of the direct results of getting together over the luncheon table.

"GROWING PAINS"

There can be no growth without pain, but the identification of the character of a particular growth with its symptomatic pain calls for the shrewdest diagnosis. I can imagine few wiser consultants than Mr. Goodhart-Rendel. I hope that there were many sufferers from growing pains in his audience at the A.A., and that they realized their luck. For, beneath a treatment essentially engaging, he uttered profundities that badly needed re-enunciation at the present juncture. Here was a lecturer who was not afraid to own to attacks of functionalism, of geometromania, and, by describing how he schooled himself to them, must have put into his hearers heart for endurance of what they themselves suffer and will suffer.

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Starting from the first discomfort of the infant architect—the discovery that designing is not as easy as it looks—he cast just as convincing a horoscope for the "man of feeling" as for the utilitarian; treated at length of the indications and consequences of hypersensitiveness, of discipleship or hero-worship, of intolerance, of revolt against academicism. Nor were any of these things analysed in a destructive spirit; on the other hand, the paper bristled with constructive criticism. Verily, the proper nourishment for an architect is hard fact: the right kind of growth will ever be associated with the pains arising from the real assimilation of all the factors of a programme.

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In his peroration Mr. Goodhart-Rendel asked in what directions an architect should wish to grow. Will many quarrel with his answers? "The first need of a good architect is sensitiveness to æsthetic values in form"; and "The good architect must have an unsleeping sense of the appropriate."

POISON FROM SMOKE

If Professor Haldane's evidence as to the effect of washing the gases of combustion arising from electricity generating stations had been given the consideration it deserved from a commission whose task was clearly to hear evidence bearing upon such an important question as atmospheric pollution in London, it is doubtful whether power stations of the present size contemplated would have been allowed. In a recent article published in *The British Medical Journal*, Professor Haldane, in discussing the deaths which occurred last December near Liége discloses an entirely new aspect of the proposed methods of eliminating sulphur from furnace fumes. He points out that the necessary lowering of the temperature of these fumes by washing would, under certain circumstances, produce carbon monoxide in a high enough percentage to be fatal to life in areas surrounding a power station. Raising the temperature of these gases, after having been lowered by the preliminary process of sulphur extraction, would render them safe, but at further expense, which, as he points out, those responsible might wish to avoid. It appears that the commissioners, in the teeth of the medical evidence submitted to them on behalf of the County Council, decided that this evidence had not the bearing on the question which it is now agreed by the best authorities to have. The whole point of Professor Haldane's diagnosis is that, although under normal circumstances there might be no great danger, it merely required the presence of still air or fog to precipitate a catastrophe of the first magnitude. This can hardly be overlooked.

THE R.I.B.A. SMALL HOUSE DESIGNS

The R.I.B.A. have now definitely adopted a scheme for providing small houses of good architectural design through panels of architects. It will be remembered that the scheme was devised and worked out in considerable detail by Mr. R. T. Longden, F.R.I.B.A., of Leek, and provides for the formation of panels of qualified architects in each district throughout the country. From the designs submitted in each district a small jury of the R.I.B.A. will select the best and stamp them with their seal of approval, so guaranteeing a definite level of merit. After approval, the designs will be continuously exhibited in centrally situated offices, so that anyone interested in small building —private investor or speculative builder—will have the opportunity of making his selection from a large number of designs of all kinds and prices.

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By using a rota the fees for small houses work out at £2 to £3 per house, which is by far the best guarantee that the scheme will find favour with the general public. It has been put into action in North Staffordshire and Manchester, and I am going to watch the progress in these two centres with considerable interest, expecting that, if the first foothold in public confidence is obtained, one of the gravest architectural problems will be at long last on the point of solution. This is not too sanguine when one realizes that the scheme provides a great variety of design at a low flat rate. That is its great appeal to the general public.

BUILDING COSTS WITH VOLUNTEER LABOUR

An article in a recent issue of *The Times* throws an interesting light on present-day prices. A village hall in Wiltshire was built by voluntary labour given by the tradesmen, bricklayers, carpenters, etc., after hours. The local builder supervised the work gratis, and the only costs were for materials. The hall was 75 ft. by 27 ft., and built of 11 in. hollow brick walls on concrete foundations. The height to eaves was 10 ft., and 20 ft. to the ridge at gables, and the total number of bricks used was about 42,000. The total cost without profits or wages was £586 9s. 7d. for the carcase and £96 6s. 5d. for heating, radiators, fittings, etc., while the furniture cost £97 13s. 7d.; thus the materials equal a little over 5d. per foot cube.

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It has often amazed me that rural communities, with their own labour so much at their disposal, should want to pay for reach-me-down buildings of shoddy materials when they might do their own work in good materials. This village in Wiltshire wanted a hall badly, but they did not want a shoddy affair and they did not want to borrow; so they got together, determined to build the hall themselves. It went forward at speed and was completed enough to be occupied under eight months. It is now a comfortable and good-looking building—the sort of building we are advocating. It is, besides, a lesson in self-help all too uncommon. ASTRAGAL

THE ARCHITECTS (REGISTRATION) BILL

Summary of Last Week's Proceedings in Committee

BY OUR SPECIAL PARLIAMENTARY REPRESENTATIVE

WHEN the House of Commons Committee, presided over by Sir Samuel Roberts, met again on Thursday last, to consider further the Architects (Registration) Bill, Lt.-Col. Moore moved the adjournment in order to inform the Committee as to the course of the negotiations which had been undertaken with the opponents of the measure since the last meeting of the Committee.

Lt.-Col. Moore said that at the last meeting of the Committee it was decided that it might be wiser to adjourn again until a final compromise had been arranged on certain minor outstanding questions, with regard to the representation of the various boards and committees. Accordingly they met again informally, but an entirely new situation was created by the putting forward by the critics of the Bill of a group of amendments, which further fundamentally altered the character of the Bill. The arrangements made, subject to the agreement of the Committee, were that the R.I.B.A. should yield up the position of registration authority as proposed under the Bill and that they should agree to an entirely new independent composite body being elected on which they were to secure representation, coupled with all the other interests and architectural bodies, to include also representation of the general public to be nominated by the various Government departments, also representatives of the engineers, builders and so on. The second agreement made was that the admission Committee and discipline Committee should be divorced from any control or supervision by the R.I.B.A. Council, and should be handed over to committees of the new body to be termed the Architects' Registration Council of the United Kingdom. They also agreed to the

constitution and composition of the two Committees, so as to ensure the widest possible representation.

Many members of the Committee had, however, grave doubts as to whether the promoters of the Bill were right in taking from this ancient body, of a hundred years' standing, these privileges which it had undoubtedly earned. That body had built up a system of architectural education, guidance and stimulation unknown in the world hitherto—a body which had opened the gates of architecture to the poorest in the land by a system of bursaries and scholarships. Many people expressed the view that the promoters had gone too far to take away control from such a body. But the point was that they agreed to it and they felt they could make a workable Bill for the benefit of the public and the future of architects. Then they met the critics of the Bill again to consider the minor questions of representation and found this entirely new group of amendments involving an entirely new alteration to the Bill. These were to the effect that the Board of Architectural Education should be handed over as a Committee to this new Council.

As hon. members knew, this Board of Architectural Education had been functioning for twenty-five years.

Mr. Winterton said he did not object to the description of the negotiations, but Lt.-Col. Moore was really arguing the case for a particular instrument to be put into the Bill or not.

Lt.-Col. Moore said that his point was that they should not make this organization, which had functioned so successfully, into a Committee of the new body. It was on that point that the promoters and the opponents of the Bill split. The promoters felt that the new situation would be unworkable, that it would break faith with all the teaching institutions and universities, and that they would be standardizing architectural education by taking it away from this semi-independent body and putting it into the hands of a narrow group of professional architects and outside interests who would not have the same knowledge and ability to deal with the problems involved. He left it in the hands of the Committee to decide what was the right and proper thing to do. In the negotiations the critics of the Bill reserved to themselves a free hand to oppose or criticize any part of the Bill *de novo*. The promoters did not take that view. They decided to carry on where the informal negotiations had left off, and they would go on with the concessions they had made. Certain amendments had been put in by him to give effect to the substance of these agreements.

Mr. McShane said there had been a lot of study on their part to come to an amicable arrangement with the promoters. The fundamental issues on which the negotiations broke down were as to whether there should be an independent body. Lt.-Col. Moore had not accepted that. The most vital question was whether or not there should be inserted into the Bill another instrument—the Board of Architectural Education—and that was where the negotiations broke down. Lt.-Col. Moore had said that they were taking away from that great body powers enjoyed for so many years, and that they were going to hand over this great organization to be incorporated in the Bill. It was precisely because the opponents of the Bill objected to such a course that they opposed it. This body existed today as a chartered body. They did not want anything to do with it. They did not want it inserted because it was an instrument of the R.I.B.A. Once statutory authority was received, they would mould the whole educational development of architecture in this country. If unfortunately the designs of the promoters of the Bill were to be accepted, the Committee would be doing a grave public disservice unconsciously. When hon. members understood the real implications, they would have nothing to do with it. The opponents of the Bill had framed amendments which would make it a good Bill from every point of view. The Bill would also be better from the point of view of craftsmen in the building trade, for whom no provision was made. He wanted people outside the Committee, and architects generally, to know that the methods so far pursued were harmful to the promoters of the Bill. To test the sincerity of the promoters, they were prepared to guarantee a majority of architects on every Committee set up under the Bill. But the promoters were not so much anxious for registration *per se* as for making this an instrument for the promotion of the particular organization in which they were interested. In his opinion an agreement could have been come to which would have helped the architectural profession, and he was profoundly discontented that no real attempt was made to meet them. They were not trying to take away from the powers of the Board of Architectural Education which was not in the Bill, but which the promoters wished to have inserted. The manner in which this Bill had been pushed in the House had not been helpful to architects in the country, for many of whom he was speaking.

Mr. Bracken said it would be a pity to kill the Bill because there was disagreement on a number of small points. Lt.-Col. Moore had shown great reasonableness in accepting amendments. The Bill would not satisfy everybody, but it would give students some professional status.

Sir Newton Moore said that every reasonable concession asked for should be granted. It was impossible to create a perfect body at once, but they could create a high standard over a number of years.

Mr. Winterton said it would be misleading to suggest that the promoters of the Bill had not gone some distance to meet them, but they did so under duress. They had broken down mainly on the question of the Board of Architectural Education, but there was nothing in any of the amendments the opponents had put down which took away any of the rights of the Board. It was a club of architects and students, and they objected to putting this outside instrument into the Bill. They had what was practically a parallel body dominated, manipulated and controlled in the interests of the R.I.B.A., and this the promoters desired to put into the Bill.

The motion for the adjournment having been withdrawn, the Committee proceeded to deal with the various amendments on the Order Paper. The first batch of these embodied the concessions indicated by Lt.-Col. Moore.

It was on Clause 5 of the Bill that opposition became manifest. In this clause it is laid down which classes of persons are entitled to be registered without examination.

Lt.-Col. Moore moved an amendment that applicants

> "shall, upon satisfying a committee set up by the Council, to be called 'the admission committee,' that they possess one of the following qualifications, be entitled to be registered, and the Council shall cause their names to be entered in the Register :
>
> "(a) Architect members of the Royal Academy and of the Royal Scottish Academy; (b) every person who has gained or gains a degree or diploma in architecture from any university in Great Britain or Northern Ireland or from the Architectural Association (London) or from any other body approved by the Council on the recommendation of the Board of Architectural Education hereinafter mentioned in this Act; (c) every person who makes application within five years of the passing of this Act who is or has been in bona-fide practice as an architect or is qualified to practise as an architect."

Mr. Winterton moved an amendment to the above amendment to the effect that every person who has gained or gains in architecture a degree or diploma recognized by the Council as qualifying for registration shall be entitled to entry into the register.

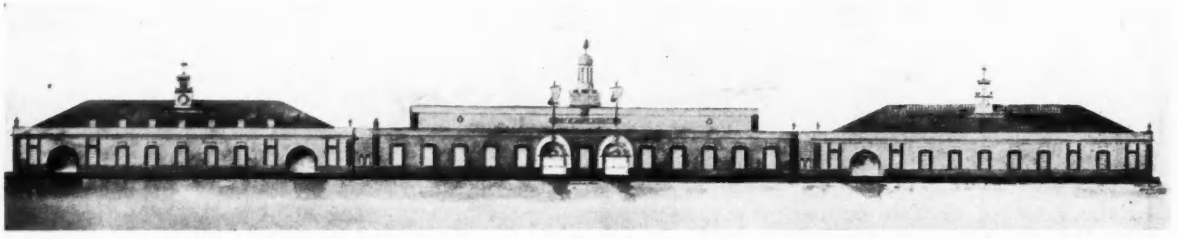
Lt.-Col. Moore, opposing the amendment, said it would throw over the Universities and the Architectural Association in London which had established a standard of education which it would be a positive crime to set aside.

Mr. W. M. Adamson said these bodies would not be excluded.

The Committee divided, and, after Mr. Winterton's amendment had been carried by sixteen votes to seven, adjourned.

THE NEW BAGGAGE HALL AT TILBURY DOCKS

DESIGNED BY SIR EDWIN COOPER, A.R.A. AND R.I.B.A. GOLD MEDALLIST



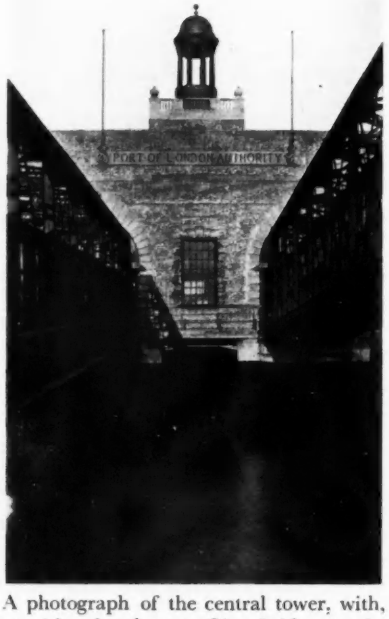
A general perspective sketch of the waterside front. The building has been erected upon a platform of reinforced concrete, provided for the purpose. Owing to the bridges and booms of the landing-stage, no photograph of this aspect is practicable.

ON Monday night Sir Edwin Cooper, A.R.A., was presented at the R.I.B.A. with the Royal Gold Medal. The opportunity is taken of reproducing views of one of his latest works in architecture, and also a short appreciation of his professional attainments.

THE WORK OF SIR EDWIN COOPER

The medal has been awarded to Sir Edwin Cooper primarily, I take it, because his work is undoubtedly architecture, and not merely one of the current "isms," such as functionalism, expressionism, modernism, or traditionalism. He is a very definite and solid figure on our stage. In his handling of large buildings especially he suggests a character derived from the imperial age of Rome. For if Roman civilization in Britain had continued without the interruption of the Dark Ages and the recall of the Legions, architecture might easily have arrived about 1066 at Marylebone Town Hall, or the P.L.A. building.

Cooper likes the things the Romans liked—directness, space and weight. The man who complained that Cooper's plans were as obvious as a Roman road was reminded that labyrinths, judging from many London office blocks, were comparatively easy, general and common. But the direct plan of the P.L.A. Building looks on paper like the layout of a beautiful pavement, over which a man can walk direct from one main point to another, or round the circumference of one great circle. Those who look for pleasure and satisfaction in mere walking find it here.



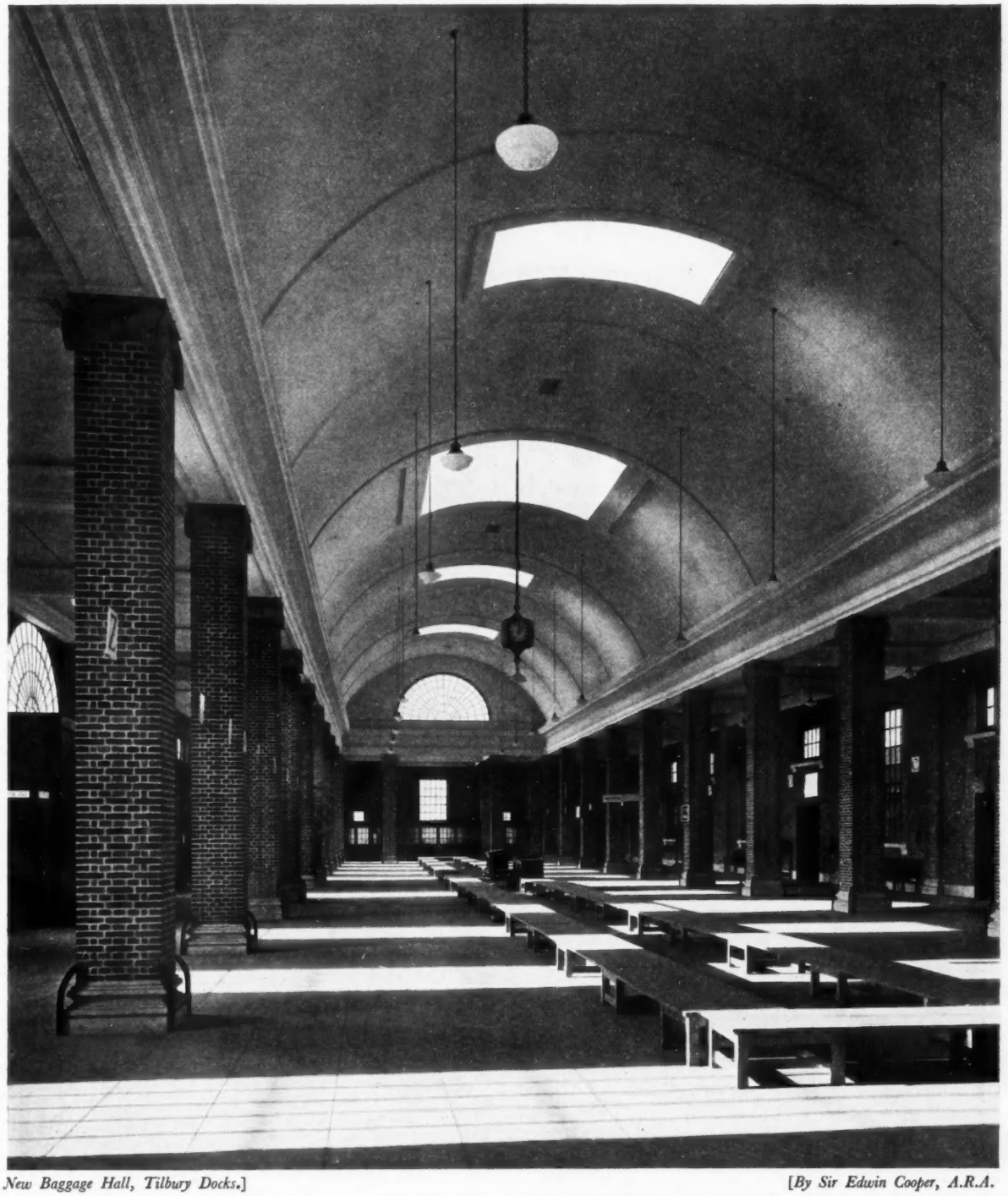
A photograph of the central tower, with, on either hand, connecting bridges to the landing stage.

In Lloyd's it was necessary to change the direction of the approach slightly, in order to arrive at the great Shipping Hall. Cooper managed that awkward transition in the most accomplished manner by means of an oval vestibule which makes the crooked path seem straight. The City merchants like this directness, which, rightly, seems to them a virtue in building. They understand it better than "atmosphere."

The surprises which Cooper gives the spectator are those of space. He proportions his corridors, which are ample for use, so that they enhance the size of his halls, and only a wall-eyed man will gain no thrill when he suddenly emerges into the Rotunda of the P.L.A. Building, or into the Baggage Hall, or the wide spaces of "Lloyd's." Other architects have used similar means to get such an effect, but few have been so suc-



A perspective drawing of the central feature of the façade illustrated above. The new building has been provided by the Port of London Authority for Customs purposes, and gives easy and comfortable access from liners arriving in the Thames to the new station of the L.M.S. railway.



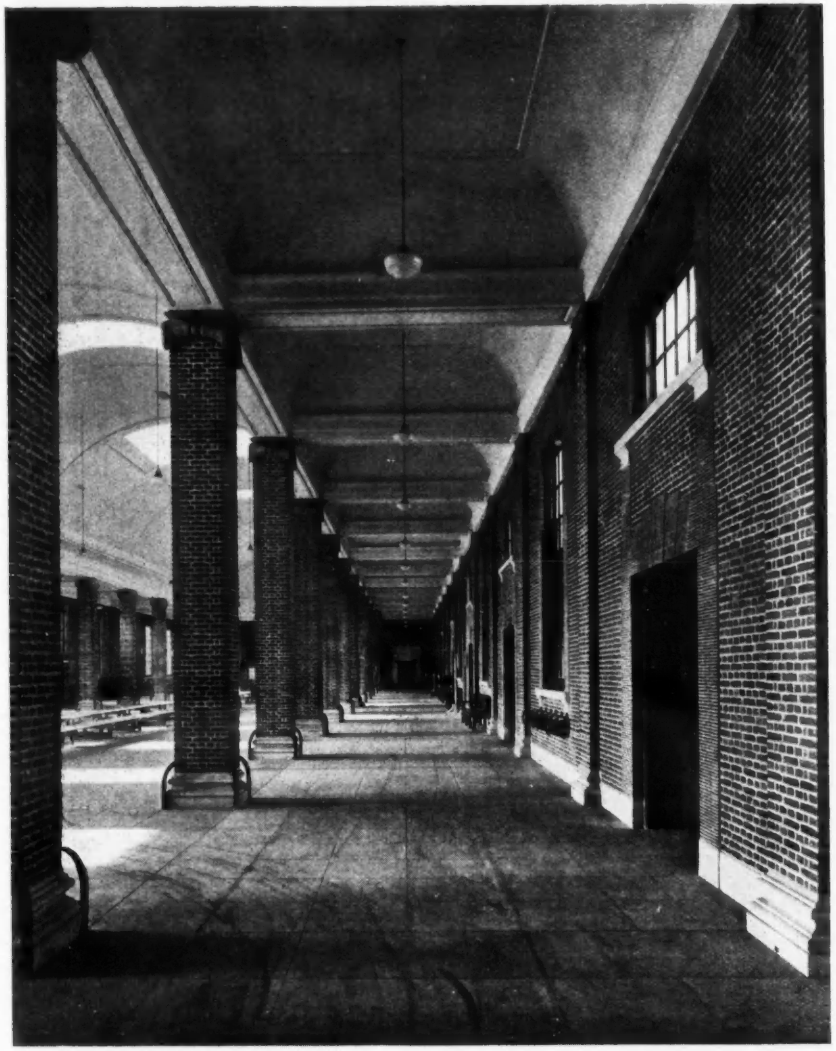
New Baggage Hall, Tilbury Docks.] [*By Sir Edwin Cooper, A.R.A.*

The baggage hall is nearly 300 ft. long, 75 ft. wide, and 43 ft. high to the top of the parapet. It has a barrel roof of plaster. The Customs benches are arranged down the centre of the main space, and initial letters, displayed at intervals, facilitate the finding by passengers of the spot at which their baggage is laid out for examination. It will be noted that the corners of the stone bases to the brick pillars are protected by fenders against damage by passing trolleys.

cessful, I think, because they have not counterbalanced their spans with so strong a feeling for stability as Cooper. His weights are just.

In this matter of weight it has been objected that his larger works externally look overloaded and clumsy, especially the P.L.A. Building, Lloyd's and Marylebone Town Hall. It is a sound defence that such buildings must be judged as wholes, exteriors with interiors, and the vast open spaces inside justify the heavy abutments and decoration without, and give them their proper beauty. The Star and Garter Home, though too large for Richmond Hill, is not a ponderous building, and the P.L.A. warehouses and cottages are suave, not clumsy. Nevertheless, it may be gladly conceded that all Cooper's work has gravity and a realization of the artistic value of weight.

P. M. ST.



New Baggage Hall, Tilbury Docks.]
Looking along one of the side aisles in the hall itself. The brick pillars and piers have carved caps of stone. Space and the very excellent natural light secured are leading characteristics of the building.



[*By Sir Edwin Cooper, A.R.A.*
A corner of the baggage hall, off which are offices for the use of the Customs staff whose duties are the reason for the building's existence. Collapsible steel gates are extensively used as temporary barriers.

THE NEW ICE RINK AT STREATHAM

DESIGNED BY ROBERT CROMIE

STREATHAM already possesses the Astoria Cinema, a theatre, dance hall and swimming baths, and its second super cinema is now being erected by the British Gaumont Corporation. More than this, a super ice rink, which seemed to be the only form of amusement lacking, opened its doors to the public on Thursday last. Classed at the L.C.C. for any form of entertainment, such as dancing, boxing, cinematograph shows, exhibitions, etc., it has a capacity for about 5,000 persons, and has been erected at a cost of over £120,000.

The building stands on a site adjoining Streatham Station, and a few minutes' walk from Streatham Hill and Norbury Stations, Streatham Hill, and has an area of 36,300 super feet, thus permitting the laying of an ice-pad of 21,000 feet super. The arena is surrounded by two rows of seats on steppings, with a continuous balcony above.

At the entrance end there is a second balcony, entered off the ballroom restaurant. Advantage was taken of the sloping site to place the rink proper at a level of 6 ft. below the entrance hall. Spacious skate-fitting rooms, skate store and shop; lavatories, complete with shower baths, and first-aid rooms, etc., are entered directly off the promenade.

There is a tea lounge at the far end, with an additional lounge over it, and a staircase linking the balcony with the promenade at this end. Kiosks for the sale of skaters' accessories, cigarettes, etc., are situated on the ground floor. Dressing-rooms for professionals, office and staff rooms are entered off the balcony (which is only 4 ft. above the entrance-hall level).

On the first floor over the entrance hall is the ballroom restaurant, arranged with separate entrances from the street for use when the rink is closed. The housing of the refrigerating machinery, plenum heating and ventilation plant, electrical gear, bioscope chamber, etc., etc., occupies a building cube of about 185,000 ft.

The rink itself is 123 ft. wide, and is covered by a fibrous plaster ceiling, a large proportion of which is allocated to wrought-iron and glass laylights. These are essential to allow the maximum amount of daylight. In the evening, sun and moonlight effects are electrically achieved by stage-area floods, with special reflectors behind the glass. Two spotlight chambers, with windows 14 ft. long, furnish accommodation for batteries of lanterns to illuminate exhibitionists on the ice.

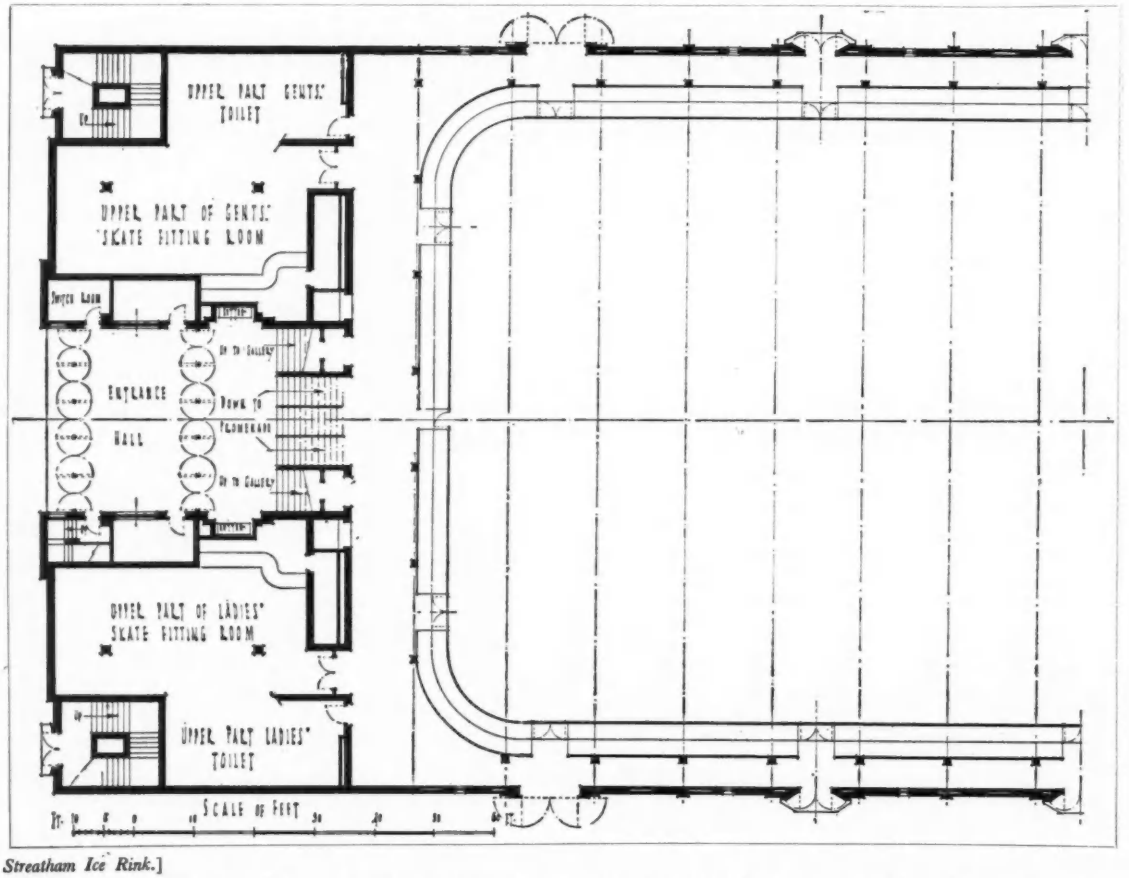
A distinct departure from ordinary decoration has been adopted in the rink. It is a kind of kaleidoscopic scheme (in which there is no shading), each colour being distinctly separated from its neighbour, in a series of interwoven patterns, each based upon some ordinary motif in everyday life, such as a viaduct, tower, battleship, tree, gramophone record, waves and the like. The walls are illuminated by small floodlights under the continuous balcony. The balcony is pale green, and the supporting piers all round the rink are a deep crimson. These are themselves illuminated by square electric fittings forming caps. The ceiling is a sunlight colour distemper. The ice-pad barrier is covered with a light greeny-blue linoleum and the skirtings and joinery are black. The windows are in frosted glass in contrast with the bright reds on the walls. The balcony bookboard is covered with green velour. The rink promenades, staircases and balcony are carpeted.



The main façade to High Street, Streatham. The elevations are in reconstructed Portland stone and black faience, with metal canopy and windows. In addition to the drive leading to and from the main entrance, provision is made for the parking of 500 cars.



The entrance vestibule showing the staircases leading down to the promenade and ice surface and up to the gallery. It is modernistic in colour treatment and metalwork is chromium plated. Behind the camera is the men's entrance hall.

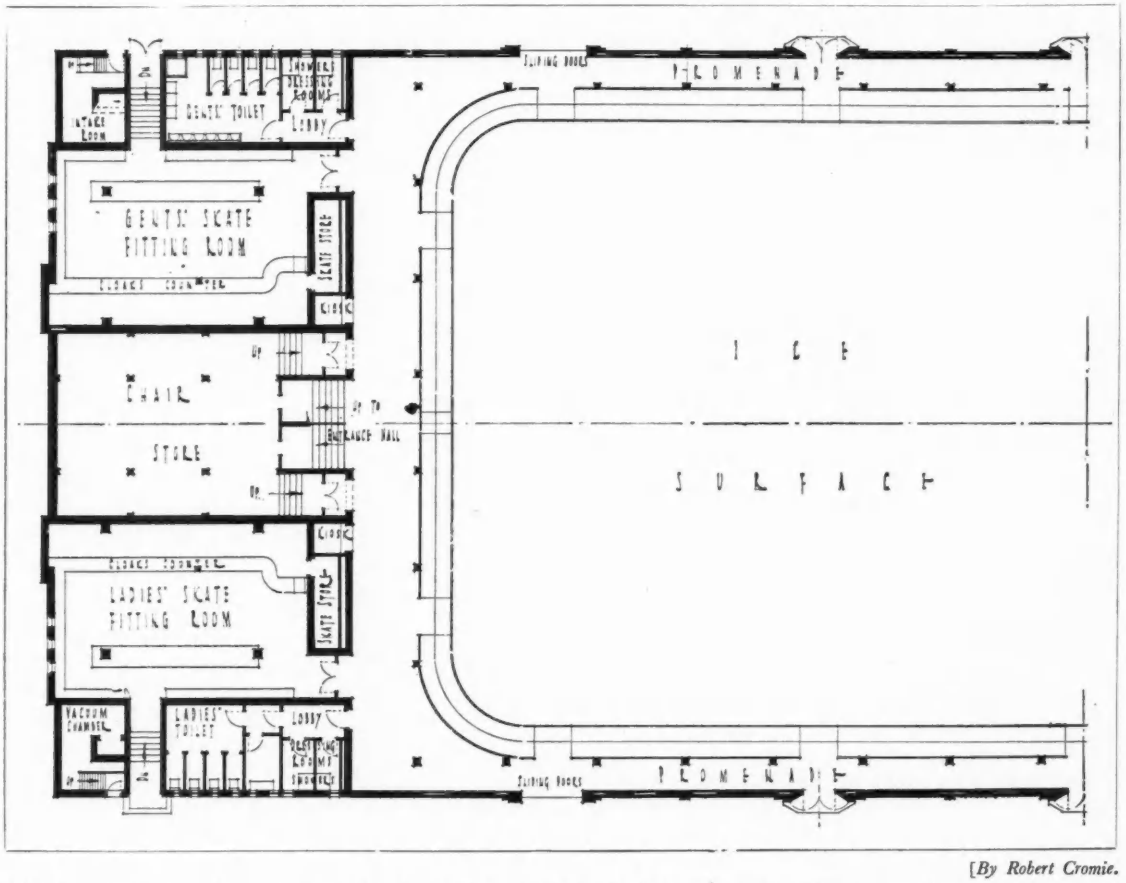


Streatham Ice Rink.]

Half plan at entrance level. The promenade and ice surface, a part plan of which is reproduced on the facing page, are on the floor below. Above entrance level are the gallery, ballroom restaurant, and tea lounge café.

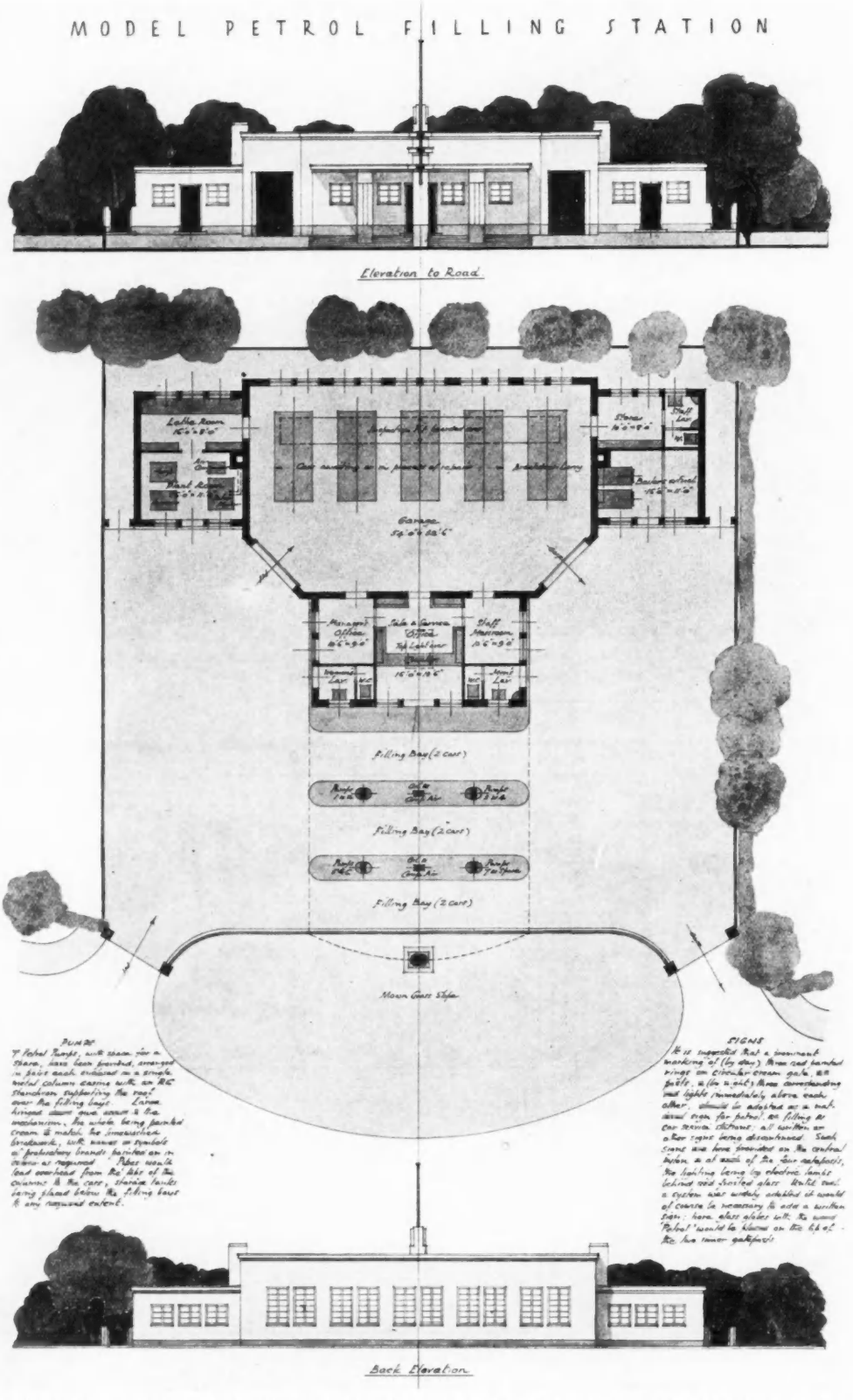


The ice surface is 210 ft. long by 100 ft. wide—an area of 21,000 sq. ft., accommodating over 1,000 skaters. On the ground floor and balcony there is additional accommodation for over 3,000 spectators to view ice hockey and other attractions.



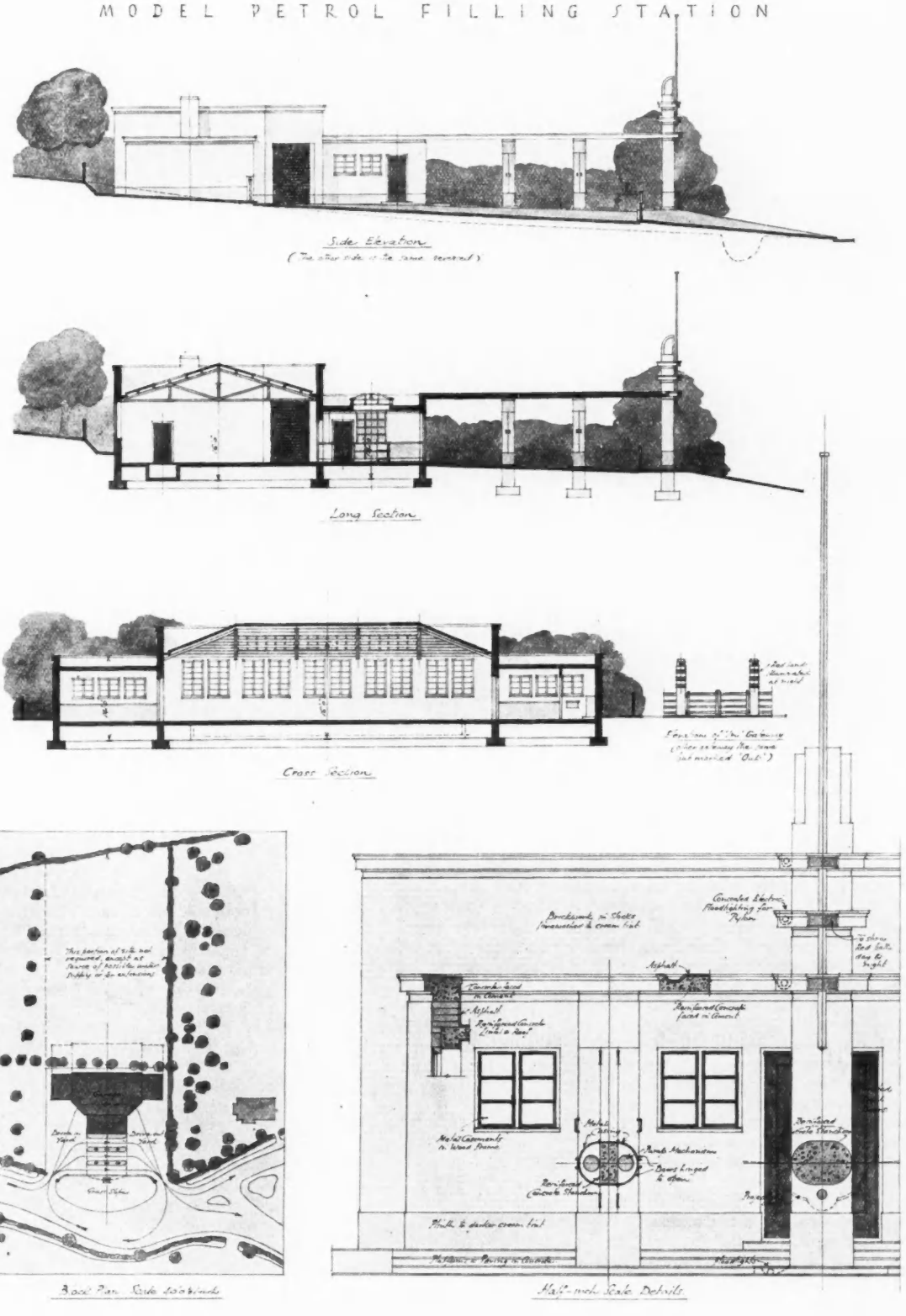
[*By Robert Cromie.*

Half plan at promenade and ice surface level. The building is designed so that, if necessary, the ice surface can be removed to enable it to be used for dancing, boxing exhibitions and cinematograph shows.



On this and the facing page are reproduced the design of a model service station, by Mr. John Dower, awarded the first prize (50 guineas) in the competition promoted by the Incorporated Association of Architects and Surveyors, in order to encourage the study and development of petrol-filling stations, planned to meet the commercial requirements

MODEL PETROL FILLING STATION



of such an undertaking, but at the same time in full sympathy with the surrounding countryside. The second prize (20 guineas) was awarded to Mr. R. E. M. Coombes; and the third (10 guineas) to Messrs. A. M. Chitty and L. T. Drake. All the designs will be on exhibition at 1 Wilbraham Place, S.W.1, from tomorrow, March 5, until Saturday, March 21.

ARCHITECTURE *versus* ENGINEERING

iv: Cross-Fertilization of Styles

BY A. J. PENTY

"The creation of a modern style of architecture . . . must depend in the future on what it depended on in the past—the cross-fertilization of styles and cultures. . . . All through history one style has been grafted on another and a new style eventually born of the union."

IT remains for us to attempt the formulation of a policy for architecture in the light of the facts adduced.

It is obvious that if architecture and engineering are not the same thing, if they acknowledge different starting-points and move towards different goals, the case for a concrete architecture collapses absolutely. For if they are not the same thing, architecture cannot be merely the expression of scientific construction. And if architecture is not the expression of scientific construction, it cannot be claimed that any particular form of construction, because it is scientific, must eventuate in a new style of architecture. If architecture finally must obey the laws of æsthetics rather than construction, we are at liberty to reject the use of concrete if it does not appeal to our æsthetic instincts.

The gain to architecture is enormous. To expose the concrete heresy lifts a cloud that for long has hung over the profession, depressing its spirits and creating intellectual confusion. It restores liberty and justifies the profession as a whole in upholding tradition and refusing to listen to the gospel of modernism.

In theology it is laid down that a heresy is not necessarily a belief in something false, but an exaggeration of one aspect of truth insisted upon to the damage or denial of other and equally important truths. The concrete heresy is of this order, for the attempt of this school to exaggerate the importance of the utilitarian side of architecture, whilst denying the validity of the æsthetic as imponderable, is their peculiar form of heresy. It has resulted in a loss of mental balance, in a failure to see architecture as a whole in its true proportions. It has made this school untrustworthy guides in the practical affairs of life.

The truth is that construction can explain a great deal in architecture, but it does not explain everything by any means. For the general proportions of buildings, the layout of the plan, the relation of length, breadth and height and fenestration, among other things, are determined by an æsthetic conception of abstract form, or, in other words, a sense of proportion.

Nor do the principles of construction offer us any guidance in questions of colour, texture or the treatment of details, while, as I have shown, what is æsthetically right may at times be constructionally wrong. Restricted as I feel the outlook of the classical school to be, they nevertheless appear the picture of mental health compared with the concrete school, for they are right in some fundamental things. They are right in insisting upon the primacy of æsthetics and abstract form; for the general layout of a design can be determined in no other way. But they are heretical in so far as they attempt to explain architecture entirely in the terms of abstract form, and in their restricted attitude towards tradition.

But it will be asked by the concrete school: if the creation of a modern style of architecture does not depend upon the discovery of any new constructive principle, such as is involved in the use of reinforced concrete, what does it depend upon? The answer is that it must depend in the future on what it depended on in the past—the cross-fertilization of styles or cultures.

This is most demonstrably the case in the past, for we know how all through history one style has been grafted on another and a new style eventually born of the union. And there is evidence that the same thing is happening today. American architecture is the product of the fertilization of the beaux-arts tradition of American architects by English taste and ideas, of designs of the 'eighties and 'nineties, which, in turn, were the result of the fertilization of the Gothic Revival by the vernacular Renaissance tradition, under the auspices of the so-called Queen Anne Revival. The same is true of the revival of architecture in the Scandinavian countries. It is the result of the reaction of English ideas upon native tradition.

The theory of the concrete school, on the contrary, that the revival of architecture depends upon the discovery of a new constructive principle and of new materials, is manifestly absurd when examined in the light of history. For it fails to explain why so many styles of architecture in the past have used the same materials and the same methods of construction. If Roman, Byzantine, Romanesque, Norman and Renaissance architecture made use of the round arch, why should it be assumed that no other treatment of it is possible? If all the styles of monumental architecture used stone, why should it be supposed the potentialities of stone are exhausted? It would be just as absurd to argue that a new style of draughtsmanship is dependent upon the discovery of a substitute for Indian ink, or that a new style in literature is dependent on the invention of a new kind of paper.

The principle of the cross-fertilization of cultures is explained in a recent book —*Progress and Religion*, by Christopher Dawson—in which the author is concerned to controvert the theory enunciated in Spengler's *Decline of the West* that "every culture is a unique creation." But the theory that new styles or cultures emerge as the result of cross-fertilization is not a recent discovery. It is to be found in (Sir) T. G. Jackson's *Modern Gothic Architecture* (1873), which was the apologetic of the so-called Queen Anne Revival and, I do not hesitate to say, is one of the few important books on architecture, though nowadays it appears to be forgotten. And the same idea is adumbrated in Matthew Arnold's *Culture and Anarchy*, which appeared a few years earlier and was, I suspect, the source of Jackson's inspiration.

There is one other notion to controvert and then I have done. It appears to have arisen as a false deduction from, or misunderstanding of, Ruskin's dictum that "all architecture is the expression of national life and character." Of course it is. It could not be otherwise. The architecture of the speculating builder equally with that of Sir Edwin Lutyens is an expression of our national life and character. But some architects of the concrete school failed to make this obvious deduction, which puts the idea in its place as one of no practical value, and misinterpreted Ruskin as meaning not that all architecture *is* but *should be* the expression of national life and character. And they have spent the rest of their lives in a vain search for an architecture that shall express the age.

Not understanding that new styles are

the consequence of cross-fertilization, they began by repudiating all the revivals of the nineteenth century as anachronisms, out of which no good could come. When, however, these revivals began to bear fruit, when some really good modern architecture on a basis of tradition began to be produced, it did not convince them of the unsoundness of their theories. On the contrary, they cast aspersions at it; they said it was insincere and make-believe—whatever that may mean. For I confess to a complete inability to grasp what they mean. I understand what is meant by thoughtful or thoughtless work, by design in good taste or bad, but what is meant by sincerity in work I don't understand. And so they went on until they ended in the worship of banality and reinforced concrete which by some mysterious mental process they proclaimed as the only legitimate expression of the age.

I will not pursue this painful subject further, for the logical end of it appears to be Hanwell. But, in conclusion, I will add that there is nothing in modern architecture to compare for make-believe with this boosting of reinforced concrete by architects of taste, for it is obvious that they are only able to do it by denying the validity of their own æsthetic instincts.

(Concluded)

LETTERS FROM READERS

The Architecture of Steel

SIR,—Personally I have every sympathy with your well-reasoned article on "The Architecture of Steel" of January 14, and feel that Mr. Basil Scott's suggestion that you accuse the steel trade of resisting overtures from the architectural profession is overstrained, as I did not take the last paragraph of your leading article in the same issue as an actual accusation, but rather as a friendly suggestion that the architects and steel trade might collaborate more, on both patriotic and æsthetic grounds. I do, however, support Mr. Basil Scott in all he says otherwise, and combat the suggestion that the steel engineer is only happy when the architect is completely out of sight, or that the steel engineer does not respond to the overtures of the architect, or that architects have flown to reinforced concrete just to spite the steel engineers. Do not let us argue general propositions on individual or selective cases. It is not my experience that there is any general feeling amongst architects that the steelwork engineers' idea is to render them entirely indispensable to the architectural profession, and so tighten their hold upon the world of building.

In the many years now that I have practised, I have found the most ready help from the steel trade in adapting their construction to our sometimes very intricate forms and expressions of design, perhaps concealed or openly exposed as part of the architecture of the building.

Although it has been my firm's custom to engage in the first instance a consulting engineer, who works out the stresses and strains and calculations before the design is placed before the steel contractor, I am glad to say that afterwards, when I have come in direct contact with the steel contractors, they have always collaborated and put themselves to no end of trouble to conform to the consulting engineer's details and our designs. I have also found that the steel contractor is always willing to have the architect visit both his drawing office and his workshops.

Mr. Basil Scott does right in instancing the readiness of the steel trade to assist the architect in the issue of their elaborate section books that have now helped the architect for many years, and surely this is a sign that the steel trade is willing to put their technical knowledge at the disposal of the architect.

T. R. MILBURN

Architecture versus *Engineering*

SIR,—It is difficult to imagine a title more harmful than that of "Architecture *versus* Engineering," under which Mr. A. J. Penty sets out his prejudices, for it implies a conflict between the architect and the engineer. The suggestion that such a conflict exists is merely an expression of reluctance to admit that a structural revolution has taken place during the last half-century, a revolution that demands a partnership between the architect and the engineer, if the former is to use wisely and well the new materials of the industrial age, and the latter is to emerge from the barbarian state of money-grubbing utility to which he was inured under nineteenth-century commercial individualism. "Architecture *versus* Engineering," in so far as it labels a state of mind, reveals an obscurantism that would have been paralleled in the fourteenth century if master builders had greeted the rediscovery of brickmaking with petitions of complaint to their patrons entitled "Building *versus* Bricklaying."

The following paragraphs from Mr. R. H. Wilenski's book, *The Modern Movement in Art*, restore to this matter the sweet simplicities of common sense :

> The architect may be said to be at one and the same time a builder and an artist. In his capacity as builder he works theoretically in stone, brick, iron, steel, and so forth; as builder he is concerned with the functional aspect of his work, with its practical purpose. But in addition to this theoretical work as builder, which is scientific, the architect has another function the exercise of which produces results so different from the results of the mere builder who is not an architect that men have invented the word "architecture" to differentiate the one kind of building from the other, and the word "art" to describe the character of the architect's work. . . .
>
> We may say in other words that the architect's business as artist is to contribute to the definition, organization and completion of his formal experience by creating a concrete object symbolizing his actual or imagined perception of certain lines, balances, recessions, and so forth; that if he can do this he is what we call an artist, and that if he cannot he is just a builder and nothing more.

It follows that there are occasions when the engineer may well claim the title of architect, and however shocking this may seem to those who praise the mediæval crafts and damn the bright young modernists, they should recognize that the only way to civilize the commercial and industrial age in which, for better or worse, we happen to be living is to recognize realities. Nobody has ever made or altered anything by quarrelling with the tools of their trade.

Mr. Penty's reference to advertising agents with which he concludes his second article is presumably prompted by the fact that the most enlightened patronage for architecture (to date) has come from Sir William Crawford, whose great agency is housed in the only building in London that is frankly (if starkly) modern in its conception, planning, equipment, decoration and finish. Mr. Penty may not like the look of modern buildings; speaking personally, I find them inhuman; but unless personal taste is expelled from criticism, we (Mr. Penty and those of us who venture to contradict him) will merely repeat in less impressive and beautiful language the errors of the late John Ruskin.

JOHN GLOAG

SIR,—I am in full agreement with Mr. Penty when he insists that beauty cannot be measured by utilitarian standards. I could not agree, for example, that a healthy chimpanzee is as beautiful as Norma Shearer. I part company—for a moment—with Mr. Penty when he suggests that there exists any *conflict* between architecture and engineering. A satisfactory building is surely one where the practical and the æsthetic are combined, using the word in its chemical sense. A satisfactory book needs worthy contents in a worthy setting—printing, binding, etc.—but would one conclude that there exists any conflict between the contents and the setting? Surely not, because the setting must conform to the contents—the length of the book, the size required, and so on—while the contents must be modified in size and spacing to suit the setting. This implies co-operation and not conflict.

The basic trouble with architectural thought, in my view, as in the other arts and sciences, is that people are always trying to make it and them rational. Even in arithmetic, that rigid framework of pure reason and logic, we find our sense of logic outraged at the very start, and, as Mr. Penty has quoted Sir William Bragge, I will quote Galileo: *Consider the series of squares 1, 4, 9, 16, 25 . . . there are obviously far more numbers that are "non-squares" than numbers that are squares. On the other hand, every number 1, 2, 3, 4, 5 . . . is a square root, so that to every number there is a corresponding square; hence there must be the same number of squares as non-squares.* In the realm of physics Nature is proving herself more and more irrational and even capricious, and at the same time she seems more and more to be dependent upon consciousness, which would lead us to suppose that she would show herself increasingly rational as we probe further into her secrets. These examples show irreconcilable conflict, but is not the "conflict" of our own invention? Why do we assume that the Universe, either in science or art, must be what we call rational or governed by logic? Why is this idea of logic so firmly implanted in our minds? We must, perhaps, regard it as an hereditary and primitive tendency, due to the practical exigencies of everyday life, where affairs are on too small and coarse a scale to show irrational tendencies.

If irrationality is admitted in science, how much more may we expect to meet it in art? To account for the existence of æsthetic beauty we must postulate a Platonic world of ideas, providing a scale of absolute beauty, and then the beauty of our bridge or steamer depends upon the extent to which we can translate it into that scale, and this, in turn, depends upon the intuition of the designer. Ecclesiasticus (v. 44) speaks of "such as found out musical tunes." Anyone can invent a thousand tunes; the difficulty lies in "finding out" one tune which is in scale with absolute beauty.

In Plato's *Republic* Socrates contends that *whilst they measure one with another, the symphonies and sounds which are heard, they labour . . . unprofitably . . . but these true musicians . . . search for numbers, but they pass not thence to the problems, to inquire which numbers are symphonious and which are not, and the reason why they are either the one or the other.* Neither Nature nor beauty will fit into any of our strait-waistcoats. Our rules are excellent—indeed, essential—for general guidance, but are no concern of the man who, having mastered them, can proceed to "find out" things.

The appearance of conflict between architecture and engineering is due to



Some of the steelwork of the Central Station, Bombay. Note the rosettes which adorn the intersections of the lacings on the columns and—

the distinction that we have drawn between structural requirements and æsthetics, and we too often find engineers without the æsthetic sense who are consequently unable to find out how to make their bridges beautiful; sometimes we get a collaboration that gives us, not a compound, but a mixture. It appears that I only ask Mr. Penty to label his conflict with the words "Architect *versus* Engineer"—but these creatures are also irrational!

MANNING ROBERTSON

SIR,—Mr. A. J. Penty's article on "Engineers and Aesthetics" in your issue for February 18 is obviously of great importance at the present time. Doubtless a lot of nonsense is talked and written, by me and others, about the beauty of engineering and the unimportance of architects, and therefore we can only be grateful when our slips are shown up. I have said a lot about the Forth Bridge as an example of "functional beauty" and about ships, and now I am informed (or, rather, I was informed in 1926) that the curved cantilevers of the bridge were made thus for "elegance," and that the funnels of liners are raked for the same reason.

But, sir, my proverbial withers take a lot more than that to wring them, I do assure you. When I learn that a Buckinghamshire cottage was pulled down in order to supply real old red bricks for the "Tudor" smoking-room of the "Berengaria," I am more inclined to say, "Some architect hath done this," than to blame the engineers; and when I was told about the curved cantilevers, and heard the profound words, "compressional members," I could only say, "Well, I never knew they *were* curved." For the beauty of the bridge and of the liner is quite independent of such trifling as imitation arches, sloping funnels or Tudor bricks—such things mar rather than make their beauty.

Indeed, the whole trouble lies in that dope word, "æsthetics." The respectable Annandale says it means "the theory of the fine arts; the science . . . of the beautiful; the doctrines of taste," and no one can complain of that. But, getting down to it, why, we may ask, are things called beautiful? People find that kind of question annoying, I know; but if your contributors are going to make their arguments hang on the word, we must at least know what they mean by it. I know what I mean, and it is this: beautiful things are those which please when seen—and, of course, I mean mentally seen, and therefore pleasing to the mind. I don't mean anything else at all.

But obviously there are all sorts of mental pleasures, and therefore all sorts of beauties. One sort of thing is more naturally the product of our industrial system of manufacture than another. Steel and concrete building is the natural product of industrialism, as stone building was naturally the product of other times. Writing was the natural product of the Middle Ages as printing is of today. Fur is the natural clothing of the Esquimaux as cotton is of the Hindus, and to say that some of these things are beautiful and others not is pure art-nonsense.

Anything is beautiful if it be made in such a way as to give pleasure to the mind which perceives it, and the question as to what should or should not give pleasure to the mind is no more and no less difficult than the question as to what should or should not give annoyance. I am annoyed, and so, sir, doubtless are you, by any manifestation of diabolism (grand word for deceit), and so sham funnels annoy me. I should also be annoyed by those curved cantilevers if I took them seriously enough. As it is, I regard them as pretty harmless foibles—but I'd rather have them straight as in the bridge at Quebec. And it still remains true that "if you look after goodness and truth, beauty will take care of itself," provided that your notions of those divine attributes are respectable and you do not "kid" yourself.

The thing called "functional beauty" is the beauty of bones and beetles and plain railway girders and plain precipices. There are other beauties. There is the beauty of the west window of Chartres and the beauty of, say, Persian carpets. There is also the beauty of holiness. Our age would be quite good at the production of the

first kind, and even of the last, if it would give its mind to it and forget about æsthetics. ERIC GILL

SIR,—Mr. Penty, by his exposure of "the constructional fallacy" in his articles entitled "Architecture *versus* Engineering," is performing a valuable service, for this fallacy cannot be too often refuted. At the present time, when so many of the Modernists have revived this fallacy in its crudest form, and in so doing are accustomed to flatter themselves that they have come upon a most brilliant discovery, which has never been made before, it is all the more necessary to affirm the æsthetic standard. The examples which Mr. Penty quotes are most illuminating. In particular, I was delighted to see him dispose of the idea, so sedulously cultivated by our modern architectural Puritans, that ships owe their beauty to a strict compliance with structural and functional requirements.

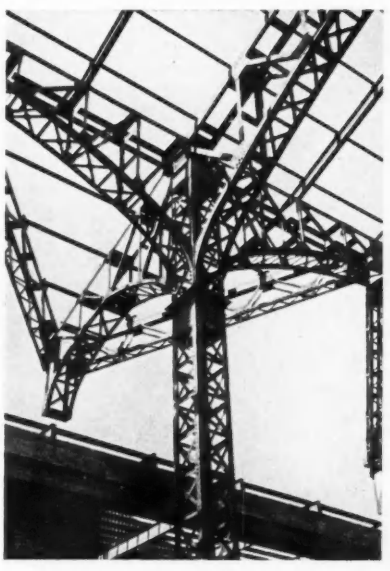
The case of the funnels is an illustration in point. It would obviously look ridiculous if the funnels were no thicker than the slender pipes which are all that are needed to convey the smoke away from the boilers. The artificial obesity of the funnels is to enable them to take a reputable part in an architectural composition comprising hull, superstructure and masts. The funnels must contribute to an artistic unity, and that, I believe, is the real reason why there is a popular prejudice against the practice of having only two funnels. For here we have an unresolved duality, which is an impossibility in organic nature and an abomination when it occurs in art. Where the ships' designers add a dummy funnel, it is for the purpose of resolving this duality and composing the funnels in a group of three, which, not obviously divisible at its centre, has the attribute of unity. Sometimes a group of three funnels is artificially extended to four, and this is also satisfactory where the funnels are so widely spaced that they appear as dividing members rather than as units of composition. The three intervals between them form a unity, the longitudinal dimension of which is further articulated by the boat deck.

The raking of the funnels is, of course, justified by the æsthetic principle of "inflection." It is desirable that the funnels should take cognizance of the fact that the bow of the ship is different from the stern, and this difference should be reflected in the disposition of the superstructure. In men-of-war this inflection is generally achieved far more successfully than in merchant ships, because the raised forecastle and the elevated bridge, with fighting tops above, clustered around the foremast, themselves create a conspicuous differentiation between the bow and the stern, and give us the assurance that the ship *knows* that it is made to go forwards. In such circumstances the funnels can with æsthetic propriety dispense with a rake, because the necessary inflection is accomplished by other means. Where the foremost funnel is thicker than the after one, as in many of the cruiser and destroyer class, or taller, as in the *Repulse* and *Renown*, the funnels help to express this idea of motion. In some of these instances the forms have a practical justification, for in the last-named case the foremost funnel was raised in order to lift the smoke above the level of the bridge; but, whether this be so or not, the *beauty* of the resultant form is occasioned by its compliance with certain æsthetic principles which have a logic of their own, independent of the logic of structure and practical function.

A. TRYSTAN EDWARDS

SIR,—The accompanying photographs show some of the steelwork which we have just completed to form the roof of the new Central Station in Bombay. Some of it does not look much worse than the achievements of our ferro-concrete friends, though I hold no brief for the rosettes which adorn the intersections of the lacing on the columns. The imitation in steel of a palm tree, though unintentional, looks quite good. N. L. ANDERSON
(BRAITHWAITE AND CO., ENGINEERS, LTD.)

SIR,—In Mr. Penty's stimulating article in the February 18 issue there are some unfortunate confusions between commercial expediency, which is æsthetically indefensible, and statical fitness of purpose, which, for all he may say, will remain for many the only stable principle of architectural design.



—the imitation, in steel, of a palm tree.

Thus, in the case of the tables quoted, the kitchen table, though undeniably cheaper, is mechanically less sound than the admirable if rather fussy Gordon Russell table, which has its legs braced at the feet by rails. The antique one probably owes its life to its rails.

In the case of the roofs also, the ugly "saw-tooth" formation of factory roofs is dictated by the commercial need for a north light: mechanically and, I think, æsthetically the parabolic roof is the best, and it is with this type that comparisons should be made.

Again, the question of the material used has nothing to do with statical fitness, provided that the properties of the material are not misused and that constructional details are not disguised. Clearly, a material or surface of intrinsic beauty enhances the appearance of any design. What have to do with statical fitness are the lies still perpetrated by mean architects of the baser sort; the girders disguised as shallow arches, the rustication of steel-frame buildings, the superfluously applied pilasters, and the standardized and meaningless ornaments and embroideries that too often desecrate even the hearth over which Mr. Penty enthuses; these are lies, and they hurt more than the neglect of the subtleties of proportion.

On the matter of the proportions of beams and the æsthetic satisfaction of conspicuous waste, I am on less safe ground. Personally, I like deck sections of beams, provided that they are well out of reach of my head. Excessive solidity undoubtedly can give an impression of magnificence, though the dynamic courage of real Gothic on an undraped ferro-concrete span has a beauty that probably rests on a sounder basis.

Having thus enlarged on the question of statical fitness, I will not spoil it all by denying that any good thing can come out of tradition, geometry, and applied ornament alone: after all, what could be better as a temple than the Parthenon? Nevertheless, do we not all groan with the overburdened maidens of the Propylæa?

I will close, as Mr. Penty does, with history. The law of gravitation may be only as old as Newton, but gravity has been with us quite a long while, and ever since man has learnt to build he has been striving after sound construction. It is interesting to see that, with the exception of the fortunate troglodytes of Spain, the primitive races of men have standardized their dwellings long before they have troubled to adorn them.

Thanking you for having borne so long

with the uneducated prejudices of a young engineer. GEORGE JAGER

Simplified Quantities

SIR,—I am interested to learn from Mr. Doyle's letter in the February 18 issue of the JOURNAL that the proposals for simplified quantities for cottage work were anticipated by Mr. T. Sumner Smith, whose book I have not seen, though apparently the objects aimed at were rather different. The objections which were then raised by the building industry would have less force in the circumstances which attach to my proposal; in fact, only No. 2 would apply—that "anyone with but a slight knowledge of building could price them, therefore it offered an inducement for anyone with a little knowledge of building to set up in business." In conjunction with this, I should like to quote Mr. Doyle's concluding paragraph, which says: "Speaking as one with a knowledge of contracting, builders would prefer to tender for small works from bills of quantities rather than from drawings and specifications."

The point of my previous letter, and the gist of my alternative suggestion, was:

1: That the fully-fledged contractor who prefers to tender on quantities is too fine a tool to employ, and commonly submits a price out of proportion to the cost on simple cottage work.

2: That the smaller "workman-builder," who can perfectly well undertake the work, often finds himself quite at sea when pricing ordinary quantities, or alternatively produces an "erratic tender from drawings and specification," as stated by Mr. Doyle. He might be considered by the big contractor "a person with little knowledge of building," but is already "set up in business" and quite capable of performing the simple work I have in mind if things are made easy for him, which I believe schedules of materials of the type I propose would do.

I gather from Mr. Doyle's letter that in the main he agrees with me, but is there not a slip in his second paragraph, which should surely read, "with few exceptions quantities are *not* supplied" for the 75 per cent. which constitutes the bulk of small cottages and houses among the work of the country? His arguments appear to show that as his contention, and it is the truth, the reason being that ordinary quantities are a hindrance to low prices in such work, and no help in regard to costing, or ordering material. EDWIN GUNN

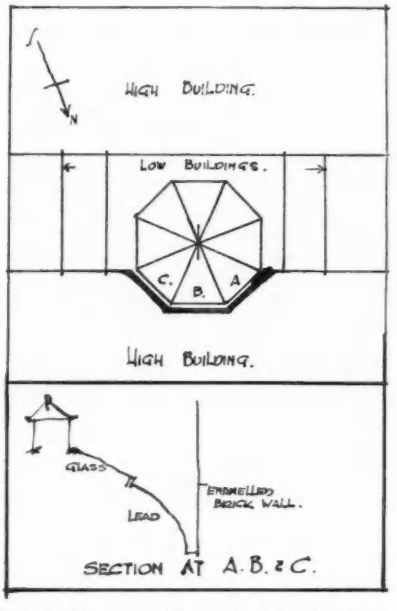
QUESTIONS THAT ARISE

Corrosion of Lead

J. G. writes: "*I enclose a sample of lead taken from the roof of a dome situated in the centre of a block of office buildings, and shall be obliged if your expert would suggest the cause of the lead deteriorating. The sketch shows the position of the dome, and only three sides are affected, A, B, and C, and in the order given A is the worst. The lead is badly bulged and covered with cracks. The building was erected twenty-five to thirty years ago, and the plumber states he has never come across a similar case. The heavy line shows a wall, faced with white enamelled brick, which rises above the dome. Could it be caused by reflected sunshine and heat from the enamelled brick? The other panels, which are practically perfect, get little or no reflected sunshine and heat.*"

The sample of lead appears to be entirely oxydized, as evidenced by its red colour, crystalline appearance, and crocodile-skin break-up. Such corrosion is probably caused by water rendered chemically active—say by a solution of oxygen and carbon dioxide. Your querist should refer to D.S.I.R. Technical Paper No. 8—The corrosion of lead in buildings, published by H.M. Stationery Office (price 1s.), in which may be found illustrated samples of dampcourse lead affected in precisely similar fashion.

A solution of slaked lime (not carbonated) appears to produce the effect disclosed. Is it possible that the sides of the dome which face inwards to the high building receive splashings of lime-water from the face of the walling? The Building Research Station might be interested in this case. They record a case where the lead-covering of patent-glazing bars over a pickle factory corroded due to exposure to fumes of acetic acid. E. G.



Plan and section of dome (see accompanying query on "Corrosion of Lead").

Oak Mantelpieces

G. E. H. writes: "*A few 'worm holes' have appeared in a new stained and varnished oak mantelpiece I had installed in a house eighteen months ago. Is this a serious matter? Will the damage spread? What steps should be taken to prevent further damage?*"

It is probable the oak of which your correspondent's mantelpiece is made contains a certain amount of sap wood, and the grub of the furniture beetle is attacking this. Its presence in the wood may be due to infected oak having been employed, or to worm activity in furniture in the house, from which the beetle has flown to the mantelpiece and there laid its eggs in joint or crevice.

Whatever the cause, the mantelpiece should be impregnated with an insecticide solution. To do this, it will be necessary to take it down and treat the back surfaces, which in all probability expose the bare wood. It is useless to apply a solution on painted or varnished surfaces, as absorption is impossible, and air lock prevents the liquid passing down the flight holes.

A mixture of equal parts of paraffin and turpentine brushed on in two good coats, with an interval of four to six days, should kill any grubs still present in the wood. J. C. R.

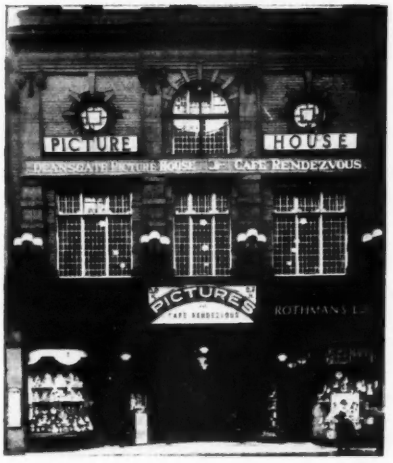
Reconstructing Stone

Y. writes: "*In modernizing an old Scottish house, twenty years ago, windows were faced with stone, both internally and between cills and floor. This (yellow freestone) has been laid askant, and has flaked off badly in places. The bad areas, both on the face of the stone and at the cills, are very definitely marked. In my opinion the stone has either gone very badly indeed in some parts, or is in perfect preservation in others, as though, in certain patches, the binding material in the stone had been inadequate.*

"*Is there any composition for making up the affected parts, in a reasonably satisfactory manner, and for preventing further damage?*"

Decayed stonework can be effectively made good so as to be almost undetected, by methods akin to dental stoppings, carefully cleaning away all loose or decayed material, and, if possible, dressing out undercut pockets where the filling is to be applied.

If the defects are relatively few and unimportant, a mixture of white cement and stone-dust from similar stone to the original can be applied after well wetting the surfaces, but if extensive or important, a specialist firm should be employed. E. G.



DEANSGATE CINEMA, MANCHESTER

Before and After Renovation

G. ALAN FORTESCUE, ARCHITECT



Before : the main front was faced with terra-cotta and had an inconspicuous, unprotected entrance.

After : within two weeks the façade had been refronted with white cement and a large shelter canopy added.

THERE can be little doubt that many owners of property which has become superannuated shrink from putting in hand works of reconditioning owing to the fear that the premises will thereby be put out of use for a prolonged period. This is particularly the case with a house of entertainment like a theatre or a cinema.

The renovations illustrated in these pages show what can be done by close organization : the whole work, including adaptation for sound films, was completed in a fortnight.

The house was built some twenty years ago, and required both practical and æsthetic modifications. There was insufficient space on the stage for talkie apparatus, and it had to be brought forward 5 ft. into the house, entailing a new proscenium and rearrangement of the orchestra. At the same time the acoustics stood in need of improvement. This was largely effected by cementing panels of acoustic asbestos felt, $\frac{3}{4}$ in. thick, to certain surfaces of the auditorium. As a preparation for the subsequent decorative treatment, these were covered with fine muslin fabric.

Other practical improvements were the substitution in the foyer of a central pay-box, illustrated in a supplement to this issue, for the old ticket offices, and the installation of concealed lighting.

On the æsthetic side the chief aim was to replace the somewhat ornate decorations of the original building. Within, a unified scheme of simple colouring—amber, as a ground, with emphasis of silver and green—was adopted. Cellulose and quick-drying paints were applied by spraying. Without, the old terra-cotta façade, with its inconspicuous entrance, has been faced with a rendering of white cement, the pilasters have been squared, and panels for electric signs and a large canopy of metal and glass have been added.

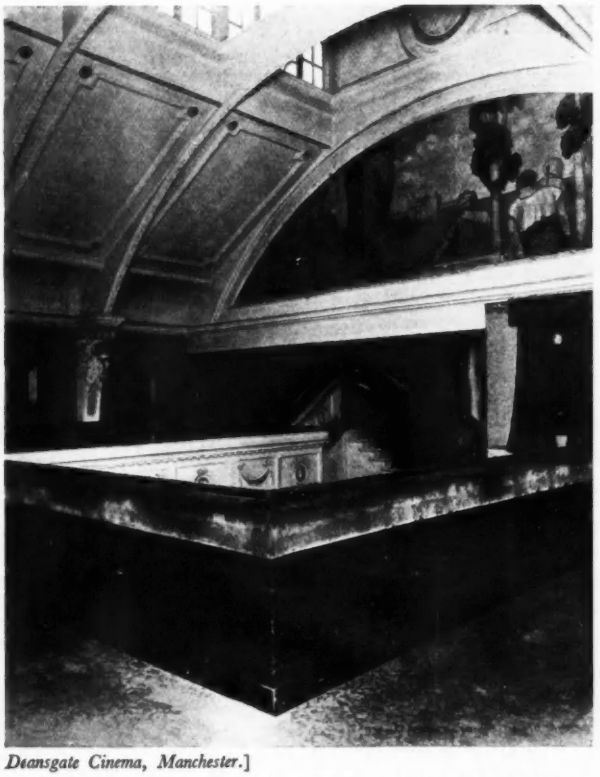


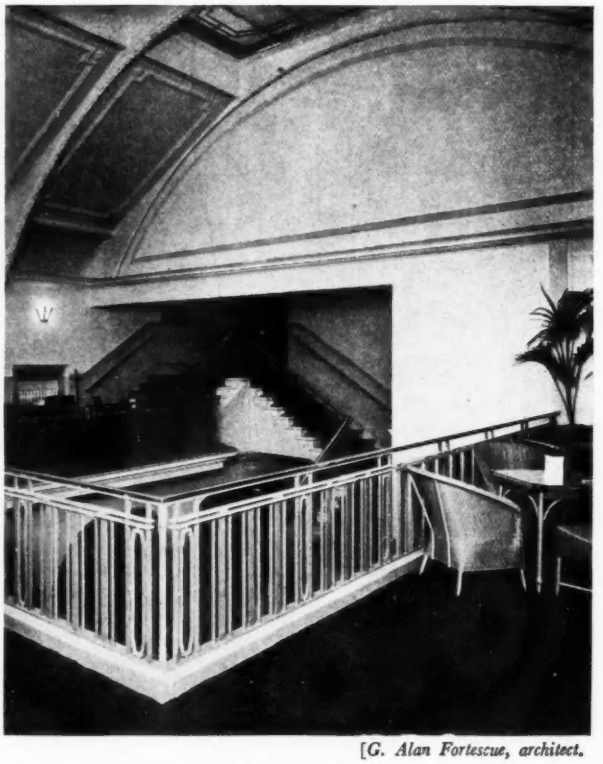
The entrance, before and after. New swing doors have been supplied, giving upon a foyer floored with rubber, in which stands the pay-box, of which a photograph and drawings are reproduced as one of the supplements to this issue.





Two views of the foyer and stairs, before and after. No very extensive structural alterations were necessary, and in the main the work has consisted of replacing the somewhat florid ornamentation of twenty years ago by a simpler scheme of decoration with plain surfaces finished in quiet tones.





Deansgate Cinema, Manchester.] [*G. Alan Fortescue, architect.*

The balcony, before and after. The massive balustrade of the well has given place to a lighter metal grille, the mural picture has vanished, lighting is now through amber-toned laylights in the ceiling, and the decorations have been unified on this floor, which includes the upper foyer and café.

THE SPECIFICATION WRITER

Plywood and Acoustics

BY ERNST PETZOLD

IN modern large rooms faulty acoustics are more frequently noticeable than is the case with earlier buildings. From this it may be concluded that architects in olden times knew something which favoured the production of good audition. In old halls the ceiling is nearly always made of wood, and the walls are either covered with wood or with heavy hangings. The science of acoustics is in a position to reply to the question of why rooms well covered with wood are acoustically preferable to halls with hard wall surfaces, even if the reply is not yet complete.

If sound strikes against a wall, part, according to fixed rules, is thrown back again (reflection [I]), part forces its way through the pores to the outside (pore-sound [II]), another part makes the wall vibrate in harmony (resonance [III]), and is carried farther into it (body-sound [IV]), whereas a final part disappears, by being changed from sound into heat energy by the wall (absorption [V]).

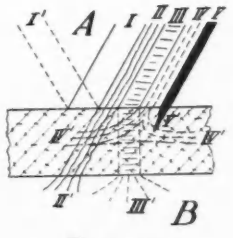


Figure one

In figure one these quantities are shown diagrammatically. Resonance and body-sound (III and IV), which in our instance can be taken as equal, are shown separately. Supposing that the wall is part of the surrounding of a concert hall, and that A is in the closed room, it is clear that all sound which does not return into the room is completely lost for the audience. This, therefore, applies to the parts II, IV, V, and partly to III. The sound energy produced in the hall suffers loss on striking a body, and this is called—not too aptly—deadening or absorption. As deadening is loss in wave-length, and absorption, on the other hand, is a change from sound energy to heat, we shall call the sum of the parts of the sound which do not return into the room loss of sound.

If there is an opening in the wall leading to the outside, all the sound striking it is lost to the interior of the room. The loss caused by an opening of 1 sq. m. is the unit of measurement for the loss of sound. In honour of the founder of modern acoustics, I call it one Sabine (1 Sab.).

Let us presume that a room is completely surrounded by thick concrete walls. Pore-sound, resonance and absorption are so infinitesimal in this case that the total loss suffered by the sound striking it once is only ·015 of its original strength. Only after being thrown back more than nine hundred times will a moderate sound become inaudible. If the mean sound distance in the room is 20 metres long, it would take one minute of time before it became absolutely inaudible; in other words, the resonance lasts nearly a minute in this room. If we surround exactly the same room with plywood boards, of which the loss of sound is ·1 Sab., the same sound will be inaudible after being thrown back only 145 times, and the resonance will last about eight seconds.

Generally, the duration of resonance —t—that is so important for audition, but cannot be taken as sole standard, is calculated by means of the following simple formula, in which V stands for the cubic capacity of the room in question in cubic metres, and S for the total loss of sound :

$$5t = \frac{k \cdot V}{S}$$

Further, k is a number variable within the widest limits; for rooms of rectangular shape, $k = \cdot 164$ can be taken as a useful mean value. It will be seen from the formula that the duration of resonance, and with it the audition, can be considerably affected by variation of the loss of sound, S. In general, the duration of resonance should lie between one and two seconds.

The question now arises: What value has the important quantity S as regards plywood? A reply fitted to all cases cannot be given, for the value varies according to the thickness, the construction, and the timber of the plywood boards, and according to the manner in which they are secured, to the background to which they are fixed, and to the manner in which they are otherwise treated.

It is important for practical room acoustics that the well-known law of resonance is no longer fully valid when sound is thrown back by a plywood wall. This is due, in the first place, to inflection, which must also be taken into consideration in the case of hard walls, and, on the other hand, and especially, to resonance. And plywood resonates particularly well.

On being struck by sound, plywood boards are themselves set in vibration. These waves of resonance are considerably weakened—i.e. they generally last only as long as the tone which caused them resounds. On the other hand, waves of resonance that are only slightly weakened must react disadvantageously for audition. The vibrations are propagated in the plywood at a speed of about 4,000 metres per second. Plywood panelling with large surfaces, therefore, causes quick expansion of the sound in the room away from the walls, and, consequently, it is thereby possible either to reduce considerably, or to eliminate entirely, the acoustic defects produced by the resonance reaching the listener too late. Sound is propagated at a similarly high speed in various other building materials; however, in the case of nearly all of them the amount of sound-energy caught up by them and sent back into the room is so small that it is of no acoustic importance. In the few instances in which other building materials have strong resonance, as is the case with Rabitz (or wire-lattice) walls and ceilings, there is generally a distortion of sound, which does not take place with plywood.

We can best realize the great room-acoustic value of resonance if we compare the action of a plywood board with that of a stiff wall of equal size.

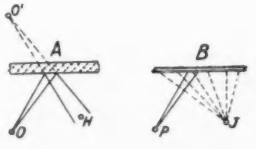


Figure two

In figure two a bundle of rays coming from O, extracted from the current of sound, strikes the non-resonant wall surface. The chief part of this sound is thrown back. If a listener at H were to hear the sound that is thrown back, he would have the impression that the source of the sound was at O'. The effect produced by the thin plywood board B is quite different. The energy of the sound striking it makes the wood vibrate in sympathy; only a comparatively small part is reflected to J. The whole wooden surface acts as a secondary source of sound with slight surface sounds. The sound is propagated from this surface in a different way to that from the source of sound—that is, from a room-acoustic point of view, much more favourably.

The vibrating wooden board not only sends sound back into the room, but also on to the wall surface behind it. The latter part is somewhat greater than the former. The stiff wall sends

the sound back to the wood panelling, where it is again thrown back and suffers loss, but also produces resonance. This is repeated until the sound dies entirely away. This whole procedure is considerably affected by the distance between the wood panelling and the brickwork, and, further, by the power of the wall to deaden sound, and the strength and power of vibration of the plywood board. In my own work on room acoustics I calculated these quantities in a rather troublesome way, as no fixed values are known.

The whole plywood panelling must be divided up into fields of various forms and sizes by means of special laths. By this means the plywood panelling is prevented from being worked up to specially great resonance by certain tones or sounds, which would naturally cause disagreeable disturbances.

In consideration of the above statements I have used plywood for the acoustic installation of numerous large rooms in which the audition has been found to be very good. However, before mentioning an example, I will make a short reference to a use of plywood which is of acoustic advantage.

Lofty theatres return to the auditorium hardly any of the sound which rises in them. Consequently, both actors and singers have to make extraordinary efforts. In the case of private theatricals the right effect and the right atmosphere can never be obtained. A very considerable acoustic improvement can be obtained by the following fairly easy method: if, for instance, a room is to be shown on the stage, the ceiling of the room can be formed by means of a correspondingly large plywood surface, which can even be made to fold together by means of hinges, somewhat in the form of a book cover. The excuse often given—that this cannot be done—can be countered by the reply that it has already been found very useful in several instances. The plywood boards are fixed to a strong wooden frame and, when not required, the whole thing can be drawn upwards like scenery. This installation can also very well be used for concerts with a small orchestra and for chamber music.

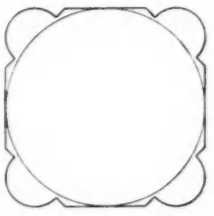


Figure three

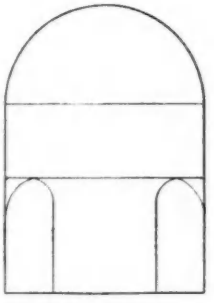


Figure four

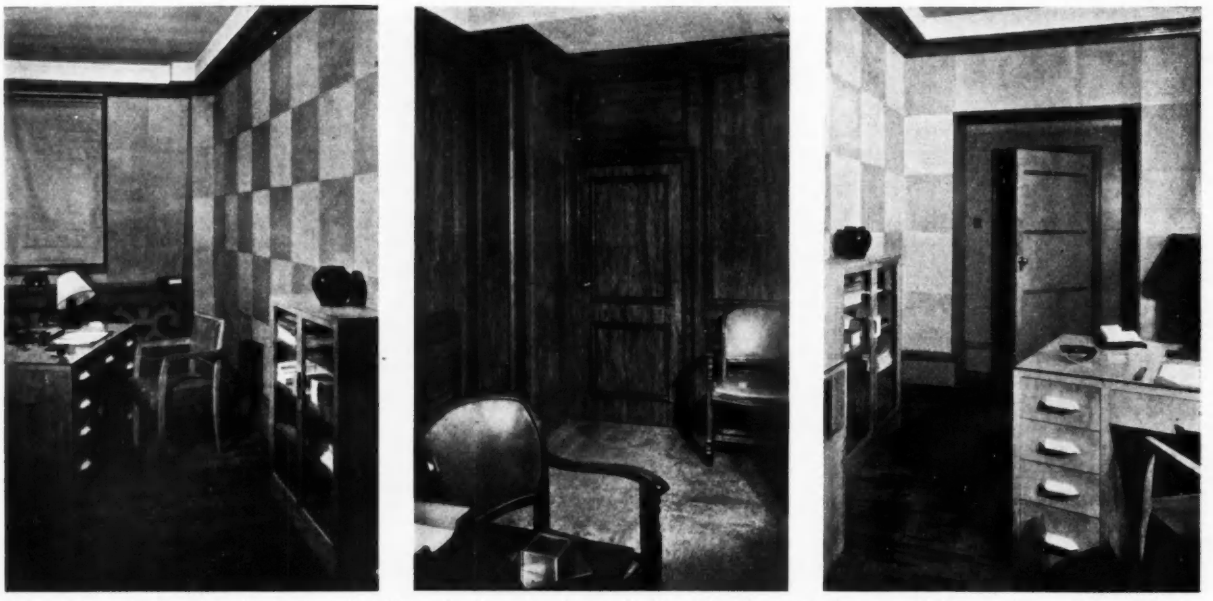


Figure five

Figures three and four show the ground plan and elevation of a chapel in Lemberg, which was most unfortunately constructed from the point of view of acoustics. As will be seen, the chapel has a large dome over a square ground plan. In the correction of this, an important part was played by panelling the walls to a height of 4 metres. Further, the curves of the niches were cut off by perforated plywood boards. The necessary battens (laths) for one panel are shown in figure five.

Enough has been said to show that plywood is a very useful material for obtaining good audition. Of course, it would be very far from the mark to say that all acoustic defects can be eliminated by its use. Further, the fact must not be overlooked that both the material and the way in which it is used must vary according to the room.

[The foregoing article and illustrations are reproduced by courtesy of "Sperrholz."]



Three rooms finished in plywood. That shown in the centre has walls formed with quartering spaced about 2 ft. apart, lined with ½-in. Venisco battenboard, to which is fixed ¼-in. Venesta plywood and mouldings of black bean, natural colour, wax polished. The other two are panelled in squares 20 ins. by 20 ins., of $\frac{3}{16}$-in. birch, with grain alternately arranged; the whole, including the furniture, is stained grey and polished.

IN PARLIAMENT

[BY OUR SPECIAL PARLIAMENTARY REPRESENTATIVE]

Supplementary Estimates

DISCUSSIONS of Supplementary Estimates occupied the House of Commons most of last week, and several interesting points arose.

On a vote of £85,000 for expenditure in respect of employment exchanges and insurance buildings, Mr. Lansbury explained that they had been able to expedite the completion of Labour Exchanges that had been needed for years. The vote was agreed to.

On a vote of £42,000 for Royal Parks and Pleasure Gardens, Mr. Lansbury said this was an entirely new vote. Part of the sum was in respect of relief work for unemployed persons in connection with the amenities of the parks. There was also a sum of £1,050 for drainage in connection with bathing in the Serpentine.

Lord Winterton inquired whether it would be possible for some of the money to be spent in providing proper protection for the bird sanctuaries in Hyde Park.

Sir Lambert Ward feared that a mistake was being made in not planting in the London parks trees that were suitable to the soil and to the locality. There was, he said, a tendency to plant specimen trees rather than large groups of those trees which it had long been the custom to look upon as typically English. The need of this planting had been brought about by the old age of elms, which were liable to become dangerous and had to be lopped and disfigured. He noticed that a large number of the young trees put in were elms, so that the same state of things would arise again. There were other trees of equal beauty which might be planted and which it would not be necessary to disfigure for the safety of the public—for instance, the lime and the horse chestnut.

Mr. Lansbury said he had taken a great deal of trouble with regard to bird sanctuaries, but he promised to look into the matter again. With regard to tree planting, when the smoke nuisance was done away with in London they would have a much better time. Until that occurred, they must take great care to choose the trees which best stood the atmosphere.

The vote was agreed to.

On a vote of £60,000 for sundry public buildings in Great Britain, including historic buildings and ancient monuments, Mr. Lansbury said that under this head also much useful work had been provided for the unemployed people. The men who had been employed were very largely from the distressed areas and the whole of the expenditure was on ancient monuments, castles, etc., and their preservation.

Major Davies expressed apprehension lest Mr. Lansbury, in his anxiety to justify the expenditure of this sum of £60,000, might have pushed forward the question of providing employment and allowed his department to lose sight of the need of using the class of labour most suitable for the restoration and beautifying of ancient monuments.

Lord Balniel, while agreeing that the work of the department with regard to ancient monuments in general could not well be improved, said that at Berkhamsted the work which was being done at the castle was both extravagant and unnecessary. Destruction had been wrought both from the archæological point of view and from the point of view of the lover of the picturesque.

Mr. Lansbury replied that his stand for the preservation of ancient monuments and historical remains was no new form of enthusiasm. The work of preservation was carried on by the Permanent Chief Inspector of the Ancient Monuments Department, Mr. C. R. Peers, who was the authority on all the steps to be taken in this country. Nothing was done without his advice and approval. The object of spending this money was to provide work for the unemployed and to preserve the ancient monuments.

This vote was then also agreed to.

LITERATURE

THE CONCRETE YEAR BOOK, 1931

THE new edition of this well-known work of reference, now in its eighth year of publication, has been still further enlarged. The handbook section, of more than 200 pages, contains a great deal of valuable information of everyday use to all concerned with civil engineering and constructional work. An interesting feature of this section is the chapter devoted to water towers.

It is imperative, it is stated, that in the design of water towers a sufficient section of steel and concrete shall be provided so that the tensile strength in the concrete is not greater than the material will safely resist; this condition of affairs is not always observed in ordinary reinforced concrete design, where, provided the steel is capable of taking the whole tension at a safe stress, it is often a matter of no concern to the designer whether the concrete is over-stressed in tension or not.

In the case of water towers this basis of design is not, or should not, be permissible, because such a structure, while perfectly safe from the point of view of carrying its load, cannot be guaranteed against cracking and leakage, and the various defects which follow.

The inside of water towers should be treated with cement rendering to provide an additional line of defence against the possibility of leakage. Concrete less rich than 1 : 1½ : 3 should not be used for water towers, and the reinforcement should be disposed as symmetrically as possible and in such a manner as not to neglect the stresses due to shrinkage and temperature variation. A factor not to be neglected is the stresses in a structure of this kind, when one side is exposed to the direct action of the sun and the other side is kept cool.

Chapters in this section also include tabulated designs for foundations, floors, walls, beams, columns, and other building members to carry various loads, illustrated with clear diagrams. Other subjects dealt with include concrete making and placing, reservoirs, roads, bunkers and silos, pre-cast concrete, etc. New chapters have been added on joints in concrete work, bridges, and other subjects.

The directory section contains a complete directory of the concrete and allied industries, with a list of trade names and brands with the names and addresses of their proprietors. In the catalogue section are 370 pages describing the businesses and products of firms engaged in concrete work, forming a very complete guide for those in need of a contractor to carry out specialist work or machinery and materials for a particular purpose.

The Concrete Year Book; 1931. Edited by Oscar Faber, O.B.E., D.SC., M.INST.C.E., and H. L. Childe. London: Concrete Publications, Ltd. Price 3s. 6d. net.

Publications Received

London Building Act, 1930. By Bernard Dicksee. London: Edward Stanford, Ltd. Price 21s. net.

The Story of Architecture in England: Volume II. By Walter H. Godfrey, F.R.I.B.A. London: B. T. Batsford, Ltd. Price 6s. 6d.

Acoustics. By J. W. Stewart. London: Chapman and Hall. Price 25s. net.

Building Science Abstracts. Vol. IV. (New Series), No. 1. January, 1931. London: H.M. Stationery Office. Price 9d. net.

Architects and Builders' Pocket Price Book. By Clyde Young. London: E. and F. Spon, Ltd. Price 5s. net.

SOCIETIES AND INSTITUTIONS

THE MODERN CINEMA

THE fourth of the Architectural Association's series of public lectures on Present-day Architecture was delivered by Mr. J. R. Leathart, F.R.I.B.A., at the A.A. last Saturday afternoon, when he described the planning and building of the modern cinema. Mr. John Gloag presided.

After tracing briefly, step by step, the numerous stages through which the modern cinema passed from its inception as a sketch plan on the architect's board to the opening night, he said the outstanding current tendency in cinema design was for the decorative forms to be internationalized. The highly individual characteristics of each country were being abandoned; there was no longer an attempt to keep stylist decoration in isolated schools. The creative artist was no longer fettered to orthodoxy and tradition; he was demanding the right to break new ground, to make emotional experiments in decorative design without limits save those imposed by his own trained sense of artistic propriety.

The modern architect was studying decoration critically, stripping it of its redundancies, trying to get a stronger decorative effect with a greater economy of thematic material. In this direction he was looking with increasing confidence to the work of the lighting engineer. The illumination of painted traditional form and decoration was being superseded by the creation of colour derived solely from light, concealed or semi-concealed.

It could not, he continued, be said that the modern movement was gaining much ground in this country. We had, as yet, reached no distinctive expression of modernity; on the contrary, we seemed to be turning over restlessly all the old stock-in-trade and running headlong after each new craze or whim without studying basic coherence and continuity. Perhaps, from this rather frenzied period, something genuinely characteristic might emerge, a new architecture at once vigorous, independent and reposeful. There was urgent need for us to get away from the mediocrity of so much recent British work, and those best acquainted with certain English cinema designers could best judge how small were the chances for this to happen.

He looked to the younger school of architects with hope, and appealed for the younger men to be given increasing opportunities and greater responsibilities. They would rise to the demand when it was made and would find ways to give expression to the new forces in architecture which were stirring throughout the world.

R.I.B.A. CONFERENCE, 1931

The annual conference of the R.I.B.A. will be held in Dublin from June 17 to 20 next. All members and students of the R.I.B.A., the allied societies, the Architectural Association, and the Association of Architects, Surveyors and Technical Assistants are cordially invited to attend the conference.

The functions will be to a great extent of a social character, and it is hoped that there will be a large number of ladies present as guests of members of the conference.

WEST YORKSHIRE SOCIETY OF ARCHITECTS

Mr. Norman Culley, president of the above society, recently lectured on "Greek and Roman Architecture," at the Huddersfield Technical Institute. Councillor Albert Hirst, chairman of the Huddersfield Technical Education Committee, presided.

The lecturer stressed the extreme simplicity of the requirements of the Greeks as evidenced by the simple layout of their cities and towns, each of which had its acropolis as a centre of civic life. The main lines of their layouts were on the chequer board or grid-iron plan, and in their midst was the agora, not only the social and commercial, but also the architectural and æsthetic centre of the life of the city-state. The various structures of a Greek city were executed with great refinement and indicated a people of high intellect and taste, and gave evidence of a civilization in which the arts were part and parcel of life itself. By numerous illustrations it was shown how the architectural order was a controlling element in design and construction, and that carving of the highest sort completed the effect.

The difference between Greek and Roman civilization was indicated; and how the city plans of the latter had a greater number of essential units to meet the complexity of requirements. There was still the surrounding wall and the chequer-board plan, but the central position was now occupied by the forum, surrounded by structures showing civic consciousness and pride. The mixture of constructional principles was described, the arcuated, and the post and beam systems, the great development of vaulting, and eventually the dome construction and the mass carcase building of concrete and brick with its veneer of costly marble, and the use of the orders of architecture for merely decorative purposes. The love of the Romans for richness and magnificence was attained often with a lack of refinement and taste. Mr. Culley concluded by making a comparison between the work of the two nations.

A vote of thanks to the lecturer was proposed and seconded by Messrs. Clarence Smith and J. Thorpe respectively.

THE ARCHITECTURE CLUB EXHIBITION

The fourth exhibition of the Architecture Club, comprising "Recent British Architecture and Applied Art," will be held at the Mansard Gallery, 196 Tottenham Court Road, London, W.1, from Tuesday, April 28, to Saturday, May 23, 1931. The exhibition will be open daily, Mondays to Fridays inclusive, from 9 a.m. to 6 p.m., and on Saturdays from 9 a.m. to 1 p.m. All communications respecting the exhibition should be addressed to the Secretary of the Architecture Club, *London Mercury* Office, 229 Strand, London, W.C. 2.

SOUTH WALES INSTITUTE OF ARCHITECTS: CENTRAL BRANCH

Under the auspices of the South Wales Institute of Architects (Central Branch) and the Institute of Builders (South Wales Branch), a lecture was given at the Engineers' Institute, Cardiff, on February 12, by Mr. F. R. Yerbury, HON. A.R.I.B.A.

Mr. Yerbury, who took as his subject "Swedish Architecture of Today," dealt first with the background for the modern movement in architecture in Sweden. He showed examples of the earlier architecture of that country, and explained that the new architecture was more nearly related to traditional forms than was normally realized.

He then proceeded to show a large collection of lantern illustrations, all of a particularly high standard, of the Town Hall at Stockholm, and many other interesting examples of recent architecture, sculpture and garden design, also of smaller specimens of work in the various allied arts and crafts.

Mr. H. Norman Edwards, who presided, said that he had taken considerable interest in recent developments of architecture on the Continent, but felt unable to support wholeheartedly the results of functionalism.

Mr. J. A. Hallam, who proposed the vote of thanks, which was carried, to the lecturer, suggested that while functionalism resulted in perfection of design in such subjects as motor-cars, aeroplanes, etc., it should be remembered that the analogy with architecture was not necessarily sound, as buildings are static.

Mr. W. S. Purchon, in seconding the vote of thanks, indicated that in studying these developments of architecture abroad, the question whether

we liked or disliked them was not of outstanding importance, and that it was definitely unsatisfactory to use them as specimens from which one could "lift" portions. He suggested that it was more important to realize that apparently in Sweden a far larger proportion of buildings were designed by architects, that these architects were really trained, and that the present architecture was a result of a genuine enthusiasm for that art and the allied arts and crafts. He thought it pathetic that our own arts and crafts movement towards the end of the nineteenth century appeared to have attracted far more attention on the Continent than it did in our own country.

Tea and Discussion

At the invitation of the Chairman and the Executive Committee of the Central Branch, a tea and discussion meeting was held at Cardiff on February 16.

The subject for the evening was "The Contract Documents," and, under the chairmanship of Mr. H. Norman Edwards, a particularly interesting discussion took place which proved very valuable, not only to the younger members present, but also to many of the senior architects, who were very glad to have the opportunity of discussing a number of interesting problems in an informal manner.

Annual General Meeting

At the annual general meeting, held on February 19, the following officers and members of the executive committee were elected: Chairman, Mr. Percy Thomas, F.R.I.B.A.; hon. treasurer, Mr. H. Teather, F.R.I.B.A.; hon. secretary, Mr. W. S. Purchon, M.A., A.R.I.B.A.; executive committee: Messrs. H. Norman Edwards, Ivor Jones, A.R.I.B.A., T. Alwyn Lloyd, F.R.I.B.A., J. A. Hallam, and Edgar Smith: representatives of associates and students, Messrs. F. G. Allen and H. J. Hughes.

The following were elected as members of the Council of the South Wales Institute of Architects: Messrs. Percy Thomas, F.R.I.B.A., H. Norman Edwards, Edgar Smith, J. A. Hallam, J. Williamson, F.R.I.B.A., C. F. Jones, A.R.I.B.A., Lewis John, M.A., B.ARCH., A.R.I.B.A., Gordon Griffiths, Lennox Robertson, F.R.I.B.A., J. Llewellin Smith, L.R.I.B.A., A. G. Lynham, F.R.I.B.A., W. D. Thomas, and H. Fletcher. Representatives of associates and students: Messrs. F. G. Allen, H. J. Hughes, A. J. Hayes, A. G. Fletcher, and Trevor Hill.

TOWN PLANNING SCHEMES

"Compensation and Betterment under Town Planning Schemes" was the title of a paper read by Mr. W. R. Davidge, F.R.I.B.A., F.S.I., at a meeting of the Auctioneers' and Estate Agents' Institute, last Thursday.

Mr. Davidge said that if a town planning scheme was carefully prepared, its general effect must inevitably be to improve and stabilize the values of building land. There would be cases, few and far between, where an owner would be injuriously affected, but such cases would be far outweighed by the benefits to other owners and the public at large.

The main difficulty was in the transitional stage during the preparation of the scheme, when owners rightly and naturally objected to any form of "sterilization." With the co-operation of landowners, which was now so general throughout the country, this difficulty was disappearing. Large areas of woodland and park were being voluntarily reserved as "private open spaces," and such "public open spaces" as were necessary were gradually being reserved for ultimate purchase by the local authorities.

So long as the restrictions in the scheme were only such as would be imposed by a wise estate owner, they would be all to the good. Much as we liked complete freedom of action for ourselves and our clients, we could all see that the other man and his building development ought to be controlled.

Space about buildings, the character and elevations of buildings, were matters which did not involve compensation.

Wide streets and building lines well set back would do more to improve a district than anything else, and the betterment in such cases would more than outweigh any occasional compensation that might be due for some slight individual hardship.

With a fuller understanding of town planning and all that it meant, we could all work for the improvement and betterment of our individual towns with the certainty that our efforts would be rewarded—by adequate compensation—not necessarily in money.

FACTS ABOUT CONCRETE

The third of this winter's series of lectures for the building industries, under the joint auspices of the School of Art and the Technical College, Gloucester, was given at the Technical College, by T. J. Clark, A.I.STRUCT.E., who dealt with Portland cement. Mr. E. Holden, president of the Institute, occupied the chair.

Mr. Clark gave a résumé of the historical discovery and its subsequent progressive development to the present high standard of the British standard specification of today. The geological sources of the necessary minerals of lime and clay, and the practice of quarrying, gaining, and preparing were lucidly explained, so that the reason for the superior character of the English product over the so-called natural Portland cement of foreign origin was easily proven.

Modern concrete construction, he thought, was responsible for new methods and for new designs, which were economic, and yet capable of giving truly artistic and æsthetic satisfaction.

THE INSTITUTION OF ELECTRICAL ENGINEERS

The annual dinner of the above Institution was held at the Connaught Rooms, W.C., on February 12. Mr. Clifford C. Paterson, O.B.E., presided over about 700 members, friends and guests.

The Rt. Hon. Herbert Morrison, M.P., proposing the toast of "The Institution," said he understood that this year was the Diamond Jubilee of the Institution; also that it was the youngest engineering society in this country, and had 14,000 members. This, he thought, was a sure indication of the growth of the British electrical industry.

Mr. Paterson, the president, in responding, thanked Mr. Morrison for his strong practical support of matters electrical, a support given because he was convinced of the benefits which were within reach of this country as the result of a greater availability of electricity.

HEATING AND VENTILATING ENGINEERS AT DINNER

The annual dinner of the Institution of Heating and Ventilating Engineers was held at the Hotel Russell, Russell Square, W.C., on February 11. Mr. Sam Fox, president, presided over about one hundred members, friends and guests.

After the loyal toasts, Mr. Henry V. Ashley, V.P.R.I.B.A., proposing "The Institution of Ventilating Engineers and the President," stressed the fact that the Institution had as its object the advancement of the science and technique of heating and ventilating, and its membership, like that of the R.I.B.A., was increasing every year. The Institution's entrance examination was the best method by which to obtain the membership of the best men in the profession. He referred to the work the Institution had carried out in connection with the Research Station at Watford, where it had built a "house within a house," so that conditions and temperatures for search work in heating and ventilat g could be made the subject of careful and scientific tests.

Mr. Fox, responding, spoke of his early life, when he, as the son of an architect, nearly took up his father's

profession. In the old days, he said, the architect never thought of heating and ventilating his building until it was finished, and then he would decide he wanted his place heated! Today, however, things were much better, and the architect was in close contact with the heating and ventilating engineer. The one could make the other do certain things in the construction of a building, and vice versa. He was very pleased to think that one of the vice-presidents of the R.I.B.A. should be with them to propose the toast of the Institution.

Sir Francis Goodenough, C.B.E., seconding the toast "Our Guests," proposed by Mr. E. R. Jones, spoke of the great future for central heating and refrigerating by gas.

The toast of "The Past Presidents" was proposed and responded to by Messrs. J. H. Bryant and Oswald Stoll, respectively.

LAW REPORTS

PERIOD PANELLING AND MANTELPIECES

Spyer v. *Phillipson and others. Court of Appeal. By the Master of the Rolls and Lords Justices Lawrence and Romer*

THIS was an appeal by the plaintiff, Mr. Edmund Spyer, of Mansfield Street, Portland Place, from a judgment of Mr. Justice Luxmoore, sitting in the Chancery Division, in favour of the defendants, Mrs. M. C. Phillipson and others, the executors of the will of the late Mr. R. H. Phillipson.

In the Chancery Division, the plaintiff, who held the reversion of the lease of 74 Portland Place, sought a declaration that certain panelling of oak and pine, and period mantelpieces placed in certain fireplaces, in a suite of rooms on the third floor of 74 Portland Place, held under a lease of 1912 by the late Mr. Phillipson, were in the nature of landlord's fixtures, or an improvement or addition to the landlord's premises within the covenant for the delivery up of the same on the determination of the lease, and he therefore submitted that the defendants were not entitled to remove the panelling.

By their defence the defendants denied that the panelling had been permanently fixed so as to become part of the structure. They denied that its removal would injure the premises, and they claimed the right to remove the panelling.

It appeared that the oak panelling was of the Stuart period and dated 1620, and the pitchpine panelling of about 1720. In addition, the ceiling had been impressed in embossed relief.

Mr. Justice Luxmore, in his judgment, said the question he had to decide was the purpose for which the panelling was put into the premises. Here the plaintiff contended that the panelling and mantelpieces had been put in in such a way that they became landlord's fixtures, and in the alternative he said that they could not be removed. His lordship, proceeding, said it was well settled law that whatever was fixed during the currency of a lease to freehold premises formed part of the freehold and could not be removed unless it fell within certain well-known exceptions. In the present case the panelling and mantelpieces were valuable chattels which had been bought for the purpose of decorating Mr. Phillipson's flat, which was held by him for a term of twenty-one years from 1912 at a rental of £900 a year. Evidence had been given that the panelling had cost £5,000, and he could not help thinking that it would be surprising for a gentleman to expend that amount of money in panelling if, after enjoying it for years, it would belong to his landlord. He had had before him a report from an experienced architect and surveyor, Mr. Geo. Head, who made it clear that the method of attachment of the panelling, ceiling and canvas friezes had in no way altered the structure of the rooms. Therefore, he came to the conclusion that this panelling, etc., had not become landlord's fixtures, but were tenant's fixtures and removable during the tenancy. Under these circumstances, he found for defendants with costs.

It was from this judgment that the plaintiff appealed.

Mr. Macaskie, K.C., argued the case for the appellant, and submitted that the panelling was a landlord's fixture. In none of the decided cases had the value of the article been regarded as a point of primary consideration at all. He argued that the appellant was entitled to succeed here upon the ground that the panelling, etc., were affixed to the freehold and thus became the landlord's property.

The Court, without calling upon Sir Robert Peel, K.C., for the respondents, dismissed the appeal.

The Master of the Rolls, in the course of his judgment, said the appeal raised an interesting point as to whether this panelling was a tenant's fixture or whether it passed to the landlord, as being affixed to the freehold, or as in the present case annexed to the landlord's long leasehold. From the evidence it appeared that the intention of Mr. Phillipson was to remove the panelling if the law allowed him to do so. His lordship agreed with the conclusion to which Mr. Justice Luxmoore came.

Here the question for the determination of the Court was whether or not the panelling could be removed by the defendants as legal representatives of the late Mr. Phillipson. His lordship could see nothing which could lead him to hold that this valuable panelling should go to the landlord. In his opinion, upon the evidence, Mr. Phillipson had not lost the right to remove the panelling, and the judgment of Mr. Justice Luxmoore was right.

Lords Justices Lawrence and Romer agreed.

A special display of architectural books is on view at the bookshop of Messrs. A. & F. Denny, Ltd., 19 Queen Victoria Street, E.C.4. This display has been arranged to afford architects and others in the City an opportunity to inspect and study works on architectural subjects at their leisure.

HOUSING ACT SCHEME

Rex v. *H. C. Webster, ex-parte G. W. Marshall. King's Bench Divisional Court. Before the Lord Chief Justice and Justices Avory and MacKinnon*

This appeal had reference to the construction to be placed on a reconstruction scheme under the Housing Act, 1890, Part II.

The matter came before the court on a *rule nisi* obtained against Mr. Webster, an official arbitrator under the Acquisition of Land Act, to prohibit him from proceeding further with an arbitration which took place between the owner of property in Holcombe Street, Hammersmith, Mr. Marshall, and the Borough Council of Hammersmith. In 1919 the Council inaugurated a reconstruction scheme under the Housing Act, serving notices upon Mr. Marshall and other property owners affected. The Minister of Health made an Order approving the scheme in October, 1922. The rule was obtained on the ground that the Order and the scheme were invalid.

Mr. Wilfred Lewis, on behalf of the Crown, contended that the proceedings for prohibition against the arbitrator were misconceived. The arbitrator was properly appointed under the Acquisition of Land Act to assess compensation and to do nothing more. The arbitrator had made his award in draft, and under all the circumstances of this case counsel argued that these proceedings were an attempt to quash the scheme by proceedings against the arbitrator, who had acted only according to the instructions he had received.

Mr. W. Allen, K.C., on behalf of the Hammersmith Borough Council, supported the arguments of his learned friend on behalf of the arbitrator, and submitted that as long as the notice to treat had been served within three

years the relationship of vendor and purchaser had been established between the promoters of the undertaking and the landowners. After that notice the owners only held as trustee for the promoters and were only entitled to hold their land until the compensation was assessed and the purchase price paid. He also contended that here all proceedings for carrying out the scheme had been carried out and no new scheme had been created in 1922. It was merely a continuation of the scheme begun in 1919.

Mr. Montgomery, K.C., for Mr. Marshall, said his submission to the court was that the scheme of 1919 was invalid, and it followed that if what was put before the Ministry of Health by the Council was *ultra vires*, then there was nothing for him to sanction and nothing could be done in the matter.

The court made the rule absolute with costs against the Borough Council.

The Lord Chief Justice, in the course of his judgment, said, with regard to the point that the property had not been acquired within three years of the date of the confirmation of the Order, it appeared that notice to treat was given in August, 1925, and the arbitrator was not appointed till March, 1930. His lordship therefore came to the conclusion that the arbitration was out of time, as it was not possible at that time that the site could be acquired within three years of the confirmation. Accordingly, and without entering into the more detailed questions which centred around a contract between the 1919 and 1922 schemes, he was of opinion that the rule should be made absolute with costs against the Council.

Justices Avory and MacKinnon concurred.

COMPETITIONS OPEN

April 1.—Sending-in day. Development of the uses of aluminium and its alloys, for the International Aluminium Bureau. Two premiums of 25,000 francs. Conditions from the Bureau International de l'Aluminium, 23 bis, Rue de Balzac, Paris, France.

April 18.—Sending-in day. Central Municipal Bank and Head Offices, Broad Street, Birmingham. Assessor: Sir Reginald Blomfield, R.A., F.R.I.B.A. Premiums, £400, £300, and £150. Conditions from Herbert H. Humphries, City Engineer and Surveyor, Council House, Birmingham. (Deposit £3 3s.)

April 30.—Sending-in day. Hospital for Infectious Diseases, Coventry, for the Coventry Corporation. Assessor: E. Stanley Hall, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

June 16.—Sending-in day. (Last day for conditions: February 25.) Offices for the Ingham Infirmary, South Shields. Limited to architects within the area of the Northern Architectural Association. Assessor: George Reavell, O.B.E., F.R.I.B.A. Premiums, £250, £100 and £50. Conditions were obtainable from John Potter, Secretary, Ingham Infirmary, South Shields. (Deposit £2 2s.)

THE ARCHITECTS' DIARY

WEDNESDAY, MARCH 4

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Training for Advertising and Commercial Art." By W. G. Raffé, A.R.C.A. Chairman: J. A. Milne, O.B.E. **8 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At the Swedenborg Hall, 20 Hart Street, Bloomsbury, W.C.1. "Public Baths and Washhouses: Engineering Equipment and Data." By W. E. Fretwell and E. Shutt. **7 p.m.**

CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "English Mediæval Architecture: The Tower of London." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane. "The Restoration of St. Paul's Cathedral." By W. Godfrey Allen, F.R.I.B.A. **6 p.m.**

THURSDAY, MARCH 5

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS, 1 Wilbraham Place, S.W.1. Exhibition of designs submitted for the Petrol Filling Station Competition. Until March 21. 10 a.m. to 8 p.m. **10 a.m.**

WEST YORKSHIRE SOCIETY OF ARCHITECTS, 62 Woodhouse Lane, Leeds. Students' evening. "An Arbitration Case. Bozart *v.* Phillin and Rammin." **7 p.m.**

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Fashions in Furniture." By E. Hawking. **7 p.m.**

AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE, 29 Lincoln's Inn Fields, W.C.2. "Housing Act, 1930." By E. W. Eason. **7.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Yorkshire Branch. At the Metropole Hotel, Leeds. "Acoustics." By C. A. Harding, A.R.I.B.A. 7 p.m. South Wales and Monmouthshire Branch. At the Institute of Engineers, Park Place, Cardiff. "Concrete Roads: Past, Present and Future." By J. H. Walker, M.I.STRUCT.E. 7 p.m. **7 p.m.**

MARGATE SCHOOL OF ART. At the Wesleyan Schoolrooms, Hawley Square, Margate. Seventh of ten lectures on the History of Architecture. "Late Gothic Buildings." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, MARCH 6

ROYAL SANITARY INSTITUTE. At the Guildhall, Swansea. Discussion on "Housing," to be opened by J. M. Morris, M.D., followed by Ernest Morgan, A.R.I.B.A. **5.30 p.m.**

SCHOOL OF BUILDING, Ferndale Road, Brixton, S.W.4. Exhibition of work and distribution of prizes by G. M. Burt. Chairman: H. D. Searles-Wood, F.R.I.B.A. **7 p.m.**

SATURDAY, MARCH 7

Sunrise, 6.32 a.m. Sunset, 5.51 p.m.

ROYAL SANITARY INSTITUTE. Meet at the Guildhall Yard, Swansea, for visits to insanitary, reconditioned and new houses; the new Townhill School; the new Mental Hospital or Llansamlet Sewage Pumping Station. **10 a.m.**

MONDAY, MARCH 9

CHARTERED SURVEYORS' INSTITUTION, 12 Great George Street, Westminster, S.W.1. "Suggested Amendment of the London Building Acts, 1930." By Gilbert Lovegrove, F.C.S.I. **8 p.m.**

TUESDAY, MARCH 10

SOUTH-EASTERN SOCIETY OF ARCHITECTS. Joint Luncheon of Architects and Builders, to be held at the Lion Hotel, Guildford, followed by address on "Building Laws," by Major W. E. Watson, F.R.I.B.A. **1 p.m.**

UNIVERSITY OF LONDON, King's College, Strand, W.C. Eighth of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At the Borough Polytechnic, Borough Road, S.E.1. "Domestic Hot Water Supply." By H. L. Egerton. 7 p.m. Manchester and District Branch, At Milton Hall, Deansgate, Manchester. "Malleable Fittings." By H. R. Hiscott. 7 p.m. **7 p.m.**

WEDNESDAY, MARCH 11

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Some Aspects of Contemporary Decoration." By Arthur J. Davis, F.R.I.B.A. Chairman: J. C. Squire. **8 p.m.**

UNIVERSITY OF LONDON, King's College, Strand, W.C. Last of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "English Mediæval Architecture: The English Home." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS. Yorkshire Branch. At the County Room, Bond Street, Leeds. "Asbestos." By R. E. Forester, M.SC. **7.30 p.m.**

LONDON SOCIETY. Visit to Price's Candle Co., Belmont Works, York Road, Battersea. **2.15 p.m.**

THURSDAY, MARCH 12

SHEFFIELD, SOUTH YORKSHIRE AND DISTRICT SOCIETY OF ARCHITECTS AND SURVEYORS. At the University, Sheffield. "Planning." By E. Berry Webber, A.R.I.B.A. **6.15 p.m.**

ARTS BUILDING, Lime Grove, Oxford Road, Manchester. "Repair of Ancient Buildings." By C. R. Peers, F.R.I.B.A., C.B.E.

THURSDAY, MARCH 12—*continued*

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Early Panelled Rooms." By H. Warren Wilson, A.R.C.A. **7 p.m.**

SOUTH WALES INSTITUTE OF ARCHITECTS (CENTRAL BRANCH) AND INSTITUTE OF BUILDERS (SOUTH WALES BRANCH). At the Engineers' Institute, Park Place, Cardiff. "The Design and Construction of Modern Cinemas." By George Coles, F.R.I.B.A. **7 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "The Strength of Compression Members." By Ewart S. Andrews, B.SC., M.INST.C.E. **6.30 p.m.**

MARGATE SCHOOL OF ART. At the Wesleyan Schoolrooms, Hawley Square, Margate. Eighth of ten lectures on the History of Architecture. "Italian Renaissance and Its Architects." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, MARCH 13

INSTITUTION OF STRUCTURAL ENGINEERS. Lancashire and Cheshire Branch. At the College of Technology, Manchester. "Special Rust and Acid Resisting Steels." By W. H. Hatfield, D.SC., M.I.MECH.E. **7 p.m.**

TOWN PLANNING INSTITUTE. At Caxton Hall, Caxton Street, Westminster, S.W.1. "County Councils and Town Planning." By H. J. C. Neobard.

SATURDAY, MARCH 14

Sunrise, 6.16 a.m. Sunset, 6.3 p.m.

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Fifth of six non-technical lectures on Present-day Architecture: "The Preservation of the Countryside, especially in relation to Building." By A. B. Knapp-Fisher, F.R.I.B.A. **3 p.m.**

MONDAY, MARCH 16

R.I.B.A., 9 Conduit Street, W.1. General Meeting. "The Treatment of Old Buildings." By C. R. Peers, F.R.I.B.A., C.B.E. **8 p.m.**

TUESDAY, MARCH 17

LONDON SOCIETY. Visit to St. James's Palace S.W.1. **3 p.m.**

WEDNESDAY, MARCH 18

CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Spanish Mediæval Architecture. By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

SOUTH-EASTERN SOCIETY OF ARCHITECTS. Brighton Chapter. At the Old Ship Hotel, Brighton. "Architectural Acoustics." By C. W. Glover, A.M.INST.C.E. **6.30 p.m.**

THURSDAY, MARCH 19

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Reformers in Furniture Design." By Percy A. Wells. **7 p.m.**

CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Reinforced Concrete." By A. van Osenbruggen. **7.30 p.m.**

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At Bradford. General Meeting. **7 p.m.**

MARGATE SCHOOL OF ART. At the Wesleyan Schoolrooms, Hawley Square, Margate. Ninth of ten lectures on the History of Architecture. "French Renaissance and its Architects." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

FRIDAY, MARCH 20

BRITISH ELECTRICAL DEVELOPMENT ASSOCIATION. Annual luncheon, to be held at the Savoy Hotel, Strand, W.C.2. 12 45 for 1 p.m. **1 p.m.**

SATURDAY, MARCH 21

Sunrise, 6.0 a.m. Sunset, 6.15 p.m.

CENTRAL SCHOOL OF ARTS AND CRAFTS. Visit to a Factory in East London. **2 p.m.**

MONDAY, MARCH 23

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "Beauty." By Professor R. M. V. Gleadowe. **8 p.m.**

TUESDAY, MARCH 24

IDEAL HOMES EXHIBITION (DAILY MAIL), Olympia, Kensington, W. Until April 17. 10 a.m. to 9 p.m. **10 a.m.**

DESIGN AND INDUSTRIES ASSOCIATION. At the London School of Economics, Houghton Street, Aldwych, W.C.2. "The Modern Film." By John Grierson. **8 p.m.**

WEDNESDAY, MARCH 25

LONDON CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row W.C.1. "German Mediæval Architecture." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

WEST YORKSHIRE SOCIETY OF ARCHITECTS, 62 Woodhouse Lane, Leeds. Students' Debate: "That Architecture is of vital importance to the Layman." Affirmative: J. A. Naylor. Negative: G. B. Stickney. **7 p.m.**

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Kent Coalfields." By Professor Patrick Abercrombie, M.A., F.R.I.B.A. Chairman: The Rt. Hon. Lord Cornwallis, C.B.E. **8 p.m.**

SOUTH-EASTERN SOCIETY OF ARCHITECTS. Croydon Chapter. At the Town Hall, Croydon. Annual General Meeting, followed by "Modern European Architecture." By F. R. Yerbury, HON. A.R.I.B.A. **8 p.m.**

THURSDAY, MARCH 26

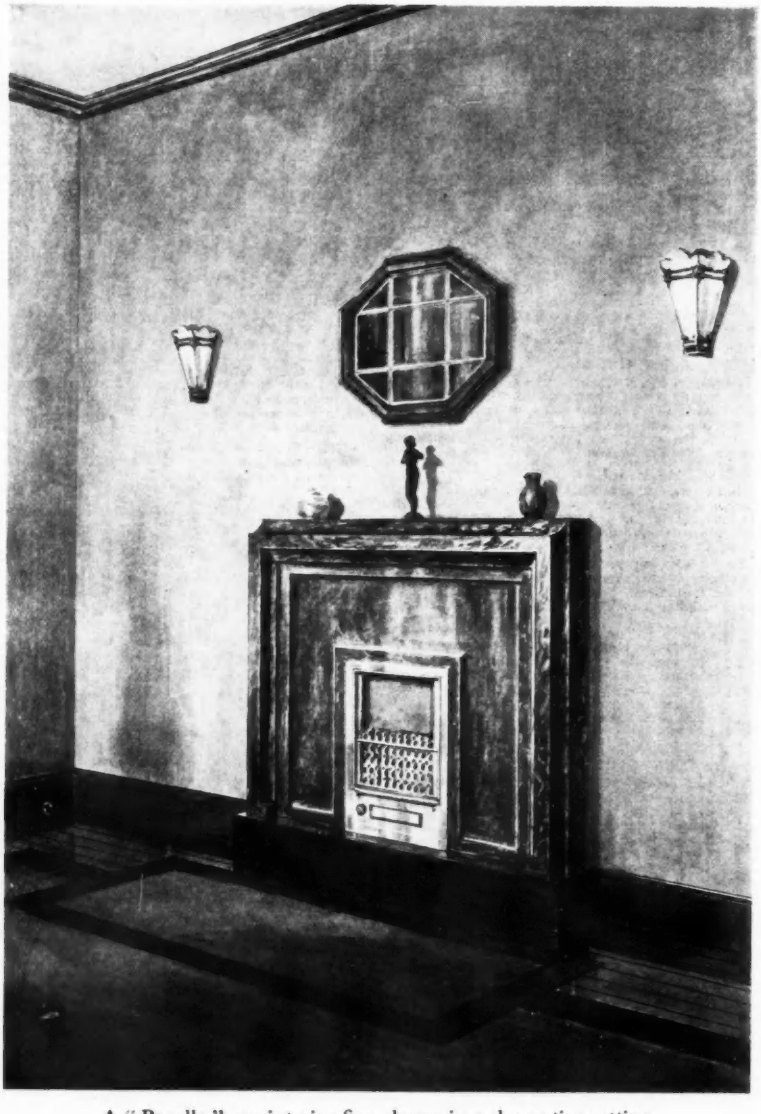
INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "The Erection of Sydney Harbour Bridge." By J. Stuart Lewis, M.I.STRUCT.E. **6.30 p.m.**

LONDON SOCIETY. Annual meeting, to be held at the Clothworkers' Hall, 41 Mincing Lane, E.C.3. Tea, 4 p.m. **4.30 p.m.**

TRADE NOTES

The Davis "Panella" gas interior fire, illustrated below, in a decorative setting, is more popularly known as the gas fire for the architect. It possesses many constructional and other advantages, and has been designed specially to meet the growing demand for a gas-heating unit that, lacking all pronounced æsthetic character of its own, will harmonize with any decorative scheme. It is, in fact, of a perfectly plain design and, moreover, has no projecting trivet. Thus, subject to the need for a properly constructed flue, the gas interior can be fitted at any part of the wall that the nature of the decorative scheme requires.

"The fine lustre of aluminium paint makes it particularly suitable for obtaining striking decorative effects, either by itself in its natural silver-like colour; tinted to imitate gold, copper or bronze; or mixed with other paints to obtain unusual effects. Mixed in varying proportions with ordinary white paints, various tints of grey of a peculiar lustre can be obtained, while mixed with red oxide various shades of pink of the same iridescent hue result. In the same manner attractive pale and lustrous tints of almost any colour can be obtained by mixing with coloured paints, and many striking decorative effects thereby obtained. Owing to the non-corrosive nature of aluminium and the formation of a series of metallic films already mentioned, aluminium paint possesses a high protective value against sun, rain, and impure atmospheric conditions generally. Being unattacked by sulphur or chlorine, it is particularly useful in industrial districts and by the sea coast, and can be used on wood, steel, non-ferrous metals and cement with equally satisfactory results. Most paints have as a pigment a metallic salt which is electro-negative to iron, and in the presence of moisture a galvanic couple is often set up which destroys the iron, with the result that wherever the paint is chipped rust starts and works its way along beneath the coating of paint, with disastrous results. Aluminium, on the other hand, is electro-positive to all the common metals, and this fact prevents excessive corrosion at points where the paint has been chipped off." From *Powdered and Granulated Aluminium*, a booklet issued by the British Aluminium Company, Ltd., Adelaide House, King William Street, E.C. 4.



A "Panella" gas interior fire, shown in a decorative setting.

A Correction

We much regret that in Messrs. Harris and Sheldon's advertisement, which appeared in last week's issue of THE ARCHITECTS' JOURNAL, the name of the architect of the Stockton Co-operative Society's new building was incorrectly given as Mr. W. G. Townsend Gray. The architect actually responsible for the work is Mr. Arthur Wellesley Holt.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Baggage Hall, Tilbury (pages 339–341). General contractors, John Mowlem & Co., Ltd.

Ice Rink, Streatham (pages 342–344). General contractor, Horace Watt. Sub-contractors : Banister, Walton & Co., Ltd., steelwork; Troughton and Young, Ltd., electrical installation and electric fittings; Stuart's Granolithic Co., Ltd., patent stone; Asbestos Cement Building Products, Ltd., roof covering; Reid, McFarlane & Co., Ltd., cork insulation; Crittall Manufacturing Co., Ltd., steel casements generally; Wainwright and Waring, Ltd., special casements and ironwork; Thos. Cook, Ltd., tile flooring; Mellowes & Co., Ltd., glazing; Hall and Dixon, Ltd., upholstery; Mundus and Kohn, Ltd., seating; Independent Sprinklers, Ltd., fire appliances; London Plenum Heating Co., heating and ventilation; Plaster Decoration Co., Ltd., fibrous plaster; F. De Jong & Co., Ltd., decorations; James & Co., Ltd., lead glazing; Swanser and Son, Ltd., canopy; Claude-General Neon Lights, Ltd., and Brilliant Sign Co., Ltd., external signs ; F. A. Norris & Co., Ltd., laylights; London Sand Blast Co., Ltd., engraved glass ; Ragusa Asphalte Paving Co., Ltd., asphalt.

The Deansgate Cinema, Manchester (pages 353–354). General contractors, F. G. Minter, Ltd. Sub-contractors : London Brick Co. and Forders, Ltd., Fletton bricks; Braithwaite & Co., Ltd., structural steel; E. Parkinson (London), Ltd., tiles; Weenen and Goddard & Co., Ltd., electric wiring; Shanks & Co., sanitary fittings; Gibbons, door furniture; J. Starkie Gardner, Ltd., metalwork; Lloyd Loom (Lusty and Sons), and Rowley Gallery of Decorative Art, furniture; Strand Signs, Ltd., signs.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The BARKING Education Committee has decided to erect two schools on the Becontree housing estate, by direct labour.

The BARKING U.D.C. is to erect 340 houses within the next five years.

The BECKENHAM U.D.C. is seeking sanction for a loan of £15,000 for the erection of a fire station.

The BERMONDSEY B.C. has decided to erect 112 flats on the Acorn Yard site.

The L.C.C. reports that plans for laying out streets on the Foundling Hospital site, BLOOMSBURY, show that it is proposed to erect approximately 1,500 flats on the site.

Plans passed at COULSDON: House, Caterham Drive, Old Coulsdon, for Miss Bould; two houses, Homefield Road, for Mr. W. Sales; five houses, Hartley Down, for Mr. F. A. Freeman; new roads, Southview Estate, for Messrs. H. Hemmings, Ltd.; eight houses, Stoats Nest Road, for Mr. W. C. Midmer.

The CROYDON Corporation has asked the borough engineer to prepare a scheme for clearing the Old Town area.

Plans passed at CROYDON: Eight houses, Berne Road, for Mr. W. P. Joyce; two houses, Grange Avenue, for Messrs. H. and D. Winn, Ltd.; nineteen houses, Shirley Avenue, for Messrs. Paish, Tyler and Crump; five houses, Pollards Hill, for Mr. H. Macintosh; seven garages, South End, for Mr. L. H. Harrington; two bungalows, Mead Way, for Messrs. Bethell and Swannell; twenty-eight houses, Croydon Road, for Mr. H. G. Palmer; twenty-four houses, Birchanger and Tennison Roads, for Mr. W. Ernest; alterations and additions, 107 Park Lane, for Messrs. G. Worsfold & Co.; four bungalows, Dunheved Road, for Messrs. C. Midmer and Sons; eight houses, Norbury and Mersham Roads, for Messrs. Smith, Wilkinson and Son; two houses, Covington Way, for Mr. H. Macintosh; six houses, Devonshire Way, for Mr. E. A. Parkes; two houses, The Glade, for Messrs. Wylie and Berlyn.

Mr. S. Harman is to build a synagogue in Knightland Road, HACKNEY.

The HAMMERSMITH B.C. is to arrange with Sir A. Brumwell Thomas, architect, for the preparation of working drawings for the new town hall and municipal buildings at Brook Green.

The KENSINGTON B.C. is to prepare housing schemes for the Adair Road and Southam Street areas.

The Church of England authorities are to acquire a site on the northern section of St. Helier estate, MORDEN, for the erection of a church.

The Herts Education Committee is to obtain sites at NORTH WATFORD, for the erection of two elementary schools.

The Surrey C.C. has appointed Messrs. A. Saxon Snell and Phillips as architects for alterations and extensions at the REIGATE Institution.

The managers of St. Dominic's Roman Catholic School are to erect new premises in Southampton Road, ST. PANCRAS.

Messrs. James and Woodworth are developing the Selsdon Park Farm estate, SANDERSTEAD.

SOUTHERN COUNTIES

Plans passed at BEXHILL: Four houses, Cooden Drive, for Messrs. Tubbs and Messer; two houses, Jameson Road, for Mr. R. A. Larkin; addition, Metropolitan Convalescent Institution, Sea Road, for Mr. W. Campbell Jones; house, St. James's Avenue, for Messrs. Murray Delves, Murray and Atkins.

Plans passed at BOURNEMOUTH: Shops and five houses, Malmesbury Park and Bennett Roads, for Mr. G. E. Elliott; two houses, New Drive, for Messrs. Marshall and Bower; house and shop, Middleton Road, for Messrs. Marshall and Bower; extensions, 18 and 20 Commercial Road, for Messrs. Woolworth & Co.; shops, offices and flats, Wilson and Curzon Roads, for Mr. C. V. Millar; two houses, Ravenscourt Road, for Mr. W. H. Elcock; two houses, Spring Road, for Mr. W. Loaden; two houses, Stephenson Road, for Messrs. G. F. Hirst and Son; two shops and houses, Tuckton Road, for Mr. Williamson; two houses, Winston and Priory View Roads, for Mr. F. A. Cole; eight houses, Seafield Road, for Mr. J. Jaques.

The BOURNEMOUTH Education Committee has approved a scheme for the erection at Hill View Road of a junior mixed and infants' school to accommodate 400 children, with provision for the erection, when required, of a further block of buildings for 300 infants.

The BRIGHTON Corporation has approved schemes for the erection of 220 houses on the Tarners and Whitehawk estates, at a cost of £98,000.

The BRIGHTON Corporation recommends the provision of electricity showrooms in Castle Square, from plans prepared by Mr. Overton, at an estimated cost of £43,000.

The BRIGHTON Education Committee has approved plans for the erection of an elementary school on the Whitehawk estate, at a cost of £41,400.

NORTHERN COUNTIES

The BLYTH Education Committee has selected a site at Bebside for the erection of a senior school.

The Bredbury and Romily U.D.C. is to erect forty-four houses on the Harry Town estate, BREDBURY.

The SOUTH SHIELDS Corporation is to erect forty-eight houses on the Ridgeway Estate, at a cost of £16,800.

Plans passed at SOUTH SHIELDS: Alterations and additions, premises in King Street, for Messrs. F. W. Woolworth & Co., Ltd.; two bungalows, St. Peter's Avenue, Harton, for Mr. F. W. Newby; twenty-nine houses, Mowbray Road, Tadema Road, and Wardle Avenue, for Messrs. T. A. Page and Son.

The STRETFORD U.D.C. is considering the question of a site for the proposed new library.

Plans passed at STRETFORD: Four houses, Granby Road, for Mr. W. H. Short; thirteen houses, Low Moss Lane, for Messrs. Freeman Evans & Co.; cell-house, Westinghouse Road, for Messrs. Southern Oil Co.; cold room extension, Cornbrook Street, for the Manchester and Salford Equitable Co-operative Society, Ltd.; masons' sheds, etc., Cornbrook Sidings, for Messrs. Mather and Ellis; additional offices, Longford Road, for the Stretford and District Gas Board; bakehouse, 322 Barton Road, for Mr. W. H. Haynes.

Plans passed at WAKEFIELD: Alterations and additions, White Horse Hotel, Westgate, for the Leeds and Wakefield Breweries, Ltd.; two houses, Eden Avenue, for Messrs. Kay and Lunan; alterations to public house, corner of Wood Street and Bull Ring, for Mr. F. Simpson; alterations, Clothier's Arms, Dewsbury Road, for Mr. F. Simpson.

The WARRINGTON Corporation Health Committee has approved revised plans for the required extensions at the borough general hospital, estimated to cost £79,300.

The YORK Corporation has asked the Housing Committee to arrange for the erection of 150 to 160 houses on the Heworth Grange Estate to re-house persons displaced in the Layerthorpe areas. A suggestion that the blocks of such houses should not be built all together has been agreed upon.

MIDLAND COUNTIES

The COVENTRY Education Committee has acquired a site at Stoke Church for the erection of a secondary school.

The HINCKLEY U.D.C. is to erect 100 houses on the Middlefield estate.

Messrs. A. Birkett and J. Grant have prepared plans of a skating rink proposed to be erected at Bath Street, Tunstall, STOKE-ON-TRENT.

Plans passed at STOKE-ON-TRENT: Three bungalows, Drubbery Lane, Longton, for Mr. S. Simpson; house and shop, Whitfield Road, Norton-le-Moors, for Mr. H. Wilson; extensions, Model Dairy, Basford, for the N.S. Co-operative Dairy, Ltd.; five houses, Gladstone Street, Basford, for Mr. Dimbleby; twelve houses, Chamberlain Avenue, for Messrs. Holloway & Co.; two houses, off Edward Street, for Mr. T. Brunt; alterations, The Northwood Inn, Botany Bay Road, for Parkers Brewery, Ltd.; workshops, off Bagnall Street, for the Staffs. Potteries Water Board; seven houses, Bucknall New Road, Hanley, for Mr. E. A. Bird; alterations to warehouse, Alexandra Road, Longport, for Mr. W. J. Kent; two houses, Chapel Street, Bucknall Street, for Mr. W. Withington; two houses, Milton Road, Sneyd Green, for Mr. J. Jackson; alterations and additions, Newcastle Street, Pottery, for Messrs. J. Maddock and Sons, Ltd.; ten houses, The Avenue, Harpfield, for Messrs. Hollins and Jones; two houses, Palmers Green, Harpfield, for Messrs. Hughes and Barber; seven houses, Bucknall New Road, Hanley, for Mr. A. E. Bird; sixteen houses, Birches Head Lane, for Mr. J. Plant.

The WALSALL Corporation has passed plans and estimates for the provision of new baths, turkish baths, etc., amounting to £56,950.

The WALSALL Corporation reports that it proposes to erect 1,000 houses on the Field Road housing site.

EASTERN COUNTIES

The Herts. Education Committee is to obtain a site at ABBOTS LANGLEY, for the erection of an elementary school for 320 children.

The Herts. Education Committee is to erect a senior school at CHESHUNT.

The Herts. county surveyor is to prepare plans for the erection of an elementary school at GREAT BERKHAMPSTEAD.

The Herts. Education Committee is to obtain a site at HARPENDEN, for the erection of a grammar school.

The Herts. county surveyor is to prepare plans for the erection of a junior school on the Dacre site, HITCHIN.

The Herts. Education Committee is to obtain a site in the Sunnyside district of HITCHIN, for the erection of an elementary school.

The Herts. Education Committee is acquiring a site near Bedford Road, LETCHWORTH, for the erection of a senior school and domestic economy centre.

SCOTLAND

The GLASGOW Corporation has purchased ground at Copland Road for a rehousing scheme.

The GLASGOW Corporation has approved a layout of ground at East Keppoch, Possil, showing 424 houses of two, three and four apartments; a hostel to accommodate thirty-four people; and 468 intermediate houses of three and four apartments.

The GLASGOW Corporation has passed plans for the erection of baths and washhouses in Barrowfield Street, at an estimated cost of £38,000.

WALES

The Cardiff Corporation recommends the acquisition of the ELY racecourse of 186 acres of land for a housing estate.

The MERTHYR Corporation is to prepare plans for the erection of open-air baths.

The MERTHYR Corporation is to prepare a scheme for the provision of 120 houses, to provide accommodation for tenants to be displaced from cellar dwellings.

The Monmouth Corporation is acquiring a housing site at WYESHAM.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	•1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_2	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	•1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W.Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury ..	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen ..	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank ..	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorks	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	•1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_3	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey ..	Yorks	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	•1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_3	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	•1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester ..	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_3	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	•1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	•1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	•1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_3	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_3	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

• In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter . . . . ,,	1 8
Joiner . . . . ,,	1 8
Machinist . . . . ,,	1 9
Mason (Banker) . . . ,,	1 8
,, (Fixer) . . . ,,	1 9
Plumber . . . . ,,	1 8
Painter . . . . ,,	1 7
Paperhanger . . . ,,	1 8
Glazier . . . . ,,	1 8
Slater . . . . ,,	1 8
Scaffolder . . . . ,,	1 4
Timberman . . . ,,	1 4
Navvy . . . . ,,	1 3
General Labourer . . ,,	1 3
Lorryman . . . ,,	1 5½
Crane Drivers . . . ,,	1 7
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . ,,	2 10 6
Hydrated Lime . . . ,,	2 16 0
Portland Cement . . . ,,	2 6 0
Ferro-crete . . . ,,	2 13 6
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . ,,	10 0
Building Sand . . . ,,	10 6
Washed Sand . . . ,,	11 6
2" Broken Brick . . ,,	9 6
¾" ,, ,, . . ,,	12 6
Pan Breeze . . . ,,	6 6
Coke Breeze . . . ,,	8 9

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . ,,	3 3 6
Stocks, 1st Quality . . ,,	4 18 6
,, 2nd ,, . . ,,	4 12 6
Blue Bricks, Pressed . . ,,	9 18 0
,, Wirecuts . . ,,	8 16 0
,, Brindles . . ,,	8 0 0
,, Bullnose . . ,,	10 8 0
Red Sand-faced Facings . ,,	7 11 0
Red Rubbers for Arches . ,,	15 0 0
Multicoloured Facings . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . ,,	21 10 0
Headers . . . . ,,	21 0 0
Bullnose . . . . ,,	28 0 0
Double Stretchers . . ,,	30 0 0
Double Headers . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . ,,	6 3	7 2
Rest bends . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¼ Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers . . ,,	5 6	7 9
Yard gullies . . ,,	9 6	11 6
Interceptors . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . . ,,	5	—

MASON

	s. d.
The following d/d F.O.R. at Nine Elms	
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . ,,	4 9
Bath stone . . . ,,	2 11
York stone . . . ,,	6 9
,, Sawn templates . . ,,	7 6
,, Paving, 2" . . . F.S.	1 8
,, ,, 3" . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station.

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20"×10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . as 1" F.S.	9
Deal, Joiner's, . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . ,, ,,	4
Teak, Moulmein . . ,, ,,	1 3
,, Burma . . ,, ,,	1 2
Walnut, American . . ,, ,,	2 3
,, French . . ,, ,,	2 3
Whitewood, American . ,, ,,	1 1
Deal floorings, ⅜" . . . Sq.	1 1 0
,, ½" . . . ,,	1 3 6
,, ¾" . . . ,,	1 5 6
,, 1" . . . ,,	1 11 0
,, 1¼" . . . ,,	1 15 0
Deal matchings, ½" . . ,,	16 0
,, ¾" . . ,,	17 6
,, 1" . . ,,	1 6 0
Rough boarding, ¾" . . ,,	18 0
,, 1" . . ,,	1 0 0
,, 1¼" . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	⅜"			½"			¾"			1"		
Qualities	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B d.	AA. d.	A. d.	B. d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	½"	1"	1¼"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket union . . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

Per cent.		Per cent.
Gas . . . 62½	Galvanized gas .	50
Water . . . 58⅓	,, water .	45
Steam . . . 55	,, steam .	40

FITTINGS.

Gas . . .	47½	Galvanized gas .	37½
Water . . .	42½	,, water .	32½
Steam . . .	37½	,, steam .	27½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ⅜" . . ,,	10 0
,, ,, ½" . . ,,	9 9
,, ,, ⅝" . . ,,	9 6
,, ,, ¾" . . ,,	9 6
,, ,, ⅞" . . ,,	9 6
,, ,, 1" . . ,,	9 6
,, ,, 1¼" . . ,,	9 6
,, ,, 1½" . . ,,	9 6

	3" s. d.	4" s. d.
Cast-iron rain-water pipes of ordinary thickness metal . F.R.	7	10
Shoes . . . . each	2 3	3 3
Anti-splash ,, . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 6
,, with access door . . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6
Half-round rain-water gutters of ordinary thickness metal . F.R.	5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse ,, . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	23 0
,, drawn pipes . . . ,,	23 6
,, soil pipe . . . ,,	26 6
,, scrap . . . ,,	13 0
Solder, plumbers' . . . lb.	1 0
,, fine do. . . . ,,	1 4
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3" £ s. d.	4" £ s. d.	6" £ s. d.
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . ,,	2 0	2 6	4 0
Holderbats . . each	3 10	4 0	4 9
Bends . . ,,	3 9	5 3	10 3
Shoes . . ,,	2 10	4 4	9 6
Heads . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . ,,	2 10 0
,, fine . . ,,	5 10 0
Hydrated lime . . ,,	2 10 0
Sirapite . . . ,,	3 10 0
Keene's cement . . ,,	5 10 0
Sand, washed . . Y.C.	11 6
Hair . . . lb.	6
Laths, sawn . . bundle	2 4
,, rent . . ,,	3 9
Lath nails . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . ,,		1 3
¼" Polished plate, n/e 1 . ,,	1 0 to	1 3
,, ,, 2 . ,,	1 2 ,,	1 7
,, ,, 3 . ,,	1 7 ,,	2 5
,, ,, 4 . ,,	2 1 ,,	2 11
,, ,, 6 . ,,	2 3 ,,	3 2
,, ,, 8 . ,,	2 6 ,,	3 6
,, ,, 12 . ,,	2 9 ,,	3 8
,, ,, 20 . ,,	3 0 ,,	3 11
,, ,, 45 . ,,	3 3 ,,	4 1
,, ,, 65 . ,,	3 7 ,,	4 6
,, ,, 90 . ,,	3 10 ,,	4 9
,, ,, 100 . ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		1 3
,, ,, ,, over 2 . ,,		1 0
,, ,, plate, n/e 1 . ,,		1 6
,, ,, ,, 2 . ,,		3 0
,, ,, ,, 5 . ,,		4 0
,, ,, ,, 7 . ,,		5 0
,, ,, ,, 15 . ,,		6 0
,, ,, ,, over 15 . ,,		7 6
Putty, linseed oil . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 4
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12″ deep and cart away	Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away	Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away	,,	11 0
,, ,, 10′ 0″ deep and cart away	,,	11 6
,, ,, 15′ 0″ deep and cart away	,,	12 0
If in stiff clay	add ,,	3 0
If in underpinning	,, ,,	5 0
Digging, return, fill and ram	,,	5 0
Planking and strutting to sides of excavation	F.S.	1 0
,, ,, to pier holes	,,	6
,, ,, to trenches	,,	6
,, ,, extra, only if left in	,,	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	,,	1 13 6
,, ,, ,, (4-2-1)	,,	1 18 6
,, ,, ,, underpinning	,,	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, junctions	,,	3 9	4 6
Gullies and gratings	,,	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
,, ,, in cement	,,	34 0 0
,, Stocks in cement	,,	41 10 0
,, Blues in cement	,,	62 0 0
Extra only for circular on plan	,,	3 0 0
,, backing to masonry	,,	2 0 0
,, raising on old walls	,,	3 0 0
,, underpinning	,,	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	,,	1 0
,, red brick facings	,,	1 6
,, blue brick facings	,,	1 9
,, glazed brick facings	,,	4 6
Tuck pointing	,,	10
Weather pointing	,,	4
Slate dampcourse	,,	1 0
Vertical dampcourse	,,	1 3

ASPHALTER

		s. d.
½″ Horizontal dampcourse	Y.S.	5 6
½″ Vertical dampcourse	,,	7 6
½″ paving or flat	,,	5 6
1″ paving or flat	,,	6 6
1″ × 6″ skirting	F.R.	1 0
Angle fillet	,,	2
Rounded angle	,,	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do. all as last	,,	15 6
Artificial stone and do.	,,	16 6
York stone templates, fixed complete	,,	14 0
,, thresholds	,,	16 0
,, sills	,,	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″	Sqr.	4 5 0
Do., 18″ × 9″	,,	4 2 0
Do., 24″ × 12″	,,	4 12 0
Westmorland slating, laid with diminished courses	,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course	,,	4 0 0
Do., all as last, but of machine-made tiles	,,	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
,, to stanchions	,,	1 0
,, to staircases	,,	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	,,	6 9
,, ,, roofs	,,	8 3
,, ,, trusses	,,	9 0
,, ,, partitions	,,	12 0
⅝″ deal sawn boarding and fixing to joists	Sqr.	1 17 6
1″ ,, ,, ,, ,,	,,	2 1 6
1½″ ,, ,, ,, ,,	,,	2 7 6
2″ × 2″ fir battening for Countess slating	,,	12 6
Do. for 4″ gauge tiling	,,	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
,, ,, ,, 2 ,,	,,	3 0
,, ,, ,, 3 ,,	,,	3 6
Stout herringbone strutting to 9″ joists	F.R.	1 0
1″ deal gutter boards and bearers	F.S.	1 4
1½″ ,, ,, ,, ,,	,,	1 8
2″ deal wrought rounded roll	F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
1¼″ do.	,,	3 4 0
1½″ do.	,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1¼″ do.	,,	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½″ deal moulded sashes of average size	F.S.	2 3
2″ ,, ,, ,,	,,	2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ⅝″ parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	4 3
2″ ,, ,, ,,	,,	4 6
Extra only for moulded horns	Each	9
1⅜″ deal four-panel square, both sides, door	F.S.	2 6
2″ ,, ,, ,,	,,	3 0
1⅜″ ,, but moulded both sides	,,	3 0
2″ ,, ,, ,,	,,	3 6
4″ × 3″ deal, rebated and moulded frames	F.R.	1 6
4½″ × 3½″ ,, ,, ,,	,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	3 0
1½″ deal moulded wall strings	,,	2 6
1½″ ,, outer strings	,,	2 9
Ends of treads and risers housed to string	Each	2 0
3″ × 2″ deal moulded handrail	F.R.	1 6
1″ × 1″ deal balusters and housing each end	Each	2 6
1½″ × 1½″ ,, ,,	,,	3 3
3″ × 3″ deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	,,	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders and hoisting and fixing in position	,,	1 3 0
Do. stanchions with riveted caps and bases and do.	,,	1 2 0
Mild steel bar reinforcement ½″ and up, bent and fixed complete	,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 19 6
Do. in flashings	,,	2 2 0
Do. in covering to turrets, etc.	,,	2 9 0
Do. in soakers	,,	1 15 0
Labour to welted edge	F.R.	3½
Open copper nailing	,,	3½
Close ,,	,,	4½

		½″ s. d.	¾″ s. d.	1″ s. d.	1¼″ s. d.	2″ s. d.	4″ s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 3	1 8	2 2	2 9	3 10	—
Do. soil pipe and fixing with cast lead tacks	,,	—	—	—	—	—	6 0
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions	,,	3 6	4 0	5 6	8 0	—	—
Lead traps	,,	—	—	—	7 6	10 6	—
Screw down bib valves	,,	7 6	10 6	12 6	—	—	—
Do. stop cocks	,,	10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4″ cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	,,	1 6
Do. outlets	,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	,,	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	,,	5 6
Lathing with sawn laths to ceilings	,,	1 6
½″ screeding in Portland cement and sand for tiling, wool block floor, etc.	,,	2 6
Do. vertical	,,	2 9
Rough render on walls	,,	2 3
Render, float and set in lime and hair	,,	3 0
Render and set in Sirapite	,,	3 3
Render, backing in cement and sand, and set in Keene's cement	,,	4 6
Extra, only if on lathing	,,	9
Keene's cement, angle and arris	F.R.	3
Arris	,,	3
Rounded angle, small	,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth	,,	2
1″ granolithic pavings	Y.S.	5 0
1½″ ,,	,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed	,,	1 2 6
9″ × 3″ ,, ,, ,,	,,	1 7 6
Extra, only for small quadrant angle	F.R.	9

GLAZIER

		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	,,	1 0
Arctic glass and glazing with putty	,,	1 2
Cathedral glass and do.	,,	1 3
Glazing only, British polished plate	,,	8
Extra, only if in beads	,,	2
Washleather	F.R.	4

PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	,,	1 0
Do. with washable distemper	,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3 3
Do. on woodwork	,,	3 6
Do. on steelwork	,,	3 0
Do. and brush grain and twice varnish	,,	5 6
Stain and twice varnish woodwork	,,	1 11
Stain and wax-polish woodwork	,,	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper	from ,,	3 0

CINEMA PAY-BOX IN STEEL

AT THE RECONSTRUCTED DEANSGATE CINEMA, MANCHESTER



G. Alan Fortescue, Architect

THE KIOSK IN POSITION IN THE ENTRANCE HALL

THE hexagonal pay kiosk, illustrated photographically above, is of steel. The drawings reproduced overleaf are to the following scales: elevation, plan and section, 1 inch = 6 feet; details, one-sixth full size, except grille, one-twelfth full size.

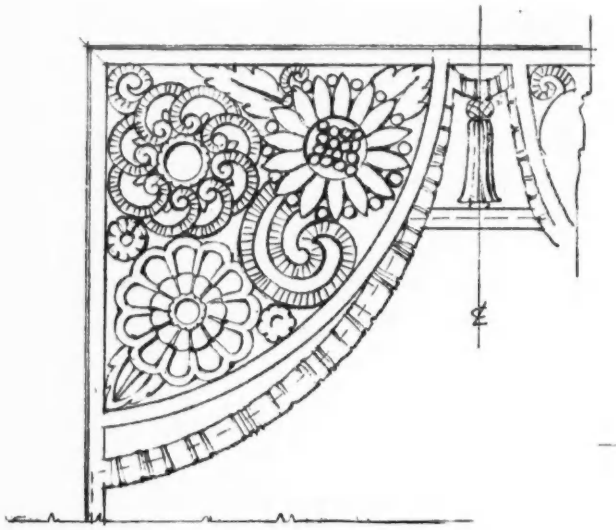
The irregular hexagon plan was determined by the position at the foot of the main staircase, adopted with a view to the quick supply of tickets to two streams of patrons. The interior of the kiosk is fitted with shelves all round to give ample room for stacking tickets, money, etc. The door at the rear is fitted with a Yale lock, which cannot be opened from the outside except with a key, to eliminate risk of a raid on the cash, and, at the same time, to allow instant exit for the ticket operators in case of fire.

The fabric was designed and constructed in London and conveyed to Manchester in eight pieces—namely, the base, six sides, and the roof—and was bolted together on the site in three or four hours. The finish is cellulose, sprayed on in green and gold glittering hues. The flowered enrichments, which were modelled and cast, were treated with natural flower colours. Photographs and a description of the Deansgate Cinema appear elsewhere in this issue.

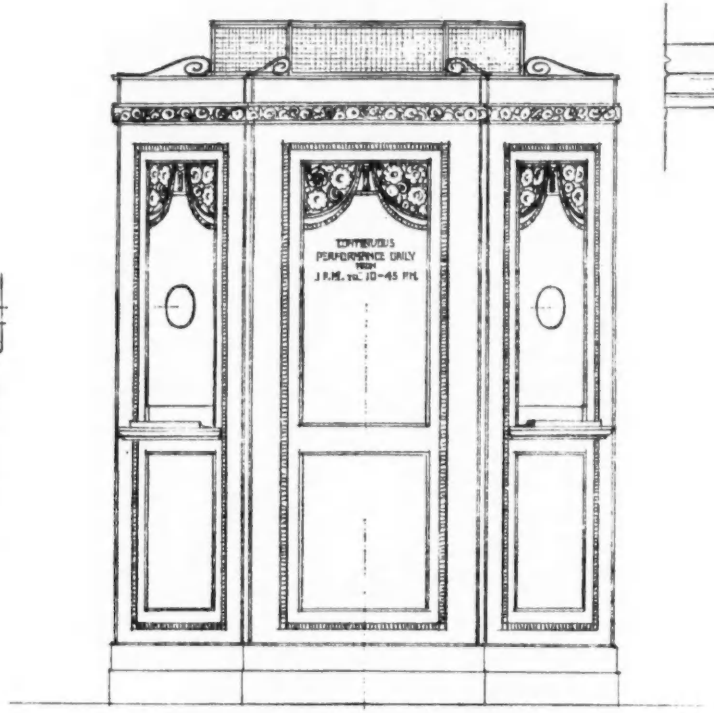
Supplement to THE ARCHITECTS' JOURNAL for March 4, 1931

THE DEANSGATE CINEMA MANCHESTER

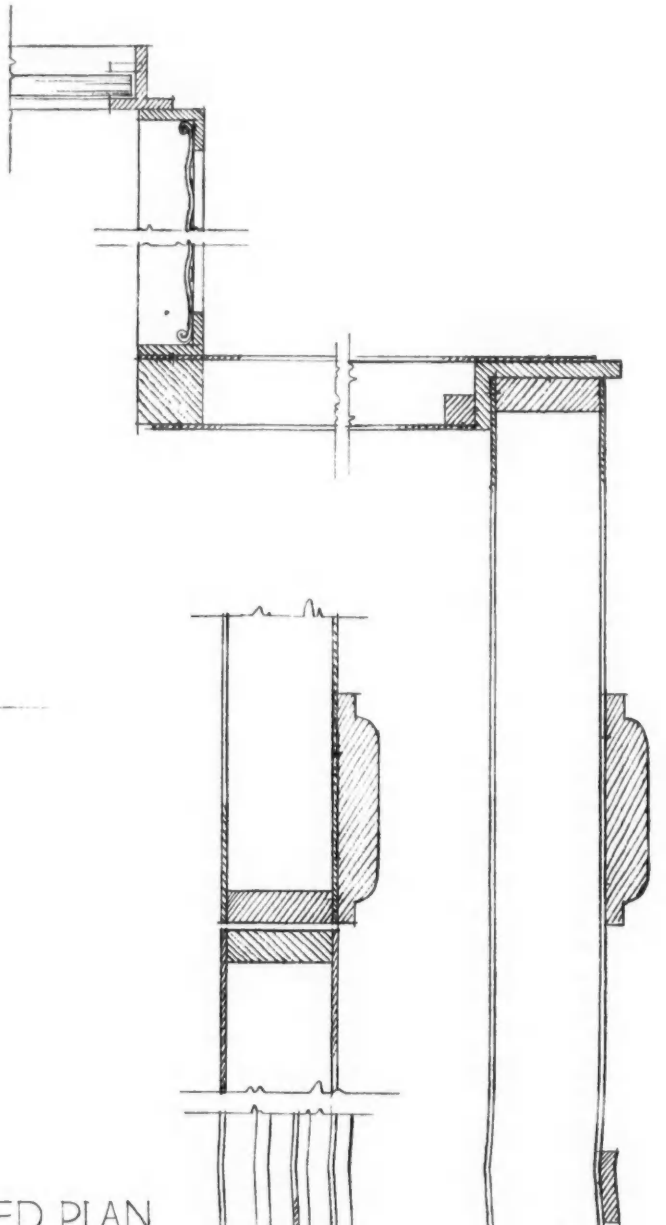
DETAILS OF PAY BOX KIOSK TO ENTRANCE HALL

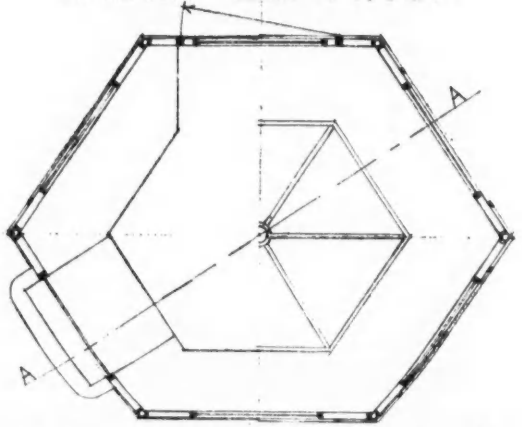


DETAIL OF GRILLE

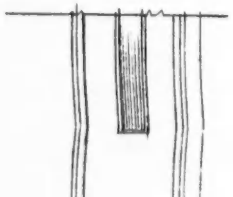


FRONT ELEVATION

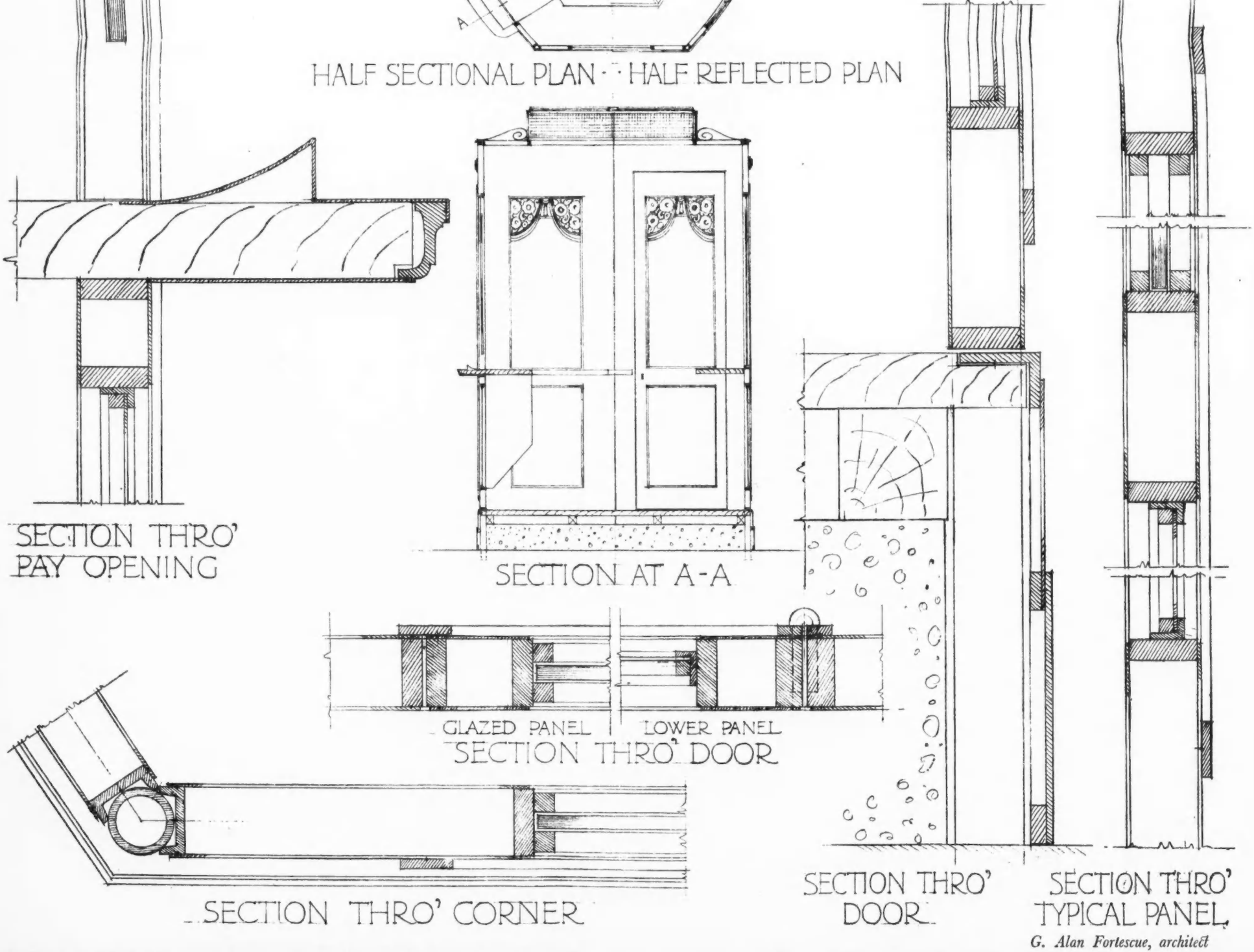




HALF SECTIONAL PLAN



HALF REFLECTED PLAN



G. Alan Fortescue, architect

HANDYSIDE, STOKESLEY, YORKSHIRE

MEASURED DRAWINGS OF RESIDENCE OF AN EIGHTEENTH-CENTURY LOCAL CELEBRITY



A GENERAL VIEW OF THE MAIN FRONT

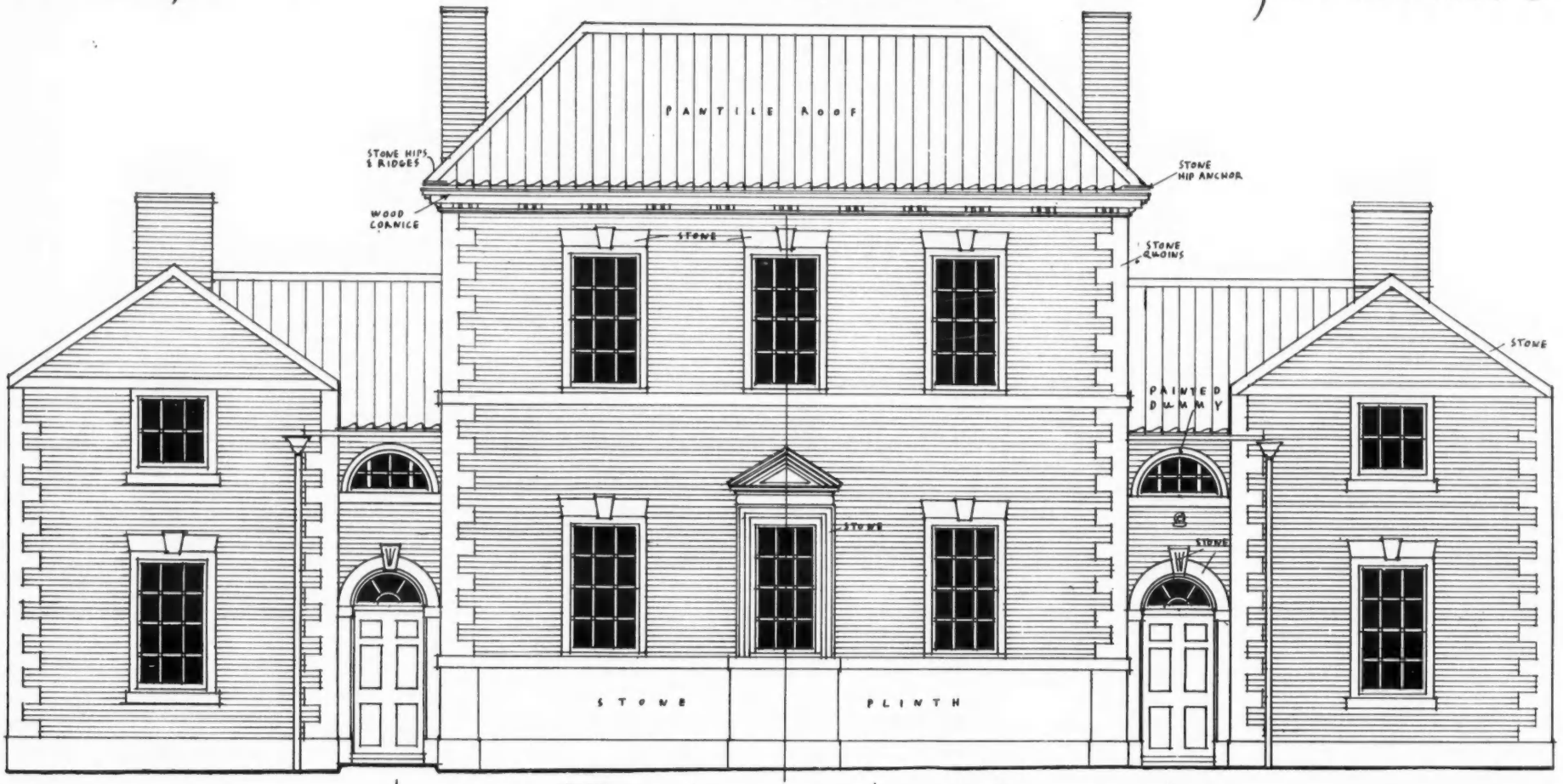


THE WING FORMING THE COACHMAN'S SEPARATE COTTAGE

THE interesting eighteenth-century composition of which photographs appear above, and measured drawings overleaf, to the scales indicated, was built for his own occupation by Dr. Handyside, who is remembered in the locality as a somewhat eccentric celebrity. There is, however, little that is eccentric, much that is logical, about the planning. The front presented to the street is both symmetrical and ingenious. The doctor's own entrance was by the right hand of the two doors; the semicircular window above it is a painted dummy, and between the two still exists a Sun Fire Insurance plaque bearing the number 654275. The left-hand door was for the use of the coachman, whose cottage forms the left wing. In the complementary right wing was the kitchen.

The structure is of brick, with painted stone quoins and dressings, etc. The roof is of pantiles, with stone hips and ridge, above a wood cornice.

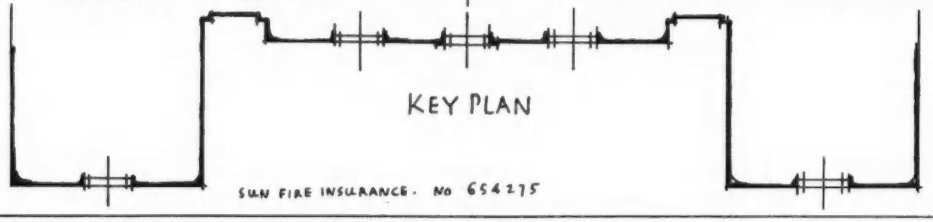
"Handyside" STOKESLEY Yorkshire



PRINCIPAL ELEVATION

Scale for Elevation

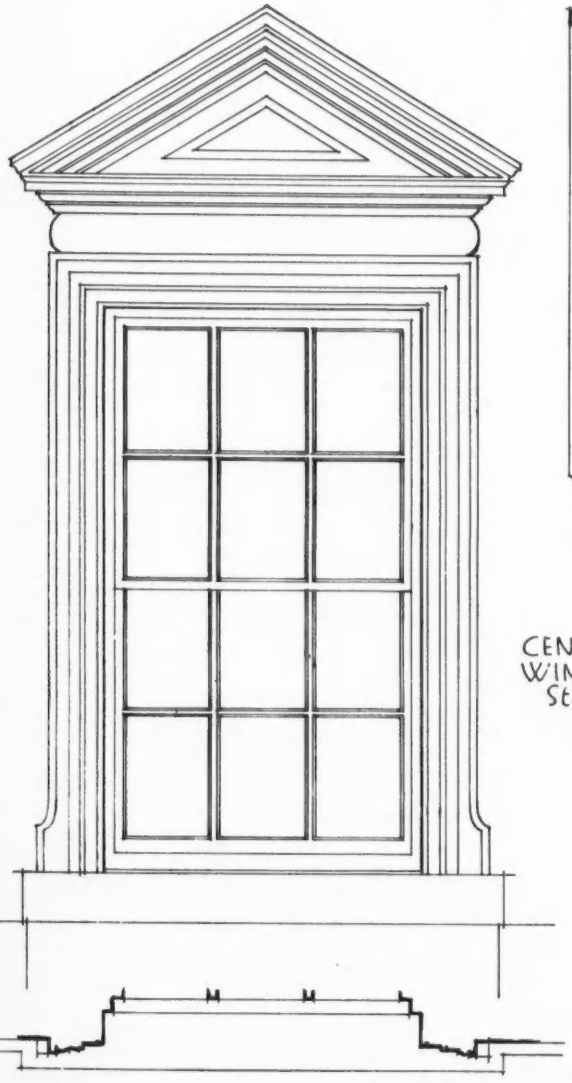
Scale for Key Plan

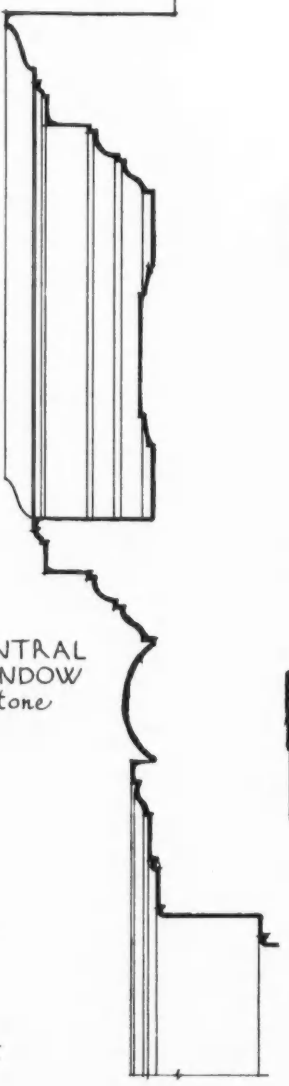


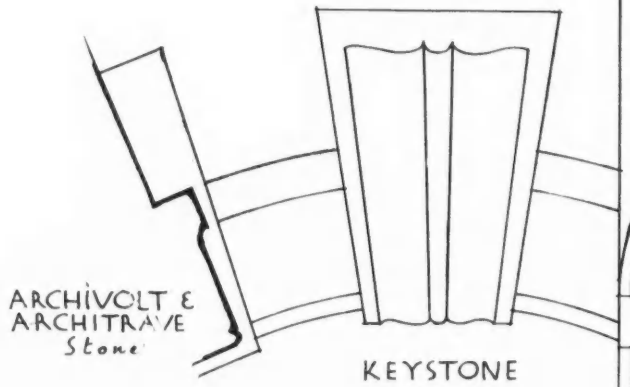
SUN FIRE INSURANCE. No 654275

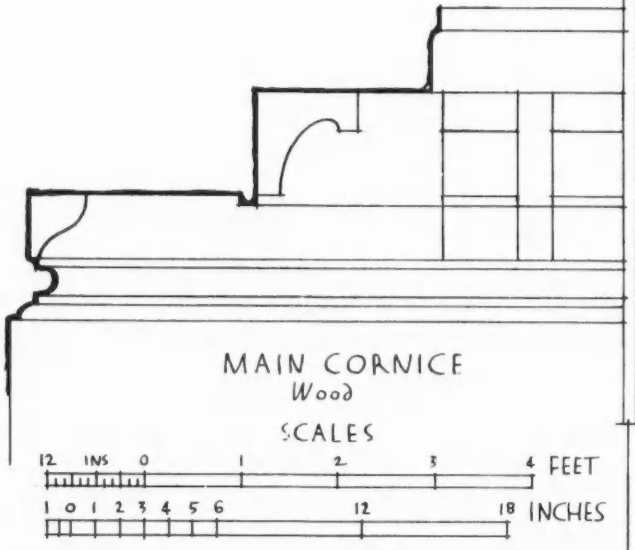
MEASURED AND DRAWN BY
PHILIP EVANS PALMER A.R.I.B.A

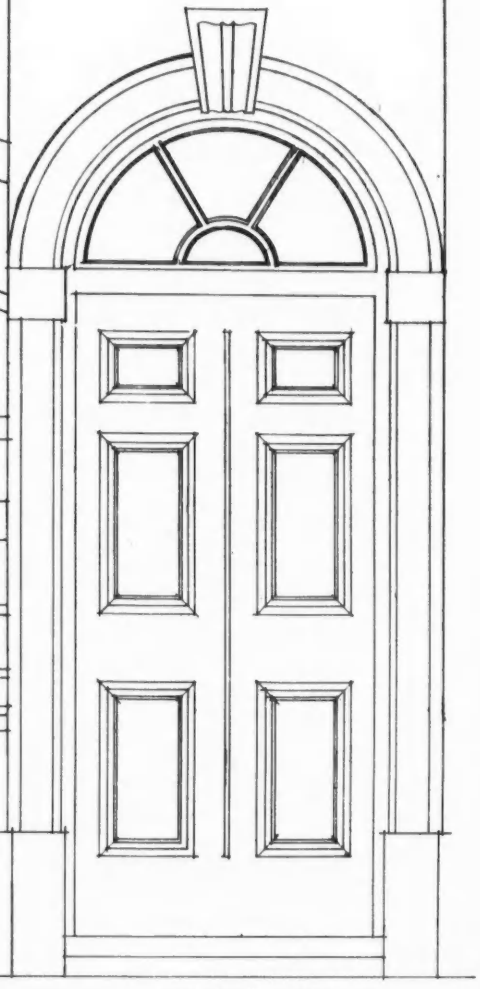
'Handyside' STOKESLEY Details

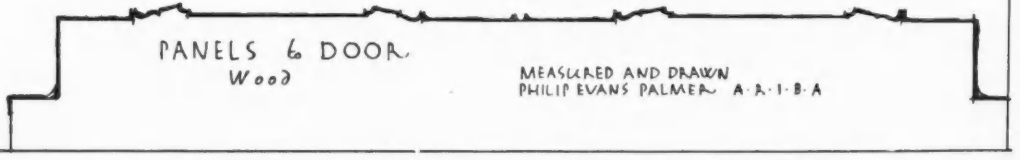












MEASURED AND DRAWN
PHILIP EVANS PALMER A.R.I.B.A

SELECTED PRECEDENTS:

CAST IRON AND ITS FUTURE: i



LAMP STANDARDS BY GEORG A. NILSSON



FUNERAL MONUMENT BY DAVID WRETLING

NOT till they were confronted with the admirable work of the Näfvequarn foundry in Sweden did the architects of this country begin to wonder why "cast-iron" should have become a word of opprobrium.

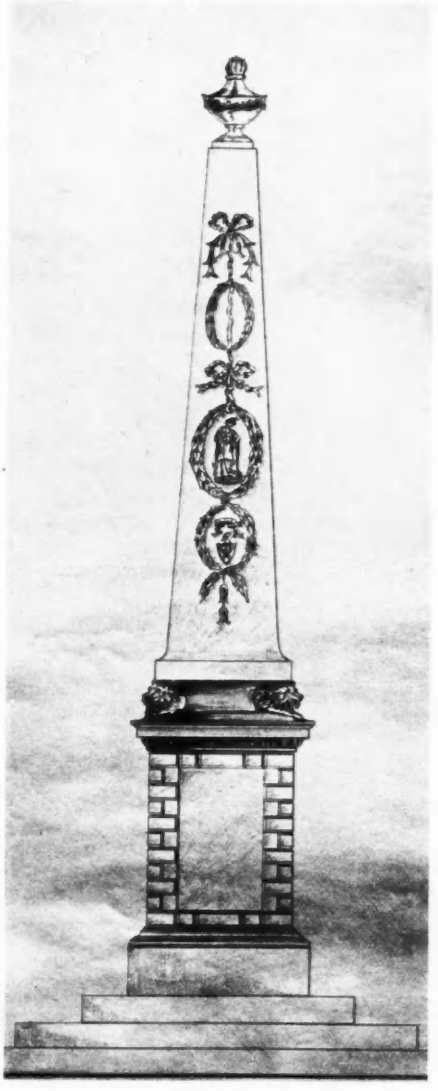
There was a time when it must have evoked the pleasantest associations. Before the introduction of steel its structural uses were many; some of them have recently been described and illustrated in these pages.

Closely allied to this was the monumental use of cast-iron, which now survives only in lamp standards and electric tramway masts, presumably designed by superannuated lamplighters and disabled depot-men. There is no record of cast-iron civic furniture having been designed by Sir Edwin Lutyens, Sir Giles Gilbert Scott, or any other of our best-known architects. Here, however, are two Swedish examples. The funeral monument on the right is the work of the sculptor David Wretling, and the lamp standards are by the architect Georg A. Nilsson. They are 15 ft. in height.

Overleaf is the cast-iron memorial to James Bruce, the Abyssinian traveller (died 1794), designed by Haworth for Larbert churchyard, and cast by the Carron Company.

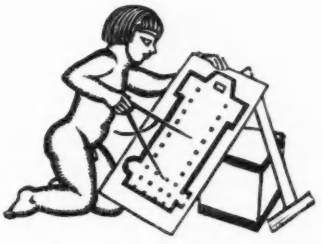
C. B.





PHOTOGRAPH AND DRAWING OF JAMES BRUCE MEMORIAL, LARBERT, BY HAWORTH

THE ARCHITECTS' JOURNAL



WEDNESDAY, MARCH 11, 1931

STILL IN THE TUNNEL

THE ARCHITECTS' JOURNAL makes no excuse for returning to a consideration of the long and baffling problem of Charing Cross Bridge by reference to a scheme which is described at length in another part of this issue. On more than one occasion we have tried to express what we took to be the consensus of architectural opinion as to the principles that should underlie our attitude to the bridge, and our opinions were substantially those laid down by the Town Planning Institute and by the R.I.B.A.

The fact that objection to the official and rejected scheme centred round the undesirability of tunnels and viaducts served rather to narrow the issue, and to lead people away from broad principles of town-planning and straightforward development; but in so far as tunnels and viaducts *did* figure and must figure largely in the consideration of the Charing Cross Bridge scheme, we feel public and professional indignation to have been well founded, and for purely practical purposes the issue may well stand as one of tunnels or no tunnels.

Very shortly we shall have the opportunity of comparing the several schemes in plan. For the moment we can only speak upon the information supplied to the press, which tells us that Scheme No. 6, backed by a bare majority of the Committee, is based upon the official rejected scheme, and though it alters the incidence in the plan of tunnels and viaducts, and reduces slightly the area covered by railways, it is to all intents and purposes the old scheme dressed up for another chance at Westminster, still a thing of tunnels and viaducts, a scheme without a future.

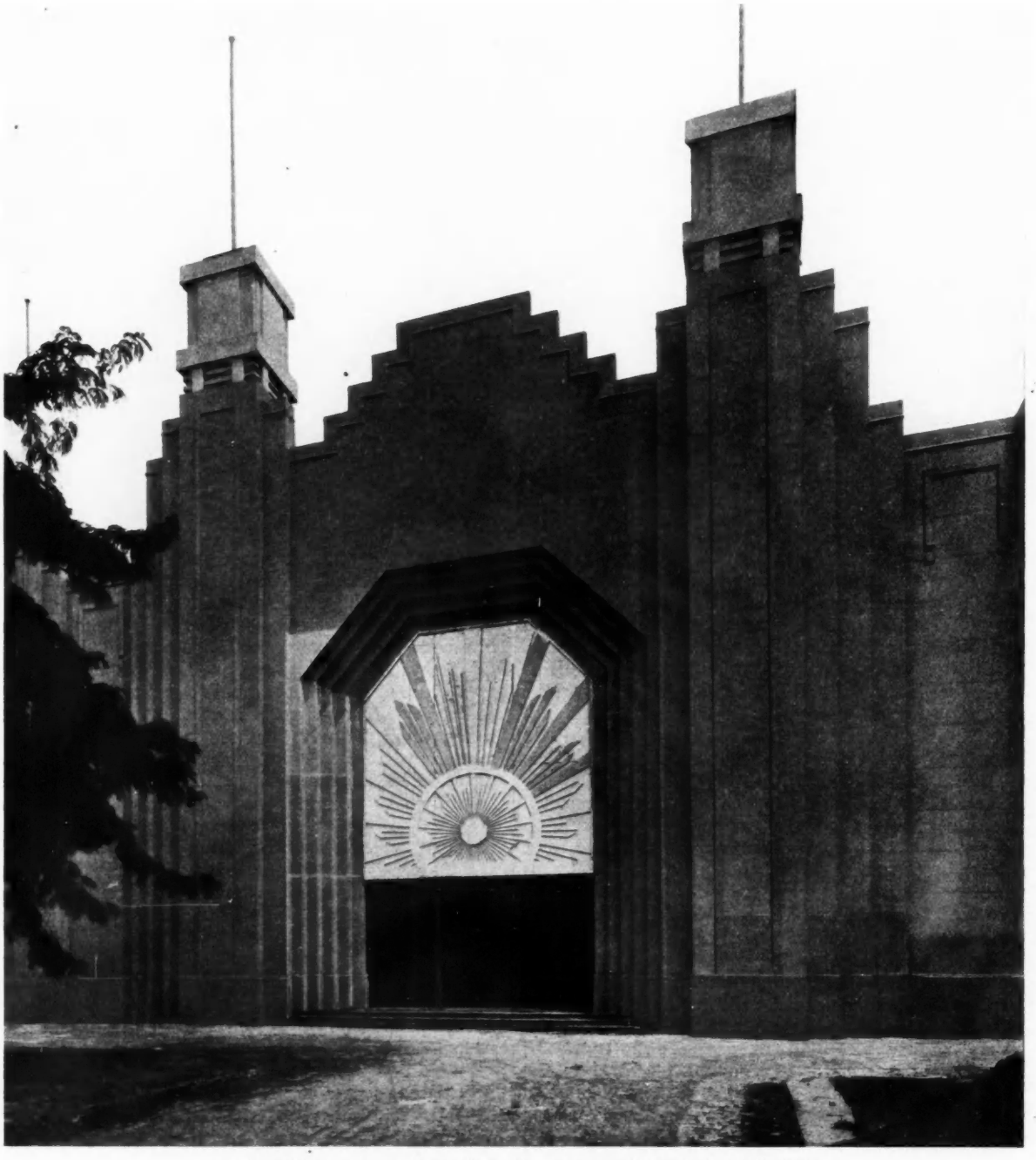
The first thought that arises to one who considers Charing Cross Bridge in relation to London is to wonder how it fits into the plan of London. Here it is at once realized that no plan of Inner London at present exists, although the money spent upon the preparation of the official rejected scheme would have kept experts and assistants for many months producing the plan we need, and gathering data, the absence of which leaves Charing Cross Bridge as a plank into the unknown. It is therefore apparent that town-planning has not entered as a major factor into the design of any scheme. It cannot.

Since town-planning seeks to make economical and proper use of all land, it would regard the development of the south bank as of extreme importance, and would unhesitatingly diagnose the present stagnation of that quarter as arising out of lack of cross-river communications, and the exploitation of the ground level by badly-planned railway viaducts. It would, therefore, in planning to spend millions of public money, regard the provision of new bridges as of equal importance, but no more than that, with the abolition of as much viaduct as possible in order to free the ground for open and free development.

These seem to us to be the only really directing principles that can be applied to this problem. If it is found that they are impossible of fulfilment, then the present scheme of Charing Cross should be abandoned.

But in two schemes at least, the one with Waterloo Junction as a site for a new station, and the other the low-level scheme described in this issue, these principles are adhered to, and in both cases have led to straightforward solutions, which, despite anything that may be brought forward by members of the Committee, we still feel to carry the greatest chances of ultimate success as parts of the town plan of London in general, and of Lambeth in particular.

If the rehash of the official rejected scheme is allowed to be carried out, it will be found that the influence of the engineer and the traffic expert have deprived London of its greatest chance of a fine co-ordinated improvement. This the general public already senses. It is stressed again in the uncertain recommendation of the Committee. We merely underline it.



AT BUENOS AIRES EXHIBITION: THE CANADIAN PAVILION

H.R.H. the Prince of Wales is due to open, on Saturday next, the British Empire Trade Fair at Buenos Aires. A site 25 acres in extent, adjoining Palermo Park, has been utilized, and the eight large buildings erected cover nearly seven acres of this space.

The Canadian pavilion, here illustrated (while still unfinished), has been designed by J. O. Turcotte, Canadian Government Exhibition Commissioner, and was built, of material of Canadian or Empire origin, by a British firm at their works in England, and shipped in sections. It is probably the largest job of its kind so far undertaken.

The framework is of Canadian timber—British Columbian fir and spruce—clothed with wall-board, the supply of which was divided among three well-known firms.

The flooring is of Douglas fir, and a feature of the interior is a transparent frieze surrounding the main hall and illustrating the resources of Canada. The internal colour scheme is French grey and silver, and a bluish tone is given to the light by a velarium of sky blue. Externally, the structure is finished sandstone colour, and, as will be seen, a sunburst is conspicuous above the main entrance doorways.

The building is 300 feet long and 150 feet wide, and the two towers shown are 90 feet high. Within, four large gangways give access to 110 exhibitors' stands.

NEWS & TOPICS

THE REGISTRATION BILL

THE Committee proceedings on the Architects (Registration) Bill are becoming more and more protracted, and last week it was an open question at Westminster whether the Bill would reach the Statute Book this Session. The Admission Committee and its composition have given the opponents of the measure opportunities to hold forth at length on many points of detail, and although the promoters are doing their best to compromise, progress is very slow. It may be that there will be a spurt towards the end, but, at the time of writing, only five of the twenty-one clauses have been dealt with, and the busy period of the Session is fast approaching. The future of the Bill is not too bright.

★

I quite agree with Mr. Wornum's protest against Mr. McShane's reference to the Architectural Association as being " not, strictly speaking, a college or an educational body, but a club consisting of students, and those who frequent it are no more comparable with the universities in respect of getting diplomas, etc. etc." Mr. McShane (in Parliamentary Committee too !) spoke from an abysmal ignorance, not only of the A.A., but of the true nature of education, which does not consist in " getting diplomas," but in enriching the mind by the best methods possible.

★

It seems that this discussion of Registration seems to blind the brain to the truth of architecture, which is still, despite all efforts to popularize it, an art that requires of its practitioners a perpetual studentship. Parliament has been described as a club. Would that its members were still students !

DESIGN AND INDUSTRY

I enjoyed the sequel to that first lively meeting of the D.I.A. that discussed Modernism and Tradition with such gusto. I hardly know which gave most pleasure, the speeches, or Mr. Frank Pick's admirable and witty summing-up of the earlier speeches. Mr. Etchells and Mr. Maxwell Fry carried the discussion on to planes that had little correspondence with the measure under debate, but I did not blame them because, after all, the debate arises not so much from the terrific desire to weld the two things together as to explore the real meaning of the change that has come over architecture by reference to something capable of definition. Things indeed began to look quite serious until Mr. Penty rose to say that he had been a modernist—for five years !—in the nineties ! !

MAXIMS OF A MINISTER

The question of carrying out constructional work by direct labour is bound up with unemployment. I cannot believe that the contracting system is really endangered, any more than I can see the disappearance of us architects from the social fabric. A memorandum from the Ministry of Health concerning the matter would make good reading for any contractor. For instance : " Men who do not do a fair day's work should not continue to be employed " . . . " it is especially important that good foremen should be employed." " The official in chief control must not be exposed to undue interference from the Council." " A very careful estimate of cost should be made . . . and accurate account of the cost should be kept." The observance of such maxims is the basis of all good contracting : their disregard by Councils and their officials is the chief danger of the direct-labour system—that and the familiar atmosphere of time-to-spare that sooner or later invades the office of the salaried official.

A LEAD FROM THE LONDON SOCIETY

There are those who think that the London Society, in embarking upon a plan for Inner London, are letting themselves in for more than they can carry through, but I don't think that view can stand before the grim necessity for a plan of some sort, if not from the Government, or L.C.C., then from the London Society. Their attempt to make a plan is not, after all, very foolhardy. Kingsway was a project that was simple and straightforward, and by no means beyond the vision of any careful student of London. Over the plan of the old streets it must have looked frightfully grandiose and impossible, and it *did* cost a lot. But it was worth it. Why should not the London Society look even more closely and comprehensively at the plan of London, and producing a plan, even though it be subject to criticism, shame the authorities into the job they shirk?

ALEXANDRA PALACE : AN OPPORTUNITY

They talk of restoring and renovating Alexandra Palace, which is falling to bits visibly. But before it is renovated may we hope that the trustees will stop to consider what it is they seek to renovate, and how they will do it? I have the feeling, each time a new building is proposed or an old one renovated, that the mere fact of building will once again prove sufficient for the owners or trustees, and that the overmastering virtue of the building, its architecture and its decoration, will be taken as a matter of course; and will look it. Here is, one would say, a great opportunity to show how taste has changed and how conscious of our surroundings we have become. Here is an opportunity for frescoes by art students. Here is—oh, opportunity in plenty. But will it be taken? Perhaps it will.

THE NEW BRITISH MARK FOR STEEL

The new national mark for steel—a registered trade mark which steelmakers are licensed to use under certified conditions—suggests, in the plain bluntness of design and wording, a firm confidence in the home product. Its adoption may be regarded as a complementary action on the part of the steelmakers to the use by their principal customers, the structural engineers, of the Union Jack design, which, with its superscription of " British Steel Only," leaves no doubt to the ordinary passer-by of the origin of the material in use in buildings he may see under construction. The steel mark is essentially of a less obtrusive nature and intended for enlightenment of the user as to the origin of the material and as a reminder that the quality conforms to the standard laid down by the British Standard Specification for Structural Steel. Already members so marked have made their appearance at many building sites; it only awaits the time-lapse while existing stocks are exhausted until the scheme becomes of full benefit to the industry.

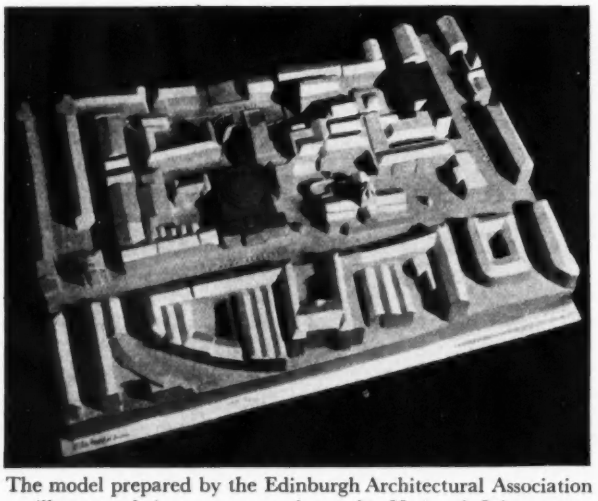
DUAL LIFTS IN TALL BUILDINGS

Extremely tall buildings present problems of their own. For example, on the purely engineering side, wind-pressure dictates design as a steel cage, free to sway in the wind—a motion that may take several seconds. More involved is the economo-engineering restriction arising from the fact that the many lifts hitherto required to serve a multitude of stories have curtailed space to an unprofitable degree.

To run two lift-cars in the same shaft would obviously minimize this drawback. And it has now been done.

★

An elevator of this new type has been built by the Westinghouse Company and placed in regular service in its main office building at East Pittsburg, Pennsylvania. The upper car of the two is the express car. For a twenty-story building it starts from the street level and, running without stops to floor eleven, serves the floors from that point to the top. It is entirely unrestricted as to its operation, except that it is automatically prevented from running into the lower car. It can, however, be "inched" up or down by hand in case of emergency. As soon as the express car is out of its way, the lower or local car, which has been waiting at a basement level, rises to the street level, and then serves the lower ten floors. It, too, is unrestricted, except that it cannot approach the upper car within a predetermined distance. Car operation is so timed that both cars will normally reach their upper limits of travel at about the same time.



The model prepared by the Edinburgh Architectural Association to illustrate their arguments about the National Library site. The central dark roof shows their proposal; that near the right-hand top corner the official one.

EDINBURGH'S ONSLAUGHT ON GOLIATH (NO. 2)

The Advocates Library controversy is a very sad business, for Edinburgh, and for us. The Edinburgh Architectural Association, in conducting their case for the building of a new national library on an unrestricted site instead of on the cramped site to which the trustees of the Library cling, have shown themselves worthy of their profession. Their judgment appears to be good, their figures and estimates are unassailable, and their presentation of the case is so reasonable and dignified that it is little wonder that they have earned public respect. They have not, as yet, succeeded in moving the trustees from their hole in the corner, but I think they will. I believe that public opinion is not today the amorphous and wayward thing that the evening press might lead one to think. Edinburgh has slain one giant by the exercise of good taste, firmly expressed. It will not be subdued by another.

A MODERN PIECE OF FURNITURE

I went to see a friend of mine the other day who has just built himself a modern house. Modern, not "modern." As modern as Corbusier with a roof on can be. As old as Vitruvius in that it has "commodity, firmness and delight." He wanted a desk for his study—possibly the most "modern" room in the house. He is a man who studies form and watches the products of the D.I.A. stable and knows his Mallet-Stevens and Chermayeff. But he is an *homme d'affaires* and wanted a desk in which he can keep his files and papers, and at which he can do a "spot of work" pleasantly. And none of these glass-topped skeletons seemed to fit his case. The alternative seemed to be an ordinary straightforward prosaic metal office desk.

★

He went to one of the recognized makers, the Roneo people, to be exact. Thoroughly efficient workable desks the salesman showed him. Olive-green things with olive-green linoleum tops. Could he not have such a thing in another colour? "Certainly, sir, maroon, or we have a grained mahogany." My friend plunged. "I should like my desk to be a particular pale shade of yellow which I will send you, and is there any reason why the drawer handles, feet and corners should not be chromium-plated?" Well, he got it without any question, in spite of what correspondents have said in the pages of this JOURNAL recently about the British manufacturer. And a very lovely thing it is, too. As "modern" a piece of furniture as you can wish for, and capable of doing a real job.

MARLOW BRIDGE TO STAND

Thank goodness common sense and good taste have prevailed to save Marlow Bridge from destruction. I don't know what excuse was given when a big enough grant for rebuilding was refused the authorities, but that hardly matters if the bridge is saved. It would be too much to expect of a Government department to say out loud and bold that it was a beautiful bridge and should be kept for that reason.

SLAVE-HANDLED TIMBER ?

Russian timber is now on the market, and I have seen the statement that "architects have a blind eye to their responsibility in certifying to it." To do them justice, I do not believe that they employ "sappy" timber in situations where it requires paint or spreads decay. If there are such, they should be warned that dry-rot is a normal consequence of decaying timber, and that architects have been held responsible for this form of fungoid growth. One legitimate use for cheap timber is to employ it for outhouses, at a distance from the main building, where there is neither paint nor plaster to prevent the weather from doing its useful work of aeration. The unsightliness of "sappy" wood makes people yearn for a decent covering, but creosote, or one of the preservative washes, is the best method of prolonging the life of cheap wood. Timber of indifferent quality used in this way not only lasts well, but grows better with age.

HOME-GROWN TIMBER

As to the use of native woods, that it is cheaper to use home-grown timber at the present time is rather doubtful. Given a large quantity of trees, one might make the wood-cutting and the seasoning pay; with a small quantity it certainly would not. Architects have tried with a few trees, and have been vastly disappointed with the result. The local timber was seldom big enough nor straight enough for the district surveyor to pass. Oak, chestnut, and elm have to be seasoned at least as thoroughly as Russian pine, and unless they are treated in a mediæval manner, with every beam standing free, they are as liable to get dry-rot as foreign timber. ASTRAGAL

MARTINS BANK,

Lombard Street, E.C.

DESIGNED BY SIR HERBERT BAKER

SALLYING forth into the streets, amid the dancing lights and shadows of this populous financial quarter, one cannot fail to experience at the sight of the new headquarters of Martins Bank that affinity of mental excitement which quiet observation can afford: to be enamoured, not only by the sympathetic manner in which Sir Herbert Baker, A.R.A., has preserved the traditions of the famous Grasshopper, but by meditating upon the history of what may well be the oldest banking house in the City of London.

Tradition tells that Sir Thomas Gresham, a mercer, who founded the Royal Exchange on the north side of Cornhill, carried on a banking business on the site as early as 1563, and from him is derived the sign of the Grasshopper. Sir Richard Martin, who was Lord Mayor of London in 1588 and Master of the Mint from 1572 until his death in 1617, had, without doubt, frequent transactions with Gresham; and thus began the association of the Martin family with the Grasshopper which has continued to the present day.

Owing to the destruction of title deeds in the Great Fire of London and the loss of the remaining early records of the Bank, in 1825, in the fire in the Royal Exchange, it is difficult to trace the occupation of the Grasshopper during the first half of the seventeenth century. It is, however, known that subsequent occupants were Edward Backwell, a prominent goldsmith, from 1662 to 1672; and Charles Duncombe and Richard Kent in 1677, about which time the goldsmiths were beginning to do a regular banking business as we know it. In 1686, Richard Smyth became a partner; so, about 1699, did Andrew Stone. About this time, also, Thomas Martin was engaged as clerk and later became a partner. The present chairman of the London board is a representative of the sixth generation of the family whose name is preserved in the title.

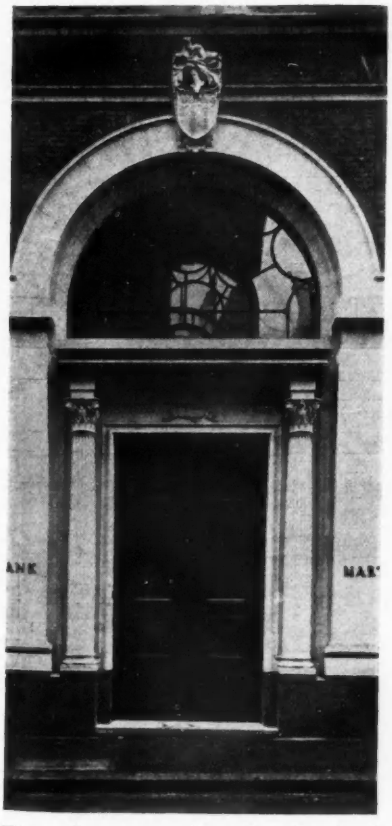
Memories of these old associations are incorporated in the new building. On the main front are carved the head of a Lombard, or Italian merchant, typifying the chief financial rivalry with the Jews in the fourteenth century, and the coats of arms of the families of Gresham and Martin.

Externally the building is of 2-in. Daneshill bricks with Portland stone dressings and a granite plinth. The lower windows are bronze; the upper, double sashed, are of teak.

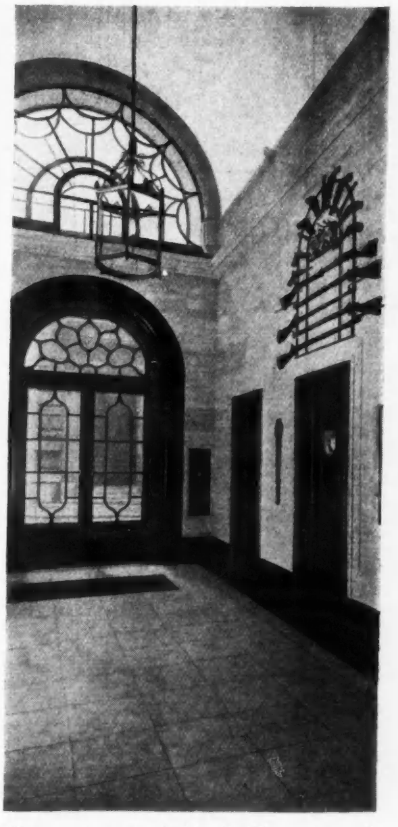
In fancy the ghosts of buried centuries seem to glide to and fro around the site: of Pepys complaining of the transactions of the "Goldsmiths shops" of speculators in the South Sea bubble; and of Thomas Garraway, who is said to have established here the first tea-house in London.



At the sign of the Grasshopper. The main façade. Tradition has it that on this site banking has been carried on since 1563.

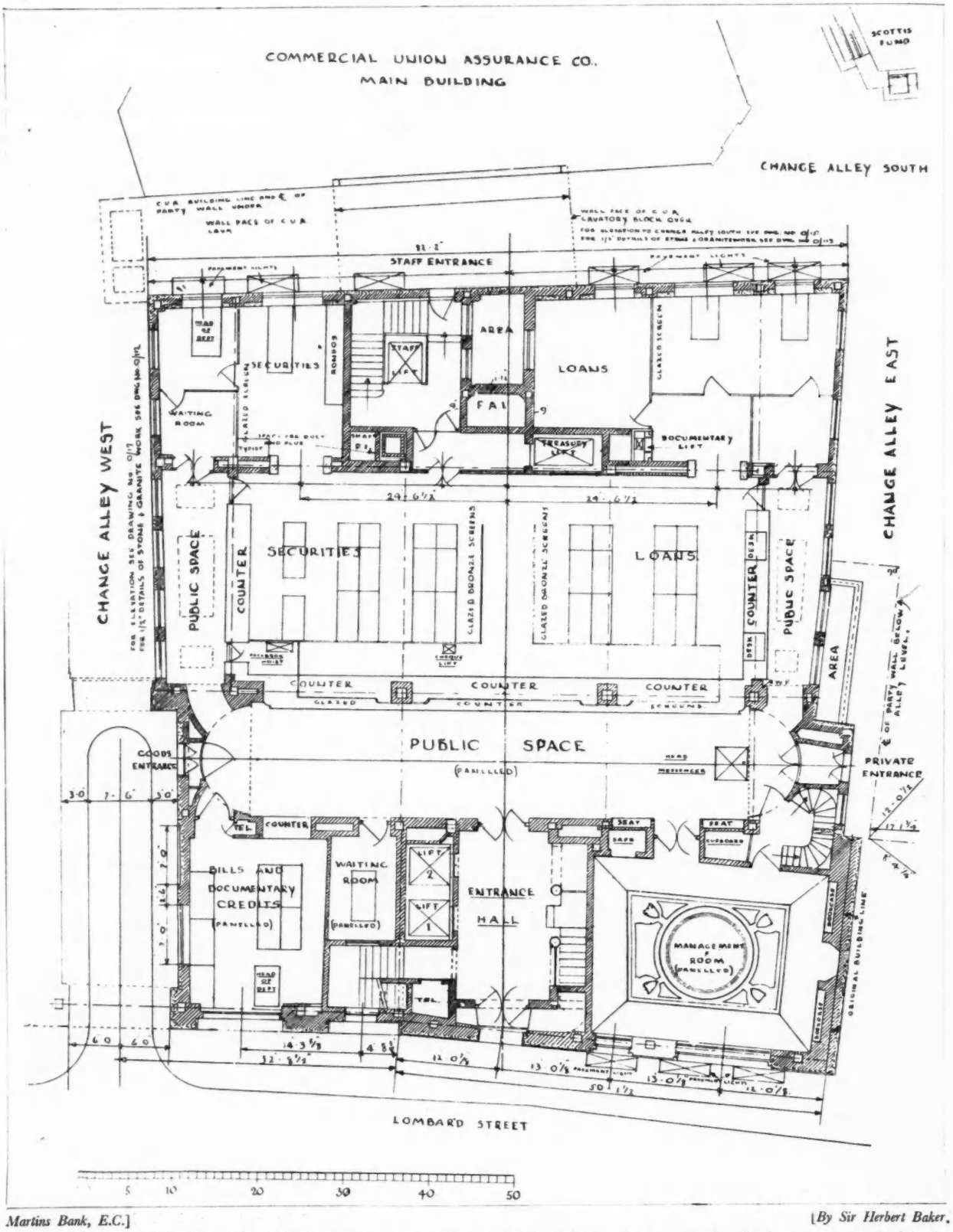


The main entrance doors from Lombard Street are of bronze and of the sliding type. The surround to the entrance is of Roman stone.



The entrance hall, looking towards Lombard Street. On the walls are the firearms kept in the eighteenth century to protect the bank.

C



Martins Bank, E.C.] [*By Sir Herbert Baker.*

Ground-floor plan. The sites of the following taverns, etc., added to the Bank during the past two hundred years, are marked in the banking hall (see page 377) : the Grasshopper, Exchange Tavern, the Crown, Garraways, the Unicorn, the White Horse, Baker's Chop House, and the Three Crossed Daggers. Around the public hall also are the coats of arms of the undermentioned Trading and Livery Companies with whom the occupants of the old buildings transacted business : Goldsmith Co., Muscovy, Virginia, East India, Merchant Adventurers, South Sea Co., Levant, Newfoundland, Royal Africa and Eastland.



In the entrance hall is the memorial erected in memory of the members of the staff who lost their lives in the Great War. This has been refixed from the old building. Another view in the entrance hall appears on page 373.

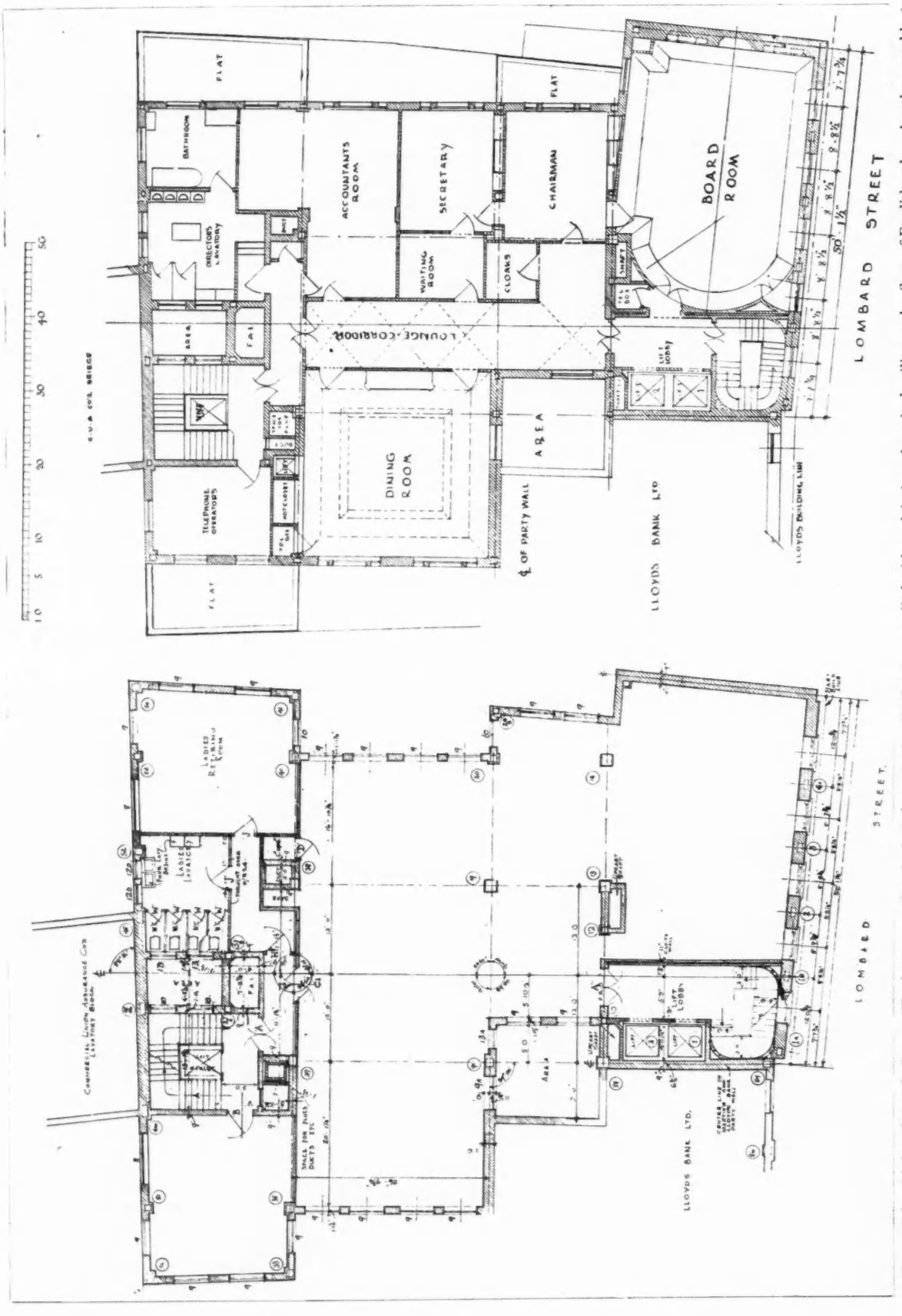
Martins Bank, E.C.] [*By Sir Herbert Baker.*



Looking up the staircase from the basement into the entrance hall. On the right-hand wall is the war memorial of the Bank, which is also shown in the accompanying left-hand illustration.

On the ceiling of the management room, or parlour, are the coats-of-arms of Stone and Martin and Gresham and Backwell, who conducted the Bank in the very place where the managing directors sit together today.

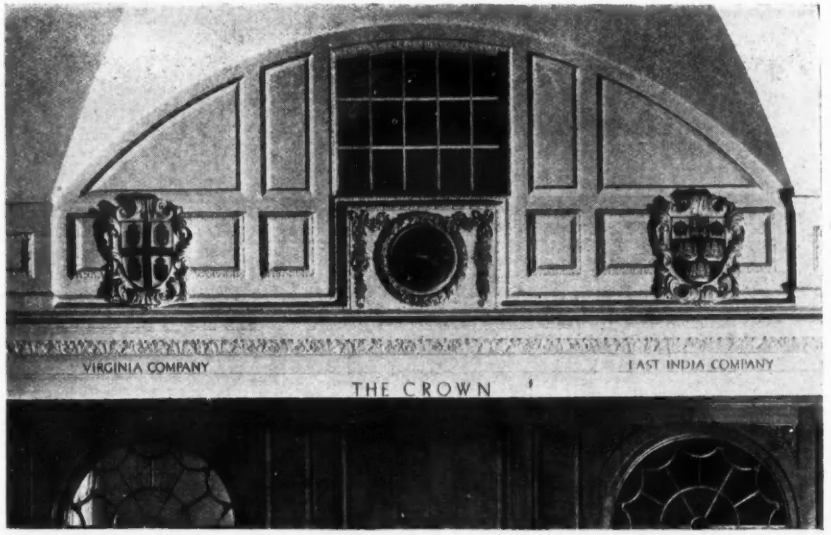




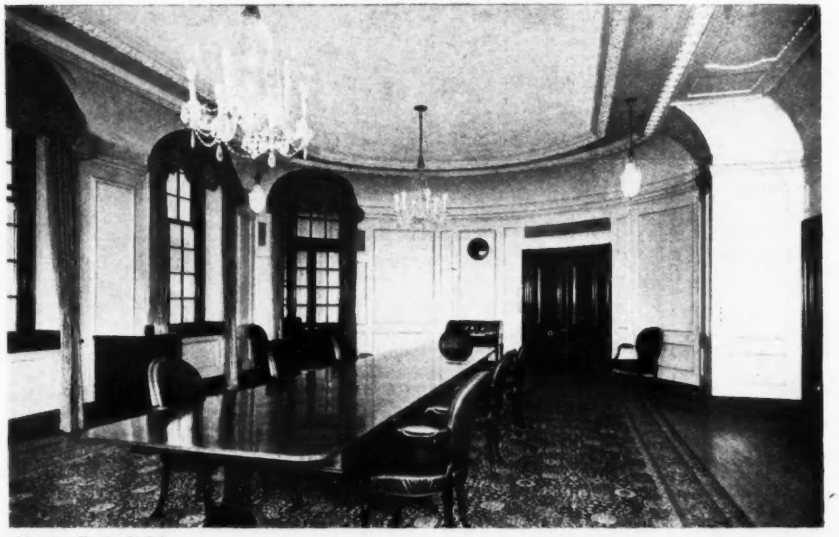
Plans of the third and fourth floors. The latter contains the board room, the directors' dining-room and the offices of the chairman and secretary. The dining room is treated in similar materials to the board room (see facing page), and the lounge corridor is plastered panelled with a plain barrel-vaulted ceiling and a floor of English oak. Another notable feature is the entrance hall on the ground floor. This has walls of Ancaster weatherbed stone with Derbyshire black architraves and skirting, and a floor of Roman stone paving.



In the banking hall the panelling and counter front are in English oak. There are a cast bronze glazed screen; and bronze grilles to the counters. The flooring of the public space is of cork composition, laid to a pattern.



On the cornice round the banking hall are the names of the old taverns and other buildings which formerly occupied the site. The frieze above contains the coats-of-arms of Trading and Livery Companies.



Martins Bank, E.C.]

The board room on the fourth floor is panelled in plaster, and has a modelled plaster ceiling. The floor is of English oak, the doors of teak. Rebuilt in this room is an old fireplace, one of the many treasures of the Bank.



[*By Sir Herbert Baker.*

The general offices afford every convenience for the efficient transaction of business by the clerks. Each department is provided with good natural lighting and ventilation, and imbued in decorative treatment with an atmosphere of cheerfulness.

NEW COUNCIL OFFICES AT BOGNOR REGIS, SUSSEX

DESIGNED BY C. COWLES-VOYSEY



The main façade, facing to the junction of Clarence Road and Belmont Street. The elevations are faced with 2-in. silver-grey bricks, with a wide struck joint, and quoins and window arches of a darker grey than the general walling. The plinth, cornice and dressings are of artificial stone. The roof is covered with dark red Italian tiles; the dome of the turret in copper. The windows are double-hung sashes, painted white. The forecourt is paved and turfed.

NEW COUNCIL OFFICES AT BOGNOR REGIS, SUSSEX

DESIGNED BY
C. COWLES-VOYSEY



The panelling in the council chamber is of Austrian oak, treated to produce a grey-brown colour. The furniture is of the same material, upholstered in cherry-red leather. The carpet is red.

THE new offices of the Bognor Regis Urban District Council stand on a site at the junction of Clarence Road and Belmont Street, two thoroughfares, just behind the sea front, of equal width and importance. In planning the building the principal entrance has been placed on the main axis, which bisects the angle made by these two roads. A corner treatment of the site appeared to be the most obvious and logical course to adopt as, in addition to other advantages, it enabled the architect to design the building so that the land on either side could be reserved for future development to meet the growing needs of the Urban District Council. Subsidiary public entrances are provided at each end of the building. In front of the principal façade is a forecourt, laid out in a simple and formal manner with turf and stone curbs.



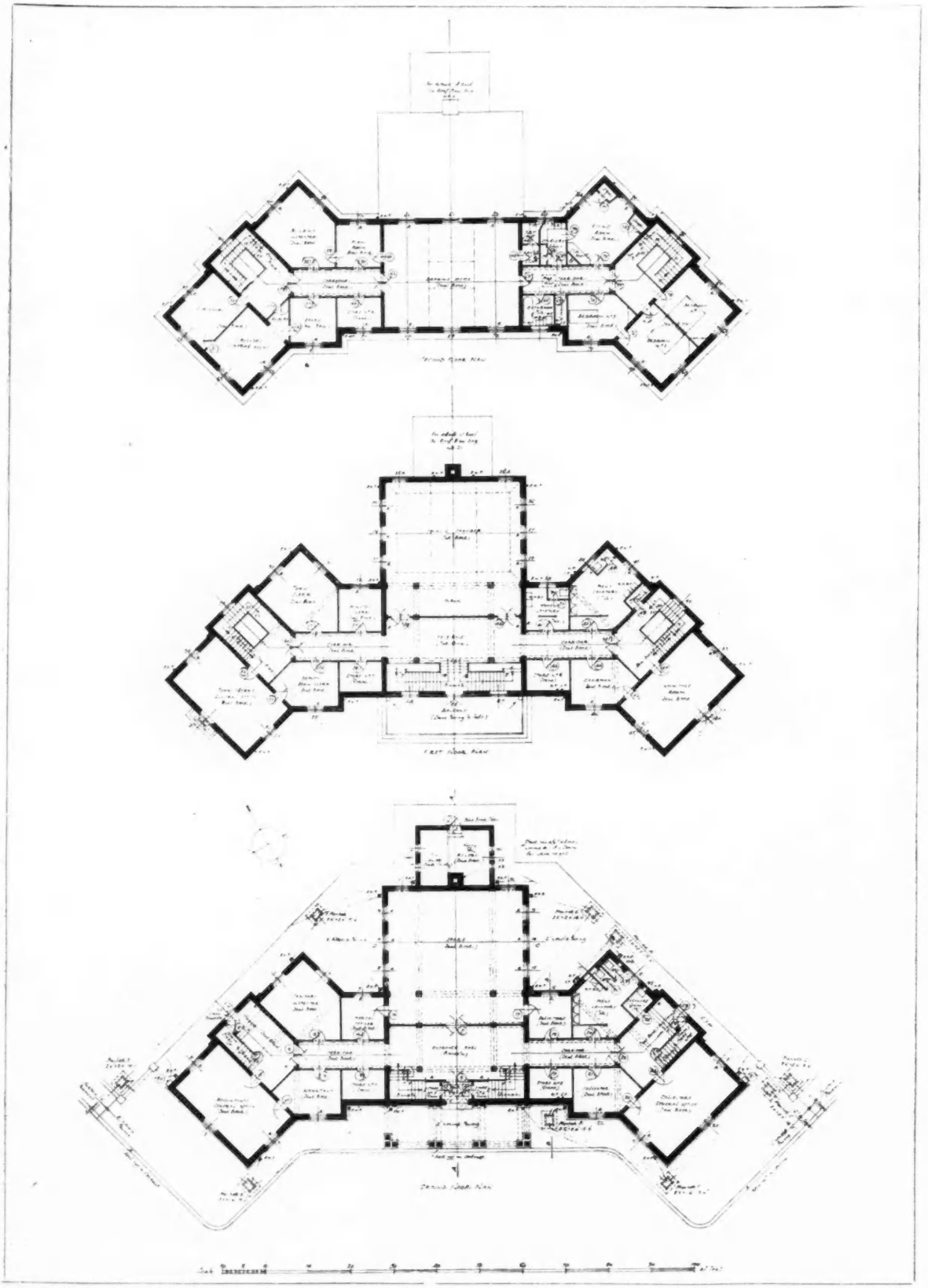
The entrance hall. On the right, between the two pillars and beneath the staircase, are the main entrance doors. The doors beyond the staircase lead to one of the municipal departments and are balanced by a pair of similar design at the opposite end of the hall.

The building is three stories high. On the ground floor are the departments of the accountant, collector and water engineer; on the first floor the Council chamber, committee-room, members' rooms and the offices of the clerk to the Council, and on the second floor are the surveyor, who has a large drawing office, the medical officer of health and a resident caretaker. A staircase at either end serves the whole building, while a main stair in the centre gives approach to the Council suite.

Fire-resisting construction has been employed throughout, the floors, staircases and flat roofs being in reinforced concrete. The floors of the lavatories are covered with red quarry tiles, those of the entrance hall and staircases with terrazzo of a Hopton Wood colour, and the remainder with oak blocks. Joinery generally is deal, painted a light buff. The walls of the staircases and corridors are of terrazzo and those of the offices are in distempered plaster.

In the Council chamber the acoustics have received careful attention. The ceiling is flat, with a large coved cornice; and all plastered surfaces are in acoustic plaster, finished to a Bath stone colour and texture.

Heating is by low-pressure hot water through the medium of radiators. A mechanical extract system of ventilation is employed in the Council chamber. A system of inter-communicating telephones has been installed, and also electric synchronized clocks.



Council Offices, Bognor Regis, Sussex.] [*By C. Cowles-Voysey.*

Ground-, first- and second-floor plans. In the entrance hall is the main staircase leading up to the Council suite. At either end of the building is a staircase serving the municipal departments.

LETTERS FROM READERS

Charing Cross Bridge

SIR,—Among the many proposals that have been put forward for the new bridge at Charing Cross, I have not heard of any suggestion of what appears to me to be the only real solution to the problem, and that is the formation of a subway under the river. From the point of view of traffic, a subway would prove to be far more efficient, as it would pass under the Strand and so avoid the congestion of traffic which must be caused there if the approach to the bridge is on the same level.

The subway could be wide enough to take three or four lines of traffic in each direction, and could include, in addition to footways, a light railway for the use of passengers to and from the Southern Railway terminus. It would be well lit and ventilated and perhaps lined with display windows, the rents from which would go towards paying for the upkeep of the subway.

As the central parts of London become more and more congested, traffic will be compelled more to go underground. The Underground Railway Company have shown us at Piccadilly Circus how attractive an underground station can be. Surely a Thames subway could be just as pleasant.

When the much-despised railway bridge is removed, this fine sweep of the river should be left unspanned between Westminster and Waterloo Bridges. Here is the best waterfront that London possesses. A bridge of any sort at Charing Cross is bound to mar the magnificence of this stretch of river.

If the proposal for a subway has not been contemplated, it surely deserves fair consideration with the other schemes. B. W. R. THOMAS

The Architecture of Steel

SIR,—I am surprised to read in the correspondence on this subject that there should be any other feeling but that of absolute confidence on the part of architects in members of the steel trade. There are good and bad in all businesses and professions, and one cannot expect the steel trade to be any exception, but personally I have always found them most helpful and efficient in every way, whether working under the consulting engineer or direct with the architect. FRANCIS JONES

SIR,—As far as this part of the country (Cardiff—ED., A.J.) is concerned, the relationship which exists between the architectural profession and the steel structural trade is most satisfactory.

We have always found structural steel firms most helpful and willing to go to any amount of trouble to assist us in the correlation of the steel framework to the building, so much so, in fact, that I can safely say that in this part of the country we have found the services given by the structural steel firms to our profession of such a nature that it is almost an unknown thing to employ consulting engineers for steelwork. PERCY THOMAS

SIR,—In a recent article in the JOURNAL on "The Architecture of Steel," comment was made on certain indications of a change in the relations between architects and the steel industry. A variety of opinions have since been expressed, according to individual experience, as to the degree of co-operation which has existed in the past, but the general consensus of opinion is that, whatever the past, the industry is indeed rendering service to its customers and safeguarding their interests in every way.

One such item of service which the industry has recently arranged to carry out is the provision of a national mark by which buyers of structural steel can identify steel of British origin. The mark (illustrated on page 396) is embossed at regular intervals on the steel, and by this means is removed the uncertainty of origin and quality which frequently accompanied the supply of material from sources other than the mills themselves.

The adoption of the mark is more than an act of service: it is a gesture of confidence in the quality of material manufactured, and an appeal to buyers to support home industry. The mark will have a national significance; the material so marked will be certified to have been forged, rolled or cast in the United Kingdom, of which not more than 30 per cent. of the value at the works is attributable to foreign materials, and which has been forged or rolled from steel ingots manufactured in the United Kingdom. This 30 per cent. proviso is essential, as certain of the raw materials are not procurable in this country. Steel, thus marked, therefore, will denote British Manufacture to British Standard Specification and, from the quality standpoint, second to none.

The necessity for steel to be of a high standard quality is becoming increasingly recognized by architects and engineers, and is now justifying the judgment of the steelmakers in this country who have equipped their works to manufacture steel by the more accurate open-hearth process. The bulk of foreign steel imported into the country is manufactured by the basic Bessemer process, which lacks the degree of control achieved by the methods adopted by British manufacturers. Moreover, the bulk of the material imported has a tensile range of only 24–28 tons per sq. in. against the British standard of 28–32 tons per sq. in. Basic Bessemer steel does not comply with the requirements of the British Standard Specification for bridges or general building construction, and its use is therefore limited. Much of it is, however, used in ignorance of its qualities, and not a little under the misapprehension that it is British material. British manufacturers, therefore, have laid upon themselves the obligation to mark their own manufactures with a registered trade mark, making the identification of British steel a matter of simple observation in place of experienced judgment, and thus regulating a situation which for some time has demanded attention and which will be appreciated at large by all responsible users.

Your article, "The Architecture of Steel," conveyed the general impression that the architectural profession and the steel industry were inclined to indulge in what Oliver Wendell Holmes described as "Mutual Undervaluation"—although this was by no means substantiated by the subsequent correspondence—but this particular service of the "British Mark," and the co-operation of the industry proffered through the ægis of the British Steelwork Association, sets new standards for the future which it is hoped the architect and his engineering colleague will heartily reciprocate. C. J. KAVANAGH
(BRITISH STEELWORK ASSOCIATION)

Unresolved Duality

SIR,—Mr. Trystan Edwards tells us that two funnels to a steamship give an instance of "unresolved duality which is an impossibility in organic nature and an abomination when it occurs in art." This is surely a perfect example of an attempt to force Nature into a framework of our own making. How are two funnels to a steamer different from two breasts or two legs to a human being? Mr. Edwards may say that the breasts and legs are resolved in the trunk of the body; if so, then the funnels are resolved in the body of the steamer. He goes on to say that, with four funnels, "the three intervals between them form a unity"; why, then, does not the one interval between two funnels form a unity?

If we look at Nature, having already made up our minds that she avoids unresolved duality, we can explain away every duality by saying that it is resolved. We can explain the double-lobed leaf of the gingko tree because the two halves are connected to a stem. If they were not, the leaf would

fall under the influence of gravity. It reminds one of the boy who explained that the stork stood on one leg because, if it lifted that up, it would fall. Seeds frequently send up double stems, and if a cordyline be cut to the ground by frost, it will often send up, not one, but a pair of new stems, connected out of sight in the roots. If two seeds fall adjacent, two plants will come up. We can hardly have it both ways and claim that the double tree is a duality resolved in the roots, but that the two trees are not a duality because they have two roots!

Proctor, the astronomer, said that if one were convinced that the result of the University boat-race depended upon the sunspot cycle, it was perfectly easy to prove it.

Indeed, one can show that Nature prefers duality and instance the double stars, positive and negative electricity, the two poles, the two arms, eyes, ears, of animals, the male and female. It is, of course, quite easy to show that Nature prefers—or abominates—units, or threes.

MANNING ROBERTSON

Unethical Practices

SIR,—Talking recently with an architect, I found him very keen on using British steel for all the reinforcement bars in ferro-concrete contracts under his control. He was not only desirous of using British steel because of a patriotic feeling, but he was also thoroughly *au fait* with the known shortcomings of the cheap foreign bars, usually of steel, made by a process which is definitely "barred" from very many important engineering and other specifications.

So intense was his feeling on the subject, that I had scarcely the heart to point out to him that he was at that moment using on one of his important ferro-concrete contracts large quantities of a steel which was certainly of Continental origin!

When at last I had convinced him of the matter, he was highly enraged (being a man of decided and outspoken views), and declared his immediate intention of taking it up with the supplier, as his specification had clearly mentioned "bars of British manufacture." I was able to show him that he had by no means made his requirements watertight, and that very many suppliers had no scruple in offering as "of British manufacture" ferro-concrete bar which was only "of British manufacture" as far as the final rolling process was concerned, the steel actually being made on the Continent, rolled into billets there, and imported in the billet form. It is obvious that such steel has neither the excellent quality of British steel, nor does it give employment to British labour in anything but a minor degree.

Architects who want British ferro-concrete bar, with its higher tests and dependable qualities, should make perfectly certain that the material supplied against their specification is not just "of British manufacture" or "British rolled," but is actually steel "wholly made, melted and rolled in Britain."

I have before me as I write a collection of stock lists, circulars, etc., from various quarters offering undoubted Continental material under the guise of "British."

It is not ethical that architects and contractors who conscientiously specify "British," and believe that they are getting wholly British material, should be fobbed off in this way with Continental steel.

The evil does not exist to the same degree with engineering and other firms, whose chemists are able to detect and reject the imposition; architects and contractors for building purposes who are rarely in a position to test each batch of material received, are by that degree the easier victims.

The remedy is in their own hands—will not architects and contractors look to their specifications, and amend them to prevent such unethical practices?

F. ROWLINSON

Architecture versus *Engineering*

SIR,—I was much interested in Mr. Penty's articles. The distinction he makes between architecture and engineering is, I think, important, and should be of service in preventing the absorption of architecture by engineering. But I do not think he has been very fortunate in the choice of his illustrations. I wonder how ever he came to recommend the new railway station at Lens as an example of good proportion and imaginative design, and the fountain at Rome as a piece of architecture, when it is simply an amorphous mass of sculpture, entirely destitute of any architectural form. I should have expected Mr. Penty to have been more discriminating.

W. K. STRENSALL

[Mr. Penty was not responsible for the illustrations.—ED., A.J.]

SIR,—It is interesting to see the photographs of Sir Edwin Cooper's Baggage Hall at Tilbury Docks in your last issue.

It is still more interesting to note the four metal hoops at the base of each column fixed, obviously, to protect the mouldings of the base from damage by trolleys.

Do not these hoops tend to show that the use of classical forms in a building of this type is therefore unjustifiable?

If a craftsman model a teapot which in form is the very essence of beauty, but in which he has omitted to make provision for a spout through which the tea may be poured, can it be said with truth that it is a beautiful teapot?

G. BRIAN HERBERT

Bills of Quantities

SIR,—A short time ago a discussion took place at which a contractor stated that the predicament we found ourselves in today was due to the fact of having objected to the preparation of quantities on Mr. Sumner Smith's system. The points I mentioned I thought fairly represented the trend of the discussion, but I gather from Mr. Sumner Smith's letter in your issue for February 25 that he adhered to the "Standard Method" as being the method agreed to by all parties.

Though it may be an agreed method, it certainly has not been adopted generally, for quantities are as badly prepared as they were before its introduction. These quantities bear as much relation to the "Standard Method" as the English language does to the French language.

Mr. J. R. Taylor, in the same issue, referring to Mr. Edwin Gunn's suggestions and my comments, proceeded to give illustrations in support of the objection to quantities prepared other than by the ordinary form. But the arguments he advanced in support are the very arguments against the ordinary form; for does it not mean that the contractor has again to take out quantities before ordering his materials?

Even in estimating, why should the contractor and not the building-owner have to take the risk as to the quantities of materials by weight, on account of the wide variations in specific gravity of the constituents of concrete? If quantity surveyors will not give us these particulars, the time may not be far distant when we may say to them, we will not tender on your quantities.

Mr. J. R. Taylor says that quantities did not assume their present form by accident; neither did wooden sailing ships attain perfection by accident, but they were, nevertheless, superseded by iron steamships.

LYNN C. DOYLE

Science and Technology

The second international congress of the History of Science and Technology will take place in London from Monday, June 29, to Friday, July 3, 1931, with the Science Museum, South Kensington, as its headquarters. Dr. Charles Singer will be the President.

Further particulars can be obtained from the Honorary Secretary of the Congress, H. W. Dickinson, The Science Museum, South Kensington, London, S.W.7.

THE ARCHITECTS (REGISTRATION) BILL

BY OUR SPECIAL PARLIAMENTARY REPRESENTATIVE

STANDING COMMITTEE "A" of the House of Commons resumed consideration of the Registration Bill on March 3.

Discussion was continued on Clause 5, which sets forth the qualification for those persons entitled to be registered without examination. At the previous sitting, Lt.-Col. Moore had moved to amend the clause so that persons could be so registered, if they possessed one of the following qualifications :

(a) Architect members of the Royal Academy and of the Royal Scottish Academy;

(b) Every person who has gained or gains a degree or diploma in architecture from any university in Great Britain or Northern Ireland or from the Architectural Association (London) or from any other body approved by the Council on the recommendation of the Board of Architectural Education hereinafter mentioned in this Act;

(c) Every person who makes application within five years of the passing of this Act who is or has been in *bona fide* practice as an architect or is qualified to practise as an architect.

It was decided at that sitting to substitute for paragraph (b) the following paragraph :

(b) Every person who has gained or gains in architecture a degree or diploma recognized by the Council as qualifying for registration.

On Tuesday, Mr. Winterton (Labour) moved, in paragraph (c), to leave out the words "five years" and to insert instead the words "six months." He said that he wished to meet the desire of the promoters to give very early effect to this Bill to consolidate the profession. He was rather surprised that the promoters proposed to keep the register open for so long a period. The amendment did not say that no person who did not make application within six months should not therefore be able to get on the register, even though he was in what the promoters called *bona fide* practice.

Lt.-Col. Moore said that the actual machinery would not have been set up within six months. The situation was absurd. They were trying to legislate for all time, and they wanted to ensure that the gate was left open wide enough.

Mr. McShane (Labour) asked why it was that five years were asked for by the R.I.B.A. It was because those five years were the five years during which those students would become eligible without examination at all, and presumably would have to be accepted on the register. It was to deal with that class of people that they moved the amendment.

Mr. Beaumont (Unionist) said that if the period suggested had been two years or eighteen months, he would have supported the amendment, but he thought that six months was too short.

Eventually, Mr. Winterton withdrew his amendment, and moved another to make the period eighteen months. This was negatived by fifteen votes to ten, and Lt.-Col. Moore then accepted a further amendment, which was agreed to, to make the period two years.

Mr. Winterton moved an amendment to leave out from paragraph (c) the words "*bona fide*." He explained that it was very difficult at that stage to decide what was really a *bona fide* architect, or what was *bona fide* practice, and he thought it better that that question should be left to the body which was to be set up under the Bill. They had made provision by a further amendment which would be moved later as to the qualification for coming on the register.

Lt.-Col. Moore said that, ever since registration started, great difficulty had been experienced in arriving at a definition to deal with the qualified professional man who was already practising in any profession.

The amendment was then agreed to.

Lt.-Col. Moore's main amendment, as amended, was agreed to.

Mr. McShane moved to add to the clause the following paragraph :

The Council shall from time to time make regulations prescribing the qualifications necessary for registration of all persons other than those referred to in paragraphs (a) and (b) of this subsection and for testing by examination or otherwise the possession of the Council's prescribed qualifications in respect of all persons other than those referred to in paragraphs (a) and (b) of this subsection, and any person possessing the prescribed qualifications shall, on making application to the Council in the prescribed manner and on payment of the prescribed fee, be entitled to have his name entered in the register.

The amendment was agreed to.

Mr. Winterton moved to leave out subsection (3) of the clause, which reads as follows :

(3) For the purposes of this section there shall be appointed annually an Admission Committee consisting of twenty-four persons, one to be nominated by each of the eleven bodies specified in the Second Schedule to this Act and thirteen persons to be appointed by the Council, of whom ten persons shall be members of the Institute, one person shall be nominated by the Surveyors' Institution, one person shall be nominated by the Royal Incorporation of Architects in Scotland, and one person shall be nominated by the Ulster Society of Architects (Incorporated). The Admission Committee shall continue in existence for such period as may be necessary to deal with questions arising under subsection (2) of this section.

Lt.-Col. Moore, however, resisted the amendment. He said that, by setting up this Statutory Admission Committee within the machinery of the Council, they were protecting those people in more or less frontier professions, like builders, decorators and others, who might be practising or might want to practise as architects, and might wish to get on the register. On that Committee there would be a representative of the Institution of Municipal and County Engineers, the Society of Engineers, and the Institution of Structural Engineers; and there would also be representatives of auctioneers, land property agents, house agents, land agents, and Scottish estate factors. The promoters proposed to move an amendment still further widening the representation, so as to ensure that anyone who wanted to get on the register would have some assurance that his case would be studied by representatives of outside interests, and not merely by purely professional architects. The composition of the Committee was twenty-four members, of whom the R.I.B.A. would have seven. Hence it was useless to say that too much was being given to the R.I.B.A.

In the debate which followed, Mr. William Stewart (Unionist) said he was the only representative of the Institute of Builders on the Standing Committee, and Lt.-Col. Moore, on behalf of the promoters, said if the hon. gentleman wished to have on the Admission Committee representation of the Institute of Builders or the building trade operatives, he (Lt.-Col. Moore) would gladly accept such additions to the Admission Committee.

The amendment was negatived by thirteen votes to eleven, and the Committee then adjourned.

When the Committee resumed discussion on Thursday, a long debate took place on subsection 3 of Clause 5 (see last quotation above).

By eleven votes to ten this subsection was eventually amended so as to read : "For the purposes of this section the Admission Committee shall include one representative of each of the bodies specified in paragraph (a) of the Second Schedule to this Act. The Admission Committee shall continue in existence for such period as may be necessary to deal with questions arising under this section."

The bodies mentioned in the Second Schedule include the R.I.B.A., the Incorporated Association of Architects and Surveyors, the Architectural Association (London), the Association of Architects, Surveyors and Technical Assistants, and the Provincial Associations of the said bodies.

The clause, as amended, was ordered to stand part of the Bill.

Clause 6 (Council to prescribe future qualifications for registration) was under discussion when the Committee adjourned.

VENESTA STAND COMPETITION

Drawings of the Winning Design

EXTRACTS FROM THE ASSESSORS' REPORT

THE competition has proved a most successful one. No less than 175 entries were received. Obviously, competitors had studied the conditions closely and applied themselves to the production of serious designs.

Selection has been difficult owing to the high standard not only of those designs clearly in the running for prizes but of the work of competitors generally.

Almost all competitors showed good appreciation of the requirements for an exhibition stand. The conditions urged the necessity for a convenient and attractive plan. At the same time the "pictorial effect" had to be obtained by simple yet striking means—means which emphasized the uses and design possibilities of the firm's products.

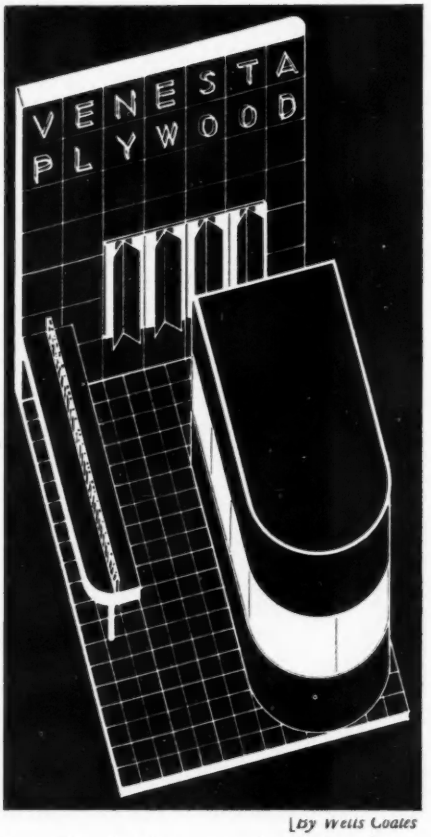
The winning design, under the pseudonym of "Isoplan"—Mr. Wells Coates—fulfils the conditions, though his method of presentation is a little unusual. His plan is remarkably good, ensuring a circulation, allowing samples to be seen and handled, while the office accommodation is well arranged. Many of the designs, though otherwise good, look best when seen from some way off. It was felt that "Isoplan's" design is one that definitely invites the visitor on to the stand.

The four designs selected to receive a prize of £10 each were (in alphabetical order):—

"Bingham" Mr. R. Parkinson.
"Lumber" Mr. E. Wamsley Lewis.
"Max" .. Mr. S. Chermayeff.
"Ply" .. Mr. E. Maxwell Fry.

The jury of assessors suggests that the leading designs should be exhibited, not so much for the benefit of architects as for manufacturers. The quality of stand design is not high in building exhibitions; the advantages of employing a competent designer should be brought home to manufacturers.

(Signed) CHRISTIAN BARMAN
H. DE C. HASTINGS
A. E. RICHARDSON
HENRY RUTHERFORD
W. L. WOOD



[By Wells Coates

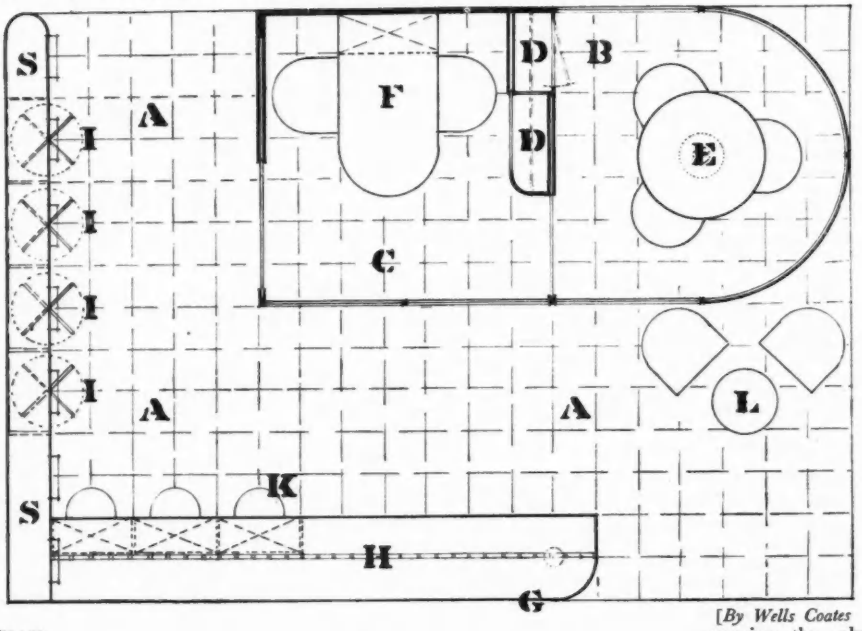
Isometric drawing, reproduced here to a scale of ⅛ in. = 1 ft. The office enclosure is lit by indirect means through circular glazed openings in the ceiling. Concealed trough lights illuminate the revolving displays, and the remainder of the stand is flood-lit from the near-by column of the exhibition building.

GUIDE TO LETTERS ON PLAN

A. Public space, open to the three main rows surrounding the site.
B. Private office with sliding door to—
C. Typist's office, which has a sliding door leading to "A."
D. Two wardrobes, each to take hats and coats of two people, one with a sliding door (typist's side); the other hung with long "piano" hinge.
E. Small table and three chairs, for the chief salesman and his guests.
F. Typist's desk and two chairs, with stationery cupboards below. Further stationeryspace is obtained by another cupboard of same size, fixed to wall 18 in. above table top, leaving the latter clear for telephone, etc. The desk is supported at wall end only, leaving clear leg room.
G. Long counter for leaflets and samples, divided down its centre by "H" (see below).

The counter is in one span, with single steel support at its end. Divisions are provided between top and bottom of counter (on "public space" side) for further leaflets, etc.

H. The letters "VENESTA LTD., VINTRY HOUSE, LONDON, E.C."
I. Revolving displays of plywood and Plymax, with prominent raised block descriptive lettering.
K. Three stools for lesser salesmen.
L. Small pedestal stand and chairs for ladies "accompanying visitors anxious to talk business."
S. Back screen isolating the stand from adjoining site, providing an enclosure for the revolving displays, and carrying the plywood block letters "VENESTA" and "PLYWOOD."



[By Wells Coates

Plan, to a scale of ¼ in. = 1 ft.

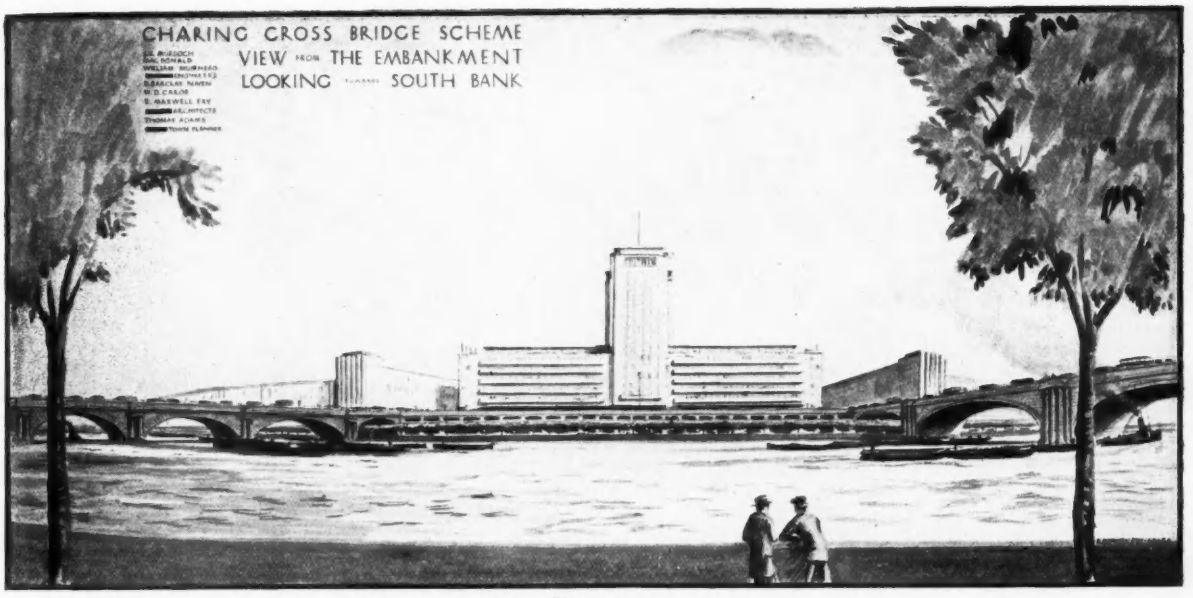


Figure one.

CHARING CROSS BRIDGE

SCHEME NO. 4.—PREPARED BY SIR MURDOCH MACDONALD, WILLIAM MUIRHEAD, *ENGINEERS*; W. D. CARÖE, D. BARCLAY NIVEN, E. MAXWELL FRY, *ARCHITECTS*; THOMAS ADAMS, *TOWN PLANNER*

THE scheme about to be described is one of two, Nos. 3 and 4 in the Committee's Report, submitted by a group of engineers, architects and town planners; the only comprehensive schemes, by other than members of the Committee, remaining after over nine months of deliberation.

Messrs. Niven, Caröe and Muirhead have for long been working on schemes for Charing Cross, having last year produced a fine and workable scheme placing the new station on the site of Waterloo Junction. The addition to their numbers of Sir Murdoch Macdonald, Thomas Adams and Maxwell Fry came about by the natural association of men intent upon a solution of the Charing Cross Bridge problem that should be guided by principles of town planning and wise development, and not have these aims made subsidiary to considerations of present traffic or the demands of vested interests.

At the outset, it was made a principle that any scheme produced by the group should be, in all its parts, open to the sky, and free of obstruction or defacement. Nothing less than this could be subscribed to by any who makes town planning a real profession of faith. This was achieved with success in the first scheme, placing the new station upon the Waterloo Junction site, and it is made possible again in this present proposal, that places the new station on what is known as the Lion Brewery site.

THE SCHEME EXPLAINED

(a) *Conditions*

The ideal condition in which, as in New York and, shortly, in Rome, railways are placed below ground, is unrealizable for South London as a whole, and is impossible in the case of this scheme, if by underground is meant submerged in cutting or tunnel. In any case, the nature of the subsoil in Lambeth makes such operation difficult, if not impossible.

The presence of high-level bridges, however, produces a new condition, since, if the southern approaches are kept at bridge level, it is possible to place railway tracks at present road-level, leading them from their present viaduct level by an easily falling gradient.

The construction of streets at high level is comparable with a similar construction of railway viaducts and station, and indeed, in so far as the development of abutting building sites is concerned, leads to economies of basement construction. The avoidance of all road tunnels is vital to future development, and without hope of development no scheme should be undertaken.

Considerations of traffic are well known, and need not be again stressed.

Considerations of cost will be dealt with in conclusion.

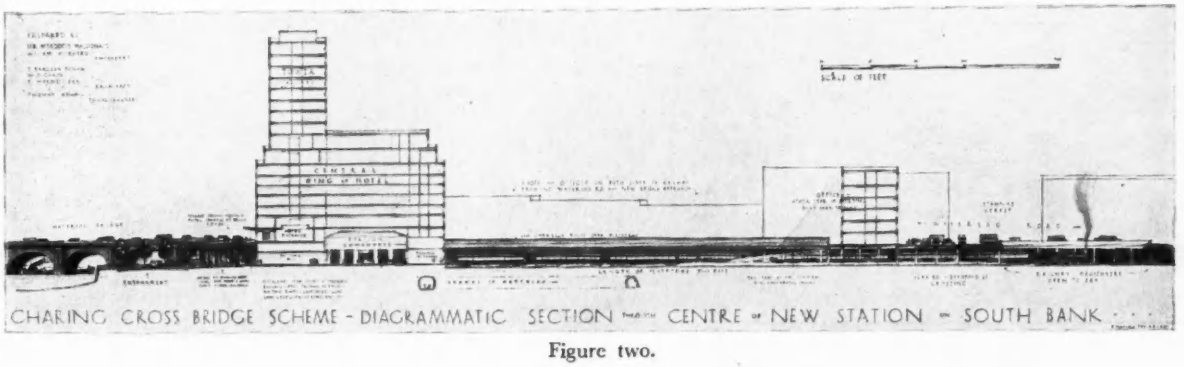


Figure two.

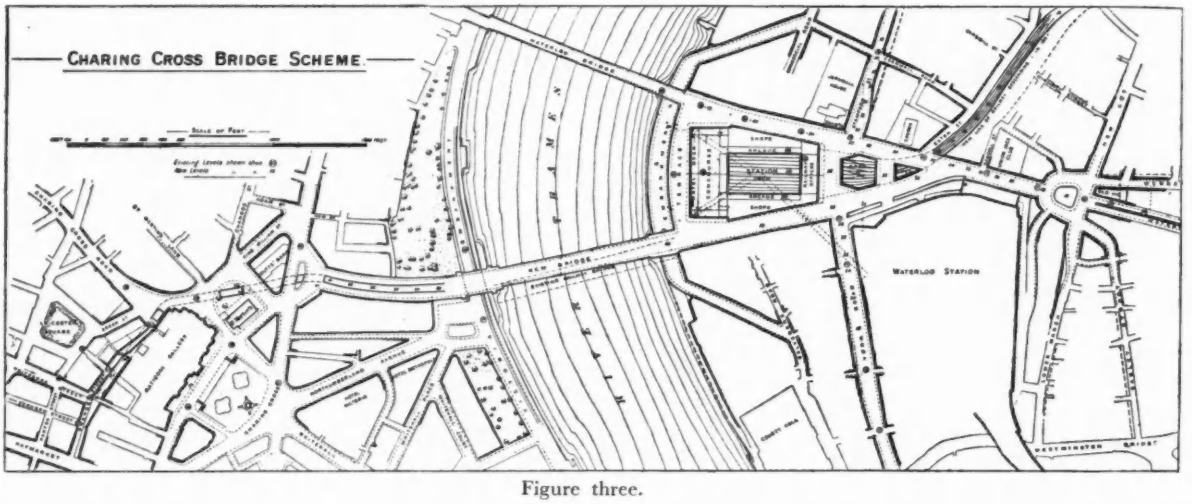


Figure three.

(b) *The Scheme itself*

The large plan (figure three) indicates the main lines of the scheme.

In this plan the North Bank follows in principle the official scheme, and is a piece of machinery designed to carry certain traffic to and from the Strand. Traffic alone has dictated the lines of this part of the scheme.

The bridge, in three spans, crosses the river on the site of Hungerford Bridge. Reaching the South Bank, it continues nearly level until, after crossing the line of York Road–Stamford Street, it joins Waterloo Road opposite Waterloo Station, and proceeds towards a large gyratory traffic circus at New Cut, breaking traffic into three main streams, east via Webber Street, south via Waterloo Road, west via Oakley Street.

The railway, from a point just beyond Blackfriars Road, is brought down a decline of 1 in 100 ft., swinging northward to spread out into a large new station occupying the wedge-shaped site between the approach roads to Charing Cross and Waterloo Bridges.

The bridge roads are kept at a level of 36 (above ordnance datum), with the tracks 20 ft. below. As soon as the railway is crossed, Waterloo Road falls gently to ground at New Cut. York Road and Stamford Street fall at 1 : 40 and 1 : 50 to natural level.

(c) *The New Station*

The station created by this scheme is on two levels: tracks and concourse below; offices and hotel above. The hotel communicates with a terrace at bridge level and overlooks the river from a height. The platforms, luggage and taxi-ways of the station communicate directly with an embankment road leading east and west.

Each end of the station—over the concourse and over a portion of the tracks—is developed with rich revenue-producing building; the sides fronting the bridge roads are developed with shops and offices; the great central portion is open to the sky, while a further area in the *place* at the junction of the two roads is also open.

This plan is undeniably workable by the best standards of English or foreign railway operation, and the hotel, looking northward to the impressive outline of London itself, occupies a site of great possibilities.

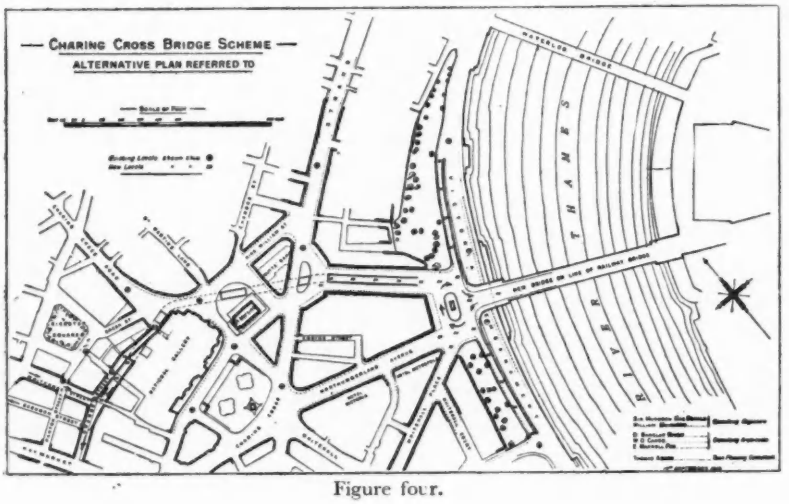


Figure four.

(d) *The North Bank alternative scheme*

The layout shown in figure four is substantially that proposed by previous schemes submitted by Messrs. Niven, Carõe and Muirhead, and adhered to by the group as a whole, because it was felt that other factors than that of traffic must enter into the planning of the North Bank if an improvement of national importance, possessing also opportunities of recoupment equal at least to those present in Kingsway, were to be undertaken.

This plan provides for traffic distribution at bridge level in a gyratory system larger than the successful one operating at Sloane Square. Ramped roads lead up to it from Northumberland Avenue, Whitehall Place and the Embankment, and down to it from the Strand. It is, as will be seen from the aerial view (figure five), a fine and orderly scheme, embracing and bringing into relation with the road plan the present Embankment Gardens, and providing sites equal in value to any on the Strand or elsewhere. Its provision for traffic is as generous as any other traffic centre in the many schemes.

(e) *Development*

The chances of future development rest entirely upon the basis presented by a finished scheme, qualified by the disturbance occasioned by its construction.

This scheme, as the aerial view (figure five) shows quite clearly, is simple, straightforward, and open. Every road frontage is capable of, and invites, development to follow the impetus created by a new station, a new hotel, and a Waterloo Station

brought from its present ignominious position on to the line of a wide thoroughfare and open space.

Development is a matter of human nature and wise financial policy. Where men find good building sites, good communications, sunlight, and fine aspect, there they will wish to build. From tunnels, viaducts, dead ends, and depressing outlooks, they fly.

These considerations can stand all manner of technical criticism. No scheme that does not provide for future development should be built.

(f) *Finance*

Bearing in mind that recoupment is a matter of guesswork based upon the human factor mentioned above, a just comparison of the cost of various schemes can only be arrived at by combining with the ascertainable cost of construction the estimated chances of recoupment. Every scheme counts upon recoupment in arriving at its net cost, but only those schemes that are without tunnels, and therefore PLAN their chances of recoupment, can honestly assume it. The limit of 12½ million pounds imposed by the L.C.C. is therefore purely fictional if it also assumes an equal measure of recoupment for all schemes. The estimated cost of works for this present scheme is £7,360,000, including an hotel, cost of a temporary bridge, and a large contingency sum.

The cost of expropriation will depend upon the policy adopted by the L.C.C. in carrying out the scheme. It may, if a wide enough area be acquired, amount to 12 million pounds, in which case recoupment will be a long business. Reduced to its minimum, it can be put at 7 millions, with recoupment assumed, by reference to L.C.C. figures, to be 4 millions, leaving a net expropriation cost of 3 millions, and a grant total of £10,360,000.

In any case, the method of reducing acquisition to the narrow lanes to be occupied by new roads and reconstruction cannot be applied to different schemes with any hopes of just comparison.

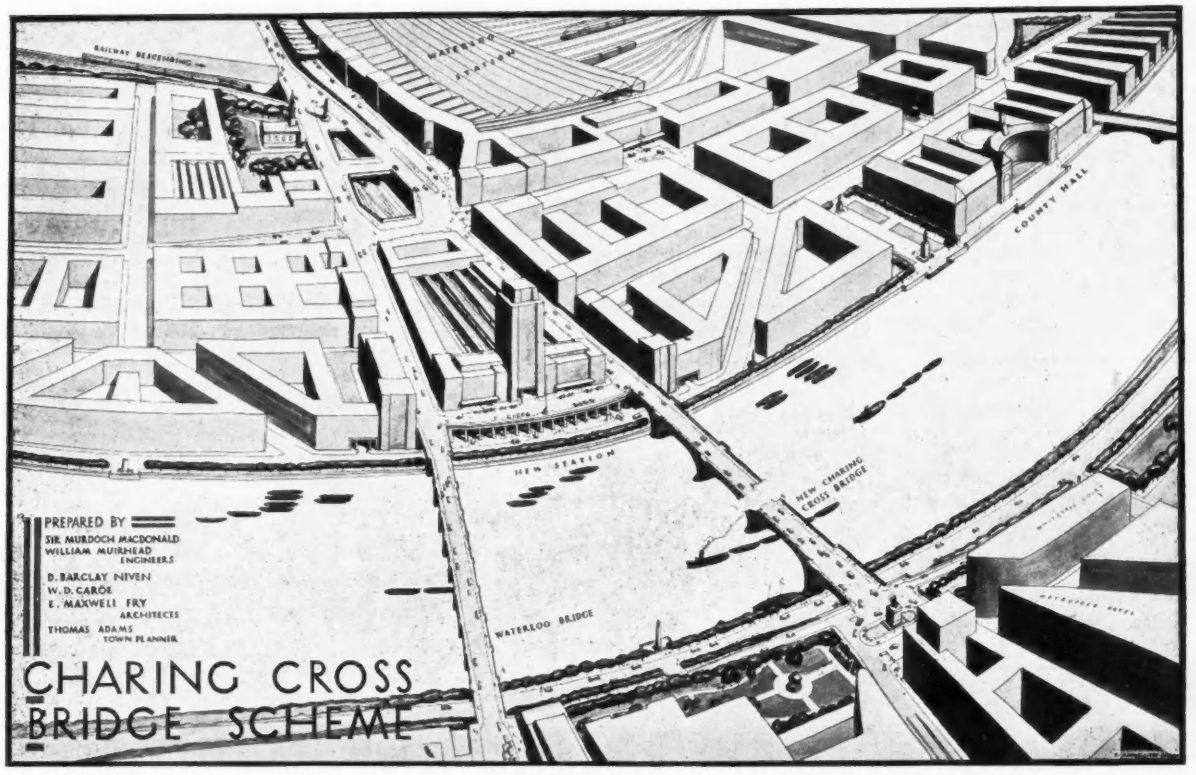


Figure five.

(g) *Construction*

It may well be imagined that any scheme will entail prolonged constructional activity and traffic dislocation. The authors of this scheme have gone very deeply into the question of a constructional programme because a low-level station entails changing over from one set of tracks to another, with consequent traffic interruption. A set of diagrams setting out the progress of works and the circulation of traffic during the period of construction was prepared, and served to show that though there were periods of dislocation varying in degree, and a short period of stoppage of the railway during the moment of changing over, a complete plan could be followed through-out, and no difficulties that could not be overcome or that have not been already met with in other reconstructions in London would arise.

The Royal Gold Medallist

Sir Edwin Cooper, A.R.A., acknowledging the investiture of the Royal Gold Medal at the hands of Sir Banister Fletcher, P.R.I.B.A., on Monday of last week, said he had read somewhere in a criticism upon work he had done, that he was a classicist without fear or apology; well, there was much truth in that remark, but in looking back over the years he could wish to have learned in the early days what the men of the Italian Renaissance like Perruzzi in Siena, Bologna and Rome, and San Micheli in Verona, had taught him in the later ones; he should not then have had as many regrets as he had today. It had not been so much that one had to learn as to unlearn.

He firmly believed that all fine buildings should develop upon traditional lines and that our rich architectural heritage should not be discarded.

Knowledge of the past, in his opinion, was the best equipment for the future.

In spite of all the talk that we heard about modern thought and expression in art, he would make every student of architecture study most carefully the work of the best masters.

LITERATURE

SPECIFICATION, 1931

FAMILIARITY breeds contempt with books as with men, and we expect the "hardy annuals" to solve all our difficulties as a matter of course. We are rather put out, in fact, when we fail to find in them the answer to some abstruse question, receiving without gratitude their constant advice and companionship.

It is now thirty-three years since *Specification* first appeared, to become the architect's *fidus Achates*. A yearly publication of this type has a particularly stiff examination to pass with every succeeding number, for human nature is always ready to exclaim that things are not so good as they were. From this ordeal *Specification* emerges with honours, for not only is what may be called the "dull useful" information easily found in its accustomed place, but it is revised and brought up to date, and new processes and materials given their proper values.

The important topical articles are continued in the present volume, as usual written by experts, and include notes on Preservation of Timber, Schools, Ice Skating Rinks, Speed in Building, and the Architectural Uses of Glass. The last two are of special interest, as they deal with subjects to which the modern architect will have to devote increasing attention.

In addition to a descriptive article, the Glazier section has been re-written and brought up to date, and now gives practical advice upon constructional and decorative uses of glass. Architects who contemplate employing ultra-violet-ray glass, or some of the lesser-known special types of glazing, can find much new information in this section.

The drainage section contains notes upon the new L.C.C. by-laws, and the sanitary engineering clauses include several of the conditions which now allow w.c.'s and bathrooms to be built without one wall being an external one.

One of the most useful articles under the heading of Miscellanea is that on Acoustic Problems and Sound Proofing, while those who have to deal with the questions of Theatre Ventilation will find some valuable notes under the heading Ventilating Engineer.

The coloured plates have been increased in number, but, however excellent—and these are very good indeed—no architect should choose a slate, tile or brick from a coloured illustration alone. He should examine the material in bulk for tone and texture.

The analytical index is excellent, but the general index, which is indispensable in a work of reference, is in very small type, and would be better at the beginning of the book.

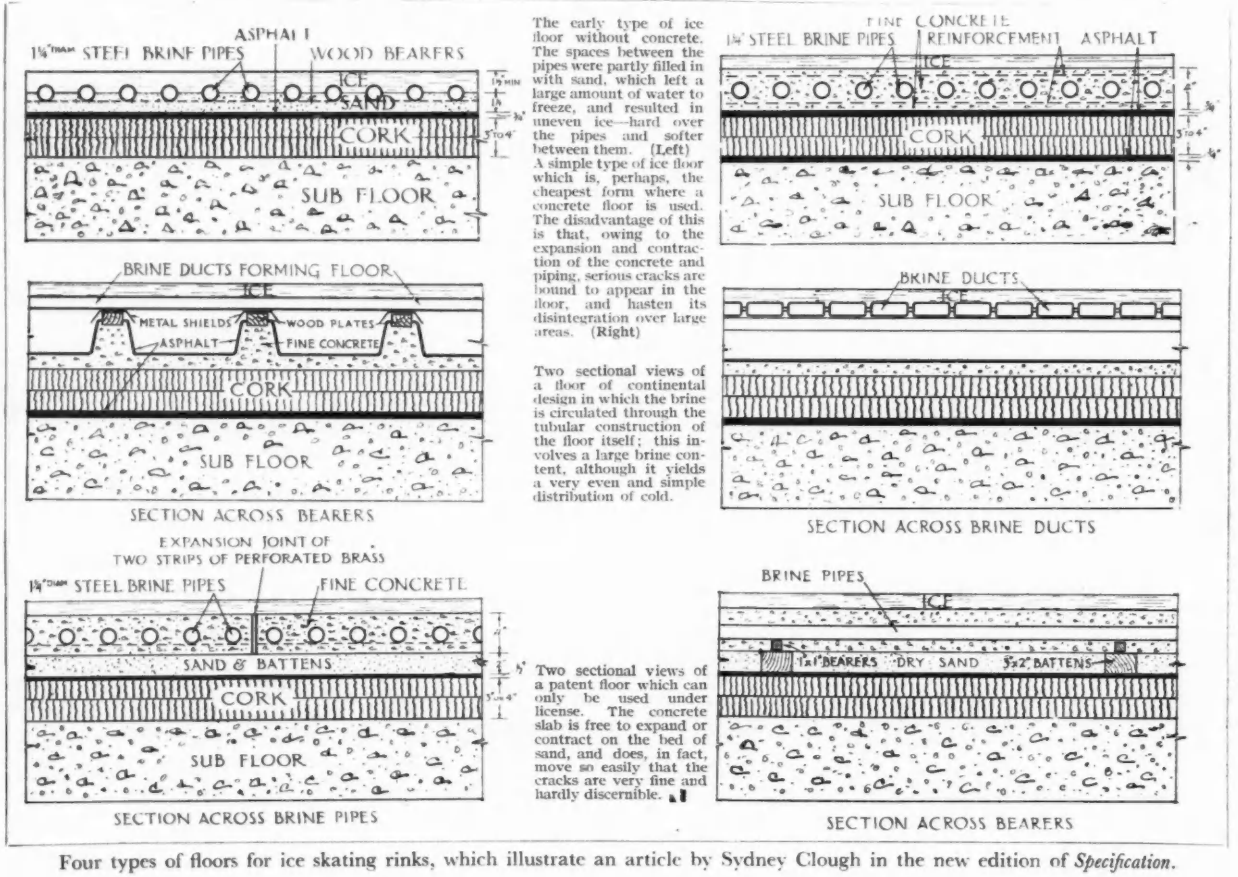
Probably many architects discard the old volume of *Specification* for the new with regrets. In thirty-three numbers many useful articles and illustrations lie buried, and there are few offices with space to house the whole series of past issues. Perhaps one day the Architectural Press will collect the most valuable of these drawings and special articles and issue them in a handy book.

LL. E. W.

Specification, 1931. Edited by Frederick Chatterton, F.R.I.B.A. London: The Architectural Press. Price 10s. 6d. net.

LAXTON'S PRICE BOOK

NO one but a fool would dream of making special mention of the features of this popular price book. One might as well attempt to describe to a man his own personal belongings. Laxton's is a household word to every architectural practitioner and student.



The early type of ice floor without concrete. The spaces between the pipes were partly filled in with sand, which left a large amount of water to freeze, and resulted in uneven ice—hard over the pipes and softer between them. (Left) A simple type of ice floor which is, perhaps, the cheapest form where a concrete floor is used. The disadvantage of this is that, owing to the expansion and contraction of the concrete and piping, serious cracks are bound to appear in the floor, and hasten its disintegration over large areas. (Right)

Two sectional views of a floor of continental design in which the brine is circulated through the tubular construction of the floor itself; this involves a large brine content, although it yields a very even and simple distribution of cold.

Two sectional views of a patent floor which can only be used under license. The concrete slab is free to expand or contract on the bed of sand, and does, in fact, move so easily that the cracks are very fine and hardly discernible.

Four types of floors for ice skating rinks, which illustrate an article by Sydney Clough in the new edition of *Specification*.

Moreover, it has been published for one hundred and fourteen years! All that is needed is to emphasize the fact that the information contained in the present edition has been subjected to the most thorough revision and correction, and that it will be found at least as reliable as its predecessors.

The electrical section has been specially extended and enlarged. It now occupies twenty-two pages as against twelve pages in the last issue, and it is far more comprehensive than in previous years.

As in previous editions, the prices in general apply to London, but sufficient details will be found in the analyses, tables and memoranda, under the various trade headings and elsewhere, to enable the book to be used in the provinces equally as well as in London. The current rates of wages in the building trades through England and Wales are also given.

The alphabetical list of specialities and proprietary articles and brands (some 10,000 in all) has again received very careful attention and has been extended. Experience has shown that this is one of the most popular sections of the book. It is printed on blue paper and gives the name and address (and in most cases the telegraphic address and telephone number) of the manufacturer of each article.

Laxton's and Lockwood's Builders' Price Book, 1931. London: Kelly's Directories, Ltd. Price 7s. 6d. net (post free).

LONDON'S BANKING QUARTER

A BROCHURE entitled *'Twixt Lombard Street and Cornhill*, written and illustrated entirely by members of the staff of Lloyds Bank, Ltd., has been published in order to mark the occasion of the opening of the head and City offices of the bank.

The book is bound in imitation vellum, and is reminiscent of the work of the old-time monks; there are many full-page illustrations in colour, and the text is embellished by ornamental letters and scrolls in numerous colours. Each page is bordered with small sketches of the people and incidents in the book.

As if we are riding H. G. Wells's *Time Machine*, we are taken rapidly through the centuries from the time when Lombard Street was "a stretch of rising ground thrusting its humped back out of a vast tract of marsh and fenland" to the present day. We see, rising in turn on the site of Lloyds Bank, mud and wattle huts, a Roman villa, a Saxon inn, a Plantagenet palace, a mediæval mansion, an Elizabethan tavern, houses of Hanoverian merchants, and finally the business offices of Victoria's reign which have given place to the great twentieth-century building.

The book is a fascinating "thumb-nail" history of the City of London, and one which provides new and interesting information on the famous banking quarter of London.

'Twixt Lombard Street and Cornhill. Written and illustrated by the staff of Lloyds Bank. London: Lloyds Bank, Ltd. Price 5s. net.

Publications Received

An Early Experiment in Industrial Organization. By Erich Roll. London: Longmans Green & Co., Ltd. Price 15s. net.

Men and Buildings. By John Gloag. London: Country Life, Ltd. Price 8s. 6d. net.

Modern Brickmaking. By A. B. Searle. London: Ernest Benn, Ltd. Price 3 gns. net.

L.C.C. Housing, 1928–30. By Montagu H. Cox. London: L.C.C. Price 2s. 6d. net.

Index to London Building Act, 1930. By J. H. Pinnock. London: P. S. King and Son, Ltd. Price 1s. 6d. net.

Electric Clocks. By F. Hope-Jones. London: N.A.G. Press. Price 12s. 6d net.

QUESTIONS THAT ARISE

Nails for Roofing Tiles

E. E. O. writes: "*Last November you kindly advised me with regard to tiles for a barn roof. This work has now been put in hand with a local builder. I am not altogether easy as to the way he is carrying out the work concerning one point in particular, and should be very grateful if you would advise me if his procedure is such as should not be passed.*

"*At the commencement of the work the first few tiles were hung with the two tile nails, but this was soon abandoned, and for the remaining portion all the tiles are being hung on one nail only. The job is not coming out very well for him, I believe, and I know that he is trying to economize in various ways. He now states that all the new joists he has had to provide are extra, and are not included in the estimate, but I was not informed of this until most of them had been fixed. I enclose copy of his estimate. Would you let me know if he is justified in his contention? I shall not quarrel over this as it should not amount to much, and I believe he has really underestimated (there are approximately twenty-five squares in roof), but I am really anxious about the nail matter. His estimate reads as follows:*

"Strip off old thatch and lathes to barn roof. Fur up rafters and cover with 1-in. by ¾-in. batten, sand-faced tiles (pinned).

"We think this job could be done for, say, £95 (ninety-five pounds only)."

Your correspondent does not say whether the tiles being used are nibbed or without nibs. It is not necessary to nail the former more frequently than every fourth course except on an abnormally steep slope, but the latter can only be properly secured by pegging or nailing every tile twice to the batten. In either case tiles that are nailed should have two galvanized or compo nails apiece. The estimate appears to be a very low figure for twenty-five squares of roofing; it is, however, so vaguely worded as to leave the builder almost a free hand in the method of carrying out the work, and he might be tempted to save about 30s. on nails.

It is true that the estimate allows for firring up the existing rafters, and if the defective timbers could not be seen before removing the thatch, the builder would be entitled to ask for an extra; but on the other hand it is doubtful if legally he could claim this unless he had first called your correspondent's attention to the fact and obtained his consent to the additional cost. In my experience most country builders are honest men who will give a good job for a fair price; with them an apparent irregularity is not usually an intentional sharp practice. LL. E. W.

Weathered Stone

H. W. C. writes: "*Is there any satisfactory method of darkening new stone to match old weathered stone in alteration work?*"

Darkening new stone to match old weathered stone is often done by brushing with a sooty wash, or on occasion a clayey wash over the new surfaces, according to the nature of the stone and the tone it has acquired in weathering.

It is best with such treatment to apply the wash rather liberally and follow with a plentiful application of clean water, removing the surplus. The natural effect of weather soon completes the harmony. E. G.

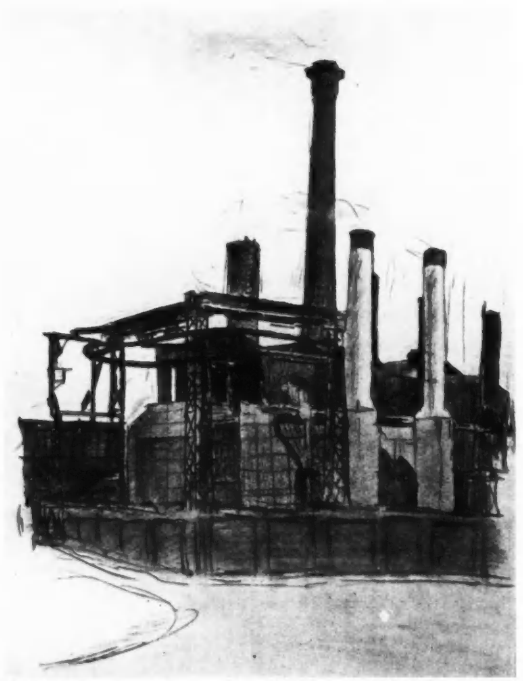
Tar Base Course

T. Y. writes: "*I would like your expert's opinion on turning the base course of a house. The base (completed) is of cement, rough off the float, with a fillet above, so that there would be no difficulty in applying the tar with an absolutely straight edge between it and the roughcast above. The height of base is about 2 ft. This treatment of the base is common in England, but unusual in Scotland, and the builder employed has not done it before. Are any special precautions necessary, to ensure a satisfactory job?*"

The work presents no special difficulties. The builder will, of course, not attempt to use Stockholm tar, but will heat coal tar and melt therein sufficient pitch to cause the mixture to work rather rich and creamy. Brush well on, hot, in two coats, with a few days between. E. G.



By F. Kerswill. (Water-colour : 8¾″ × 7¾″)
Eynesford Viaduct, Kent.



By J. Hylton. (Pencil and wash : 8½″ × 11¼″)
"Sketch."



By J. C. B. Price. (Water-colour : 10½″ × 8¼″)
Laon : the Cathedral and Bishop's Palace.



By H. Goddard. (Pencil, toned paper : 7¾″ × 12½″)
The Butterwalk, Dartmouth, Devon.



By R. Tatchell. (Pencil : 8¾″ × 13″)
The König von England, *Mainz.*

THE SKETCH CLUB

TWENTY-FOURTH SESSION

STUDENTS' SKETCHES: BARTLETT SCHOOL OF ARCHITECTURE

FOR this Session a selection has been made from holiday sketches by students of the Bartlett School of Architecture, University College, London. As befits holiday sketches, the expression of enjoyment takes some precedence over technical qualities, though these are by no means lacking.

The line drawing in pencil by R. Tatchell, showing the "König von England," Mainz, catches the eye as an enjoyable subject presented in a manner pre-eminently architectural. H. Goddard's study of the Butterwalk, Dartmouth, pleasantly records the pleasure of harvesting nearer home impressions of style, material and construction, while F. E. Kerswill has caught in happy mood the light and shadow, texture and harmonies, of Queen Anne's Gate, Westminster.

An interesting contrast is presented by the pencil "Sketch," by J. Hylton, and the water-colour of Laon by J. C. B. Price. The former, though not perhaps technically excellent, offers outstanding evidence of enjoyment of the soaring vertical solidity of great chimneys and of purposeful masses concerned with power mechanical. The Laon group is enjoyed for its more delicate vertical tendencies, combined with stern yet beautiful massing, hinting at power ecclesiastical.

The charm of things as they are, represented by the Church of All Hallows, is recorded by the confident pencil of E. Starling.

V. M. C.

By H. Goddard. (Pencil, toned paper : $7\frac{3}{4}'' \times 12\frac{1}{2}''$)

The Butterwalk, Dartmouth, Devon.

impressions of style, material and construction, while F. E. Kerswill has caught in happy mood the light and

represented by the Church of All Hallows, is recorded by the confident pencil of E. Starling.

V. M. C.

By R. Tatchell. (Pencil : $8\frac{3}{4}'' \times 13''$)

The König von England, *Mainz.*



By E. F. Starling. (Pencil : $7\frac{1}{2}'' \times 12''$)

All Hallows Church, London Wall, E.C.



By F. E. Kerswill. (Pencil : $9'' \times 11\frac{1}{4}''$)

Queen Anne's Gate, Westminster.

IN PARLIAMENT

[BY OUR SPECIAL PARLIAMENTARY REPRESENTATIVE]

London Squares Preservation Bill

IN the House of Lords last week, Lord Londonderry, on behalf of the L.C.C., moved the second reading of the London Squares Preservation Bill. He said that the principal object of the Bill was to preserve squares, gardens and enclosures to the number of 466. The Royal Commission, in their report, divided those open spaces into groups, and proposed that no compensation should be payable in respect of those for which special Acts of Parliament existed, governing their maintenance and management, while in the case of the others there would be possible claims for compensation. The information given to the Royal Commission was that the amount of compensation would not, in all probability, exceed £600,000. He thought that in all cases where compensation was claimed it would be far smaller than one would at first sight think likely. The negotiations between the County Council and those interested were of a completely friendly character, and he had little doubt that by the time the Committee stage was reached, the difficulties would have been adjusted.

Provision was made in the Bill whereby owners would not be prevented from re-developing an estate and building on an enclosure, provided a satisfactory alternative open space could be provided, subject to the restrictions which applied to the original enclosure. The Royal Commission made it clear that they were of opinion that any legislation which might be introduced should leave unaltered the present inheritance or property in the squares affected, and that no provision should be made for the compulsory use by the general public of the squares which were protected. The Bill carried out the views of the Commission in those very important respects. He understood that seventeen petitions had been deposited against the Bill, and active negotiations had been proceeding between the promoters and many of the petitioners with a view to seeing what measure of agreement could be reached as regarded the objections raised. The whole of the squares covered by the Royal Commission in their recommendations numbered 461. The petitions related to only 131 out of 223 squares included in Part II. of the Schedule of the Bill. No objections had been taken so far as 285 squares were concerned.

Lord Ponsonby, for the Government, welcomed the Bill which, after some debate, was read a second time.

Slum Clearance Schemes Progress

At question time in the House of Commons, Dr. Hastings asked the Minister of Health if he could give the number of clearance schemes, and the number of people proposed to be rehoused by them, that had been sanctioned by his department since the passage of the Housing and Slum Clearance Act, 1930.

Mr. Greenwood said that 117 areas in England and Wales, occupied by 24,237 persons, had been declared to be clearance areas under the Housing Act, 1930. Those declarations did not require his sanction.

Housing Development

Mr. Shakespeare asked the Minister of Health whether he would set up a national board for the expedition and co-ordination of housing development.

Mr. Greenwood said this question was the subject of recent discussion in the House, and there was no indication of any general desire that the present position should be reconsidered in this way.

SWEDISH ARCHITECTURE

"SWEDEN is without question the pioneer country of art in industry." This sentence, extracted from Viscount Burnham's article in the current issue of *The Architectural Review*, explains, in a few words, the reason why, not a year after the first, a second number of the *Review* should be devoted to Sweden and Swedish manufactures. It is also pointed out in the editorial foreword that if the special March issue does even a little to spread the gospel of co-operation between artist and manufacturer, it will not be wasted.

An interesting feature of the *Review* is an article contributed by Mr. Edward Maufe, F.R.I.B.A., on "Contemporary Swedish Architecture," in which he makes the following remarks:

In Sweden it is definitely the modern



[*From* The Architectural Review.

The entrance front of Chalmers Technical Institute, Gothenburg. Arvid Fuhre, Hugo Jahnke, Conny Nyquist, and Karl Samuelson, Architects.

buildings which excite one by their freshness, their vitality and their style. It is true that there are many fine old buildings in the line of the French tradition — many interesting old churches of Northern European character—but we have seen such elsewhere; whereas it would be difficult to think of any other country where the buildings of the last twenty-five years combine such freshness *without* obviously strained and self-conscious attempts to break with tradition.

And here, at the outset, one must seek the cause of the violent contrast between the spirit of the Stockholm Exhibition of last year and the spirit of modern Swedish architecture in general.

I think that we shall find that this contrast is largely political, that is to say, the modern work in general is largely the result of an aristocracy—an intellectual and artistic aristocracy—while the spirit of the Stockholm Exhibition represents the swing of the pendulum. It was organized by the present Government, which has democratic tendencies.

It is interesting to know that the great impetus towards a living architecture was caused by a body of people with a definite purpose, people who were not primarily architects but who demanded the best and were prepared to make personal sacrifices to get it. A country undoubtedly gets the architects it deserves. An architect cannot work in a vacuum. Sweden had to demand good architects before it got them.

Conscious revivals always seem to be the most depressing things, and here it was not a question of these Swedes saying that they would work for good architecture; certainly they did not say that they would revive anything of the past. They had a great pride in their own country and had a strong desire to live well, and fine buildings were necessary to help them to this end.

The Swede is incurably romantic and has a very strong national conscience. It must be remembered what a very small population there is in Sweden —6,000,000 for the whole country—so that once even a small intellectual or artistic aristocracy is formed its influence is enormous. If a good building is put up in Stockholm, its architect is a marked man; if a bad building is put up, that architect is a marked man too, whereas we can put up either sort of building and keep it all our own secret.

Then in Sweden they have a virile peasantry with its traditional crafts almost unspoiled by the industrial revolution, and they have their Crown Prince, an acknowledged arbiter of taste and humanism; it would be difficult to over-estimate his influence towards better architecture, sculpture and painting.

Swedish contemporary architecture must definitely be connected with the Gothenburg rather than the Stockholm Exhibition. It is, of course, possible that Swedish architecture may take on an entirely new lease of life from the Stockholm Exhibition. Some critics have put this point of view forward. I myself, however, can see no sign yet of any spiritual decline in the twenty-five years' work of which I am speaking, but in any case I do not see that functionalism need exclude romanticism. The 1931 Swedish Exhibition in London is especially valuable, as from it we can form a definite opinion on this point—it gives us a résumé of what Sweden has done and enables us to judge where she is going.

SOCIETIES AND INSTITUTIONS

R.I.B.A. FINAL EXAMINATION : INDIA

THE R.I.B.A. Examination Board in India have arranged to hold the R.I.B.A. Final Examination in Bombay from April 30 to May 8, 1931. The last day for receiving applications, which should be sent to the Hon. Secretary of the R.I.B.A. Examination Board in India, 43 Apollo Street, Fort, Bombay, is March 30.

R.A. SUMMER EXHIBITION

The days for submitting works for this year's Royal Academy Exhibition, to be held from May 4 to August 8, are as follows :

Water-colours, pastels, miniatures, black-and-white drawings, engravings, and architectural drawings : Friday, March 27.

Oil paintings : Saturday, March 28, and Monday, March 30.

Sculpture : Tuesday, March 31.

Hours for the reception of works, 8 a.m. to 10 p.m. (Saturday, March 28, 8 a.m. to 2 p.m.).

It should be noted that (a) not more than three works may be submitted by any one artist; (b) no works will, under any circumstances, be received before or after the specified dates; (c) all works must be delivered (unpacked) at the Burlington Gardens entrance. None will be received at the Piccadilly entrance.

Labels and forms can be obtained, during this month only, from the Secretary, Royal Academy of Arts, W.1. Applications by letter must be accompanied by a stamped addressed envelope.

SOUTH WALES INSTITUTE OF ARCHITECTS (WESTERN BRANCH)

At the twelfth annual general meeting of the above Society, held at Swansea, the following members were elected officers for the ensuing year : Chairman, Mr. Oliver S. Portsmouth, A.R.I.B.A.; hon. secretary, Mr. J. Herbert Jones, F.R.I.B.A.; hon. treasurer, Mr. G. R. H. Rogers, A.R.I.B.A. Committee : Messrs. Charles S. Thomas, F.R.I.B.A.; Edwin Smith, A.R.I.B.A., P.A.S.I.; E. R. Brown, L.R.I.B.A., M.T.P.I.; Sidney Crocker, L.R.I.B.A.; F. A. Broad, F.S.I.; students' representatives, Messrs. L. W. Devonald and E. H. Billings. The following members were elected to represent the branch on the Council of the South Wales Institute of Architects: Messrs. G. R. H. Rogers, Charles S. Thomas, Edwin Smith, Henry A. Ellis, M.A., F.R.I.B.A.; F. A. Broad, F.S.I.; Oliver S. Portsmouth. Students' representatives, Messrs. C. W. Geddes and L. W. Devonald.

The chairman presented prizes to the successful competitors in the students' competitions as follows : Design subject, first prize (£3 3s.), Mr. Roy Thomson; measured drawings, first prize (£3 3s.), Mr. John Nicholls; essay, first prize (£3 3s.), Mr. David E. Stevens.

SCOTTISH ARCHITECTS

At the monthly meeting of the Royal Incorporation of Architects in Scotland, held in Edinburgh, the following were appointed representatives to the R.I.B.A. Council for 1931–32 : Messrs. John Watson, F.R.I.B.A. (Glasgow); R. S. Reid, F.R.I.A.S. (Edinburgh); Wm. L. Duncan, F.R.I.B.A. (Turriff); and Wm. Salmond, F.R.I.B.A. (Dundee).

A grant of £10 10s. was made to the Association for the Preservation of Rural Scotland.

The following new members were elected : Mr. C. D. Carus-Wilson, Edinburgh, as Fellow; Messrs. C. L. Grant, Edinburgh, D. G. Kirk, Portobello, D. A. Murray, and S. L. Knowles, as Associates ; and Messrs. W. A. Ogg, Balerno, and G. B. Greenwood, as Students.

A WHITSUNTIDE TOUR

The passing of the Housing Act, 1930, and the generally recognized necessity of clearing slum areas, has brought into prominence the activities of other countries. In Berlin and Vienna considerable progress has been made in the number of flats and dwellings erected, and much resourcefulness shown in their design, construction and surroundings. The Town Planning Bill foreshadows powers to deal with built-up areas. The old historic towns of Prague and Nuremberg offer many points of interest and instruction in this connection. It is, therefore, of particular interest to note that The Garden Cities and Town Planning Association has arranged a Whitsuntide tour to Berlin, Prague, Vienna and Nuremburg—from May 19 to 30. The

cost is £36 per person. All interested in the tour should apply for particulars to the Secretary of the Association at 3 Gray's Inn Square, London, W.C. 1.

INDUSTRIAL DESIGNS COMPETITION

Particulars of the eighth annual open competition of industrial designs, to be held at the Imperial Institute, South Kensington, London, S.W.7, in June, 1931, have now been issued, and can be obtained from the Secretary of the Royal Society of Arts, John Street, Adelphi, London, W.C.2. Intending competitors must apply to the Secretary of the Society between May 1 and May 9 for the necessary entry forms, the last day for receiving entries being May 22. The designs will be received at the Imperial College of Science and Technology, Imperial Institute Road, S.W.7, between June 8 and 10. In all, scholarships and prizes amounting to about £1,600 are offered in connection with the 1931 Competition.

The Royal Society of Arts offers a prize of £15 under the Mulready Trust for a set of drawings in black and white or colour of architectural subjects, and a prize of £10 under the John Stock Trust for a design for a bronze wall tablet to commemorate the loss of Airship R 101. Four scholarships will also be awarded: A travelling scholarship of the value of £100 in the section of architectural decoration for textiles, offered by Mr. James H. Hyde; a travelling studentship of £100, offered by Messrs. Simpson and Godlee, for designs for printed furnishings or casement fabrics; a travelling studentship of £75, offered by the Tootal Broadhurst Lee Co., for designs suitable for dress materials; and the Art Congress Studentship of £50 for practising craftsmen or designers, founded by the late Sir William Cuthbert Quilter.

Among the other competitions, for which prizes ranging from £5 to £50 are offered, are the following: In the architectural decoration section, for designs for a ceiling light for a restaurant and for a cinema; electric light fittings for a lounge; entrance lobby to a bank; suite rooms for a large liner; fireplace and mantelpiece. In the furniture section, designs for the furniture and furnishings for a bedroom; furniture for a dining-room; and a carved oak sideboard.

SIR JOHN SOANE'S MUSEUM

Sir John Soane's Museum, 13 Lincoln's Inn Fields, W.C.2, is open free on Tuesdays, Wednesdays, Thursdays and Fridays during the months of March to September inclusive, from 10.30 a.m. to 5 p.m. At other times admission may be obtained by cards from the Curator, Mr. Arthur T. Bolton, F.R.I.B.A.

ENGLAND'S CORONATION CHURCH

The history of Westminster Abbey and its monastic buildings formed the subject of Sir Banister Fletcher's lecture at the Central School of Arts and Crafts, London, on February 25. He described the Confessor's church, the pioneer example of the Norman style in England, and how the church was intimately connected with the history of famous people.

On the following Wednesday, Sir Banister lectured on England's greatest historic fortress—the Tower of London.

LAW REPORTS

TEMPORARY BUILDINGS: QUESTION OF DWELLINGS ON WHEELS

Ruislip-Northwood U.D.C. v. *W. Lee and Another. King's Bench Division. Before Mr. Justice Mackinnon*

BY this action the Ruislip-Northwood Urban District Council sought a decision of the Court as to whether a number of caravans, old omnibuses and pantechnicon vans in fields were or were not temporary buildings. The vehicles were on wheels in fields at Eastcote, owned by the defendant and his wife.

Mr. Montgomery, K.C., for the Council, said the question was whether these vehicles come under the Public Health Amendment Act, 1907, or not. They appeared on the land about 1926, and the Council sought a declaration that such structures were "temporary buildings," with which the Council might deal. The contention of the defendant was that the vehicles or structures were not "in" but "parked in" the fields. Counsel's reply was that the intention was that they were to be statically there.

Mr. H. R. Metcalfe, surveyor to the U.D.C., gave evidence, and doubted the ability of the structures for travel.

Mr. Forbes, defendants' counsel, said many had made journeys of long distances. Counsel declared the action an oppressive one. The Council should have gone to the magistrates and summoned the defendants for penalties.

Mr. W. L. Eves, former surveyor to the U.D.C., gave evidence as to the mobility of the vehicles. They could easily be driven away.

His lordship said he had no doubt that these vehicles had been shifted about the field in a sort of general post so as to try to preserve their attribute of mobility. To his mind it was clear that that was a pretence to oust the presumption that they were there permanently. They bore names, and the postman delivered letters as to a row of houses. There had grown up in four years a little village of these vehicles. He was satisfied that the whole purpose of the scheme was to establish these things as permanent, and the wheels were kept on them solely that they might be wheeled out of the statute. In view of the authorities Mr. Montgomery had cited, he made the declaration asked, that these were temporary buildings within the meaning of the Act. The declaration would cover twenty-one caravan dwellings belonging to Mrs. Lee. The defendants must pay the costs of the action.

RATING OF AN AQUEDUCT

Manchester Corporation v. *Bolton Area Assessment Committee and Another. King's Bench Division. Before Justices Avory, Swift and Acton*

This was an appeal by the Corporation of Manchester against a decision of the Recorder of Bolton in favour of the Bolton Area Assessment Committee and the Little Hulton Urban District Council, in a question of the rating of the Corporation's aqueduct that passed through Little Hulton.

Mr. Tyldesley Jones, K.C., for the Manchester Corporation, said the question was whether, when valuing the portion of the aqueduct within Little Hulton, the Assessment Committee could include the sum of £79,000 as part of the revenue of the whole undertaking. The contention of the Corporation was that that sum could not be included, because it was raised for meeting debt charges payable in respect of expenditure made upon works in course of construction, and the sum was a liability of the landlord, and not one that a hypothetical tenant would be called upon to pay. The sum was raised in Manchester as a "public water rate," not payable for a supply of water, and was not a "water rent." For the Assessment Committee it was submitted that the amount was paid annually to the Corporation, as occupiers of the undertaking, and was revenue that should be taken into account as profits. Here the Recorder found for the Assessment Committee, that the income from the public water rate was incidental to the occupation of the physical hereditament, and that it was distinctly available to a hypothetical tenant as an item of gross profit. Counsel submitted that the Recorder had arrived at a wrong decision, having regard to the fact that the amount in question came from a rate levied upon all the owners of property in Manchester, and it was distinct from the water rent levied upon the occupiers.

The Court, after hearing the legal arguments, held that the Recorder came to a wrong decision in law, and allowed the appeal with costs. Leave to appeal further was granted.

Mr. Justice Avory, in giving judgment,

said, adhering to the decision in the case of *The Metropolitan Water Board* v. *The Marylebone Assessment Committee*, he considered that a clear line must be drawn between the obligation of the landlord on the one hand, and those of a hypothetical tenant on the other. The payment of debt charges was a matter for the landlord and not for the tenant.

Justices Swift and Acton agreed.

COMPETITION NEWS

In the Incorporated Association of Architects and Surveyors' competition for a petrol-filling station, the winning design of which was illustrated in our last issue, the following competitors received honourable mention: Messrs. S. H. Smith, J. D. Doyle, J. P. Nume and J. Hughes, Christopher Woodbridge and Noble, D. S. Auty, W. W. Heffer and K. H. Urquhart.

The winners of the three prizes for the best "Laymen's suggestions" are as follows: First prize (£10 10s.), Miss Marguerite Light; second prize (£5 5s.), Mr. John Graham; third prize (£5 5s.), Mr. John A. Major.

ROME SCHOLARSHIP IN ARCHITECTURE

The Faculty of Architecture of the British School at Rome have admitted the following candidates to the competition for the Rome scholarship in Architecture, 1931:

Bradbury, R. (Manchester University).
Cahill, T. J. (Manchester University).
Hewitson, T. T. (Liverpool University).
Hughes, J. (Liverpool University).
Gibson, A. G. (Architectural Association).
Lewis, B. B. (Melbourne and Liverpool Universities).
Matthew, R. H. (Edinburgh College of Art).
Oakes, C. C. D. (Royal Academy Architectural School).
Walker, H. R. M. (Architectural Association).
Whyman, G. P. (Manchester University).
Wylson, J. D. (Architectural Association).

COMPETITIONS OPEN

April 1.—Sending-in day. Development of the uses of aluminium and its alloys, for the International Aluminium Bureau. Two premiums of 25,000 francs. Conditions from the Bureau International de l'Aluminium, 23 bis, Rue de Balzac, Paris, France.

April 18.—Sending-in day. Central Municipal Bank and Head Offices, Broad Street, Birmingham. Assessor: Sir Reginald Blomfield, R.A., F.R.I.B.A. Premiums, £400, £300, and £150. Conditions from Herbert H. Humphries, City Engineer and Surveyor, Council House, Birmingham. (Deposit £3 3s.)

April 30.—Sending-in day. Hospital for Infectious Diseases, Coventry, for the Coventry Corporation. Assessor: E. Stanley Hall, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

June 16.—Sending-in day. (Last day for conditions: February 25.) Offices for the Ingham Infirmary, South Shields. Limited to architects within the area of the Northern Architectural Association. Assessor: George Reavell, O.B.E., F.R.I.B.A. Premiums, £250, £100 and £50. Conditions were obtainable from John Potter, Secretary, Ingham Infirmary, South Shields. (Deposit £2 2s.)

THE ARCHITECTS' DIARY

WEDNESDAY, MARCH 11

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Some Aspects of Contemporary Decoration." By Arthur J. Davis, F.R.I.B.A. Chairman: J. C. Squire. **8 p.m.**

UNIVERSITY OF LONDON, King's College, Strand, W.C. Last of nine public lectures on "Persian Art." By Professor Percy Dearmer. **5.30 p.m.**

CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "English Mediæval Architecture: The English Home." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS. Yorkshire Branch. At the County Room, Bond Street, Leeds. "Asbestos." By R. E. Forester, M.SC. **7.30 p.m.**

LONDON SOCIETY. Visit to Price's Candle Co., Belmont Works, York Road, Battersea. **2.15 p.m.**

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS, 1 Wilbraham Place, S.W.1. Exhibition of designs submitted for the Petrol Filling Station Competition. Until March 21. 10 a.m. to 8 p.m. **10 a.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. Students' Meeting. "The Chorley Wood Sewage-Disposal Works." By Eric H. Ely, B.SC. Chairman: G. C. Taylor. **6.30 p.m.**

THURSDAY, MARCH 12

SHEFFIELD, SOUTH YORKSHIRE AND DISTRICT SOCIETY OF ARCHITECTS AND SURVEYORS. At the University, Sheffield. "Planning." By E. Berry Webber, A.R.I.B.A. **6.15 p.m.**

ARTS BUILDING, Lime Grove, Oxford Road, Manchester. "Repair of Ancient Buildings." By C. R. Peers, F.R.I.B.A., C.B.E.

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Early Panelled Rooms." By H. Warren Wilson, A.R.C.A. **7 p.m.**

SOUTH WALES INSTITUTE OF ARCHITECTS (CENTRAL BRANCH) AND INSTITUTE OF BUILDERS (SOUTH WALES BRANCH). At the Engineers' Institute, Park Place, Cardiff. "The Design and Construction of Modern Cinemas." By George Coles, F.R.I.B.A. **7 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "The Strength of Compression Members." By Ewart S. Andrews, B.SC., M.INST.C.E. **6.30 p.m.**

MARGATE SCHOOL OF ART. At the Wesleyan Schoolrooms, Hawley Square, Margate. Eighth of ten lectures on the History of Architecture. "The Italian Renaissance and Its Architects." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

INCORPORATED INSTITUTE OF BRITISH DECORATORS, Painters' Hall, Little Trinity Lane, E.C.4. Mock Trial. **7.45 p.m.**

FRIDAY, MARCH 13

INSTITUTION OF STRUCTURAL ENGINEERS. Lancashire and Cheshire Branch. At the College of Technology, Manchester. "Special Rust and Acid Resisting Steels." By W. H. Hatfield, D.SC., M.I.MECH.E. **7 p.m.**

TOWN PLANNING INSTITUTE. At Caxton Hall, Caxton Street, Westminster, S.W.1. "County Councils and Town Planning." By H. J. C. Neobard.

INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS. Scottish District Meeting. At the City Chambers, Edinburgh. Discussion on "The Employment of Structural Steel in Building." **11.30 a.m.**

SATURDAY, MARCH 14

Sunrise, 6.16 a.m. Sunset, 6.3 p.m.

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Fifth of six non-technical lectures on Present-day Architecture: "The Preservation of the Countryside, especially in relation to Building." By A. B. Knapp-Fisher, F.R.I.B.A. **3 p.m.**

MONDAY, MARCH 16

R.I.B.A., 9 Conduit Street, W.1. General Meeting. "The Treatment of Old Buildings." By C. R. Peers, F.R.I.B.A., C.B.E. **8 p.m.**

TUESDAY, MARCH 17

LONDON SOCIETY. Visit to St. James's Palace, S.W.1. **3 p.m.**

WEDNESDAY, MARCH 18

CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Spanish Mediæval Architecture. By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

SOUTH-EASTERN SOCIETY OF ARCHITECTS. Brighton Chapter. At the Old Ship Hotel, Brighton. "Architectural Acoustics." By C. W. Glover, A.M.INST.C.E. **6.30 p.m.**

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Annual Reception. **8 p.m.**

THURSDAY, MARCH 19

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Reformers in Furniture Design." By Percy A. Wells. **7 p.m.**

CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Reinforced Concrete." By A. van Osenbruggen. **7.30 p.m.**

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At Bradford. General Meeting. **7 p.m.**

MARGATE SCHOOL OF ART. At the Wesleyan Schoolrooms, Hawley Square, Margate. Ninth of ten lectures on the History of Architecture. "French Renaissance and its Architects." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

THURSDAY, MARCH 19—*continued.*

ILLUMINATING ENGINEERING SOCIETY. At the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. "Modern Domestic Lighting." By H. T. Young, M.I.E.E. **7 p.m.**

FRIDAY, MARCH 20

BRITISH ELECTRICAL DEVELOPMENT ASSOCIATION. Annual luncheon, to be held at the Savoy Hotel, Strand, W.C.2. 12 45 for 1 p.m. **1 p.m.**

SATURDAY, MARCH 21

Sunrise, 6.0 a.m. Sunset, 6.15 p.m.

CENTRAL SCHOOL OF ARTS AND CRAFTS. Visit to a Factory in East London. **2 p.m.**

MONDAY, MARCH 23

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "Beauty." By Professor R. M. V. Gleadowe. **8 p.m.**

TUESDAY, MARCH 24

IDEAL HOMES EXHIBITION (DAILY MAIL), Olympia, Kensington, W. Until April 17. 10 a.m. to 9 p.m. **10 a.m.**

DESIGN AND INDUSTRIES ASSOCIATION. At the London School of Economics, Houghton Street, Aldwych, W.C.2. "The Modern Film." By John Grierson. **8 p.m.**

WEDNESDAY, MARCH 25

LONDON CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row W.C.1. "German Mediæval Architecture." By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

WEST YORKSHIRE SOCIETY OF ARCHITECTS, 62 Woodhouse Lane, Leeds. Students' Debate: "That Architecture is of vital importance to the Layman." Affirmative: J. A. Naylor. Negative: G. B. Stickney. **7 p.m.**

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Kent Coalfields." By Professor Patrick Abercrombie, M.A., F.R.I.B.A. Chairman: The Rt. Hon. Lord Cornwallis, C.B.E. **8 p.m.**

SOUTH-EASTERN SOCIETY OF ARCHITECTS. Croydon Chapter. At the Town Hall, Croydon. Annual General Meeting, followed by "Modern European Architecture." By F. R. Yerbury, HON. A.R.I.B.A. **8 p.m.**

THURSDAY, MARCH 26

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "The Erection of Sydney Harbour Bridge." By J. Stuart Lewis, M.I.STRUCT.E. **6.30 p.m.**

LONDON SOCIETY. Annual meeting, to be held at the Clothworkers' Hall, 41 Mincing Lane, E.C.3. Tea, 4 p.m. **4.30 p.m.**

INSTITUTE OF FUEL. At the Institute of Engineers, Park Place, Cardiff. "Local Generation of Electrical Power *plus* the Grid." By Major E. Ivor David, M.I.E.E. **6 p.m.**

FRIDAY, MARCH 27

ROYAL ACADEMY SUMMER EXHIBITION, Burlington House, S.W.1. Day for submission of watercolours, pastels, miniatures, black-and-white drawings, engravings and architectural drawings, 8 a.m. to 10 p.m. **8 a.m.**

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS, 1 Wilbraham Place, S.W.1. "English Interior Decoration." By T. Braddock. **7 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Western Counties Branch. At the Merchant Venturers' Technical College, Unity Street, Bristol. "Testing of Materials." By W. E. Francis, M.SC. Midland Counties Branch. At the Chamber of Commerce Buildings, New Street, Birmingham. "The Erection of Sydney Harbour Bridge." By J. Stuart Lewis, M.I.STRUCT.E. **7 p.m.**

SATURDAY, MARCH 28

Sunrise, 5.44 a.m. Sunset, 6.27 p.m.

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Last of six non-technical lectures on Present-day Architecture. "Architecture—the Social Art." By R. A. Duncan, A.R.I.B.A. **3 p.m.**

MONDAY, MARCH 30

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Exhibition of domestic architecture, interiors and furnishings. Until April 24. **10 a.m.**

SATURDAY, APRIL 4

Sunrise, 5.35 a.m. Sunset, 6.33 p.m.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION, The Castle, Winchester. Council Meeting. 3 p.m. General Meeting. 6.15 p.m. **3 p.m.**

WEDNESDAY, APRIL 8

INSTITUTION OF STRUCTURAL ENGINEERS. Lancashire and Cheshire Branch. Annual General Meeting to be held at the College of Technology, Manchester. **7 p.m.**

THURSDAY, APRIL 9

SHEFFIELD, SOUTH YORKSHIRE AND DISTRICT SOCIETY OF ARCHITECTS AND SURVEYORS. Annual General Meeting, to be held at the University, Sheffield. **6.15 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "The Structural Engineer and his Vocational Training." By F. E. Drury, M.SC. 6.30 p.m. Yorkshire Branch. At the Metropole Hotel, Leeds. "The Erection of Sydney Harbour Bridge." By J. Stuart Lewis, M.I.STRUCT.E. 7 p.m. **6.30 p.m.**

SATURDAY, APRIL 11

Sunrise, 5.17 a.m. Sunset, 6.45 p.m.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. The Castle, Winchester. Excursion to Works of Messrs. John I. Thornycroft, Basingstoke.

TRADE NOTES

It is now widely held that the iron and steel industry is fighting an impossible and unfair battle against foreign steel imports, and that sooner or later the home market must be secured for British makers, if the industry is to survive. Nevertheless, the manufacturers themselves will be the first to admit that although protection is the essential foundation of industrial revival under present world conditions, it will not of itself completely solve the difficulties of the industry.

Every effort has been made in the past by steelmakers to maintain, in the face of the gravest financial difficulties, the position of the trade as a basic industry of the country. The latest effort—the adoption of the "British Mark" for steel, illustrated on this page—provides further evidence that the industry is striving to maintain its position.

Success will depend greatly on the support which architects, engineers and users generally throughout the country will give by specifying British material and insisting on steel with the new British Steel Mark.

The scheme for applying the "national mark" system for British steel was launched at a luncheon given by the British Steelwork Association on Tuesday of last week. Sir William Harke, director of the British Federation of Iron and Steel Manufacturers, in addressing those present, pointed out that architects had in the past specified British steel, but had no means of knowing whether they were getting it. Our Continental friends had for years rolled sections of British standard specifications in order that they might compete in our markets. Their joists and sections had been branded or marked "B.S.", which purchasers had taken to mean "British Steel," whereas it really only stood for "British Standard." Mr. A. Pugh, of the Iron and Steel Trades Federation, said it was in the interests of the community that, at any rate, other things being equal, British steel should be purchased. It was interesting to note that an order for twenty-five tons would employ a British workman for a year.

*

The flooring department of the Wilfley Co., Ltd., will in future operate as a separate business under the name of the Marbolith Flooring Co., Ltd. All inquiries for Marbolith, terrazzo and granolithic paving, and wood block, parquet and hardwood floors, should be addressed to this latter firm at Gwydir Chambers, 104 High Holborn, W.C.1.

*

It is interesting to note that the faience used on the front elevation of the Streatham Ice Rink, illustrated in our last issue, was supplied by Messrs. Shaws Glazed Brick Co., Ltd.

*

Messrs. Archd. Eadie & Co., Ltd., of Glasgow, found that the demand for their many paints and products had so increased that the Glasgow headquarters, a Cardiff branch and a London export office were insufficient for their distribution needs. They have therefore opened new depots, holding full stocks and giving complete service, at London, Manchester and Birmingham. These are now in operation at 3 Somerset Street, Manchester; 18 New Meeting Street, Birmingham; and London.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office. All inquiries concerning inventions, patents and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated, readers should apply to the Patent Office, 25 Southampton Buildings, W.C.2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

4889. Wolfsholz, A. Strengthening, tightening and rendering sound, buildings, etc. February 16.

4903. Watkins, C. Building construction. February 16.

5005. Dyke, H. Manufacture of preformed building units. February 17.



A girder, bearing the new British rolling mark for steel, being hoisted into position on the final section of the London County Hall.

THE BUILDINGS ILLUSTRATED

Following are the names of the specialists' general and some of the sub-contractors for the buildings illustrated in this issue :

Canadian Pavilion, British Empire Trade Exhibition, Buenos Aires (page 370). General contractors etc., Humphreys, Ltd. Construction: International Fibre Board, Ltd. (Ten Test); Gypsum Lime and Alabasteine Canada, Ltd. (Gyproc); Building Products, Ltd. (B.P. Board); Price Bros. (Donnacona).

Martins Bank, Ltd., 68 Lombard Street, E.C. (pages 373–377). General contractors: Holloway Bros., Ltd., and Frederick Smith & Co., Ltd. Consulting engineer, Dr. Oscar Faber, O.B.E. Sub-contractors: Geo. Rome & Co. (London), Ltd., plaster work; Brookes, Ltd., Hopton Wood stone, marble, terrazzo and tiling; Drake and Gorham, Ltd., electrical engineers; G. N. Haden and Sons, Ltd., heating and ventilating engineers; C. Isler & Co., Ltd., artesian well; Henry Hope and Sons, Ltd., bronze windows; H. H. Martyn & Co., Ltd., Bromsgrove Guild, Ltd., James Gibbons, Ltd., and Birmingham Guild, Ltd., bronze work; Waygood-Otis, Ltd., lifts; Carron Company, kitchen equipment; Korkoid Decorative Floors, Korkoid flooring; Arthur L. Gibson & Co., Ltd., "Kinnear" steel rolling shutter; H. and C. Davis & Co., Ltd., lift enclosure; Gent & Co., Ltd., electric clock installation.

Council Offices, Bognor Regis (pages 378–380). General contractor, H. W. Seymour. Clerk of works, A. W. Howard. Consulting engineer, Dr. Oscar Faber. Sub-contractors: Young, Austen and Young, Ltd., heating; A. W. Beaven and Sons, Ltd., electric installation; Bognor Gas and Electricity Co., light fittings; Wood, steelwork; Empire Stone Co., Ltd., artificial stone; Samuel Elliott and Sons, Ltd., oak panelling; Art Pavements and Decorations, Ltd., terrazzo; Stirling and Johnson, Ltd., roof tiling; Martin Van Straaten & Co., wall tiling; Pontifex and Sons, Ltd., sanitary fittings; Bainbridge Reynolds, Ltd., metal work; Yannedis & Co., ironmongery; Stevens and Adams, Ltd., block flooring; Joseph Armitage, carving; Eric Munday, lettering and inscriptions; Reynolds & Co., carpets and curtains; Dictograph Telephones, Ltd., telephones.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The Essex Education Committee has approved plans for the extension of the BRENTWOOD high school for girls, at a cost of £14,000.

The L.C.C. is to develop a housing estate at Dog Kennel Hill, CAMBERWELL, at a cost of £538,000.

The L.C.C. is purchasing 1½ acres of land in Evelyn Street, DEPTFORD, for the erection of tenements.

The Middlesex Education Committee has purchased a site in Staines Road, FELTHAM, for the erection of an elementary school.

The Middlesex Education Committee has obtained a site in Locket Road, HARROW WEALD, for the erection of an elementary school.

The Essex Education Committee has approved plans for the erection of a senior mixed school on the Bush Elms estate, HORNCHURCH, at a cost of £20,000.

The Essex county architect is preparing plans for a new county high school for boys at ILFORD.

Plans passed by ILFORD Corporation: Warehouse, Havelock Road, for Messrs. Clemens Bros.; thirty-three garages, Ramsgill Drive, four houses, Hatley Avenue, eight houses, Hastings Avenue, and twenty houses in Springfield Drive, for Mr. J. Aldridge; fifteen houses, Reynolds Avenue, and four houses, Redbridge Lane, for Mr. W. M. Edwards; sixteen houses, Trinity Road, for Mr. G. F. Seigerts; seven houses, Woodford Avenue, and thirteen houses, Vaughan Gardens, for Mr. T. Anders; thirty-five houses, South Park Road, for Messrs. E. Glenny and Sons; nine houses, Aldborough Road, for Messrs. Baskett and Brown; twenty houses, South Park Terrace, for Messrs. Holland Bros.; shops and flats, Fencepiece Road, for Messrs. Haines and Warwick, Ltd.; ten shops and dwellings, Whites Parade, for Messrs. J. A. Tarry, Ltd.; eight shops and dwellings, and three shops, Southdene Gardens, for Mr. L. W. Robinson.

The ISLINGTON B.C. is seeking further sites for housing schemes.

The POPLAR B.C. recommends the erection of twenty-two flats in Glaucus Street, twelve flats in Beachy Road, and eleven flats in Poplar High Street, by direct labour.

The POPLAR B.C. proposes a clearance scheme for the Ingleham Place area.

Plans passed at SANDERSTEAD: Two garages, Briton Crescent, for Mr. E. K. Ketley; house, Purley Bury Close, for Messrs. W. J. Frewing and Sons, Ltd.; house, Briton Crescent, for Mr. H. P. Hawkes; three houses, Lime Meadow Avenue, for Messrs. Hooker and Rogers; twelve houses, junction of Sanderstead Road and Purley Downs Road, for Mr. H. N. Jones; house, Church Way, for Mr. F. Flood.

The L.C.C. is to erect a nurses' home and extend the Downs Hospital for Children at SUTTON, at a cost of £54,295.

The L.C.C. has approved plans for the erection of an elementary school in Tench Street, WHITECHAPEL, at a cost of £23,350.

SOUTHERN COUNTIES

The Rector of St. John the Baptist's Church is obtaining a site for the erection of a Catholic church on the Whitehawk estate, BRIGHTON.

The BRIGHTON Corporation is to erect thirty houses for displaced tenants in the Black Rock area, at a cost of £14,000.

Plans passed by BRIGHTON Corporation: Four houses, Elm Grove, for Mr. G. Ayling; four houses, Winfield Avenue, Patcham, for Mr. G. Denyer; four shops and flats, St. James and Cavendish Streets, for Miss R. J. Hallett; eight houses, Balfour Road, for Messrs. T. J. Braybon and Son.

A new public elementary non-provided Roman Catholic school for about 300 children is to be erected at EASTBOURNE.

Plans passed at GUILDFORD: Two houses, Madrid Road, for Mr. H. Ashenden; four houses, Manor Road, for Mr. Hoptroff; twenty-seven garages, Wodeland Avenue, for Messrs. Annesley Brownrigg and Hiscock; alterations, 69-70 North Street, for Messrs. Gammons, Ltd.; six houses, Grange Road, for Messrs. Holford & Co.; house, Addison Road, for Messrs. S. Ellis, Ltd.

Plans passed at KENLEY: Fourteen houses, Little Roke Road and Oaks Road, for Messrs. E. T. Brown and Sons; conversion of stable and buildings into three flats and cottages, Oaks Road, for F. T. Brown.

The KENT C.C. is to provide additional accommodation for the nursing staff of the Medway Institute, at a cost of £18,000.

The Rector of St. Nicholas is purchasing from the Guildford Corporation a site at WESTBOROUGH, for the erection of a church.

SOUTH-WESTERN COUNTIES

The CHELTENHAM Corporation is to prepare a clearance scheme for the St. Paul's Street south, Lime Kiln Row and Regent Place areas.

The TORQUAY Corporation General Purposes Committee has approved plans prepared by Messrs. Bridgman and Bridgman, architects, for the adaptation of the Y.M.C.A. premises for municipal and library purposes, at an estimated cost of £15,900.

MIDLAND COUNTIES

The BIRMINGHAM Education Committee is to erect an elementary school in Severn Street, at a cost of £34,350.

The BIRMINGHAM Education Committee is to undertake structural improvements at various schools, at a cost of £34,000.

The BIRMINGHAM Corporation is to extend the Little Bromwich Hospital, at a cost of £18,250.

The LEICESTER Corporation is seeking power compulsorily to acquire a site for the construction of open-air swimming baths.

The Joseph Rowntree Village Trust is to provide a new public elementary school for about 300 children at NEW EARSWICK.

Plans passed by NORTHAMPTON Corporation: Two houses, Chestnut Road, for Messrs. Jordans; two sub-stations, Kerr and Windsor Streets, for Electric Light Co., Ltd.; seven houses, Brookland Road, for Messrs. S. G. Sale & Co.; two houses, Clarence Avenue, for Mr. H. Holloway; furniture store, off Church Lane, for Mr. W. Knight; two houses, Trinity Avenue, for Messrs. A. P. Hawtin and Sons, Ltd.

Plans passed at SMETHWICK: Shops, house, and garage, Thimblemill Road, for Mr. J. Morris; eighteen houses, Kimberley Road, for Mr. H. Grindley; offices, Bridge Street, for Messrs. J. A. Phillips & Co., Ltd.; extensions to works, Alma Street, for Cranford Manufacturing Co., Ltd.

Messrs. Phillips Bros. are to erect forty houses off Milton Road, Sneyd Green, STOKE-ON-TRENT.

The STOKE-ON-TRENT Corporation has purchased 24 acres of land at Meir for a housing scheme.

The STOKE-ON-TRENT Corporation is obtaining land in Goms Mill Road for rehousing, in connection with the Longton clearance scheme.

The WALSALL Corporation is to extend the maternity hospital at Bloxwich, at an estimated cost of £16,000.

The Ministry of Health has held an inquiry into the application of the WALSALL Corporation, for approval for the extension of the Council house, at a cost of £18,000.

The Ministry of Health has held an inquiry into the scheme of the WILLENHALL U.D.C. for the erection of municipal offices and fire station in Walsall Street, at a cost of £16,400.

NORTHERN COUNTIES

The BIRKENHEAD Corporation has obtained sanction to borrow £40,000 for the erection of baths.

Plans passed at BIRKENHEAD: Two houses, Lingdale Road; alterations to shop, 128 Duke Street; shop, Old Chester Road; two houses, Waterpark Road; two houses, Woodchurch Road; four houses, Southdale Road; eight houses, Park Road South.

H.M. Office of Works is to erect an employment exchange at Shibdon Road, BLAYDON.

The BOLTON Corporation is to erect 152 houses in Higher Swan Lane and eight in Crumpsall Street.

Plans passed by BOLTON Corporation: Ten houses, Crompton Way, for Mr. G. Sykes; eight houses, Verdure Avenue, for Mr. A. S. Woods; church, Morris Green, for St. Bede's Church Council; town hall extensions, sessions house, etc., for the Corporation; school, Whitecroft Road, for Education Committee; extensions, Kensington Place, for Messrs. Moss and Smith, Ltd.; sixteen houses, Abingdon Road, for Messrs. Leigh Bros., Ltd.; twelve houses, Hollywood Road, for Messrs. T. P. Smith, Ltd.

The DURHAM County Public Assistance Committee has approved plans of the proposed new reception block at the county mental hospital, at a cost of £41,000.

The HULL Education Committee is to erect, by direct labour, the first portion of the Ainthorpe Grove school, at a cost of £14,010.

The HULL Corporation is to erect 102 flats in Southcoates Lane, at a cost of £45,215.

The HULL Corporation has obtained sanction to borrow £23,968 for the erection of admission quarters at the mental hospital.

An hotel is to be erected in New Street, HULL, from plans prepared by Messrs. Scarlett and Ashworth, at an estimated cost of £113,000.

The LEEDS Corporation is arranging for the erection of 5,000 houses within the next five years.

The MANCHESTER Education Committee is to enlarge the New Moston Council school, at a cost of £18,000.

The MANCHESTER Corporation has arranged a programme for the erection of 3,000 houses per annum.

The MANCHESTER Education Committee is to erect senior schools at Withington and Ladybarn, at a cost of £115,000.

The Lancashire C.C. is purchasing 64 acres of land at MARTON and 166 acres of land at SOUTH LATHON for the provision of small holdings.

The Cheshire C.C. has obtained land at NANTWICH, for the erection of a welfare centre.

The NEWCASTLE Education Authority is to provide new public elementary schools (a) for about 1,800 children in Dunstanborough Road, and (b) for about 500 children in Clifford Road.

The SHEFFIELD Corporation has sold a site on the Shiregreen housing estate to the Church of England authorities, for the erection of a church.

Plans passed at SHIPLEY: Two bungalows, Wrose Road, for Mr. H. Child; two garages and workshops, Wharncliffe Road, for Mr. W. Chippindale; thirty-eight houses, Glenside Road and Glenroyd, for Messrs. J. and P. Obank.

Plans passed at TYNEMOUTH: Layout, Hawkey's Lane estate, and six houses, North Chirton estate, for Messrs. F. R. N. Haswell and Son; three houses, Highbury Place, for Messrs. J. W. and D. Brannen; twenty houses, Brampton Place and Sunniside, for Mr. W. Moore; four houses, Fern Avenue, for Messrs. Cackett and Burns Dick and Mackellar; four houses, Manor Road, for Mr. J. R. Wallace; eight houses, Lansdowne Terrace, for Mr. J. Dixon.

The WARRINGTON Corporation is to purchase land near St. Elphin's Park (Fairfield Hall site), for a proposed new school.

The YORK Education Committee has obtained sanction for a loan of £7,500, for extending the Knavesmire school.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0¾
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	•1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11¼
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0¾
B_2	Aylesbury ..	S. Counties	1 3	11¼
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0¾
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_2	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0¾
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0¾
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1¼
A_2	Bewdley ..	Mid. Counties	1 5½	1 1¼
B_2	Bicester ..	Mid. Counties	1 3	11¼
	Birkenhead ..	N.W. Counties	•1 8½	1 3¼
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W.Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11¾
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0¾
A_2	Bournemouth	S. Counties	1 5	1 0¾
B_2	Bovey Tracey	S.W. Counties	1 3½	11¾
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1¼
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11¾
A_1	Bridlington	Yorkshire	1 6	1 1½
A_1	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0¾
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11¼
A_2	Bromsgrove	Mid. Counties	1 5½	1 1¼
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_1	Canterbury	S. Counties	1 3½	11¼
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0¾
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11¼
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11¼
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank ..	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0¾
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0¾
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0¾
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1¼
A_2	Cumberland	N.W. Counties	1 5	1 0¾
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11¾
A_2	Denbigh ..	N.W. Counties	1 5	1 0¾
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11¾
A_2	Driffield ..	Yorks	1 5	1 0¾
A_2	Droitwich ..	Mid. Counties	1 5½	1 1¼
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0¾
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	•1 5½	1 1¼
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0¾
A_2	Filey ..	Yorks	1 5	1 0¾
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone ..	S. Counties	1 3½	11¾
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11¾
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1¼
A_2	Goole ..	Yorkshire	1 5½	1 1¼
A_2	Gosport ..	S. Counties	1 5	1 0¾
A_2	Grantham ..	Mid. Counties	1 5	1 0¾
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	•1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11¾
A_2	Hatfield ..	S. Counties	1 5	1 0¾
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0¾
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0¾
B_2	Isle of Wight	S. Counties	1 3	11¼
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1¼
A_2	Kidderminster	Mid. Counties	1 5½	1 1¼
B_2	King's Lynn	E. Counties	1 3½	11¾
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1¼
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11¼
A_2	Lichfield ..	Mid. Counties	1 5½	1 1¼
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	•1 8½	1 3¼
A_2	Llandudno	N.W. Counties	1 5	1 0¾
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2¾
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0¾
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0¾
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0¾
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1¼
B_2	Minehead ..	S.W. Counties	1 3½	11¾
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11¾
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1¼
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1¼
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0¾
A_2	Oldham ..	N.W. Counties	1 5½	1 1¼
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1¼
A	PAISLEY ..	Scotland	•1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11¼
A	Perth ..	Scotland	•1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1¼
A	Plymouth ..	S.W. Counties	•1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0¾
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0¾
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0¾
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0¾
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0¾
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1¼
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11¼
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1¼
A_2	Skipton ..	Yorkshire	1 5½	1 1¼
A_2	Slough ..	S. Counties	1 5	1 0¾
A_2	Solihull ..	Mid. Counties	1 5½	1 1¼
A_2	South'pton ..	S. Counties	1 5	1 0¾
A_2	Southend-on-Sea	E. Counties	1 5½	1 1¼
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1¼
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland ..	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0¾
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0¾
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1¼
A_2	Wellingborough	Mid. Counties	1 5½	1 1¼
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1¼
A_2	Whitby ..	Yorkshire	1 5½	1 1¼
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester ..	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0¾
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1¼
A_2	Worksop ..	Yorkshire	1 5	1 0¾
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0¾
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11¾
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter . . . . . ,,	1 8
Joiner . . . . . ,,	1 8
Machinist . . . . . ,,	1 9
Mason (Banker) . . . . ,,	1 8
,, (Fixer) . . . . ,,	1 9
Plumber . . . . . ,,	1 8
Painter . . . . . ,,	1 7
Paperhanger . . . . ,,	1 8
Glazier . . . . . ,,	1 8
Slater . . . . . ,,	1 8
Scaffolder . . . . . ,,	1 4
Timberman . . . . . ,,	1 4
Navvy . . . . . ,,	1 3
General Labourer . . . ,,	1 3
Lorryman . . . . . ,,	1 5½
Crane Drivers . . . . ,,	1 7
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . . ,,	2 10 6
Hydrated Lime . . . . ,,	2 16 0
Portland Cement . . . ,,	2 6 0
Ferro-crete . . . . ,,	2 13 6
Thames Ballast . . . . per Y.C.	8 9
¾" Crushed Ballast . . . ,,	10 0
Building Sand . . . . ,,	10 6
Washed Sand . . . . ,,	11 6
2" Broken Brick . . . ,,	9 6
¾" ,, ,, . . . ,,	12 6
Pan Breeze . . . . ,,	6 6
Coke Breeze . . . . ,,	8 9

BRICKLAYER

	£ s. d.
Flettons . . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . . ,,	4 18 6
,, 2nd ,, . . . ,,	4 12 6
Blue Bricks, Pressed . . . ,,	9 18 0
,, Wirecuts . . . ,,	8 16 0
,, Brindles . . . ,,	8 0 0
,, Bullnose . . . ,,	10 8 0
Red Sand-faced Facings . . ,,	7 11 0
Red Rubbers for Arches . . ,,	15 0 0
Multicoloured Facings . . ,,	9 4 0
Luton Facings . . . . ,,	8 16 0
Midhurst White Facings . . ,,	**5 0 0**
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . . ,,	21 10 0
Headers . . . . . ,,	21 0 0
Bullnose . . . . . ,,	28 0 0
Double Stretchers . . . ,,	30 0 0
Double Headers . . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . . per F.R.	1 1	1 6
Bends . . . . . each	2 10	4 4
Taper bends . . . . ,,	6 3	7 2
Rest bends . . . . ,,	5 9	8 9
Single junctions . . . ,,	3 9	5 9
Double ,, . . . ,,	5 9	8 9
Straight channels . . . ,,	2 6	3 2
¾" Channel bends . . . ,,	7 8	—
Channel junctions . . . ,,	7 0	12 6
Channel tapers. . . . ,,	5 6	7 9
Yard gullies . . . . ,,	9 6	11 6
Interceptors . . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . . . each	6 0	13 0
Inspection bends . . . ,,	15 3	24 0
Single junctions . . . ,,	9 3	18 0
Double junctions . . . ,,	14 0	27 6
Lead wool . . . . lb.	6	—
Gaskin . . . . . ,,	5	—

MASON

The following d/d F.O.R. at Nine Elms	s. d.
Portland stone, Whitbed . . . . F.C.	4 6
,, ,, Basebed . . . . ,,	4 9
Bath stone . . . . . ,,	2 11
York stone . . . . . ,,	6 9
,, Sawn templates . . . . ,,	7 6
,, Paving, 2" . . . . . F.S.	1 8
,, ,, 3" . . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station.

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20"×10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . . as 1" F.S.	9
Deal, Joiner's, . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . ,, ,,	1 1
Deal floorings, ¾" . . . Sq.	1 1 0
,, 8" . . . ,,	1 3 6
,, 1" . . . ,,	1 5 6
,, 1¼" . . . ,,	1 11 0
,, 1½" . . . ,,	1 15 0
Deal matchings, ¾" . . ,,	16 0
,, ¾" . . ,,	17 6
,, 1" . . ,,	1 6 0
Rough boarding, ¾" . . ,,	18 0
,, 1" . . ,,	1 0 0
,, 1½" . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	¼"			½"			¾"			1"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	½"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket union . . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . . ,,	10	1/1	1/6	2/2	4/3
Tees . . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . . ,,	3½	5	8	1/–	2/–
Backnuts . . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . . .	55	,, steam .	40

FITTINGS.

Gas . . .	47½	Galvanized gas .	37½
Water . . .	42½	,, water .	32½
Steam . . .	37½	,, steam .	27½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ⅜" . . . ,,	10 0
,, ,, ½" . . . ,,	9 9
,, ,, ⅝" . . . ,,	9 6
,, ,, ¾" . . . ,,	9 6
,, ,, ⅞" . . . ,,	9 0
,, ,, 1" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0

Cast-iron rain-water pipes of ordinary thickness metal . F.R.	3" s. d. 7	4" s. d. 10
Shoes . . . . each	2 3	3 3
Anti-splash ,, . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6

Half-round rain-water gutters of ordinary thickness metal . F.R.	5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse ,, . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	23 0
,, drawn pipes . . . ,,	23 6
,, soil pipe . . . ,,	26 6
,, scrap . . . ,,	13 0
Solder, plumbers' . . lb.	1 0
,, fine do. . . . ,,	1 4
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . '	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . . ,,		6
Hartley's rough rolled ,,		9
Do. wired plate . . . ,,		1 3
¼" Polished plate, n/e 1 ,,	1 0 to	1 3
,, ,, 2 ,,	1 2 ,,	1 7
,, ,, 3 ,,	1 7 ,,	2 5
,, ,, 4 ,,	2 1 ,,	2 11
,, ,, 6 ,,	2 3 ,,	3 2
,, ,, 8 ,,	2 6 ,,	3 6
,, ,, 12 ,,	2 9 ,,	3 8
,, ,, 20 ,,	3 0 ,,	3 11
,, ,, 45 ,,	3 3 ,,	4 1
,, ,, 65 ,,	3 7 ,,	4 6
,, ,, 90 ,,	3 10 ,,	4 9
,, ,, 100 ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 ,,		1 0
,, ,, ,, 2 ,,		1 3
,, ,, ,, over 2 ,,		1 9
,, ,, plate, n/e 1 ,,		1 6
,, ,, ,, 2 ,,		3 0
,, ,, ,, 5 ,,		4 0
,, ,, ,, 7 ,,		5 0
,, ,, ,, 15 ,,		6 0
,, ,, ,,over 15 ,,		7 6
Putty, linseed oil . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 4
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12" deep and cart away	Y.S.	3 6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10 0
" to form basement n/e 5' 0" deep and cart away	"	11 0
" " 10' 0" deep and cart away	"	11 6
" " 15' 0" deep and cart away	"	12 0
If in stiff clay add	"	3 0
If in underpinning "	"	5 0
Digging, return, fill and ram	"	5 0
Planking and strutting to sides of excavation	F.S.	1 0
" " to pier holes	"	6
" " to trenches	"	6
" " extra, only if left in	"	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	"	1 13 6
" " " (4-2-1)	"	1 18 6
" " " underpinning	"	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
" junctions	"	3 9	4 6
Gullies and gratings	"	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
" " in cement	"	34 0 0
" Stocks in cement	"	41 10 0
" Blues in cement	"	62 0 0
Extra only for circular on plan	"	3 0 0
" backing to masonry	"	2 0 0
" raising on old walls	"	3 0 0
" underpinning	"	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	"	1 0
" red brick facings	"	1 6
" blue brick facings	"	1 9
" glazed brick facings	"	4 6
Tuck pointing	"	10
Weather pointing	"	4
Slate dampcourse	"	1 0
Vertical dampcourse	"	1 3

ASPHALTER

		s. d.
½" Horizontal dampcourse	Y.S.	5 6
½" Vertical dampcourse	"	7 6
½" paving or flat	"	5 6
1" paving or flat	"	6 6
1" × 6" skirting	F.R.	1 0
Angle fillet	"	2
Rounded angle	"	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do. all as last	"	15 6
Artificial stone and do.	"	16 6
York stone templates, fixed complete	"	14 0
" thresholds	"	16 0
" sills	"	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4 5 0
Do., 18" × 9"	"	4 2 0
Do., 24" × 12"	"	4 12 0
Westmorland slating, laid with diminished courses	"	6 10 0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4 0 0
Do., all as last, but of machine-made tiles	"	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
" to stanchions	"	1 0
" to staircases	"	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	"	6 9
" " roofs	"	8 3
" " trusses	"	9 0
" " partitions	"	12 0
½" deal sawn boarding and fixing to joists	Sqr.	1 17 6
1" " " " "	"	2 1 6
1¼" " " " "	"	2 7 6
¾" × 2" fir battening for Countess slating	"	12 6
Do. for 4" gauge tiling	"	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
" " " 2 "	"	3 0
" " " 3 "	"	3 6
Stout herringbone strutting to 9" joists	F.R.	1 0
1" deal gutter boards and bearers	F.S.	1 4
1¼" " " " "	"	1 8
2" deal wrought rounded roll	F.R.	9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
1¼" do.	"	3 4 0
1½" do.	"	3 13 0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1¼" do.	"	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1¼" deal moulded sashes of average size	F.S.	2 3
2" " " "	"	2 6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ¾" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4 3
2" " " "	"	4 6
Extra only for moulded horns	Each	9
1¼" deal four-panel square, both sides, door	F.S.	2 6
2" " " "	"	3 0
1¼" " but moulded both sides	"	3 0
2" " " "	"	3 6
4" × 3" deal, rebated and moulded frames	F.R.	1 6
4½" × 3½" " " "	"	2 0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3 0
1½" deal moulded wall strings	"	2 6
1½" " outer strings	"	2 9
Ends of treads and risers housed to string	Each	2 0
3" × 2" deal moulded handrail	F.R.	1 6
1" × 1" deal balusters and housing each end	Each	2 6
1½" × 1½" " "	"	3 3
3" × 3" deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	"	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders and hoisting and fixing in position	"	1 3 0
Do. stanchions with riveted caps and bases and do.	"	1 2 0
Mild steel bar reinforcement ½" and up, bent and fixed complete	"	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 19 6
Do. in flashings	"	2 2 0
Do. in covering to turrets, etc.	"	2 9 0
Do. in soakers	"	1 15 0
Labour to welted edge	F.R.	3½
Open copper nailing	"	3½
Close "	"	4½

		½" s. d.	¾" s. d.	1" s. d.	1¼" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 3	1 8	2 2	2 9	3 10	—
Do. soil pipe and fixing with cast lead tacks	"	—	—	—	—	—	6 0
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	"	7	9	1 0	1 3	2 0	—
Boiler screws and unions	"	3 6	4 0	5 6	8 0	—	—
Lead traps	"	—	—	—	7 6	10 6	—
Screw down bib valves	"	7 6	10 6	12 6	—	—	—
Do. stop cocks	"	10 0	12 0	16 0	23 6	56 6	—
4" cast-iron ½-rd. gutter and fixing	F.R.						1 3
Extra, only stop ends	Each						1 0
Do. angles	"						1 6
Do. outlets	"						3 0
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.						1 6
Extra, only for shoes	Each						2 6
Do. for plain heads	"						5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	"	5 6
Lathing with sawn laths to ceilings	"	1 6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"	2 6
Do. vertical	"	2 9
Rough render on walls	"	2 3
Render, float and set in lime and hair	"	3 0
Render and set in Sirapite	"	3 3
Render, backing in cement and sand, and set in Keene's cement	"	4 6
Extra, only if on lathing	"	9
Keene's cement, angle and arris	F.R.	8
Arris	"	3
Rounded angle, small	"	3
Plain cornices in plaster, including dubbing out, per 1" girth	"	2
1" granolithic pavings	Y.S.	5 0
1½" " "	"	6 0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1 2 6
9" × 3" " " "	"	1 7 6
Extra, only for small quadrant angle	F.R.	9

GLAZIER

		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	"	1 0
Arctic glass and glazing with putty	"	1 2
Cathedral glass and do.	"	1 3
Glazing only, British polished plate	"	8
Extra, only if in beads	"	2
Washleather	F.R.	4

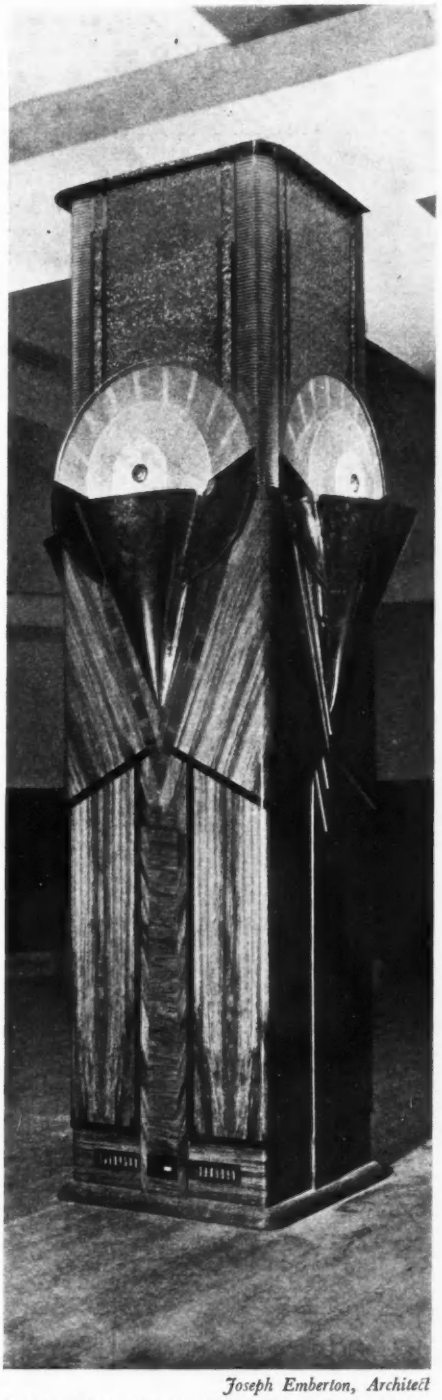
PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	"	1 0
Do. with washable distemper	"	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3 3
Do. on woodwork	"	3 6
Do. on steelwork	"	3 0
Do. and brush grain and twice varnish	"	5 0
Stain and twice varnish woodwork	"	1 11
Stain and wax-polish woodwork	"	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 0
Hanging ordinary paper from	"	3 0

STANCHEON CASING WITH LIGHT FITTINGS

SCALE DRAWINGS

BOWLS PAVILION IN A KENTISH VILLAGE



Joseph Emberton, Architect

A STANCHEON CASED WITH MIRRORS, LIGHTS AND WALNUT VENEER

THE stancheon casing illustrated by the photograph above and by half-inch scale details overleaf, comes from the new Empire Restaurant at Olympia.

In this hall, the rich figured panelling in Ancona walnut (veneered on laminated board), the walnut doors to the entrance and the terrazzo landing and steps, all go to produce a rich yet simple effect; and these stancheon casings have been designed in keeping with the general decorative scheme of the room.

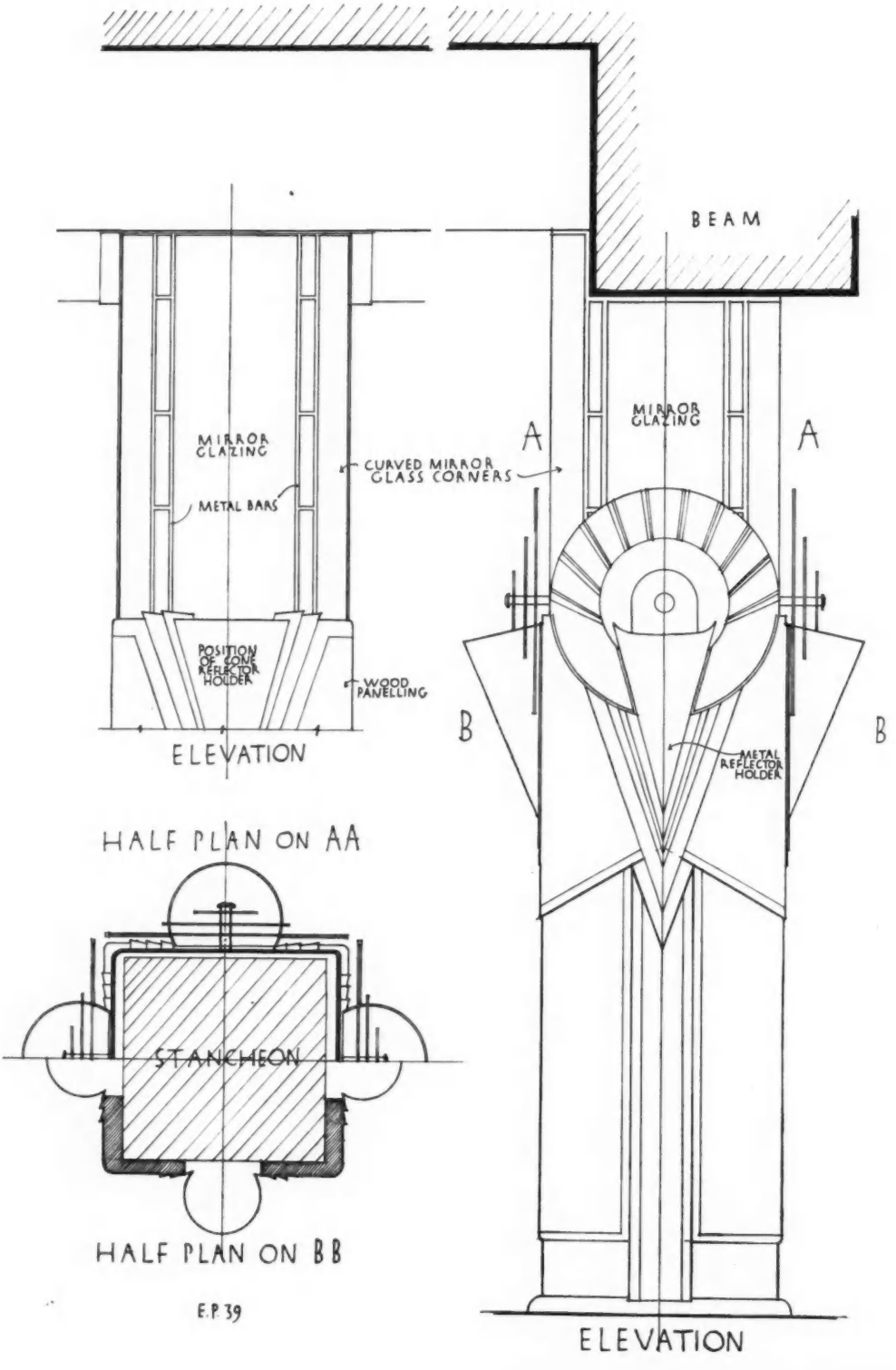
The upper part consists of panels of mirror glazing divided by metal bars. Below are four sets of semi-circular sandblasted glass diffusers, placed over cone reflectors, which are chromium-plated, and give an interesting outline to the columns.

Below, the casing is of veneered walnut, treated in the same manner as the other panelling in the room.

OLYMPIA EXHIBITION HALLS, LONDON: EMPIRE RESTAURANT

HALF-INCH SCALE DETAILS OF LIGHT FITTINGS AND CASING & STANCHEON

JOSEPH EMBERTON, ARCHITECT



E.P. 39

For photograph and description see previous page.

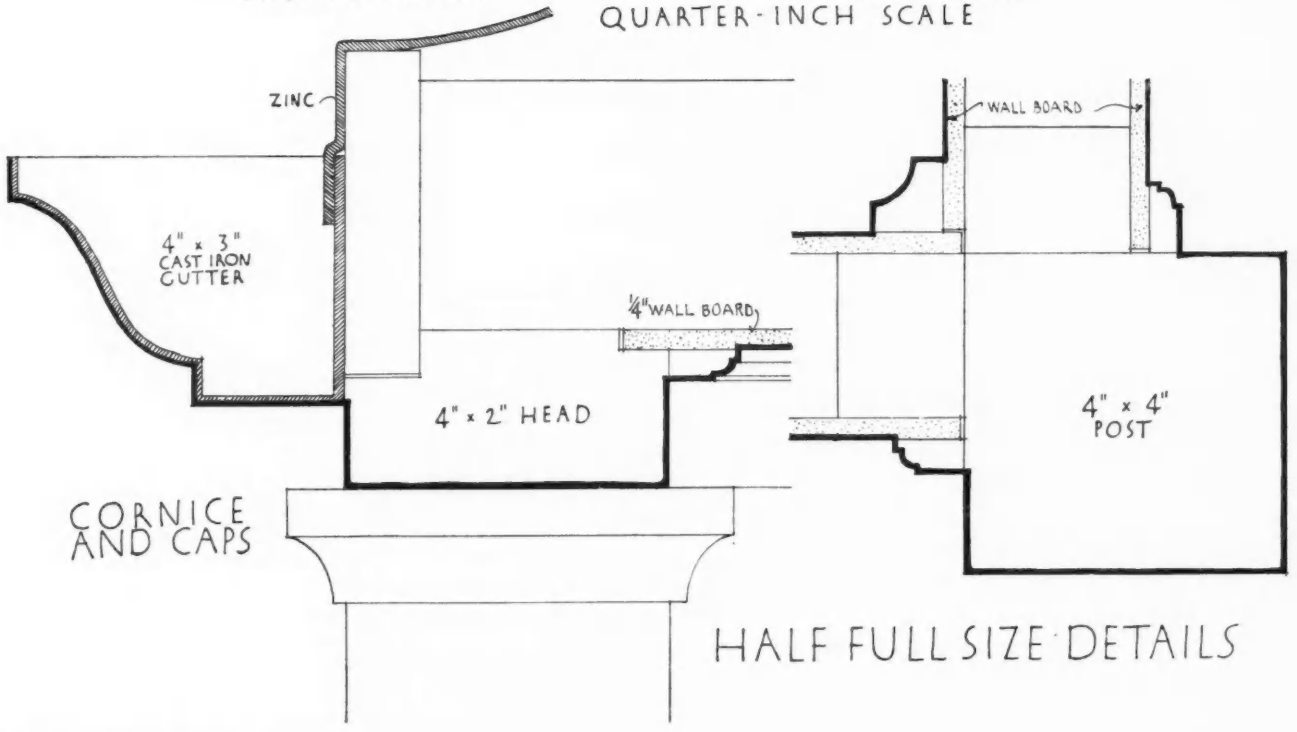
BOWLS PAVILION
KEMSLEY VILLAGE

E. MAXWELL FRY, ARCHITECT
(ADAMS, THOMPSON AND FRY)



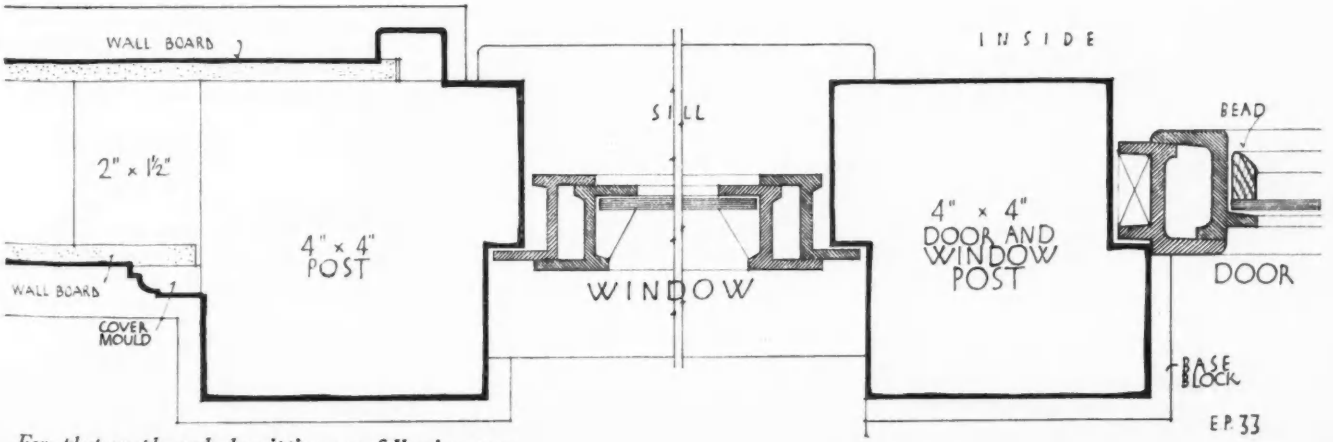
END ELEVATION — HALF FRONT

QUARTER-INCH SCALE



CORNICE AND CAPS

HALF FULL SIZE DETAILS



EP. 33

For photograph and description see following page.



E. Maxwell Fry (Adams, Thompson and Fry), Architect

BOWLS PAVILION, KEMSLEY VILLAGE, KENT

IT is not often that an architect has the chance of proving that a well-designed building need cost no more than an undistinguished stock "portable" erection, but in this case the opportunity was given of competing in price with a catalogue product, and succeeded financially; and with what aesthetic result the photograph above will show.

The drawings on the preceding page give detail elevations of this pavilion to a scale of four feet to one inch and are self-explanatory.

Half full-size details are given, showing the treatment of door and window openings in the stud walls, which are cased with patent board—a method of construction admittedly not permanent in the usual sense but at the same time completely weatherproof and admirably suited to this type of building.

WORKMEN'S FLATS IN SWEDEN

ILLUSTRATIONS OF DETAILS OF THE BOSTRÖM DWELLINGS, GOTHENBURG



[*Andrew Person, Architect*

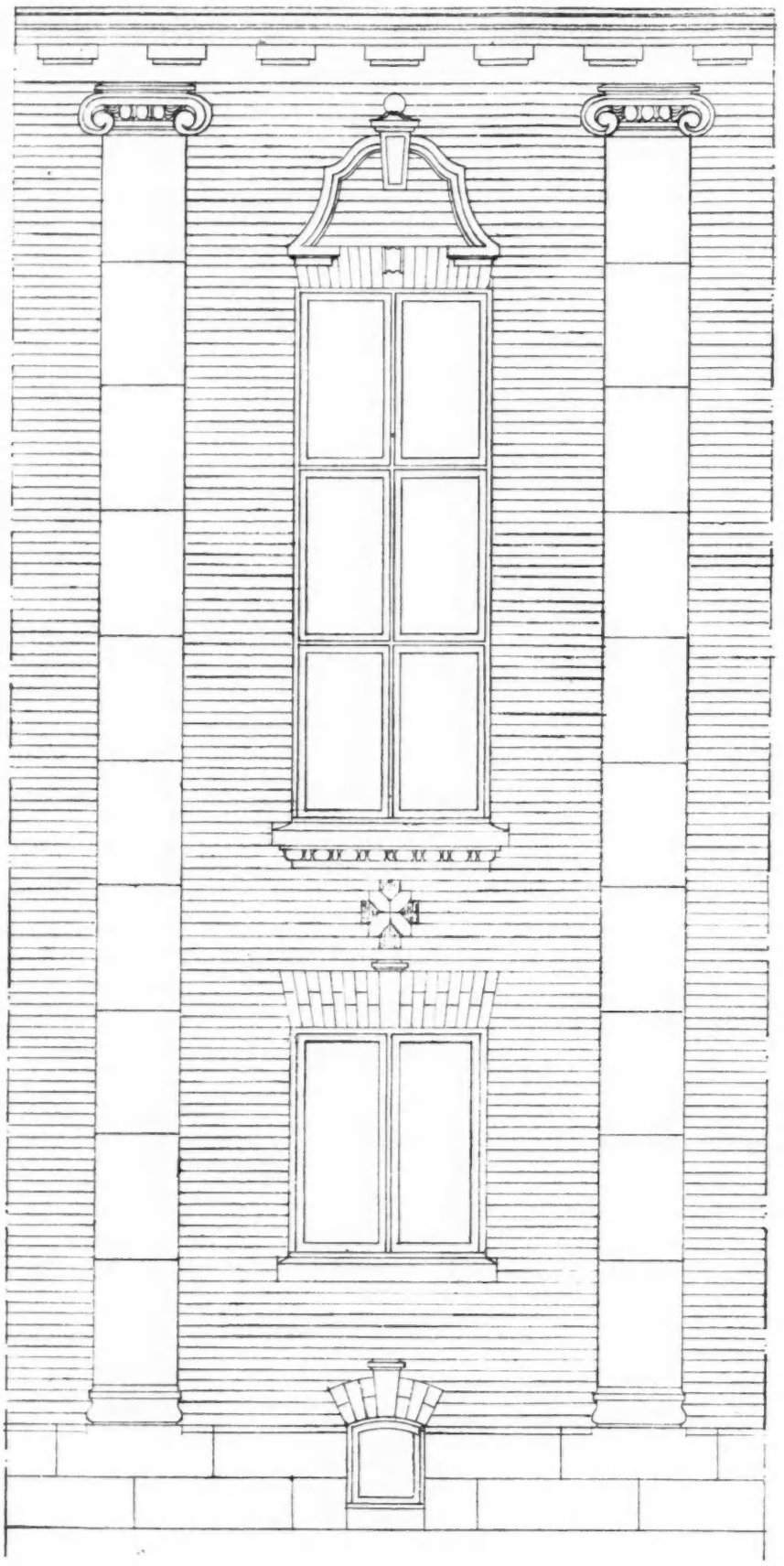
THE CENTRAL FEATURE OF THE KUNGSLADUGÅRDSGATAN FRONT

THE Boström dwellings (for plans and general views see supplement with issue for February 25) belong, in point of design, quite evidently to the school of Swedish "Queen Anne," of which Östberg's City Hall is the crowning achievement. They are free, however, from the Oriental associations so conspicuous in that building, and for these are substituted motifs more akin to the neo-Grec spirit as revealed in some of the Gothenburg Exhibition buildings. The delicacy of modelling of the brickwork facades is also more typical of the end of the eighteenth century than of its earlier years.

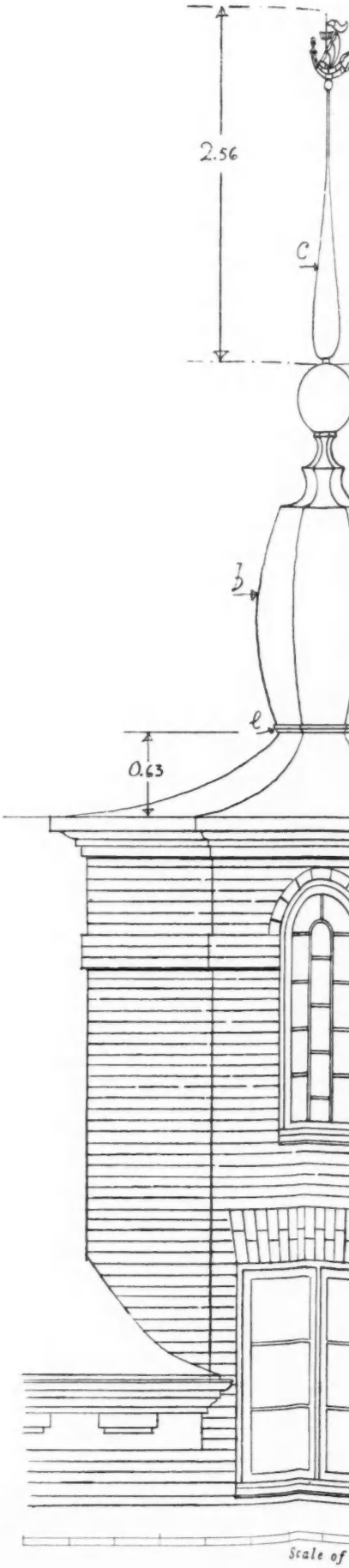
The central feature illustrated on the right, overleaf, and also, photographically, on the last page, is that from the Oxhagsgatan front. Note how the diagonally barred windows (unique in the building) unite with the doorway in forming an unmistakable central feature with the most economical means. The doorway itself is typical of a whole series, the detail of which varies from each to the next.

The left-hand detail drawing is of one of the bays in the central feature on the Kungsladugårdsgatan front, also illustrated above. In order to avoid a repetition of the doorway, a drawing of one of the side bays is selected.

The beaten copper cupola of the centre drawing is not the principal one, which sits on the ridge of the roof, but a subsidiary one at one end of the building, built up on the face of the wall, as shown in the photograph on the last page.



Scale of Feet



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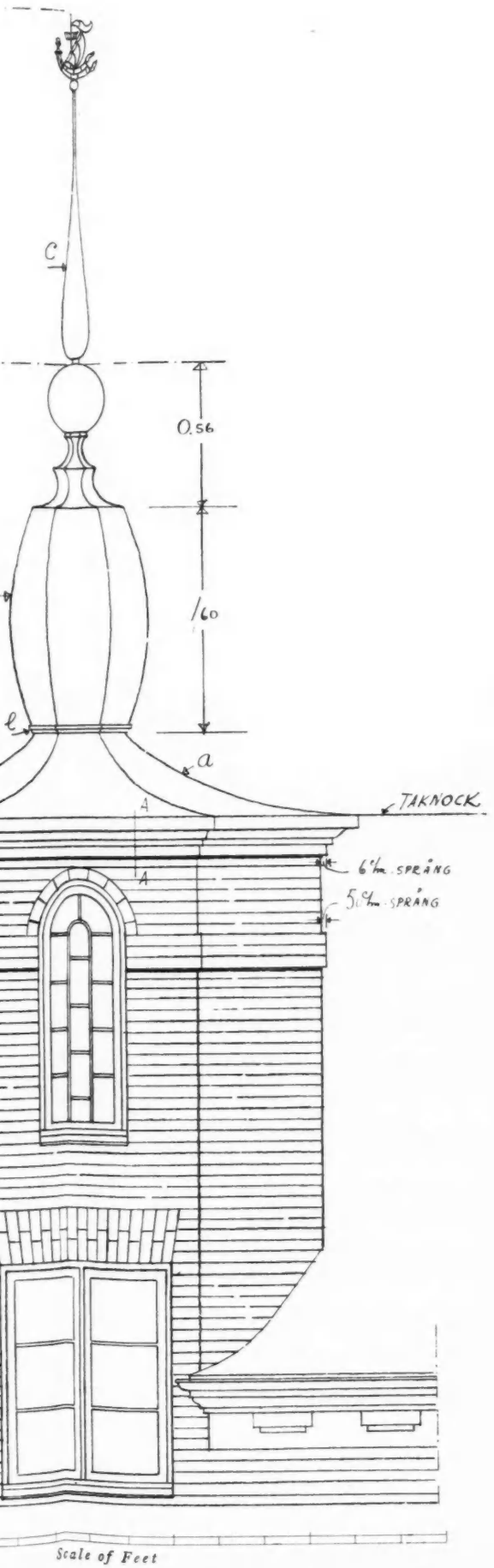

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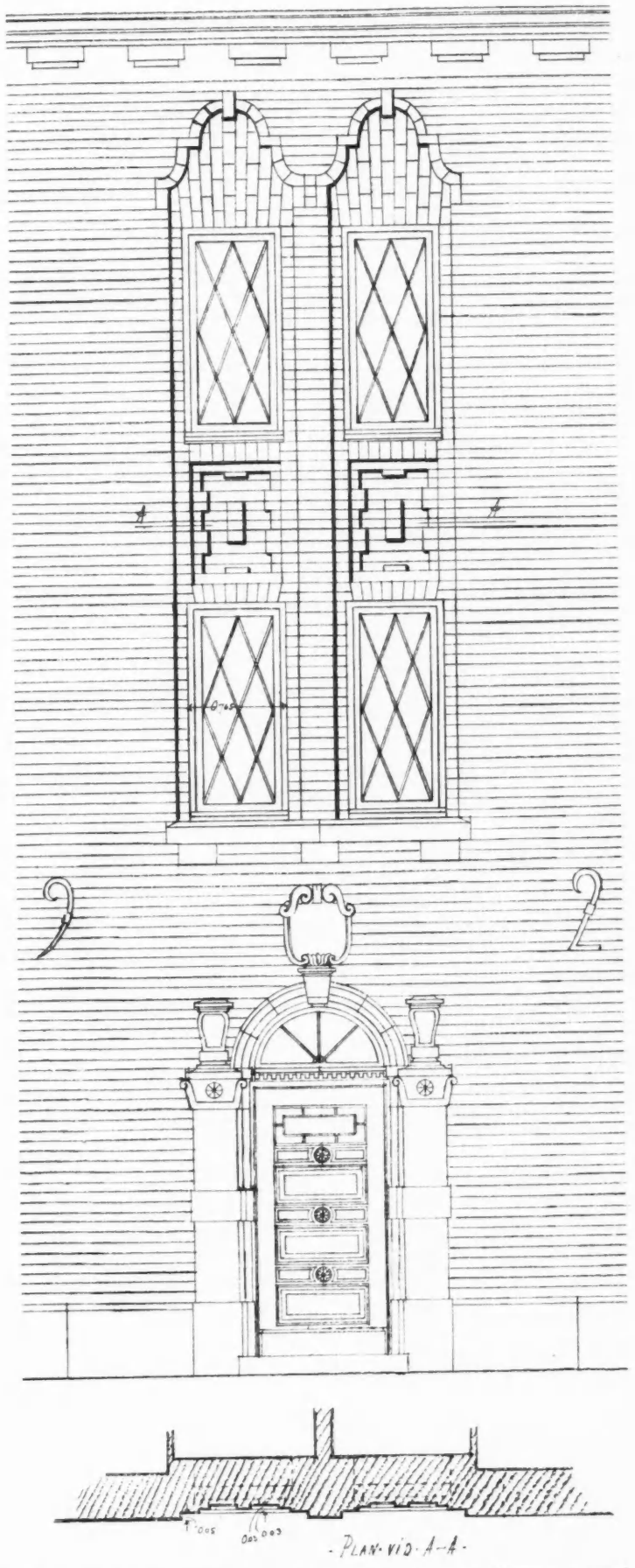

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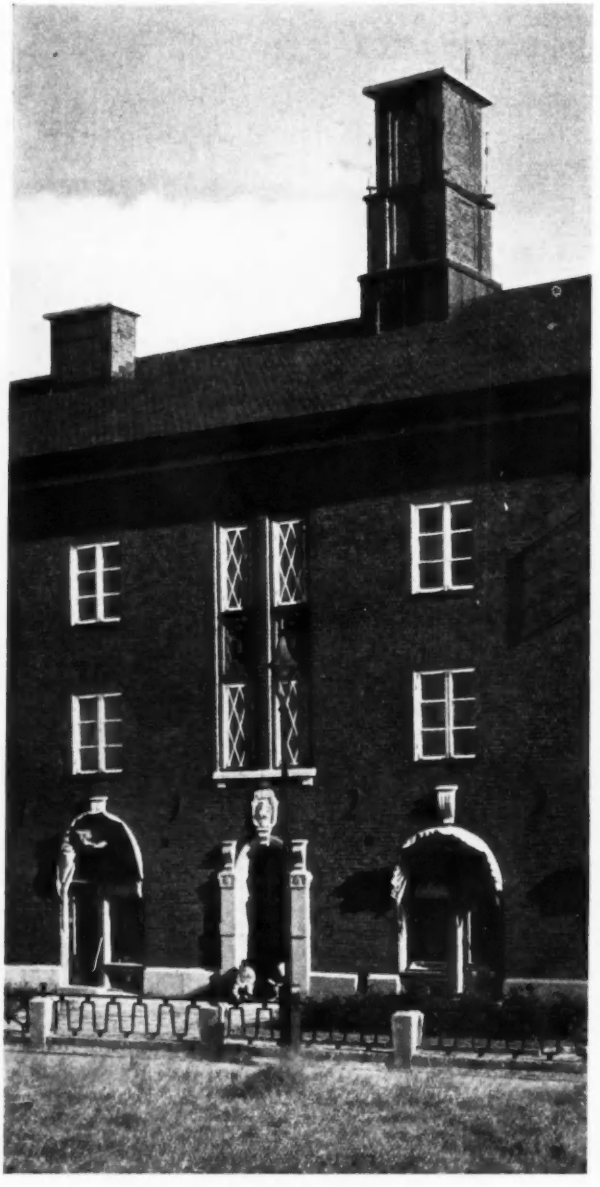


THE CENTRAL FEATURE
OF THE OXHAGSGATAN FRONT



BUILT-OUT BAY WINDOWS
AND CUPOLA OF BEATEN COPPER

SELECTED PRECEDENTS:

CAST IRON AND ITS FUTURE: ii



FIREPLACE IN S.S. KUNGSHOLM, BY ANNA PETRUS



A COTTAGE BAKING-OVEN OF THE FLAXMAN ERA

FIREGRATES and heating apparatus generally are about the commonest objects made of cast-iron today. Yet no department of cast-iron manufacture has shown a greater poverty of design in modern times. The newest and most typical products we have are undoubtedly the coal-burning grates in which the visible iron casting consists chiefly of a narrow rim covering the edge of the marble or tile surround. Cast-iron surrounds have almost gone out of use; yet what could be more efficient and yet graceful than the simple reeded panels, first used in the eighteenth century, on a decorated surround like the one from the Swedish liner Kungsholm *(illustrated above, on the left) modelled by Miss Anna Petrus and cast at the Näfvequarn foundry?*

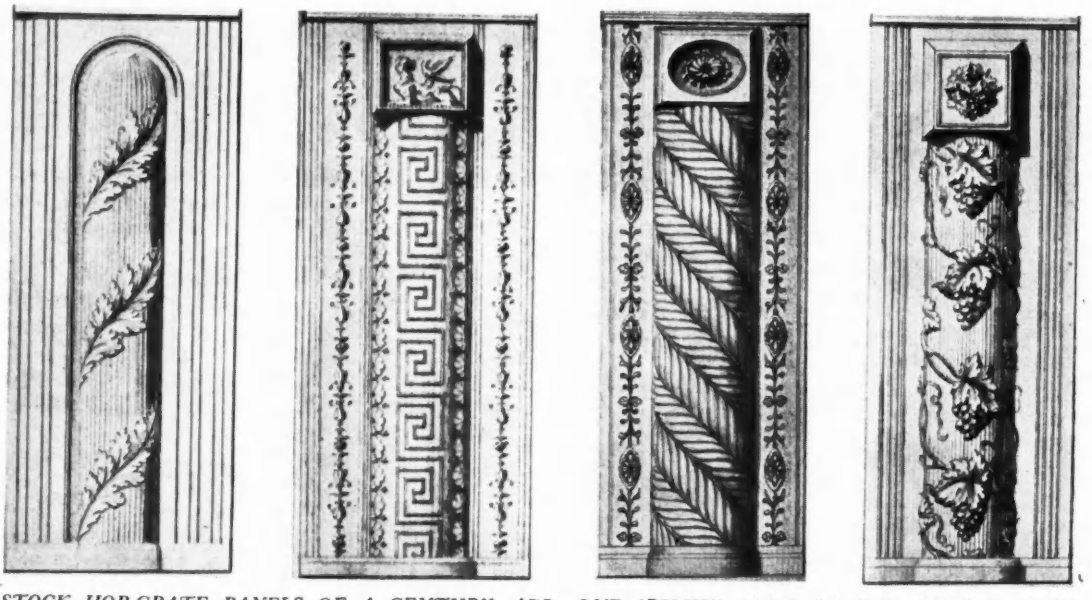
The picture on the right shows what English ironfounders were able to do when, a century ago, they still were game enough to get designers like Flaxman to model the front of a humble cottage baking-oven.

Overleaf are some of the standard hob-grate panels an architect was able to purchase in those days, together with a typical grate in which one of the patterns is shown fixed (from Medford House, Mickleton, Glos.). The baking-oven and panels are illustrated by courtesy of the Carron Company, their originators. C. B.

(The first illustrated note on "Cast Iron and its Future" appeared last week.)

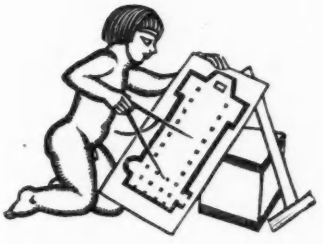


FIREPLACE AT MEDFORD HOUSE, MICKLETON, GLOS.



STOCK HOB-GRATE PANELS OF A CENTURY AGO, ONE (RIGHT) USED IN THE DESIGN ABOVE

THE ARCHITECTS' JOURNAL



WEDNESDAY, MARCH 18, 1931

SWEDISH ART

An Example to British Manufacturers

THE Exhibition of Swedish Industrial Art which was opened yesterday by H.R.H. the Crown Prince of Sweden is an event of transcending importance to English manufacturers and designers because, if we are fortunate, it may mark the turning-point of our diminishing fortunes; not so much by itself alone, but because it represents the fruits of long efforts to give concrete ratification to the assertions of such bodies as the Design and Industries Association that at the basis of successful manufacture lies DESIGN.

This exhibition, to everyone unacquainted with Sweden, will come as a revelation of beauty. There have been larger exhibitions, but none that within the compass of a few rooms has gathered together so varied a representation of industrial output.

Sweden has never suffered from an industrial revolution, and, so far as that fortunate country is concerned, the association of handcrafts with the term Industry does not come amiss. But though Sweden has escaped the worst ravages of unfettered expansion, the movement represented by this exhibition is a revival, a renaissance of taste and artistic achievement.

In part it is a movement imposed by one section of the community, and that a highly cultured and sensitive section, upon the people generally.

If that were all it were, it would have remained an esoteric cult, carried, as so many crafts and art works are carried in England, by the careless workaday business of the world. But it is much more than this.

When one speaks of the glass *design* of Simon Gate one speaks of the glass *work* of Orrefors. The two are inseparable, artist and manufacturer; and from that living collaboration every thought of amateurism, of arty-craftyism and elegant dilettanteism fly, and with them fly also those worse evils that throng the manufacturing houses of England—false artyism, false craftyism, reproductionism and rank copyism.

From all one can hear, these are the ruling impulses in that exhibition by which South Americans are at this moment judging us. Their sway over ill-fated Wembley was complete—and disastrous. Even into the last exhibition at Olympia they entered largely enough to cancel what good work found an honourable place there—and so it goes on, unless or until we can persuade enough manufacturers that salvation lies in the way Sweden has taken.

It should be clearly understood that this exhibition of Swedish manufacturers is here by *our* invitation, because the artists and manufacturers of Sweden, working together, have made such beautiful things that their fame has spread the world over. The truth of this will be apparent to those who have perused the two special issues of *The Architectural Review* devoted to Swedish art. It is also emphasized in the new book, *Modern Swedish Decorative Art*, by Dr. Nils G. Wollin, just published by the Architectural Press.

It is no more than natural that the Swedish export trade in these articles is showing increases that will make our manufacturers' mouths water when they realize their full importance, and set them against our own. But the moral is clear, both to manufacturers and designers, and action lies first with us the designers, the creators of taste. It is for us to work the miracle that will leaven with sweet leaven the exceeding great lump of Industrial England.



39–45 FINSBURY SQUARE, E.C.

The façade of the new office building on the south side of Finsbury Square. It has a frontage of 196 ft. to the square and one of 120 ft. to Cross Street. Lighting areas, running south to north, and 20 ft. wide, give direct sunlight to the offices.

The building is ten stories high, nine of which with large open spaces are available for letting as offices. Heating chambers, etc., are placed in the sub-basement.

Sir Giles Gilbert Scott, R.A., and Mr. F. R. Gould Wills are the associated architects.

NEWS & TOPICS



Arthur J. Davis, whose paper on contemporary decoration, read before the Royal Society of Arts last week, is summarized on page 419, placed artists in two camps—the blind lovers of everything savouring of archæological accuracy, and the supporters of the New Movement, who intended to break with everything accepted hitherto. He believes the right solution is to steer a middle course between the Charybdis of slavish repetition and the Scylla of uncontrolled licence.

THE REGISTRATION BILL

STEADY and persistent obstruction to the Architects (Registration) Bill continues. Last Thursday the old trick of "no quorum" was successfully tried. The quorum of members for a standing committee is twenty, and if that number is not forthcoming the committee stands adjourned, valuable time thus being wasted. If a quorum is not obtained for two successive sittings, the Bill under consideration goes to the bottom of the list, which means that it is "dead" for the rest of the session. No quorum could be obtained last Thursday. It is difficult to understand the implacable hatred of the R.I.B.A. which fills the breasts of Mr. McShane and some of his Labour colleagues. They read sinister designs into any proposal with which the Institute may be even remotely connected. While such hostility persists it is hard to see how any Bill can become law.

THE DATA OF HYGIENE

It was Leonard Hill who disposed of the prevailing theory that the carbon dioxide percentage in the air was the best register of good or bad ventilation. He proved that the physical properties of the air and their influence on the temperature-regulating mechanism of the body are the cause. The temperature mechanism of the body is influenced by the cooling power which the air and surroundings exert, and this in turn depends on the temperature of the air, the temperature of the surroundings, the humidity of the air, and air movement. Leonard Hill's Kata-thermometer assesses the cooling effect of these factors in one measurement—namely, the rate of cooling or cooling power.

★

In the new experimental room at the London School of Hygiene it is possible by means of new plant to reproduce very varied climatic conditions, any temperature from 40° to 140°, and almost any degree of humidity. Experimental subjects rest or work in this room, and by observation of pulse, body temperature, etc., it is possible to study the effect of air conditions on the human body, and what are good and bad conditions for the particular type of work involved.

FOR THE PRESERVATION OF ITALY

The National Committee for the Defence of the Artistic, Historical and Natural Beauties of Italy has a high-sounding name, but a very business-like way of going about its business. There is a law in Italy that rather resembles the 1920 Ancient Monuments Act in its comprehensiveness, even adding to the wide powers of this Act a control over landscape or panorama that may be endangered. The law has been in force eight years, 4,662 notifications have been sent out, and the intangibility of about 1,000 buildings has been ensured.

★

There are many difficulties to be met with, not least among which is the difficulty of dealing fairly with old cities wherein modern life must be lived in surroundings that might invite a sort of museum-like preservation from certain types of zealot. Another is, of course, the rapid industrialization of Italian cities, with its concomitants of speculation and vandalism. Hydro-electric schemes have given the committee many a bad jolt, even though they have time and again saved what might have been ruined. But they are backed by the Government, and their bold actions in what have appeared to be public disapprobation have brought them rewards as great as, and sometimes greater than, have come to those who labour in England for the same fine cause.

INQUESTS ON FIRES

It is still only in the City of London that inquests are held upon fires. Dr. F. J. Waldo, the City Coroner, has been assiduous in the matter, and feels strongly that the powers under which he acts should be extended to Southwark, the other part of his district, and, in fact, generally. He tells me that he made 197 private personal inquiries into fires, fatal and non-fatal, in the course of last year. As long ago as 1909 a Home Office Committee recommended that "the benefits of fire inquiry should be extended to the country at large"; in 1921, verdicts of arson were actually returned in eleven out of twenty-five cases, the effect being manifest, as in later years no inquests were necessary; in 1923 the Royal Commission on Fire Prevention were unanimously of opinion that provision for fire inquiry should be made in England, Wales and Scotland. The moral is obvious; yet nothing is done.

"THE HONEYWOOD SETTLEMENT"

It is with relish that I recall, now that *The Honeywood Settlement* has appeared in book form, those latter adventures of friend Spinlove that proceeded as a series of narrow escapes leading him, nevertheless, into safe harbour. Was architect ever before given such a chronicler as Karshish? And where before has so much wisdom been united with so much humour in the portrayal of our professional lot? That there should be imitators is natural. Nevertheless, Karshish is, in fact, inimitable, and has a genius for recording just that side of our job that has escaped most memoirs and the wise sayings of our ancients.

AN ECHO FROM THE ALBERT HALL REACHES SCOTLAND

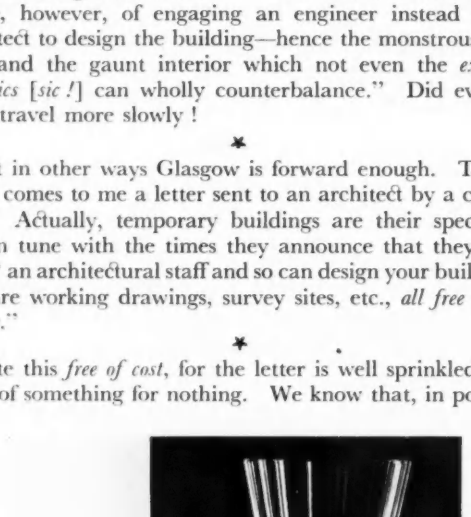
The Glasgow Herald, in discussing the Albert Hall, makes the following observation: "The initial mistake was made, however, of engaging an engineer instead of an architect to design the building—hence the monstrous glass roof and the gaunt interior which not even the *excellent acoustics* [*sic !*] can wholly counterbalance." Did ever an echo travel more slowly !

*

But in other ways Glasgow is forward enough. Thence there comes to me a letter sent to an architect by a certain firm. Actually, temporary buildings are their speciality, but in tune with the times they announce that they have also "an architectural staff and so can design your buildings, prepare working drawings, survey sites, etc., *all free of cost to you.*"

*

Note this *free of cost*, for the letter is well sprinkled with lures of something for nothing. We know that, in point of



At the Swedish Exhibition of Industrial Arts and Crafts, Dorland House, Lower Regent Street: a study of glassware, by the firm of Kosta. Furniture, carpets, ceramics, cast iron, and gold and silver ware are among the industries represented.

fact, the low-paid architectural staff of no firm can hope to produce anything worthy the name of architecture, while the very combination of building and architecture forbids the proper practice of the latter, and this firm, which has probably worked for architects at different times, must realize perfectly well what they are about. Well, the remedy lies with Glasgow's architects.

SOUTHWARK'S NEW MUNICIPAL BUILDINGS

I am glad to hear that the Southwark Borough Council has decided to hold a competition for their new town hall and municipal offices to be erected on the site of the existing town hall in Walworth Road, S.E., at a cost of £255,000. When the question of new buildings was mooted last year, I advocated, in these columns, that an open competition should be held. So far it has been decided to appoint Mr. Louis de Soissons as assessor, and it is probable that six architects will be invited to submit designs. Personally, I feel limited competitions in London are sometimes a mistake. In this case, for instance, the younger members of the architectural profession could be afforded the opportunity of pitting their creative abilities against those of brother practitioners who have already carved a name for themselves.

BYLAWS OF SPECIFICATION TYPE

Tomorrow (19th) a further step will be taken in the establishment of the Technical and Economic Advisory Council for the Building Industry. For the present this is being undertaken by the already overworked staff of the Royal Institute of British Architects. It is hoped, however, that the various professional institutions will contribute liberally so that a part-time secretary may be engaged and office accommodation provided away from Conduit Street. The Council intend to follow up the visit paid in December by Lord Ebury and Major Maurice Webb to the County Hall and are likely to press for the London Building Act to be amended at the earliest possible date and bylaws substituted for the present measure. The Council is of the opinion that bylaws of the specification type will be more appropriate for all technical details of construction.

BUY BRITISH GRAVESTONES

Those architects, who are so frequently asked to advise clients about gravestones in churchyards, should note the warning given in the recent report of the Central Council for the Care of Churches. This Council refers to the widespread tendency to use imported gravestones of Italian marble rather than those made of British stone by British craftsmen. The objection raised to Italian marble is not primarily on economic but on æsthetic grounds. The report points out that this material is quite unsuitable to the English climate, and that its extensive use often results in spoiling the quiet beauty of many of our churchyards. A list is given in this report of various alternatives to Italian marble supplied by British firms.

A CUBE OF FIRE BY NIGHT

Motoring homeward the other night through one of the more remote London suburbs, the keynote of which I remembered as being dignified respectability, there smote upon my eye the spectacle of a concrete house of the cubical, le Corbusier, school-floodlit. I had the curiosity to stop and give it closer inspection. Undoubtedly it was a brilliant piece of work, not without a blatant effectiveness. Then came my real shock. Nicely placed so as to catch the light from an adjacent street lamp was a neat brass plate, bearing the legend: "J. H. ——, architect." Well, well ! Of course, if a man feels like floodlighting his house there is no law to stop him. Among architects, however, I said to myself, only a Smarterly would do this thing. But the name was not his—presumably it belongs to a pupil of his, desirous (if that be possible) of going one better.

*

The Awakening of the Middle Classes

SIR,—It is time builders were warned about building faulty houses. Thousands have sprung up in some places recently and more are being erected.—M. A. M.

From *The Daily Mail !*

ASTRAGAL

GROUTING AT GOODRICH CASTLE

MR. C. R. PEERS (H.M. Office of Works), in the course of a paper on "The Treatment of Old Buildings," read at the R.I.B.A., on Monday night, made some interesting remarks concerning the repair work which had been carried out at Goodrich Castle, Herefordshire.

Built, he said, of a red sandstone quarried on the spot, its materials were of very unequal quality; and the masonry, set in mortar of no great original strength, was suffering severely from wind, weather and the luxuriant vegetation of the Wye Valley. The castle was not only in danger of collapse, but had actually experienced a heavy fall of masonry just before it was transferred to the Commissioners of Works. The main walls were still standing to a height of forty feet or more, and dated from a late-thirteenth-century setting out, enclosing a small Norman keep which took the architectural history back to the days of Henry II. A building of this description was calculated to provide object-lessons in the need for thoroughness in repair. Strength could gradually be restored to the walling by systematic raking out of perished and useless mortar and replacement by new, but in spite of all precautions it might happen, as it did there, that the masonry was in no condition to stand the very moderate disturbance so caused.

The south-west tower began to show unmistakable signs of moving bodily outwards into the moat, and had to be hastily tied back with steel hawsers and heavily shored. The tower replaced an earlier one of smaller diameter, and suffered from unequal foundations, but the proximate cause of the movement was the perishing of the face work in the lower part, which put a strain on the core beyond its power of resistance. It was here necessary to restore the area of support, and to insert new face work—a proceeding quite alien to their general methods.

The consolidation of the core by grouting made all sound in the event, but this in itself demanded a treatment which was now standardized in their work. The high pressure grouting machine, where the grout was mixed in a cylinder and thence driven into walling or the like by the force of compressed air, was, he believed, primarily intended for tunnel work, and generally for use in conditions where powerful resistance had to be overcome. It was by no means suitable for ancient masonry incapable of standing up to heavy stresses, and would at best deliver the grout unequally, following the line of least resistance and forming wedges of neat cement in the heart of the wall. What was needed was a machine to inject either neat cement, or cement and sand, into every crack and crevice of a wall, and of the stones, mortar and plaster composing the wall, by a gentle and thorough system of percolation from below upwards, the sand being kept in suspension during the initial set. The pressure not to exceed 25 lb. to the square inch, and the cost of the apparatus to be so low that even a Government department could afford to use it. The inventive brain of Mr. I. F. Milne, of the Office of Works, provided the desired machine, consisting merely of a hopper mounted on a wooden frame, and connected below with a length of rubber tubing and a nozzle.

This gravity grouter, with the aid of a plunger fitted with a rubber cup, and set at a convenient height above the point at which the grout was to be applied, had been found entirely adequate to the tasks it had to perform, and had developed virtues in a quite unforeseen direction. The first step in the process was the drilling of holes, beginning at the lowest part of the wall to be treated, spacing the holes three to six feet apart horizontally, and about two feet apart vertically. Two lines being drilled, the loam and dust in the core of the wall were washed out with a hosepipe inserted in the upper tier of holes, the washing continuing till the water ran clear. The grout was then applied through the lower holes, and was continued until it rose to the upper row, the plunger being applied to the grout in the hopper in order to keep the sand in the grout in suspension till the mixture began to set in the wall. During the process it was necessary to watch for escapes of grout and to stop the holes with gaskin or spun hemp. By such means not only could a wall core be completely consolidated, but the grout getting to the back of the old pointing would secure it in position and make it waterproof, so that repointing was practically unnecessary.

Finally, by completely excluding moisture from the wall, it had been found to benefit decaying stone to so marked a degree as to give ground for hope that this most difficult of all problems might possibly find a solution in this direction. It would be rash at present to claim more than this.

In concluding his paper with some general remarks, Mr. Peers said repair must neither deface nor obscure old work, but it was better to risk a deception by inconspicuous additions than to proclaim them by conspicuous and unsympathetic materials. A distinction in treatment was to be made between buildings used and those that were disused and ruined. The life of a building could be prolonged, but in this country, at any rate, not indefinitely.

There was an absolute need for a full photographic and graphic record of everything before, during, and after repair. In clearing a building many details quite impossible to preserve in position, such as plaster and painting, were constantly brought to light; moreover, the course of time would so blend the old work with the repairs that on historical grounds a complete record was essential.

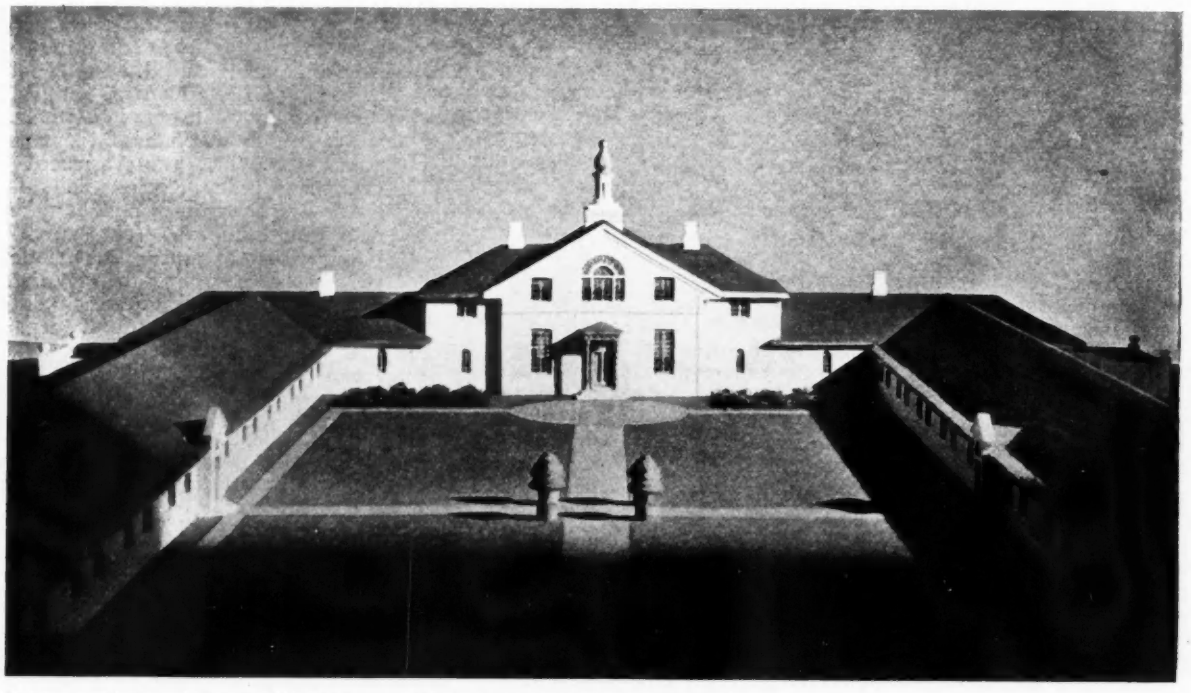
PRESERVATION

IT was only fitting that one of the six non-technical lectures organized by the Architectural Association should be devoted to the preservation of the countryside. As Mr. Knapp-Fisher, whose lecture was the fifth of the series, pointed out last Saturday, there is a pressing urgency of arresting and preventing the disfigurement of rural England which was daily taking place, especially, he thought, at the hands of those who, without sense or conscience, were responsible for the erection of thousands of ugly dwellings, ill-placed and completely out of harmony with their surroundings.

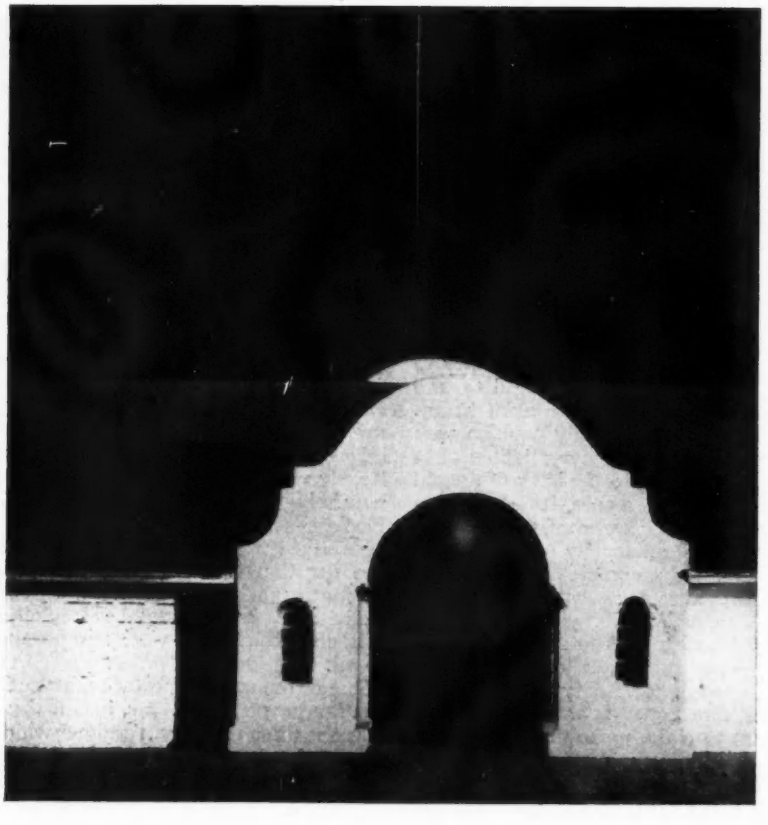
The cause of destruction, he said, was one born of ignorance, of lack of education and culture, the absence of any æsthetic sense, of a wrong scale of values—with pecuniary gain as the motive. The ugly resultant fact was that many of our old villages, our historic buildings and the serene and natural charm of the most lovely country was in process of being taken away from us, and our children and our children's children could not be blamed if they rose up and cursed us for our folly. The hideousness of our streets and buildings, the vulgarity of so many of our advertisements and the injury they did, were allowed to go on largely unchecked, although much was now being done both inside and outside Parliament to prevent disfigurement.

He asked his audience to look upon the question of disfigurement not as a matter which concerned a few individuals or a couple of societies, but one which was vitally important to all.

One of the most important matters in the landscape was colour, and if there was one thing more than another which should be hounded out of existence it was the vivid pink slates so beloved of the cheap builder of desirable residences, and the same species of paint, which looked for all the world like dried blood.



This general view of the model of the proposed design, which takes the form of a quadrangle, should be compared with the drawing of the layout given on page 411.



The entrance gateway to the quadrangle, around which are disposed almshouses to accommodate 100 persons in bed-sitting-rooms, each provided with wash-basins.

BRITISH HOSTEL

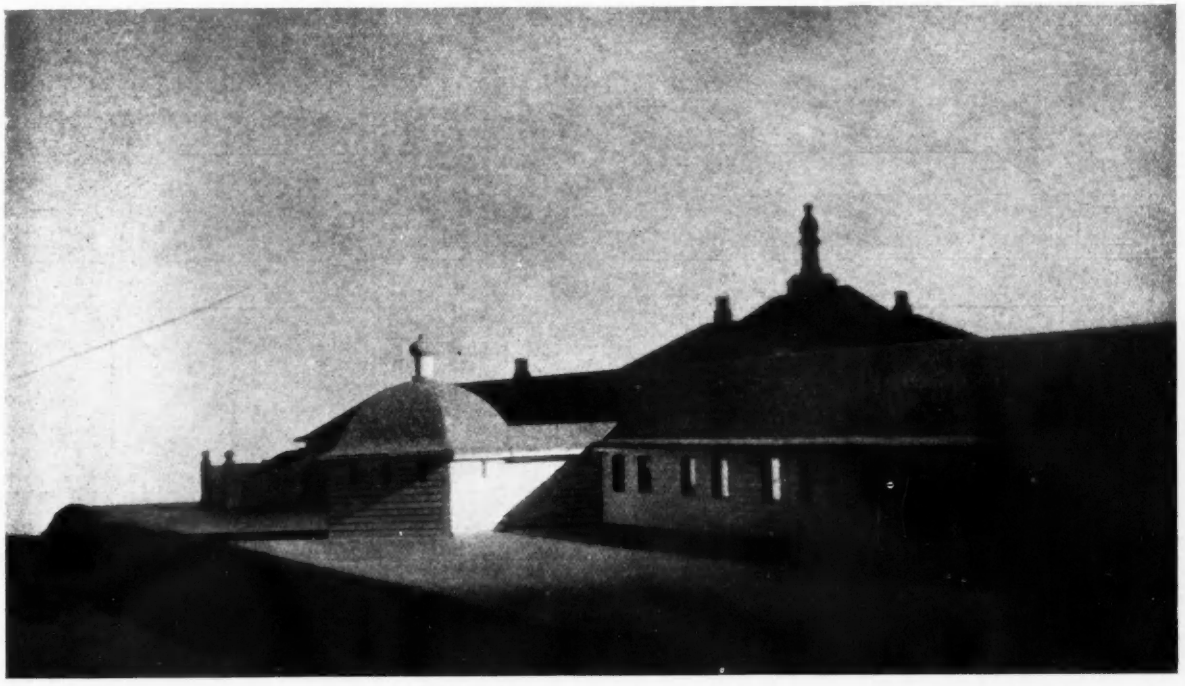
PROFESSOR ABERCROMBIE'S

THE British Subjects in Russia Relief Association has been organized by Lady Muriel Paget to care for a large number of British subjects, many of them old and infirm, who are living in Russia and who require relief and in some cases nursing. The organizing committee, of which Mr. L. E. Mather is chairman, decided that the most satisfactory and economical way of looking after a considerable number of these people would be to build a hostel or almshouse in the neighbourhood of Leningrad.

A design for this has been prepared by Professor Patrick Abercrombie, in consultation with Messrs. W. H. Colt, Ltd., who, as specialists in timber construction, have given their services in a consultative capacity and are to erect the building. It is not yet, however, quite decided as to whether the most economic method will be to construct the units in this country and send them to Russia to be assembled, or to build the whole there.

Special consideration has been given to the climatic conditions. The external walls, which will probably not be more than 9 ins. thick, will consist of five layers of material: the roofs will be equally solidly constructed and covered with wood shingles.

The site for the proposed building is at Detski Selo, a suburb of Leningrad,



Looking along an outside wall of the enclosure. The projection shown is one of the lavatory blocks, of which two are provided, one on each side of the quadrangle.

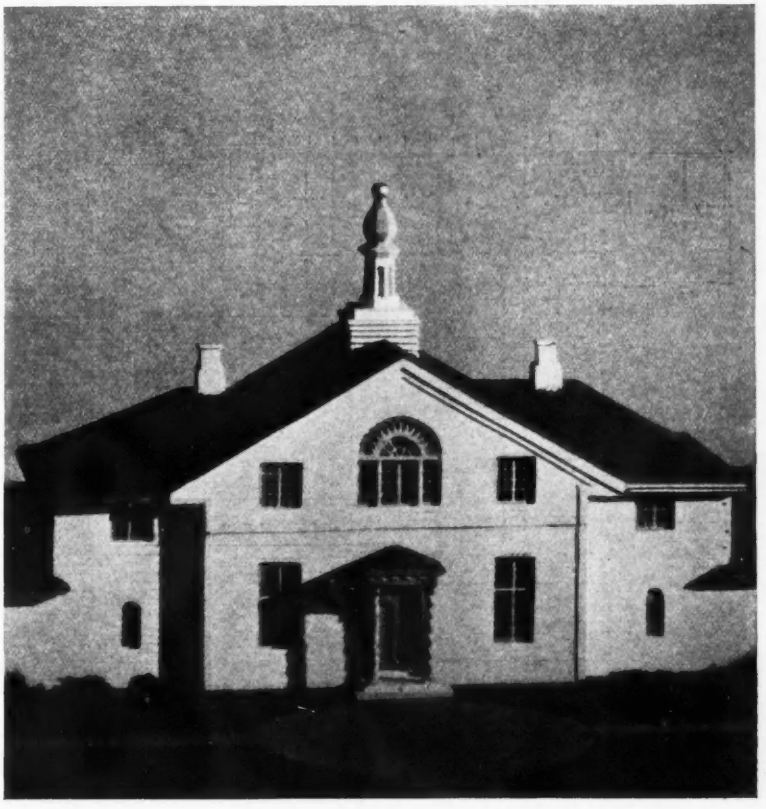
NEAR LENINGRAD

PROPOSED DESIGN

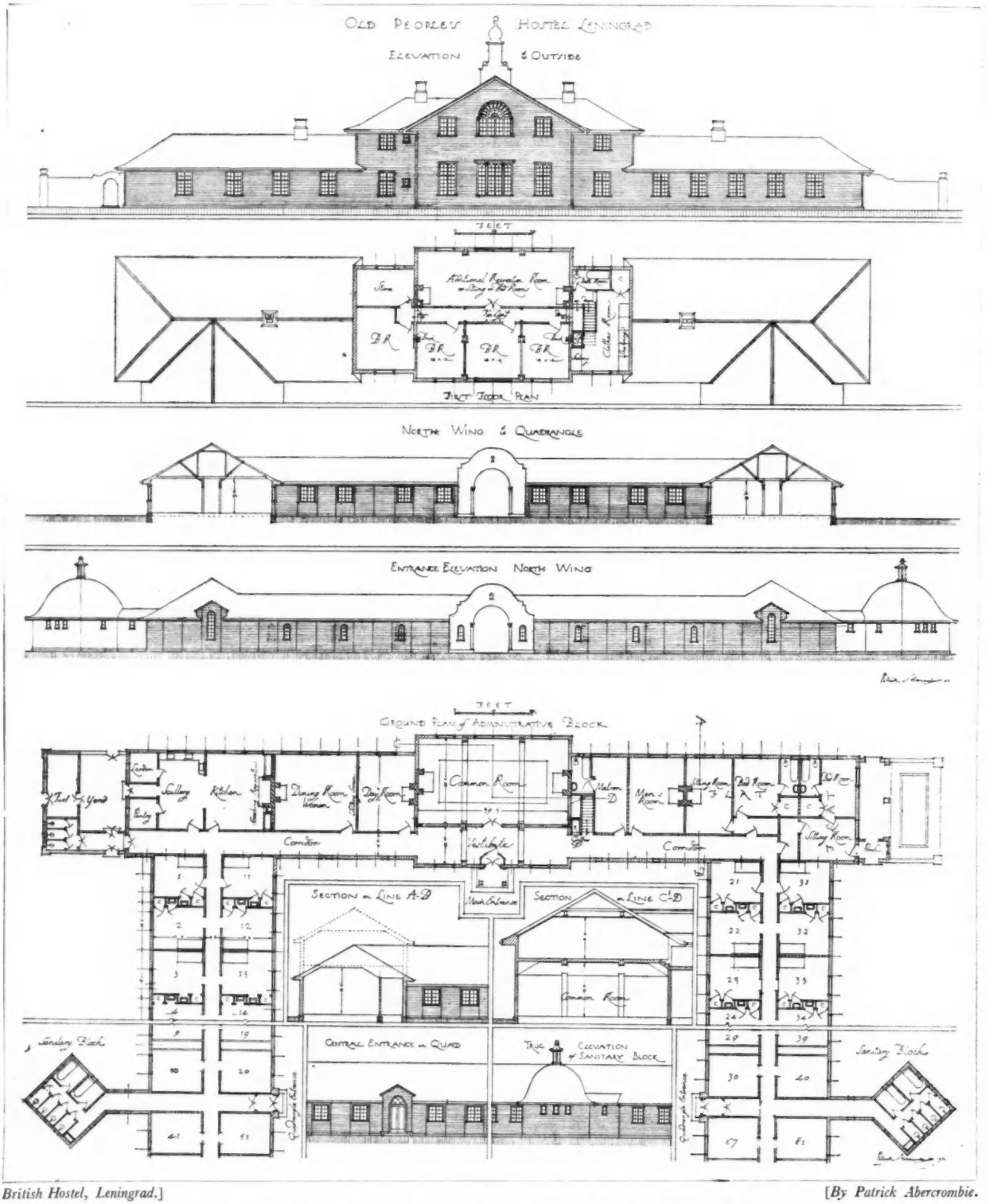
where the former Tsar's Summer Palace stood. The hostel, which is planned as a quadrangle with surrounding buildings, is to accommodate about one hundred people, each having a bed-sitting-room, which will contain a wash-basin and cupboard. The administrative block contains common rooms, for recreation and dining, though the room allocated for the latter purpose has been kept smaller than would be required if all patients were expected to take their meals together. It is probable that many will have meals served in their bed-sitting-rooms.

As regards details of the building itself, the roofs of the duplicated units will be carried by trussed rafters 15 ft. apart, these corresponding with the 5 ft. wide units of walling on which basis the whole building is constructed and designed, the vertical lines on the elevations representing the fillet covering the joints between these units. The windows are double metal casements in wood frames. The drains will all be taken in ducts inside the building.

In appearance, the intention is to avoid the Colonial look which timber buildings easily acquire, and to aim at a somewhat unusual combination of Russian Byzantine architecture with a tinge of Early Victorianism, the latter suggested by the age and former



A near view of the entrance to the administrative block, within the quadrangle. Two common rooms are provided, for recreation, and for use as a dining-room.

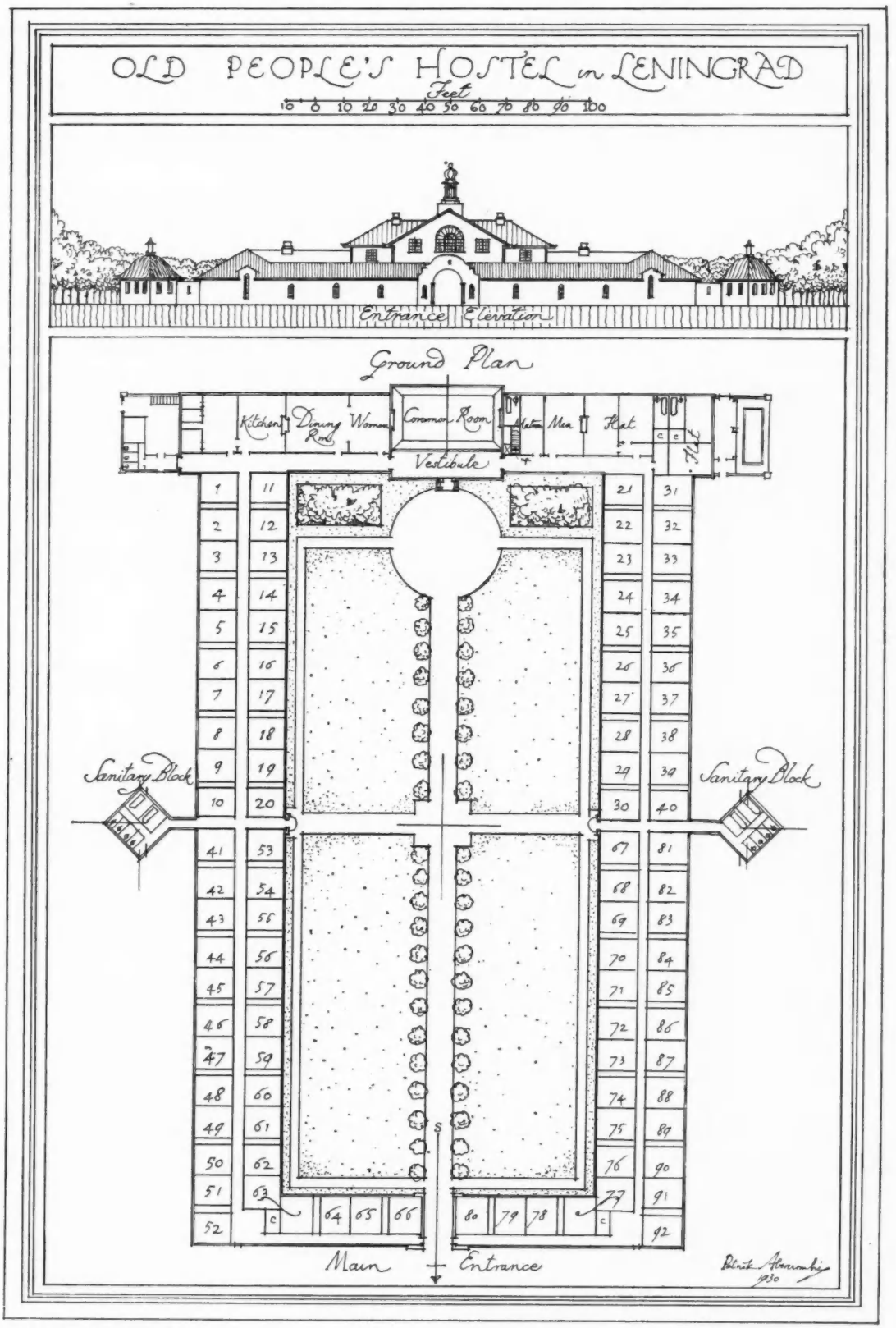


British Hostel, Leningrad.] [*By Patrick Abercrombie.*

occupations of many of the inmates. In colour the walls will be white, the roofs, of British Columbian red cedar shingles; there will be touches of blue and gold about the cupolas and the main entrance.

As a result of a visit to Leningrad by Lady Muriel Paget and Mr. O'Hea (of Messrs. Colt), some minor modifications may be introduced. It has been suggested that a wooden loggia should be carried across the centre of the quadrangle, and possibly that workshops might be added on either side of the main entrance.

[The model illustrated was made by Mr. W. Burden, and the photographs reproduced are by Burrell and Hardman, both of Liverpool.]



British Hostel, Leningrad.] [*By Patrick Abercrombie.*

The architect's sketch of the north elevation, as it will appear from outside the walls; and of the lay-out. The accommodation, which is indicated in detail on the plans reproduced on the facing page, includes a flat for the resident matron and a room over the common room that could be used for recreation or divided up, at option.

E

GENERAL HOSPITAL AT MARGATE, KENT

DESIGNED BY ADAMS, HOLDEN AND PEARSON

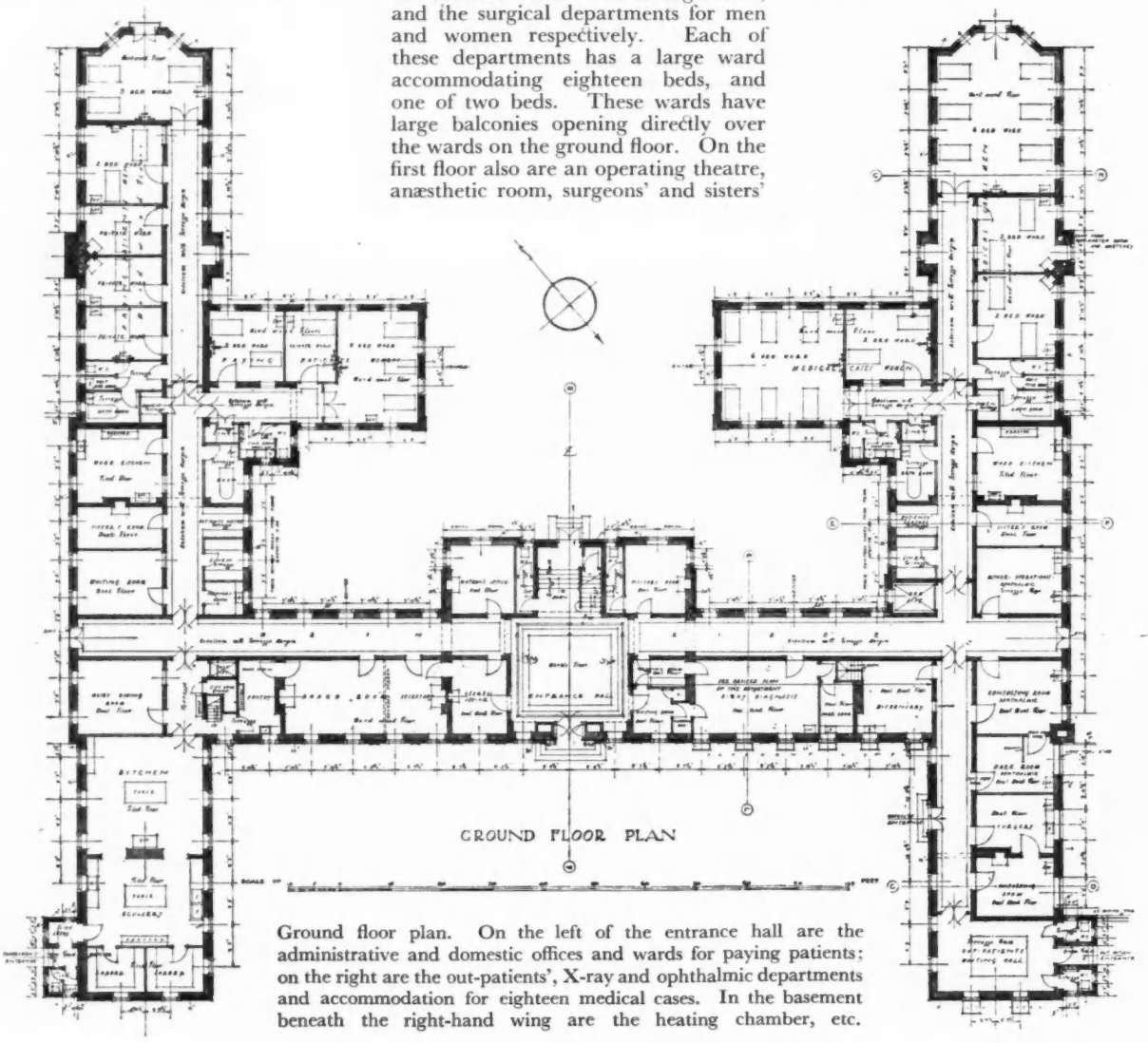
THE new Margate and District General Hospital stands on an open site in St. Peter's Road and affords magnificent views of the Downs and occasional glimpses of the sea. Building operations occupied some nineteen months. The foundation stone was laid by the Lord Mayor of London (Sir Charles Batho), and the hospital was officially opened by Prince and Princess Arthur of Connaught.

The main entrance on the ground floor is approached by a carriage drive through well-laid-out gardens. On the right of the entrance hall are the out-patients', X-ray and ophthalmic departments. Here also are two wards of six beds each, and three of two beds each and the appurtenant offices of the two departments. The out-patients' waiting hall is planned in the north corner of this wing of the hospital in close proximity to the out-patients' department, but on a different front and some considerable distance away from the main entrance hall. On the left of the entrance hall are the administrative and domestic offices, which include the offices for clerks, secretary and matron, the board-room, kitchen, maids' dining-room, and the following wards for paying patients: one three-bed, one two-bed and three one-bed for men; and one three-bed, one two-bed and one one-bed for women.

On the first floor are the sisters' and nurses' dining-rooms, the resident medical officer's bed- and sitting-rooms, the matron's bed- and sitting-rooms; and the surgical departments for men and women respectively. Each of these departments has a large ward accommodating eighteen beds, and one of two beds. These wards have large balconies opening directly over the wards on the ground floor. On the first floor also are an operating theatre, anæsthetic room, surgeons' and sisters' rooms, ward kitchens, and a ward of eight beds for children.

On the second floor are the nurses' and maids' rooms, the nurses' recreation room, and the sisters' sitting-room.

The site of the hospital has a slight fall from front to back, with a further accentuation towards the right-hand wing. This slope has been taken full advantage of by the architects to provide under the right wing a basement in which are placed the heating chamber, porter's room and store-rooms, and those portions of the hospital demanding seclusion, such as the mortuary and viewing room. In the basement also is a water-softening plant with a capacity of 1,200 gallons per hour.



Ground floor plan. On the left of the entrance hall are the administrative and domestic offices and wards for paying patients; on the right are the out-patients', X-ray and ophthalmic departments and accommodation for eighteen medical cases. In the basement beneath the right-hand wing are the heating chamber, etc.



The entrance front is approached from St. Peter's Road by a carriage drive through well-laid-out gardens. The site affords open views over the Downs and occasional glimpses of the sea.

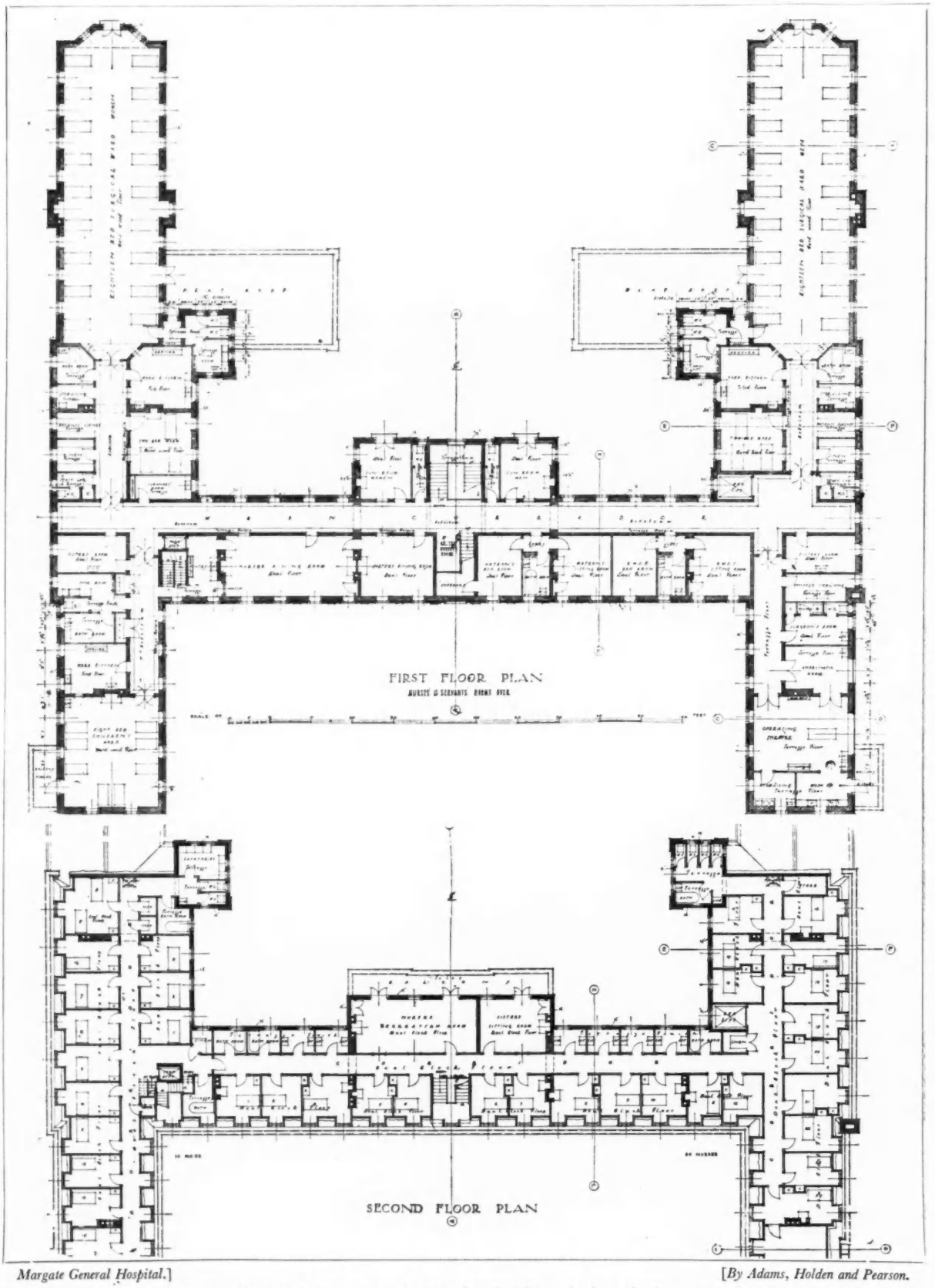
The elevations are of light Kentish stock bricks, with the windows openings and quoins in red facing bricks. The plinth course, window cills and coping are in Portland stone, and the roof is covered with red sand-faced tiles.

The half-tone blocks accompanying this article are reproduced by courtesy of *Kahncrete Engineering*.



Margate General Hospital.] [*By Adams, Holden and Pearson.*

In the entrance hall, looking towards the corridor leading to the out-patients', X-ray and ophthalmic departments. The doorway on the right is to the waiting-room for X-ray diagnosis. On the extreme right of the illustration are the main entrance doors from the carriage drive.



Margate General Hospital.] [*By Adams, Holden and Pearson.*

The accommodation on the first floor includes two surgical wards, of eighteen beds each, for men and women respectively, with large balconies opening directly over the wards on the ground floor, and the sisters' and nurses' dining-rooms. On the second floor, a part plan of which is shown, are nurses' and maids' quarters, including the nurses' recreation room, and the sisters' sitting-room.



The men's surgical ward. The French casement windows on the left-hand side give access to the balcony over the ground floor wards. Another surgical ward, of similar design, is provided for women.



Margate General Hospital.] [*By Adams, Holden and Pearson.*

The operating theatre showing, through the open doorway, the wash-up. Further to the right is the sterilizing room. In addition to the window seen, still more light is given by windows in the opposite wall. The complete and modern furnishing is typical of the meticulous care exercised in the equipment of the hospital.

LETTERS FROM READERS

The Architecture of Steel

SIR,—I venture to trespass upon the space of THE ARCHITECTS' JOURNAL with reference to your article on "The Architecture of Steel."

After being trained in the tradition of English brick architecture, I went to the United States just at the time when steel construction was beginning to make its great progressive leap and had the opportunity of taking a small part in those developments that made the great skyscrapers possible.

This new step in architecture was largely due to the free collaboration of architects, structural engineers and the steel manufacturers.

At first, cast iron was used, but soon this gave way to rolled steel sections of the Carnegie type—i.e. with the light flange similar to the forms commonly used here and to which plates are riveted when added strength is desired.

The Bethlehem Works started the heavy flange forms which reduced fabrication considerably.

Since then many patents have expired and the heavy flange sections that occupy less space in the buildings and require so little hand-work, have become of the most universal use.

Experimentation with the ingredients of the metal used to hinder rust, metal fatigue, etc., have spread the mode of steel construction. Pittsburg is now putting on the market a largely rustless metal of aluminium alloy that has all the strength but a great reduction in the weight, and the proposed revision of the New York Building Code, in course of preparation by the Merchants' Association of that city, will advocate the use of electric welding and the approval of a considerably higher stress, and, of course, a still further and corresponding reduction in the tonnage needed.

These successive steps have enabled a tremendous advance to be made in steel standardization, together with speed of erection and ease of handling.

Nothing but genuine co-operation between all parties interested could have brought about such improvements.

There is not in the U.S.A. that hesitancy that I fear one sometimes suspects exists at home, which prevents our architects or structural engineers asking advice from the manufacturers. I feel it would be most unfair to suggest there is not the willingness to indulge in this cooperation, but I do think it is not so customary.

In the Building Industry Council of Review which has been sitting now nearly two years, much information has been gathered, which shows that there are possibilities of beneficial methods and materials that should add to the efficiency of structures, speed of construction and reduction of cost, and this body is now pursuing its investigation into the questions of the time and progress schedule and of standardization.

The L.C.C. has now expressed its intention of tackling the Building Act, so it does seem opportune that those particularly interested in steel architecture and in architecture could, with advantage, thoroughly investigate whether the structural shapes now available are rolled of the most advantageous metal ingredients, considering the lengths and types of loading they are normally subjected to. Next are the sections themselves, the best for the uses for which they are designed, for, with the obvious need of so largely rebuilding England, steel has the greatest structural opportunity that has ever been before it, and if grasped, will bring into use employment in many activities in addition to building—such as coal mining, stone work, transportation—with the appropriate reduction of rents and increase of profits.

I hope we may enjoy the possible benefits of a great activity in architecture in the near future.

ALFRED C. BOSSOM

[*Below the Editor replies to the numerous correspondence on the above subject, which arose out of his article in the* JOURNAL *for January 14 last.*]

THE ARCHITECTS' JOURNAL from January 21 onwards has contained a large number of letters commenting on my article, "The Architecture of Steel." I should like to thank all correspondents for the remarkable unanimity with which they support my plea for a closer relationship between architect and engineer. The steelwork industry "is repentant," Mr. J. D. Stitt tells us, and several writers refer to the newly-founded British Steelwork Association, so ably headed by Mr. Kavanagh.

The work thus far done by this Association is beyond all praise, and is precisely what many people agree is most wanted today. Their only regret must be that Mr. Kavanagh was not born in time to start his activities fifty years ago, for then we should not still be "entering," as Mr. Ben Walmsley says, "upon the true Steel Age," but should be living in the heyday of it.

While on the subject of Mr. Walmsley, I am unable to believe that he can really be so far out of touch with modern building as to remain unaware that concrete has made a sudden leap into the limelight. What Ancient Rome did is interesting, but surely beside the point.

Mr. J. D. Stitt, for his part, has written a very thoughtful letter which deserves the closest study, but I wish I could understand why he is so reluctant to let steel be used as a visible part of an architectural design. Why, oh why, must steel be "not inspiring as architecture"? What is there that is so degrading about that useful material? Fortunately, Mr. Kavanagh is working so hard to bring out its inspiring qualities that neither Mr. Stitt's blushes nor any amount of dislike or prejudice on his part can very well prevent steel coming into its own sooner or later.

I thank Mr. M. B. Buxton for his "steel roof principals covered with ancient oak," but I am sanguine enough to believe that not even the superlative charm of ancient oak will seriously interfere with the coming of the Steel Age in building. In every other department of human activity steel has now established itself for good. But to reach that desirable object we want a different sort of cooperation between architect and steelworker than the "business relationship" of which Mr. Scott speaks, "cordial" and "amicable" though this may have been from time immemorial.

CHRISTIAN BARMAN

Architecture versus *Engineering*

SIR,—Mr. Penty set out to show that architecture was "*versus*" engineering, and has only shown that architects and engineers are up to the same tricks. Some architects, apparently, turn their joists on their weak sides and some engineers convert smoke pipes into dropsical funnels. But these mental aberrations on the part of professional men prove nothing, except that frail humanity is always straying from the path of truth.

Nothing in the world is perfect, and if some idiot in the design of the *Bremen* fattened one of the funnels to please the Mr. Pentys of this world, it does not invalidate the claim that the whole build of the ship, the part that matters and the part that appears beautiful, has been designed as a machine to get through the water. Further, what about the old sailing-ships? They are sufficiently antique to pluck the heart-strings of the Pentys; yet, are the sails cut, trimmed or reefed according to æsthetic principles?

I have a fantastic mental picture of an immense sailing-ship, designed and manned by Mr. Trystan Edwards on the

best artistic principles, with Mr. Penty as passenger, trying to fight its way round Cape Horn—if it ever got as far. Forgive me, I must not waste my time or your precious space like this. I only want to know what Mr. Penty is driving at. King's College Chapel appears beautiful; it is pure architecture. An aeroplane or ship or bridge can appear beautiful when it is pure engineering. And the Pont du Gard smashes the whole of Mr. Penty's argument, for it is pure engineering *and* pure architecture. So where in the name of goodness is the quarrel between the two? FREDERIC TOWNDROW

SIR,—Readers of Dickens may remember Mr. Venus the anatomist. He was engaged to Pleasant Riderhood—a rather unpleasant young lady with a still more unpleasant father. She broke off her engagement because, she said, "*she did not wish to be regarded in that bony light.*" She was unpleasantly conscious that Mr. Venus regarded her mainly as a skeleton.

I am reminded of this by the photograph of the Festival Hall at Frankfurt, published in the issue of the JOURNAL for February 25.

For my part, it is just the boniness of structures of this kind which repels me. They remind me of the skeleton of a dead fish one might observe on the seashore, and I feel I should like to see such anatomies decently clothed with flesh—in the form of plaster or other superficial materials which would give breadth and simplicity, instead of unpleasant and disturbing fussiness.

I have much appreciated Mr. Penty's articles and agree with every word he has said. M. H. BAILLIE SCOTT

SIR,—May I say how interesting and stimulating I have found Mr. Penty's articles on "Architecture *versus* Engineering"? As I have crossed pens with him on previous occasions, it is pleasant to me to find myself in agreement with so much of his argument, all, perhaps, save the title—which might lead to certain misunderstandings—and some references to materials, which I think might mislead the earnest seeker after the truth in these matters.

It certainly seems clear to me that we shall not find salvation either in rough textured Tudor bricks or by thinking only of a narrow material efficiency.

It may be that part of the difficulty is a verbal one, for I certainly believe that, for a building to be fully beautiful, it must be thoroughly efficient in the utilitarian sense, and I also believe that it cannot be thoroughly efficient as architecture if it is not beautiful; and that beauty does not necessarily follow—as Mr. Penty makes clear—by only dealing with the sheer utilitarian and material necessities of the case.

Another part of the modern difficulty seems to arise from the fact that certain modern materials are capable of doing things impossible in other materials. From which we should not deduce that those things are necessarily beautiful or even desirable.

Those who tire of sham mediævalism on the one hand, and of "stale dishes of ill-adapted classicisms" on the other, are not necessarily driven to the "blue funk" school with its sheer negation of design; nor need they content themselves by "lifting" the juicier bits from the wilder extravagances of recent times.

There is another course; and I believe it is to be found in a combination of various factors, among which may be mentioned a study of the best work of the past and of its errors, and a study—as scientifically conducted as is possible—of the planning and constructional problems involved in satisfying modern requirements. Not much more is needed, except, perhaps, the ability to get some emotional content into the result, and that, I suppose, begs the whole question.

W. S. PURCHON

The Ancient Monuments Bill

SIR,—Your correspondent, Mr. William Davidson, states that my proposal to allow churches to be scheduled as ancient monuments could only be made on the assumption that all the best brains and scholars in the profession were official architects.

Mr. Davidson does not appear to understand what is meant by an "ancient monument," nor what are the powers and functions of the Commissioners. They can only schedule a building as an ancient monument if it is ancient, and if it can be described as a monument. Having scheduled it, they can do nothing to it themselves, except merely prevent the owner from destroying or injuring it. Their staff is not large, but it includes men who have made a life study of ancient architecture, and are recognized experts.

Among private architects such men are rare; in fact, it is difficult, if not impossible, to find a private architect who understands, or even professes to understand, the technicalities of Gothic architecture. Many of our finest old churches have been spoilt by architects in whom professional ability was not tempered by the requisite antiquarian knowledge.

Two years ago I was visiting an ancient castle to which the owner was making some alterations and restorations. I asked the man in charge of the work who was advising him. "Advising me!" he replied, indignantly, "I have been in the building trade for over twenty years."

I fear that this attitude is not unknown among architects. (LORD) RAGLAN

Facing Bricks

SIR,—It is a contentious subject, this one that turns upon our divergent ideas as to whether bricks should be regarded as a "natural" building product or as a purely mechanized article. In my opinion they come under the former category, as they represent the unit of design most commonly adopted in this country. It is an architect's job to dispose of these units in the best manner to reveal their natural beauty. The beauty of earlier brickwork depended entirely upon the texture produced by hand-made bricks, commonly in 2-in. thickness, but modern practice — particularly in Northern Europe—has tended to increase the thickness of the bricks, so that today we find a thinner brick used in small, and a thicker brick in large-scale buildings. In short, a relationship between the scale of the unit and the scale of the whole.

The introduction of machinery and the pressure of speculative builders for a mechanical easily-built thick brick has, I am afraid, destroyed the tradition of this country until we have reached a point where mechanism is being wholeheartedly, but quite wrongly, applied to the production of so-called rustic bricks by merely combing their visible faces in a most unbricklike manner. We have, in fact, lost sight of the natural beauty of a brick in our effort to commercialize the article and, pursuing a similar course with reference to colour, we have introduced with extravagance what is referred to in general terms as "the multicoloured brick." The beauty of elevational architecture lies in the repose of the massed walling, and I suggest that the practical aim should be the return of what I choose to call that "natural" type of brick which is traditional.

I could offer similar criticisms with reference to the mortar jointing. This, too, should be of traditional type, and in no case should it be the dead white which has become so common, and which merely isolates and destroys the beauties of the brick itself.

I would like to suggest that there is no necessity to make the nature of a brick quite as dense as is customary. For my own part, I prefer the brick of open nature, and general experience has taught me that this type makes for a drier and warmer building.

I think a great opportunity lies in the production of a brick which is suitable for speculative types of building, and which has none of those ugly features common to the "all-red" facing brick.

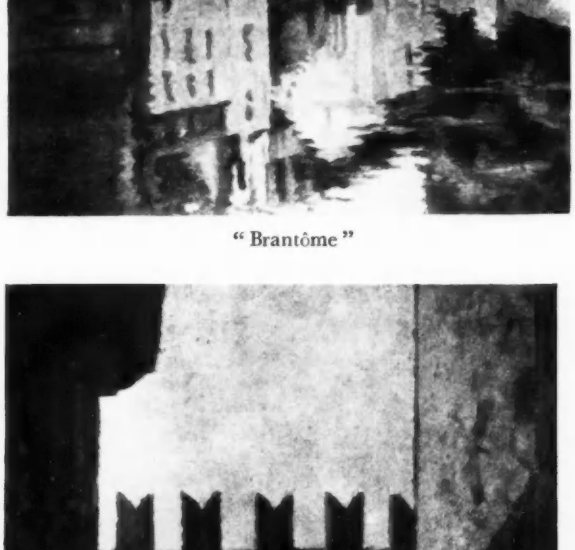
R. T. LONGDEN



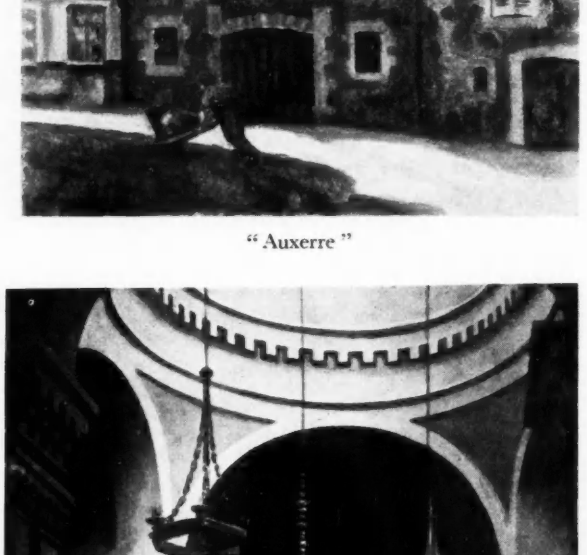
"Brantôme"



"Auxerre"



"Bologna"



"Spanish Baroque, Madrid"

Four paintings by Roger Fry, from the retrospective exhibition of his work held by the London Artists' Association.

CONTEMPORARY DECORATION

BY ARTHUR J. DAVIS

A GLANCE at the conditions which exist at the present time in the world of decoration shows that there is no recognized style, such as was generally adopted by the artists of the eighteenth century, who all accepted the classical tradition, but that a number of small groups and many individuals are working out their own salvation.

These artists can be roughly divided into two camps, supporting opposite aims and aspirations.

In one group are to be found the blind lovers of everything which savours of archæological accuracy and historical interest. They inhabit houses which they refer to as reproductions and which are to us merely incompetent fakes. They sentimentalize over the charm of Early English half timber and Tudor panelling. They are possessed by a passion for worm-eaten oak, dented pewter and hammered iron. They tolerate no innovations and no compromise with degenerate modernity.

In the opposite camp we find the supporters of the advanced New Movement, who frankly admit that they intend to break completely with the past, and to ignore everything that has been accepted hitherto. They claim that their point of view is the only logical one, and that it represents the rational expression of the present age. They further add that the future of architecture and decoration will follow in the direction that they are indicating and that they alone can prophesy the trend of artistic progress. These reformers look to Germany, France and Scandinavia for their inspiration, and worship at the shrines of Mendelsohn, Le Corbusier and Mallet Stevens. The surgical ward and operating theatre, suggestive of hygienic bareness and uncompromising sanitation, are the models for their schemes of interior decoration, from which is banished all superfluous ornamentation. Some of the more puritanical believers in the advanced movement go a step further and declare that all decoration is futile and unnecessary, the unrelieved lines of construction alone being logical and therefore beautiful, and any additional ornament being a mere sentimental concession unworthy of a scientific age.

I suggest that it is immaterial as to which language is selected to express the thought so long as the individual work itself contains an element of artistic quality, that illusive spiritual essence which is outside the work and yet belongs to it. Quality is the monopoly of no particular school or group, but is the hall-mark of all true works of art of all times and all civilizations, and it stamps the efforts of inspired artists with a superiority which is easily recognized by all sensitive minds.

It follows that some great artists, even if they have had the misfortune to be born at a time when æsthetic appreciation was at its lowest, have risen superior to their environment and have shown by the originality and perfection of their work, results comparable with the efforts of others who flourished in more congenial times.

What will the future bring forth? Definite changes always have occurred and will occur, and it is fatuous for anybody to proclaim that the dress, the decoration, or the furniture of the future will develop in any particular direction. All we can do is to endeavour to isolate each individual artistic production with a sympathetic understanding of the conditions under which it has been created and the period in which it was produced.

If I have insisted on the word "quality" it is because I firmly believe that it is only from that standpoint that we can judge any work of imagination, and that it is idle to quarrel over the question of whether traditionalism or functionalism or any other "ism" is the more suitable vehicle of expression. I have mentioned this word "functionalism" as it is the catch-word of the moment in æsthetic circles. I believe it to mean that its devotees have adopted a formula which insists on everything being given an outward expression of the function for which it has been created. This religion professes to despise all shams, to sweep away the cobwebs of the past, and to start all over again. Like Minerva springing ready armed from the brain of Jupiter, it aspires to create a new world, complete and independent of all former growth and example.

No fashion is permanent, and any artist whose sole claim to serious consideration is his slavish obedience to the passing craze, or his desire to thrill and astonish us by his originality, will eventually be ignored when he can no longer represent the last word in modernity or if the work he has produced is void of all the sound qualities which form the foundation of authentic progress.

This does not imply that the very interesting transition, which decorative art is at present passing through on the Continent, in America, and in a lesser degree in this country, is not without considerable value; on the contrary, no one will deny that much of it is vital and truly progressive.

In all creative effort we may borrow and adapt but must never merely copy. A servile reproduction which has no relation to our age and time is contemptible; it is an unsuccessful attempt to galvanize a dead body into life. But the votaries of the opposite theory, who claim to ignore all that the past can teach us, are equally in error, and I believe the right solution is to steer a middle course between the Charybdis of slavish repetition and the Scylla of uncontrolled licence.

Combinations of form, shape and colour which have always appealed to the emotions will continue to do so, but a new vision can fashion them to suit altered requirements. Fresh harmonies can be created, new chords can be struck, but the eternal laws which govern design, proportion and good taste must inevitably be obeyed, and it is by the intelligent study of the qualities which graced the authentic works of the past that we must find our guide and inspiration in the creation of beauty and harmony in the setting of our present life.

I suggest that the reason of the lifelessness of much of our English decoration is due to the lack of scholarly knowledge in the equipment of our art students, whose work is too often of a timid and uninspired character.

[Extracts from a paper read by Mr. Davis at the Royal Society of Arts last Wednesday, on "Some Aspects of Contemporary Decoration."]

Roger Fry's Paintings

The London Artists' Association recently held a retrospective exhibition of the work of Roger Fry at the Cooling Galleries. Mr. Fry was brave enough to exhibit not only those pictures which showed his present aims and point of view, but even pictures painted as far back as 1893, when his work showed no indication of his present style, but only hinted faintly at the selection of subtle colour effects which is still his main interest. Mr. Fry is above all, colourist; never flamboyant, he concentrates on placing subtle shade against subtle shade, and building up a painting of quite unusual harmonies. The colour is the picture; the subject, the drawing (always accurate) and the design exist to support the colour, and because of this some of his paintings convey a sense of emptiness and a feeling that, interesting and pleasing as the colour is, it cannot carry the whole weight of the picture.

In his two pictures of French and Spanish Baroque in the exhibition, Mr. Fry shows his interest in architecture, and these pictures prepare the way for his book of *Ten Architectural Lithographs*, recently published, in which he has abandoned colour for careful drawing and almost realistic and academic treatment of his subject. P. M. H.



The main entrance, looking east; the door surround is of wood, painted white.

HOUSE AT ESHER

DESIGNED BY IMRIE AND ANGELL

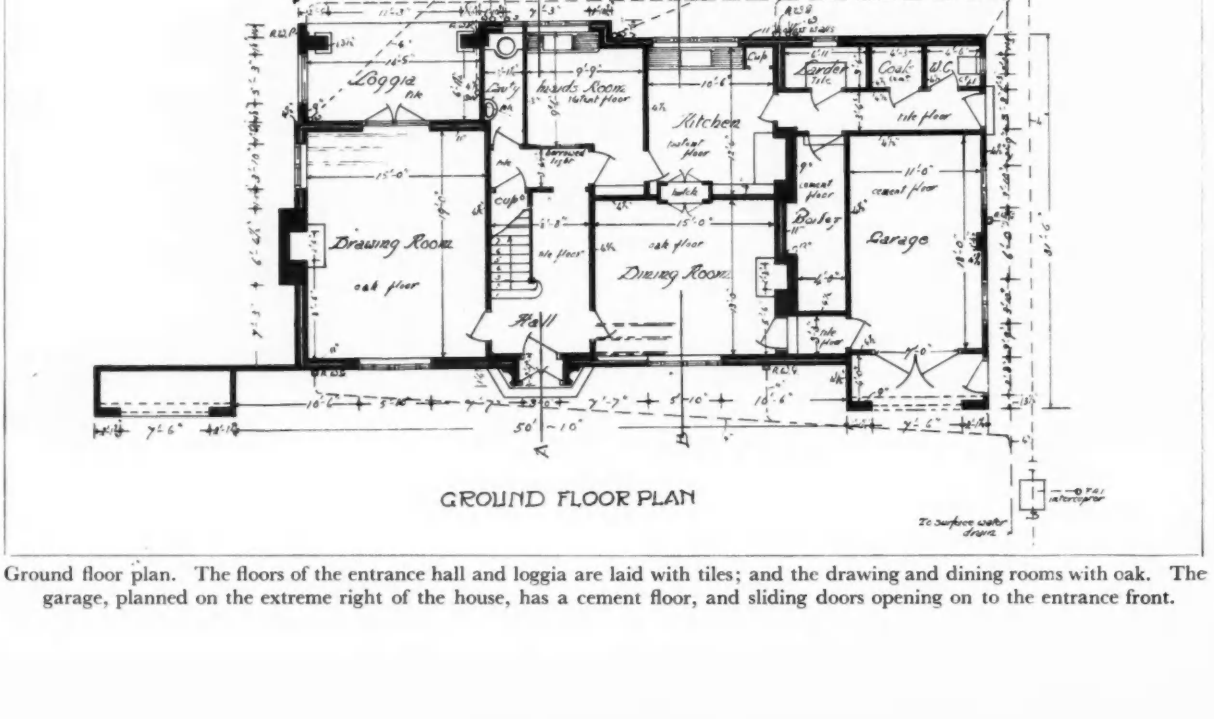
"LONGCROFT," situated on the Sandown House Estate, Esher, Surrey, has been planned with its main aspect facing south. Besides the accommodation shown on the ground floor plan, the first floor contains three bedrooms, dressing room, bathroom and a w.c. The second floor provides two bedrooms.



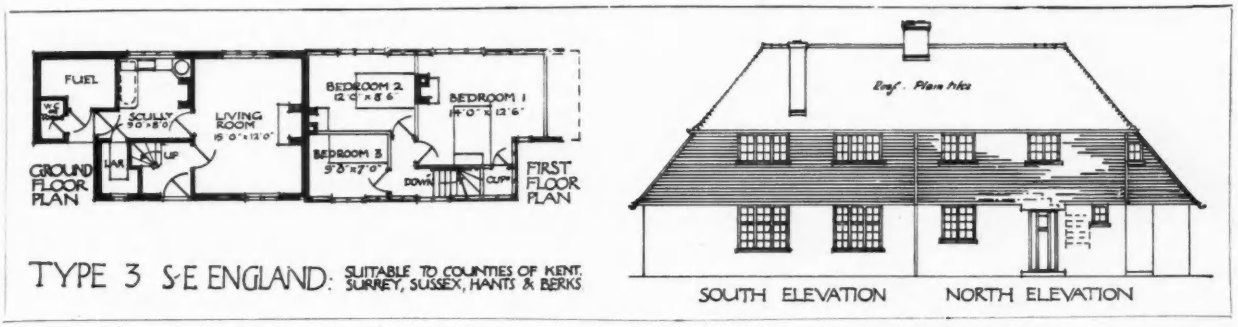
A general view of the entrance front. The walls are of hand-made sand-faced bricks, and the roof is covered with hand-made sand-faced tiles.



The architects' drawing of the garden elevation affords an interesting comparison with the photograph of the entrance front, reproduced above. The gable is weatherboarded.



Ground floor plan. The floors of the entrance hall and loggia are laid with tiles; and the drawing and dining rooms with oak. The garage, planned on the extreme right of the house, has a cement floor, and sliding doors opening on to the entrance front.



Drawing to illustrate the specification in the accompanying article, prepared by Edwin Gunn.

THE SPECIFICATION WRITER

Rural Cottage Specifications: Type iii. S.E. England

BY EDWIN GUNN

COTTAGES intended for districts where weather-boarded or tile-hung buildings are traditional and plain tiles obtainable in local yards; where grey stock bricks are commonly used for walling or, where not available, wirecuts, which may be slimed and whitened up to first-floor level as described under Type i.

SPECIFICATION

WALLS.—External walls up to first-floor joist bed to be built of local grey stocks in cement mortar, 1 to 6, with joints well filled and struck off flat with edge of trowel (no pointing); chimney-stacks above roof to be similarly faced.

Upper portion of fronts to be strongly framed with 4 in. × 2 in. for cill, head, and studs, 4 in. × 4 in. corner posts and 4 in. × 3 in. braces.

Cover externally with untearable felt (bituminous felt on canvas backing), lapped 2 ins. at joints, neatly cut and fitted against margins and openings, and nailed with clout nails 6 ins. apart.

First-floor fronts to be covered with:

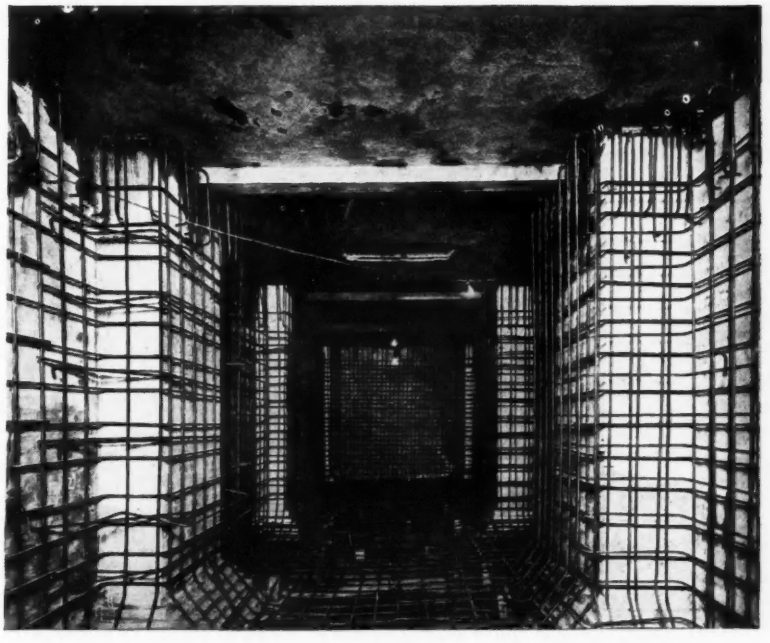
a: Sawn, rebated, feather-edged boarding (country-cut), two out of 7 in. × 1 in., lapped 2 ins., and well nailed to each stud, the nails being driven through one board only above the lap, and ends cut and fitted to verges and frames. External angles to be butted against 3 in. × 1½ in. vertical corner batten, nailed to post. Lowest board to be cocked out by 3 in. × 1½ in. tilter fixed at level of ground-floor window heads and projecting 3 ins., portion over door-head being swept out at 45° for width of two additional boards with cut bracket ends to form small pent roof. Boarding to be limewashed on completion with mixture prepared as in Specification Type 1.

b: Sawn elm boarding, ¾ in. thick, 8 ins. wide, in long lengths, lapped 3 ins. and well nailed with 3 in. wrought nails to studs, butt end joints being drilled and screwed over small zinc soaker. The boarding to be freshly cut and nailed on "green." Tilter and porch as last.

c: Hand-made sand-faced tiles, nailed with two galvanized tile nails to 1¼ in. × ¾ in. battens set to 4½ ins. gauge. Tilter and porch as last. External angles to have special angle tiles, and courses running out below verge to be fixed with Winchester cuts so that triangle tiles each have one nail. Bottom course to have proper under-eave tile.

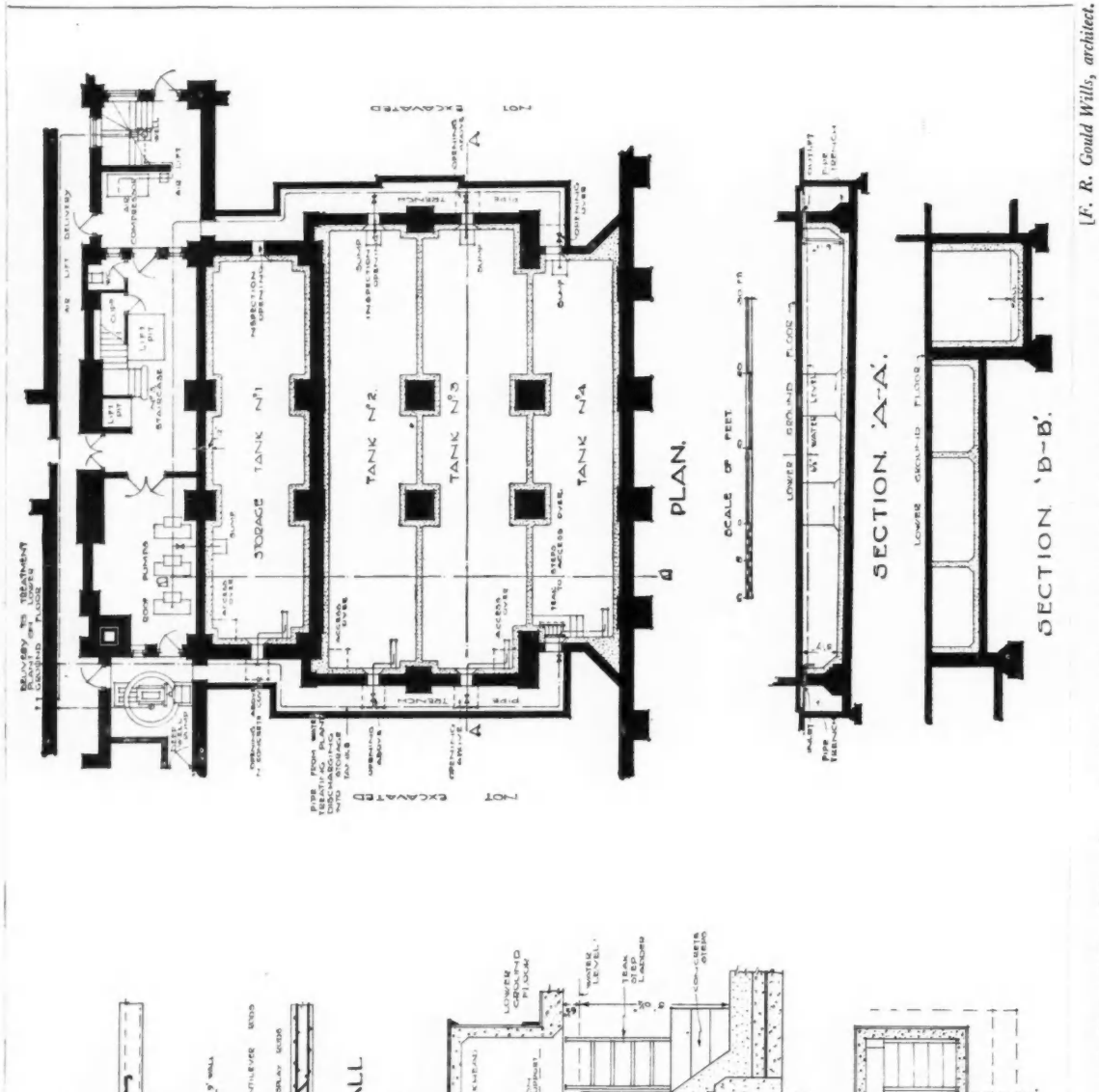
ROOF.—Cover the roof with hand-made, sand-faced, nibbed tiles laid to 4 ins. gauge on 1¼ in. × 1 in. fir battens, every fifth course, and all margins to be nailed with galvanized tile nails. Eaves and ridge to have proper half-courses, verge to have tile undercloak projecting 3 ins., and hips to be covered with granny-bonnet hip tiles, each tile nailed and also bedded and pointed in haired mortar. Ridge to be covered with half-round tile ridge bedded in mortar and pointed in cement. Eaves soffit projecting 9 ins. to be closed in with 9 in. × ¾ in. boarded soffit, fixed after tile-hanging, or weatherboarding fronts.

Gutters to be 5 ins. half round, returned at ends on main fronts to deliver on to lower slopes, and supported on rafter brackets screwed to rafter feet before tiling. Down pipes to be 3 ins., made to stand clear of weather-covering by screwing to oak blocks.



F. R. Gould Wills, architect.

Water storage in a London basement: interior view of No. 1 tank, of four provided at Nos. 39–45 Finsbury Square, while in course of construction. The concrete reinforcement is of ⅝ in. rods spaced at 9 in. centres, and the capacity of this tank alone is 37,000 gallons. Drawings appear on the next page.



Water storage in a London basement: elevations, sections and plans of the reinforced concrete tanks described on the facing page. There are four of these, giving a total storage capacity of 98,000 gallons: the water is pumped from two artesian wells 500 ft. deep, sunk on the site, and before being further raised to the service tanks in the building, 120 ft. above, is treated in a purification plant, to avoid the possibility of corrosion of the galvanized pipes through which it is distributed. The drawings are fully illustrative of the interesting constructive methods that give sufficient stability to allow of any tank being emptied of its water, independently of the others, without risk of collapse. [*F. R. Gould Wills, architect.*

WINDOWS to be wood casements, sashed in panes about 10 in. × 8 in. sight size, having 4 in. × 3 in. rebated frames and 6 in. × 3 in. projecting oak cills. Backs of frames and undersides of cills to be deeply grooved as weatherstop, and the frames fixed in first-floor framing to be given 2 ins. projection beyond face of studs to act as stop to weather-covering.

EXTERNAL DOORS to be similar to internal doors, but covered externally with ¾ in. boarding and twice-splayed cover fillets nailed on.

EXTERNAL PAINTING. — Gutters and down pipes to be painted two coats grey bituminous paint; casements and frames and eaves soffits, three coats good white lead paint, finished broken white; external doors, three coats finished selected strong bright tint.

OWING to the high cost of linseed oil, there have appeared on the market putties made up with cheaper oils and only a small percentage of linseed. To distinguish between the two, from inspection or working, is very difficult, even for an experienced glazier. But the properties are widely different. Experiments have been undertaken to demonstrate them, and the results are very illuminating. Windows on a south-easterly aspect were glazed with samples of each. The sun was upon them until 11.30 a.m. each day. After exposure throughout the summer, the putty made up with mixed oils had already receded from the glass, showed the surface staining characteristic of mineral oil under the effect of sunshine, and could be removed in hardened lumps by the finger-nail. The linseed oil putty, on the other hand, had to be cut away with a knife before its condition could be examined. It was found to be still soft and plastic, beneath the oxydized crust, and though expected to become completely oxydized and hardened in about two years, retained its powers of adhesion and weather-tightness while in the soft stage. Its probable useful life is given as twenty years as against five for mixed oil putty.

Water Storage in a London Basement

A SPECIAL feature in the building erected at Nos. 39–45 Finsbury Square (see the frontispiece to this issue) is the introduction of four water-storage tanks below the lower ground-floor level, the water being obtained by pumping from artesian wells on the site, and being specially treated before general use.

Tank No. 1 has a capacity of 37,000 gallons, tank No. 2 of 21,000, tank No. 3 of 23,000, and tank No. 4 of 17,000, giving a total storage of 98,000 gallons, this quantity being required for use in the building.

The tanks were constructed in reinforced concrete, the sides cantilevering from the bottom slab. The walls and bottom were 9 ins. thick throughout, reinforced with steel rods on both sides: ⅝-in. diameter rods at 9-in. centres. All reinforcing rods were securely wired together at points of intersection to secure rigidity, as will be seen from the photograph on page 421. Splay rods were used as reinforcement at all corners both on plan and elevation.

Each tank was designed to support the water pressure independently of the others, thereby allowing any tank to be emptied with safety when required. The insides of the tanks received, when set, two coats of waterproofer, designed expressly for such conditions, to secure additional impermeability. The mixture of concrete used was one part Portland cement, one and a-half parts clean washed sand, and three parts washed ballast to pass a ¾-in. mesh.

There are two boreholes, 8 ins. diameter × 550 ft. deep, the standing water levels being respectively 232 ft. and 236 ft. below ground level.

One borehole is equipped with a deep well pump, driven by an electric motor, which draws 2,200 gallons per hour to the ground storage tanks. The other borehole is pumped by means of compressed air and yields 2,500 gallons per hour. From the tanks the water is picked up by three surface pumps, each with a capacity of 2,700 gallons per hour, and automatically controlled by the level in the roof storage tanks, which are 120 ft. above the pump-room floor.

The report of the public analyst states that the water is soft in character, of faint alkaline reaction, and the analysis of the mineral constituents shows that it is typical of the water derived from the chalk in the London basin. It is of a high degree of organic purity, contains no excess of saline matter, and shows no chemical evidence of undesirable contamination.

Nevertheless, it is well known that the water supplies obtained from the deep wells of London, although bacteriologically of a high degree of purity, are apt to have a corrosive action, even copper pipes not always being immune. The installation of a purification system has enabled galvanized pipes and boilers to be used.

The water is first accurately measured and then treated with reagents, following which it is passed through a mechanical filter of the waterworks type, so that, in addition to being satisfactory for use in the domestic hot and cold water supplies without corrosive effect, it is also perfectly satisfactory for drinking purposes, since its purity is in no way affected. The working parts of the plant are automatic in their action, and very little attention is required.

[The three rooms in plywood, illustrated on page 356 of the JOURNAL for March 4 last, were designed by G. Grey Wornum and Louis de Soissons.]

IN THAT CONTINGENCY

The following abstracts of inquiries are some of a number recently submitted to the Building Research Station, and their replies thereto.

Damp Patches in Walls

A CONTRACTOR stated that dampness had occurred on walls in which previous defects that allowed the penetration of water had been remedied and the walls made waterproof. Whenever the weather was wet or "muggy," the original wet patches had again shown signs of damp.

The explanation suggested was that the passage of water through the wall, in the first instance, conveyed certain soluble salts to the internal surface, where they were deposited and there absorbed water from the atmosphere, when very humid conditions prevailed. The inquirer wished to know the nature of the salts most commonly found under these conditions, and if any remedy, short of hacking off and renewing the internal plaster, had been found satisfactory.

We have investigated a number of cases where the appearance of damp in walls had been ascribed to the presence of hygroscopic salts which, it had been supposed, were introduced with the building materials. It has usually been found, however, that the actual cause was that of penetration of moisture from the exterior of the wall through solid brickwork or masonry. The appearance of condensed moisture in humid weather is likely to be more marked on a wall already damp from some external source, than on a dry wall.

A few cases, however, have been brought to our notice, where hygroscopic salts have given rise to damp conditions. The presence of such salts in ordinary building materials is distinctly unlikely. Bricks, mortars and plasters frequently contain significant proportions of sulphates, which give rise to efflorescence and other troubles, but the presence of chlorides and nitrates, which are the salts which usually display hygroscopic effects, is most unusual.

It may then be assumed as a general

rule where hygroscopic salts exist that they will have been introduced from some external source. The commonest conditions are probably the following :

1 : Salts derived from sea water; introduced in sand or aggregates from seashore or saline estuaries.

2 : Salts absorbed in solution from the ground.

3 : Salts absorbed when the building has been used for the storage of articles containing hygroscopic material. Storage of salted carcases, chemicals and salt goods has been found to give rise to trouble in this way.

4 : By penetration of salt spray in times of gales in the case of buildings situated near the sea.

In applying a remedy, it is essential to consider the circumstances of each particular case, and it is hardly possible to lay down any general procedure. In cases where a large amount of salt is present, and where presumably the whole of the brickwork or masonry is thoroughly impregnated, it would be of little use to hack off and replace the plaster. The only satisfactory treatment would lie in the application of an impermeable membrane over which plaster could be applied, or alternatively, to batten the wall and plaster on laths so that the plaster will be out of capillary contact with the body of the wall.

In cases of slight dampness due to the use of sea sand, it has been suggested that a wash of sodium phosphate might be helpful, as this would tend to form non-hygroscopic compounds. There would be a tendency to efflorescence, however, if moisture subsequently gained access to the wall. We have had one case reported to us where this treatment was found to be effective.

Design of Roofs

A firm engaged in the manufacture of scientific instruments required information on the design of roofs of a contemplated new building. It was desired to shelter the top floor from the rapid rise in temperature which frequently occurs on sunny days in summer. They stated that their work could be accommodated to the changes of temperature which occur from day to day, but not for considerable changes of temperature which occur in the course of two or three hours. In their existing buildings the rapid rise of temperature is partly annulled by the use of lawn sprinklers, which had been found fairly effective over a limited area.

It had been suggested that the new building should have an outer slate-covered roof with north lighting and a light inner roof covered with asbestos cement sheeting, with an air space between.

The question of the prevention of a rise of temperature due to the passage of solar radiation through windows facing on the street was also raised. It was considered that outside blinds were expensive and liable to rapid deterioration.

The most efficient roof for this purpose is one of low thermal conductivity, whose outer surface has high reflectivity for solar radiation and whose inner surface is of metal. The small amount of solar energy which is absorbed by a roof of this type can only pass through the roof with difficulty, while any slight raising of the temperature of the inner surface is of little importance on account of the non-radiating properties of the metallic surface.

The importance of a highly reflecting outer roof surface has been demonstrated at the Building Research Station; the whitewashed surface of an asphalt slab laid on concrete on the ground showed a maximum temperature of 69 deg. Fahr. on a warm, sunny day, while the untreated surface of a similar specimen rose to 98 deg. Fahr.

In addition, the reflectivities for solar radiation of a number of roofing materials have been measured, and values ranging from 57 per cent. for a light Dutch clay tile to 9 per cent. for a dark concrete tile were obtained. Slates do not in general reflect more than 14 per cent., but in view of the nature of the London atmosphere few alternative materials of higher reflectivity, when new, seem likely to confer lasting benefits.

We have recently had an opportunity of examining a white vitreous-enamelled steel roofing sheet which reflected 52 per cent. Polished metal should not be used on an outer roof surface, as such a surface cannot lose heat by re-radiation to the sky.

A reflectivity of 80 per cent. can readily be obtained by means of whitewash, but this would need fairly frequent renewal. Quicklime with oil or tallow for fixing purposes is reasonably resistant to washing by rain.

The provision of an inner roof separated from the outer one by an air space is to be recommended, but it is suggested that galvanized iron or metal-faced plywood should be used in preference to asbestos cement. This would minimize the transference of heat, by radiation, across the air space, as well as prevent the radiation of heat downwards into the room. The air space should, of course, be well ventilated.

For preventing solar radiation from entering the room through the windows, an external coating of whitewash is again recommended. It has been found that a blackened sheet exposed under clear glass may be heated by solar radiation to 248 deg. Fahr., while a similar sheet under whitewashed glass is only heated to 81 deg. Fahr.

Special glass combining high infra-red absorption with moderate light transmission is on the market, but its usefulness is greatly limited by the fact that it is heated by the radiation which it absorbs. The benefit of clear glass in winter can, moreover, only be obtained by reglazing.

THE REGISTRATION BILL

[BY OUR SPECIAL PARLIAMENTARY REPRESENTATIVE]

ON Tuesday, March 10, Standing Committee "A" of the House of Commons continued consideration of the Architects (Registration) Bill. Most of the morning was spent in discussing an amendment to omit the Board of Architectural Education from the scope of Clause 6 (Council to prescribe future qualifications for registration).

This amendment had been moved at the previous sitting by Mr. McShane and strongly resisted on behalf of the promoters, who said that the future of architecture would be perfectly impossible if this great Board were cut out. About twenty-five years ago, when the R.I.B.A. started to try to co-ordinate all the various architectural schools and institutions, it found numerous schools working in different directions; there was a great deal of overlapping of effort, and at the same time there were parts of the country not covered. The R.I.B.A. had never taken the line of dictating to the Board, but had confined themselves to assisting and co-ordinating the work of the Board.

The Board of Architectural Education was truly representative of all that was best in architectural education. It had its teaching committees, its bursary and scholarship committees; it had contact with all the great schools in South Africa, Australia and elsewhere. It had built up a reputation for architectural education and co-ordination such as did not exist anywhere else in the world. And yet, at the whim of that Standing Committee, that great body was to be cut out of the Bill altogether, and its place taken by a small education committee, which would have none of the traditions, none of the knowledge, none of the wide contacts and none of the experience that the Board possessed. The Board was an integral part of the Bill. It was an integral organization to assist the new Council in the discharge of its great responsibility. It had some long-tried machinery, and was the only body which, with any real authority, could advise the new Council on educational or examination matters.

Mr. Winterton (Lab.) said that one of the worst things that could happen

to architecture was that the Board should be, for all time, the one authority to advise the Council.

When the discussion was continued on Tuesday, Mr. McShane contended that out of seventy members of the Board, not fewer than fifty-three would be members of the R.I.B.A. The Board would be overwhelmingly controlled by the R.I.B.A. It would, to all intents and purposes, be the R.I.B.A. under another name. He was anxious that there should be registration, but the retention of the Board would be a deadly blow to the Bill, which would not have a chance of getting through the House of Commons.

Mr. Lindley (Lab.) supported Mr. McShane's view, and said that the National Federation of Building Trades Operatives was opposed to the retention of the Board in the clause.

Mr. Harris (Lib.), speaking as a layman, said the thing he was interested in was to see that only competent people practised architecture, and that they were protected in the future from the abortions which disfigured their streets today. At present, he could put up a brass plate and proclaim himself an architect, and he would get a lot of mugs—perhaps on the strength of his reputation as a Member of Parliament—to employ him in putting up buildings. He would not, in future, be able to act as a charlatan if the Bill became an Act of Parliament. The security against that kind of thing was to see that an educational test was imposed. The strength of the proposal in the clause was that it secured that the educational test was to be applied, not by a narrow organization appointed by the Council, but by a comprehensive organisation representing all the best educational influences in the country. If they were going to pass a Bill to regulate the profession of architecture for all time, they were bound to see that the education board was on a broad and comprehensive basis. To him, the clause was the text of the Bill. If the Board were left out, then he would not bother about the Bill, because it would then be worthless. It would merely mean the establishment of a registration office like a servants' registry. It would mean nothing but a sort of architectural Kelly's Directory, and they did not want to pass an Act of Parliament in order to publish a new volume of Kelly, a mere list of names of ladies and gentlemen who claimed the right to call themselves architects.

Mr. Beaumont (Unionist) caused much amusement by saying that Mr. McShane's attitude might be summed up as follows :

> I could not love this Bill so much,
> Loathed I not the R.I.B.A. more !

After further debate, the amendment was negatived by seventeen votes to eleven. The Board of Architectural Education, therefore, remains in the Clause, which was then agreed to.

When the Standing Committee met on Thursday, March 12, the necessary quorum of twenty members could not be obtained, and the proceedings were, therefore, adjourned until Tuesday, March 17.

In Parliament

Parlour and Non-Parlour Houses

DR. SALTER asked the Minister of Health whether he could state the average cost of non-parlour and parlour houses in contracts let by, and in approved direct-labour schemes of, local authorities in England and Wales during each of the years ended December 31, 1927, 1928, 1929, and 1930.

Mr. Greenwood said that the following statement showed the desired particulars :

Year.	Non-parlour Houses.	Parlour Houses.
	£	£
1927	413	480
1928	362	429
1929	345	409
1930	340	404

Sir Kingsley Wood asked the Minister of Health if he would state the average cost of non-parlour and parlour houses in contracts let by, and in approved direct-labour schemes of, local authorities in England and Wales at the last convenient date.

Mr. Greenwood said that for the month of January, 1931, the average figures were : For non-parlour houses, £349, and for parlour houses, £396.

Mr. Wellock asked the Minister of Health if he would state the average superficial area and the average price of A-type non-parlour houses in direct-labour schemes and in contracts let by local authorities in England and Wales during 1930.

Mr. Greenwood said that the average superficial area was 761 ft., and the average price £340.

Restriction of Ribbon Development

Mr. Ede asked the Minister of Health if the promised legislation on town planning would include any proposals to restrict ribbon development.

Mr. Greenwood said that pending the introduction of the Bill, he could not say more than that this aspect of planning was receiving his careful consideration.

LITERATURE

AN OUTLINE OF EUROPEAN ART

IT is an age of "outlines" of this and that, but the outlines authors draw often become self-portraits when they deal with such matters as history and art. Mr. R. H. Wilenski avoids this form of egoism, and in *A Miniature History of European Art* he has put away personal things. The standardized jargon associated with the recording of æsthetic prejudices has no place in the eighty pages of his compact and unforgettably lucid essay. He has a proper sense of responsibility about prejudices, and that is really all the book reveals about the author, for every sentence is strictly attentive to the business of giving facts about the development of European art and the conditions—social, spiritual and economic—that have influenced it.

The essay is divided into seven sections



From A Miniature History of European Art.] [*Photo by Imperial War Museum, London.*

"We are making a new world," by Paul Nash.

as follows: I. Pre-Christian Art. II. Mediæval Christian Art. III. Renaissance Art. IV. Seventeenth-Century Art. V. Eighteenth-Century Art. VI. Nineteenth-Century Art. VII. Twentieth-Century Art. There are twenty-four plates, selected with such skill that they restore to the word illustration all the meaning it has lost in these days of casual and abundant picture-book publishing. There is also an index of painters, sculptors and architects mentioned in the text, with their dates.

This book is so irresistibly easy to read that it is only when its after-effects upon readers are taking place that it comes to be recognized as a masterpiece of compression. To the Philistine or to those whose interest in art is spasmodic and archaic (typically English, that is to say), the mental after-effects must be clarifying, granting, even to the most obdurate of the "I know what I like" school, enlightenment regarding the sincerity and classical character of the modern movement.

Nobody with the mildest pretensions to interest in its subject could skip a sentence of this book. In the preface the author says: ". . . I have set out not to comment but solely to relate." He succeeds, for he has made not only a book that can be read and re-read with pleasure, but a contribution to contemporary art education that was urgently needed. JOHN GLOAG

A Miniature History of European Art. By R. H. Wilenski. Oxford: University Press. Price 4s. 6d. net.

ILLUMINATION

THOSE who recollect an earlier work by the same author, entitled *The New Science of Colour*, will indentify the desires of this pioneer in the modern colour movement to demonstrate the values of colour and light in their many applications. *The Gates of Light* is a record of the arts and achievements of illumination and coloured light in therapy, psychology and illuminating engineering. How far "it expands the recognition of illuminating engineering from a science to an art"—quoting a statement on the wrappers—may be seen from this examination of some of the twenty-eight chapters.

Of these, the first fifteen are concerned with exterior illumination. A plea is made for the individual recognition of the illuminating expert by architects, and by the directors of department stores and commercial buildings. City planners are urged to zone illuminated advertising areas. Architects are asked to consider "landscape night advertising, to put an end to the disorderly array of ugly statements." The author realizes the sky-sign has come to stay, and urges the architect to prepare a place for it. "Streets dedicated entirely to advertising would prove a novelty in city planning, and might call forth new ideas in architecture and illumination."

In a chapter on the æsthetics of colour and light in city planning, architects are asked to realize the extent of their immense responsibility to the future and the extreme importance of their choice of co-operative experts.

The much greater use of floodlighting for city illumination is urged, and the colours advocated are green, yellow, and white. Selection is to be based on architectural and psychological requirements. I can imagine the latter causing a town planning committee or city council more than a little anguish, unless of course a "co-operative expert" had been co-opted. It is considered that the street lamp must remain for a little longer, but why not some new materials? Weathered woods, lacquered, unpolished or polished, and cements in dark tones, it is suggested, would "add a new and distinctive touch to fixtures."

Then follows an enthusiastic chapter on the lighting of public parks, gardens and fountains. The dreary misery of the sickly gas lamps in our London parks drove me to read greedily of fountains, cascades and lakes which invoke the most dramatic and colourful developments of the illuminating artist-engineer.

The second part of the book contains nine chapters concerned with interior lighting. Hospitals, asylums, prisons and reformatories are dealt with, and the curative properties of certain colour lighting is stressed. The particular lighting requirements of schools and colleges should alone make the book a valuable addition to the reference shelves of any practising architect.

Two chapters on what is called "Filter Illumination" explain the author's invention for which gold and bronze medals were awarded at the Pacific South-West and Panama Exhibitions, California, 1928. The object of "filter light" is to provide a "better quality of light" and to rest and educate the eye.

The book is thoughtfully written, but lacks statistical information, plans and adequate illustrations. C. H. W.

The Gates of Light. By Beatrice Irwin. London: Rider & Co. Price 7s. 6d. net.

SOCIETIES AND INSTITUTIONS

R.I.B.A. INTERMEDIATE EXAMINATION

FOLLOWING are the dates on which the forthcoming R.I.B.A. Intermediate Examination will be held: June 5, 6, 8, 9 and 11, 1931 (last day for receiving applications: May 5, 1931).

R.I.B.A. PRIZES AND STUDENTSHIPS

The R.I.B.A. Prizes and Studentships Pamphlet for 1931–1932 has just been issued. The pamphlet contains full information upon the various prizes and studentships, together with, where applicable, the detailed programmes for the competitions. Copies are obtainable at the R.I.B.A., 9 Conduit Street, W.1, price 1s. exclusive of postage.

WEST YORKSHIRE SOCIETY OF ARCHITECTS

Mr. Norman Culley, F.R.I.B.A., presided at a meeting of the above Society held in Leeds, on February 26, when Mr. Hope Bagenal read a paper entitled "Classic Forms and English Geology."

The lecturer said the attitude, "It will



The Angel visiting St. Anne. By Giotta. (*Photo: Anderson.*)

[*From* A Miniature History of European Art.

last my time," was not only poor-spirited, but was also a betrayal, in regard to building. When architects took up that attitude they were cutting the ground from under their feet. Cheap, rapid building processes were a huge economic fallacy, and would, in some future period of world depression, result in the leakiest properties and worst slums yet known. At any given time the community was inhabiting buildings which were going to have a life of not much more than thirty years, and would then have to take refuge in those which had been erected by builders dead and gone. The initial idea of building was permanence. In ancient days all building stones were precious stones, and the quarry was regarded as sacred. It was of early-nineteenth-century date that they could find mills and factories showing the stark grandeur of a true classicism.

He was not, he continued, pleading the cause of structure for structure's sake; that was for the engineer. He was pleading for structure in the interests of art. A work of architecture presented a structural problem and an art problem side by side, the latter being always the more difficult. The direct statement of structure made the art problem easier; it helped to narrow it down. This narrowing down of the problem to definite limits was, to his mind, the great lesson they could learn from Greek architecture, because a Greek temple was, at the same time, the simplest and the most imaginative of buildings.

Messrs. Joseph Addison and W. F. Dawson, respectively, moved and seconded a vote of thanks to the lecturer: and Messrs. R. A. Easdale and G. H. Foggitt, amongst others, took part in the ensuing discussion.

Mr. Bagenal, in acknowledgment, said his engineer's training had led him to admire beauty of structure with material rightly used. He thought that they all ought to get behind the veil of familiarity, induced by a constant association. Modern materials were not showing themselves superior to the old, and recent research showed this. In trying new materials they must not forget the old ones, which had stood the test of time.

MODERN ARCHITECTURE

The fifth of the series of lectures by members of the West Yorkshire society, arranged in conjunction with the local education authority, was given in the Technical Institute, Huddersfield, by Mr. Joseph Addison, head of the Leeds School of Architecture, on March 6, the subject being "Modern Architecture."

The lecturer affirmed that there were buildings now being erected in Leeds and Huddersfield which would be out of date before the scaffolding had been removed. England had shown a sad lack of enterprise in not taking up the new movement in architecture. Progress was now so rapid that the architect had to be alert to seize upon new materials and more mobile forms of construction.

The limitations which governed the design of the heavy stone and brick buildings of the pre-modern style would not be encountered by the designers using the new materials. The American skyscraper, rising over a thousand feet above the level of the street, was an accomplished fact; and perhaps within the next decade the horizontal skyscraper supported by columns of steel would also be a reality. It would have the advantage of permitting unrestricted traffic beneath its widespread legs, and afford an abundance of light and air both to the buildings and the traffic-ways beneath them. He thought that the buildings of the near future would consist almost wholly of metals, glass, and new chemical compounds.

SOUTH YORKSHIRE ARCHITECTS' ANNUAL DINNER

The annual dinner of the Sheffield, South Yorkshire and District Society of Architects was held at Sheffield. Mr. W.G.Buck, president, occupied the chair.

After the loyal toasts, Lt.-Col. Stephenson, proposing "The City of Sheffield," said that he thought from an architectural standpoint there was much to deplore in Sheffield, especially with regard to the post-war domestic architecture. He sometimes thought that the various committees of the Council should make more use of the Acts of Parliament which they possessed or might possess, but he also thought that Sheffield had much to be commended, and in many ways it could more than hold its own. The Lord Mayor, responding, admitted that he was not particularly interested in architecture, and that as a lawyer he was not supposed to know much about business or trade, but he had managed in the course of his life to learn a little about the latter two.

Mr. B. P. Brown, who also responded, stated that it would interest architects to know that steel was being produced in Sheffield which would probably outlast concrete and other present-day building materials.

Dr. A. W. Pickard-Cambridge, M.A., proposing "The R.I.B.A. and the Allied Societies," spoke of the lasting impression which bad architecture made on civilization, as these bad examples of building were at all times and for a long period of years constantly before people's eyes. It was regrettable that so many ugly small houses were being erected all over the country.

Mr. Francis Jones, F.R.I.B.A., in reply, alluded to the Lord Mayor's remark that he was not particularly interested in architecture. He said that it was the fault of the R.I.B.A. that the Lord Mayor was not interested, and it was the fault of the profession, and that there was some justification for the remark. The fault, however, lay not with the present generation, but with its predecessors, who did not see that the City was properly town-planned, and that it had merely been allowed to grow up out of itself and assume haphazard proportions.

Mr. C. M. Hadfield, F.R.I.B.A., replied on behalf of the allied societies. He appealed for the co-operation of all practising architects in the organized activities of the allied societies, in view of the many urgent problems likely to arise in the near future through the "Development" proposals of the R.I.B.A., and the probable early passing of a Registration Act.

The toast of "The Guests" was proposed by Mr. J. Lancashire, L.R.I.B.A., who said he thought there should be closer co-operation between the architect and the engineer. Sir William Ellis, G.B.E., responded.

EAST YORKSHIRE ARCHITECTS' ANNUAL DINNER

The York and East Yorkshire Architectural Society held their annual dinner in the Guildhall, Kingston-upon-Hull. The President, Mr. G. Dudley Harbron, F.R.I.B.A., occupied the chair.

Mr. Kenneth Ward, L.R.I.B.A., proposing "The City and County of Kingston-upon-Hull," spoke of the recent improvements in Hull, and said that the new street, when completed, would be a distinguishing feature of the city. The Sheriff (Alderman R. W. Wheeldon), and the Stipendiary Magistrate (Mr. J. R. Macdonald), responded.

The toast of "The R.I.B.A." was proposed by Mr. F. J. Horth, F.R.I.B.A., who paid warm tribute to the work of the Institute, making special reference to the efforts to pass into law the architectural control of elevations and the splendid work which the Board of Architectural Education and the Endowment of the Institute rendered for students of architecture. He complimented the Hull Council on the support they had given to the Architectural School.

Mr. Francis Jones, F.R.I.B.A., in reply, congratulated the people of Hull on looking to the future and, instead of placing buildings in haphazard manner, having prepared a town-planning scheme. Without town planning as a basis, the architect's work was ineffective.

Mr. E. A. Sallis Benney (Principal of the Hull College of Art and Crafts), proposing the toast of "The York and

East Yorkshire Architectural Society," congratulated the Society upon its nearly fifty years of activity in the interests of architects and architectural students. He complimented its members upon helping the College of Art, and he trusted the College was helping them in the further advancement of professional knowledge.

Mr. G. Dudley Harbron, F.R.I.B.A., responding, recalled the success of many of the students of the Hull College of Art, who had distinguished themselves by gaining prizes awarded by the R.I.B.A., for which opportunity they, as an allied society, were conscious of their indebtedness to the fine endowment the profession enjoyed through the Prize Scheme of the Institute and its educational ladder, which enabled the boy from the elementary school to obtain the highest architectural educational advantages. He hoped that the College of Art would soon be recognized by the R.I.B.A. for exemption. Mr. Harbron made interesting historical references to the architects who had been responsible for the various Guildhalls in Hull, as well as the present building, designed by Sir Edwin Cooper.

"Our Guests" was proposed and responded to by Mr. H. Andrew, F.R.I.B.A., and Dr. M. Jacobs, President of the Hull Literary and Philosophical Society, respectively.

THE LONDON BUILDING ACT, 1930

Suggested amendments of the London Building Act, 1930, were made by Mr. Gilbert H. Lovegrove, F.R.I.B.A., in a paper read before the Chartered Surveyors' Institution on March 9.

After giving a résumé of the earlier Acts, Mr. Lovegrove said none of the modern Building Acts defined what was a building, and the dictionaries were not very successful, so that, now case-law had defined a number of instances as to what were "buildings" covered by the Act, it was probably best that the omission should be continued.

Domestic and warehouse buildings might be more clearly defined. The existing circular definitions—that a warehouse building was one that was neither a public building nor a domestic building, and a domestic building was one which was neither a public nor a warehouse building—were unsatisfactory, although one could not expect the equal of the beautiful definition of section 95 that an old building was one that was not a new building. Shops over a small area should be included in "public buildings," together with all places of public assembly; at present, except under section 97, the Council had no control, and many shops and churches were extremely dangerous in case of fire. He suggested buildings having a floor space of over ten squares in all on one or more floors should be so included where the public had access. The definitions should be grouped in one section, and not be separated under sections 5 and 95.

Referring to the construction of buildings, he thought that the weakness of those sections of the 1930 Act which were not included in the 1894 Act, appeared to be that a petty sessional court should be the referee in a dispute as to the strength of a steel-framed building between the district surveyor and the building owner; this should surely be a matter for the Tribunal of Appeal as now composed. No provision was made for inspecting the building after it had been completed; the steelwork remained hidden from view until it was taken down, whatever its condition might be. He understood that in America provision was made for opening it up at stated periods, and something of this sort was very desirable to prevent possible collapses.

Many walls had been rendered defective through the removal of the loads from one side after having been evenly loaded on both sides. It was common knowledge that the external walls, including the flank walls of an old building, bulged far more quickly than an evenly loaded party-wall, and it was rare that a party-wall was rebuilt with the rest of a building owing to the inconvenience caused to the adjoining occupier. Some provision might be considered for independent inspection, other than for the purpose of serving a dangerous structure notice, with a view to the future stability of the wall, particularly where the erection of a steel-framed building was proposed, causing the uneven loading of a wall. At the present time, in practice, the adjoining owner's convenience had too great a weight in preference to a broad-minded opinion as to what was best in the interests of sound building.

MEDIÆVAL SECULAR BUILDINGS

Sir Banister Fletcher, P.R.I.B.A., in his lecture at the Central School of Arts and Crafts, London, on Wednesday last, dealt with the domestic side of English Mediæval Architecture. He traced the development through the Early English, Decorated and Perpendicular periods, to the manor-house of the Tudor period.

LAW REPORTS

PUBLIC HEALTH ACT, 1891

Rapson v. *Gimson. King's Bench Divisional Court. Before Justices Avory and Swift*

THIS appeal centred around the construction to be placed on the first subsection of section 39 of the Public Health Act, 1891, which stipulated that w.c.'s in premises used for human habitation or the storage of food must be enclosed by solid walls of brick or some other material.

It appeared that in reconstructing a house in Longridge Road, Kensington, into self-contained flats, the w.c.'s next to the kitchen were enclosed by a wall of 3 ins. by 2 ins. studs or uprights 18 ins. apart, attached to which were sheets of fibrous plaster covered with a skimming of Keene's cement.

The Justices of Kensington held that such a wall could be regarded as a solid wall that would meet the requirements of the bylaw, and the case now came before the Court on an appeal by the plaintiff on a case stated.

The Court held that the appeal failed, as the justices could find that the wall was solid.

Mr. Justice Avory thought that there was considerable force in the argument advanced by the appellant that the partition as constructed might not remain solid and impervious to the passage of air so that there would be no contamination from the w.c. to the adjoining rooms. As far as his lordship could see, there was nothing in the bylaws which said that the wall or partition was to be maintained in a solid and impervious condition. It simply said that it was to be constructed in such and such a way, and it followed that the Court had nothing to do with the question as to how long the partition would remain solid and impervious. All the Court had to do was to decide whether the justices could find as they did, and in their opinion they could so find.

Mr. Justice Swift concurred.

SALE OF PROPERTY

Harrods Ltd. v. *Lemon. King's Bench Division. Before Mr. Justice Avory*

In this action Messrs. Harrods Ltd. sued Miss Helen Kent Lemon, of Westwood, Ascot, to recover commission in respect of the sale of Blytheswood, Ascot, for £7,337 10s.

Plaintiffs' case was that their estate agency department were instructed to find a purchaser, and that they introduced a person who eventually agreed to purchase, subject to a surveyor's report. The purchaser consulted the plaintiffs' building department in regard to the property, and they reported that the drains were bad. That department was unaware that their estate department were acting for the vendor in the matter. As a matter of fact, complaint was made to plaintiffs before completion as to the building department acting for the purchaser. Plaintiffs' case was that the two departments were separate businesses.

Defendant's submission was that the plaintiffs were guilty of a breach of

duty, and they counter-claimed for damages.

His lordship, in giving judgment for the plaintiffs, with costs, reviewed the position in regard to their two departments. He said he could not accept the contention that the estate and building departments of the plaintiffs were to be viewed as separate entities, as in law Harrods Ltd. were one person, however many businesses they might carry on. In acting as they did, one department for the purchaser and another for the vendor, they were committing a breach of their duty as agents for the vendor. They were putting themselves in such a position that they had a temptation not faithfully to perform their duty to their employer. However, he came to the conclusion that plaintiffs were not guilty of any fraud or dishonesty, but he thought they had acted in good faith, though under a misapprehension as to their legal position to their client. But he could not see that any damage had been suffered by the defendant. He was satisfied that the purchaser would, in any event, have had a report on the drains before making the contract. Defendant had agreed to a reduction in the price of the property from £7,500 to £7,337 10s. In view of all the circumstances of the case he came to the conclusion that the plaintiffs were entitled to succeed, and he entered judgment for them on the claim and counter-claim with costs.

HABITABLE FLAT: APPEAL DECISION

Rhoades v. *Richards. Court of Appeal. Before Lords Justices Scrutton, Greer and Slesser*

This appeal arose out of an action, tried in the King's Bench Division before Mr. Justice Horridge and a special jury, in which plaintiff, Mrs. R. Rhoades, of St. Mary Abbott's Terrace, Kensington, sued Mr. H.W. H. Richards, the chief electrical engineer of a railway company, to recover £58 16s., the second instalment of rent, payable in advance, of a furnished flat at Iverna Court, Kensington.

Plaintiff said under a tenancy agreement the rent was due on May 15, 1929. She also sought to recover the sum of £1 10s. in respect of dilapidations.

In his defence the defendant pleaded that he was justified in repudiating the agreement on the ground that the flat was not habitable owing to the presence of noxious insects in the kitchen and bathroom. He put in a counter-claim for £117 odd in respect of expenses he had been put to.

The jury found that the premises were not fit for human habitation when the defendant entered, and Mr. Justice Horridge entered judgment for the defendant on the claim and for the defendant on the counter-claim for £46.

The plaintiff now appealed, and Mr. Fortune, her counsel, said it was not till the defendant had been in possession for three weeks that he complained that some insects called silver fish were in the kitchen, bathroom and two lavatories. The flat was a furnished flat at a rental of seven guineas a week, payable in advance. Defendant paid the first instalment of £58 odd. The matter got into the hands of the medical officer of health and, ultimately, defendant left the flat and refused to pay the next instalment of rent. Counsel argued that as silver fish were not noxious in the sense that they did not bite, as did bugs, and could be got rid of by powder and fumigation, the flat could not be said to be uninhabitable. No one could say that because there were one or two mice in a house it was uninhabitable.

The Court dismissed the appeal with costs, without calling upon Mr. W. T. Monckton, K.C., for the respondent.

Lord Justice Scrutton, in giving judgment, said the law as to flats was that there was an implied condition that the flat should be fit to live in at the time of hiring. The insects in question were extremely disagreeable things, and there was evidence that there were large numbers of them in the flat, and they were of nocturnal habits. In his opinion there was abundant evidence for the jury to have arrived at their decision.

Lords Justices Greer and Slesser agreed.

COMPETITIONS OPEN

April 1.—Sending-in day. Development of the uses of aluminium and its alloys, for the International Aluminium Bureau. Two premiums of 25,000 francs. Conditions from the Bureau International de l'Aluminium, 23 bis, Rue de Balzac, Paris, France.

April 11.—Sending-in day. Temporary Garage at the Building Trades Exhibition, Manchester (April 14 to April 25). Assessors: H. S. Fairhurst, F.R.I.B.A., John Swarbrick, F.R.I.B.A., and Professor A. C. Dickie, M.A., A.R.I.B.A. Premiums: £100, £30 and £20. Particulars from Provincial Exhibitions, Ltd., City Hall, Deansgate, Manchester.

April 18.—Sending-in day. Central Municipal Bank and Head Offices, Broad Street, Birmingham. Assessor: Sir Reginald Blomfield, R.A., F.R.I.B.A. Premiums, £400, £300, and £150. Conditions from Herbert H. Humphries, City Engineer and Surveyor, Council House, Birmingham. (Deposit £3 3s.)

April 30.—Sending-in day. Hospital for Infectious Diseases, Coventry, for the Coventry Corporation. Assessor: E. Stanley Hall, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

June 16.—Sending-in day. (Last day for conditions was February 25.) Offices for the Ingham Infirmary, South Shields. Limited to architects within the area of the Northern Architectural Association. Assessor: George Reavell, O.B.E., F.R.I.B.A. Premiums, £250, £100 and £50. Conditions were obtainable from John Potter, Secretary, Ingham Infirmary, South Shields. (Deposit £2 2s.)

THE ARCHITECTS' DIARY

WEDNESDAY, MARCH 18

CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Spanish Mediæval Architecture. By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

SOUTH-EASTERN SOCIETY OF ARCHITECTS. Brighton Chapter. At the Old Ship Hotel, Brighton. "Architectural Acoustics." By C. W. Glover, A.M.INST.C.E. **6.30 p.m.**

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Annual Reception. **8 p.m.**

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS, 1 Wilbraham Place, S.W.1. Exhibition of designs submitted for the Petrol Filling Station Competition. Until March 21. 10 a.m. to 8 p.m. **10 a.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. "Automatic Hydro-Electric Installations." By E. N. Webb, D.S.O. Chairman: S. B. Donkin. **6 p.m.**

THURSDAY, MARCH 19

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Reformers in Furniture Design." By Percy A. Wells. **7 p.m.**

CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Reinforced Concrete." By A. van Osenbruggen. **7.30 p.m.**

WEST YORKSHIRE SOCIETY OF ARCHITECTS. At Bradford. General Meeting. **7 p.m.**

MARGATE SCHOOL OF ART. At the Wesleyan Schoolrooms, Hawley Square, Margate. Ninth of ten lectures on the History of Architecture. "French Renaissance and its Architects." By R. Goulburn Lovell, A.R.I.B.A. **7.45 p.m.**

ILLUMINATING ENGINEERING SOCIETY. At the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. "Modern Domestic Lighting." By H. T. Young, M.I.E.E. **7 p.m.**

FRIDAY, MARCH 20

BRITISH ELECTRICAL DEVELOPMENT ASSOCIATION. Annual luncheon, to be held at the Savoy Hotel, Strand, W.C.2. 12 45 for 1 p.m. **1 p.m.**

SATURDAY, MARCH 21

Sunrise, 6.0 a.m. Sunset, 6.15 p.m.

CENTRAL SCHOOL OF ARTS AND CRAFTS. Visit to a Factory in East London. **2 p.m.**

INSTITUTION OF CIVIL ENGINEERS. Students' visit to the Bedington (Croydon) Sewage-Disposal Works.

MONDAY, MARCH 23

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "Beauty." By Professor R. M. V. Gleadowe. **8 p.m.**

TUESDAY, MARCH 24

DESIGN AND INDUSTRIES ASSOCIATION. At the London School of Economics, Houghton Street, Aldwych, W.C.2. "The Modern Film." By John Grierson. **8 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. Discussion on: "The Washaway and Reconstruction of the Nerbudda Bridge on the Great Indian Peninsular Railway." and "The George's River Bridge, New South Wales." **6 p.m.**

WEDNESDAY, MARCH 25

LONDON CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row W.C.1. "German Mediæval Architecture," By Sir Banister Fletcher, P.R.I.B.A. **6 p.m.**

WEST YORKSHIRE SOCIETY OF ARCHITECTS, 62 Woodhouse Lane, Leeds. Students' Debate: "That Architecture is of vital importance to the Layman." Affirmative: J. A. Naylor. Negative: G. B. Stickney. **7 p.m.**

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Kent Coalfields." By Professor Patrick Abercrombie, M.A., F.R.I.B.A. Chairman: The Rt. Hon. Lord Cornwallis, C.B.E. **8 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. "Recent River-Wall Construction on the Thames." By J. M. Liddell, B.SC. Chairman: E. H. Tabor, M.INST.C.E.

BRITISH WOOD PRESERVING ASSOCIATION. At 29 Lincoln's Inn Fields, W.C.2. Discussion on "The Preservative Treatment of Timber." **6.30 p.m.**

THURSDAY, MARCH 26

SOUTH-EASTERN SOCIETY OF ARCHITECTS. Croydon Chapter. At the Town Hall, Croydon. Annual General Meeting, followed by "Modern European Architecture." By F. R. Yerbury, HON. A.R.I.B.A. **8 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "The Erection of Sydney Harbour Bridge." By J. Stuart Lewis, M.I.STRUCT.E. **6.30 p.m.**

LONDON SOCIETY. Annual meeting, to be held at the Clothworkers' Hall, 41 Mincing Lane, E.C.3. Tea, 4 p.m. **4.30 p.m.**

INSTITUTE OF FUEL. At the Institute of Engineers, Park Place, Cardiff. "Local Generation of Electrical Power *plus* the Grid." By Major E. Ivor David, M.I.E.E. **6 p.m.**

INSTITUTION OF ELECTRICAL ENGINEERS, Savoy Place, Victoria Embankment, W.C.2. "The Electrical Heating of Buildings." By Ronald Grierson, M.I.E.E. **6 p.m.**

TRADE NOTES

The new catalogue of pavement lights issued by Messrs. Haywards, Ltd., is much more than an elaborated price list; it is a treatise on the subject containing over a hundred large quarto pages, profusely illustrated, and many full-size sectional drawings. Details are given of over fifty lens patterns, and every type of construction in iron and reinforced concrete is fully exemplified. A special colour section is devoted to tile lights, and details are given of stallboard lights, cellar flaps, ventilating panels, daylight reflectors, etc. Haywards draw special attention to their "W" glass for pavement lights. The durability of this glass is specifically guaranteed by the firm, and the claim is made that it is practically immune against "fledding." The historical note at the beginning of the catalogue reveals the fact that the semi-prism pavement light lens was invented sixty years ago by Mr. Edward Lambert Hayward, and that the whole pavement light industry is rooted in that early invention.

*

Philips Lamps, Ltd., have placed on the market a sunlight lamp, the Philips Ultrasol, which has been specially designed for home use. The apparatus has been constructed to operate from A.C. mains of 100 to 250 volts (50 cycles). A tapped mains transformer enables this voltage range to be covered. The Ultrasol is claimed to be electrically and mechanically safe in every respect, connections to A.C. mains being through an ordinary plug. No goggles, it is said, are necessary, provided one does not look directly at the light source. The apparatus consists of four separate parts, a reflector with holder and lead-in wires, a stand in two parts, and a base comprising a transformer in a cast-iron case with cable for mains connection. The entire outfit can easily be carried from room to room. It has a matt silvered finish. The firm have just issued a new brochure, "Fittings for Indoor and Outdoor Lighting."

*

Messrs. J. Lyons & Co., Ltd., have ordered a further 179 Frigidaire ice cream cabinets, bringing the total number of their Frigidaire installations up to 7,000. An order of this magnitude, placed by such a firm as Messrs. Lyons & Co., should convince even the most sceptical of the advantages of the iceless electrical ice cream freezer and storage equipment.

*

"Every £1,000 worth of foreign sanitary earthenware used in this country means the loss of £400 in wages to British workers employed in British pottery factories, to say nothing of the wages lost to the workpeople engaged in the industries supplying the necessary raw materials. A loss of every £400 in wages represents a week's work for 100 British pottery workers. It is clear that if the growing importation of foreign-made sanitary earthenware continues unchecked, the outlook for the British industry is serious. Here is the case of a highly-organized industry which, until recently, supplied the entire sanitary earthenware requirements of this country, being compelled to face the prospect of decreased output—with all its attendant evils of discharge of operatives and short-time working—solely because the Continental manufacturer, by reason of his low wages and lower standard of living, is able to sell a little cheaper. Conceding that British buyers of Continental sanitary earthenware effect a slight initial saving—in any case a matter of a few shillings only on each article—it must be borne in mind that the country loses on the transaction inasmuch as it has to pay indirectly in the form of 'dole' far more than any difference in price between the British and foreign-made article."—From "An International Affair," issued by Messrs. O'Brien Thomas & Co., Ltd.

Bank News

The annual general meeting of the shareholders of the Westminster Bank, Ltd., was held at the head office, Lothbury, E.C. The Hon. Rupert E. Beckett (chairman) presided. Commenting on the bank's balance sheet, he said there had been a substantial fall in net profits, which were £338,496 lower as compared with the figures shown in 1929, representing a decrease of 15·7 per cent. The poorer results were disclosed in the figure representing advances to customers and other accounts, which showed a shrinkage of no less than £15,400,000. Owing to bad trade, money had not been called for in such large volume for current commercial needs. It had flowed back to the bank naturally, and there had certainly been no calling in of loans from productive industry. Indeed, they welcomed any legitimate outlet for the bank's funds, where they could be properly employed in stimulating and extending trade. Speaking of the allocations of the profits to the various funds, he said that he stressed the figures to show that banks were no more immune from the vicissitudes of bad trade than any other members of the trading community. He detailed the various directions in which Britain suffered from peculiar disabilities, mainly the legacy of the Great War. He pointed out that nearly a half of our annual budget represented deferred payment for the war and was therefore more or less fixed; the remainder—more than a half—instead of being strictly and rigidly curtailed in view of this fact, has shown a ceaseless tendency to rapid expansion, under successive Governments. For years, the demand that the country should begin to cut its coat according to its cloth had fallen upon deaf ears; but today, when the general and sharp fall in prices had proportionately increased the real burden of taxation, the need for national economy must be brought home to the whole people. We had surely reached a time when any new expenditure should be judged not by its intrinsic desirability, but by the question whether the country could afford it.

THE BUILDING ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for Margate and District General Hospital (pages 412–415). General contractors, Reg. Elliott & Co. Sub-contractors: Berkeley Electrical Engineering Co., Ltd., electric light and power; Fredk. Braby & Co., Ltd., copper roofing, including tower, flats, dormers, etc.; A. E. Davis and Son, ironmongery; Doulton & Co., Ltd., sanitary fittings; Express Lift Co., Ltd., bed and service lifts; J. W. Gray and Son, Ltd., lightning conductors; Hollis Bros. & Co., Ltd., wood block flooring; A. J. Shingleton, light-tight blinds; W. B. Simpson and Sons, Ltd., wall tiling; James Slater & Co., Ltd., heating and hot water and sterilizers; Trussed Concrete Steel Co., Ltd., Reinforced Concrete Engineers, fire-resisting floors and staircases; J. P. White and Sons, hospital flush doors; Crittall Manufacturing Co., Ltd., metal casements and operating theatre lights.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office. All inquiries concerning inventions, patents and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated readers should apply to the Patent Office, 25 Southampton Buildings, W.C.2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

5118–5119. Phillips, T. Metallic reinforced slabs of concrete, etc. February 18.

5142. (I.G. Farbenindustrie Akt.-Ges.). Rendering building materials waterproof. February 18.

5561. Morton, B. Pre-cast beams for concrete floors, etc. February 23.

5823. Allan, A. D. V., and Salvesen, E. P. Hollow concrete building blocks. February 24.

5833. Rose, J. Damp-proofing, etc., walls. February 24.

6335. Hurden, A. P. and Hurden, E. Roofing tiles, etc. February 28.

SPECIFICATION PUBLISHED

343803. Hutcheson, W. J. F. Reinforcement connected with reinforced concrete buildings, slabs, playgrounds and suchlike.

Messrs. J. S. Gibson and W. S. A. Gordon, FF.R.I.B.A., have removed their offices to 2 Devonshire Terrace, Marylebone Road, W.1. Telephone number: Welbeck 8609.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Plans passed at EAST HAM: Alterations, 2 Barking Road, for Messrs. F. Sage & Co., Ltd.; eleven garages, Melbourne Road, for Mr. R. Slater, architect; twelve houses, Lawrence Avenue, for Messrs. Herapath Bros.

The EAST HAM Corporation Baths Committee has approved the estimate submitted by the borough engineer of £17,923 for the erection of new swimming and slipper baths, alterations to the old vapour bath, and the erection of a gallery in the existing swimming bath.

The LEWISHAM B.C. is to prepare plans for the erection of a maternity home at Catford Hill, at an estimated cost of £25,000.

The WATFORD Corporation has obtained sanction to borrow £33,000 for the erection of swimming and slipper baths at Hempsted Road.

Plans passed by WATFORD Corporation: Houses, Leggats Way, for Watford Garden Estates, Ltd.; four houses, Orchard Drive, for Messrs. W. King and Sons; four houses, Purbrook Avenue, for Mr. F. W. Brockett; power house, St. Albans Road, for Grano Food Co.; bank and shops, Chalk Hill, for Mr. James Rodwell.

SOUTHERN COUNTIES

Plans passed by DARTFORD U.D.C.: Ten houses, Shepherds Lane, for New Ideal Homesteads, Ltd.; four houses, Dewlands estate, for Mr. L. Fuller; four houses, Knowle Road, for Messrs. H. C. Wright & Co., Ltd.; four houses and one shop, The Brent, for Mr. W. F. Summers; additions and alterations, 4 Spital Street, for Messrs. Gersons; eight shops, Market Street, for Mr. W. F. Blay.

The EASTBOURNE Corporation is to erect electricity substations in Cambridge and Addingham Roads, and is to acquire the old lifeboat station in Marine Road, for conversion into a substation.

The HASTINGS Corporation has passed plans submitted by Mr. J. B. Mendham, architect, for the erection of a cinema and variety theatre near Warrior Square station, St. Leonards.

Plans passed at HASTINGS: Two shops, Abbey Drive, St. Leonards, for Mr. H. H. Ford; sixteen houses, St. Helen's Road, for Messrs. Jeffery and Bowcock; alterations, Baptist Church, Wellington Square, alterations, The Adelphi Hotel, Warrior Square, St. Leonards, and three houses, Broomgrove Road, for Messrs. H. Ward, Son and Wray; parish hall, St. Mary Magdalen Church, for Messrs. Callow and Callow; additions, Wesleyan Church, Upper Park Road, for the trustees; six houses, Saxon Road, for Mr. J. Hunt; two houses, Woodland Vale Road, for Messrs. Jeffery and Bowcock; sixteen houses, Glen Road, Hollington, for Mr. F. Miller.

The OXFORD Corporation is to obtain tenders for the erection of thirty houses at Cold Arbour and 160 at Cutteslowe.

The OXFORD Corporation has approved the original elevations for the building on the south-east corner of Carfax, submitted by Messrs. Ashley and Winton Newman, FF.R.I.B.A.

Plans passed at OXFORD: Four houses, Iffley Road, for Mr. G. H. Simmons; two houses, Ramsey Road, for Mr. G. Coppock; church hall, Canning Crescent, for the Rev. D. K. S. Hunt; new Methodist hall, Lime Walk, Headington, for the Wesleyan chapel.

The PORTSMOUTH Corporation is to erect 2,800 houses during the next five years.

Plans passed at PORTSMOUTH: Six shops, London Road, for Mr. R. J. Winnicott; offices, 51 Commercial Road, for Woolwich Equitable Building Society; nine houses, St. Chad's Avenue, for Mr. F. W. Devenish; four houses, Amberley Road, for Messrs. Dye Bros.; twelve houses, Mayfield Road, for Messrs. Tanner Bros.; sixteen houses, off Tangier Road, for Mr. E. V. B. Thorpe; three houses and shops, London Road, for Messrs. Collett and Collett; three shops, London Road, for the Builders' Guild; thirteen houses, Northover Road, for Mr. A. A. Carter; eight houses, off Tangier Road, for Mr. S. J. Todd; shop, Clarendon Road, for Messrs. G. J. Davis and Son.

SOUTH-WESTERN COUNTIES

The NEWPORT (MON.) Corporation has obtained a grant for the scheme for the construction of the Talybont reservoir, at a cost of £410,000.

Plans passed at PLYMOUTH: Five bungalows, Crowndale estate, for Mr. H. Mills; completion of west end of St. Augustine's Church, Alexandra Road, Lipson, for the parish council; alterations to offices, corner of Vauxhall and Treville Streets, for Mr. E. Robins; four houses, Glenpark Avenue, for Mr. W. P. Hill; alterations, Mainstone Hotel, 85 Cattedown Road, for the New Victoria Brewery, Ltd.; alterations and additions, James Street Vaults, James Street, for the New Victoria Brewery, Ltd.; two houses, Breen Park Road, for Mr. E. A. Davy; two houses, Broome Park estate, for Messrs. Hayter and Cole; four houses, Breen Park Road, for Mr. S. Tellam; forty-four houses, Seymour Road, Mannamead, for Seymour estates.

Plans passed at POOLE: Two houses, Shottsford Road, for Mr. W. J. Dacombe; four houses, Pine Avenue, for Mr. S. G. Ward; house, Hinchliffe Road, for Mr. F. Pulker; house, Twemlow Avenue, for Mr. D. A. Wood; house, Cranbrook Road, for Mr. N. P. Good; house, Houlton Road, for Mr. F. Jones; amended plan of three houses, Alder Road, for Messrs. Philpotts and Manners; house, Anthonys Avenue, for Mr. J. Jagger; four detached and one pair of semi-detached houses, Stente Road, for Mr. F. H. Cockram; two houses, Livingstone Road, house, Berkeley Avenue, pair of semi-detached houses, Farcroft Road, for Mr. M. J. Lawford; three blocks of four houses, Alchester Road, for Messrs. Brailsford and Wood, Ltd.; four houses, Highland Road, for Mr. W. A. Green; two houses, Walton Road, for H. W. J. Whiffen; two houses, Sherwood Avenue, for Messrs. Opperman and Jones; four houses, Alder Road, for Mr. J. C. Philpotts.

The TORQUAY Education Committee has asked Mr. B. Widdows, architect, to prepare plans for the erection of a school for 320 children.

EASTERN COUNTIES

The COLCHESTER Corporation is to erect fourteen houses in Serpentine Walk, and is to consider the acquisition of a housing site in Land Lane.

The NEWMARKET R.D.C. is to erect twenty houses at Swanham.

MIDLAND COUNTIES

The ALFRETON U.D.C. is to erect sixty-four houses on the Mansfield estate.

The BIRMINGHAM Corporation has obtained sanction to borrow £1,000,000 for housing schemes, and £100,000 for waterworks.

The CHESTERFIELD Corporation has asked the Improvement Committee to consider the development and utilization of the Rose Hill estate, including the provision of municipal buildings.

The CHESTERFIELD R.D.C. is to erect eighteen houses at Beighton and twelve at Tupton.

The CHESTERFIELD Corporation has asked the borough engineer to prepare plans for widening the bridge over the River Hipper.

The Ministry of Health has held an inquiry into the proposal of the DERBY Corporation to erect new municipal offices, embracing a civic centre, market, bus station and a new main road, at a total cost of £306,000.

A cinema is to be erected on the Conservative Club site, EVESHAM.

Messrs. Morrall and Stubs are to erect a cinema, with seating capacity for 840 persons, in Port Street, EVESHAM.

The NOTTINGHAM Corporation has approved proposals of the Trent Navigation Committee, for the improvement of the navigation, including the construction of a dock, warehouse and transit shed, at a total cost of about £60,000.

The NOTTINGHAM Corporation is to undertake a comprehensive slum-clearance scheme, involving a cost of £1,400,000.

The NOTTINGHAM Corporation is to erect 528 houses and thirty flats on the Valley Road and Hucknall estates, at a cost of £185,000.

The SHREWSBURY Education Committee has acquired a site for the erection of a senior school.

NORTHERN COUNTIES

The BOLTON Corporation has obtained sanction to borrow £472,918 and £4,360 for the extension of the town hall and the erection of public offices and police buildings, and of the sums of £148,422 and £500 for the erection of a central library, art gallery and museum.

The Ministry of Health has approved the proposal of the BRADFORD Corporation for the erection of 770 houses on the Chellow Grange estate.

The BRADFORD Corporation has approved the plans of the city architect for the erection of an operating theatre block at St. Luke's Hospital at a cost of £10,720.

The CARLISLE Corporation has purchased Pleasureland, Upperby, for a housing scheme.

The CARLISLE Education Committee has appointed Mr. Herbert Buckland, F.R.I.B.A., as architect for the new technical and central schools.

The LIVERPOOL Education Committee is to erect an elementary school on the Highfield estate.

The Lancashire Education Committee is seeking sanction to borrow £31,000 for the erection of a senior school at ORMSKIRK.

The ROTHERHAM R.D.C. is to erect 100 houses in various parishes, and has adopted a programme for the erection of a further 400 during the next five years.

The SHEFFIELD Corporation has decided to erect 176 houses, by direct labour, on the Greenhill estate.

Plans passed at SHEFFIELD: Two houses, Harley Road, for Mr. W. Green; four houses, Donnington Road, for Mr. J. C. Mason; six houses, Crimicar Lane, for Messrs. A. J. Mackenzie, Ltd.; two houses, Garry Road, for Mr. M. Simpson; twenty houses, Hoober Avenue, for Mr. T. H. Bailey; two houses, Prince of Wales Road, for Mr. F. Talbot; two houses, Nether Edge Road, for Mr. H. White; two houses, Glebe Road, for Mr. F. Lamb; twenty-six houses, Longley estate, and eight houses, High Wincobank estate, for the Estates Committee.

The WAKEFIELD Corporation is to prepare a rehousing scheme for ninety-two houses in the New Street area.

Plans passed at YORK: House and two shops, Albemarle Road, for Mr. T. Chippendale; new buildings and stand, Knavesmire, for the York Race Committee; two houses, Westminster Road, for Messrs. R. J. Pulleyn and Sons; church, Dalton Terrace, for the Rev. G. Richardson; house and shop, Pottery Lane estate, for Mr. F. Waite; twenty-four houses, Tang Hall Lane, for the Millfield Estate Co.; hotel, Albemarle Road, for Messrs. J. J. Hunt, Ltd.; four houses, Slingsby Grove, Dringhouses, for Mr. S. C. Nekervis; seven houses, Muncaster estate, for Messrs. Collins and Murray.

SCOTLAND

The Glasgow Corporation has approved a scheme for the erection of sixty tenements for rehousing in the Coalhill Street area.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_3	Addlestone	S. Counties	1 5	1 0¾
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_3	Appleby ..	N.W. Counties	1 3	11¼
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0¾
B_3	Aylesbury ..	S. Counties	1 3	11¼
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0¾
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_2	Basingstoke	S.W. Counties	1 4	1 0
A_3	Bath ..	S.W. Counties	1 5	1 0¾
A	Batley ..	Yorkshire	1 6½	1 2
A_3	Bedford ..	E. Counties	1 5	1 0¾
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1¼
A_2	Bewdley ..	Mid. Counties	1 5½	1 1¼
B_3	Bicester ..	Mid. Counties	1 3	11¼
	Birkenhead	N.W. Counties	*1 8½	1 3¼
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W.Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11¾
A	Bolton ..	N.W. Counties	1 6½	1 2
A_3	Boston ..	Mid. Counties	1 5	1 0¾
A_3	Bournemouth	S. Counties	1 5	1 0¾
B_3	Bovey Tracey	S.W. Counties	1 3½	11¾
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1¼
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_3	Bridgwater	S.W. Counties	1 3½	11¾
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_3	Brighton ..	S. Counties	1 5	1 0¾
A	Bristol ..	S.W. Counties	1 6½	1 2
B_3	Brixham ..	S.W. Counties	1 3	11¼
A_3	Bromsgrove	Mid. Counties	1 5½	1 1¼
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_3	Canterbury	S. Counties	1 3½	11¾
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_3	Cheltenham	S.W. Counties	1 5	1 0¾
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_3	Chichester ..	S. Counties	1 3½	11¼
A	Chorley ..	N.W. Counties	1 6½	1 2
B_3	Cirencester	S. Counties	1 3½	11¾
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank ..	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_3	Colchester ..	E. Counties	1 5	1 0¾
A	Colne ..	N.W. Counties	1 6½	1 2
A_3	Colwyn Bay	N.W. Counties	1 5	1 0¾
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_3	Conway ..	N.W. Counties	1 5	1 0¾
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1¼
A_3	Cumberland	N.W Counties	1 5	1 0¾
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_3	Deal ..	S. Counties	1 3½	11¾
A_3	Denbigh ..	N.W. Counties	1 5	1 0¾
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_3	Dorchester	S.W. Counties	1 3½	11¾
A_3	Driffield ..	Yorkshire	1 5	1 0¾
A_3	Droitwich ..	Mid. Counties	1 5½	1 1¼
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0¾
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1¼
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_3	FELIXSTOWE	E. Counties	1 5	1 0¾
A_3	Filey ..	Yorks	1 5	1 0¾
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_3	Folkestone	S. Counties	1 3½	11¾
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11¾
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1¼
A_2	Goole ..	Yorkshire	1 5½	1 1¼
A_3	Gosport ..	S. Counties	1 5	1 0¾
A_3	Grantham ..	Mid. Counties	1 5	1 0¾
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_3	Hastings ..	S. Counties	1 3½	11¾
A_3	Hatfield ..	S. Counties	1 5	1 0¾
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_3	Hertford ..	E. Counties	1 5	1 0¾
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0¾
B_3	Isle of Wight	S. Counties	1 3	11¼
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1¼
A_2	Kidderminster	Mid. Counties	1 5½	1 1¼
B_3	King's Lynn	E. Counties	1 3½	11¾
A	LANCASTER	N.W. Counties	1 6½	1 2
A_3	Leamington	Mid. Counties	1 5½	1 1¼
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_3	Lewes ..	S. Counties	1 3	11¼
A_2	Lichfield ..	Mid. Counties	1 5½	1 1¼
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3¼
A_3	Llandudno	N.W. Counties	1 5	1 0¾
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2¾
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_3	Luton ..	E. Counties	1 5	1 0¾
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_3	Malvern ..	Mid. Counties	1 5	1 0¾
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_3	Matlock ..	Mid. Counties	1 5	1 0¾
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1¼
B_3	Minehead ..	S.W. Counties	1 3½	11¾
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11¾
A	Morecambe	N.W. Counties	1 6½	1 2
A_1	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_3	Norwich ..	E. Counties	1 5½	1 1¼
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_3	OAKHAM ..	Mid. Counties	1 5	1 0¾
A_2	Oldham ..	N.W. Counties	1 5½	1 1¼
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1¼
A	PAISLEY ..	Scotland	*1 6½	1 2
B_3	Pembroke ..	S. Wales & M.	1 3	11¼
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1¼
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_3	Portsmouth	S. Counties	1 5	1 0¾
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0¾
B	Reigate ..	S. Counties	1 4½	1 0½
A_3	Retford ..	Mid. Counties	1 5	1 0¾
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_3	Ripon ..	Yorkshire	1 5	1 0¾
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_3	Rugeley ..	Mid. Counties	1 5	1 0¾
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1¼
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_3	Salisbury ..	S.W. Counties	1 3	11¼
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1¼
A_2	Skipton ..	Yorkshire	1 5½	1 1¼
A_3	Slough ..	S. Counties	1 5	1 0¾
A_2	Solihull ..	Mid. Counties	1 5½	1 1¼
A_3	South'pton	S. Counties	1 5	1 0¾
A_2	Southend-on-Sea	E. Counties	1 5½	1 1¼
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1¼
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_3	Swindon ..	S.W. Counties	1 5	1 0¾
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_3	Teignmouth	S.W. Coast	1 5½	1 0¾
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1¼
A_2	Wellingborough	Mid. Counties	1 5½	1 1¼
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1¼
A_2	Whitby ..	Yorkshire	1 5½	1 1¼
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_3	Windsor ..	S. Counties	1 5	1 0¾
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1¼
A_2	Worksop ..	Yorkshire	1 5	1 0¾
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_3	Wycombe ..	S. Counties	1 5	1 0¾
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11¾
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£	s.	d.
Bricklayer . . . per hour		1	8
Carpenter . . . ,,		1	8
Joiner . . . ,,		1	8
Machinist . . . ,,		1	9
Mason (Banker) . . ,,		1	8
,, (Fixer) . . ,,		1	9
Plumber . . . ,,		1	8
Painter . . . ,,		1	7
Paperhanger . . ,,		1	8
Glazier . . . ,,		1	8
Slater . . . ,,		1	8
Scaffolder . . . ,,		1	4
Timberman . . . ,,		1	4
Navvy . . . ,,		1	3
General Labourer . ,,		1	3
Lorryman . . . ,,		1	5½
Crane Drivers . . ,,		1	7
Watchman . . . per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

	£	s.	d.
Grey Stone Lime . . . per ton	2	8	6
Blue Lias Lime . . . ,,	2	10	6
Hydrated Lime . . . ,,	2	16	0
Portland Cement . . ,,	2	6	0
Ferro-crete . . . ,,	2	13	6
Thames Ballast . . . per Y.C.		8	9
¾″ Crushed Ballast . ,,		10	0
Building Sand . . . ,,		10	6
Washed Sand . . . ,,		11	6
2″ Broken Brick . . ,,		9	6
¾″ ,, ,, . . ,,		12	6
Pan Breeze . . . ,,		6	6
Coke Breeze . . . ,,		8	9

BRICKLAYER

	£	s.	d.
Flettons . . . per M.	3	1	6
Grooved do. . . . ,,	3	3	6
Stocks, 1st Quality . ,,	4	18	6
,, 2nd ,, . ,,	4	12	6
Blue Bricks, Pressed . ,,	9	18	0
,, Wirecuts . ,,	8	16	0
,, Brindles . ,,	8	0	0
,, Bullnose . ,,	10	8	0
Red Sand-faced Facings ,,	7	11	0
Red Rubbers for Arches ,,	15	0	0
Multicoloured Facings . ,,	9	4	0
Luton Facings . . . ,,	8	16	0
Midhurst White Facings . ,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:			
Stretchers . . . ,,	21	10	0
Headers . . . ,,	21	0	0
Bullnose . . . ,,	28	0	0
Double Stretchers . ,,	30	0	0
Double Headers . . ,,	27	0	0
Glazed Second Quality, *Less* ,,	1	0	0
,, Buffs and Creams, Add ,,	2	0	0
,, Other Colours ,, ,,	5	10	0
2″ Breeze Partition Blocks . per Y.S.		1	9
2½″ ,, ,, ,, . . ,,		2	0
3″ ,, ,, ,, . . ,,		2	3
4″ ,, ,, ,, . . ,,		3	0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4″ s.	d.	6″ s.	d.
Straight pipes . . per F.R.	1	1	1	6
Bends . . . each	2	10	4	4
Taper bends . . ,,	6	3	7	2
Rest bends . . ,,	5	9	8	9
Single junctions . ,,	3	9	5	9
Double ,, . ,,	5	9	8	9
Straight channels . ,,	2	6	3	2
¾″ Channel bends . ,,	7	8	—	
Channel junctions . ,,	7	0	12	6
Channel tapers. . ,,	5	6	7	9
Yard gullies . . ,,	9	6	11	6
Interceptors . . ,,	18	6	25	9
Iron drain pipe . per F.R.	2	3	3	5
Bends . . . each	6	0	13	0
Inspection bends . ,,	15	3	24	0
Single junctions . ,,	9	3	18	0
Double junctions . ,,	14	0	27	6
Lead wool . . . lb.		6	—	
Gaskin . . . ,,		5	—	

MASON

The following d/d F.O.R. at Nine Elms:		s.	d.
Portland stone, Whitbed . . . F.C.		4	6
,, ,, Basebed . . ,,		4	9
Bath stone . . . ,,		2	11
York stone . . . ,,		6	9
,, Sawn templates . ,,		7	6
,, Paving, 2″ . . F.S.		1	8
,, ,, 3″ . . ,,		2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£	s.	d.
24″ × 12″ Duchesses . . per M.	31	0	0
22″ × 12″ Marchionesses . ,,	28	0	0
20″ × 10″ Countesses . ,,	20	5	0
18″ × 10″ Viscountesses . ,,	17	0	0
18″ × 9″ Ladies . . ,,	15	0	0
Westmorland green (random sizes) per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:			
20″ × 10″ medium grey per 1,000 (actual)	26	0	0
,, ,, green . ,,	27	15	0
Best machine roofing tiles . ,,	5	0	0
Best hand-made do. . . ,,	5	10	0
Hips and valleys . . each		9½	
,, hand-made . . ,,		10	
Nails, compo . . . lb.		4	
,, copper . . . ,,		2	0

CARPENTER AND JOINER

	£	s.	d.
Good carcassing timber . . F.C.		2	6
Birch . . . as 1″ F.S.			9
Deal, Joiner's, . . ,, ,,			5
,, ,, 2nds . . ,, ,,			4
Mahogany, Honduras . . ,, ,,		1	3
,, African . . ,, ,,		1	1
,, Cuban . . ,, ,,		2	6
Oak, plain American . . ,, ,,		1	0
,, Figured ,, . . ,, ,,		1	3
,, Plain Japanese . ,, ,,		1	2
,, Figured ,, . . ,, ,,		1	5
,, Austrian wainscot . ,, ,,		1	6
,, English ,, . . ,, ,,		1	11
Pine, Yellow . . . ,, ,,		1	0
,, Oregon . . . ,, ,,			4
,, British Columbian . ,, ,,			4
Teak, Moulmein . . ,, ,,		1	3
,, Burma . . ,, ,,		1	2
Walnut, American . . ,, ,,		2	3
,, French . . ,, ,,		2	3
Whitewood, American . ,, ,,		1	1
Deal floorings, ⅜″ . . Sq.	1	1	0
,, ½″ . . ,,	1	3	6
,, ⅝″ . . ,,	1	5	6
,, 1″ . . ,,	1	11	0
,, 1¼″ . . ,,	1	15	0
Deal matchings, ⅜″ . ,,		16	0
,, ½″ . . ,,		17	6
,, ⅝″ . . ,,	1	6	0
Rough boarding, ½″ . ,,		18	0
,, ⅝″ . . ,,	1	0	0
,, 1″ . . ,,	1	8	0

Plywood, per ft. sup.

Thickness	⅜″			½″			⅝″			¾″		
Qualities	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼″	⅜″	½″	¾″	1″	1¼″	2″
Tubes, 2′–14′ long, per ft. run	4	5½	9½	1/1	1/10		
Pieces, 12″–23½″ long, each	10	1/1	1/11	2/8	4/9		
,, 3″–11½″ long ,,	7	9	1/3	1/8	3/–		
Long screws 12″–23½″ long ,,	11	1/3	2/2	2/10	5/3		
,, ,, 3″–11½″ long ,,	8	10	1/5	1/11	3/6		
Bends . . ,,	8	11	1/7½	2/7½	5/2		
Springs not socketed ,,	5	7	1/1½	1/11½	3/11		
Socket union . ,,	2/–	3/–	5/6	6/9	10/–		
Elbows, square . ,,	10	1/1	1/6	2/2	4/3		
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1		
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6		
Plain sockets and nipples ,,	3	4	6	8	1/3		
Diminished sockets ,,	4	6	9	1/–	2/–		
Flanges . . ,,	9	1/–	1/4	1/9	2/9		
Caps . . . ,,	3½	5	8	1/–	2/–		
Backnuts . . ,,	2	3	5	6	1/1		
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6		
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–		

Discounts: TUBES.	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . . .	55	,, steam .	40
FITTINGS.			
Gas . . .	47½	Galvanized gas .	37½
Water . . .	42½	,, water .	32½
Steam . . .	37½	,, steam .	27½

SMITH AND FOUNDER—*continued.*

	s.	d.
Rolled steel joists cut to length . . cwt.	9	6
Mild steel reinforcing rods, ⅜″ . . . ,,	10	0
,, ,, ½″ . . . ,,	9	9
,, ,, ⅝″ . . . ,,	9	6
,, ,, ¾″ . . . ,,	9	6
,, ,, 7/8″ . . . ,,	9	0
,, ,, 1″ . . . ,,	9	0
,, ,, 1¼″ . . . ,,	9	0
,, ,, 1½″ . . . ,,	9	0

Cast-iron rain-water pipes of ordinary thickness metal . F.R.	3″ s.	d.	4″ s.	d.
	7		10	
Shoes . . . each	2	3	3	3
Anti-splash shoes . ,,	5	0	8	6
Boots . . . ,,	3	3	4	6
Bends . . . ,,	2	9	4	0
,, with access door . ,,	—		6	9
Heads . . . ,,	4	0	5	0
Swan-necks up to 9″ offsets . ,,	4	0	6	3
Plinth bends, 4½″ to 6″ . ,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal . F.R.	5		6	
Stop ends . . . each	6		7	
Angles . . . ,,	1	7	1	11
Obtuse angles . . ,,	2	0	2	6
Outlets . . . ,,	1	9	2	3

PLUMBER

	s.	d.
Lead, milled sheet . . . cwt.	23	0
,, drawn pipes . . ,,	23	6
,, soil pipe . . ,,	26	6
,, scrap . . ,,	13	0
Solder, plumbers' . . lb.	1	0
,, fine do. . . ,,	1	4
Copper, sheet . . ,,	1	0
,, tubes . . ,,	1	4

L.C.C. soil and waste pipes:	3″		4″		6″	
Plain cast . . F.R.	1	0	1	2	2	6
Coated . . ,,	1	1	1	3	2	8
Galvanized . . ,,	2	0	2	6	4	6
Holderbats . . each	3	10	4	0	4	9
Bends . . ,,	3	9	5	3	10	3
Shoes . . ,,	2	10	4	4	9	6
Heads . . ,,	4	8	8	5	12	9

PLASTERER

	£	s.	d.
Lime, chalk . . per ton	2	8	6
Plaster, coarse . . ,,	2	10	6
,, fine . . ,,	5	10	0
Hydrated lime . . ,,	2	16	0
Sirapite . . ,,	3	10	0
Keene's cement . . ,,	5	10	0
Sand, washed . . Y.C.		11	6
Hair . . . lb.			6
Laths, sawn . . bundle		2	4
,, rent . . ,,		3	9
Lath nails . . lb.			3½

GLAZIER

	s.	d.		s.	d.
Sheet glass, 21 oz. . . F.S.					3½
,, ,, 26 oz. . . ,,					4½
Arctic glass . . ,,					5
Cathedral glass . . ,,					6
Hartley's rough rolled . ,,					9
Do. wired plate . . ,,				1	3
¼″ Polished plate, n/e 1 . ,,	1	0	to	1	3
,, ,, 2 . ,,	1	2	,,	1	7
,, ,, 3 . ,,	1	7	,,	2	5
,, ,, 4 . ,,	2	1	,,	2	11
,, ,, 6 . ,,	2	3	,,	3	2
,, ,, 8 . ,,	2	6	,,	3	6
,, ,, 12 . ,,	2	9	,,	3	8
,, ,, 20 . ,,	3	0	,,	3	11
,, ,, 45 . ,,	3	3	,,	4	1
,, ,, 65 . ,,	3	7	,,	4	6
,, ,, 90 . ,,	3	10	,,	4	9
,, ,, 100 . ,,	4	0	,,	5	0
Vita glass, sheet, n/e 1 . ,,				1	0
,, ,, ,, 2 . ,,				1	3
,, ,, ,, over 2 . ,,				1	9
,, ,, plate, n/e 1 . ,,				1	6
,, ,, ,, 2 . ,,				3	0
,, ,, ,, 5 . ,,				4	0
,, ,, ,, 7 . ,,				5	0
,, ,, ,, 15 . ,,				6	0
,, ,, ,,over 15 . ,,				7	6
Putty, linseed oil . . lb					3

PAINTER

	£	s.	d.
White lead . . . cwt.	2	8	0
Linseed oil . . . gall.		3	3
Boiled oil . . . ,,		4	3
Turpentine . . . ,,		3	4
Patent knotting . . ,,		14	0
Distemper, washable . cwt.	3	0	0
,, ordinary . ,,	2	5	0
Whitening . . . ,,		4	0
Size, double . . firkin		3	0
Copal varnish . . gall.		13	0
Flat varnish . . ,,		14	0
Outside varnish . . ,,		16	0
White enamel . . ,,	1	15	0
Ready-mixed paint . ,,		13	6
Brunswick black . . ,,		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12" deep and cart away	Y.S.	3 6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10 0
" to form basement n/e 5' 0" deep and cart away	"	11 0
" " 10' 0" deep and cart away	"	11 6
" " 15' 0" deep and cart away	"	12 0
If in stiff clay	add	3 0
If in underpinning	"	5 0
Digging, return, fill and ram	"	5 0
Planking and strutting to sides of excavation	F.S.	1 0
" " to pier holes	"	6
" " to trenches	"	6
" " extra, only if left in	"	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	"	1 13 6
" " " (4-2-1)	"	1 18 6
" " " underpinning	"	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
" junctions	"	3 9	4 6
Gullies and gratings	"	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
" " in cement	"	34 0 0
" Stocks in cement	"	41 10 0
" Blues in cement	"	62 0 0
Extra only for circular on plan	"	3 0 0
" backing to masonry	"	2 0 0
" raising on old walls	"	3 0 0
" underpinning	"	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	"	1 0
" red brick facings	"	1 6
" blue brick facings	"	1 9
" glazed brick facings	"	4 6
Tuck pointing	"	10
Weather pointing	"	4
Slate dampcourse	"	1 0
Vertical dampcourse	"	1 3

ASPHALTER

		s. d.
½" Horizontal dampcourse	Y.S.	5 6
½" Vertical dampcourse	"	7 6
½" paving or flat	"	5 6
1" paving or flat	"	6 6
1" × 6" skirting	F.R.	1 0
Angle fillet	"	2
Rounded angle	"	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do. all as last	"	15 6
Artificial stone and do.	"	16 6
York stone templates, fixed complete	"	14 0
" thresholds	"	16 0
" sills	"	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4 5 0
Do., 18" × 9"	"	4 2 0
Do., 24" × 12"	"	4 12 0
Westmorland slating, laid with diminished courses	"	6 10 0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4 0 0
Do., all as last, but of machine-made tiles	"	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
" to stanchions	"	1 0
" to staircases	"	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	"	6 9
" " roofs	"	8 3
" " trusses	"	9 0
" " partitions	"	12 0
¼" deal sawn boarding and fixing to joists	Sqr.	1 17 6
1" " " " " "	"	2 1 6
1½" " " " " "	"	2 7 6
2½" × 2" fir battening for Countess slating	"	12 6
Do. for 4" gauge tiling	"	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
" " " 2 "	"	3 0
" " " 3 "	"	3 6
Stout herringbone strutting to 9" joists	F.R.	1 0
1" deal gutter boards and bearers	F.S.	1 4
1½" " " " "	"	1 8
2" deal wrought rounded roll	F.R.	9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
1¼" do.	"	3 4 0
1½" do.	"	3 13 0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1¼" do.	"	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½" deal moulded sashes of average size	F.S.	2 3
2" " " "	"	2 6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ¾" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4 3
2" " " "	"	4 6
Extra only for moulded horns	Each	9
1½" deal four-panel square, both sides, door	F.S.	2 6
2" " " "	"	3 0
1½" " but moulded both sides	"	3 0
2" " " "	"	3 6
4" × 3" deal, rebated and moulded frames	F.R.	1 6
4½" × 3½" " "	"	2 0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3 0
1½" deal moulded wall strings	"	2 6
1½" " outer strings	"	2 9
Ends of treads and risers housed to string	Each	2 0
3" × 2" deal moulded handrail	F.R.	1 6
1" × 1" deal balusters and housing each end	Each	2 6
1½" × 1½" " "	"	3 3
3" × 3" deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	"	7 6

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders and hoisting and fixing in position	"	1 3 0
Do. stanchions with riveted caps and bases and do.	"	1 2 0
Mild steel bar reinforcement ½" and up, bent and fixed complete	"	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 19 6
Do. in flashings	"	2 2 0
Do. in covering to turrets, etc.	"	2 9 0
Do. in soakers	"	1 15 0
Labour to welded edge	F.R.	3½
Open copper nailing	"	3½
Close "	"	4½

Lead service pipe and fixing with pipe hooks	F.R.	½" s. d. 1 3	¾" s. d. 1 8	1" s. d. 2 2	1½" s. d. 2 9	2" s. d. 3 10	4" s. d. —
Do. soil pipe and fixing with cast lead tacks	"	—	—	—	—	—	6 0
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	"	7	9	1 0	1 3	2 0	—
Boiler screws and unions	"	3 6	4 0	5 6	8 0	—	—
Lead traps	"	—	—	—	7 6	10 6	—
Screw down bib valves	"	7 6	10 6	12 6	—	—	—
Do. stop cocks	"	10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	"	1 6
Do. outlets	"	3 0
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	"	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	"	5 6
Lathing with sawn laths to ceilings	"	1 6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"	2 6
Do. vertical	"	2 9
Rough render on walls	"	2 3
Render, float and set in lime and hair	"	3 0
Render and set in Sirapite	"	3 3
Render, backing in cement and sand, and set in Keene's cement	"	4 6
Extra, only if on lathing	"	9
Keene's cement, angle and arris	F.R.	8
Arris	"	3
Rounded angle, small	"	3
Plain cornices in plaster, including dubbing out, per 1" girth	"	2
1" granolithic pavings	Y.S.	5 0
1½" " "	"	6 0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1 2 6
9" × 3" " " "	"	1 7 6
Extra, only for small quadrant angle	F.R.	9

GLAZIER

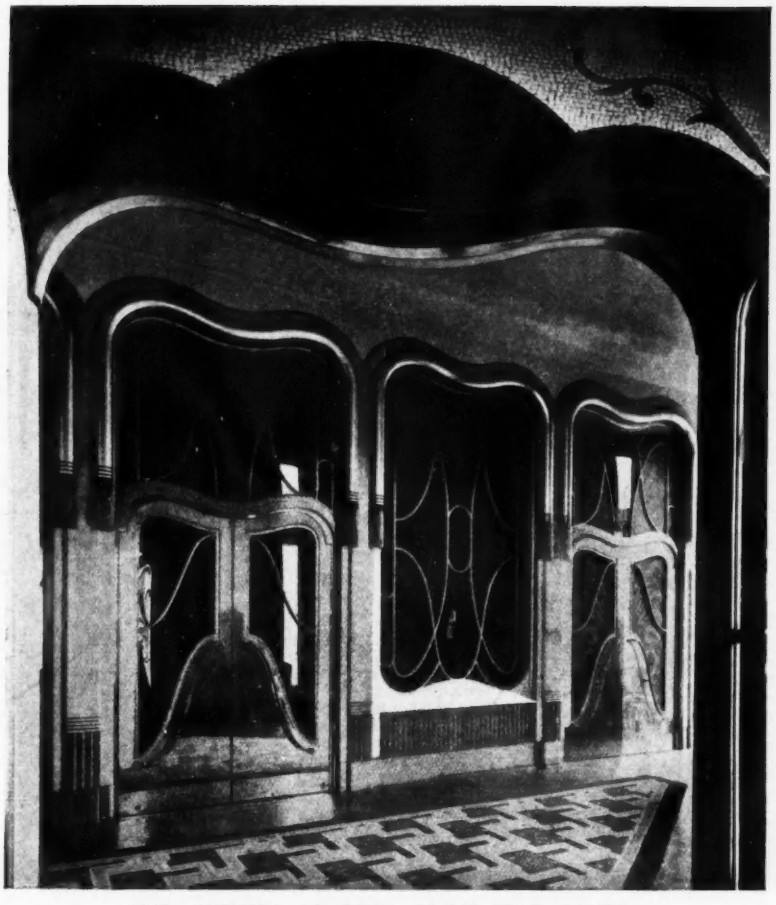
		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	"	1 0
Arctic glass and glazing with putty	"	1 2
Cathedral glass and do.	"	1 3
Glazing only, British polished plate	"	8
Extra, only if in beads	"	2
Washleather	F.R.	4

PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	"	1 0
Do. with washable distemper	"	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3 3
Do. on woodwork	"	3 6
Do. on steelwork	"	3 0
Do. and brush grain and twice varnish	"	5 6
Stain and twice varnish woodwork	"	1 11
Stain and wax-polish woodwork	"	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper	from "	3 0

NEW FOYER SCREEN AT "THE TROC."

A PHOTOGRAPH AND DETAIL DRAWINGS OF THE PANELS AND DOORS IN THE ALEXANDRA ROOM



THE SCREEN AS SEEN FROM THE FOYER

THE intention in this design and the general character of the whole interior decoration was to provide a more efficient system of ventilation and illumination for one of the best-known banqueting rooms in London, but to meet these practical requirements without prejudice to the well-known identity of the Trocadero itself. The complete destruction of features with which thousands have grown intimate, even if the old-fashioned environment is kept, has proved before now to be the destruction of public patronage and good-will: the problem of modernizing such places is a matter of mass-psychology as much as of decoration itself.

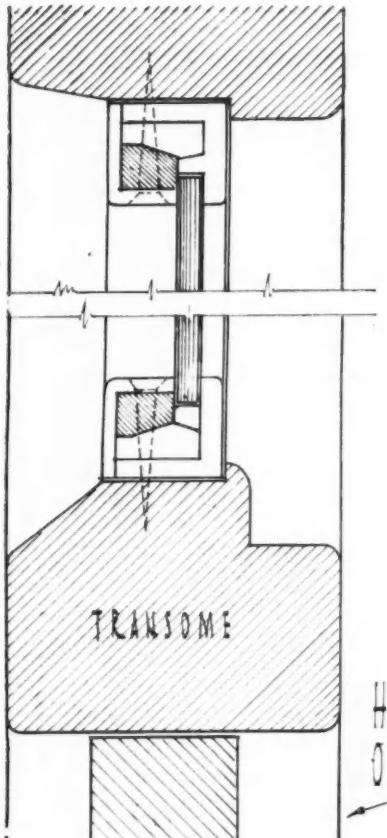
The skeleton of this screen is made of light steel-work, to ensure rigidity and to avoid cumbersome construction. It is packed out with hardwood pads and fixing blocks to receive corresponding facings on both sides.

The window and door frames and their surrounds are made of solid sycamore; the base is carried out as a cove skirting in oak. The crowning overlays to windows and doors are made of solid mahogany, following the contours of the windows and door frames, and finished in English gold-leaf to harmonize with the surrounding metal work. Metal tracery inside the window frames, transomes and doors, is of plain and hammered bronze, finished electro-gilt.

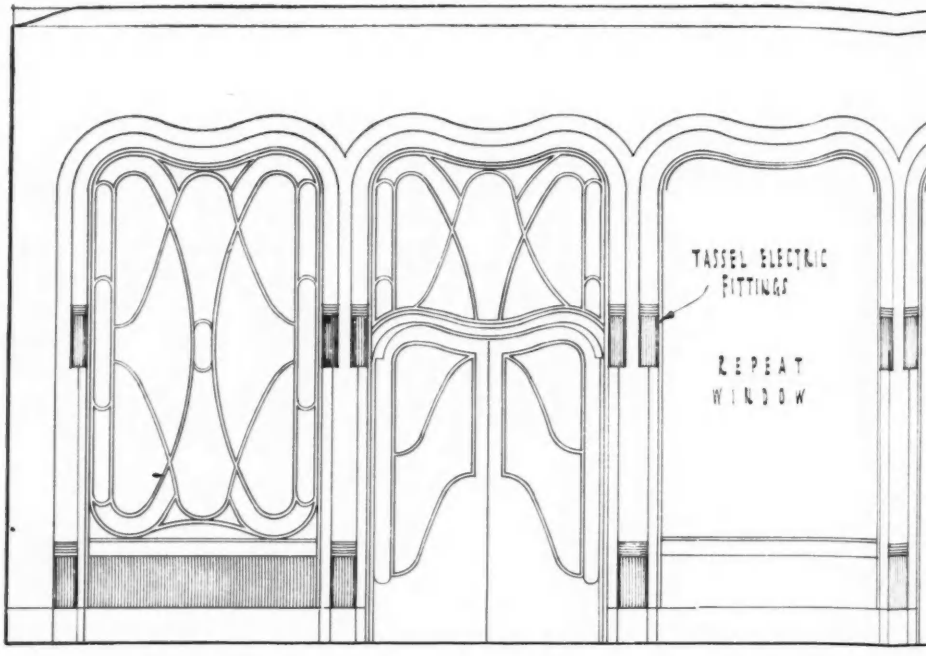
Pushing plates, kicking plates, and handle-bars to the doors are of bronze, also finished gilt. Ventilating grilles under the windows and their dummy continuation of bases to door and window surrounds are of the same material and finish.

The glazing represents the first introduction in this country of a special glass manufactured in France that bids fair to become popular owing to the flattering aspect which it produces, when used as mirror-glass, through its inherent flesh-like colour, due to the presence of gold salts in the glass itself. The glass throughout this screen is $\frac{3}{8}$ in. thick, each of the very large panels being in one piece. In a specification this would be properly described as "clear peach plate." Each panel is patterned by acid and sand-blast with gold lines incised in complement to the general character of the scheme.

The electric fittings, which are designed in the form of tassels which hang from the extremities of the motifs crowning the doors and windows, consist of blown-glass tubes in variegated colours $\frac{1}{4}$ in. in diameter $\times$ 12 ins.

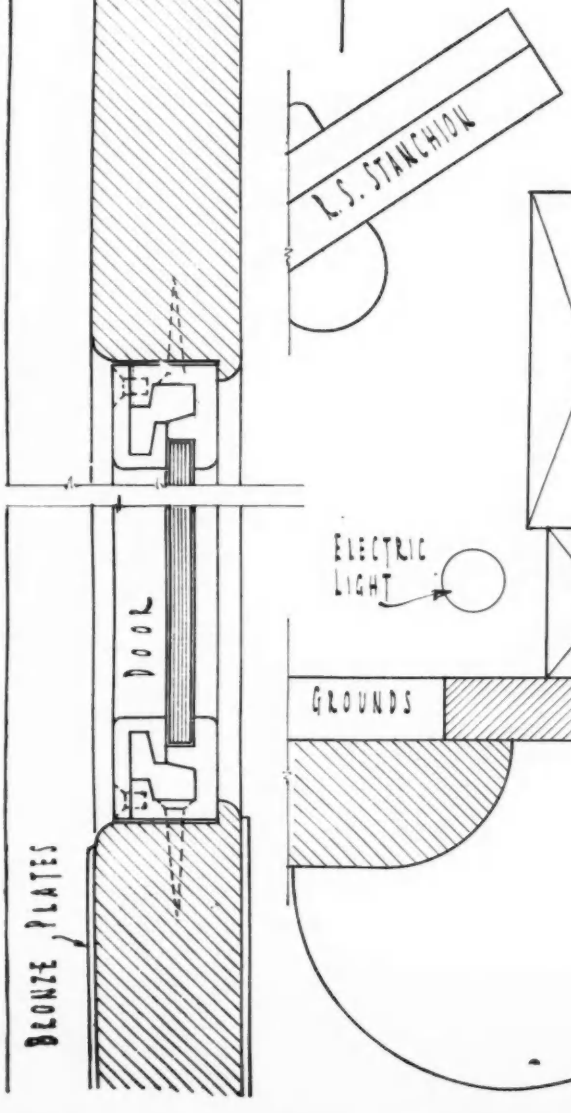


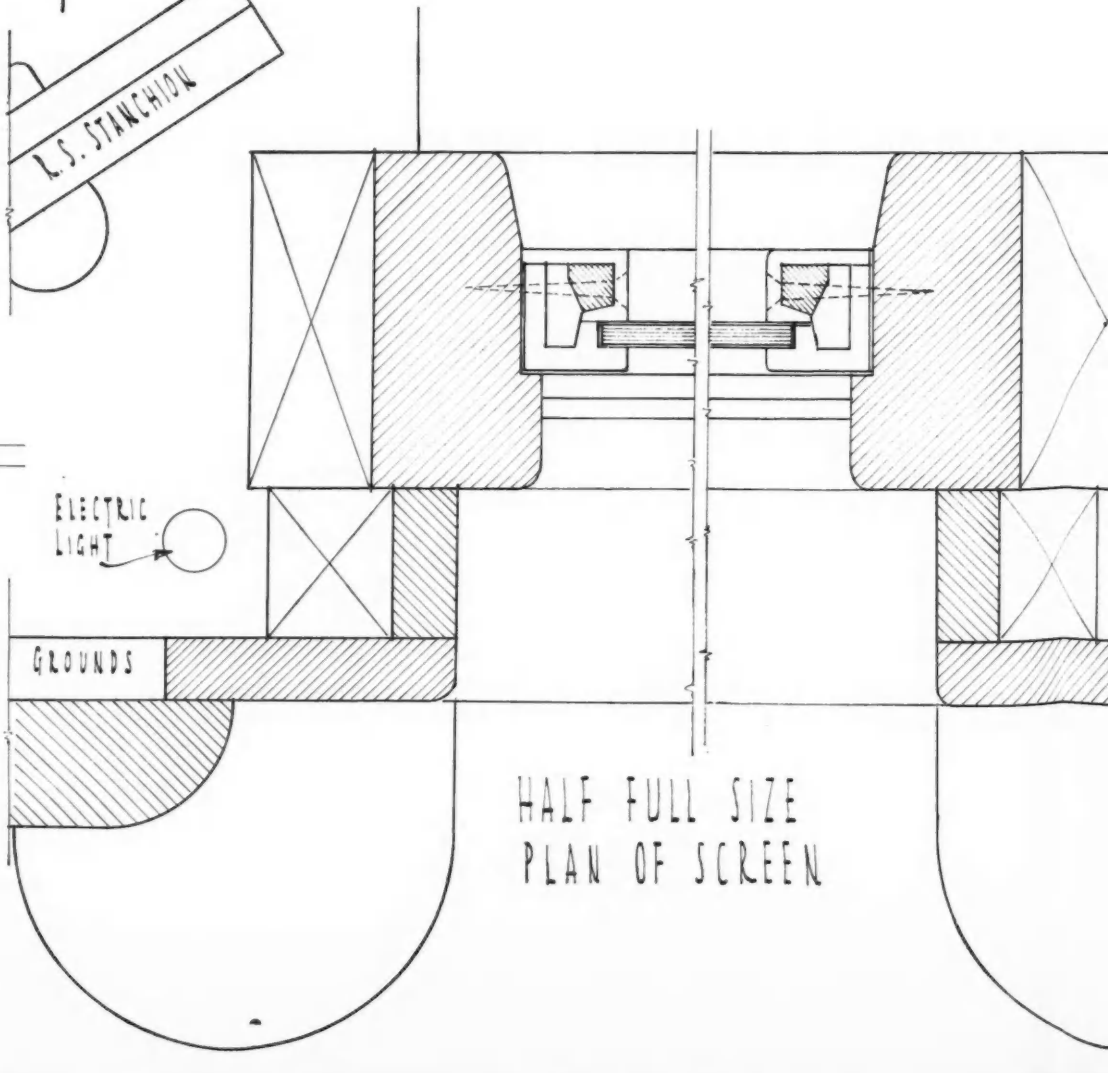
HALF FULL SIZE SECTION OF SCREEN DOORS



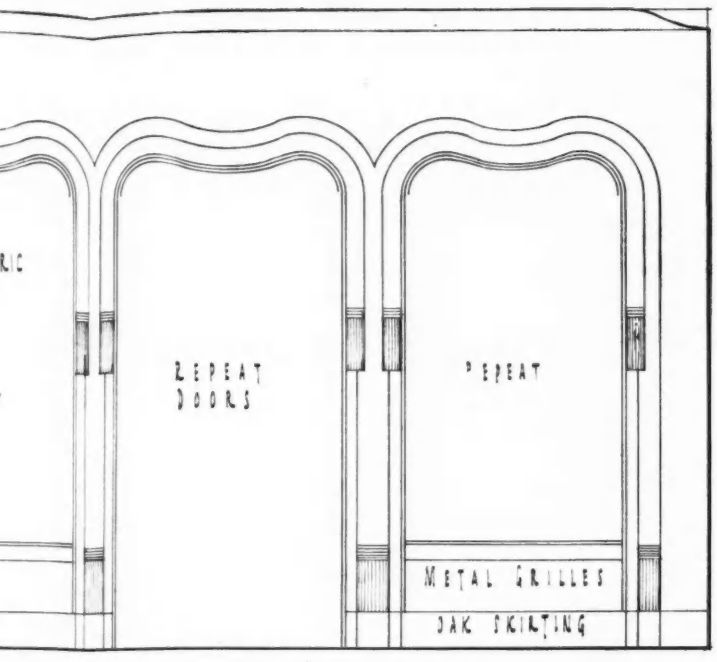
ELEVATION OF SCREEN AT "A" ON PLAN

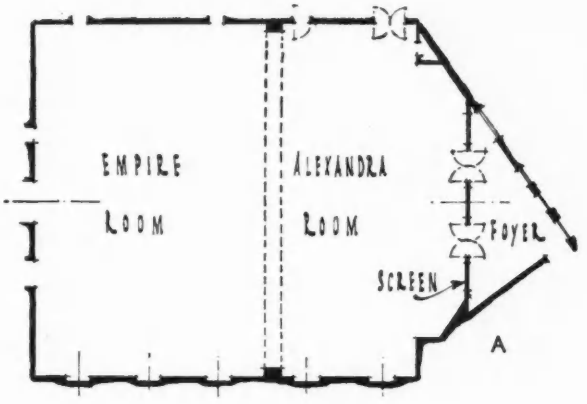
SCALE = ¼ IN TO 1 FOOT —





HALF FULL SIZE PLAN OF SCREEN



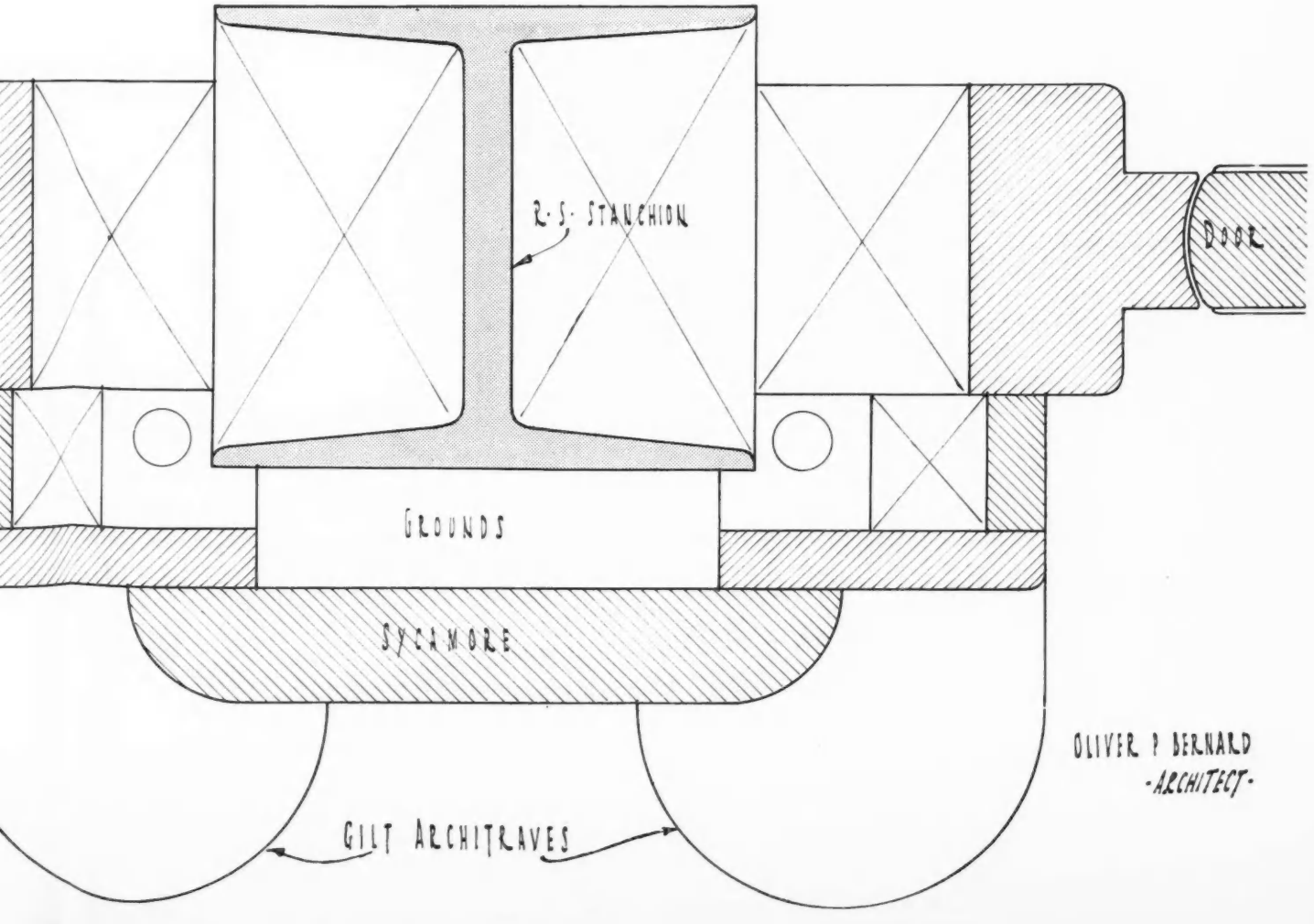


PLAN OF ROOMS
SCALE = $\frac{1}{32}$ IN TO 1 FOOT.

CREEN
N
T —

—THE TROCADERO - LONDON —

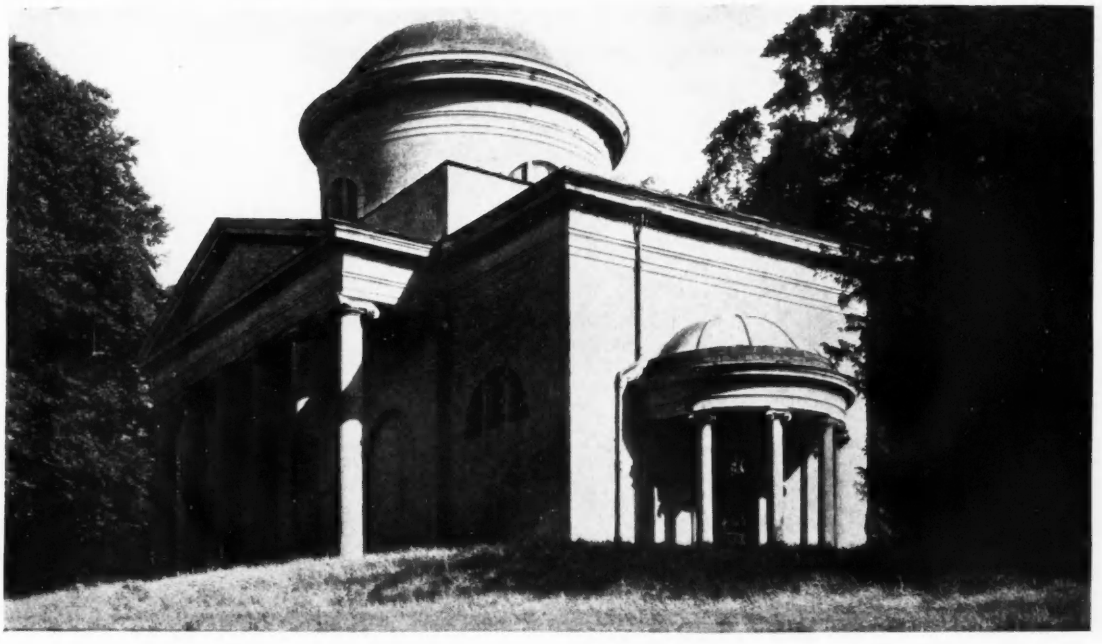
DETAILS OF SCREEN



OLIVER P BERNARD
-ARCHITECT-

NUNEHAM COURTENAY CHAPEL, OXON.

PHOTOGRAPHS AND A MEASURED DRAWING OF THE NORTH ELEVATION AND PORTICO

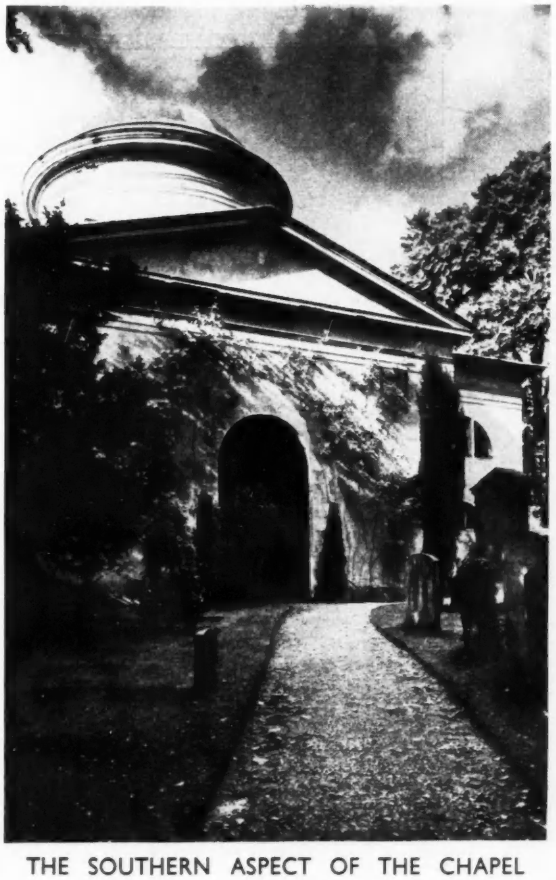


A GENERAL VIEW FROM THE NORTH-WEST

NUNEHAM PARK is the seat of the Harcourt family, and the chapel here illustrated, standing on the estate, was for more than a century the parish church of Nuneham (All Saints).

It was built by Simon, first Earl Harcourt, in 1764, to take the place of an ancient church which he had demolished in that year, and he himself is said to have furnished the designs for it—designs "slightly altered" by Stuart.

A new church of All Saints was erected in close proximity to the village by the late E. W. Harcourt, M.P., and consecrated in 1880; since that time its predecessor has been furnished as the private chapel of Nuneham Courtenay.

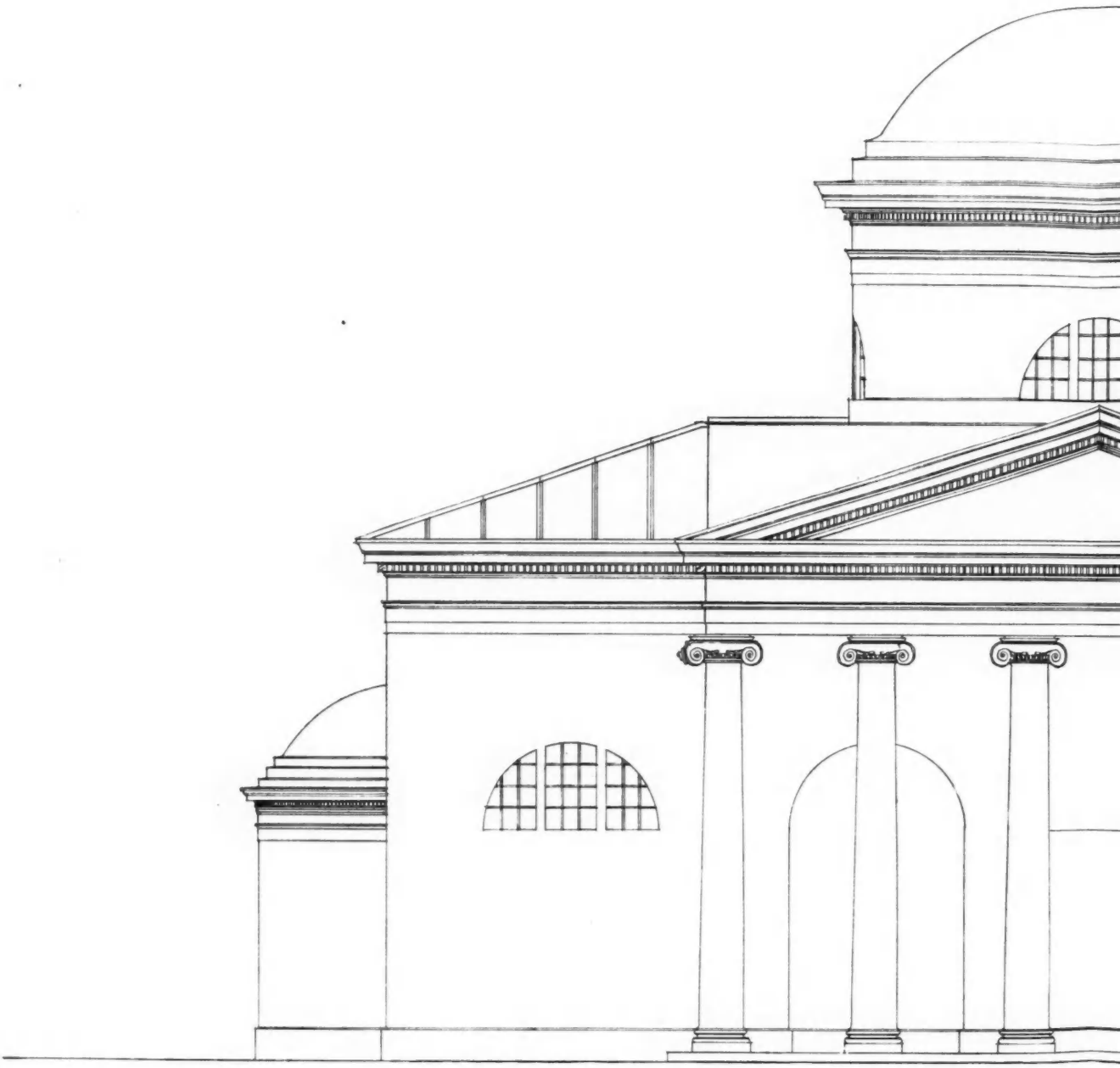


THE SOUTHERN ASPECT OF THE CHAPEL

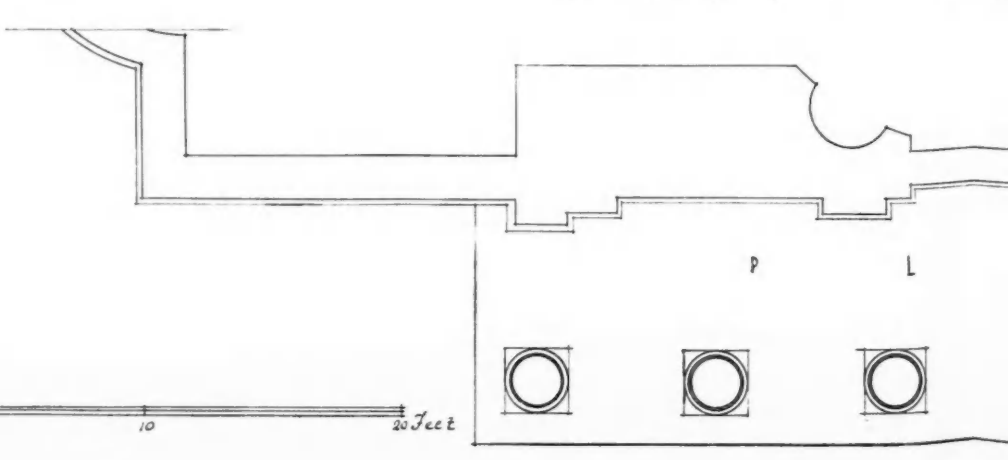
Placed on a slight eminence near the River Isis, it is a plain oblong building, surmounted by a low central dome. The north side, of which a photograph appears above and a measured drawing overleaf, has a portico of six Ionic columns, supporting a pediment, and small segmental windows. Of the central feature a photographic study, taken from a nearer viewpoint, is reproduced on the last page. The south elevation, as will be seen from the remaining view on this page, is treated plainly.

Other drawings and photographs will appear as supplements to forthcoming issues.

THE CHAPEL, N



NORTH E



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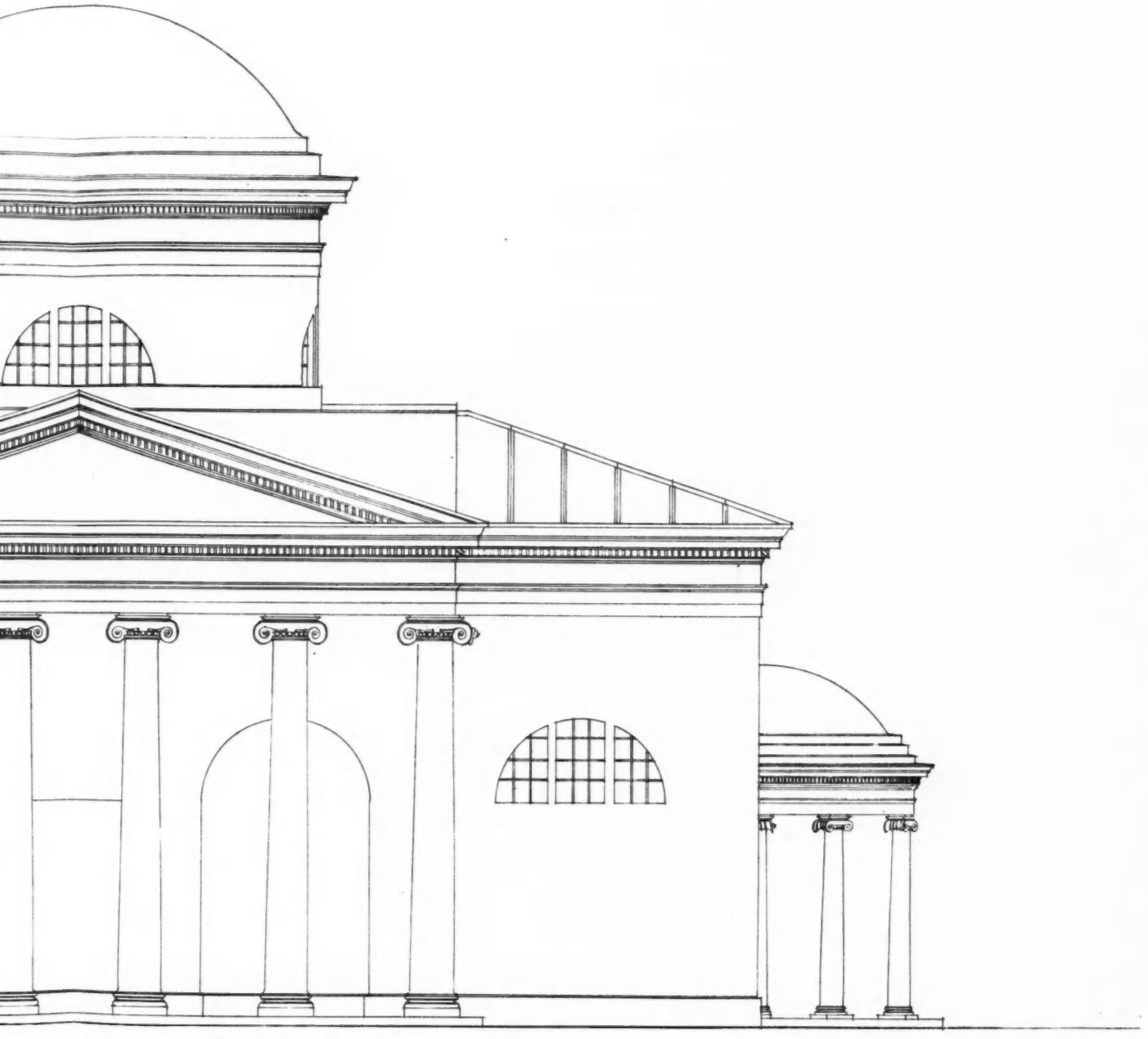
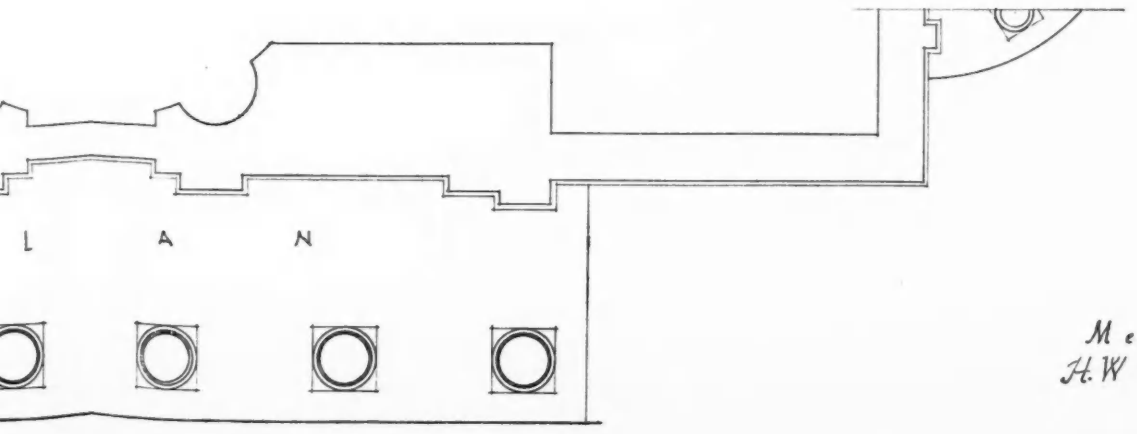
L, NUNEHAM PARK.

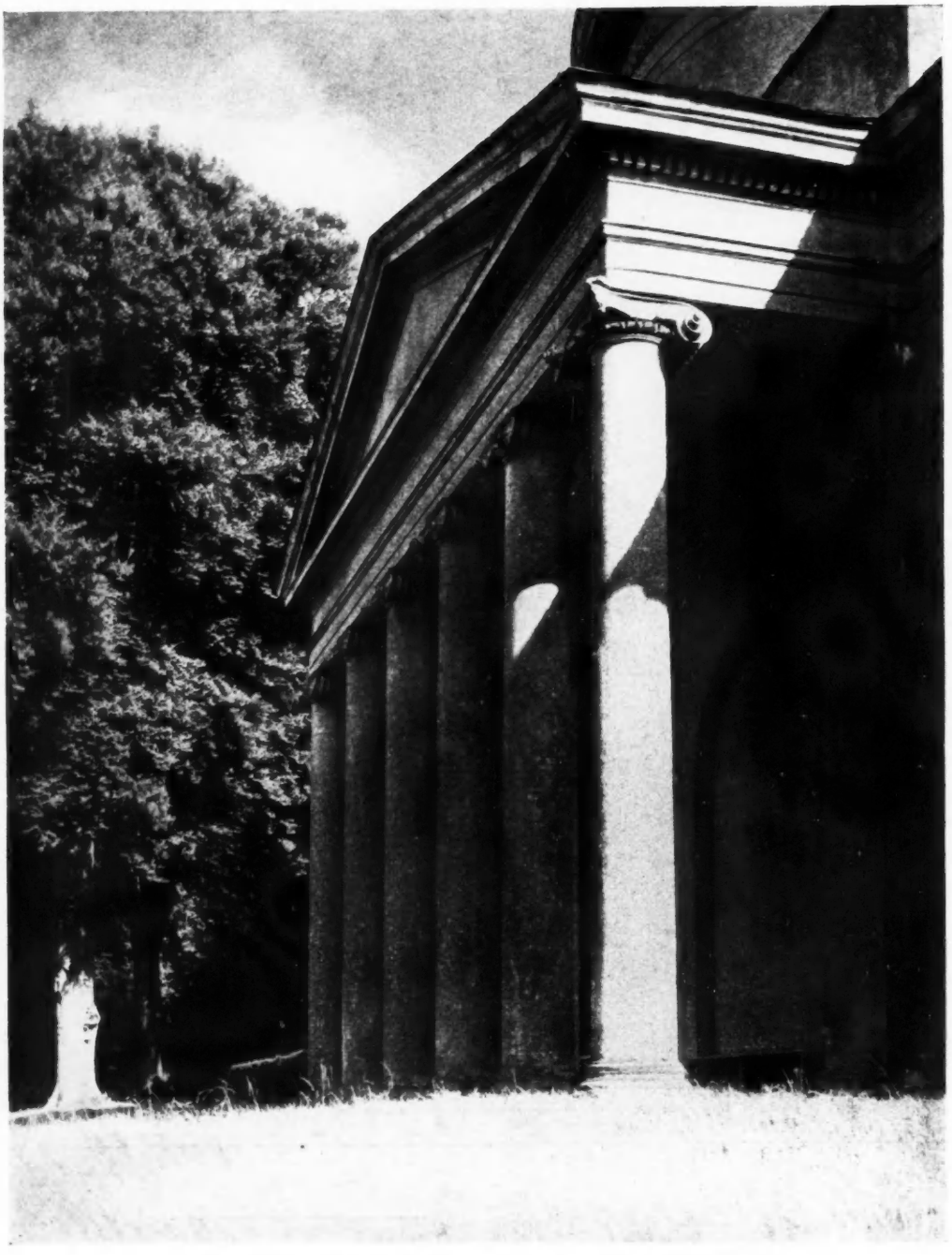


ELEVATION



PLAN

Mens et Delt:
H.W Crickmay & J.Q.Lay



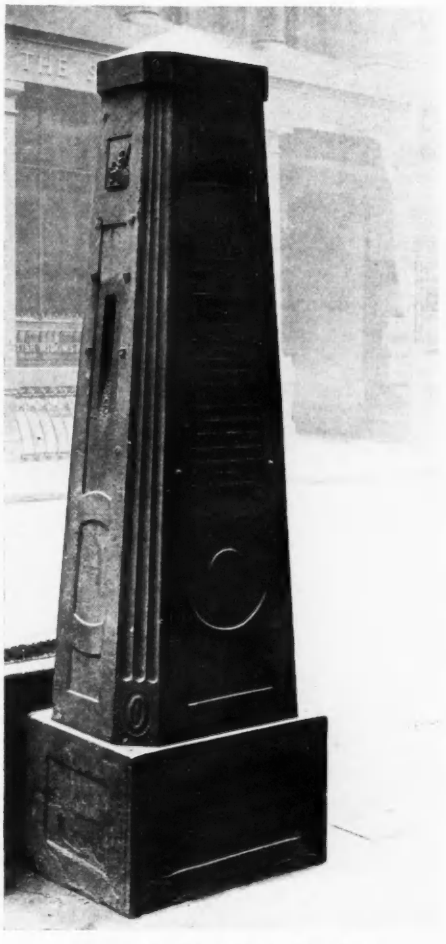
A STUDY OF THE PORTICO IN THE NORTH ELEVATION

SELECTED PRECEDENTS:

CAST IRON AND ITS FUTURE: iii



PUMP AT RAYMOND BUILDINGS, W.C.



PUMP IN CORNHILL, LONDON

THERE must be any number of good cast-iron pumps scattered up and down the country, yet whoever stoops to notice these graceful reminders that the ideals of industrialism and civilization were not always irreconcilable?

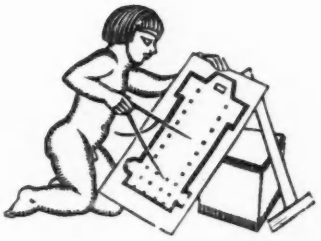
Everybody knows the houses in Chipping Campden, let alone Aldgate Pump; but how many are equally familiar with the Campden village pump, illustrated overleaf, or with the iron pump in Cornhill (above), a bare stone's throw from Aldgate? Nothing appears to be known about these pumps, most of which bear the name of some perfectly humdrum ironfounder. THE ARCHITECTS' JOURNAL *will be glad to receive, and to pay for, photographs or drawings of similar outdoor gear and furniture made of cast-iron and possessing reasonable architectural merit. Information about such things, or about architects employed by ironfounders to design their goods, will also be welcomed.* C. B.

(The first and second illustrated notes on "Cast Iron and its Future" appeared in the two preceding issues.)



PUMP AT CHIPPING CAMPDEN, GLOUCESTERSHIRE.

THE ARCHITECTS' JOURNAL



WEDNESDAY, MARCH 25, 1931

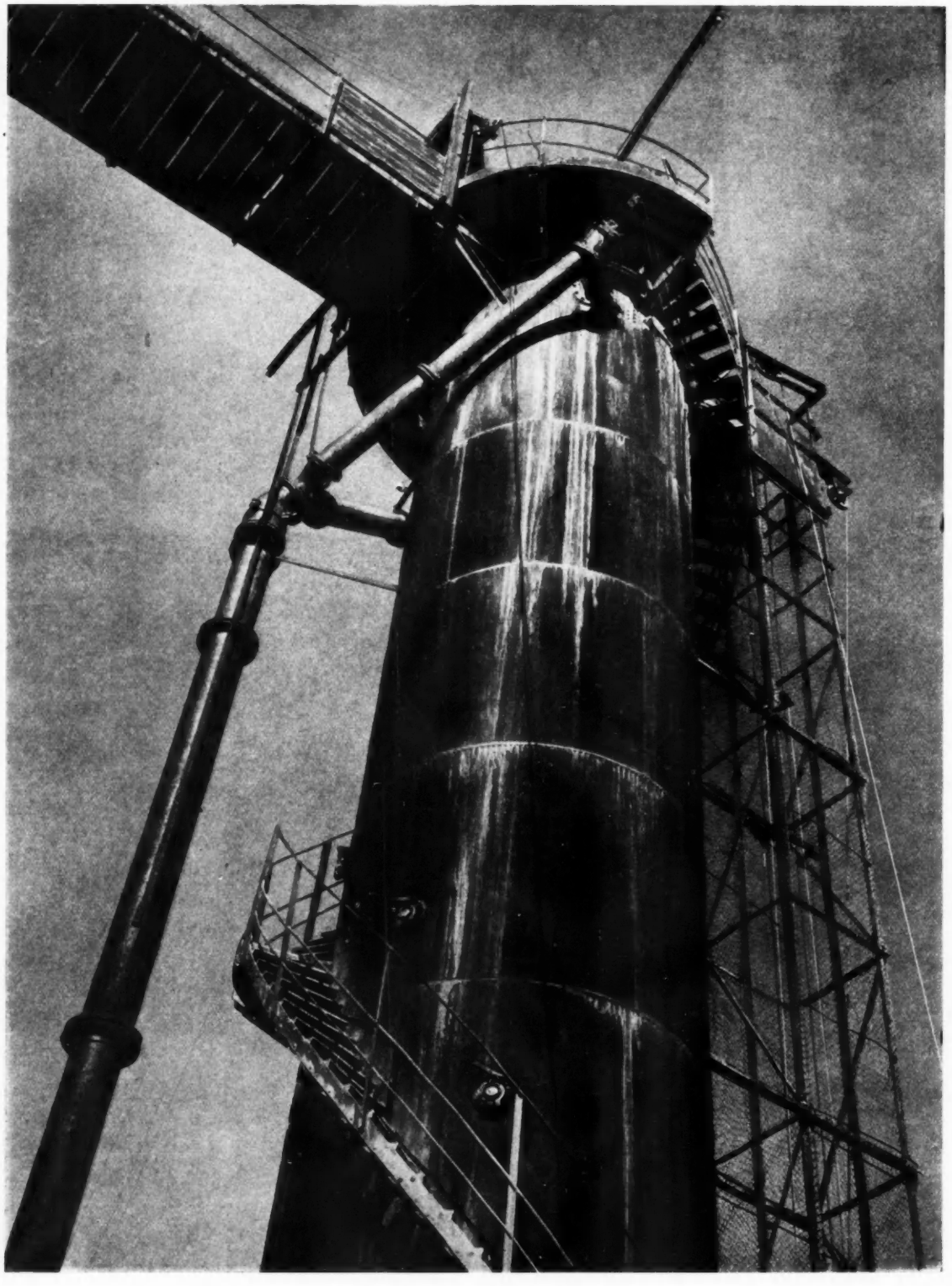
THE TURPITUDE OF STEEL

SOME two months ago a plea was advanced in these pages for a wider recognition of the artistic possibilities of steel construction. It was pointed out that architects and steel manufacturers alike are too apt to look to the concealed skeleton for the principal application of steel in buildings. Even in bridges, where the steel cannot be covered with stone, brick, plaster, marble or some such apologetic sheathing, masonry towers, battlements, pylons, archways and other embellishments are introduced to detract attention from the odious but necessary presence of structural steel. Yet many have testified that this material may lend itself to a wide range of novel and graceful architectural forms. Why, then, is it that experiments in these forms are so seldom to be met with ? This was the question propounded in the New Year issue of THE ARCHITECTS' JOURNAL, and to this question a number of correspondents have since attempted in various ways to reply. The views advanced by our readers are worth the closest study, and we do not think there are many people interested in the subject of steel, whether from the industrial angle or that of the designer, who have omitted to follow them from week to week.

The chief lesson to be learnt from this correspondence is that nothing much can be hoped for until steel manufacturers are able to conquer the inhibition that makes a frank and unashamed exposure of the material appear horrible in their eyes. It has been made increasingly clear that they are just as anxious to co-operate with the architect as the architect is to co-operate with them. But the collaboration between architect and engineer is still founded on the tacit assumption, amounting indeed to a gentlemen's agreement, that the result of their joint labours is not to be seen. The function of the architect, says the engineer in effect, is to design architecture. It is true that steel has a part to play in architecture, but its place is behind the scenes, not in front of them. It may be furiously active "off," but it is unthinkable that it should ever "come on." Where steel does appear to the public eye, as in railway bridges and factory roofs, it is an eyesore, an abomination, something unclean and not to be talked about. To allow it to pollute the architect's architecture with its visible presence would be a crime, an indecency. Such are the feelings, unspoken but none the less deeply rooted for that, with which the steelwork engineer regards his colleague, the architect, when the two come together to carry out a piece of work.

It is possible, of course, to maintain that the remedy for this state of affairs lies with the architect, and to urge that if an architect wishes to design a structure expressing the untold artistic possibilities of steel, he has only to get to work at his drawing-board, and the engineer will be found as willing as ever to place his knowledge at the architect's disposal. But every architect knows, though the majority of engineers may not, that design is not something spun out of the mind of an artist working at his own sweet will, but is the result of the artist's attempt to grapple with a situation presented to him from outside, to gather a mass of unrelated and unmeaning facts into an organized whole bearing the stamp of beauty. And what are the facts about steel ? A few of them, a very few, are easily available in the books of tables issued by most of the great constructional firms. A hundred others remain locked up in the mind of the engineer. The key to that storehouse has to be found, and none but the engineer can find it. It is he who must rid himself of his diffidence and dare to tell us all he knows and all he hopes. Only when his lips are unsealed shall we be able to discover of what novel and exciting feats the architecture of steel is capable. The founding of the British Steelwork Association shows that there are some, at any rate, who realize the need of a new approach. This young and enterprising body, under the able leadership of Mr. C. J. Kavanagh, has already struck some very telling blows in the cause of steel in general and of British steel in particular. When it has succeeded in breaking down the old inhibitions and instilling a stronger faith among the rank and file of its own members it will have scored the greatest victory of which it is likely to prove capable in this generation.

Once this has been done, the legal obstacles that stand in the way of a franker revelation of structural members should be easy enough to dispose of.



STEEL MINISTERS TO STEEL

A steel chalk-oven at the Mathildeahütte Foundry, Harzburg, Germany.

In the process of smelting, lime is required for the purpose of mixing with the charge in the steel furnaces, its function being to liquefy the slag. Hence the existence of a lime-kiln in a steelworks.

(*From* Eisen und Stahl, *a collection of photographs by Albert Renger-Patzsch* [*Berlin : Hermann Reckendorff*], *a review of which will appear in a forthcoming issue.*)

NEWS & TOPICS

THE REGISTRATION BILL

THERE is, at the time of writing, a faint hope that the Architects (Registration) Bill may, after all, be saved. A very short sitting of the Standing Committee last week ended in an adjournment for lack of a quorum, but that sitting was sufficient to save the Bill from going to the bottom of the list. It is significant that the adjournment was for a week, and not for two days, as is usual. By the time these lines appear in print it will be known whether the negotiations which the week's adjournment has permitted to take place have been successful, or whether Mr. McShane and his Labour colleagues have really earned the title of "wreckers."

THE A.A. RECEPTION

On the occasion of the eighty-third annual reception of the Architectural Association, last week, the President and Mrs. G. Grey Wornum shook hands with about a thousand members and guests. The scene in the library derived particular brilliance from the distinction of the men, and, if I may say so, the good looks of the ladies. They moved against the background of the rich and delicate modern Chinese hand-printed papers selected from the President's collection; while, at one end, the Old Moscow Balalaika Orchestra, in gorgeous national costumes, discoursed spirited music. Prince Eugen and Prince Sigvard of Sweden, who were present, took much interest in the exhibition of drawings and photographs made for the Survey of Bloomsbury, undertaken by the A.A. To dance in the Lecture Room seemed to be the pressing need of all. A visitor was heard to inquire whether the droves of expensive-looking cars outside in Bedford Square were the property of architects; if so, the profession must be doing well. "I think that is a sub-contractor's job," was the reply.

THE POELZIG EXHIBITION IN BERLIN

Early this month an exhibition of the work of Hans Poelzig and his pupils (including Marlene Poelzig, his wife) was opened in Berlin. The original proposal was to celebrate his sixtieth birthday in 1929, but postponement allowed three important new buildings to be represented. These are the Cassirer cable works at Spandau, the new "Funkhaus" in Berlin, and the German Dye Trust offices at Frankfort-on-Main, a seven-storied building faced with travertine, but entirely devoid of ornament, built on a plan resembling an immense key, with six wings in parallel to the rear of a curved secretariat, designed to accommodate 2,000 clerks.

*

Poelzig is fond of saying that he has trained his pupils to wear neither traditional nor modernist blinkers. In his inaugural speech, Max Liebermann declared that, "unlike so many German architects, who hastened to convert themselves from Saul to Paul on the outbreak of the Revolution in 1918, Poelzig is no renegade. He has always remained true to himself." Much of the exhibition is inevitably devoted to mere schemes—for the new German Embassy in Washington (1909), the terraced "House of Friendship" in Constantinople (1916), a big departmental store in Cologne, the famous "Festspielhaus" project for Reinhardt in Salzburg, and the boldly-fenestrated elevations for the Palace of the League of Nations competition. But there is no lack of buildings that have left their impress on modern design: the Posen water-tower, shops and offices in Breslau and Berlin, the Luban chemical works, the famous "Grosses Schauspielhaus" and the "Capitol" and "Babylon" cinemas in Berlin.

THE FAITH OF JOHN BURNS

Many architects who look upon John Burns as the prophet of town-planning will no doubt assemble next month to do him honour at the dinner which has been arranged for the celebration of the twenty-first anniversary of the first Town Planning Act. Lord Lytton, the president of the Garden Cities and Town Planning Association, is to take the chair. I hear that full scope is to be given to Mr. Burns so that he may have every opportunity to express the faith which is in him, and to describe his ideas for the future of this country. It is expected that he will pronounce himself very strongly in favour of an extension of existing planning powers to built-up areas.

RURAL INDUSTRIES

The presence of the Swedish Exhibition in London is a reminder of our own rural industries which have been revived, or have themselves revived, after being so nearly dead. *Rural Industries*, the magazine that chronicles the doings of rural craftsmen, lays great stress upon design as the most potent factor in their trade recovery, and, indeed, Design in Industry must become the watchword of us all if the recovery is fully to be made good. The average village smith's ideas upon design are of the very haziest, and if he is turning his attention to ornamental smithwork to save himself from extinction, he cannot rely upon a continuous tradition, but must needs learn most things again. He will try to imitate Georgian ironwork, working with new tools that no Georgians even knew, and be surprised to find how the virtues of old ironwork elude him, and here it is that architects, if they will use the village smith for appropriate ironwork, can do a good deal to guide him along channels most suited to modern conditions.

*

There are many rural crafts beside ironwork that need no artificial restoration. Basket working need never suffer eclipse under the stress of any form of economic pressure, and another craft, that I myself hold in great esteem, is that of horsehair weaving, which is a form of upholstery covering that, freed from its gloomy precedent of black, becomes a thing of unusual beauty of colour. It might be a good thing if *Rural Industries* could give us a comprehensive catalogue of all marketed products pertaining to architecture, with lists of agents, prices, etc.

DEFUNCT ? — "NOT QUAITE" !

I have received the following letter from one of my friends, which I print in full: "I am told that the Art Workers' Guild gilded the name of T. S. Tait on their name roll and thus led some to believe that he is no longer with us.

So :—

There was a young fellow called Tait,
Whom the Art Workers' Guild labelled 'late';
When they said, 'Aren't you dead?'
He shook his Scotch head,
And very refained, said, 'Not quaite.'"

ASTRAGAL



Violet Melchett Infant Welfare Centre, Chelsea.]

The principal entrance on the main Wellington Street front. It leads to a central waiting hall, around which are grouped the doctor's consulting rooms, dressing and isolation rooms, and the dispensary.

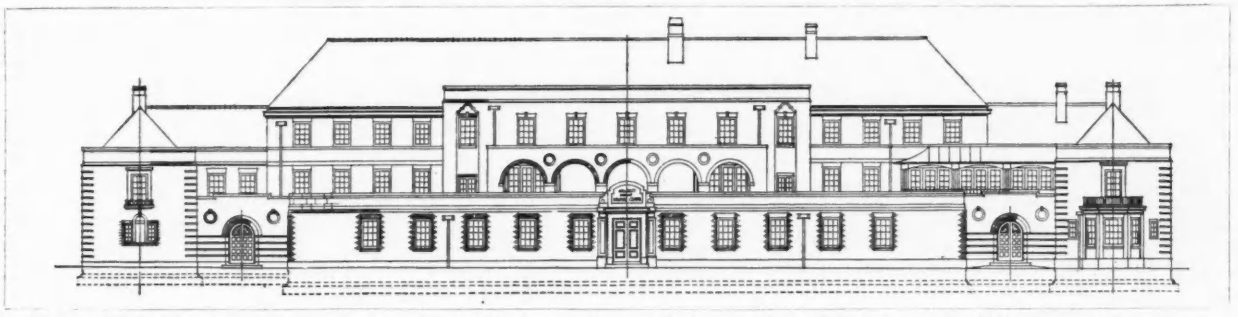


[*By Buckland and Haywood.*

This staircase is typical of the hygienic manner in which the whole of the building is constructed and decorated. Colour schemes throughout are cheerful, and take full advantage of the sunlight.

THE VIOLET MELCHETT INFANT WELFARE CENTRE

DESIGNED BY BUCKLAND AND HAYWOOD



The architects' drawing of the main elevation to Wellington Street, Chelsea. The building is to be officially opened tomorrow by H.M. the Queen. Combined under one roof are a welfare centre, a mothercraft training home, and a day nursery.

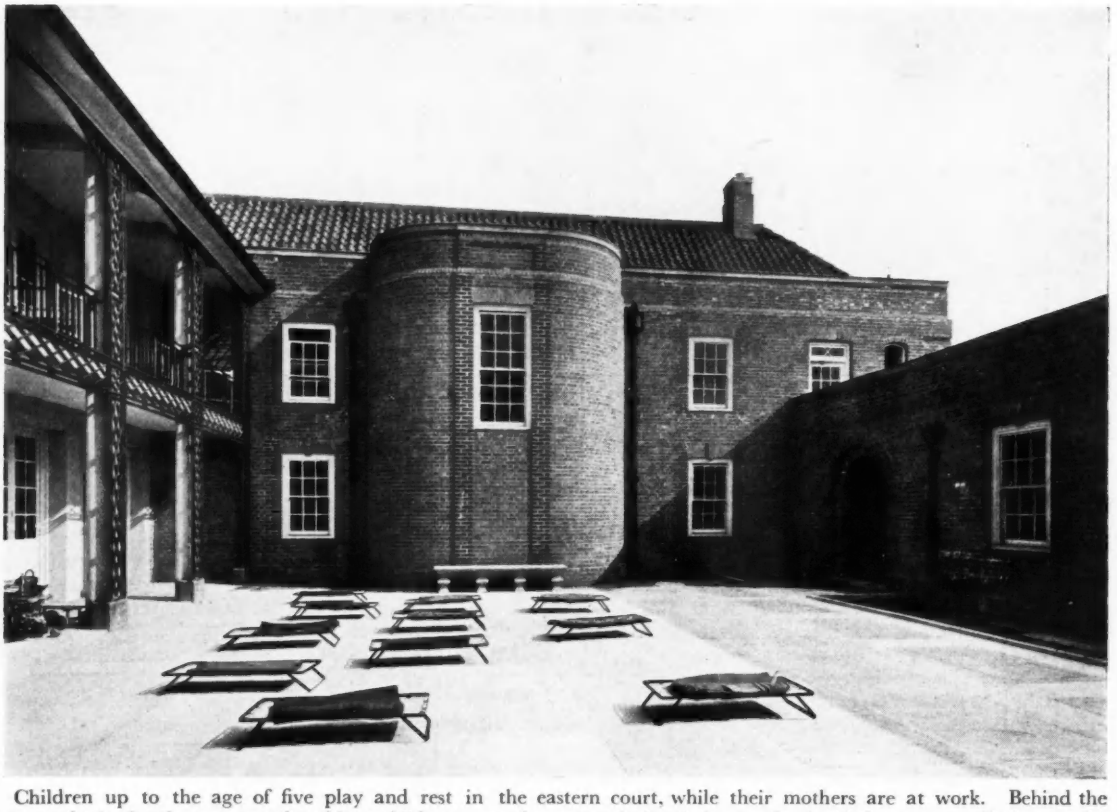
TOMORROW, Thursday, H.M. the Queen will officially open the Violet Melchett Infant Welfare Centre at Chelsea. The site and the building formed the last and one of the greatest gifts the late Lord Melchett made to charity. His intention was to provide a memorial of Lady Melchett's work for the infant welfare cause. The building itself marks an entirely new development in the child welfare movement, as it combines under one roof a welfare centre, a mothercraft training home and a day nursery. Thus, as well as fulfilling its charitable purposes, it provides a complete training for probationers, under staff supervision. The building, as will be seen from the accompanying plans and photographs, is planned to derive the maximum amount of sun, light and air; and is decorated internally in a simple manner. Due regard has, of course, been paid to cleanliness. All angles are coved; and all corridors, waiting-hall, perambulator stores, kitchen, laundry and sanitary departments are lined with terrazzo. This applies to all floors, except in the first-floor corridors, where a cork carpet is let into, and forms a surface flush with, the terrazzo. The floor surface of all rooms where there is little traffic is cork carpet, worked into coves at the junction between the floors and walls.

Accelerated hot-water heating is installed, with hospital radiators in each room; and a separate system supplies constant hot water for the baths and basins. The boilers are of pressed steel sectional type and are equipped with the Prior system of oil-firing apparatus.

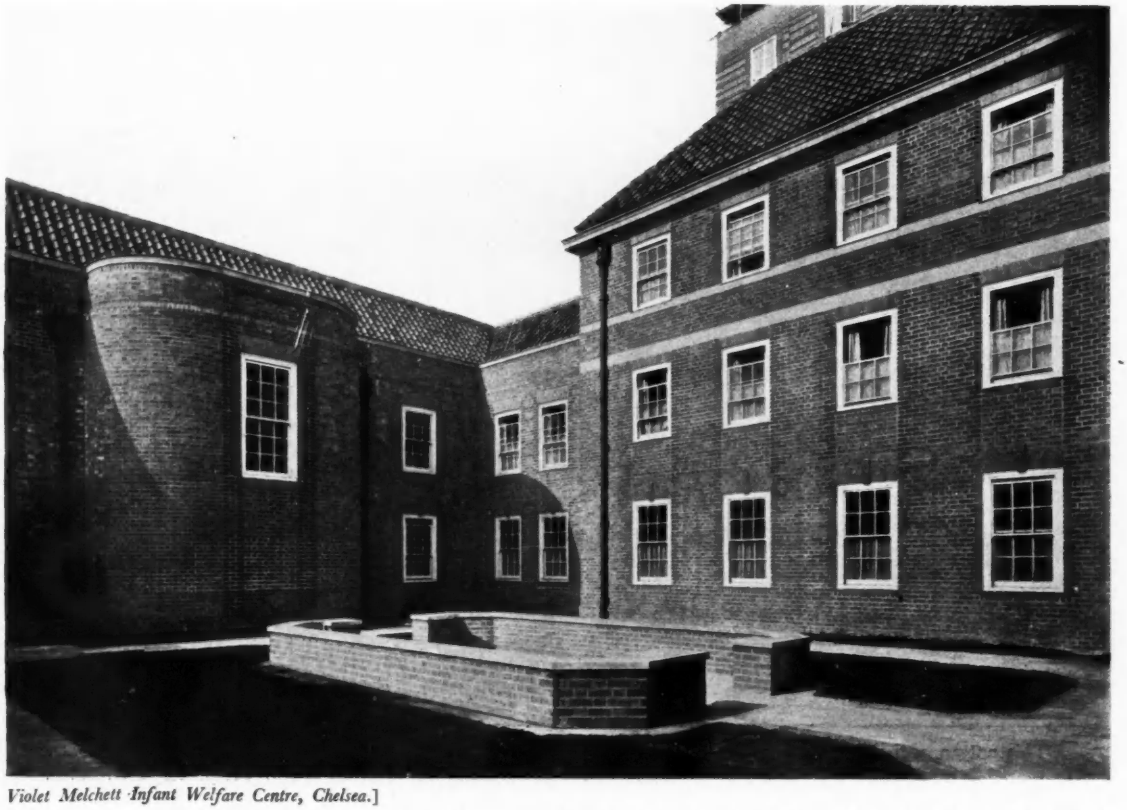
At the back of the building a private road, the property of the welfare centre, connecting Manor Street and Flood Street, has been provided for service. No confusion of traffic can therefore occur. The foundation stone was laid by Violet, Lady Melchett, D.B.E., on June 25, 1930.



This entrance, shown on the left of the elevational drawing, gives access to the mothercraft training home. It is balanced by one of similar design leading to the day nursery on the other side of the principal entrance.

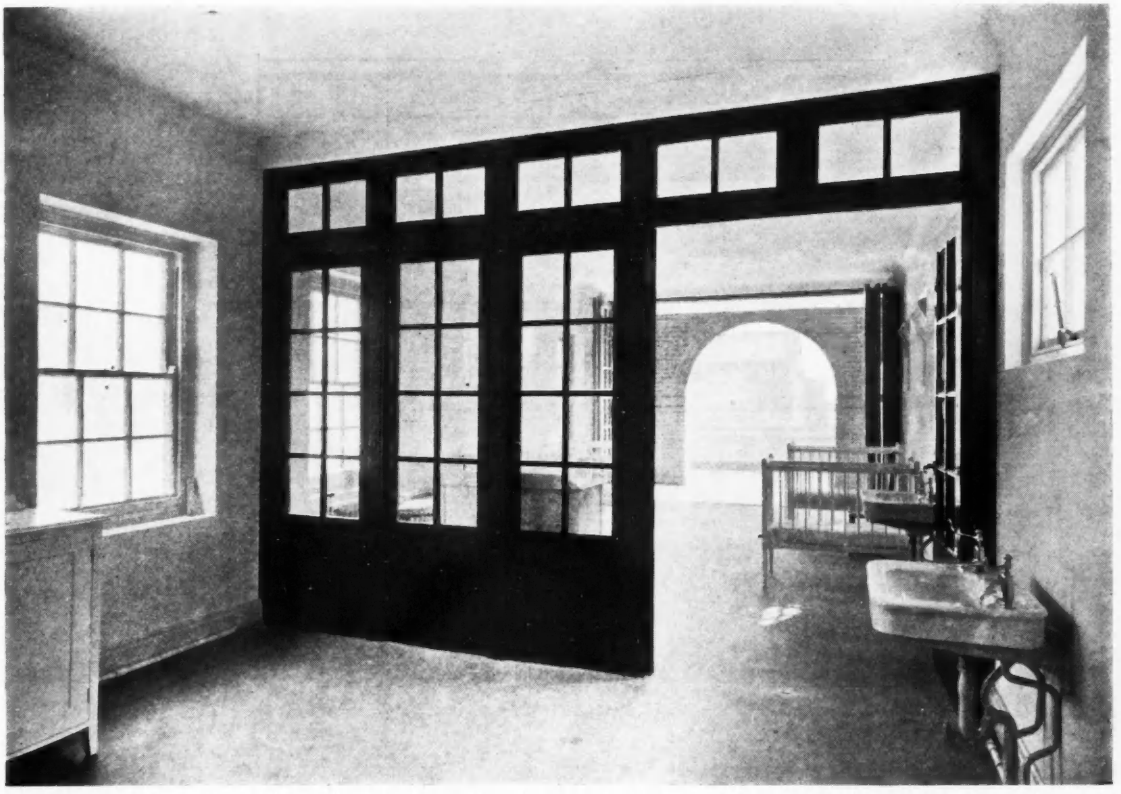


Children up to the age of five play and rest in the eastern court, while their mothers are at work. Behind the veranda is the day nursery for thirty children; at the rear of the balcony the babies' nursery. Both can be converted into open-air rooms.



Violet Melchett Infant Welfare Centre, Chelsea.]

The western court is laid out as a garden with a central sand pit, and serves the mothercraft training home and the welfare centre. Both courts are intended as playgrounds for the children, and are specially designed to form sheltered suntraps.

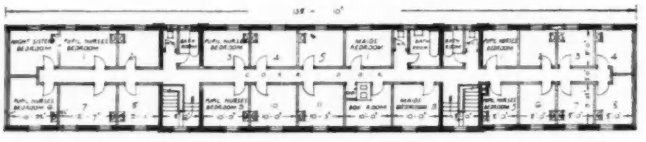


Looking through two of the babies' wards on the first floor towards the open balcony on the roof garden. The wards are separated from one another by a glazed partition, and from the balcony, which accommodates cots during inclement weather, by sliding doors.

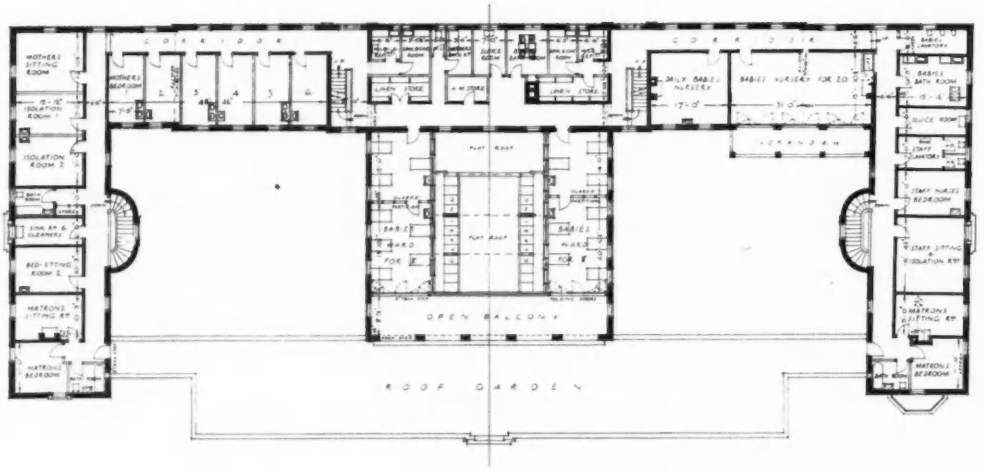


[By Buckland and Haywood.

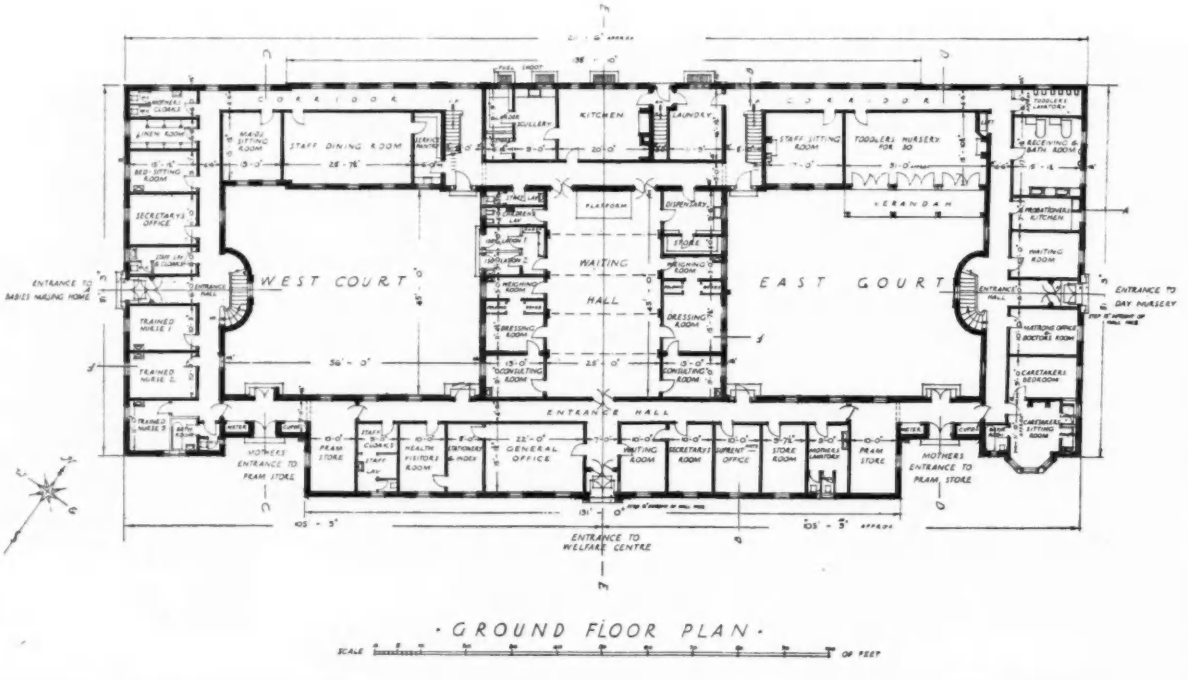
The open balcony on the first floor gives direct access to the roof garden from the two babies' wards in the centre of the main front, see elevational drawing on page 441. In the background of this view and that on page 440 are seen the top stories of an adjoining block of flats nearing completion.



SECOND FLOOR PLAN



FIRST FLOOR PLAN



GROUND FLOOR PLAN

Violet Melchett Infant Welfare Centre, Chelsea. [*By Buckland and Haywood.*

Ground-, first- and second-floor plans. The front section of the building, facing Wellington Street, contains the administration offices and the infant welfare centre, the western section, facing Manor Street, the mothercraft training home; and the eastern section, facing Flood Street, the day nursery.

CHEMICAL LABORATORY AT CLAPHAM, S.W.

DESIGNED BY EMDEN, EGAN & CO.



The main front to Clapham Road and the return elevation to Crewdson Road. The principal façades to the streets are in Carrara-ware, the rear elevations and areas in white glazed bricks. The windows and infilling are of metal.

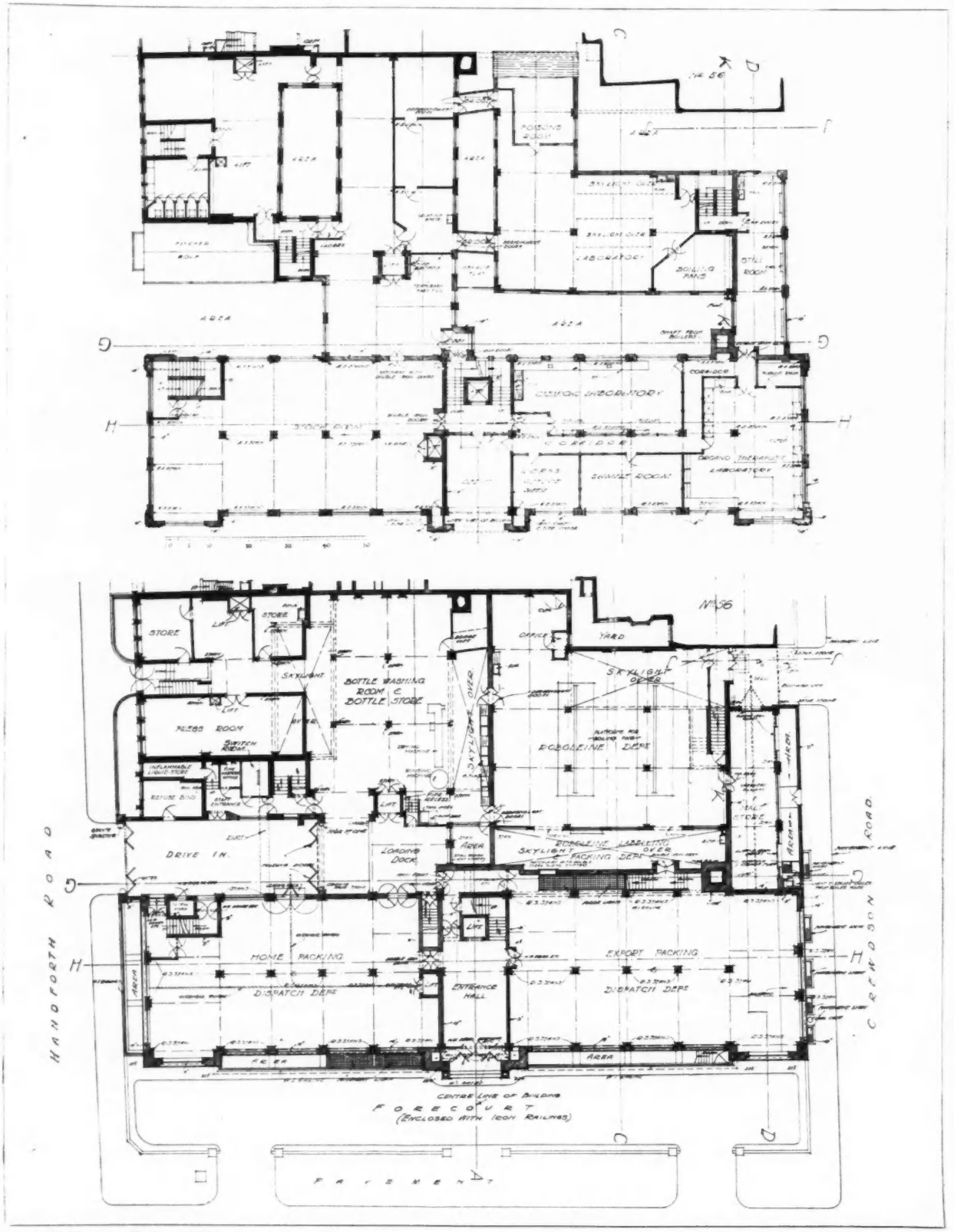
MESSRS. OPPENHEIMER'S premises have been specially designed and planned for the manufacture of medicinal and chemical products. Particular care, therefore, was taken to ensure that the building should be constructed on the most hygienic lines, to facilitate easy cleaning and to reduce as far as possible the exposure of pipes and the formation of ledges which would harbour dust.

The building, a steel frame structure divided in plan into four parts by 14-in. division walls, stands on a site with the main front to Clapham Road and side elevations to Handforth Road and Crewdson Road. The main entrance forms the central feature of the principal front, and on the Handforth Road side is a drive-in for lorries to the loading dock. The main entrance leads through a vestibule into the entrance hall, from which the staircase and an electrical passenger lift give direct and easy access to the offices, laboratories and the various other departments. The façades to the streets are in Carrara-ware, and the rear elevations and areas are in white glazed bricks.

As usual in buildings of an industrial description, the entrance hall and main staircase strike the most prominent note in the internal



A near view of the main entrance doorway. As will be seen from the general view above, it is approached from Clapham Road by a forecourt enclosed with iron railings.



Chemical Laboratory, Clapham, S.W.] [*By Emden, Egan & Co.*

Plans of the ground- and a typical upper-floor. The building has been specially designed for the manufacture of Robolcine, palatinoids, vaccines and other medicinal and chemical products.



Chemical Laboratory, Clapham, S.W.] [*By Emden, Egan & Co.*

The main entrance hall from Clapham Road. The walls of the hall and the main staircase up to the first floor are in Roman and Napoleon marble. The floor is also in marble, the staircase treads are in pre-cast Biancola.

decoration scheme. This hall and the main staircase up to the first floor have panelled walls in Roman and Napoleon marble. The floor of the hall is also in marble and the treads of the staircase are in pre-cast Biancola. The organo-therapeutic laboratory and Roboleine departments are finished with Biancola walls and terrazzo floors. In the remainder of the building the walls and ceilings generally are finished in Keene's cement, painted with enamel, all internal and external angles being rounded. The floors are steel joist and concrete, finished on top mainly in jarrah wood blocks. All joinery work to glazed partitions, doors, etc., is either in teak or oak throughout, and the door furniture, switch plates, etc., are in B.M.A.

As a preventative against dust the whole of the electrical conduits are buried in the concrete and the walls. The heating system is designed to reduce the amount of piping to the minimum, and in the case of the organo-therapeutic department the heating pipes were buried. Ray radiators were used in place of the wall pattern radiators throughout the remainder of the building. The old part of the factory in the north-east corner of the site has not been materially altered and is left for reconstruction at a later date.

THE REGISTRATION BILL

[BY OUR SPECIAL PARLIAMENTARY REPRESENTATIVE]

STANDING Committee "A" of the House of Commons on Tuesday, March 17, resumed consideration of the Architects (Registration) Bill.

Clause 7 of the Bill reads as follows:

(1) If any person registered under the provisions of this Act shall be convicted of felony or misdemeanour, or after an inquiry . . . be judged by the Discipline Committee . . . to have been guilty of any conduct disgraceful to him in a professional respect, the Council shall, if the Discipline Committee so request, cause the name of such person to be removed from the Register, either permanently or for such period as the Discipline Committee think fit.

Mr. McShane (Labour) moved an amendment to provide that "the Council may, upon proof of such conviction, cause the name of such person to be removed from the Register . . . as the Council determines." He said the purpose of the amendment was to try to ensure, as the critics of the Bill had been attempting throughout to ensure, that the Council should be the controlling authority. His amendment raised the same question again as to whether the proposed Disciplinary Committee was to be a Statutory Committee or whether the Council was to be in control. This case was parallel to that of the Admission Committee, previously dealt with. The Admission Committee was to settle whether a person was to come upon the Register or not, and the Council, although it was supposed to be the dominating body, must recognize that decision, willy-nilly. If now the Disciplinary Committee were also to be placed in a position to order the Council what to do, by the time the Bill was finished the Council would be a "Gilbert and Sullivan" Council. He did not know whether it wou'd be necessary for the Council to meet at all, as they would merely have to register the instructions of what were to be two

statutory bodies. The promoters of the Bill had issued an analysis of the proposed Disciplinary Committee, to be nominated as follows: By the Commissioners of Works, one member; by the Minister of Health, one member; by the President of the Law Society, two members; and appointed by the Council from the Register, four members. In addition to those permanent members, it was proposed that there should be two temporary members. Therefore they would be in the hands of the R.I.B.A.—this was King Charles's head.

Mr. Harris (Lib.) said that members were sick of the attacks on the R.I.B.A.

Mr. McShane retorted that he was not objecting to the R.I.B.A. protecting its own interests as trade unionists, but he objected to the R.I.B.A. trying to use him to get themselves incorporated statutorily in the Bill.

At this moment Mr. McShane called attention to the fact that there was not a quorum present, and the Chairman, in accordance with the rules, adjourned the Committee until March 24.

Mr. Harris then accused Mr. McShane of trying to wreck the Bill, to which Mr. McShane retorted that he was trying to wreck the Bill as it stood now.

LETTERS FROM READERS

Architecture versus *Engineering*

SIR,—I have not replied before to my critics because no clear issue had emerged, while the various letters appear to cancel each other. Mr. Gloag complained that I am obscurantist, but as other correspondents appear to have understood my meaning, I can only assume the defect is with himself rather than with anything I have written. However, as I appear to have much annoyed Mr. Towndrow—and he asks me bluntly what I am getting at—I am constrained to reply, lest any of your readers should entertain a doubt as to my meaning.

The purpose of my articles, then, was to stiffen the backs of architects against the modernist concrete engineering onslaught, by stating the case for the traditionalist's attitude towards architecture. Mr. Gloag thinks I am reluctant to admit that a structural revolution has taken place during the last half-century, which demands a partnership between the architect and engineer. But that is not the case. I recognize the need of a partnership between the architect and the engineer, but I insist that the architect shall be the senior partner, whereas the modernist school would reduce him to the position of a junior partner, preparatory to kicking him out altogether; and I thought the best way to achieve that end would be to show that architecture had a *locus standi* of its own, independent of engineering.

If there is no conflict between architecture and engineering then the sooner architects resign in favour of engineers the better. But if there is a conflict—and I think the illustrations I gave should be sufficient to prove to anyone who knows when a thing is proved that such a conflict does exist—then architects are not called upon to surrender to engineers, and they may be satisfied that they are doing the right thing when they conceal their girders instead of exposing them.

Concealing girders used to worry me when I was younger. I felt I was guilty of a deception, and a little ashamed of myself. But I don't feel like that any longer, for I know that architecture and engineering are not the same thing, and that the choice is between two evils, and in concealing girders I feel I choose the lesser one.

The significant thing about this correspondence however, is that no one has challenged the truth of what I said about concrete. It is significant, because those of us who stand for tradition have been browbeaten by the concrete school for the last twenty-five years, on the assumption that we were simply stupid conservatives. And now that we challenge them, not one ventures to reply.

What does this mean? Does it mean that the advocates of concrete were unaware of its limitations? Are they really scientific or is it all bluff? For I should very much like to know what their silence does mean.

I may add the same thing happened when a few weeks ago I lectured to the Design and Industries Association. I said the same things about concrete, and nobody replied to my criticisms. Only one of the subsequent speakers mentioned concrete at all, and that was to say he agreed with me; and he was an engineer. What are we to think of the modernist concrete school?

ARTHUR J. PENTY

Simplified Quantities

SIR,—I read the good-humoured letter from Mr. Lynn C. Doyle that appears in your issue for March 11 with pleasure. I feel sure that he will forgive me for pointing out that his analogy of the wooden and the iron ships fails to carry conviction, when it is remembered that in their earliest form quantities were lists of material prepared after the manner of a bill—"Bills" of Quantities. It may be possible to lament this lost simplicity with some show of reason, but not at the same time to claim to be abreast with, or in advance of, the times.

As to the threatened refusal to tender, surely Mr. Lynn C. Doyle knows that it was on the initiative and with the help of builders that the method known as "Standard Method of Measurement" came into being! The Federated Builders regard the achievement of a standard method as something to be proud of, and have constantly under consideration further proposals as to its improvement.

J. R. TAYLOR

The Ancient Monuments Bill

SIR,—I have to thank Lord Raglan for his reply to my letter on the above subject.

I should like, however, to make it clear that I have never at any time underestimated the ability of the official experts or the results of their labours.

It may interest Lord Raglan to know that within recent years several ancient monuments have been scheduled on my recommendation, and that at present I am trying, most strenuously, to secure many valuable specimens of mediæval architecture for the nation by scheduling. It is unlikely I should adopt such a course if I were not impressed with the ability and skill of official architects of the Ancient Monuments Department of the Office of Works.

Such a course does not invalidate the statements of my last letter.

What qualifications or experience Lord Raglan has for his sweeping statements I do not know, but to state as he does that "it is difficult, if not impossible, to find a private architect who understands, or even professes to understand, the technicalities of Gothic architecture," is an insult to the profession and is absolutely untrue.

What personal knowledge he can have of the abilities of the 8,000 or more individual architects in the kingdom must be very limited, but the official mind always assumes that official status makes a man a superman. I am well acquainted with the powers of the commissioners and official architects, and have no fault to find with the latter, provided they do not overstep these powers; but when it comes to official staffs doing private restoration work on monuments which they have for some reason refused to schedule, or been unable to schedule, then it is time for the private architect to question their methods and raise the point of professional etiquette.

I have the greatest admiration for much of the work of such bodies as the S.P.A.B. and the Ancient Monuments Department of the Office of Works, but every scholar in the profession will agree with me in resenting the assumption that only an official architect knows anything about the spirit and technique

of Gothic work. Further, all ancient monuments are not Gothic, as Lord Raglan seems to imply.

There are many other points which arise out of Lord Raglan's letter, but my views on these are too well known to the profession to need repetition.

WILLIAM DAVIDSON

The Ideal School Hall

SIR,—We have read, with interest, Mr. Alexander's comments in your issue for February 11 on our article, "The Ideal School Hall."

He criticizes adversely our solution of how a school hall and library may be combined. He complains that "the chief function of a balcony—to give an uninterrupted view of the stage from all seats—has been sacrificed to the needs of a library." One cannot have everything. The primary intention of our balcony was to house the library. The library which is needed in a modern school is not, as Mr. Alexander still seems to believe, a rather large classroom with bookshelves, in which books can be kept and a few students can perhaps find room to read. It must have room for many readers; the books must be separated into sections according to subjects, so that small groups or single students can read in peace. If funds allow of such a library being built as a separate building, well and good; but that it was often impossible on grounds of expense was our reason for suggesting the combination. It must be remembered, however, that the side balconies would only be used on those rare occasions when the hall is required to accommodate a large number of people. Many of these occasions would be concerts, when a clear view of the stage is not necessary.

Mr. Alexander states that our roller shutters would not make the library soundproof. He is possibly right, but they could be sufficiently soundproof for most occasions.

Even if the shutters were left out, our hall would, we feel, be more generally usual than most we have seen.

As for the flat roof, it would be quite possible to adapt the open timber roof which the grand tradition of Victorian education has made sacred to our scheme: on the other hand, the flat roof has a simplicity and adaptability which makes it the normal usage in practically all Continental schools. Æsthetically, it will depend on the skill of the architect, rather than on associated values.

Mr. Alexander's own solution of our problem—to have the library on the stage—fills us with surprise.

We feel that he can know little of what happens in a school, and that he misses one of our main points, that a school hall should have a properly-equipped stage. We envisage, not "a room with a long, uninterrupted wall," but a workmanlike stage, with its lighting set, its apparatus for putting up stage settings and hanging curtains, and all the paraphernalia essential for easy dramatic production. We wonder what is to happen to the library when plays are being produced—the productions might extend over six weeks, or even a term—what will be the state of the books and bookcases when the show is over, and what would be the remarks of a practical schoolmaster on an architect who tried to combine a library and a stage. We fear that they would not be either complimentary or polite.

F. C. HAPPOLD
H. C. HUGHES

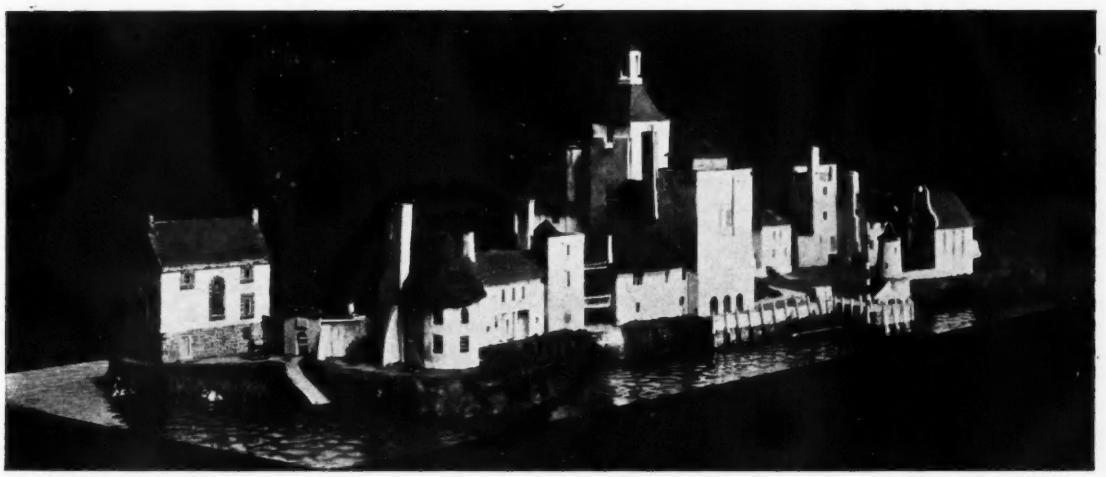
THOUGHTS ABOUT BUILDING

BY M. H. BAILLIE SCOTT

Architect and Engineer

THERE seems to be a tendency nowadays to recognize no essential difference between the architect and the engineer. I think myself that there is a considerable difference. If you think of the architect as a kind of animated cocktail, composed in definite proportions of artist, engineer and business man, I think you will find it is the artist that puts the gin in the engineer, the artist who puts the kick in the cocktail. The engineer is not himself concerned with the artistic spirit, and does not recognize æsthetic claims. A bridge across a running stream is a mere convenience to him, and it is nothing more. He will quite cheerfully and blindly destroy the whole character of some rural beauty-spot with his girders and his reinforced concrete. He makes no claim to create beauty, but is only concerned with practical efficiency.

There is a modern school of architects who vainly imagine that in solving their practical problems they are doing all that is required of them, and that in so doing, beauty will kindly oblige by stepping unasked across the threshold. The best that can be said for a creed of this kind is that it saves the architect a great deal of trouble. For what is the normal process of the architect who has æsthetic ideals? He makes his plan and solves his practical problem perhaps quite easily the first time, but he must be constrained to recast his design again and again to reconcile the conflicting claims of utility and beauty. He may bring down at the first shot that clumsy and ungainly fowl, utility, but it is more difficult to kill with the same stone the splendid bird of paradise.



The model of the seaside township of Port Meirion. Clough Williams-Ellis, Architect. Mr. Baillie Scott in a part of his paper not reported above says "this seems to me to be one of the few exceptions to the general view that modern building destroys the beauty of the country."

I have said that the architect is essentially a kind of "mixed drink," and that the quality of his work mainly depends on the proportion and character of the artistic spirit. It is chiefly in country building that artistic sensitiveness is desirable. Most of our modern towns and suburbs will not be much the worse for a little more ugliness in their streets, and we may at least find some amusement, if nothing else, in the latest modernist freak there. But in the country it is different. We are jealous of its disappearing beauty and we deplore its desecration by modern building.

I dread the advent of the town planner in the country, destroying all its wayward inconsequence and drilling it into an artificial, machine-made paradise.

The Function of the Architect

What is the function of the architect? After adequately fulfilling practical demands—what we might call in Kipling's phrase the "belly need"—he should be a decorator of the world of Nature—just that. If we think of the countryside as a room, partly furnished with trees and flowers, he has to add a human contribution to all that, and in so doing to accentuate its appeal instead of destroying it for ever. I believe he will only succeed in doing this rightly if he is country-bred and country-taught, and if, like Wordsworth's *Wanderer*, the foundations of his mind have been laid in the contemplation of natural beauty.

Modernism

The modernist architect who is concerned entirely with practical function, and who, if he were creating a human being adapted for modern conditions, would probably add an extra eye in each side of the head to be used in crossing a crowded street, may, perhaps, view with impatience the claims of tradition as expressed in the Classic orders and in old country building.

And yet, while we may thank him for the omission of much useless ornament and architectural features, I cannot think his conception of the modern house is a sound one.

What, after all, is a house for? It exists mainly for the purpose of affording us an adequate protection from weather. It must keep out the cold and it must keep out the heat. It should constitute, too, an indoor world which gives us a sense of really being indoors, so that, in the dismal weather which so often afflicts us, we may find a refuge and retreat in a world of our own, where we forget the out-door world. For such purposes I maintain it is hard to beat the old cottage or the old house. The walls are thick, and so keep out heat and cold, and this useful function is not neutralized by large gashes cut in the walls where only a sheet of glass stands between us and the weather, and which, on gloomy and rainy days make it impossible to escape from the outside world. Quite apart from any æsthetic qualities, an old cottage with its thick walls, thatched roof and windows of reasonable size is all that the functionalist can desire in the way of practical efficiency.

What can be said for the novelty-seeking modernists' creations? Let us pass over the fact that they are destructive of rural beauty and cast a blight on the country-side, and examine them on practical grounds only. We find usually thin walls, a flat roof and large window areas, all specially adapted for letting in the heat in summer and the cold in winter. So quickly is the internal heat conducted away that we must resort to elaborate mechanical means of heating. And as to the interior, well! It is only when we find we have to live in such surroundings that we recognize one use for these large windows; they do afford us some escape from unpleasant indoor surroundings.

The Achievements of the Old Builders

I think one of the great achievements of the old builders was to give us a really inviting, homely and liveable interior. The term *liveable* is perhaps the best to use in this connection, for there is a kind of beauty which we may admire immensely but not wish to live with. There are few, I think, who would wish to live in Westminster Abbey or St. Paul's, though both these buildings may be said to be beautiful. In the old house or cottage we shall find something inviting and eminently liveable in all its appointments—the old hand-made furniture, the outcome of the experience of generations of craftsmen—the old oak panelling on the walls which makes such a splendid background to people and things: the generous fireplaces. All these things create for us a world in which we can live in peace and enjoyment. By the side of all this, most of the modernists' work seems to me just transitory rubbish, the up-to-date fashion of the passing day which today is and tomorrow will be cast into the oven.

There may be notable exceptions, of course, and I must confess my own experience of modernist interiors is mainly confined to public buildings.

On one occasion I partook of tea in a room adjoining a modern public hall. It was so grey and bare, and of such uncompromising and devastating severity, that I felt that I had strayed into Wormwood Scrubs and that, instead of tea, I should be regaled there with bread of affliction and water of affliction. In another up-to-date tea room the whole scheme was so violently and insistently artistic that the people looked dreadfully shabby and out of place, whilst the whole establishment was lit by an uncanny imitation of daylight and of course, super-heated by mechanical means. And I thought how much more liveable and really comfortable was the old inn with its genial fireside, its old oak furniture and gleaming brass candlesticks. The modern decorator is apt to forget that his main function is to provide a good background to people, instead of a colour scheme which is aggressive and insistent, which demands harmonious garments in its occupants.

The Two Vital "Isms"

We have now the opposite camps of the traditionalists and the modernists. In all these party divisions, both in art and politics, it is the mark of the reasonable man to hold aloof from all such limited and standardized professions of faith. He should be ready to accept any new thing which is sound, and equally determined to hold fast all old things which are good. His should be the policy of the open mind and the free hand. Every style is good if it is only well enough done. If we hear of a modern house in the Tudor style we may feel great misgivings, and even hardly repress a shudder: we approach it with all kinds of dismal forebodings. But it is just possible we should find in it such an exquisite selection of traditional forms, so entirely appropriate to their position and use, that they seem to us entirely justified. And, in addition to whatever intrinsic beauty such a house may possess, it will carry with it some of the atmosphere of those old times which, although they may not have been as good as they were popularly supposed to be, were at least good in this, that men then understood how to beautify the world with their buildings, and how to provide us with an interior world which forms a very satisfactory setting for our lives.

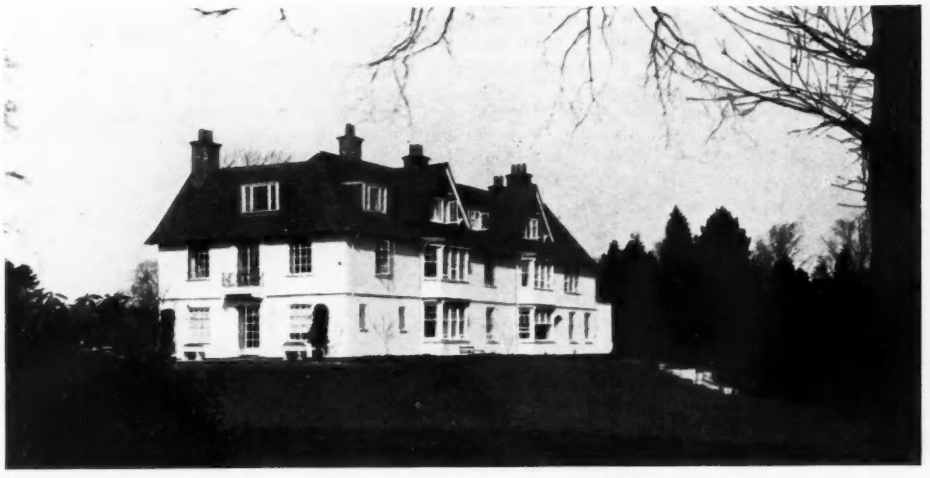
The Mechanical Age

Certainly many of us in a mechanical and soulless age welcome in our homes the restful and unobtrusive harmonies of the old house. If we are to have modernism it should not be of the extreme kind, which is violently revolutionary and iconoclastic, and egotistically scornful of tradition. Our modernism should link itself with the past and develop from it, accepting old truths as well as creating new beauty, where that is possible.

[Extracts from a paper by Mr. M. H. Baillie Scott on "Thoughts about Buildings," read before the Birmingham Society of Architects.]

A SURREY HOUSE REMODELLED

FROM DESIGNS BY P. MORLEY HORDER

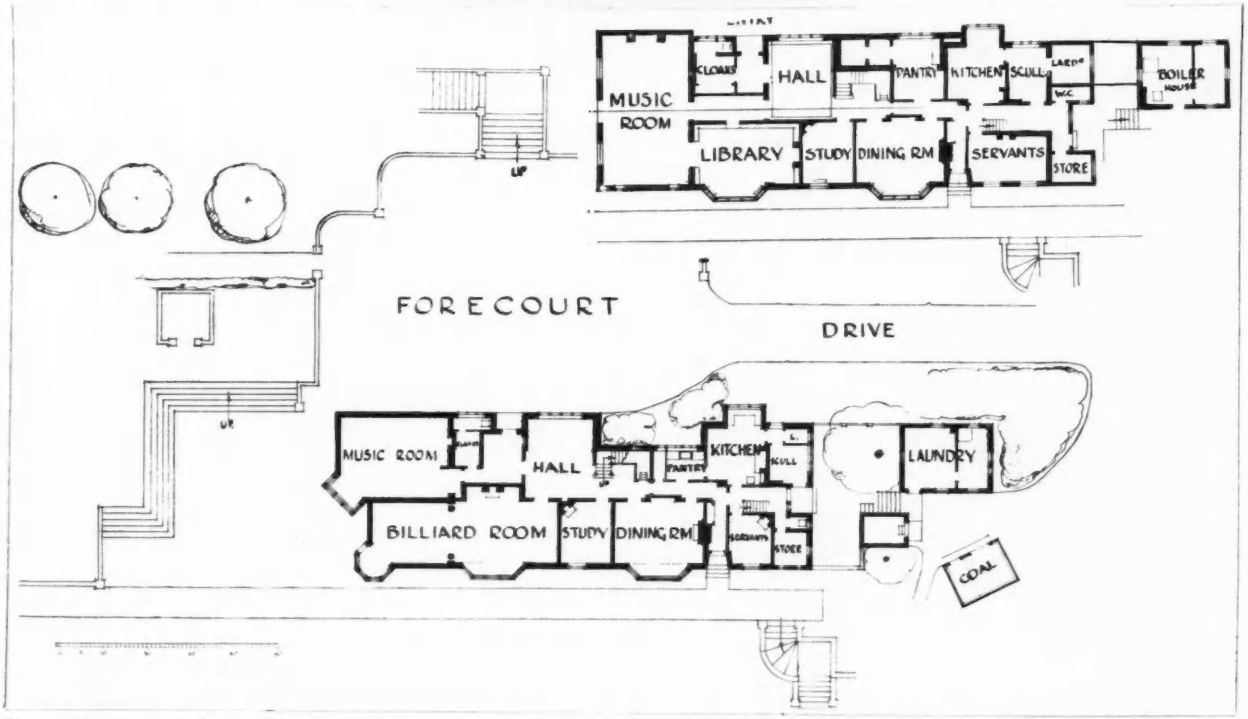


WOLVISTON HOUSE, Whyteleafe, was purchased by Mr. H. O. Agrell, the treasurer of the remarkable Exhibition of Swedish Art. He selected this district to live in owing to its easy access from the City, and as being the nearest point which provided a site of suitable height with sufficient ground to feel reasonably certain that the amenities could not be disturbed. The house was really not at all of the kind he was looking for, but it had a beautiful garden, and he felt that when remodelled to suit his requirements it would probably be more satisfactory than if he started to build anew. The alterations to the exterior will be obvious by comparison with the photograph of the house as it was. He has in mind in the future to do further work in connection with a more enclosed entrance court to give greater privacy to the very well-planned south garden.

View from the S.E., after and before alteration. The old house was full of gables and dormers, and had no sort of geography, but the garden was a fine one; the site stands high and affords seclusion.



As to the interior, photography cannot do justice to the work, since much depends upon colour. This especially applies to the large music room and the bath room—in some respects the most interesting in the house. Light and colour abound, and the decorative effects arise from them, and from the direct replanning of the existing house.



Plans of the ground floor, before and after. The earlier one indicates the setting in the existing well laid-out garden; the entire remodelling of the south end, with its balcony on the central axis of the house, aimed at bringing the two into relation.



The hall, seen from the entrance vestibule. On the right there is access to the servants' quarters, from which to the music room runs the longitudinal corridor shown in the adjoining view.



The corridor vista from the foot of the stairs, looking across hall and music room.



The dining room. The door shown communicates conveniently with the kitchen; it is balanced by another giving on to the main corridor. On the right is a bay window with easterly aspect.



The fireplace end of the music room. This is the most important and spacious apartment in the house; only about half of it is shown in the photograph. Entrance from the corridor is by the double doors on the right; facing them are French windows to the garden.



The library, showing the panelling and fireplace, on either side of which are recessed cupboards. This room is on the same side of the house as the dining room, and has the corresponding bay window, as seen from the plan and exterior view on the previous page.

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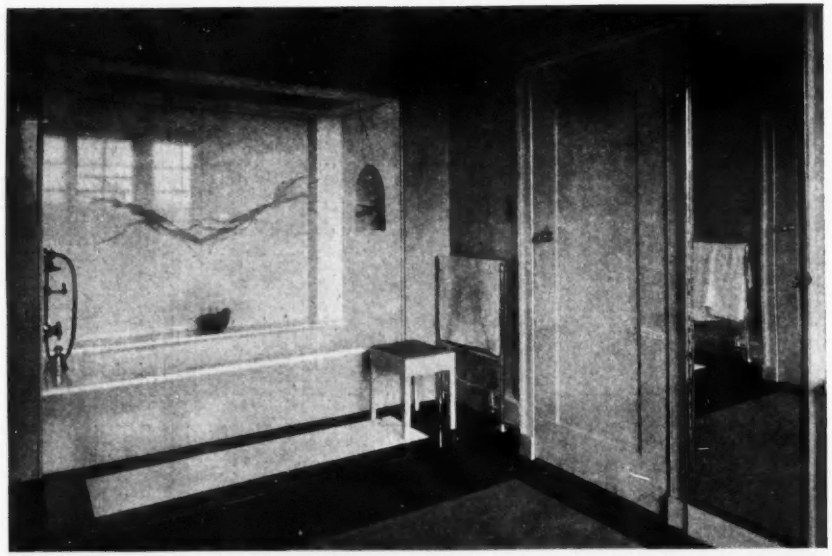
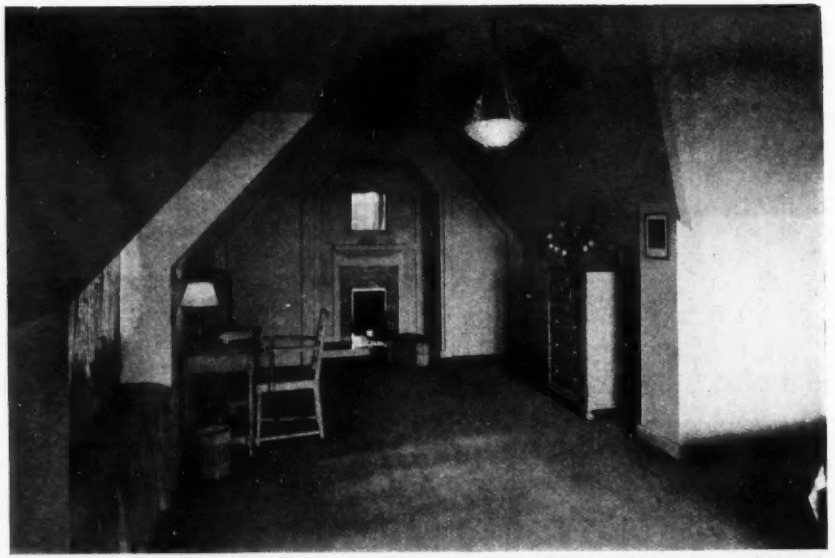


The bathroom. This is probably the most interesting piece of work in the house from the technical point of view; at the back of the bath is a particularly fine slab of marble.



The gable room in the roof. The contours have lent themselves to a happy composition of door and cupboards in the end wall. If modernism means simplification, it is found here.



Wolviston House, Whyteleafe, Surrey.]

One of the bedrooms, showing, through the open door, a glimpse of the bathroom illustrated above.



The first floor landing and bedroom corridor, seen looking south from the head of the stairs.



[*P. Morley Horder, Architect.*

In another bedroom, showing the fireplace, and, to its right, the fitted lavatory basin.

CHARING CROSS BRIDGE

The Schemes Reviewed

THE Report of the Charing Cross Bridge Advisory Committee is a long one, because, having failed to produce an agreed scheme it has had to describe in detail six schemes produced by its members and by members of the professional public.

The report is divided into six chapters and some rather pertinent appendices. Chapter I defines methods of approach to the problem, recognizes the "somewhat narrow ambit of the terms of reference" and considers it the duty of the committee "to consider the probable lines of progress of town-planning and railway development in order to avoid the spending of public money on improvements which might become ineffective later or which might prevent progress on sound lines."

Chapter II is historical and gives an account of the haphazard way in which the early railway companies were allowed to lead their lines across South London and the river, and how, in course of time, the necessity for new road bridges led to proposals, as early as 1904, for moving Charing Cross station to the south side. Then follows an account of the various attempts to devise ways and means of bridging the river for road traffic, leading to the plans of the Royal Commission in 1926, the ill-fated Parliamentary scheme of 1930, its rejection by a Parliamentary Committee, and the ultimate formation by the L.C.C. of a committee with instructions to produce an agreed scheme to cost no more than 12½ million.

Chapter III narrows the field of action by a discussion of "fundamental considerations." Having first proved the necessity for a road bridge at Charing Cross by references to road traffic observations and analyses, and being satisfied that such a bridge would be of not more than five arches, and be placed approximately on the line of the present railway bridge if its position were to be governed by considerations of navigation, the presence of tube railways and other factors—it goes on to deal with railway considerations and town planning.

The railway considerations are important. It is possible to enlarge Charing Cross station to meet future needs for fifty years, but only by extending further platforms over the Embankment, and at the risk of creating new problems in the Strand. If the station is moved on to the south bank it would no longer be restricted, but its numerous suburban passengers would appear to have to walk greater distances—an argument in favour of its retention on the north bank.

A position on the south bank would involve new connections with tube railways, would have to consider the convenience of passengers who walk to their destinations, and the delicate change-over operation from old to new lines.

The report recognizes that town-planning requires the siting of railway stations outside the area of inner London, citing a Royal Commission of 1846, and noting that Charing Cross station was placed on the north bank seventy years ago as part of a bargain with the railway companies. It concludes, as a result of these considerations, that the station should be placed on the south bank of the river.

The considerations of road traffic on the north and south banks, being discussed in relation to each scheme, will emerge later.

The committee examined a great number of schemes, narrowing these to nine, and later to six schemes which they offered for the consideration of the L.C.C.

It should be explained that all schemes have been worked on by the Committee and its advisers and that as a result of this each has a very similar northern termination to the Strand, a traffic circus at the crossing of York Road–Stamford Street with the bridge approaches and another traffic circus at or near the Old Vic. theatre on the line of Waterloo Road. These features common to each on plan are, of course, modified and qualified by the absence or presence of such damaging factors as railway viaducts, tunnels, etc. They should be narrowly regarded in three dimensions before being accepted.

These six schemes may be classified under three groups of two each:

a: Those that leave Charing Cross station on the north bank, and carry a new road bridge parallel to Hungerford railway bridge.

Of these schemes No. 1 is put forward by Messrs. Trench and Grierson, the engineers on the committee. The bridge, cheek by jowl with the old bridge, is three-arched, bending where it touches the bank to meet the Strand and Waterloo Road respectively.

b: No. 2, by Sir Reginald Blomfield, R.A., has a suspension bridge a few yards down-stream, and has the merit of directness, lying in a straight line between its junctions with the Strand at one end; Waterloo Road at the other.

Both these schemes, since they do not disturb the *status quo*, are cheap in first cost, and No. 2 is also, as stated above, straightforward and reasonable.

The second group of two represent the type of solution which has received the support of architects and town-planners since the problem of the bridge first received recognition. Both schemes 3 and 4 put forward by Lambeth Borough Council and by a group of engineers, architects and town-planners respectively lay great stress upon the needs of future development and the place of Charing Cross bridge in the town plan of London. Both of them entirely obviate the need for tunnels or viaducts.

Scheme 3 is recognizably the original scheme of Messrs. Caröe and Niven, put forward for Lambeth B.C. by Messrs. Adams and Davidge at the time of the rejection of the official scheme. It shows a high-level station opposite Waterloo station on the site of Waterloo Junction. Its layout is a simple and regular scheme of roads open to the sky in all parts, and unobstructed over the wide area of North Lambeth.

Scheme 4, put forward by a group headed by Sir Murdoch Macdonald, the engineer of the Assuan Dam extension, was described in detail in the last issue of THE ARCHITECTS' JOURNAL. It places the new station at ground level on the Lion brewery site, adjacent to the river, and by raising roads above the railway assures a rapid development over a street plan unobstructed by tunnels and viaducts.

The last group, schemes 5 and 6, are returns to the official scheme, resorted to towards the end of the Committee's sittings. The first group, though it presented schemes well within the fixed limit of 12½ million, could not be regarded as desirable solutions while they left the station on the north bank; the second group appeared to the Committee to involve expenditures in excess of the limit fixed; and a return to the official scheme, despite the existence of the heavy estimate originally attached to it, presented a possible last line of approach.

Scheme 6, voted for by a bare majority of nine, makes substantial alterations to the official scheme, and shortens the length of roads in tunnels, but creates a large traffic circus at the junction of York Road – Stamford Street with Waterloo Road, almost entirely covered by the raised railway. In most other respects it resembles the official scheme.

No. 5, by Sir Giles Gilbert Scott, R.A., places the station to the north of Waterloo Station, adjacent to the Lion brewery site, and thus avoids some of the worst faults of No. 6, though it retains the features of viaduct and tunnel. Sir Gilbert Scott adds a criticism (in Appendix D) of scheme No. 6, in which he says that "scheme No. 6 has one demerit of so formidable a nature that I can see no prospect of it being satisfactorily overcome,

viz.: the formation of a large traffic circus, a great proportion of which is covered by a railway viaduct. The viaduct is low, and the open space that it largely covers is approximately the size of Trafalgar Square."

QUESTIONS THAT ARISE

Design of Roof

T. F. C. writes: "*The accompanying sketch shows first-floor plan and roof section of a proposed new residence which I have designed for a client. I would be glad of your expert's opinion regarding the design of the roof. As will be seen by the dotted lines, I intend to continue the main roof timbers under the wing roofs, so as to gain a better tie. What does he think of this? Also, does he consider the scantlings are of sufficient dimensions for their purpose? Finally, I would welcome any suggestion he has to make as to an alternative roof design. The roof will be covered with Kilalloc slates on batten.*"

The roof construction shown by your correspondent's sketch is quite reasonable in design for this type of building, and the continuance of the main roof timbers under the wings is desirable, as it makes for rigidity. The scantlings shown, however, are much too light, particularly the rafters. Provision must be made for roof loading per square foot of about 20 lb. dead load and 28 lb. live load from wind stresses, or a total load of 48 lb. per square foot of roof area. The 17 ft. rafters shown, spaced at 12 inches, thus have a distributed load of 816 lb. each, but the safe loading of a beam 4½ ins. by 1½ ins. on 17 ft. centres, according to any recognized formula, with a safety factor of seven, is only about 224 lb.

The value of the 4½ ins. by 1½ ins. collar beam as a strut is negligible, being only about 50 lb. Its chief function is as an additional tie. Therefore the rafters must be calculated to carry their load as on 17 ft. centres. The minimum permissible size is 6 ins. by 2 ins., but preferably 6 ins. by 2½ ins.

The ceiling joists also are very light, particularly where they have the complete span of 26 ft. 3 ins. without supporting on partitions. I should advocate ceiling joists of at least 6 ins. by 2 ins.

An alternative construction is to dispense with the collar beam and introduce purlins 5 ins. by 8 ins., strutting these with 4½ ins. by 3½ ins. from the two centre partitions, and from the ceiling joists at *a* and *b*. These two members being unsupported in the middle (except for the cross partition under one end of *a*) would then require to be increased to the proportions of a truss tie beam, about 4 ins. by 9 ins. The beam carrying the main roof members under the wings would also require to be increased to carry the concentrated load transmitted through *a* and *b*. With this construction the rafters could remain 4½ ins. by 1½ ins., as their effective span between points of support would then be 8 ft. 6 ins., with a safe loading value of 400 lb. or half the load for the complete rafter.

A. H. H.

Granolithic Paving

A. V. writes: "*Would your expert please inform me whether a percentage of granite dust should be included with the chippings for granolithic paving? The work which I am at present engaged upon is my first commission, and I should appreciate assistance in this matter. I specified the granolithic chippings to be free from dust, and the work to be finished with a smooth face. I complained to the contractor that the granite chippings contained a large quantity of dust, but he said that if a percentage of dust, which was really small granite chippings, were disallowed, the granite would work up to form a rough face in finishing off the paving. I agreed to a percentage of dust, but even so, the surface is rough, not really with the exposure of the granite chippings, but more as a rough cement face. Paving that I have seen has been finished with quite a smooth face, and this is what I required.*"

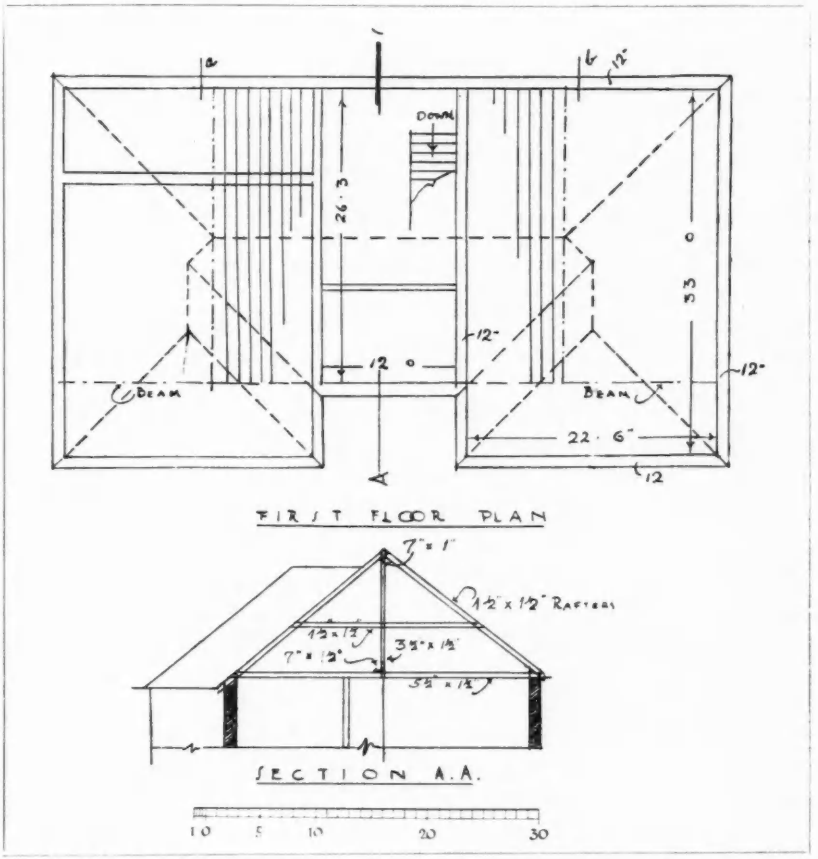
There is no objection to a small amount of granite dust with the chippings for granolithic paving, but there is a tendency, unless the work is carefully supervised, to include too much dust and too little cement.

The work is usually brought up to a smooth face with the trowel within an hour of laying, the trowel bringing the cement to the surface. Trowelling with too much dust leaves only a surface which will eventually flake.

Where the paving, composed of one of cement and two of granite chippings, is required to be finished with the float and a rougher surface obtained, about 5 per cent. granite dust is advisable, otherwise the float would not fetch enough cement to the surface to give a satisfactory finish.

There is, of course, a saving in labour and material in carrying out the work in the latter manner, and I should say that the work about which your correspondent seeks advice has been executed in this way.

W. A. D.



First-floor plan and roof section of proposed new residence. (See query on "Design of Roof.")

LITERATURE

THE PLAN REQUIREMENTS OF MODERN BUILDINGS

THIS book is perhaps more remarkable in its original conception than its choice of examples. An anthology of contemporary plans—plans only, apart from elevations and sections—is something rather new in the annals of architectural literature. It is, nevertheless, an extremely good idea; and, as planning has become the architect's basic function, the deliberate survey of contemporary planning has considerable possibilities for the future. It is in the main disposition of the parts of a plan—the "parti" as it is called—that the architect needs initial guidance to send him off in the right direction. With his main idea right, and with perhaps no more than an indication of section (such as is given in this book), he will soon resolve the building into a three-dimensional entity and build up its external manifestations in mass and elevation. In fact, if he is wise, he will prefer to do this, rather than be led away by the existing externals of any building. For these reasons Mr. Rees's book is of the greatest value.

The whole world of modern building is divided up into twenty-five sections, with generally two sheets of explanatory plans and two or three pages of valuable data given to each subject.

There is, besides, a short introduction of seven pages on "The Composition of the Plan," which in itself is a masterpiece of economic prose. One may see here that the author has applied his planning ability to his writing, for there is not a wasted word; and this introduction deserves to be read and read again.

Of course, one can always find notable omissions in a book of this kind, and one would like to have seen under such sections as offices, factories, and flats, the inclusion of the more fluid partition type of plan, inaugurated by the use of steel and concrete structure.

There is, perhaps, a predilection shown for consciously patterned symmetry, for fussy shapes, ostentatious axes, and large masses of support. And one wonders why so much attention has been given to the monumental French and American types of plan, and so little space to the ordinary bread-and-butter of our work in such things as up-to-date examples of British municipal buildings, baths, washhouses, offices, flats and houses. For instance, under the section "Flats" there is not a single British example. Are we as bad as that? Yet space is given to American University layouts conceived in the grand manner and buildings which have only an academic interest.

One feels that it would have been better to have varied the strict division of the book in its equal sections, either by lumping some subjects together or by diminishing some and enlarging others. A book like this is too good to be of value only to the student, and one hopes that it will go on from year to year with revisions and additions to make it a work of reference on up-to-date as distinct from academic planning. F. E. T.

The Plan Requirements of Modern Buildings. By Verner O. Rees, A.R.I.B.A. London: Ernest Benn, Ltd. Price 35s. net.

THE LAKE DISTRICT

THIS report covers only the south-east portion of the Lake District, mostly lying to the east of Windermere. The northern and eastern boundaries rise to a height of over 2,000 ft., the ground falling irregularly to Morecambe Bay at Arnside. Naturally, in this district, the main concern is with the preservation of those characteristics which make it attractive to visitors.

The slow, relentless attack upon the scenic beauty of the Lake District has been going on for over one hundred and fifty years. Wordsworth traces its beginnings back to about the year 1775, when there began to be diffused among the public a more general appreciation of the wilder aspects of nature, and in his guide to the Lake District he devotes the whole of the third section to a dissertation on "Changes and rules of taste for preventing their bad effect." It is felt by all lovers of natural beauty that this process of *laissez faire* has gone on long enough, and that the time has come to formulate some definite scheme of control.

The report consists of two parts; the first is devoted to a study of past and present conditions, and the second deals with proposals for the future guidance of the local authorities preparing town-planning schemes. Naturally, the preservation of the amenities affects most of the proposals, more particularly the siting of new roads, as the local industries, of which weaving is the leading one, are not on a large scale, and the agricultural activities are unlikely to vary to an extent materially changing the general aspect of the country.

The problem of water supply is important: at present all places above the 500 ft. level depend on local wells, and all development above this would demand the formation of additional reservoirs, for which appropriate catchment areas are defined. It is pointed out that the routes for possible overhead electric cables should be studied with a view to minimizing the interference with the landscape; the positions and proper design of stations and sub-stations also demand consideration.

The total area of land in the region now owned by the National Trust comprises 481 acres, consisting of a number of choice pieces selected for preservation. Unfortunately, however, the area preserved is at present wholly inadequate, and much more will have to be done before the scenic beauty of the region is properly protected. On the western shore of Lake Windermere, in spite of the inactivity of the local authority, something is being done to save a portion of this beautiful lakeside scenery.

The general structure of the plan provides:—

a: Around existing centres which are supplied with public services, ample areas for expansion; the small villages lacking proper services have been given areas in proportion.

b: Definite permanent reservation of all key points of scenery and all the more inaccessible high land.

c: Areas between *a* and *b* to be kept generally rural, with building limitations usually increasing in severity as the zones approach nearer to *b*. Any building in this area to be so open in character and of such appearance as not to spoil the rural character, and with small requirements in respect to public services. Closer grouped development is to be allowed, by consent, in selected places, if found to be required.

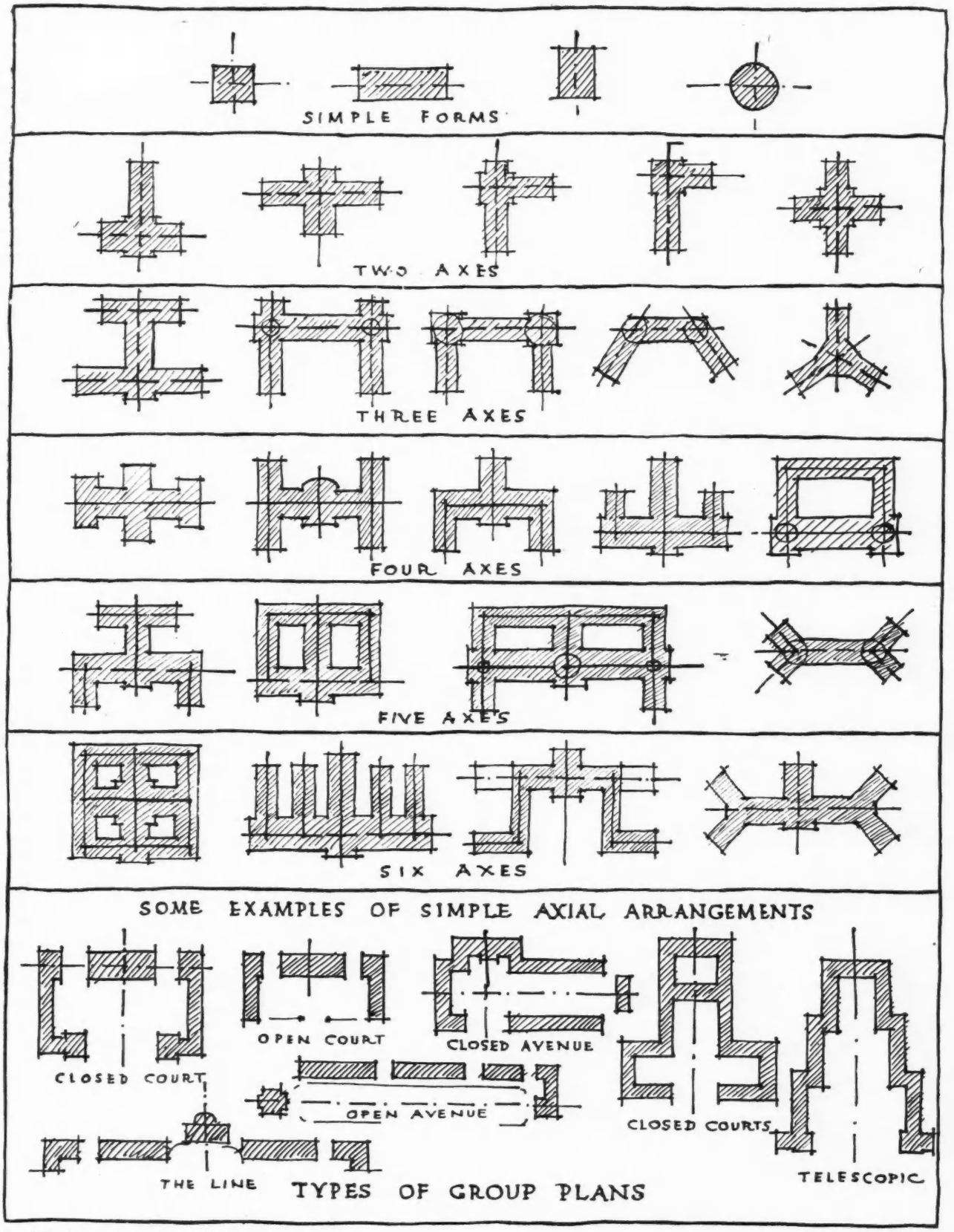
The desirability of employing the local stone and slate for all buildings is emphasized, as less likely to introduce discord; both Wordsworth and Sir Joshua Reynolds are quoted in support of this principle. H. V. LANCHESTER

The Lake District (South) Regional Planning Committee: Report upon the Survey and the Regional Planning Scheme. By Robert H. Mattocks, DIP. C.D., M.T.P.I. Kendal: Atkinson and Pollitt.

BRITISH STEEL

THE British Steelwork Association has just issued a booklet entitled *How to Recognise British Steel*, in which an outline is given of the reason for the adoption by the steel manufacturers of the registered trade mark, in order that their product may be distinguished from that of the foreign manufacturer. The Association points out that in order to avoid the indefinite phrasing which has frequently permitted the supply of foreign steel, despite the fact that it obviously has been the intention of the buyer to stipulate "Steel of British Origin," the following clause should be included in specifications: "The steel supplied to be to British Standard Specification No. 15 (1930) manufactured and rolled in Great Britain."

How to Recognise British Steel. Issued by the British Steelwork Association. Gratis.



From The Plan Requirements of Modern Buildings.] [*By Verner O. Rees.*

A number of the simpler combinations of axes in buildings ; also diagrams of the principal types of group plans.



By John B. Souter. *The Palace of the Zunigas, Plasencia.* (*Pencil:* $11\frac{3}{4}'' \times 8\frac{3}{4}''$).



By John B. Souter. *The Convent of San Benito, Alcántara.* (*Pencil:* $11\frac{3}{4}'' \times 8\frac{3}{4}''$).

THE SKETCH CLUB

TWENTY-FIFTH SESSION

HOSPITALITY is, on this occasion, offered to some particularly delicate examples of the art of the lead pencil, by Mr. John B. Souter. Their technical interest will be enhanced by what he terms "a few personal observations":—

The Palace of the Zunigas, Marquises of Mirabel, Plasencia, built in 1550, adjoins a Dominican convent. The Palace occupies the left half of the mass of buildings seen in the drawing, and is celebrated for a seemingly unsupported stone staircase, and a collection of mutilated Roman sculpture and inscriptions from the surrounding district.

While making the sketch, in the shadow of a Moorish ruin upon a hillside facing the town, I was entertained to a song recital by a self-styled Argentine ex-naval-officer, ex-bull-fighter, ex-opera-singer, commercial traveller in footwear, who appeared to enjoy the acoustics of the place. At another sitting I was invited to share an *al fresco* meal of partridge stewed in a teapot. Wayward delights like these attend the draughtsman in remoter Spain.

The Convent of San Benito, Alcántara, was built of granite in 1506, and, having been left for dead after the French treatment of 1809, is now being tardily resurrected to the status of a national monument. Those tiles you see upon the roof were stacked by a lad who all day long sang a sad Moorish song at his task in the sun, to an endless clattering *obbligato* from the nesting storks on the tower.

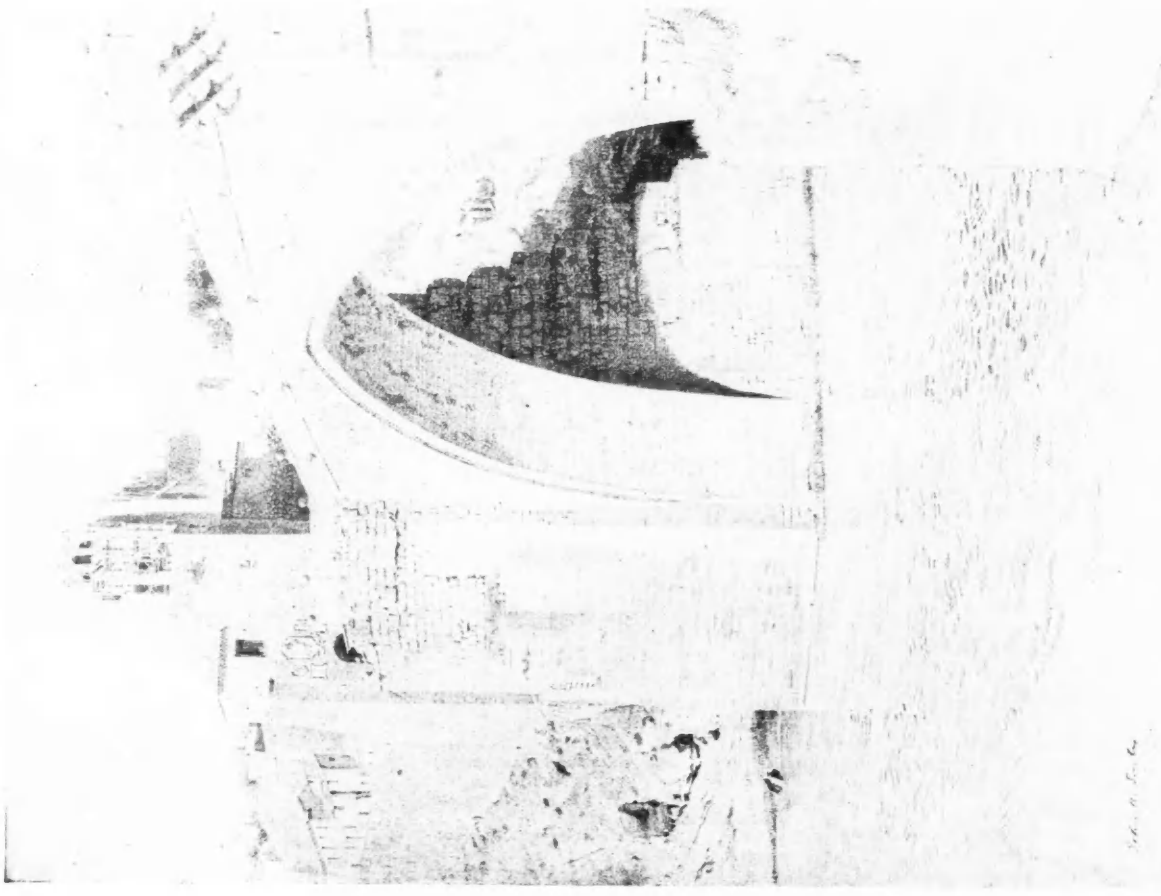
The ground falls very steeply to the Tagus, and the carcases of domestic animals go part of the way down. A vantage point from which a drawing of the town should be made is rendered untenable by effluvia, but the famous Roman bridge over the gorge below can be studied without a qualm, although not drawn without a military permit.

The Alcántara Bridge over the Tagus at Toledo has been called a hackneyed subject. It has, admittedly, been drawn and painted more than often, but the Alcázar which crowns the city has been almost as frequently shelved, and the relationship between the two quite falsified. One prominent landscape painter has recently been obliged, in the interests of composition, he says, to shift the city half a mile back. Architects, perhaps, do not fully appreciate the onerous nature of the painter's task.

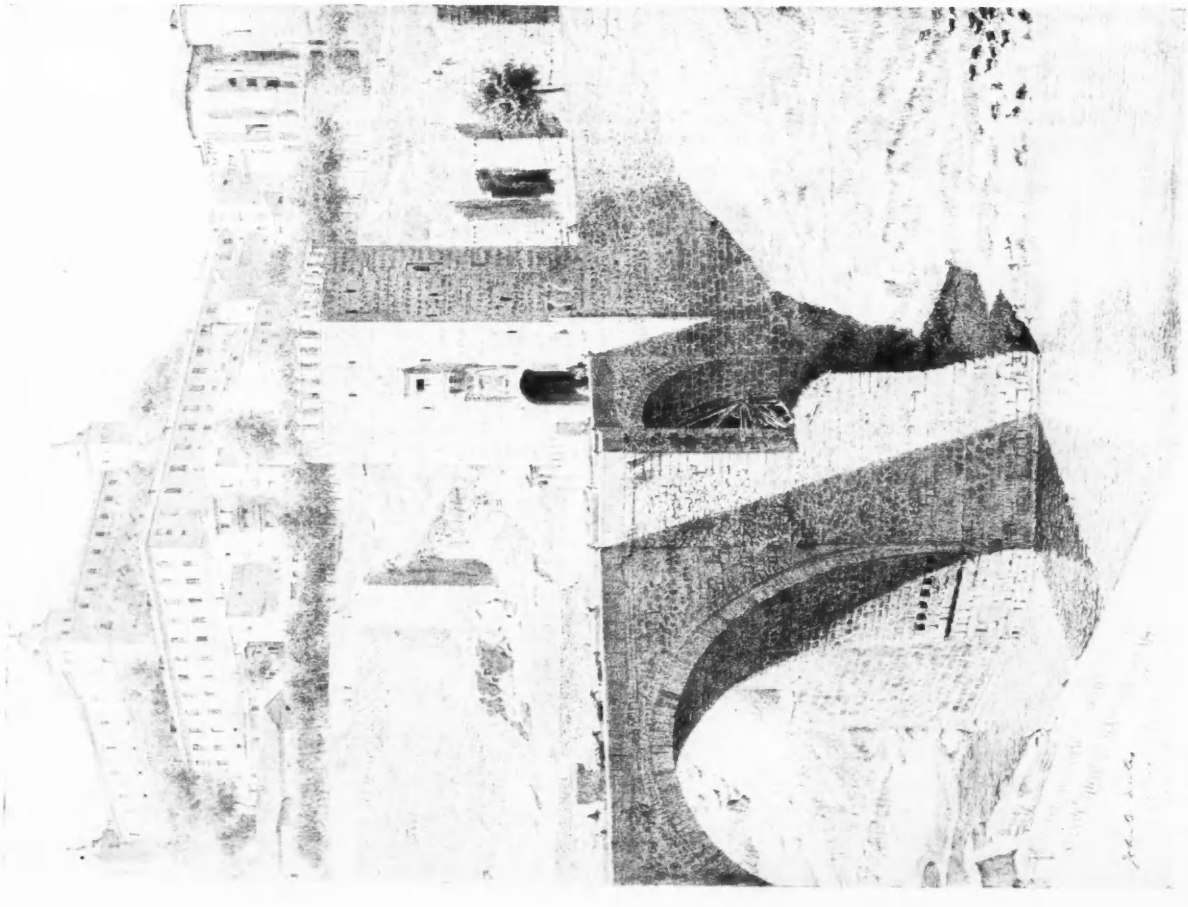
The San Martín Bridge, at the opposite corner of Toledo, enchants the connoisseur, but has missed the notice which its up-river colleague enjoys, for San Martín leads from the city to the desert, and the Alcántara leads to the railway station.

This is not the place to repeat the legend of the destruction of the half-built bridge by the architect's wife, who, in order to conceal a vital error in his calculations, burned the scaffolding, and thus precipitated the inevitable collapse of the structure, but I do assure you that my own wife stood between my drawing and the stones which young Toledo hurled on us from the highway above. Further, be assured that two youths swam the lordly Tagus with catapults to bombard from the pier the swallows' nests which cluster under the arch.

To the architect who would sketch at Alcántara I can promise no arias from grand opera, no teapotted partridge, only the polite attentions of a local lover of art upon whose land he is likely to stray. Sr. Don Julano de Tal will stand over him enraptured, while he works, and even infect with his enthusiasm as many as fifteen fellow-citizens, whom he will bring in a body to share his joy.



The San Martin Bridge, Toledo. *By John B. Souter.* *(Pencil : 8¾" × 11¾").*



The Alcántara Bridge, Toledo. *By John B. Souter.* *(Pencil : 8¾" × 11¾").*

SOCIETIES AND INSTITUTIONS

R.I.B.A. COUNCIL MEETING

FOLLOWING are some notes from a recent meeting of the R.I.B.A. Council :

The British Architects' Conference, 1932 : On the recommendation of the Allied Societies' Conference, it was decided to accept the invitation of the Manchester Society of Architects to hold the British Architects' Conference at Manchester in 1932.

The Town Planning Bill : On the recommendation of the Town Planning and Housing Committee, it was agreed to write to the Minister of Health urging him to secure the introduction of a Town Planning Bill as soon as possible, which will provide extended powers to plan built-up areas and safeguard the amenities of the country districts. It was decided to urge the allied societies to approach their local Members of Parliament and impress upon them the importance of dealing with this question at the earliest possible date.

The School of Architecture, Brighton : It was decided that the School of Architecture, the Municipal College of Art, Brighton, be recognized for exemption from the Testimonies of Study for the R.I.B.A. Intermediate Examination.

The University of London Architectural Education Committee : Messrs. L. Sylvester Sullivan, F.R.I.B.A., and W. H. Ansell, F.R.I.B.A., were nominated as the R.I.B.A. representatives on the University of London Architectural Education Committee.

The Announcement of Competition Awards : It was decided to add a clause to the " Directions to Assessors " urging that assessors should take all possible steps to ensure that the award is communicated to the competitors before it is announced in the Press.

Conditions of Contract : It was unanimously decided to take the necessary preliminary steps under the bylaws for the approval of the new Form of Contract, subject to the consideration of various revisions by drafting counsel. It was also decided that Mr. W. E. Watson, F.R.I.B.A., be instructed to act as drafting counsel on behalf of the R.I.B.A.

Proposed British Standard Specifications : The Science Standing Committee reported that they had appointed Messrs. R. J. Angel, F.R.I.B.A., and S. Pointon Taylor, F.R.I.B.A., to represent the R.I.B.A. at Conferences called by the British Engineering Standards Association to consider the question of preparing British Standard Specifications for : (a) Asbestos pipes and gutters; (b) cast concrete roofing tiles; (c) breeze and clinker slabs; (d) sawn cut timber sizes; and (e) dimensions for clear-way openings for doors.

Reinstatement : The following ex-members were reinstated : As Fellow, Mr. Arnold Mitchell; as Associate, Mr. T. E. Heysham; as Licentiate, Mr. Benjamin Robert Irwin. It was reported that under the provisions of the Supplemental Charter of 1925, Section III. (e), the following Licentiates had qualified and been transferred to Associateship of the Royal Institute : Messrs. Wilfred Edwin Kelly and Richard John Vernall.

Resignations : The following resignations were accepted with regret : Fellow : Mr. Edward Hardwick-Terry; Associates : Messrs. Samuel B. Birds, Dermot W. F. Gale, Arthur W. Stelfox; Licentiates : Messrs. Charles T. M. Evans, Charles H. Roberts, George H. Smith.

Retired Fellowship : The following member was transferred to the list of retired Fellows : Mr. T. Butler Wilson.

Election of Students : The following Probationers were elected as students of the R.I.B.A. :

Bishop, Hugh G. (Architectural Association)
Cadell, Gilbert L. (Cambridge University).
Ciregna, Albert P. (University of London).
Darby, John P. (Architectural Association).
Earley, J. (University of London).
Ferguson, Charles W. B. (Architectural Association).
Fisk, George M. (McGill University, Montreal).
Gossage, Neil F. (Cambridge University).
Horsburgh, Ernest R. (Liverpool School of Architecture).
Hughes, Henry G. (McGill University, Montreal).
Lambert, Stanley C. G. (Architectural Association).
Maxwell, Herries S. (McGill University, Montreal).
Moore, John E. (Northern Polytechnic).
Peace, Frank N. (Liverpool School of Architecture).
Pullan, Frederic R. (Leeds College of Art).
Sanderson, John K. M. (University of London).
Taylor, Frederick B. (McGill University, Montreal).
Wolever, John K. (McGill University, Montreal).

R.I.B.A. ELECTION OF MEMBERS

The following have been elected to membership of the R.I.B.A. :

As Hon. Corresponding Member (1)

Baldwin, Frank C.

As Fellows (16)

Archibald, R. J.
Bailey, A. G. S.
Bailey, G.
Barman, C.
Bowers, R. S.
Cross, K. M. B.
Follet, S. G.
Greaves, J.
Harrison, E. G. (Mrs.)
Harrison, H. St. J.
Jones, E. D.
Kendall, G. E.
Kewell, J. E.
Messer, Lt.-Col. A. A.
Reid, A. W. D.
Watkin, E. T.

As Associates (53)

Aiton, N. (Miss)
Angles, R. E.
Aylwin, J. N.
Bowden, G. E.
Bower, S. E. D.
Bowring, C. C.
Brown, T.
Caven, C. A.
Cox, W. J. P.
Evans, E. A. E.
Fowles, A. J.
Frizzell, F. G.
Gale, A. H.
Gifford, R. C.
Gillett, M. (Miss)
Goddard, A. N.
Herman, M. E.
Hills, J. W.
Holman, E.
Humphrey, W. E.
Jackson, W. T.
Johnston, A. C.
Kelly, H. L.
Lewis, B. B.
Lynn-Thompson, W.
McLean, R. A.
Madeley, R. G.
Maitland, J.
Marsden, F.
Marshall, T. L.
Meed, H. L.
Millington, C. R.
Mills, E. M. I. (Miss)
Norie, D. M. (Miss)
Oatley, J. W.
Owen, H.
Payton, A. G. R.
Rogers, T. H.
Sartain, S. P.
Saunders, V. C. L.
Schofield, J. A.
Scott, B. (Miss)
Shand, G. S.
Smith, L. B.
Taylor, W. R. H.
Turnbull, J.
Wakeham, P. O. G.
Ward, D. R.
White, E. J.
Wilbond, F. S.
Wilkie, D. A.
Williams, H. D.
Wynne-Thomas, T.

As Licentiates (99)

Ashworth, B.
Ayshford, H.
Baker, H.
Baker, M.
Barker, R. N.
Barrie, A. C.
Bowman, H.
Brown, C. J.
Bye, A.
Cassé, W. C.
Charity, F. W.
Clark, G. G.
Clarson, C. L.
Cook, H.
Corking, J. W.
Cowlishaw, G. H.
Crabtree, E. J.
Crome, J. S.
Culpin, E. G.
Davies, A. T.
Derham, Major J. C.
Dickinson, C.
Eagar, T. R.
Elliott, R.
Frankland, E.
George, G. W. H.
Gilbert, H. W.
Grieves, R. M. H.
Grover, G. F.
Grundy, P. H.
Hamilton, A.
Harpur, J. L.
Harriman, J. T.
Hatfield, S.
Haynes, F. C.
Henson, C. A. E.
Hick, A.
Higginbottom, A. J.
Hill, F.
Hill, T.
Holloway, C. E.
Hoogterp, J. A.
Hopcraft, R. G.
Jackson, J. P.
Johnson, V. L.
Knowles, H.
Lang, E. A.
Langley, F. H.
Leed, J. C.
Lewis, J. N.
Liddle, E. J.
Lowe, R. W.
Macrae, J.
Marshall, P. H.
Maynard, A.
Meadows, F. A.
Middleton, J. E.
Mitchell, G. B.
Moore, A. A. C.
Morgan, C. F.
Moss, H. B.
Newton, S. H.
Osborne, G. J.
Parker, H. H.
Pecorini, W. A.
Pike, M. W.
Platt, H.
Pollard, J.
Pullan, B. S.
Pullen, A.
Rae, T.
Rayner, C. G.
Reid, R. S.
Reynolds, J. J.
Rigby, L.
Rogers, R. A.
Ross, L. H.
Scott, T.
Sexton, G. W. F.
Shaw, E. D. G.
Smith, E. E. D.
Smith, S. W.
Southcombe, J. C.
Stevens, H. J.
Stillman, C. W. M.
Taylor, L. W.
Ternan, A. W. M.
Tilley, P. F.
Vickery, R. M.
Wakely, W. J.
Walsh, J. J.
Ward, F. J.
Watson, G. P. H.
White, J. R.
Wood, W.
Conway, F. R. A.
Duguid, R. G. A.
Gault, H.
O'Neil, G.

MODERN CINEMAS

Under the auspices of the South Wales Institute of Architects (Central Branch) and the Institute of Builders (South Wales Branch), a lecture was given at the Engineers' Institute, Cardiff, by Mr. George Coles, F.R.I.B.A., who spoke on " The Design and Construction of Modern Cinemas." Mr. W. S. Purchon, A.R.I.B.A., presided.

Mr. Coles dealt in a systematic manner with the whole problem of

cinema design and construction, starting with a series of outline plans on which he indicated the various essentials of each scheme. He then proceeded to a consideration of various types of section and explained their relative advantages and disadvantages. He next dealt in turn with the auditorium, entrances, vestibules, the stage and bio-box, and the various services such as heating, ventilating and lighting, and explained how a large number of constructional and other difficulties had been overcome.

In proposing and seconding a vote of thanks, Mr. Percy Thomas, F.R.I.B.A., and Mr. T. Alwyn Lloyd, F.R.I.B.A. (president of the South Wales Institute of Architects), raised a number of points in connection with acoustics, internal decoration, provision for posters and other advertisements on the exterior, and building costs, with which Mr. Coles dealt fully in his reply.

SOUTH WALES ARCHITECTS AT DINNER

Proposing the toast of the "R.I.B.A." at the annual dinner of the South Wales Institute of Architects, Mr. W. J. Williams, M.A., said, with the renaissance of architecture that was being experienced, they were likely to see great changes in town planning and the building of houses. And towards the renaissance the Institute had made material contributions.

Dr. Raymond Unwin, F.R.I.B.A., responding, said he would like to see the time come when it would be considered not the thing for any university to turn out graduates who did not know the difference between a good building and a bad one.

Mr. G. C. Lawrence, F.R.I.B.A., who, also responded, paid a tribute to the great service of the allied societies in promoting the interests of architecture.

Mr. T. Alwyn Lloyd, F.R.I.B.A. (chairman), proposing "The Guests," said the South Wales Institute of Architects celebrated its fortieth birthday last year, and was founded in Cardiff. The Institute endeavoured to play its part in the education of the public no less than the instruction of young architects at its own Welsh School of Architecture, under the able guidance of Mr. Purchon.

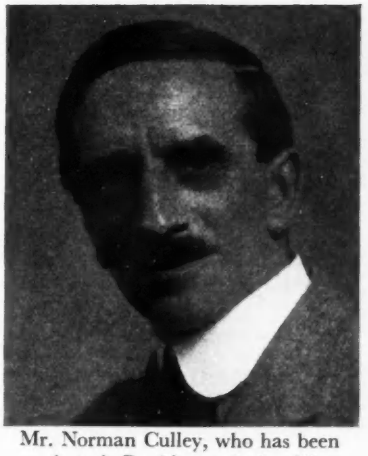
Responses were made by the Lord Mayor of Cardiff (Alderman R. G. Hill Snook), the Mayor of Newport (Councillor Tom Crowther), Messrs. F. J. Thomas, and J. Arthur Smith, F.R.I.B.A.

The Mayor of Newport appealed to the architects to remember that if Britain was to live and expand, then they had to give the workers air to breathe in their homes and factories. They should not concentrate all their art on churches and civic buildings.

WEST YORKSHIRE SOCIETY OF ARCHITECTS

At a general meeting of the above society, held at Bradford on March 19, the officers for the session 1931–32 were elected as follows: President, Mr. Norman Culley, F.R.I.B.A., Huddersfield; vice-presidents, Messrs. J. F. Walsh, F.R.I.B.A. (Halifax), and B. R. Gribbon, F.R.I.B.A. (Leeds); hon. secretary, Mr. Norval R. Paxton A.R.I.B.A. (Leeds).

A lecture was then given by Mr. F. R. Yerbury, HON. A.R.I.B.A., on "Swedish Architecture of Today," during which he explained that Sweden, for its architecture, had up to the beginning of the present century, drawn upon Renaissance models, and, later, on the Romantic styles as typified by the work of William Morris. At the beginning of the present century, however, it had been bitten by the modernist movement,



Mr. Norman Culley, who has been re-elected President of the West Yorkshire Society of Architects.

and since that time most of its principal buildings had followed that style.

Mr. J. C. Proctor, A.R.I.B.A., moved, and Mr. R. J. Edmondson, L.R.I.B.A., seconded the vote of thanks.

BRITISH ARCHITECTURE

"That British architecture is not impressive" was the subject of discussion at a dinner of the Suffolk Association of Architects, held at Ipswich on March 16. Mr. E. T. Johns presided.

Dr. Giuseppe said it seemed to him that the principle of good architecture was to follow certain lines. The trouble with modern architects was that they did not do this but made lines of their own. The first law of an architect should be that the building should serve the purpose for which it was built, but he contended that when looking at many buildings, one never knew for what they were intended. In most of the shopping quarters of London, the buildings gave one the appearance that they were about to tumble forward on their façades. The second law was that buildings should be studied with regard to their surroundings, and as an example of the negation of this he quoted Regent Street, where only two kinds of architecture were missing, an Indian wigwam and an Esquimaux igloo. The third law was that buildings should be of good proportion. Most modern buildings were very ugly-proportioned.

Mr. E. R. Jarrett, A.R.I.B.A., in reply, said that in all the points raised by Dr. Giuseppi the profession had already gone on the lines suggested. He admitted that at the moment British architects did not quite know where they were, but they were learning, and were certainly progressing, towards a style of their own. They were making their own scales and proportions, as well as their own formula, to meet the needs of the present day. He claimed that the modern building was designed to show what it was really built for.

Dr. C. G. Havell pointed out that the great fault of architects was that they worked from plans on flat paper, instead of from models, as was the case with ancient craftsmen.

EDINBURGH ARCHITECTS

At the annual meeting of the Edinburgh Architectural Association the following members were appointed officers for session 1931–32: Mr. R. S. Reid, F.R.I.A.S., president; Messrs. J. A. Arnott, F.R.I.B.A., and J. R. M'Kay, A.R.I.B.A., vice-presidents; Mr. A. Nicol Bruce, secretary and treasurer; Mr. W. G. Walker, auditor; with members of Council as follows: Messrs. Henry F. Kerr, A. Lorne Campbell, Reginald Fairlie, T. B. S. Gibson, E. Auldjo Jamieson, John Jerdan, B. N. H. Orphoot, A. F. Balfour Paul, W. J. Walker Todd, F. C. Mears, Wm. Williamson, John Wilson, L. G. Thomson, Arch. Craig and G. A. Cassells. Messrs. Reid, Arnott, Wilson, Thomson, P. R. M'Laren and C. E. Tweedie were elected as Chapter representatives to the Council of the Royal Incorporation of Architects in Scotland.

FARADAY CENTENARY CELEBRATIONS

Michael Faraday, often described as "the Shakespeare of Research," whose centenary celebrations will be held at the Albert Hall in September, was referred to in a speech by Sir William Bragge, K.B.E., at the annual luncheon of the British Electrical Development Association, held at the Savoy Hotel on Friday last.

Sir William said that the experimental skill and the intuitive judgment of Faraday had made plain the laws of electricity and magnetism, whose development had so affected the whole of the world. He had laid the foundations on which the electro-magnetic

theory had been built, and on those same foundations the Association's own operations were securely based. The central feature of the Albert Hall Exhibition would be a statue of Faraday, with, arrayed at his feet, one of his first experiments, and the actual things he used—a piece of wire, a magnet and a drop of mercury. There would also be on view several exhibits illustrating the uses of electricity, which had been derived from Faraday's simple experiment.

Alderman E. Huntsmen, who presided, remarked that among those present (about 550) were representatives of Belgium, Geneva, France, Holland, Austria and Germany.

MOCK TRIAL AT THE INCORPORATED INSTITUTE OF BRITISH DECORATORS

In a hilarious evening at the Painters' Hall on March 12 the sins of the incompetent decorator—or "muckorator" to give him his official title—were visited upon his head, and Justice took its stern and awful course.

Mr. C. A. Hindley, the President of the I.I.B.D., as the judge, was the picture of severity and cold dignity, while the opposing counsel were ably represented by Mr. Sydney Laughton and Mr. E. F. J. Peregrine. Most of the witnesses had to be seen to be believed, and brilliant character studies were given by Miss Nadine Marsh, Messrs. C. H. Eaton and T. M. Pritchard. Mr. W. C. Sutherland, as a citizen of Oswaldtwistle—"the place Accrington's near"—scored the triumph of the evening. Others who distinguished themselves were Mrs. Grace Lovat Fraser, Mrs. Ettie Hornibrook and Mr. Henry G. Dowling.

A.A. ANNUAL RECEPTION

At the annual reception of the Architectural Association, held at 34 Bedford Square, W.C., on Wednesday last, about 1,000 members and guests were received by the President, Mr. G. Grey Wornum and Mrs. Wornum. Amongst those present were the following:

H.R.H. Prince Eugen of Sweden, H.R.H. Prince Sigvard of Sweden, His Excellency the Swedish Minister and Baroness Palmstierna, Sir Francis and Lady Goodenough, Sir George Humphreys, Mr. Charles Marriott, Major and Mrs. A. A. Longden, Mr. and Mrs. Frank Rutter, Mr. and Mrs. Stanley Hamp, Mr. Eric Aumonier, Mr. and Mrs. A. B. Knapp-Fisher, Mr. and Mrs. C. H. James, Mr. and Mrs. Alfred Bossom, Mr. and Mrs. Howard M. Robertson, Mr. and Mrs. C. Lovett Gill, Mr. and Mrs. L. H. Bucknell, Mr. and Mrs. C. St. J. G. Miller, Mr. and Mrs. L. S. Sullivan, Mr. and Mrs. A. Gilbert Scott, Mr. and Mrs. Joseph Armitage, Mr. Lionel Pearson, Mr. Bo Hellstrom, Mr. and Mrs. Oscar Thorsing, Mr. P. Morley Horder, Mr. and Mrs. F. Winton Newman, Mr. and Mrs. Ahlberg, Dr. and Mrs. Stavenow, Col. Sir Harold Wernher, Mr. Alister MacDonald, Miss Benedicks, Mr. and Mrs. Lundberg, Mr. A. B. Yeates, Mr. and Mrs. Victor Gollancz, Major and Mrs. W. E. Watson, Mr. and Mrs. Darcy Braddell, Mr. Hamilton T. Smith, Mr. and Mrs. T. P. Bennett, Mr. Clough Williams-Ellis, Mr. and Mrs. Elder Duncan, Prof. Gilbert Ledward, Mr. and Mrs. Joseph Emberton, Mr. and Mrs. John Gloag, Mr. R. H. Wilenski, Mr. C. E. Aagaard, Major and Mrs. F. M. Oliphant, Mr. P. H. Jowett, Mr. Gilbert Bayes, Mr. Edward J. Sullivan, Mr. A. S. W. Odelberg, Mr. and Mrs. Walter Gilbert, Mr. and Mrs. R. A. Duncan, Mr. Douglas Tanner.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Housing (Financial Provisions) Act, 1924

ASKED by Sir K. Wood if he would state the numbers of houses completed in agricultural parishes in England and Wales under the Housing (Financial Provisions) Act, 1924, each month since September, 1930, Mr. Greenwood said that they were as follows: October, 1930, 332; November, 1930, 319; December, 1930, 318; January, 1931, 234.

Housing Progress

Mr. Greenwood informed Sir K. Wood that the number of State-assisted houses completed in England and Wales under the various Housing Acts between January 1, 1919, and January 31 last was 984,897, of which 15,492 were completed during the quarter ended December 31, 1930. These figures did not include houses erected by local authorities in replacement of houses demolished under improvement and reconstruction schemes made under legislation passed before 1930.

Sir K. Wood asked the Minister of Health if he would state the number of houses built under the Housing Acts by the various councils in the Metropolitan area during 1930, and the number of houses authorized but not completed for the same year.

Mr. Greenwood said that the following statement contained the desired information:—

Local Authority.	Houses completed during 1930.	Authorized but not completed at Dec. 31, 1930.
London County Council ..	3,446	11,547
Battersea ..	6	6
Bermondsey ..	11	—
Finsbury ..	—	146
Greenwich ..	—	109
Islington ..	107	44
Lambeth ..	8	132
Lewisham ..	—	60
Poplar ..	116	—
St. Pancras ..	39	22
Southwark ..	—	9
Stepney ..	—	3
Wandsworth	—	72

These figures did not include 521 houses erected during the year by the L.C.C., 20 by the Borough Council of Stepney, and 48 by the Borough Council of Hammersmith in replacement of houses demolished under improvement and reconstruction schemes.

Parlour and Non-Parlour Houses

Mr. Shepherd asked the Minister of Health whether he could state the numbers of parlour and non-parlour types of houses authorized to be built to the nearest convenient date; and whether figures could be given of the average total cost of each type, inclusive of land, road-making, etc.

Miss Susan Lawrence said that the Minister regretted that exact information in the form desired was not available, but of 800,672 houses recorded as included in contracts let or certificates issued by, or in direct labour schemes of local authorities, other than the L.C.C., in recent years, approximately 49 per cent. were of parlour type and 51 per cent. of non-parlour type. The average cost of houses of each of these types erected for local authorities during 1930, excluding the cost of land, roads and sewers, was £404 and £340 respectively. Precise figures as to the average total cost, including those items, were not available, but on the average of all houses this addition amounted to about £75.

Slum Clearance Schemes

Mr. O'Connor asked how many local authorities had failed to prepare a slum-clearance scheme and a five-year housing policy; and what proportion this represented of all local authorities.

Mr. Greenwood said that programmes for the next five years had been received from 268 of the 290 urban authorities representing populations over 20,000 who were required by the Act of 1930 to submit such programmes. 183 of these definitely contemplated the provision of houses for the replacement of unfit houses, and the total number of houses to be so provided in the five years was 103,680.

Building Bylaws

Mr. P. Oliver asked the Minister of Health whether any code of building bylaws relating to the level, width, and construction of new streets had been presented under Section 12 (1) of the Housing Act, 1923; and, if so, how many local authorities had passed a resolution adopting such code.

Mr. Greenwood said the answer was in the negative, but almost every local authority which had in force in 1923 bylaws with respect to new streets had now brought them up to date by the ordinary procedure of itself adopting proposals upon modern lines. This had been found more convenient than procedure under the Housing Act of 1923.

LAW REPORT

DAMP IN NEW HOUSE

Miller v. *Cannon Hill Estates, Ltd. King's Bench Divisional Court. Before Justices Swift and Macnaghten*

THIS action concerned allegations as to damp in a new house.

The defendants, the Cannon Hill Estates, Ltd., contractors and builders, appealed against a judgment for £91 7s. damages, in the Mayor's and City of London Court, in favour of the plaintiff, Mr. W. H. Miller, who alleged that a house which he purchased from the defendants at Cannon Close, Raynes Park, became damp during the winter of 1929.

Mr. W. H. Moresby, for the appellants, said they built a house for the respondent for £915, and the purchase was completed in August, 1928. Later, the respondent alleged that the house was not habitable through damp. The appellants denied the alleged defects put forward by the respondent and set up that any dampness was due solely to the abnormally wet weather and the exposed position of the premises, for which they were not legally liable. Appellants also said that respondent inspected the house and purchased it on his own judgment.

Counsel said the grounds of the appeal were that the judge of the Mayor's Court was wrong in admitting evidence as to the existence of an alleged agreement or warranty, outside the contract itself, that the house was to be weatherproof, and that there was no intention to give such warranty.

Counsel submitted that there was no contract expressed or implied that the house was or would be fit for habitation. The respondent saw the show house, and if the house erected was like it, according to the specifications and bylaws, the respondent could not succeed. The case was of importance as the appellants had erected 600 houses on the estate. His case was that the house was built to satisfy the requirements of the local surveyor.

Sir Thomas Hughes, K.C., for the respondent, supported the judgment of the court below on the ground that there was an express warranty or contract, collateral with the agreement to erect a house which was to be reasonably fit for habitation, with materials and workmanship of the best. In the alternative he argued that that contract was implied.

The court dismissed the appeal and refused leave to appeal to the Court of Appeal.

Mr. Justice Swift, in the course of his judgment, reviewed the case argued for the appellants and the respondent, and said the respondent and his wife asked that the house should be built of good material and they were assured that the house was of good material. That assurance was fortified by a statement to the effect that the local surveyor supervised the work and that it was impossible to deceive him. His lordship's view was that that language was clearly capable of being held by the jury, who tried the action, as amounting to a warranty, such as was pleaded. The jury, in the circumstances, were entitled to find that there was a collateral bargain that the house was to be built of proper materials and in a workmanlike manner. If a person purchased an empty unfurnished house there was no implied contract that it was to be necessarily fit for human habitation, but the position was different if he contracted with a builder to erect a house for him, or if he agreed to buy a house in course of erection. The whole object was that a house would be erected in which the purchaser could live straight away. There was an implication of law that the house should be reasonably fit for human habitation, and the judge of the Mayor's Court had acted rightly in entering the judgment he did, and it ought not to be disturbed.

Mr. Justice Macnaghten agreed.

COMPETITIONS OPEN

April 1.—Sending-in day. Development of the uses of aluminium and its alloys, for the International Aluminium Bureau. Two premiums of 25,000 francs. Conditions from the Bureau International de l'Aluminium, 23 bis, Rue de Balzac, Paris, France.

April 11.—Sending-in day. Garage for the temporary accommodation of motor vehicles, organized by management of the Building Trades Exhibition, Manchester (April 14 to April 25). Assessors: H. S. Fairhurst, F.R.I.B.A., John Swarbrick, F.R.I.B.A., and Professor A. C. Dickie, M.A., A.R.I.B.A. Premiums: £100, £30 and £20. Particulars from Provincial Exhibitions, Ltd., City Hall. Deansgate, Manchester.

April 18.—Sending-in day. Central Municipal Bank and Head Offices, Broad Street, Birmingham. Assessor: Sir Reginald Blomfield, R.A., F.R.I.B.A. Premiums: £400, £300, and £150. Conditions from Herbert H. Humphries, City Engineer and Surveyor, Council House, Birmingham. (Deposit £3 3s.)

April 30.—Sending-in day. Hospital for Infectious Diseases, Coventry, for the Coventry Corporation. Assessor: E. Stanley Hall, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

June 16.—Sending-in day. (Last day for conditions was February 25.) Offices for the Ingham Infirmary, South Shields. Limited to architects within the area of the Northern Architectural Association. Assessor: George Reavell, O.B.E., F.R.I.B.A. Premiums: £250, £100 and £50. Conditions were obtainable from John Potter, Secretary, Ingham Infirmary, South Shields. (Deposit £2 2s.)

June 26.—Sending-in day. Offices for the City of Leicester Corporation, Charles Street, Leicester. Assessor: E. Berry Webber, A.R.I.B.A. Premiums: £300, £200 and £100. Conditions from A. T. Gooseman, Engineer and Surveyor, Town Hall, Leicester. (Deposit £2 2s.)

THE ARCHITECTS' DIARY

WEDNESDAY, MARCH 25

LONDON CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row W.C.1. "German Mediæval Architecture." By Sir Banister Fletcher, F.R.I.B.A. **6 p.m.**

WEST YORKSHIRE SOCIETY OF ARCHITECTS, 62 Woodhouse Lane, Leeds. Students' Debate: "That Architecture is of vital importance to the Layman." Affirmative: J. A. Naylor. Negative: G. B. Stickney. **7 p.m.**

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Kent Coalfields." By Professor Patrick Abercrombie, M.A., F.R.I.B.A. Chairman: The Rt. Hon. Lord Cornwallis, C.B.E. **8 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. "Recent River-Wall Construction on the Thames." By J. M. Liddell, B.SC. Chairman: E. H. Tabor, M.INST.C.E.

BRITISH WOOD PRESERVING ASSOCIATION. At 29 Lincoln's Inn Fields, W.C.2. Discussion on "The Preservative Treatment of Timber." **6.30 p.m.**

THURSDAY, MARCH 26

DESIGN AND INDUSTRIES ASSOCIATION. Monthly Luncheon, to be held at the Florence Restaurant, Rupert Street, W.1. Subject for discussion: "Design as a Factor in British Trade." The Retailer's View: David L. Webster. The Designer's View: R. P. Gossop. Chairman: Holbrook Jackson. 1 to 2.30 p.m. **1 p.m.**

SOUTH-EASTERN SOCIETY OF ARCHITECTS. Croydon Chapter. At the Town Hall, Croydon. Annual General Meeting, followed by "Modern European Architecture." By F. R. Yerbury, HON. A.R.I.B.A. **8 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "The Erection of Sydney Harbour Bridge." By J. Stuart Lewis, M.I.STRUCT.E. **6.30 p.m.**

LONDON SOCIETY. Annual meeting, to be held at the Clothworkers' Hall, 41 Mincing Lane, E.C.3. Tea, 4 p.m. **4.30 p.m.**

INSTITUTE OF FUEL. At the Institute of Engineers, Park Place, Cardiff. "Local Generation of Electrical Power *plus* the Grid." By Major E. Ivor David, M.I.E.E. **6 p.m.**

INSTITUTION OF ELECTRICAL ENGINEERS, Savoy Place, Victoria Embankment, W.C.2. "The Electrical Heating of Buildings." By Ronald Grierson, M.I.E.E. **6 p.m.**

FRIDAY, MARCH 27

ROYAL ACADEMY SUMMER EXHIBITION, Burlington House, S.W.1. Day for submission of watercolours, pastels, miniatures, black-and-white drawings, engravings and architectural drawings, 8 a.m. to 10 p.m. **8 a.m.**

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS, 1 Wilbraham Place, S.W.1. "English Interior Decoration." By T. Braddock. **7 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Western Counties Branch. At the Merchant Venturers' Technical College, Unity Street, Bristol. "Testing of Materials." By W. E. Francis, M.SC. Midland Counties Branch. At the Chamber of Commerce Buildings, New Street, Birmingham. "The Erection of Sydney Harbour Bridge." By J. Stuart Lewis, M.I.STRUCT.E. **7 p.m.**

SATURDAY, MARCH 28

Sunrise, 5.44 a.m. Sunset, 6.27 p.m.

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Last of six non-technical lectures on Present-day Architecture. "Architecture—the Social Art." By R. A. Duncan, A.R.I.B.A. **3 p.m.**

MONDAY, MARCH 30

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Exhibition of domestic architecture, interiors and furnishings. Until April 24. **10 a.m.**

SATURDAY, APRIL 4

Sunrise, 5.35 a.m. Sunset 6.33 p.m.

MONDAY, APRIL 6

Easter Bank Holiday.

WEDNESDAY, APRIL 8

INSTITUTION OF STRUCTURAL ENGINEERS. Lancashire and Cheshire Branch. Annual General Meeting to be held at the College of Technology, Manchester. **7 p.m.**

THURSDAY, APRIL 9

SHEFFIELD, SOUTH YORKSHIRE AND DISTRICT SOCIETY OF ARCHITECTS AND SURVEYORS. Annual General Meeting, to be held at the University, Sheffield. **6.15 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "The Structural Engineer and his Vocational Training." By F. E. Drury, M.SC. 6.30 p.m. Yorkshire Branch. At the Metropole Hotel, Leeds. "The Erection of Sydney Harbour Bridge." By J. Stuart Lewis, M.I.STRUCT.E. 7 p.m. **6.30 p.m.**

FRIDAY, APRIL 10

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION, The Castle, Winchester. Council Meeting. 3 p.m. General Meeting. 6.15 p.m. **3 p.m.**

SATURDAY, APRIL 11

Sunrise, 5.17 a.m. Sunset, 6.15 p.m.

MONDAY, APRIL 13

R.I.B.A., 9 Conduit Street, W.1. "Modern Flats." By G. Grey Wornum, F.R.I.B.A. **8.30 p.m.**

OBITUARY

ARTHUR J. MURGATROYD

WE regret to record the death of Mr. Arthur James Murgatroyd, F.R.I.B.A., at his home at Buxton, on Tuesday of last week.

The head of the firm of Mills and Murgatroyd, he was responsible for the erection of many banks in the north-west of England; warehouses and offices in Manchester and neighbourhood; private houses in Lancashire, Cheshire and Derbyshire; and a number of buildings for the Manchester Board of Guardians. One of his recent buildings was the Limbert Nurses' Home, near Manchester, for the Guardians of the Manchester Union, illustrated in THE ARCHITECTS' JOURNAL for July 2, 1930. Elected to the Fellowship of the R.I.B.A. in 1925, his loss will be deeply felt by members of the architectural profession, especially in the Manchester district.

SIDNEY FLAVEL

We regret to record the death of Mr. Sidney Flavel, chairman of Messrs. Sidney Flavel & Co., Ltd., which occurred on March 16.

Mr. Flavel, who was eighty-four years of age, was the great-grandson of the founder of the firm, and started his career with the family concern in 1867. He devoted a great portion of his life to public affairs, being appointed Mayor six times, Justice of the Peace in 1876, Alderman in 1884, and Hon. Freeman in 1910, of the Borough of Royal Leamington Spa; also Justice of the Peace in 1896, and Alderman in 1889, of the county of Warwick.

He was interested in many charities and a member of the Church of England, being churchwarden of Leamington for over forty years. The business will be carried on by his son and grandson.

TRADE NOTES

The conversion of the empty shell of Dorland House, Regent Street, into suitable premises for the Exhibition of Swedish Industrial Art was a problem which confronted Mr. Hakon Ahlberg, who had a very short time at his disposal for the completion of the work. Bare floors had to be subdivided into rooms and compartments suitable for exhibition purposes and for decoration. The material used was the new Treetex insulating board, which can be seen on all walls, partitions and stands, and also on parts of the ceiling. In the room containing the Crown Prince's furniture, the windows have been built in with Treetex. In this room a fireplace has been built with the same material, and is especially interesting as an example of the versatility of the board. It has also been used for the construction of doors. We understand the board is light and easy to handle, and that the work was carried out in record time. The same board, which has two distinct surfaces, has been employed for the construction of the Hush-Hush House, designed by Mr. A. Trystan Edwards for the Ideal Homes Exhibition. It has also been used throughout Stanmore House and Lovell's Maplescombe House. The head-quarters of Treetex are at 421–4 Australia House, Strand, W.C.2.

*

The exhibits of the Anglo-Colonial Trading Corporation, Ltd., at the Building Trades Exhibition, to be held at Manchester from April 14 to 25, will include Donnacona insulating and building board, Riverbank eelgrass building blanket, sheetrock gypsum wall and ceiling board, and slates and tiles. Donnacona insulating and building board is made in three thicknesses, ½ in., 1 in. and 2 ins.

It is claimed to be vermin-proof and to resist rot, water and damp. It can be sawn like timber, and is easily fixed and decorated. Donnacona possesses two distinct surfaces—one rough cast, giving a textured finish when left undecorated, and one smooth, which can of course be papered. The rough side is also claimed to form an excellent key for plaster and cement. Riverbank building blanket, which is also a British product, is claimed to be a most efficient material for the absorption of sound, and to afford protection from heat and cold. It is made from eelgrass (a seaweed which grows on the coasts of Nova Scotia) sandwiched between strong Kraft paper. Sheetrock is a fire-resisting board with a flat, true surface. It is claimed not to warp, and to be a most satisfactory substitute for lath and plaster.

Among the slates to be shown are brands from the Fumay, Angers and Savoie quarries.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL by permission of the Controller of H.M. Stationery Office. All inquiries concerning patents and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated, readers should apply to the Patent Office, 25 Southampton Buildings, W.C.2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

6409. Baines, J. Concrete building slab. March 2.

6410. Baines, J. Building panel for roofs, walls, etc. March 2.

6771. Bacon, F. Roofing sheets. March 4.

6840. Bergersen, E. G. Materials for construction of buildings, etc. March 5.

6886. Akerman, W. S. Roof constructions. March 5.

SPECIFICATION PUBLISHED

344007. Freyssinet, E. Obtaining light structural elements of great strength.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors, specialists and sub-contractors for the buildings illustrated in this issue :

Violet Melchett Infant Welfare Centre, Chelsea (pages 440–444). General contractors, F. G. Minter, Ltd. Joint consulting engineers, Lt.-Colonel J. D. K. Restler, and Major J. Kidston Allsop. Sub-contractors : Blockleys, Ltd., bricks; Diespeker, Ltd., floors and terrazzo ; Lyne and Sons, Ltd., lynocino and terrazzo work; Roberts Adlard & Co., roofing tiles; John Blaikie and Sons, Ltd., plumbing; Leeds Fireclay Co., Ltd., sanitary fittings; G. E. Taylor & Co., electrical work; The General Electric Co., Ltd., electrical fittings; Mr. Bloye, letter carving and decorative fibrous plasterwork; F. G. Minter (Decorations), Ltd., decorations and cork carpet; Naylor Bros., distemper and paint; Henry Hope and Sons, Ltd., door furniture; Baker Perkins, Ltd., laundry equipment; Lyne and Sons, Ltd., courtyard paving; James Slater & Co., Ltd., gas incinerator; Bratt Colbran & Co., fireplaces; Brightside Foundry and Engineering Co., Ltd., heating, hot water supply, and ventilation; " Prior " Oil Burner Co., Ltd., " Prior " oil firing system; Binns and Speight, Ltd., steel sectional boilers and storage calorifiers.

Offices, laboratories, etc., for Oppenheimer, Son & Co., Ltd., 43–55 Clapham Road, S.W.9 (pages 445–447). General contractors, Holliday and Greenwood, Ltd., who were also responsible for the demolition, excavation, foundations, plumbing, concrete, joinery, plaster and gas fitting. Sub-contractors : Ragusa Asphalte Paving Co., Ltd., dampcourses and asphalt; J. Dewar, steelwork; Baxter Elliott, artificial stone; Doulton & Co., Ltd., terra-cotta; J. H. Sankey and Son, Ltd., Fosalsil (Moler) blocks; Pilkington Bros., Ltd., " Vita " sheet and arctic glass; Paragon Glazing Co., patent glazing; Hollis Bros. & Co., Ltd., wood-block flooring; Comyn Ching & Co., Ltd., central heating; Davey Paxman & Co., Ltd., boilers; Clyde Oil Fuel System, Ltd., oil-burning plant; Troughton and Young, Ltd., electric wiring and electric light fixtures; A. Emanuel and Sons, Ltd., and Doulton & Co., Ltd., sanitary fittings; A. Jones Lock Co., Ltd., door furniture; Hoskins and Sewell, Ltd., casements; Haywards, Ltd., folding gates, Dreadnought fireproof doors, and iron staircases; Haywards, Ltd., Morris-Singer Co., and Norris & Co., metalwork; Art Pavements and Decorations, Ltd., marble; Smith, Major and Stevens, Ltd., lifts; Herbert Morris, Ltd., overhead runway.

The builders and owners of Nos. 39–45 Finsbury Square, E.C., the main façade and the water-storage system of which were illustrated and described in our last issue, are Messrs. Howell J. Williams, Ltd.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The Surrey Education Committee has approved a revised estimate of £16,530, for the erection of a school at High View, BEDDINGTON.

The City of London Corporation has granted an application by Messrs. Campbell Jones, Sons and Smithers, architects, on behalf of the Phœnix Assurance Co., Ltd., for consent to the erection of a building abutting upon Abchurch Lane, Sherborne Lane and Abchurch Yard, CITY, E.C.

Sketch plans prepared by the Surrey County architects for new secondary schools for both boys and girls at COULSDON, for boys at Merton, and for girls at Kingston-upon-Thames, have been submitted to the Board of Education for approval.

The Ministry of Health has held an inquiry into the proposal of the FINSBURY B.C. to erect baths and washhouses, at a cost of £72,850.

Plans passed by FULHAM B.C. : 110 flats and twenty-three shops, Parkview Court, for Mr. J. A. Mactaggart (Western Heritable Investment Co., Ltd.); premises, Stevenage Road, for Redline Motor Spirit Co., Ltd.; buildings, rear Wesleyan Church, Fulham Road, for Mr. J. Ross Wills; alterations and additions, Albert Yard, Wandsworth Bridge Road, for Messrs. W. J. Marston and Son.

Plans passed at LEWISHAM : House, Bromley Road, Catford, for Mr. G. Tryhorn; garages, Bromley Hill, for Mr. E. Bates; houses, Cliffview Road, for Mr. A. McDougall; additions, 110 High Street, Sydenham, for Mr. E. C. Christmas; shops, Westerley Crescent, for Mr. E. A. Bawcutt.

The Surrey Education Committee is to erect a school for 384 pupils in Ridge Road, SUTTON.

SOUTHERN COUNTIES

The BOURNEMOUTH Corporation has obtained sanction for a loan of £22,000 for the erection of a new council chamber and additional offices.

The BOURNEMOUTH Corporation has obtained sanction to borrow £6,700 for the erection of a branch library at Charminster.

Plans passed at BOURNEMOUTH : Shops and flats, Curzon Road, for Mr. C. V. Miller; shops, Wimborne Road, for Mr. G. Jones; conversion into flats, 235 Capstone Road, for Mr. Drake; alterations and additions, 14 and 16 Southbourne Grove, for Messrs. F. W. Woolworth & Co., Ltd.; alterations to store, Pine Road, for Mr. R. Jessop; alterations, Messrs. Arthurs, Ltd., Old Christchurch Road, for Mr. G. Butler; thirty-two houses, Iford Lane, for Mr. A. Webb; alterations, Bryanstone Works, Upper Norwich Road, for Mr. G. F. Jordan; two houses, Priory View Road, for Mr. A. Vine; three houses, Granville Road, for Messrs. A. J. Abbott and Son; two houses, Saxonbury Road, for Mr. M. S. Parsons; shops, offices, and flats, Westover Road, for Mr. R. J. M. Nabney; alterations, London Hotel, Commercial Road, for Messrs. Brickwood, Ltd.

A building scheme has been initiated by the Governing Body of Merton College, Oxford, on land on the KINGSTON by-pass road.

Plans passed at NORTHFLEET : House, Watling Street, for Mrs. Juniper; house, Lewis Road, for Mr. K. Prior; seven houses, Perry Street Road, for Mr. J. Clements.

Mr. H. Coussens has prepared plans for the erection of a cinema at TUNBRIDGE WELLS.

MIDLAND COUNTIES

The Notts. Education Committee is to erect a semi-permanent school for 500 pupils at ANNESLEY WOODHOUSE.

Plans passed at BEDFORD : Two houses, South Ville Road, for Messrs. E. H. C. Inskip and Son; additions, 60 Spencer Road, for Messrs. Usher and Anthony; two shops, Newnham Street, for Mr. W. B. Stonebridge; two houses, Elstow Road, for Messrs. Valentine and Ashby; extensions to bakery, Midland Road, for the Bedford Co-operative Society; three houses, Ouseland Road, for Messrs. E. H. C. Inskip and Son.

The Notts. Education Committee is to provide a temporary school in Glebe Street, BEESTON, for 200 children.

The DUDLEY Corporation is to proceed with the clearance of the New Hall and Birmingham Streets slum areas.

The Managers of St. Patrick's R.C. School are to erect a school for 260 children in Sneighton Dale, NOTTINGHAM.

The NOTTINGHAM Education Committee is to erect a central school for 520 girls on the Rosehill Farm estate.

The SHREWSBURY Corporation is to provide new waterworks at Shelton and a reservoir at Copthorne, at an estimated cost of £115,000.

The SHREWSBURY Corporation recommends a scheme for the erection of 400 houses, at a cost of £160,000.

The Notts. Education Committee is to erect a school for 400 pupils in Henning Lane, SUTTON-IN-ASHFIELD.

The WALSALL Corporation recommends the erection of fifty houses for special cases, and proposes to commence immediately the erection of twenty on the Field Road.

THE WOLVERHAMPTON Corporation recommends the purchase of a housing site at Bushberry, for the erection of 184 houses.

The Notts. Education Committee has obtained sanction to borrow £11,250 for the erection of a new council school at Manton, WORKSOP.

NORTHERN COUNTIES

The BACUP Corporation has passed revised plans for the erection of a cinema in Burnley Road for the Bacup and Rossendale Land and Building Co.

The West Riding Education Committee is to erect a senior school at BAILDON, at an estimated cost of £16,050.

The BLACKBURN Corporation has passed plans for the erection of a cinema in Penny Street.

The Board of Education has approved plans of the BLYTH Education Committee for the erection of a central school.

The BRADFORD Corporation has passed plans for the erection of forty-eight single-room dwellings for aged persons, caretaker's house and baths, on the Bierley housing estate, at a cost of £7,675.

The CHESHIRE Education Committee has approved plans for the erection of an elementary school at Runcorn, at a cost of £40,000.

The West Riding Education Committee is to erect a special subjects centre in Station Road, CONISBOROUGH.

The West Riding Education Committee has purchased a site at CROFTON for the erection of an elementary school.

The DONCASTER Corporation is to erect a bus garage at Intake, at a cost of £30,000.

The West Riding Education Committee has purchased a site at EARBY for the erection of a junior school.

The Lancashire Education Committee has purchased a site at FARRINGTON, for the erection of a junior school.

The HULL Corporation has purchased twelve acres of land at Anlaby Park Road for a housing site.

The HULL Corporation has obtained sanction for a loan of £50,000 for electricity showrooms and offices.

Plans passed at HULL : Two houses, Waldegrave Avenue, for Messrs. Simmonite, Curtis and Holtby; six houses, Waldegrave Avenue, for Mr. W. H. Dowell; eight houses, Hall Road, for Mr. E. Mowforth; forty houses, Kirklands Road, for Mr. H. Johnson; four houses, Allderidge Avenue, for Mr. C. Wray; two houses, Willerby Road, for Mr. J. H. Vickerman; four houses, Willerby Road, for Mr. R. Cleminshaw; eighteen houses, off Goddard Avenue, for Mr. A. Johnson; seven houses, Spring Bank, for Mr. J. S. Torr; eight houses, Willerby Road, for Mr. J. H. Vickerman; 116 houses, new estate off Endyke Lane, for Messrs. Trigg and Barnett; house, hotel and garage, "Grapes" Hotel, Brook Street, and Mill Street, for Moor's and Robson's Breweries, Ltd.; alterations and additions, 42 and 43 Whitefriargate, for Messrs. Marks and Spencer, Ltd.

The HULL Corporation has passed plans for the construction of a bridge over the river Hull, in connection with the ring road.

The West Riding Education Committee is to erect a school to accommodate 640 children at ILKLEY, at an estimated cost of £28,050.

The LEEDS Corporation has approved the erection of ninety-one non-parlour houses for the rehousing of persons displaced by street improvement schemes.

The LEEDS Corporation has voted £392,045 on street improvements and £382,850 on development and housing for the year.

The LEEDS Education Committee has obtained sanction to borrow £19,353 for the erection of the Potternewton Council school.

The West Riding Education Committee is to erect a mining institute at MEXBOROUGH.

The Ministry of Health has held an inquiry into the application of the NANTWICH R.D.C. for sanction to borrow £128,500 for waterworks.

Plans have been prepared by the West Riding Education Committee for the erection of a school for 600 pupils on a site in Harewood Lane, NORTH ELMSALL.

The OLDHAM Corporation is purchasing plots of land in partially developed streets in connection with proposals for the erection of houses for the working classes.

Plans passed at ROTHERHAM : Two houses, Wickersley Road, for Messrs. S. Elmore and Sons; additions to office, Forge Lane, for the Rotherham Forge and Rolling Mills, Ltd.; branch stores, Badsley Moor Lane, for the Rotherham Co-operative Society, Ltd.

The Wakefield Education Committee is to consider the provision of an open-air school at SNAPETHORPE.

The SOUTH SHIELDS Education Committee is to provide a new high school for boys at a cost of £30,800, and a new secondary school for girls, at a cost of £39,600.

The SOUTH SHIELDS Corporation is negotiating for sites for the erection of 316 houses.

The SOUTH SHIELDS Corporation is to erect sixty-eight houses on the Stanley Terrace housing site.

The West Riding Education Committee is to erect an elementary school for 640 children at WATH.

The WIGAN Corporation is seeking sanction for a loan of £31,000 for the erection of public baths.

WALES

The SWANSEA Corporation is to erect another 100 houses on the Townhill estate, by direct labour.

SCOTLAND

The Municipal Transport Committee of the GLASGOW Corporation is to extend the Parkhead depot to make suitable accommodation for eighty buses, at an estimated cost of £10,000.

Messrs. John Lawrence (Glasgow), Ltd., are to develop a building estate at Cowdenhill, GLASGOW.

The GLASGOW Corporation has approved a layout of the ground at Carntyne showing 904 houses, 532 tenement houses for rehousing purposes, and 372 intermediate houses of the flatted type.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0¾
A_1	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11¼
A_1	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0¾
B_2	Aylesbury ..	S. Counties	1 3	11¼
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0¾
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0¾
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0¾
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1¼
A_2	Bewdley ..	Mid. Counties	1 5½	1 1¼
B_2	Bicester ..	Mid. Counties	1 3	11¼
	Birkenhead	N.W. Counties	*1 8½	1 3¼
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W.Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11¾
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0¾
A_2	Bournemouth	S. Counties	1 5	1 0¾
B_2	Bovey Tracey	S.W. Counties	1 3½	11¾
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1¼
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11¾
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0¾
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11¼
A_2	Bromsgrove	Mid. Counties	1 5½	1 1¼
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11¾
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0¾
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11¾
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11¾
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank ..	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0¾
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0¾
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0¾
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1¼
A_2	Cumberland	N.W. Counties	1 5	1 0¾
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11¾
A_2	Denbigh ..	N.W. Counties	1 5	1 0¾
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11¾
A_2	Driffield ..	Yorkshire	1 5	1 0¾
A_2	Droitwich ..	Mid. Counties	1 5½	1 1¼
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0¾
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1¼
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0¾
A_2	Filey ..	Yorkshire	1 5	1 0¾
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11¾
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11¾
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1¼
A_2	Goole ..	Yorkshire	1 5½	1 1¼
A_2	Gosport ..	S. Counties	1 5	1 0¾
A_2	Grantham ..	Mid. Counties	1 5	1 0¾
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11¾
A_2	Hatfield ..	S. Counties	1 5	1 0¾
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0¾
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0¾
B_2	Isle of Wight	S. Counties	1 3	11¼
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1¼
A_2	Kidderminster	Mid. Counties	1 5½	1 1¼
B_2	King's Lynn	E. Counties	1 3½	11¾
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1¼
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11¼
A_2	Lichfield ..	Mid. Counties	1 5½	1 1¼
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3¼
A_2	Llandudno	N.W. Counties	1 5	1 0¾
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2¾
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0¾
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0¾
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0¾
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1¼
B_2	Minehead ..	S.W. Counties	1 3½	11¾
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11¾
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1¼
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1¼
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0¾
A_2	Oldham ..	N.W. Counties	1 5½	1 1¼
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1¼
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11¼
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1¼
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0¾
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0¾
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0¾
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0¾
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0¾
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1¼
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11¼
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1¼
A_2	Skipton ..	Yorkshire	1 5½	1 1¼
A_2	Slough ..	S. Counties	1 5	1 0¾
A_2	Solihull ..	Mid. Counties	1 5½	1 1¼
A_2	South'pton	S. Counties	1 5	1 0¾
A_2	Southend-on-Sea	E. Counties	1 5½	1 1¼
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1¼
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0¾
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0¾
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1¼
A_2	Wellingborough	Mid. Counties	1 5½	1 1¼
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1¼
A_2	Whitby ..	Yorkshire	1 5½	1 1¼
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0¾
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1¼
A_2	Worksop ..	Yorkshire	1 5	1 0¾
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0¾
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11¾
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . per hour	1 8
Carpenter . . . . ,,	1 8
Joiner . . . . ,,	1 8
Machinist . . . . ,,	1 9
Mason (Banker) . . . ,,	1 8
,, (Fixer) . . . ,,	1 9
Plumber . . . . ,,	1 8
Painter . . . . ,,	1 7
Paperhanger . . . ,,	1 8
Glazier . . . . ,,	1 8
Slater . . . . ,,	1 8
Scaffolder . . . . ,,	1 4
Timberman . . . . ,,	1 4
Navvy . . . . ,,	1 3
General Labourer . . . ,,	1 3
Lorryman . . . . ,,	1 5½
Crane Drivers . . . ,,	1 7
Watchman . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . ,,	2 10 6
Hydrated Lime . . . ,,	2 16 0
Portland Cement . . . ,,	2 6 0
Ferro-crete . . . ,,	2 13 6
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . . ,,	10 0
Building Sand . . . ,,	10 6
Washed Sand . . . ,,	11 6
2" Broken Brick . . . ,,	9 6
¾" ,, ,, . . . ,,	12 6
Pan Breeze . . . ,,	6 6
Coke Breeze . . . ,,	8 9

BRICKLAYER

	£ s. d.
Flettons . . . per M.	3 1 6
Grooved do. . . . ,,	3 3 6
Stocks, 1st Quality . . ,,	4 18 6
,, 2nd ,, . . ,,	4 12 6
Blue Bricks, Pressed . . ,,	9 18 0
,, Wirecuts . . ,,	8 16 0
,, Brindles . . ,,	8 0 0
,, Bullnose . . ,,	10 8 0
Red Sand-faced Facings . ,,	7 11 0
Red Rubbers for Arches . ,,	15 0 0
Multicoloured Facings . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . ,,	21 10 0
Headers . . . ,,	21 0 0
Bullnose . . . ,,	28 0 0
Double Stretchers . . ,,	30 0 0
Double Headers . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . ,,	6 3	7 2
Rest bends . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¾" Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers . . ,,	5 6	7 9
Yard gullies . . ,,	9 6	11 6
Interceptors . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . ,,	5	—

MASON

The following d/d F.O.R. at Nine Elms:	s. d.
Portland stone, Whitbed . . F.C.	4 6
,, ,, Basebed . . ,,	4 9
Bath stone . . . ,,	2 11
York stone . . . ,,	6 9
,, Sawn templates . . ,,	7 6
,, Paving, 2" . . F.S.	1 8
,, ,, 3" . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . ,,	17 0 0
18" × 9" Ladies . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20"× 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . ,,	10
Nails, compo . . . lb.	4
,, copper . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . as 1" F.S.	9
Deal, Joiner's, . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . ,, ,,	4
Teak, Moulmein . . ,, ,,	1 3
,, Burma . . ,, ,,	1 2
Walnut, American . . ,, ,,	2 3
,, French . . ,, ,,	2 3
Whitewood, American . ,, ,,	1 1
Deal floorings, ¾" . . . Sq.	1 1 0
,, 1" . . . ,,	1 3 6
,, 1¼" . . . ,,	1 5 6
,, 1½" . . . ,,	1 11 0
,, 1¾" . . . ,,	1 15 0
Deal matchings, ¾" . . ,,	16 0
,, 1" . . ,,	17 6
Rough boarding, ¾" . . ,,	1 6 0
,, 1" . . ,,	1 10 0
,, 1½" . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	⅜"			½"			⅝"			¾"		
Qualities	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	½"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket union . . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58⅓	,, water .	45
Steam . . .	55	,, steam .	40

FITTINGS.

Gas . . .	47½	Galvanized gas .	37½
Water . . .	42½	,, water .	32½
Steam . . .	37½	,, steam .	27½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ¾" . . . ,,	10 0
,, ,, ⅞" . . . ,,	9 9
,, ,, 1" . . . ,,	9 6
,, ,, 1⅛" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1⅜" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0

Cast-iron rain-water pipes of ordinary thickness metal . F.R.	3" s. d. 7	4" s. d. 10
Shoes . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . ,,	3 3	4 6
Bends . . . ,,	2 9	4 0
,, with access door . ,,	—	6 9
Heads . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6
Half-round rain-water gutters of ordinary thickness metal . F.R.	5	6
Stop ends . . . each	6	7
Angles . . . ,,	1 7	1 11
Obtuse angles . . ,,	2 0	2 6
Outlets . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	23 0
,, drawn pipes . . . ,,	23 6
,, soil pipe . . . ,,	26 6
,, scrap . . . ,,	13 0
Solder, plumbers' . . . lb.	1 0
,, fine do. . . . ,,	1 4
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.		s. d.
Sheet glass, 21 oz. . . F.S.			3½
,, ,, 26 oz. . . ,,			4½
Arctic glass . . . ,,			5
Cathedral glass . . ,,			6
Hartley's rough rolled . ,,			9
Do. wired plate . . ,,			1 3
¼" Polished plate, n/e 1 . ,,	1 0	to	1 3
,, ,, 2 . ,,	1 2	,,	1 7
,, ,, 3 . ,,	1 7	,,	2 5
,, ,, 4 . ,,	2 1	,,	2 11
,, ,, 6 . ,,	2 3	,,	3 2
,, ,, 8 . ,,	2 6	,,	3 6
,, ,, 12 . ,,	2 9	,,	3 8
,, ,, 20 . ,,	3 0	,,	3 11
,, ,, 45 . ,,	3 3	,,	4 1
,, ,, 65 . ,,	3 7	,,	4 6
,, ,, 90 . ,,	3 10	,,	4 9
,, ,, 100 . ,,	4 0	,,	5 0
Vita glass, sheet, n/e 1 . ,,			1 0
,, ,, ,, 2 . ,,			1 3
,, ,, ,, over 2 . ,,			1 9
,, ,, plate, n/e 1 . ,,			1 6
,, ,, ,, 2 . ,,			3 0
,, ,, ,, 5 . ,,			4 0
,, ,, ,, 7 . ,,			5 0
,, ,, ,, 15 . ,,			6 0
,, ,, ,,over 15 . ,,			7 6
Putty, linseed oil . . lb			3

PAINTER

	£ s d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 4
Patent knotting . . . ,,	14 0
Distemper, washable . . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

	£ s. d.
Digging over surface n/e 12″ deep and cart away . . . Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away . . Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away . . ,,	11 0
,, ,, 10′ 0″ deep and cart away . . ,,	11 6
,, ,, 15′ 0″ deep and cart away . . ,,	12 0
If in stiff clay . . . . . add ,,	3 0
If in underpinning . . . . . ,, ,,	5 0
Digging, return, fill and ram . . . . . ,,	5 0
Planking and strutting to sides of excavation . . . F.S.	1 0
,, ,, to pier holes . . . . . ,,	6
,, ,, to trenches . . . . . ,,	6
,, ,, extra, only if left in . . . . . ,,	3½
Hardcore, filled in and rammed . . . . . Y.C.	14 0
Portland cement concrete in foundations (6-1) . . . ,,	1 13 6
,, ,, ,, (4-2-1) . . ,,	1 18 6
,, ,, ,, underpinning . . ,,	2 2 0
Finishing surface of concrete, spade face . . . . . Y.S.	9

DRAINLAYER

	4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately) . . . . . F.R.	1 8	2 6
Extra, only for bends . . . . . Each	2 8	3 9
,, junctions . . . . . ,,	3 9	4 6
Gullies and gratings . . . . . ,,	17 6	19 9
Cast iron drains, and laying and jointing . . . F.R.	5 6	7 0
Extra, only for bends . . . . . Each	12 6	18 6

BRICKLAYER

	£ s. d.
Brickwork, Flettons in lime mortar . . . . . Per Rod	32 0 0
,, ,, in cement . . . . . ,,	34 0 0
,, Stocks in cement . . . . . ,,	41 10 0
,, Blues in cement . . . . . ,,	62 0 0
Extra only for circular on plan . . . . . ,,	3 0 0
,, backing to masonry . . . . . ,,	2 0 0
,, raising on old walls . . . . . ,,	3 0 0
,, underpinning . . . . . ,,	10 0 0
Fair Face and pointing internally . . . . . F.S.	3
Extra only for picked stock facings . . . . . ,,	1 0
,, red brick facings . . . . . ,,	1 6
,, blue brick facings . . . . . ,,	1 9
,, glazed brick facings . . . . . ,,	4 6
Tuck pointing . . . . . ,,	10
Weather pointing . . . . . ,,	4
Slate dampcourse . . . . . ,,	1 0
Vertical dampcourse . . . . . ,,	1 3

ASPHALTER

	s. d.
½″ Horizontal dampcourse . . . . . Y.S.	5 6
½″ Vertical dampcourse . . . . . ,,	7 6
½″ paving or flat . . . . . ,,	5 6
1″ paving or flat . . . . . ,,	6 6
1″ × 6″ skirting . . . . . F.R.	1 0
Angle fillet . . . . . ,,	2
Rounded angle . . . . . ,,	2
Cesspools . . . . . Each	5 0

MASON

	£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete . . . . . F.C.	1 1 6
Bath stone and do. all as last . . . . . ,,	15 6
Artificial stone and do. . . . . ,,	16 6
York stone templates, fixed complete . . . . . ,,	14 0
,, thresholds . . . . . ,,	16 0
,, sills . . . . . ,,	1 3 6

SLATER AND TILER

	£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″ . . . . . Sqr.	4 5 0
Do., 18″ × 9″ . . . . . ,,	4 2 0
Do., 24″ × 12″ . . . . . ,,	4 12 0
Westmorland slating, laid with diminished courses . . . ,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course . . . . . ,,	4 0 0
Do., all as last, but of machine-made tiles . . . ,,	3 11 0
Fixing only, lead soakers . . . . . Doz.	9
Stripping old slating and clearing away . . . . . Sqr.	10 0

CARPENTER AND JOINER

	£ s. d.
Flat boarded centering to concrete floors, including all strutting Sqr.	2 12 0
Shuttering to sides and soffits of beams . . . . . F.S.	1 0
,, to stanchions . . . . . ,,	1 0
,, to staircases . . . . . ,,	2 0
Fir and fixing in wall plates, lintols, etc. . . . . F.C.	5 0
Fir framed in floors . . . . . ,,	6 9
,, ,, roofs . . . . . ,,	8 3
,, ,, trusses . . . . . ,,	9 0
,, ,, partitions . . . . . ,,	12 0
⅞″ deal sawn boarding and fixing to joists . . . . Sqr.	1 17 6
1″ ,, ,, ,, ,, ... ,,	2 1 6
1½″ ,, ,, ,, ,, ... ,,	2 7 6
1½″ × 2″ fir battening for Countess slating . . . . ,,	12 6
Do. for 4″ gauge tiling . . . . . ,,	16 0
Stout feather-edged tilting fillet . . . . . F.R.	6
Patent roofing felt, 1 ply . . . . . Y.S.	2 6
,, ,, ,, 2 ,, ... ,,	3 0
,, ,, ,, 3 ,, ... ,,	3 6
Stout herringbone strutting to 9″ joists . . . . . F.R.	1 0
1″ deal gutter boards and bearers . . . . . F.S.	1 4
1½″ ,, ,, ,, ,, ... ,,	1 8
2″ deal wrought rounded roll . . . . . F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off . . . . . Sqr.	2 15 0
1¼″ do. . . . . ,,	3 4 0
1½″ do. . . . . ,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall . . . . . F.S.	1 10
1¼″ do. . . . . ,,	2 1

CARPENTER AND JOINER—*continued.*

	s. d.
1¼″ deal moulded sashes of average size . . . . . F.S.	2 3
2″ ,, ,, ,, ,, ... ,,	2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ⅞″ parting beads, and with brass-faced axle pulleys, etc., fixed complete . . ,,	4 3
2″ ,, ,, ,, ,, ... ,,	4 6
Extra only for moulded horns . . . . . Each	9
1½″ deal four-panel square, both sides, door . . . . F.S.	2 6
2″ ,, ,, ,, ,, ... ,,	3 0
1½″ ,, but moulded both sides . . . . . ,,	3 0
2″ ,, ,, ,, ,, ... ,,	3 6
4″ × 3″ deal, rebated and moulded frames . . . . F.R.	1 6
4½″ × 3½″ ,, ,, ,, ... ,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers . . . . . F.S.	2 0
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages . . ,,	3 0
1¼″ deal moulded wall strings . . . . . ,,	2 6
1½″ ,, outer strings . . . . . ,,	2 9
Ends of treads and risers housed to string . . . . Each	2 0
3″ × 2″ deal moulded handrail . . . . . F.R.	1 6
1″ × 1″ deal balusters and housing each end . . . . Each	2 6
1½″ × 1½″ ,, ,, ,, ... ,,	3 3
3″ × 3″ deal wrought framed newels . . . . . F.R.	1 6
Extra only for newel caps . . . . . Each	7 6
Do., pendants . . . . . ,,	7 6

SMITH AND FOUNDER

	£ s. d.
Rolled steel joists cut to lengths, and hoisting and fixing in position . . . . . Per cwt.	17 0
Riveted plate or compound girders and hoisting and fixing in position . . . . . ,,	1 3 0
Do. stanchions with riveted caps and bases and do. . . ,,	1 2 0
Mild steel bar reinforcement ½″ and up, bent and fixed complete . ,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g. . . . . F.S.	1 0
Wrot-iron caulked and cambered chimney bars . . . Per cwt.	1 15 0

PLUMBER

	£ s. d.
Milled lead and labour in flats, gutters . . . . . Per cwt.	1 19 6
Do. in flashings . . . . . ,,	2 2 0
Do. in covering to turrets, etc. . . . . ,,	2 9 0
Do. in soakers . . . . . ,,	1 15 0
Labour to welted edge . . . . . F.R.	3½
Open copper nailing . . . . . ,,	3½
Close ,, ... ,,	4½

	½″ s. d.	¾″ s. d.	1″ s. d.	1¼″ s. d.	2″ s. d.	4″ s. d.
Lead service pipe and fixing with pipe hooks . . . F.R.	1 3	1 8	2 2	2 9	3 10	—
Do. soil pipe and fixing with cast lead tacks . . . ,,	—	—	—	—	—	6 0
Extra, only to bends Each	—	—	—	—	2 3	6 6
Do. to stop ends . ,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions . . . ,,	3 6	4 0	5 6	8 0	—	—
Lead traps . . . ,,	—	—	—	7 6	10 6	—
Screw down bib valves . . . ,,	7 6	10 6	12 6	—	—	—
Do. stop cocks . ,,	10 0	12 0	16 0	23 6	56 6	—

	£ s. d.
4″ cast-iron ½-rd. gutter and fixing . . . . . F.R.	1 3
Extra, only stop ends . . . . . Each	1 0
Do. angles . . . . . ,,	1 6
Do. outlets . . . . . ,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on . F.R.	1 6
Extra, only for shoes . . . . . Each	2 6
Do. for plain heads . . . . . ,,	5 6

PLASTERER AND TILING

	£ s. d.
Expanded metal lathing, small mesh . . . . . Y.S.	3 9
Do. in n/w to beams, stanchions, etc. . . . . ,,	5 6
Lathing with sawn laths to ceilings . . . . . ,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc. . . . . ,,	2 6
Do. vertical . . . . . ,,	2 9
Rough render on walls . . . . . ,,	2 3
Render, float and set in lime and hair . . . . . ,,	3 0
Render and set in Sirapite . . . . . ,,	3 3
Render, backing in cement and sand, and set in Keene's cement . ,,	4 6
Extra, only if on lathing . . . . . ,,	9
Keene's cement, angle and arris . . . . . F.R.	8
Arris . . . . . ,,	3
Rounded angle, small . . . . . ,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth . ,,	2
1″ granolithic pavings . . . . . Y.S.	5 0
1½″ ,, ,, ,, ,, ... ,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed . ,,	1 2 6
9″ × 3″ ,, ,, ,, . . ,,	1 7 6
Extra, only for small quadrant angle . . . . . F.R.	9

GLAZIER

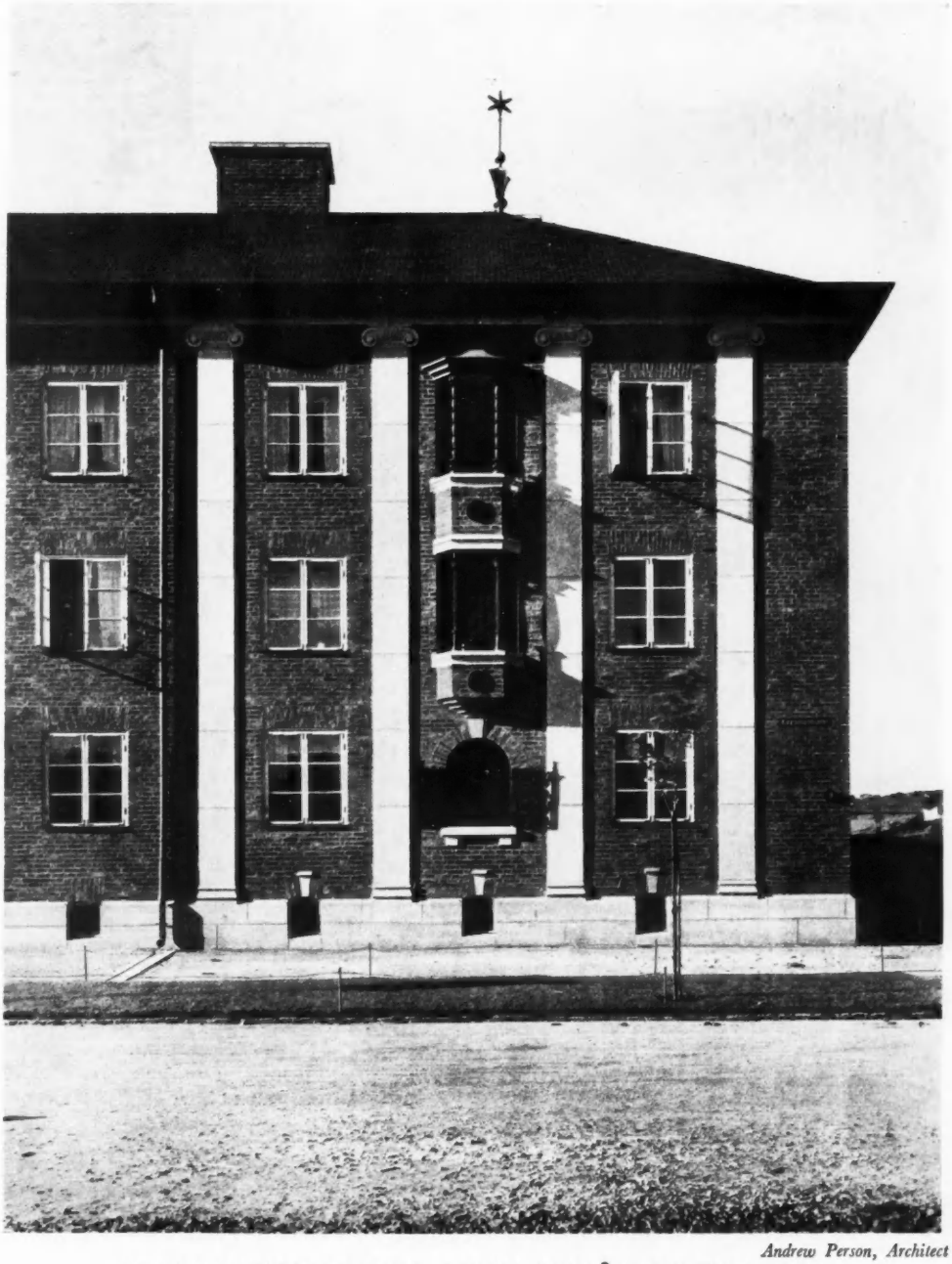
	s. d.
21 oz. sheet glass and glazing with putty . . . . . F.S.	8
26 oz. do. and do. . . . . ,,	1 0
Arctic glass and glazing with putty . . . . . ,,	1 2
Cathedral glass and do. . . . . ,,	1 3
Glazing only, British polished plate . . . . . ,,	8
Extra, only if in beads . . . . . ,,	2
Washleather . . . . . F.R.	4

PAINTER

	s. d.
Clearcolle and whiten ceilings . . . . . Y.S.	8
Do. and distemper walls . . . . . ,,	1 0
Do. with washable distemper . . . . . ,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces . ,,	3 3
Do. on woodwork . . . . . ,,	3 6
Do. on steelwork . . . . . ,,	3 0
Do. and brush grain and twice varnish . . . . . ,,	5 6
Stain and twice varnish woodwork . . . . . ,,	1 11
Stain and wax-polish woodwork . . . . . ,,	4 6
French polishing . . . . . F.S.	1 2
Stripping off old paper . . . . . Piece	2 6
Hanging ordinary paper . . . . . from ,,	3 0

WORKMEN'S FLATS IN SWEDEN

A FINAL PHOTOGRAPH AND DRAWING OF A DETAIL FROM THE BOSTRÖM DWELLINGS



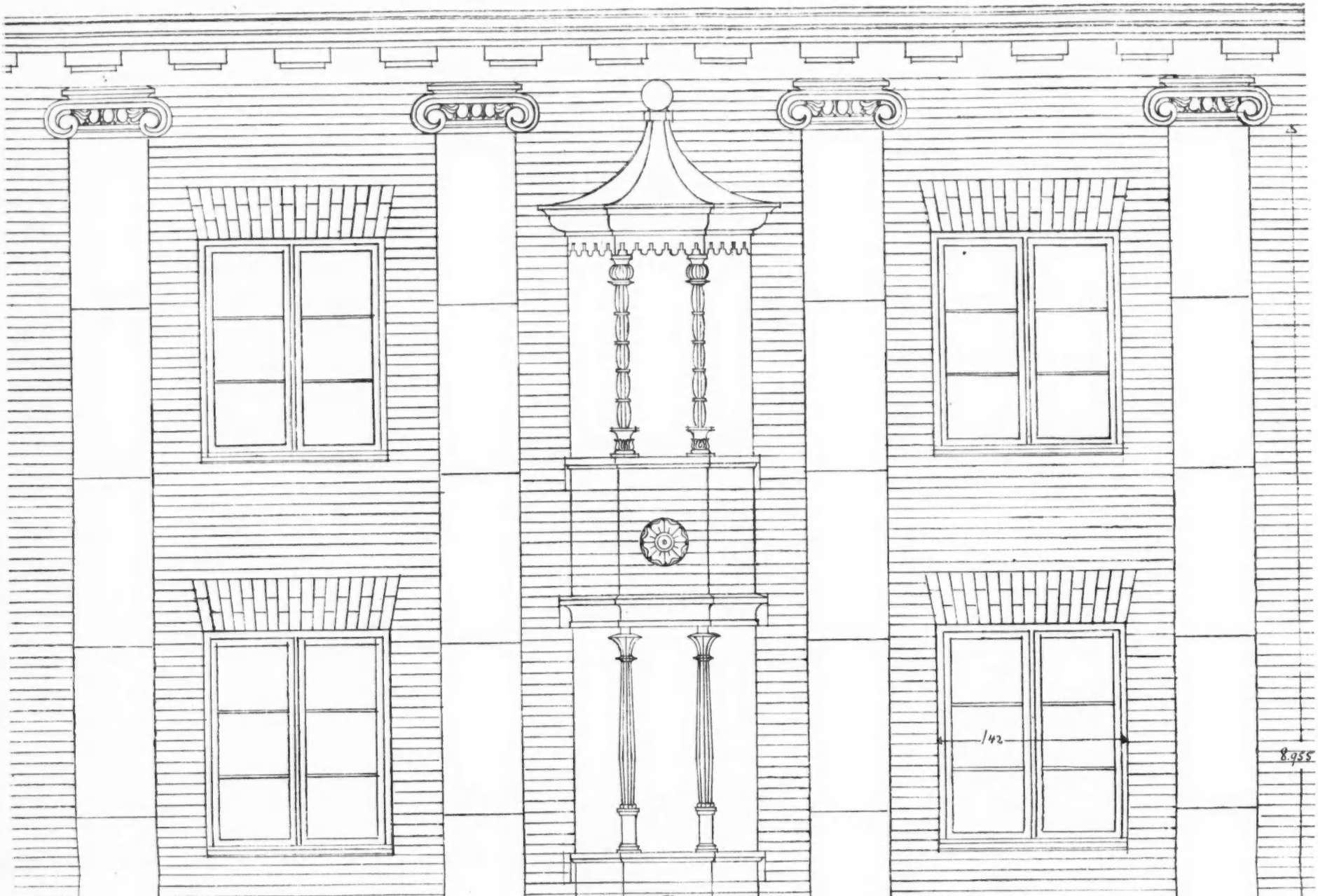
Andrew Person, Architect

AN END PAVILION TO THE KUNGSLADUGÅRDSGATAN FRONT

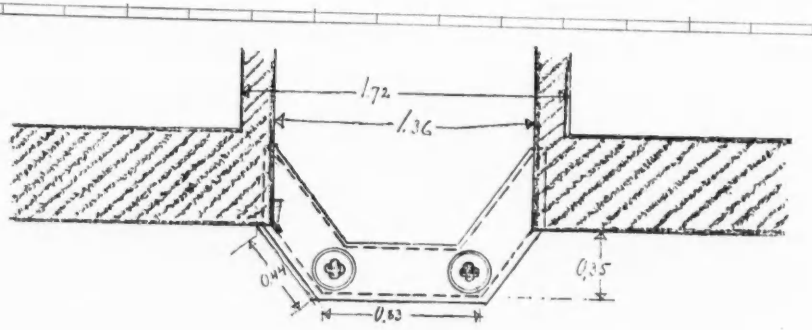
THIS terminal feature should be compared with the central portion of the same facade illustrated in one of the supplements with the issue for March 11. The pilasters here are the same ; four at each end balance the six in the middle.

The use of the order is almost mediaeval in its simplicity : it is simply applied to a facade with a fixed scheme of fenestration without in any way modifying that scheme or causing breaks to appear in wall-face or entablature.

Since the windows in the end pavilions are set closer together, it follows that the intercolumniation is also less. Views of the entire elevation were published on February 25.


142
8.955


1.10
0.47


1.72
1.36
0.44
0.83
0.35

ENTRANCE AND SHOWCASES

A SCALE DETAIL DRAWING AT DANIEL NEAL'S PREMISES, LONDON, W.

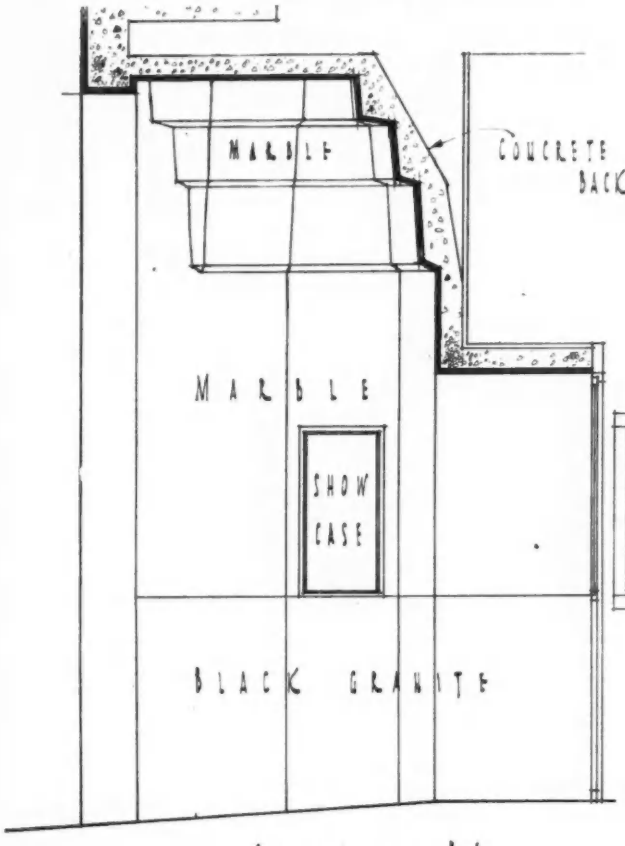


P. J. Westwood, Architect

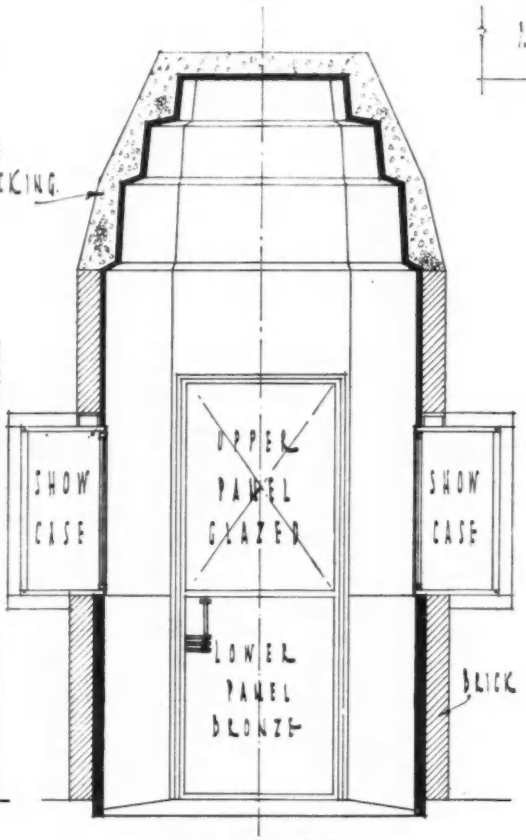
THE DOORWAY, SEEN FROM PORTMAN SQUARE

THE subsidiary entrances, one of which is here illustrated, are actually means of escape in case of fire required by the London County Council; the aim has been to make them as attractive as possible. Owing to the spacing of the steelwork carrying the main structure above, they had to be formed in main piers. Interest was worked into their design by the introduction of small cameo showcases and bronze doors, with distinctive handles, through the upper glazed halves of which views can be had of the interior.

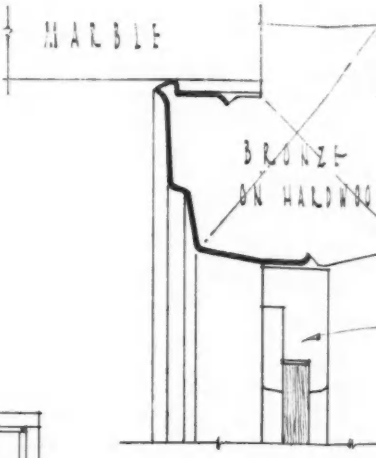
The floor is of Travertine marble; the lower plinth is in black granite, the walls are lined with green Cippolino marble. The ceiling is in stepped plaster bands in order to reduce the apparent height. The whole composition shows a modern tendency, and there is a total absence of mouldings.



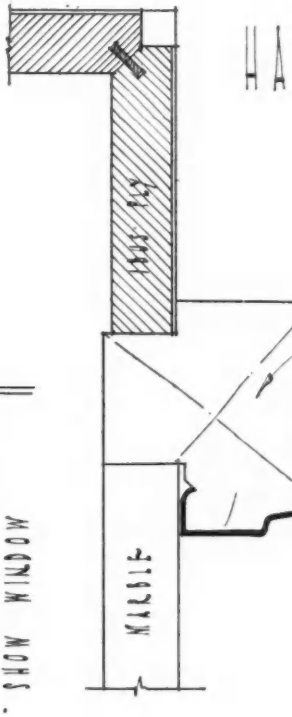
SECTION A-A



SECTION B-B



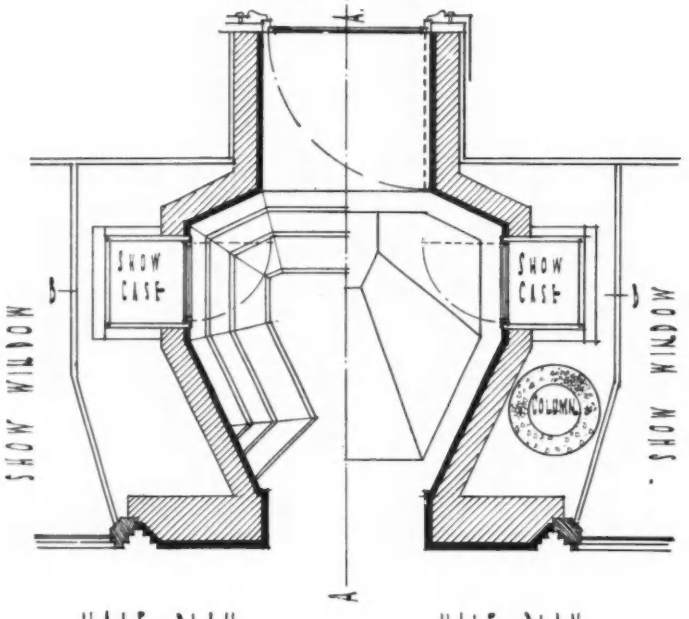
SECTION TH



HA

PLAN & SECTIONS OF ENTRANCE -

SCALE = $\frac{3}{8}$ IN. TO 1 FOOT -

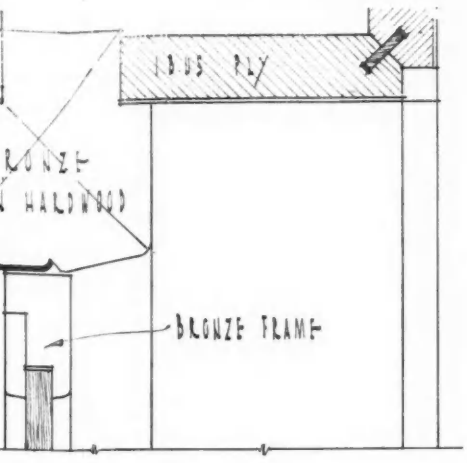


HALF PLAN OF SOFFIT

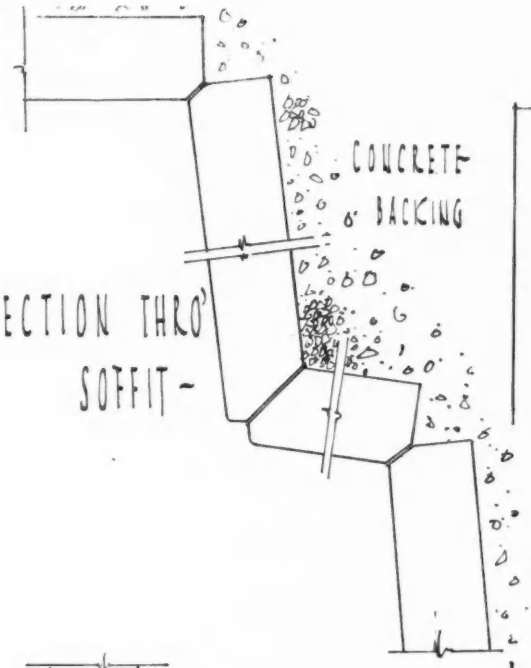
HALF PLAN

MESSRS. DANIEL NEAL & SON LTD. PORTMAN SQU

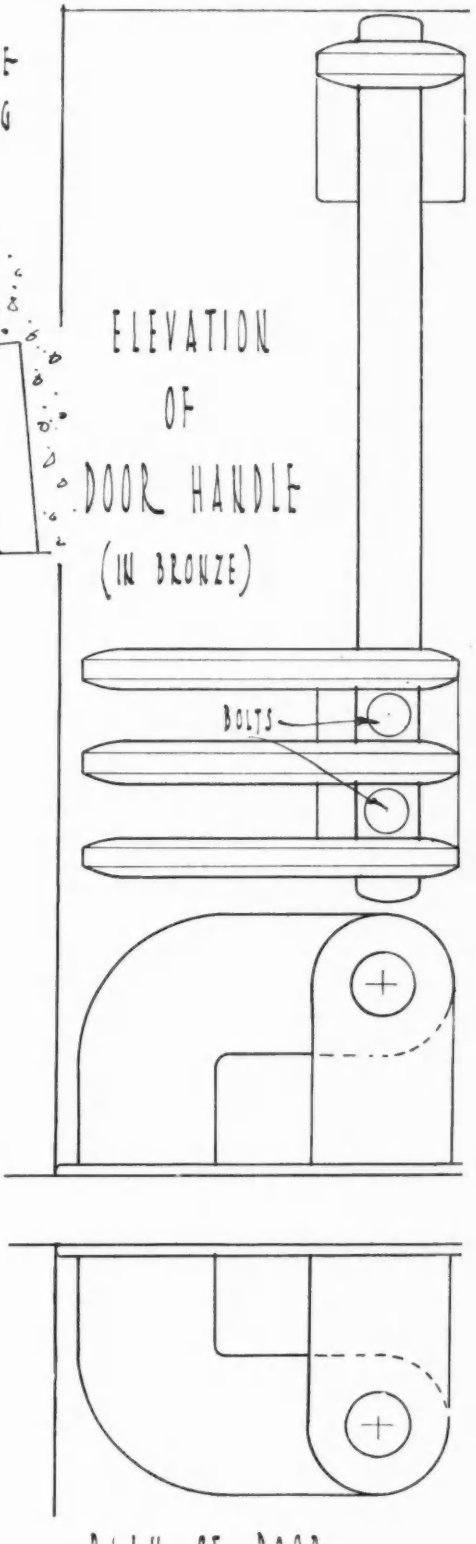
DETAILS OF SUBSIDIARY ENTRANCE -



ION THRO' HEAD OF DOOR

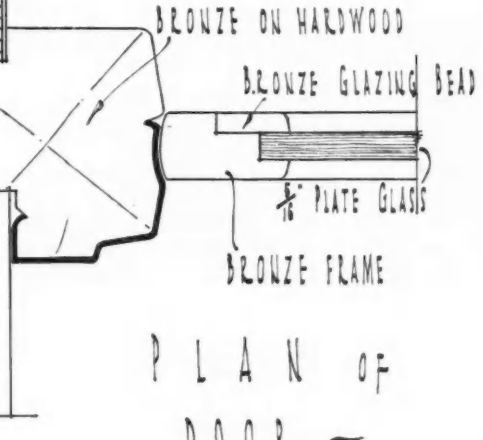


SECTION THRO' SOFFIT -

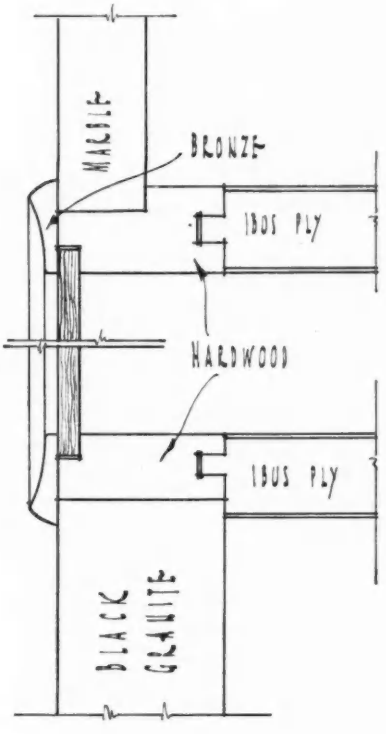


ELEVATION OF DOOR HANDLE (IN BRONZE)

HALF-FULL-SIZE DETAILS



PLAN OF DOOR -



SECTION THRO' SHOWCASE

PLAN OF DOOR HANDLE

SQUARE - LONDON - W-

P-J-WESTWOOD-F-R-I-B-A
-ARCHITECT-



720.5
v.73 pt.2

SELECTED PRECEDENTS:

WILTSHIRE THATCH



"CRUX" CONSTRUCTION AT WILSFORD



COB-WALLED COTTAGES AT SHREWTON

THE thatchers' art and the thatchers' tools today are much what they were in centuries gone by. Different localities show different ways of forming the ridges and gable-ends and the openings for windows wholly or partly in the roof. Local custom can also be seen in the arrangement of the split lath "lacings" at eaves and ridge.

The four examples shown here are typical of thatching in the south-west corner of Wiltshire. The method and details are practically the same in each case. But the materials of which the buildings are constructed show great variation.

The cottage at Wilsford is a rare example of "crux" construction, the roof-principal or "crux" rising from the ground. This is the earliest type of construction found in English cottages. The brick filling and the thatching are of a later date—the thatch being quite new.

The group of cottages from Shrewton, shown above, has walls of cob, heavily lime-whitened. This type of wall stands well if protected from the damp, but is too slow in erection to be useful under present-day conditions. The second example from Shrewton, shown overleaf, is built of a variety of materials, chalk, flint and brick, typical of many of the old rural buildings in this part of England. The effect in colour and texture is very rich.

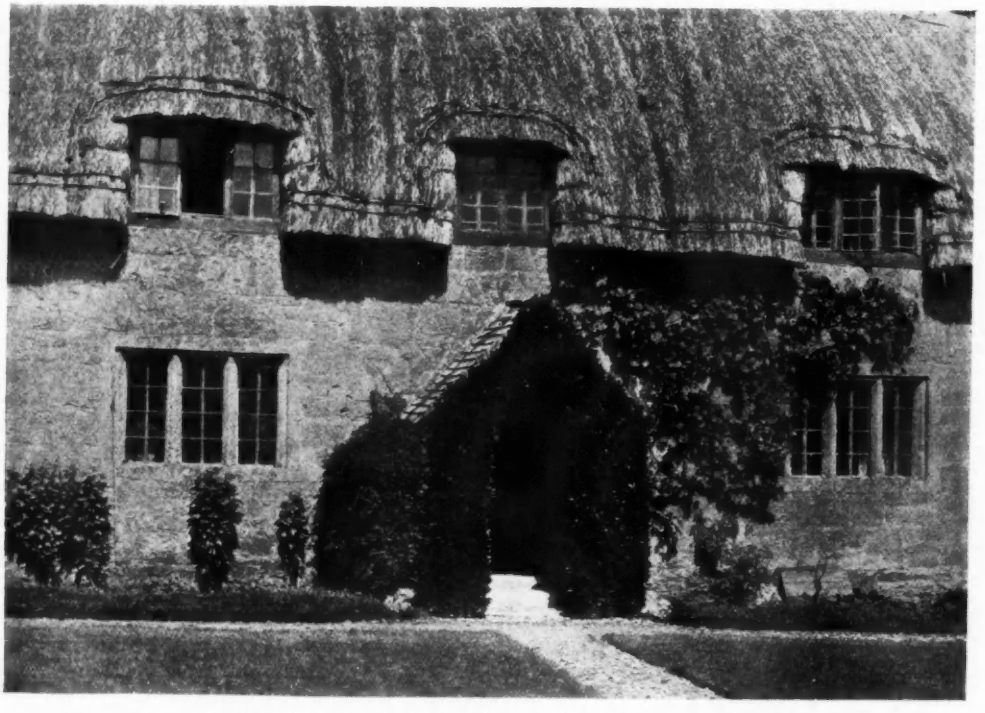
The building from Ashmore, just over the Wiltshire border, also given overleaf, is not a cottage, but a farm-house. This accounts for its superior construction in roughly squared stone and the greater formality of the design.

Thatch is unfortunately inflammable, and the rates of insurance are consequently raised. But since many villages of thatched buildings have stood for centuries without serious accident, we may assume that, with reasonable care, the risk of fire is not serious.

In other respects thatch has several advantages as a roofing material. It resists heat and cold, and it can be moulded, more easily than any other kind of roofing, to meet vagaries of plan and irregularities of span and pitch. In fact it seems to gain in character and charm in overcoming these little difficulties. J. B.



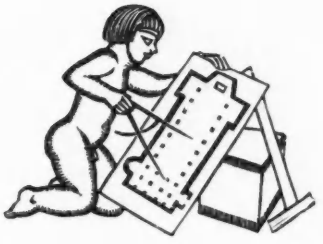
AN INSTANCE OF MIXED CONSTRUCTIVE MATERIALS FROM SHREWTON



A STONE FARMHOUSE FROM ASHMORE, JUST OVER THE DORSET BORDER

PUBLIC LIBRARY
DETROIT MICH.

THE ARCHITECTS' JOURNAL



WEDNESDAY, APRIL 1, 1931

RURAL COTTAGE ARCHITECTURE

IT is an unfortunate fact that the rural cottage, as now commonly built, not only fails to contribute to that charm of the countryside which we all (verbally) recognize as dependent largely upon pleasant old buildings, but is too often actively detrimental. The pity of it is that so much of its detrimental character would be easily avoidable if people concerned would only take a little trouble, and if critics would abandon their unhelpful attitude of blind worship of the old, and unseeing condemnation of the new; there is too much of what Mr. Chesterton has called " the mystagogue " about the devotee of past manners and methods.

The errors which commonly produce disharmony between the modern rural cottage and its setting can be reduced to those of poor shape and bad colour. The luxury cottage of the week-ender and townsman-turned-countryman often errs by over-elaboration and affected picturesqeness, but it is to the severely practical cottage, housing the working cottage-dweller, that allusion is now specially made.

Study of the old rural buildings of any area—the local " folk-architecture " of the pre-industrial era—will usually disclose both an established shape-unit and a prevailing colour, both closely related to the one-time-enforced use of the best obtainable local materials. The more strongly marked instances of a definite tradition—the rubble and stone tiles of the Cotswolds, the plaster and thatch of East Anglia, and the cob and thatch or grey slates of Devon—will at once spring to the mind.

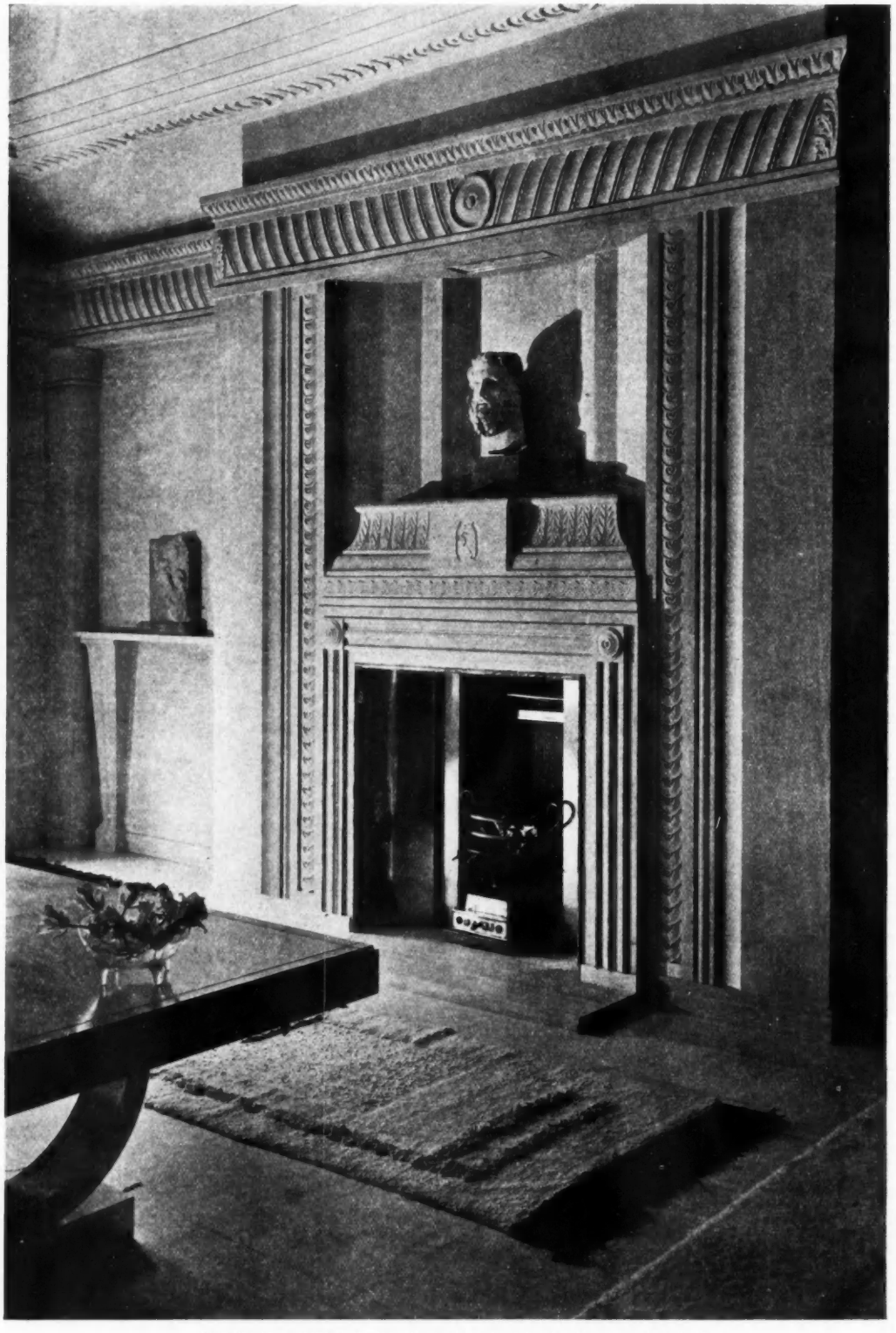
Now it would be idle to suggest that it is possible to revert entirely to former usages in each district, but it is nowhere necessary, or even advantageous, in the grossly material sense, to make deliberate departure from the practices which have established admirable local colour. It is possible to build in the Cotswolds with harmonious brick and tile. In Wales or the South-West, where visible distances are wide and a blotch of harsh colour may wreck a countryside, it is not necessary to use scarlet foreign tiles or shrimp-pink asbestos when such materials as Welsh " New Quarry " or Cornish slates are available, and even the natural (and cheaper) grey asbestos would be less offensive. We may no longer build in cob, but as much of this despised walling lies unsuspected beneath a fairly plastered exterior, so may a basis of brick or concrete yield similar effects without sacrifice.

Nor is it of necessity that much needlessly obtrusive paint is applied to portions of buildings which require no emphasis. The unintelligent application of a harmless general direction that all external paintwork shall be white, or green, or black, so that some object such as a large board or an oblique rainwater pipe, which should be allowed to merge into its background, tells strongly across miles, is frequent and unfortunate.

We have dwelt first upon the importance of colour, because it is the matter most easily rectified. But hardly less important is the question of shape. It is less easy to rectify, for the achievement of a simple shape which yet comprises all the essentials of a building is not only a high tax on a designer's ability, but runs counter to much lay opinion which seems to demand that forms should *not* be simple, but " broken up." Is not the expression " like a barn " (which should be a compliment) habitually used by lay critics as condemnation?

How this attitude can endure concurrently with, on the one hand, a fatuous admiration for the old (and essentially simple) cottage forms, and, on the other, the existence of the untidily excrescent forms, encrusted with unrelated lean-to's of the unskilled cottage-builder, may be thought puzzling, and looks like muddled thinking, or sheer hypocrisy ! Even by the standards of advanced modernism, there are few who will deny that the tendency of efficient design is always towards greater simplicity of form.

Contributions, now in progress in the JOURNAL, seek to suggest simple specification means by which quite humble dwellings may be brought into accord with established characteristics existing in well-marked areas. We hold this to be a worthy object, and none can deny that it is in intention more helpful than the policy of the averted head.



IMBUED WITH THE CULTURE OF ANCIENT GREECE

The dining-room at Mulberry House, Smith Square, S.W., the residence of Lord Melchett, designed by Braddell and Deane, is an essay in the adaptation of ancient Greek culture to the usages of modern life. The marble head, round which the chimneypiece is designed, shown in the above view, is the chief feature of interest in the composition. The electric fire is encased in a steel urn, set between cheeks of brightly polished steel. The walls are of travertine marble, dull polished. The table, executed in nickel, can be reduced in length when desired. The rug is of lamb's wool.

NEWS & TOPICS

THE STRUGGLE CONTINUES

AFTER the acceptance of amendments wholesale by the promoters, the future of the Architects (Registration) Bill appeared rather more rosy. But there was little substance in any of the amendments, and the old struggle came up again on the Schedule dealing with the composition of the proposed Registration Council. Mr. McShane and his supporters again saw in it the hidden hand of the R.I.B.A., and strenuously opposed it. On Thursday, March 26, the old game of killing the Bill by abstention from the Committee began once more. No quorum could be obtained, and another valuable morning was wasted. Members are freely asking how much longer the farce is to continue.

IF POVERTY BLOCKS THE WAY

Dr. MacColl's letter to *The Times* on Tuesday of last week brings Charing Cross Bridge into a limelight tempered by time and the sad progress of this great event. His letter shows that Sir Giles Gilbert Scott's remarks (Appendix D) are sufficient to condemn scheme No. 6, voted for by nine members of the Committee. In a short review of the six schemes he commends the unassailable virtues of No. 4, which solves all the problems, including those of future development and expansion, without creating any road tunnels and without violence to the plan of the very important section of London involved by the scheme.

*

If poverty is held to block the way, then Sir Reginald Blomfield is right, says Dr. MacColl, in arguing for the retention of Charing Cross Station; but Sir Reginald's plan would only be tolerable if the railway bridge were shortly to disappear, and of this there is no prospect. In any case, Parliament should once more hold itself free to decide upon the merits of all six.

" HUSH-HUSH "

I was recently privileged to have a peep at the preparations which are now being feverishly made at Olympia to complete the model houses that are such an attractive feature of *The Daily Mail* Ideal Home Exhibition. I understand that it is not permissible to tell too many secrets about it, for the surprises will be made manifest on the opening day. As, however, in one respect *The Daily Mail* itself has already let the cat out of the bag, I may make reference to the mysterious and unusual " Hush-Hush " house, which is situated to the left of the main entrance to the housing section. At first I thought its principal object was to provide a special display of good brickwork, for the front and two end elevations are blank walls of this material, the only apertures being three doorways, giving access to entrance lobby, garage and kitchen offices. The absence of windows, however, does not in the least detract from the interest of the composition, because a striking pattern is obtained by the contrasting colours of the brickwork, of which the large main panel, forty feet long, of pale grey, is surrounded by a red border.

*

This is indeed a " Hush-Hush " house, but its purpose becomes as clear as day when one realizes that all the living-rooms, well lit and ventilated, face the garden at the back, and are thus protected from the noise of traffic. Inside the house, which is the largest in the exhibition, a twentieth-century standard of accommodation is exemplified, and special devices are employed to render the walls and ceilings soundproof. If this is to be the typical house of the future, and its conception seems logical, we may expect to see in our residential areas long terraced fronts punctured only by a number of decorative doorways, as in some Moorish street where the white walls are expressive of domestic seclusion. The " Hush-Hush " house is not a Utopian idea, but is intended to be an immediately practicable proposition. It has been designed by Mr. Trystan Edwards.

DESIGN MEANS MONEY

The second of the series of six lunches to consider, eating done, " Design as a Factor in the Recovery of British Trade," was held at the Florence Restaurant, London, last Thursday by a crowded gathering of business men and designers connected with the textile industry. The retailers' view was presented by Mr. David L. Webster, the assistant manager of the Bon Marché, Liverpool; the designers' view by Mr. R. P. Gossop, the hon. secretary of the Society of Industrial Artists. Both speakers, working from, if not opposite, then different camps, came to the conclusion that design has become an enormously more important factor in the textile industry than ever before.

*

Time was when quality and price were everything. Those were the " take-it-or-leave-it " days of British expansion. Today quality is fairly well safeguarded by general standards of production; price remains a factor of importance; but *design* has become one of the really dominating necessities of industries. Lack of design means lack of export markets, and lack of home markets. Design means money. What a joyful fact ! Design, creation of beautiful things for the machine to make, is really to become an essential part of our lives.

TOWN PLANNING THE BUILT-UP AREAS

The new Town Planning Bill now before Parliament is the most ambitious thing of its kind ever presented for enactment. The actual text of the Bill is five times as long as the existing Acts, but the measures it proposes are of still greater relative importance. The extension of town planning to built-up areas is, of course, its principal aim, but among many new and some novel provisions may be listed the setting off of 100 per cent. betterment against full compensation, the wide powers of compulsory acquisition, the control of *land* as opposed to building, the control—the absolute control—of the design of buildings, the control of user, the power of levying what is known as " excess condemnation," a form of improved value rate, and so on, and so on for many pages.

*

It is what we have asked for, but at first blush it seems nearly too much, and one wonders where we shall find men of all-round capacity, capable of administering an Act that touches our life in town and country at nearly every conceivable point. I hope we may have some of the more important provisions explained, propounded and argued upon.

DRAWINGS AND DRAW-INS

The L.C.C. have been asked to drop Part VII. of their General Powers Bill, which seeks to obtain powers to veto plans for new buildings unless they provide proper traffic facilities. These would take the form of draw-ins, traffic reservoirs, lay-bys, etc., and as such must take up ground-floor space. Hence the opposition and consequent

withdrawal. The only good solution would have to be on a wide scale, and rather after the manner of Le Corbusier, who moves everything a stage up, rearing the building upon piles or stancheons, and saving *all* the ground for circulation. And, though I should live in dread of our compromise that would result from this theory's application, carried to the full his theory is right, sane and a means of salvation.

MR. ESSEX'S LITTLE TOUR

Mr. Essex of Cambridge is chiefly remembered as the architect to Sir Horace Walpole at Strawberry Hill, where in 1776 he designed the Beauclerc hexagonal chantry. He may thus be considered one of the pioneers of the Gothic Revival, and the diary of his tour in the Low Countries in the year 1773, when fifty-two years of age, is an interesting illustration of his tastes. The diary was printed by the Cambridge Antiquarian Society in 1888. Essex, with his daughter Millicent, his friend the Rev. Mr. Tyson, and a Miss Wale set out from Cambridge at 7 o'clock on the morning of August 16 and arrived in London the same afternoon. Leaving the following morning in the Brompton fly they reached Rochester only to find the Crown Hotel full, and they therefore were obliged to take post-chaise and sleep at Sittingbourne. The next day they arrived at Dover by way of Canterbury, but the prospect of the Channel on a wet and windy day was so uninviting that the party nearly decided to abandon their trip. They persevered, however, and after a very painful crossing arrived at Calais and put up at the Hôtel d'Angleterre.

★

Having chosen their travelling carriage and engaged a courier they set out for Dunkirk, but Essex is obliged to stop on the way to examine the church at Gravelin. Dunkirk is reached in the evening, and here, after the Customs formalities and coffee at their hotel in the Marché des Pommes, they take an evening walk in the town. At that time there was a service of barges between Dunkirk and Bruges, but as progress was slow Essex arranged to start later by coach and overtake the barge at Nieuport. Here they crossed the frontier and entered the dominions of the Austrian Empress; one is apt to forget how recently Belgium has become free from foreign influence. While waiting for the barge Essex found time to visit the church of Notre Dame, where he was much entertained by a funeral. Bruges was reached in the evening after a further transhipping on account of the locks.

★

The entry for Sunday, August 22, begins with a complaint that will be echoed by many modern travellers: "We got up very early this morning being disturbed by the clanging of bells in the several churches and the chimes of the Town House." After breakfast Essex sets out with his sketch book to visit the churches. Unfortunately a number of these have been destroyed since his visit, including the Cathedral of S. Donat, which was swept away in the Revolution of 1800. Essex draws several thirteenth-century caps but calls them all Corinthian, and his sketches show that he is unable to distinguish the Gothic foliage from the acanthus leaf. In the church of Notre Dame he makes the really extraordinary misstatement that the nave columns are Corinthian and "very well diminished." From Bruges to Ghent the party travel in another canal barge, of which Essex draws a plan.

At Ghent, Essex again systematically visits the churches, including the Cathedral of S. Bavon, where he notes the large candlesticks but not Van Eyck's "Adoration of the Lamb," at that time complete. The Grand Béguinage, the Abbey of S. Peter, the Carthusian Monastery and many other buildings described by Essex, have all disappeared. From Ghent they drive to Antwerp, where they notice the prosperous appearance of the country and the number of oratory chapels by the roadside. In Antwerp, Essex makes several sketches and they attend a celebration of High Mass in the Place de Mer on Sunday. The following day they set out for Brussels, but stay for an hour or two at Malines to see the churches, including the cathedral of S. Rombold. Here again one is struck by the number of churches which have since disappeared or been put to secular uses. In Brussels, Essex makes a careful plan of the steps leading up to the west front of S. Gudule, but these, too, have apparently been entirely changed since his day. He also describes and draws a plan of the old church of S. Jacques de Caudenberg before it was rebuilt in 1776. Considering the rate of progress at the period (about three miles an hour), the number of churches seen and accurately noted by Essex is remarkable, and as many of these have disappeared the record of them gives an added value to this diary of an architect's summer holiday.

FULL CIRCLE IN THE QUADRANT

Visitors to Regent Street Quadrant during the past few weeks—or those of them who remember the outburst from traders which followed the production of the original Norman Shaw designs for rebuilding—must have rubbed their eyes in amazement (writes Mr. Edwin Gunn) to see the arched form, which was so vigorously objected to then, now produced *inside* the treasured plate glass—but in cardboard! Apparently the architectural conception of the needs of a display window was merely a little in advance of the times. I am impelled (he adds) to rescue from the obscurity of the *A. A. Journal* of those days the following parody, the model for which will be easily identified:

THE QUADRANT

Designer great, think you because
Your fame and weight transcend all laws
'Twill be your fate to win applause?
Shopkeepers dense of purblind view
With rage intense are blaming you;
Your sole offence—construction true.
Construction true, needful to art's achievement
Reft of plate glass and strips of brass
How sad the shop's bereavement!
At art that glows with flame intense
Each trader throws his "common-sense"
And down it goes without defence.
You must combine commercial law
With each design your hand may draw
E'en though you sign them Norman Shaw.
O Norman Shaw, type of great Art kept under
Can thy great power in this dark hour
Save Regent Street—I wonder?

THE CONDITION OF CHICHESTER CATHEDRAL

The Dean of Chichester is very anxious about the condition of the beautiful buildings committed to his charge. Lumps of carved marble have already fallen which might have killed anyone passing below. The "great sumptuous south window" in the transept is in danger of collapse. The stonework of the open lantern tower, which was rebuilt in 1861, has been bitten into severely by the south-west winds and rains. It is estimated that the sum of £4,500 will be needed to carry out the urgent repairs.

ASTRAGAL

A MODEL FARM IN EPPING FOREST



This photograph of the milking shed should be compared with the general view of the farm which appears on page 477. The farm has been specially designed to provide good ventilation, an even temperature, and the maximum of sunshine and light.

DESIGNED BY
MAURICE CHESTERTON

SOMEONE once wrote that the *truly* imaginative are never otherwise than analytic. Be that as it may, it is questionable whether the higher powers of the reflective intellect of an architect can be more decidedly, or even perhaps usefully, tasked than by finding solutions to the intricate problems encountered in designing a model farm. His results must be brought about by the very soul and essence of method. Above all, he must have the co-operation of a client like Sir Fowell Buxton, a farm bailiff like Mr. Lind, and equipment manufacturers like Messrs. Louden King before he could hope to bring his design to so successful a demonstration as that of Mr. Maurice Chesterton under review.

The basis of the whole problem is the production of pure milk—to keep the cows clean, and during milking to avoid dirt dropping from off them or from the caps of the cowmen into the pails; to provide an abundance of sunshine, light and air; adequate ventilation; and, of greater importance, an even temperature. How far this has been accomplished may be judged from the accompanying illustrations.

In the milking stalls, for example, it is impossible for one cow to come into contact with another. They stand, back to back, upon platforms sufficiently high from the floor to prevent them from putting their hind legs in the gutters, and each cow has a halter around her neck, allowing her to turn, but not to wander about. Each animal also is provided with her own manger and drinking cup. The latter is filled by the cow, who, smelling the water, pushes her nose down into the bottom of the cup, thus releasing the spring fountain that automatically fills it.

The cows are fed from a feeding alley at the head of the mangers, the food being conveyed on an overhead runway from the fodder room. At one end of each row of mangers is a water tap, and at the other a drain. Thus, by pulling up the divisions, the mangers can be washed easily from one end to the other. The overhead runway is also used to convey the manure from the milking shed to a pit beyond the farm buildings.

Another unusual feature of the plan is the lavatory where the cowmen wash themselves before milking the cows. It is important to note that no man can leave the milking shed without entering the open air, even though he approaches the dairy and other buildings by the covered way which protects him from inclement weather.

After milking, the cowmen carry their pails through the covered way into a compartment called a milk tip. This is placed next to, but entirely separated from, the dairy. The milk is poured into a receptacle in the wall of the tip, which automatically conveys it through the wall into the dairy.

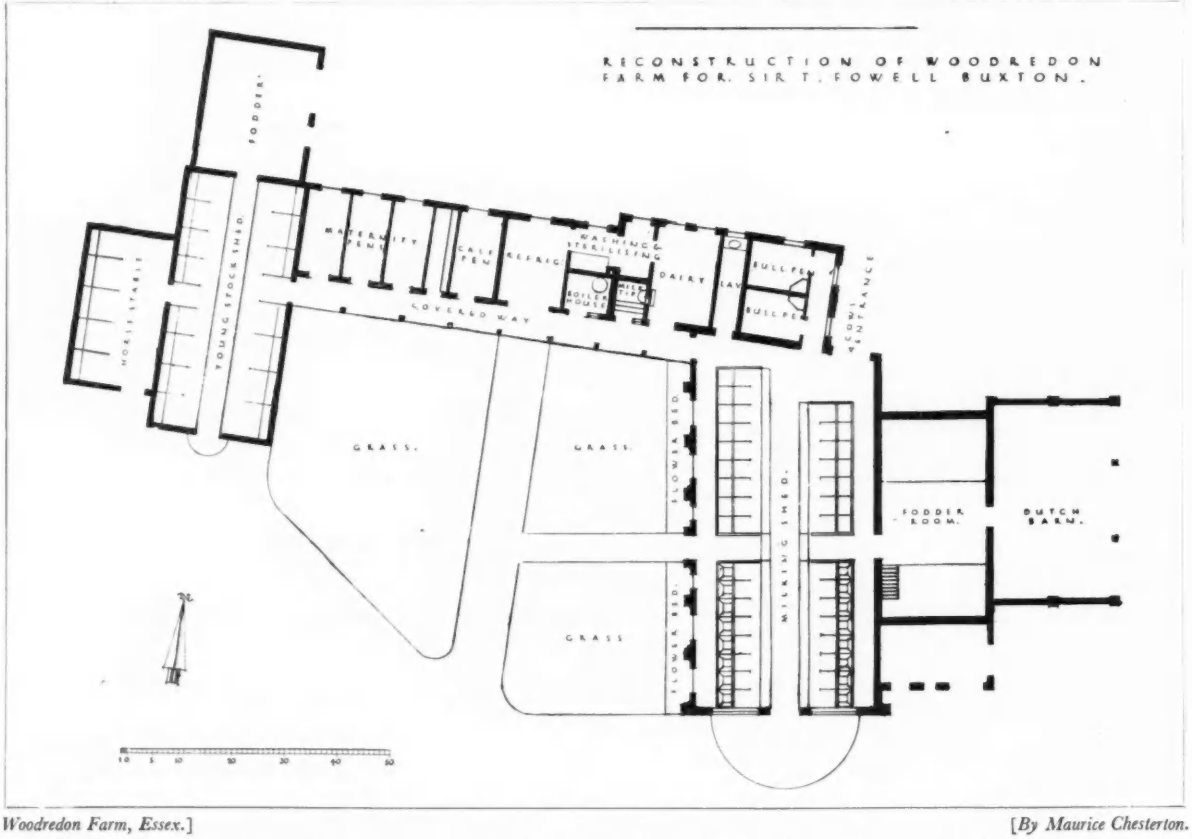
So much for imagination and analysis. But there is another important factor—psychology.

Every herd, even the Ayrshire pedigree stock here, has a leader. If he or she, during a first visit to a farm building, jumps an obstacle through fright, the remainder of the herd will follow suit and will continue to jump that obstacle until the end of time. On the opening day, therefore, the bailiff left the doors of the farm open, placed tasty morsels of food in the mangers, and kept out of the way until the animals had, by their natural inquisitiveness, become accustomed to their new home.

Today the cows, at milking time, wander quietly into their stalls without embarrassment or hesitation, and without thwacks and wallops, or hoarse and angry shouts from the cowmen. Above all, they do not slip or tumble down! E. R.



In the milking shed is an overhead runway connected to the fodder room for the conveyance of food to the mangers. It is also used for the removal of manure. Sliding doors are fixed to withstand damage from the wild winds of Epping Forest.



Woodredon Farm, Essex.] [*By Maurice Chesterton.*

Ground-floor plan. Electric light and an adequate supply of water are installed. Among the special features of the plan is the lavatory where the cowmen wash themselves before milking the cows. All floors have a good fall and all corners are rounded.

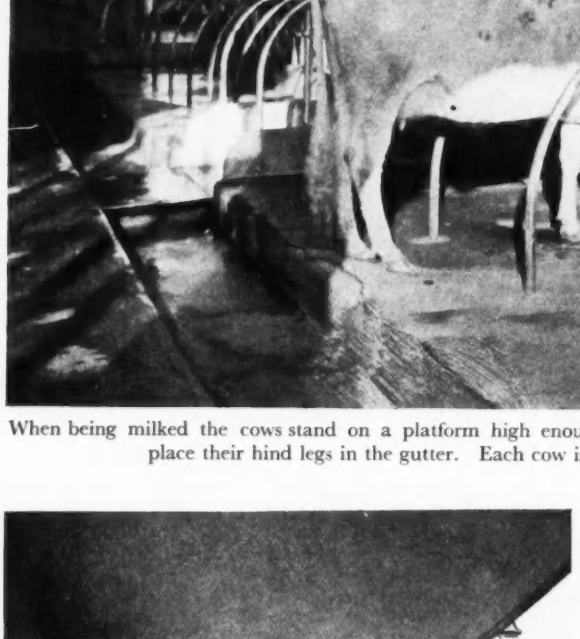


Woodredon Farm, Essex.] [*By Maurice Chesterton.*

A general view. On the left is the young stock shed, in the centre behind the covered way are the maternity and calf pens, the dairy etc., and on the right is the milking shed.

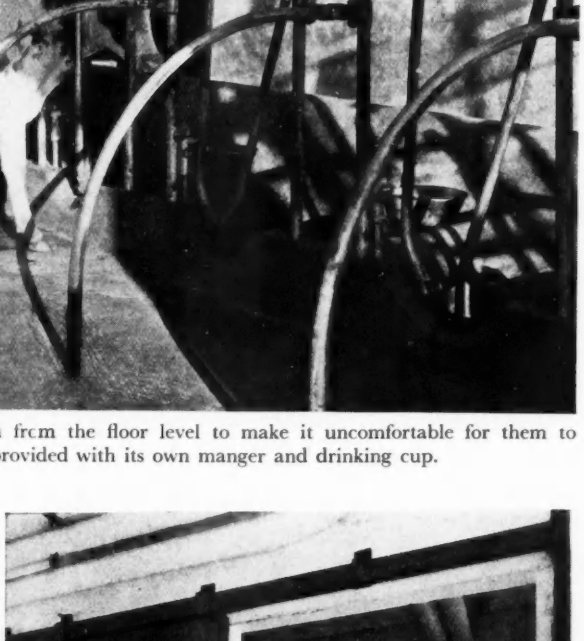


When being milked the cows stand on a platform high enough from the floor level to make it uncomfortable for them to place their hind legs in the gutter. Each cow is provided with its own manger and drinking cup.



Woodredon Farm, Essex.]

The covered way keeps the sun off the dairy and enables the cowmen to circulate throughout the whole of the farm buildings without going out into the rain.



[*By Maurice Chesterton.*

Looking from the dairy through the washing and sterilizing room into the refrigerating room. Everything has been done to abolish dirt; even the milking pails are of special design.

THE REGISTRATION BILL

[BY OUR SPECIAL PARLIAMENTARY REPRESENTATIVE]

WHEN Standing Committee "A" of the House of Commons resumed consideration of the Architects (Registration) Bill on Tuesday, March 24, Lt.-Col. Moore, on behalf of the promoters, made an important statement.

They had now sat for six days, he said, involving many weeks. They had made concessions—some might think somewhat recklessly — because they thought that the Bill could be made workable. There were many other important Bills waiting for discussion. The promoters had gone into the whole matter, and had decided to accept all the amendments on the paper down to the Schedules. On the Schedules, he proposed to ask the feeling of the Committee.

After Mr. McShane had challenged Lt.-Col. Moore to state one single concession that had been made, the Standing Committee proceeded to the consideration of amendments, and some ten pages of these were rapidly agreed to. To Clause 7, dealing with power to remove names of misdemeanants from the Register, Mr. McShane moved an amendment designed to secure that power solely for the Registration Council. This was agreed to; also the following new clauses, moved by Mr. McShane :

> In any case in which the discipline committee has recommended the Council to remove the name of any person from the Register as provided in Section seven hereof the Council shall, before so doing, inform any such person by notice in writing of his right to be heard by the Council personally or by his legal representative with regard to the matter on application by him in writing not later than three months from the date from which he received the notice.
>
> The decisions of the Admission Committee shall be subject to confirmation by the Council.

Coming to the constitution of the Registration Council, Lt.-Col. Moore said that the promoters had done everything they possibly could to make the composition of the Council fair and just to every section of the community. On it would be representatives of every architectural body of any standing in the country, and, at the same time, of "frontier" and unattached bodies. There was no plural voting. The Council would consist of about forty-two to forty-three members, a very easily-worked body, not unwieldy and not over-burdened.

Representatives of the R.I.B.A. would number twelve; members of the Incorporated Association of Architects and Surveyors, who had been opposing the Bill, would number four. The Architectural Association of London would get two, as would the Association of Architects, Surveyors and Technical Assistants. The provincial associations would get four, the unattached architects three, the Government Departments six, and the "frontier" professions and trades eight.

That showed that there was no question of the R.I.B.A. having a dominating influence on the Council. They would have twelve members, and the rest of the organisations thirty. The Council would not be a "packed" body.

Mr. McShane said this Schedule was pretty well the heart of the most serious differences they had had with the promoters. He feared that the Council would be composed, in the great majority, of architects who were members of the R.I.B.A., and he feared it would be R.I.B.A. in character. That was one of the things he had honestly and sincerely tried to prevent.

Mr. D. M. Cowan (Liberal) urged that members should, in order to give stability to the Council, be elected for a term of three or five years, instead of one year.

Lt.-Col. Moore said he had an open mind on this point, and would be willing to deal with it on report.

When the Committee resumed on Thursday, March 26, no quorum could be obtained, and the Committee adjourned until Tuesday, March 31.

THE CUL-DE-SAC

A READER, writing from Ireland, asks us if we could enlighten him as to what is the practice with the cul-de-sac in England. A case has arisen near an Irish town where an individual has built a number of houses in a field and made a road to approach them which is a cul-de-sac. He has applied to the County Council to adopt his road. His solicitor and the County Council solicitor are now fighting over the matter, and both of them have asked the opinion of "Reader." One of them points out the culs-de-sac at Welwyn, but these are not parallel to the present case because they are part of a big layout. Below we print the opinion of a town-planning expert and that of Mr. F. J. Osborn, secretary and manager, Welwyn Garden City :

The Model Town Planning Clauses, issued by the Ministry of Health, provide for relaxation of street widths in the case of residential estates laid out at densities not exceeding twelve houses per acre, for application where the traffic is not likely to be of such a character and volume as to require a street of greater width. The principle underlying this is that adequate widths should be provided for through traffic, but where the layout obviates the likelihood of such traffic, a less expensive and less urban type of street is preferable.

A single cul-de-sac street is permissible under these provisions, up to a maximum length of 600 ft. (24 ft. between fences, with 16-ft. carriageway). Obviously such a street could not take through traffic and, before passing the plans, the authority would only want to assure themselves that the proposed street was appropriate in the proposed position and would not baulk the development of adjoining land. P.

The following is the local practice with regard to the taking over of cul-de-sac roads in Welwyn Garden City. The estate company makes all roads in accordance with a specification which has been agreed with the local council. Development is very largely by means of short closes or culs-de-sac, which are of some advantage under modern conditions, as they enable a good many houses to stand off the rapid traffic roads.

The council makes no distinction between through roads and cul-de-sac roads in taking over, except that it insists on a greater width for through roads.

In our case, the culs-de-sac are always made a public right-of-way and cannot be closed to the public.

There is not the slightest doubt that the local authority has a perfect right to take over a cul-de-sac road, provided that as a means of access to a number of houses such road is open to the public. It would, in fact, be very unfair that they should not undertake the maintenance of such a road, seeing that those who have houses on the cul-de-sac have to contribute to the rates for the upkeep of the main roads, while remaining responsible for the upkeep of the cul-de-sac as frontagers.

The only grounds on which I can imagine that the local authority might reasonably resist the taking over of a cul-de-sac road would be that it was of an inordinate length in relation to the number of houses, or the amount of rateable value, upon it. If the cost of upkeep of a cul-de-sac were reasonably proportioned to the number of houses on it, then it seems to me it would be very unfair if the local authority did not take it over.

The question as to whether the road is a through route to other roads seems to me quite irrelevant, so long as it is a road leading to houses and permanently open to the public. F. J. O.



Mr. Francis Jones.

R.I.B.A. PRESIDENTS ELECT

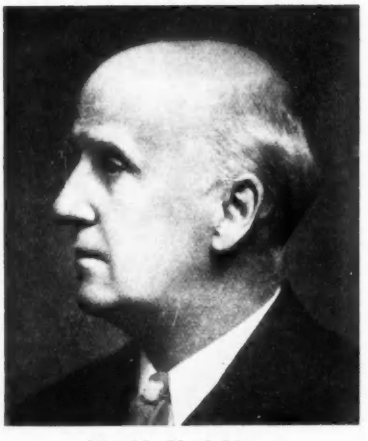
WHOM WILL THE COUNCIL CHOOSE?

SINCE the war, important changes in the constitution and composition of the Royal Institute of British Architects have added greatly to the work and responsibility of the Council.

The unification of the profession some few years ago increased the membership, and the consequent revision of the Charter and bylaws (giving a larger measure of representation to the provincial societies) led to the establishment of a Council of some sixty members. Last year a further revision of the bylaws, upon the reopening of the Licentiate class of membership, once more increased the burden devolving upon the Council and their administrative officers. Again, in recent years more work has fallen to the Board of Architectural Education in co-ordinating architectural education in this country.

Now that the R.I.B.A. has become a great professional union, its present quarters in Conduit Street are inadequate to its needs and activities. With this growth the interests of the R.I.B.A. have widened. During the last years it has taken a prominent part in the organization of the movement for the preservation of rural England and in such questions as Thames bridges, the London squares and the replanning of important urban areas.

A glance at the printed agenda gives some idea of the variety and number of questions which come before the Council and, consequently, of the importance and responsibility of the President's position. Next session there will be many important matters (possibly a Bill for the Registration of Architects) to which the new President will be called upon to apply himself. Besides the growing complexity of the President's duties within the R.I.B.A. itself, increasing demands are made on his time in visiting the allied societies, attending dinners and other public functions, etc. In fact, it can safely be said that the amount of time which the President is expected to devote to the duties of his office is now far greater than ever before.



Mr. H. V. Ashley.

The R.I.B.A. have now to proceed to the election of the new President. In practice, it is the Council who decide, their nomination being almost invariably unopposed.

Whom will they select?

A few years ago the choice was much easier to forecast. Today it gives rise to wide speculation. The Council will seek to discover a leader—one of proved loyalty to the Institute, who has shown, by service already given, his willingness to make their interests his own; one who will conduct their meetings with wisdom, impartiality and tact.



Dr. Raymond Unwin.

In considering the names of possible candidates for the presidential office, those that rise naturally to the minds of members who study Institute politics are, first of all, those of the Vice-Presidents—Mr. H. V. Ashley, Mr. H. M. Fletcher, Mr. Francis Jones and Dr. Raymond Unwin. Mr. H. V. Ashley has for many years taken an active part in Institute affairs, notably as a member of the Executive and Practice Committees. His thoroughness and clarity of mind must have made his contribution most valuable. We have seen Mr. H. M. Fletcher in the chair in Sir Banister Fletcher's absence. We enjoyed his quiet dignity, and feel sure that there are many who would



Mr. H. M. Fletcher.



Mr. Maurice E. Webb.



Mr. H. V. Lanchester.



Mr. E. Stanley Hall.



Sir Giles Gilbert Scott.

be content to see the duties of the office fall into his hands. Mr. Francis Jones, of Manchester, is, we imagine, the most likely candidate if the Council should prefer an architect from the provinces. Dr. Raymond Unwin is expected to receive strong support. He is an acknowledged authority on the subject of town planning. At the Ministry of Health he has rendered signal service to architecture in connection with many housing and town-planning schemes. He is a quiet but effective speaker.

Of the ordinary members of the Council, the name of Mr. H. V. Lanchester will suggest itself to many. He is, perhaps, the senior member of the Council. His wide experience, not only in the Institute but as adviser of various public bodies, will doubtless strengthen his claims as a candidate. Younger men who may be said to be in the running are Mr. Stanley Hall, Mr. Goodhart-Rendel and Mr. Maurice E. Webb. Mr. Stanley Hall, who was for many years hon. secretary, is known as a tireless worker for the Institute; Mr. Goodhart-Rendel was chairman of the Art Committee, and is very popular with the younger members of the R.I.B.A.; while Mr. Maurice E. Webb will be remembered for his able chairmanship of the Board of Architectural Education and for his energy and powers of organization.

Other eminent members of the Council are Sir Herbert Baker, Sir Edwin Cooper and Mr. W. Curtis Green, all of whom should receive nominations.

The name of Sir Giles Gilbert Scott does not appear in the list of present members of Council, but Sir Giles would by common consent be acclaimed as worthy of the office.

RATIONALIZATION IN BUILDING

The Future of the Industry

THE General Secretary of the National Federation of Building Trades Operatives, bemoaning the unemployment among building operatives, inclines to lay some quite appreciable share of the blame upon the mechanization of building. He is to an extent right in his contention, because mechanization means less workers if it means anything at all.

At the same time, there must be a dispersal of building workers into factory occupations that now produce so much of the material of building. A revolution of method is slowly taking place, offering in the place of the old materials which builders' workmen fashioned and prepared, materials that come from the factory finished, tested and ready to use.

The best of these ready-made materials are above suspicion, and offer to an industry long steeped in old traditions of building a new means of expanding the circle of its activities. To the architect no less, these materials come, not as a menace to his freedom of expression, but as a promise of freedom from customs that have outlived usefulness and activities hitherto undreamt of.

With regard to that other argument so hotly advanced by another section of the building industry, I am in a state of doubt. Private enterprise versus municipal undertaking is in the air we breathe today.

What private enterprise fails to do successfully, there seems no reason to prevent municipal enterprise from trying. Private enterprise before the war did *build* houses—built them, on the whole, soundly, cheaply, and for reasonable rents. But it built under different conditions and, on the whole, it built the most hideously ugly houses—bad copies of the fashion of twenty years before.

Had private enterprise been given the whole job of housing in the post-war periods, I shudder to think what would have been the outcome, and I believe that, even with Government aid, it would not have touched the low-price house until it had worked every scrap of profit out of the higher-priced house. Naturally.

Now, thanks to Government aid, thanks, also, to Lever and Cadbury, the pioneers of communal enterprise, or housing for people rather than profit, we may not be utterly ashamed of the way we have housed the population.

It has not been yet possible to build a house fit to live in for £250, but as the day approaches that makes this possible, is there any reason why we should forgo the methods of wise planning that have produced so much of good, merely because cheap houses may once more show a profit?

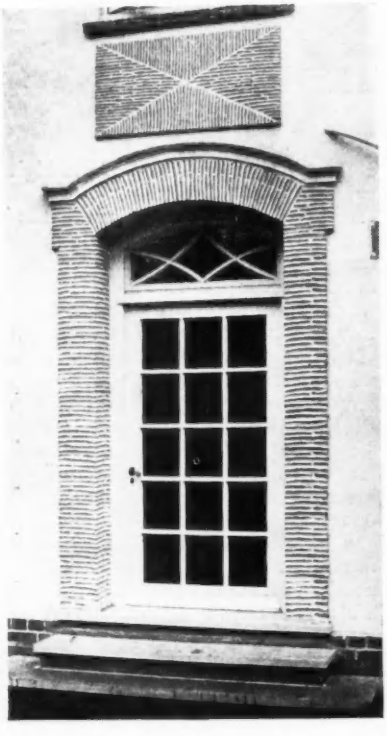
In Welwyn Garden City houses are built for a little over £300—good houses and beautiful to look at. This is private enterprise on such a scale that it becomes nearly municipal, and the argument then boils down to a question of whether houses shall be built for people to live in, or for the profit of a few, not really and vitally interested in making the best house, the best estate, the best town, for the money. E. M. F.



The south, or garden, front. The French feeling in this house, though it has no louvred shutters, is here conspicuous; the eye is cunningly beguiled into imagining them there by the vertical stripes of the red brickwork, either side of every window opening, contrasting as shadows with the highlights of the plaster stucco, which is coloured a warm cream.

A SURREY HOUSE ON FRENCH LINES

DESIGNED BY BASIL OLIVER

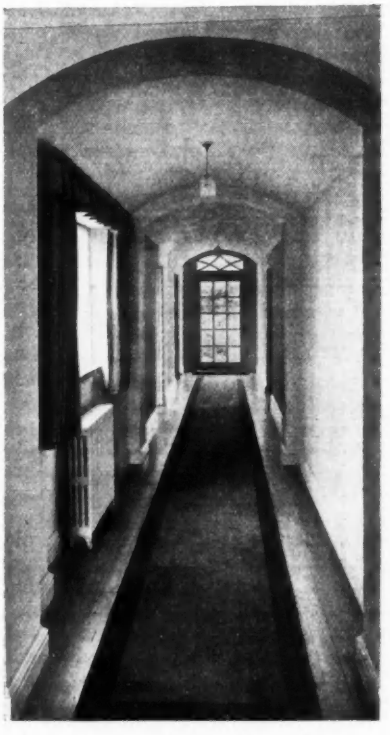


The garden door from outside. Roof tiles have been used decoratively here, for the segmental window openings in the south front, and elsewhere.

THE End House, Fife Road, East Sheen, was given its distinctively French character in accordance with the wishes of the client for whom it was designed. Yet it has no louvred shutters, and the French windows are of metal, and open outwards, not inwards. The structure throughout is of brick, sand-faced red facing-bricks of slightly varying shades having been employed, and the illusion created is due to the covering of the brickwork with plaster stucco tinted a warm cream, disposed in vertical stripes. They counterfeit the shadows of the absent shutters. The roof is covered with red, hand-made pantiles having a bold roll. Metal windows were used throughout, and these and the wooden frames to the windows were painted ivory white to match the plasterwork. Rain-water gutters, down pipes and balconies were painted lead colour.

The planning has several points of interest. The three principal rooms on the ground floor adjoin, and can be thrown *en suite*. There is also a corridor running the length of the house. Further, the servants' quarters are isolated in a northerly wing.

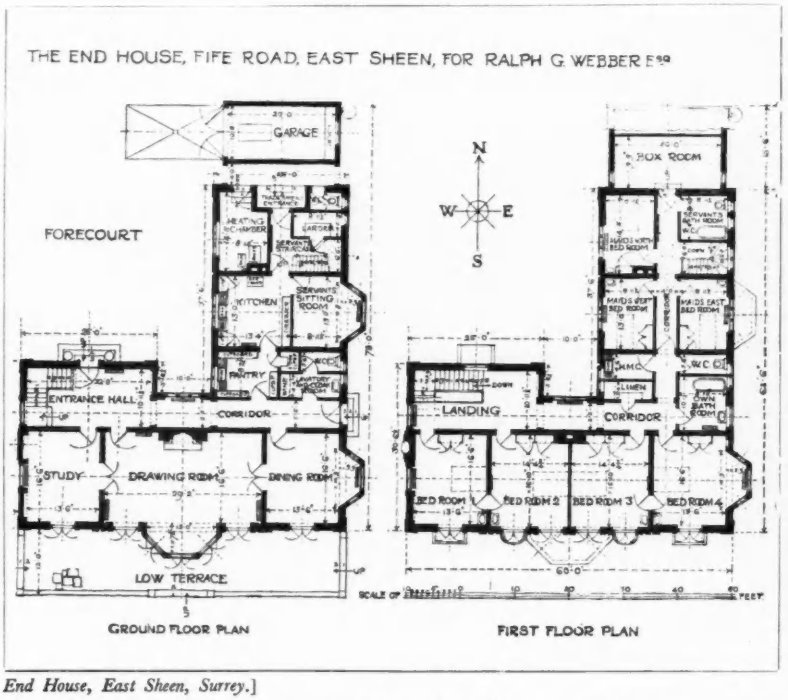
A decorative feature in the interior is the balustrade to the staircase, which the architect confesses to have been suggested by some modern work of Bruno Paul. The exterior, too, has many ornamental attractions.



The garden door from within. It occurs at the eastern end of the main corridor that runs the length of the house, as seen from the plan on the facing page.



The main entrance and forecourt, with the entrance porch, which faces north; the kitchen wing is seen on the left. The niche and corbel between the upper windows of the west end, which faces towards the road, were formed of plain roofing tiles; either side are decorative panels, cast in artificial stone. The metal casements, which have 1-in. glazing bars, are painted ivory white.



End House, East Sheen, Surrey.]

The planning is axial, giving a vista through the three reception rooms. The kitchen, working quarters, garage and servants' bedrooms are self-contained in the north wing. The four principal bedrooms face south, and all have balconies and are fitted with lavatory basins.



[*By Basil Oliver.*

The iron stair balustrade, with sprays of rose-leaves and blossoms in oval panels, was suggested by some modern work of Bruno Paul.

SUNDAY SCHOOL IN BUCKS.

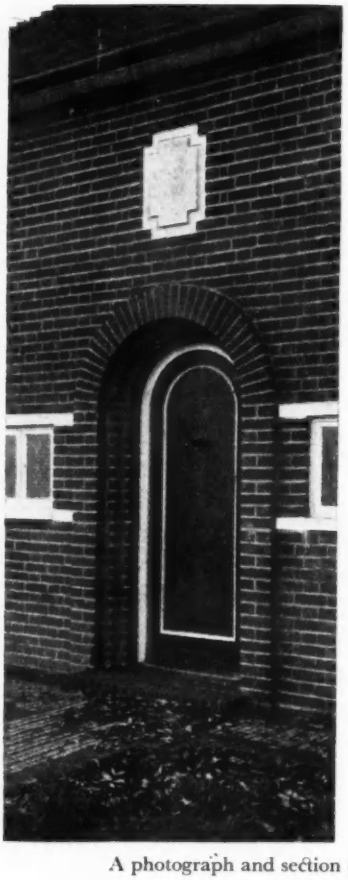


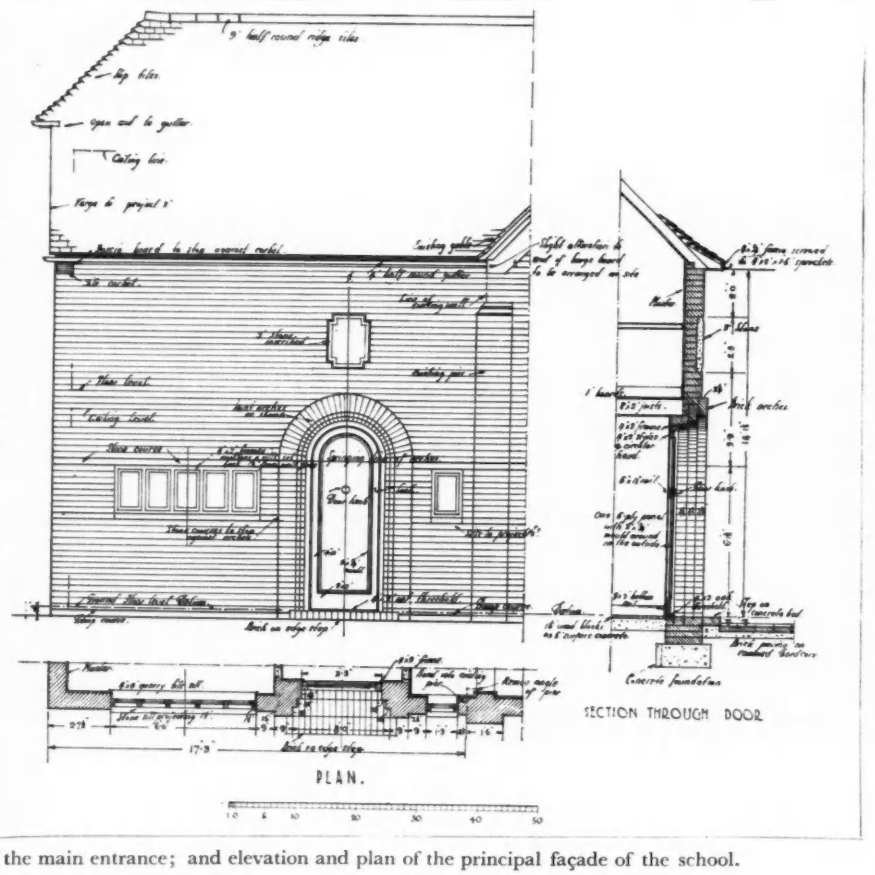
A general view of the Nonconformist Church at Holmer Green, showing how the Sunday School additions have been incorporated in the design, in order to make one complete unit. The additions are on the left of the barge-boarded gable. The new front has been correlated to the existing by continuing the main horizontal lines of the white stone courses.

DESIGNED BY FRANK T. WINTER

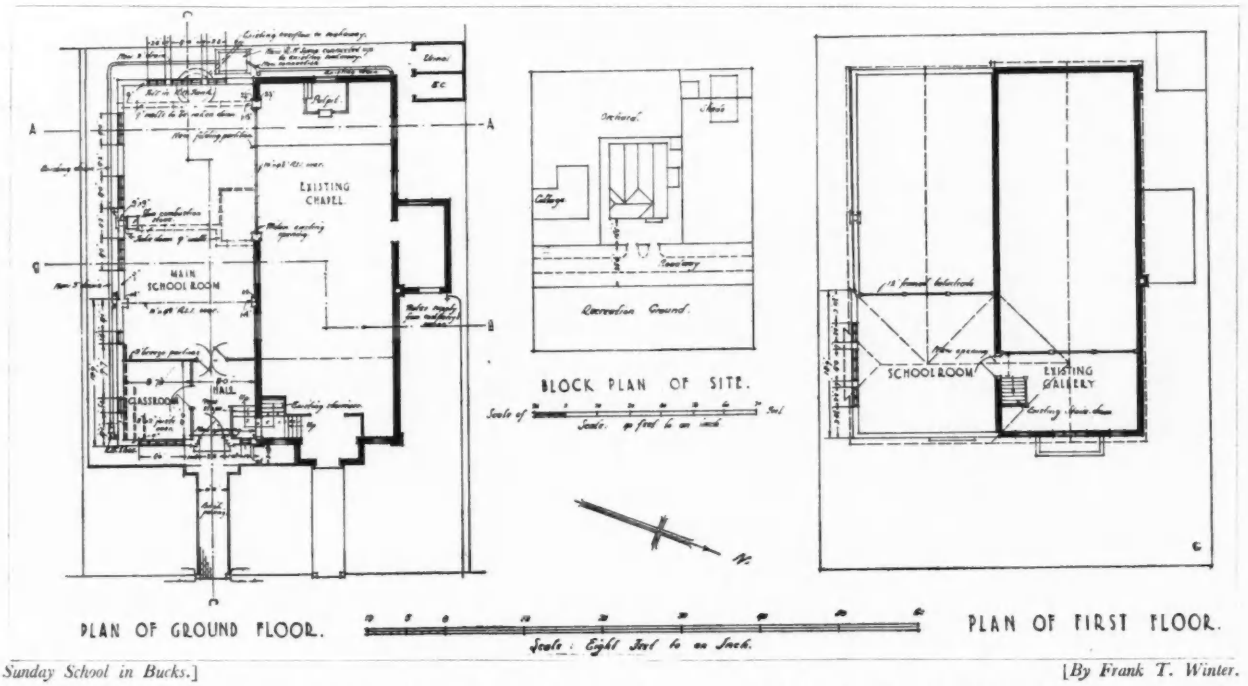
THE building illustrated — a Sunday school addition to an existing Nonconformist chapel at Holmer Green, High Wycombe, Bucks.—represents a solution of an interesting though somewhat exacting problem.

A number of conditions had to be observed in working out the design. The site was small for the accommodation required; the maximum amount of classroom space had to be provided,





A photograph and section of the main entrance; and elevation and plan of the principal façade of the school.



Sunday School in Bucks.] [*By Frank T. Winter.*

Ground- and first-floor plans and block plan of site. Note how the entrance hall has been contrived by cutting openings in the old wall in order to afford access to all parts of the new and old buildings.

with separate rooms for two senior classes; the schoolroom had to be so arranged that it could be thrown open to the chapel on special occasions; the lighting of the chapel had to be affected as little as possible; and the front of the building had to be designed so as to join up with a building of no particular architectural interest, alterations to the latter not being desired.

The plan provides for a main schoolroom and one classroom on the ground floor, and a smaller schoolroom on a first or mezzanine floor, the second senior class being accommodated in the gallery of the chapel itself. By adapting the existing staircase by means of cutting openings in the old wall, it was possible to contrive a small entrance hall affording access to all parts of the building with little or no waste of space. A folding partition 16 feet long is arranged between the main schoolroom and the chapel.

The walls are plastered and have a dado of plywood panelling throughout. A feature of the interior is a simple panelled treatment on the end wall, incorporating a reproduction in colour of Raphael's Granduca Madonna—the gift of Mrs. Henry Cadbury. The foundation tablet is of stone, inscribed with gilded lettering. This is placed inside the entrance hall, where it can be seen and read, and contains a strikingly-worded dedication to the children who use the building.

The floor is of pine blocks. All internal joinery is of Colombian pine, stained and dull varnished.

An attempt has been made to correlate the new front with the existing by means of continuing the main horizontal lines. The positions of the arched recessed doorway and the windows arise in logical sequence from the plan, and these, together with the stone plaque over, form in themselves a complete and balanced unit.

LETTERS FROM READERS

Contemporary Decoration

SIR,—The paper on contemporary decoration, which was read by Mr. Arthur J. Davis before the Royal Society of Arts, and of which you publish extracts in your issue for March 18, seems to me as admirably concise and lucid as any other contribution I can remember to a discussion which yet, perhaps, can never be kept within the limits of a single argument. The serious consideration of modern tendencies in the "applied" arts by someone of Mr. Davis's authority, cannot fail to stimulate all conscientious artists and craftsmen. But, by reason of his very brevity, he is inclined, in common with other critics, to beg the whole question. For it is in the end inseparable from the far greater question of æsthetics generally, which, in its turn, can only be approached with an hypothesis proceeding from some particular interpretation of history.

Is this age capable of producing a new æsthetic? Mr. Davis says there is today "no recognized style, such as was adopted by the artists of the eighteenth century." Admittedly, we have no style (and here *style* must not be confused with *design*, which is merely the manner of expressing any given style); but the eighteenth century artists never *adopted* theirs. In the eighteenth century a building was erected, without question, in an eighteenth century way; while the craftsmanship, literature, amusements, institutions and ceremonies of the period were bound together in an irrefutable kinship of which tradition held the key. And, until the end of the first quarter of the nineteenth century, which saw the disruption, not so much of an unbroken tradition as of an invariable traditionalism, functional activity was fulfilled in a form which received the endorsement of unanimous, if passive, consent.

Again, Mr. Davis says that "some great artists, even if they have had the misfortune to be born at a time when æsthetic appreciation was at its lowest, have risen superior to their environment." . . . I submit that the artists who have risen, or have had to rise, superior to their environment are too few to matter (and I do not, nor presumably does Mr. Davis, refer to personal circumstances). The history of art tells of the natural adoption by races and nations of art forms peculiarly

appropriate to their spiritual and functional existences, and not to the imposition on them of art movements owing their origin to the irrelevant invention of individuals, no matter how inspired.

Does not the very fact that there is room for discussion of present tendencies in the arts indicate of itself the decay of the arts? What but confusion and incoherence can follow from the conflict between opposing schools, the individual interpretation of experience, the vision of idiosyncrasy, the insistence on peculiarity and separateness, which is the inevitable revolt against group exploitation and mass-economic organization?

It is not surprising that the wish to achieve artistic expression which today accompanies, not indeed a deepening historical insight, but the accumulation of historical data—a wish, as it were, to emulate something infinitely desirable, because definitely out of reach, in a past to which modern analysis (so singularly equipped to weigh, to measure, to reduce to dead elements, and withal so impotent) has assigned the qualities we feel we most admire—it is not surprising that this should come to be regarded as itself sufficient promise of attainment. Not surprising, but a delusion for all that; and one, as it seems to me, which is largely the result of a confusion of ideas, of a failure to bring to the examination of the modern world a self-irony indispensable to a late age. For what shall the wish avail if the inner necessity is absent: the character, the tradition, the habit, the *style?* By what should these be replaced if not by the knowledge and acceptance of limitation?

ROBERT LUTYENS

SIR,—Mr. Davis, in his lecture on "Some Aspects of Contemporary Decoration," quite evidently, like many other intelligent observers who do not actually practise within the realm of their subject, sees only the two extreme and rather obviously defined expressions.

The advocation of steering the middle course between the scientific purism of such new prophets as Mendelsohn and Corbusier, and the archæological accuracy of copyists, is not merely, as he sees it, an ideal goal yet to be reached, but is an accomplished fact. Mr. Davis could very easily verify this in the pages of such German periodicals, for example, as *Moderne Bauformen*, *Innen-Dekoration*, *Baugilde*, and *Baukunst*—to name but a few—which every month lay before their readers reproductions of work exemplifying all the qualities that Mr. Davis sighs for.

The fact that this movement may not at the time of writing constitute a style is explained by the rapid changes which modern invention in the first place imposes on contemporary artists of sensibility in the second place.

The ever-changing quality of the best contemporary work suggests an unprecedented wealth in the combination of the two forces which compares more than favourably with past achievement.

Mr. Davis suggests that greater attention should be paid to the scholarly equipment of the art student in this country and its implied greater knowledge of old forms.

My own experience, however, tells me that, on the contrary, the less timid student, capable of intelligent and creative work, is that one who has left behind archæology, the old orders and copybook æsthetics, and has turned with greater perception to the sociological and scientific aspects of our time, who is striving to establish a new orderliness of structure related to real life, and is so enabled to build within this structure a new æsthetic in which hygiene, heat and light play a leading and not subsidiary part.

S. CHERMAYEFF

SIR,—It was distinctly refreshing to hear an architect of Mr. Davis's standing, lecturing at the Royal Society of Arts, deal with decoration in such a thorough and scholarly manner, and, by selected illustrations, prove that this country still has respect for its artistic traditions, and is now producing work that compares more than favourably with that in other countries.

A comment by Mr. Davis that "a servile reproduction which has no relation to our age and time is contemptible; it is an unsuccessful attempt to galvanize a dead body into life" was particularly apt, and caused one to think furiously of the Tudor pavilions at Buenos Aires, erected to convince potential buyers that we are really alert and progressive!

HENRY G. DOWLING

Smoke Prevention

SIR,—I must apologize for asking for more of your space, but would be grateful for the opportunity of replying to some of the more important points brought up in Mr. Gentry's letter, which appeared in your issue for February 25.

The principal one is his assertion that "damaging products are given off not only by raw coal but by any solid 'smokeless fuel.' Soot in itself is not harmful either to human beings or to buildings." With the latter statement the laundries and window-cleaners would no doubt agree, but when I find the cuffs of my shirt blackened after one day's wear, and the papers on my desk covered with a layer of smuts on returning from lunch, I am at least entitled to maintain that soot is a nuisance. With respect to the former portion of the quotation, Mr. Gentry entirely ignores the one constituent of coal smoke which makes it so destructive, and which is not found in the combustion products of carbonized fuels, and that is tar. Domestic smoke may contain up to 40 per cent. of tar, which permits the deposit to adhere to the surface on which it falls, and this, in addition to its own action, enables the sulphur acids to exert their corrosive influence in a concentration far greater than would otherwise be possible.

In addition, "tar is a known irritant of the mucous lining of the windpipe and smaller tubes," and "it is a well-known fact, established both scientifically and in industrial life, that tars and mineral soils produce cancer." (Dr. J. S. Taylor.)

With the solid smokeless fuels there is an absence of carbon and tar from the waste products, and the sulphurous acids (both sulphur oxides become sulphuric acid eventually), having no nucleus to absorb them and bring them down, are quickly dispersed through the atmosphere. While their complete absence would be welcome, their effects are of little moment compared with those of smoke.

With respect to the ten million tons of smoke and three million tons of soot, which has puzzled Mr. Gentry, I am afraid that I have been guilty of using two different authorities without correlating their figures, but the error is small. The Committee on Smoke and Noxious Vapours Abatement gave the figures of 2½ million tons of soot from domestic fireplaces and 500,000 tons from industrial chimneys, per annum. Professor W. A. Bone estimates two million tons and 1½ million tons of carbon from domestic and industrial operations respectively, and assuming that domestic smoke deposit contains 60 per cent., and industrial, 25 per cent. carbon, there is a total weight of 9·3 tons of smoke emitted yearly. (*Coal and its Scientific Uses*, pp. 245–6.)

In answer to the point that 33 cwt. of coal are needed to produce one ton of smokeless fuel, I would suggest that the true way of conserving our coal supplies is not to cease using them, but to use them in the most profitable manner, and that it is more to the national benefit to use 33 cwt. for carbonization purposes than 20 cwt. for use in the raw state.

In conclusion, I would like to thank Mr. Gentry for his courteous replies and agree with him that it might be of great value for the Coal Merchants' Federation of Great Britain, this Society and other bodies, to cooperate in examining the problems with which we are all concerned, towards an end we all desire. ARNOLD MARSH

(GENERAL SECRETARY, NATIONAL SMOKE ABATEMENT SOCIETY)



The Lea Bridge Road front. The site is just beyond the boundary of the L.C.C., thus the factory was erected without many irksome restrictions. Nevertheless, the shaft in the rear of the offices is a monument to a bylaw which prohibits manholes inside a building.

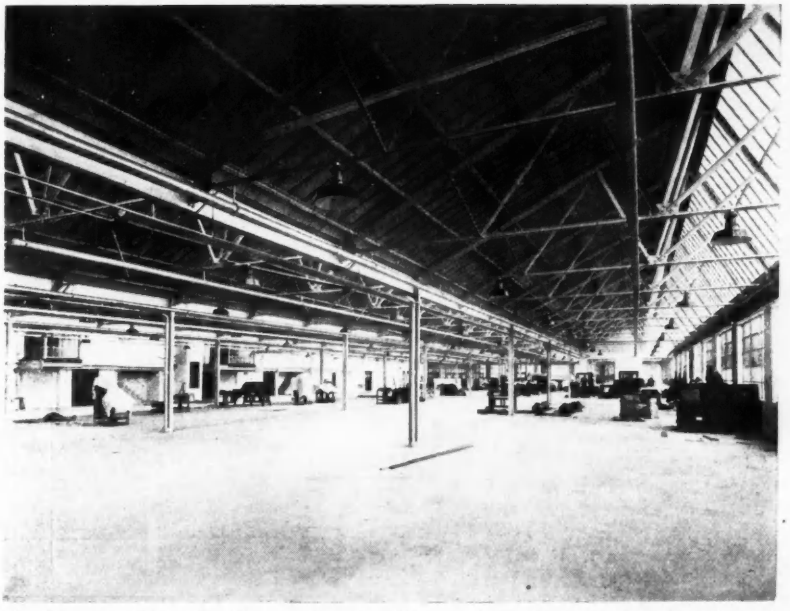
CARDBOARD-BOX FACTORY AT LEYTON, ESSEX

DESIGNED BY H. VICTOR KERR

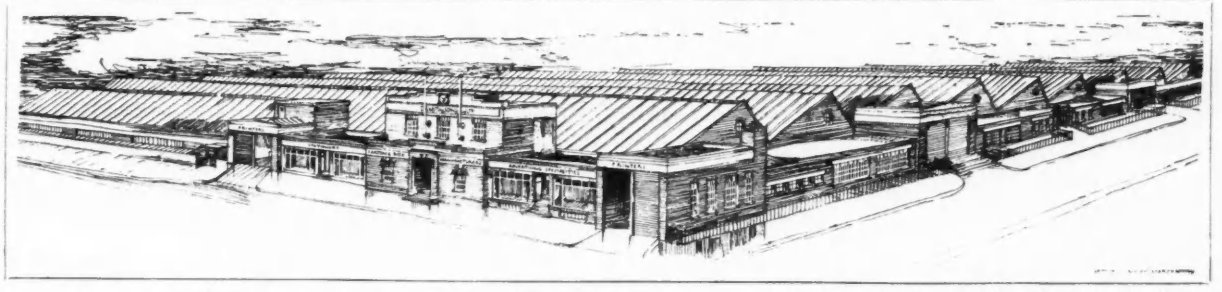
IN planning this cardboard box and carton factory for Messrs. D. Smith and Son (1924), Ltd., two distinct processes had to be provided for, i.e. hand-made and machine-made goods, each having different raw materials. All raw materials enter by way of the reception dock and lifts from Lea Bridge Road, and on leaving the latter, are put into the respective stock rooms on either side.

Both processes start from a point on the main factory floor near these stockrooms, the machine-making progressing clockwise around the factory and the hand-making anti-clockwise, reaching their respective finished stock rooms on either side of the loading dock in Burwell Road.

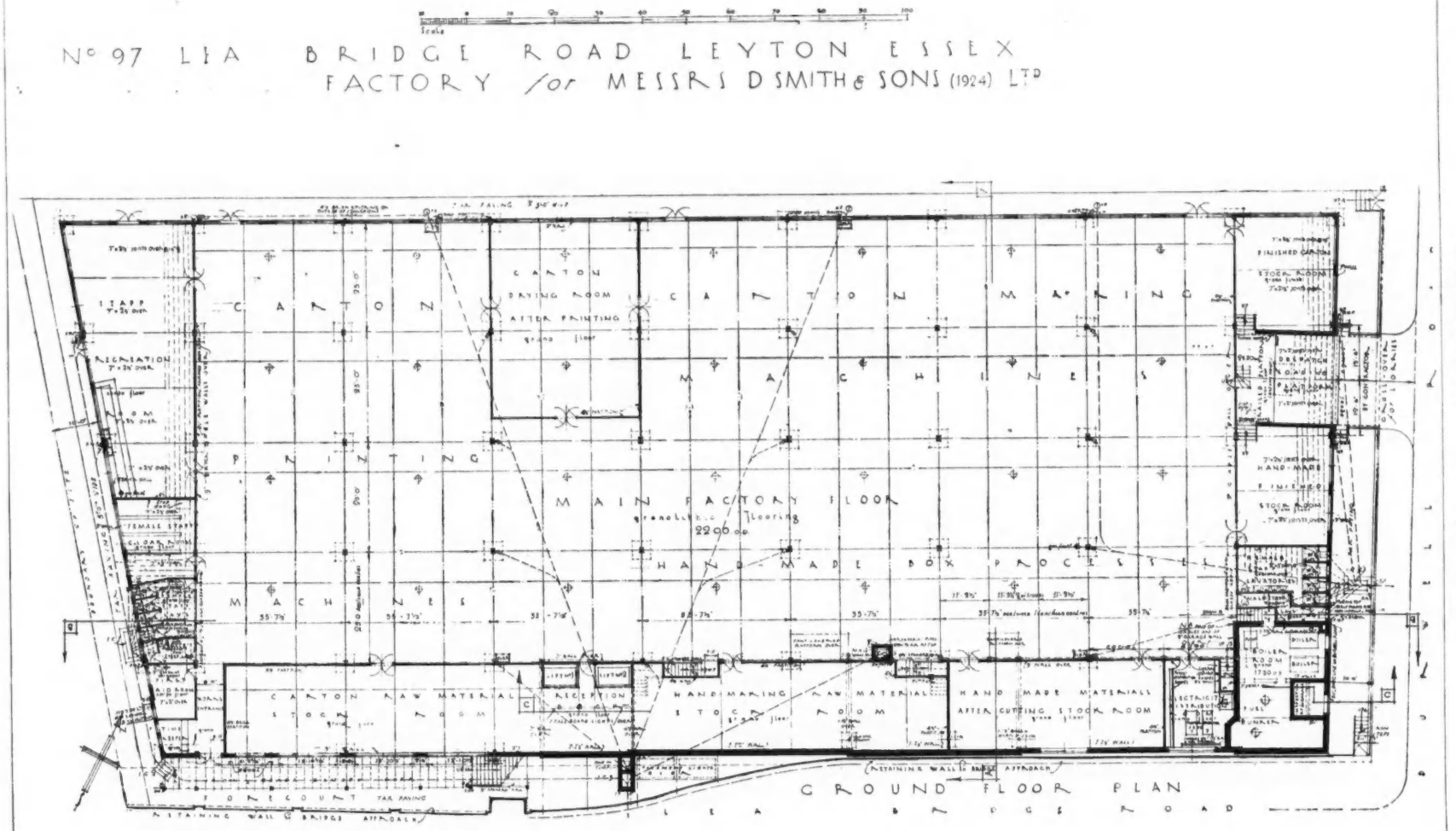
The construction is a simple system of north-light trusses on beams and stancheons. Wired rough-cast glass in lead-covered bars is used on the north pitches, and asbestos cement tiles, without internal lining, are laid on the south. Low-pressure steam heating is used, carefully balanced with a natural system of upward ventilation through cowls.



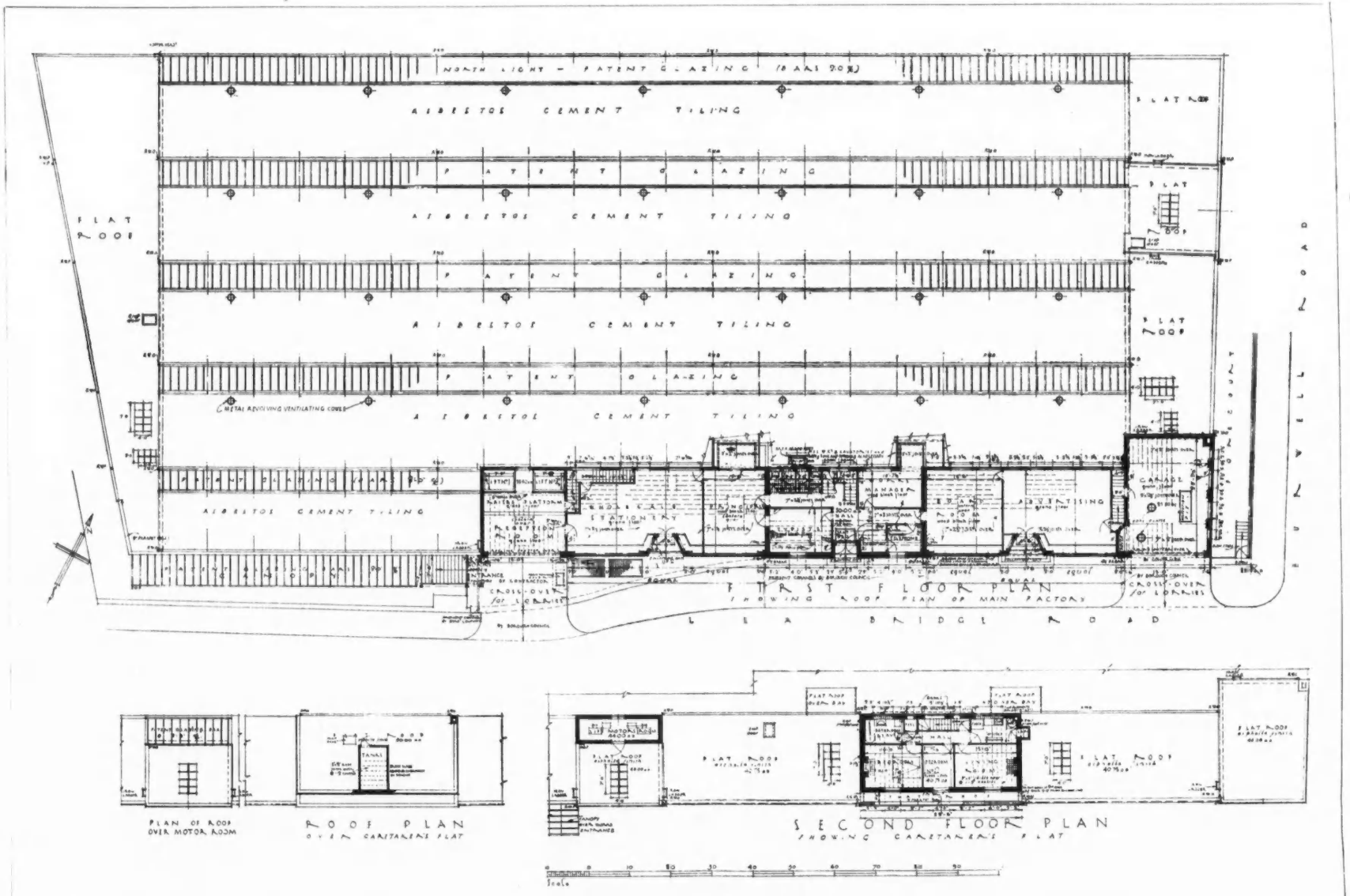
The floors are finished with a special material to resist the heavy traffic of steel-tyred trucks. The small areas surrounding the machines are of wood blocks for the comfort of the operatives.



The architect's perspective drawing. The site is almost level and occupies two acres, the present scheme embracing about half that area, leaving the remainder for expansion. The main elevation is in Dorking flush-pointed facings and white cement stucco.



Ground-floor plan. The mean level of Lea Bridge Road, adjusted to the form of a bridge approach, is about 8 ft. above the general level of the site. Advantage was taken of this to carry the offices on steelwork at street level; the space beneath has been economically utilized for stock, and is readily accessible from the main factory at the same level,



Cardboard Box Factory, Leyton.] [*By H. Victor Kerr.*

Plans of the first- and second-floors, and of the roof. The height of the office block made the provision of cantilevered observation bays from the principal's and works managers' offices a simple matter, and from either of these the administration staff have an uninterrupted view of the factory. External factory walls are of 9-in. stock bricks between stancheons.

THE SPECIFICATION WRITER

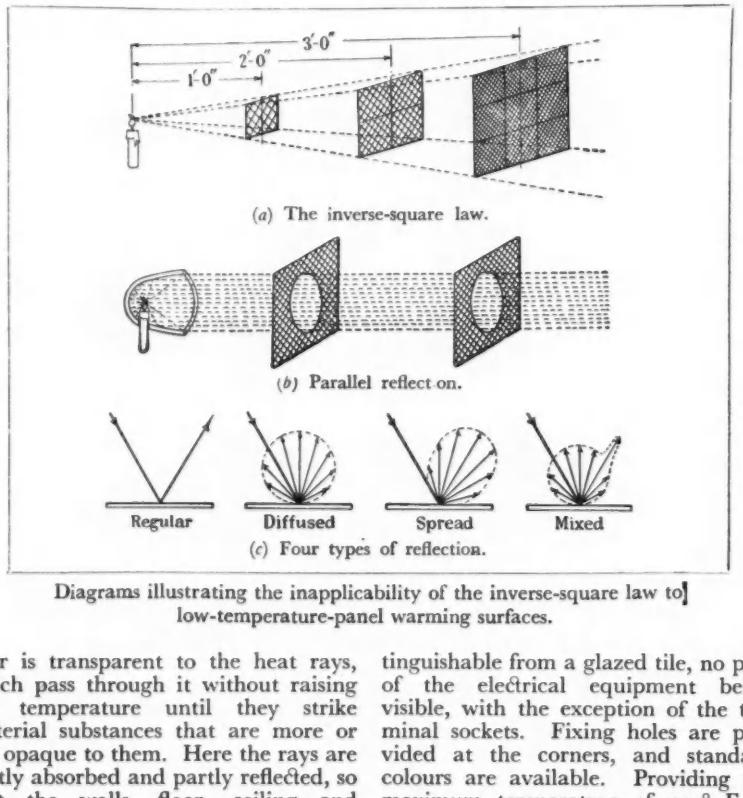
Panel Heating Systems

BY RONALD GRIERSON

The following has been extracted from the author's paper on "The Electrical Heating of Buildings," recently read at the Institution of Electrical Engineers.

ARCHITECTS and decorative artists have been quick to appreciate the advantage of eliminating all visible pipes and radiators from their buildings and rooms, and during the last twenty years the hot-water panel system, in which the panels have, in the majority of cases, been located in the ceiling, has been successfully applied to many large buildings both in England and abroad.

The suggestion is frequently made that the emission of heat from panel-warming surfaces must comply with the well-known inverse-square law and that, therefore, the system must fail when fixed in the ceilings of lofty rooms. It will be recalled, however, that the inverse-square law only applies to radiant emissions from a *point* source, whereas on an extended panel surface there are myriads of points emitting radiant heat. (See accompanying illustration.)



(*a*) The inverse-square law.

(*b*) Parallel reflection.

(*c*) Four types of reflection.

Diagrams illustrating the inapplicability of the inverse-square law to low-temperature-panel warming surfaces.

Air is transparent to the heat rays, which pass through it without raising the temperature until they strike material substances that are more or less opaque to them. Here the rays are partly absorbed and partly reflected, so that the walls, floor, ceiling and furniture are all warmed, and themselves become secondary radiating surfaces. It is due to the convection effect at these surfaces that the air is warmed. Just as the image of a light can never be brighter than the source, so also the air can never be warmer than the surface that warms it. In a ceiling-panel-warmed building, these surfaces are the floor, walls and furniture.

As to electrical panel-warming systems, these may be briefly divided into three main categories, viz. :—

a : The high-temperature, non-embedded panel, operating at temperatures of the order of 550° F.

b : The low-temperature, non-embedded panel, operating at temperatures of the order of 100–150° F.

c : The low-temperature, embedded panel (e.g. incorporated in the plaster or concrete of the structure), operating at temperatures of the order of 80–120° F.

Briefly described, type (a) consists of a glazed fireclay tile, $\frac{5}{8}$ in. thick, in which is incorporated a resistance element formed of graphite of ribbon section. As sold to the installer or the user, the plaque or panel is indistinguishable from a glazed tile, no part of the electrical equipment being visible, with the exception of the terminal sockets. Fixing holes are provided at the corners, and standard colours are available. Providing the maximum temperature of 500° F. is not exceeded, the panels are stated to have an unlimited life. It will be realized that restriction of the free transfer of heat from the panel by enclosing it, e.g. in a metal casing, would increase the surface temperature considerably above the figure it would attain if it were freely exposed to the air. Again, the free transfer of heat from a panel is restricted if the latter is mounted in a horizontal position.

A typical installation in a drawing office, having a cubical content of 39,000 cub. ft., has a total loading of 39 kw. (1 watt per cub. ft.), which is divided between thirteen 1,750-watt panels, mounted on the walls at an average height of 7 ft. 6 ins., and sixteen 1,000-watt panels suspended from the ceiling at a height of 10 ft. above floor level.

A recent development of this system is the combination of the panels with lighting fittings of the metal and glass panel type.

Perhaps the most convenient form of type (b) for general use is the metal box (see illustration), which may be either of cast aluminium or sheet iron, for this construction has the merit of mechanical strength for transport and handling on site. Other forms include thin slate panels (which may be finished to represent marble for use in bathrooms, entrance halls and the like), and also pre-cast plaster slabs, complete with mouldings.

Maximum surface temperatures are of the order of 100–180° F., and loadings are of the order of 40 watts per sq. ft. Present information indicates that standard loadings will be 250, 500, 750 and possibly 1,000 watts.

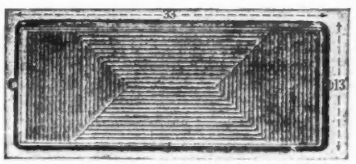
Type (c), in its simplest form, comprises a backboard that serves the dual purpose of a foundation plate to carry the warming element, and a partial heat insulator to minimize the loss of heat through the back of the panel.

The element is formed of a three-strand, nickel-chromium alloy, insulated with a specially treated rubber mixture which will permanently withstand a temperature of 180° F., as compared with the maximum working temperature of the wire of 140° F. and a normal working temperature of the wire of 120° F.

In the low-temperature panels the conductors are stretched in parallel formation at approximately $\frac{5}{8}$-in. centres over the backboard, and are run in solid with a liquid mixture of plaster of Paris, which entirely surrounds them and adheres with great tenacity to the insulating backboards. As regards durability, the conductors are completely embedded and are rigidly held in the plaster of Paris slab, so that the access of air is prevented and short-circuiting between turns is impossible. Dry plaster of Paris is an excellent electrical insulator; serious earth faults are inconceivable, over-heating is impossible, and fire risk is negligible.

The smaller panels are naturally more costly to manufacture than the larger panels, and prices therefore are not strictly proportional to the area or loading.

After erection in the ceiling so that the surface is flush with the floating coat of the remainder of the ceiling, the setting coat of plaster is applied to the whole ceiling area, and thus panels become invisible in the finished ceiling. Slight modifications in the normal procedure of plastering are recommended, such as the use of hydrated lime and the insertion of scrim in the setting coat.



A typical low-temperature metal-cased wall or ceiling panel.

Other forms of panels available for walls, ceilings and also for floors, to meet special requirements, include the double-ended and single-ended tubular types, comprising steel or copper tubes, fixed on 3-in. centres and threaded with bare conductors. Glass tubes or other suitable non-organic insulating materials are employed for spacing the conductors from the metal tubes. These tubes are also embedded in the plaster or the concrete of the structure as already described.

A recent patent covers the use of oil-filled tubes in floors, designed to transmit the heat more readily from the wire to the tubes than is possible with an air-filled tube, and thereby to lower the temperature gradient that exists between the wire and the tube. With this type the heat-storage capacity of a heat-insulated concrete floor may be utilized.

LIMEWASH is a generally successful preservative of stone. Accordingly, the Society for the Protection of Ancient Buildings has issued a memorandum on the subject. The lime used for making limewash must, it is pointed out, be stone lime, and not either chalk or gas lime. Moreover, it must be freshly burnt and in the lump. It is recommended that the question of colour should be left until after application of the final coat of limewash, when a little dry colour or dust can be rubbed or brushed on. To make the limewash, 2 lb. of lime may be put into an ordinary 3-gallon bucket with ¼-lb. of crushed common salt, and 3 quarts of boiling water added. The lime will, or should, if fresh, cause furious boiling in the pail; upon this the efficacy of the wash depends. A little more water should next be added, the mixture well stirred and left to slake; later the bucket may be filled, thus yielding 12 quarts of skimmed-milk consistency. Application, after first brushing down the stonework, is best made with a grass brush, patiently saturating the surface and working into all interstices. Second and third coats should be equally carefully applied, and the work should not be undertaken on days so hot that evaporation proceeds too fast to ensure a proper working of the wash into every crevice. The process is admitted to be tedious: it takes some time to become a really good limewasher.

Slag Wool in Buildings

BY CHARLES H. BUTCHER

IN appearance slag wool consists of a mass of very fine fibres, interlacing with each other in every direction, thus forming an innumerable number of minute air-cells. Its mere form therefore, at once suggests that it should be remarkably efficient as a heat-insulating medium, and for deadening sound. Although the truth of this supposition is borne out in actual building practice, the material could be used for a considerable variety of purposes, not all of which are yet realized.

In comparison with other heat-insulating materials—cork, hair, felt, asbestos, magnesite and wood—slag wool can be commended on several grounds. First, it is not merely fire-resisting, but quite *fireproof*, or in other words non-combustible and indestructible by flame; the other materials mentioned, excepting asbestos and magnesite, are *not* fireproof.

Secondly, it is vermin and insect proof, for the fine fibres of mineral matter of which it is composed are irritating to anything which attempts to burrow into it; with neither food nor comfort there is no inducement to stay. Being entirely free from organic matter, it is also relatively immune as a possible carrier of disease; there is nothing present which is capable of supporting germ life or fungus.

Thirdly, it contains a very considerable amount of air (sometimes as much as 94 per cent.), which, although said to be held in close confinement in the minute air-cells is, nevertheless, still permitted to filter through very slowly under the influence of air currents. From this it follows that if slag wool is laid in close contact with wood, it will not so imbed the wood that free access of air is denied and conditions are set up which favour dry rot. Cements and plasters used for sound deadening, on the other hand, always seal the breathing pores of wood with which they are in close contact. Slag wool has a fourth claim to attention; it is a cheap material and easily obtainable.

In illustration of its general heat-insulating value, its use for sound screens between floor and ceiling or in partition walls, and as a means of protection against fire spreading from one combustible material to another, some special instances of utility may be cited. Closely allied to heat insulation, for instance, there is protection against frost.

A liberal use of slag wool gives better protection to water pipes than other insulating materials which are available "but which are so rarely used." With slag wool the imbedding of the pipes is not a difficult nor a lengthy operation, so that there is really no excuse for damage and annoyance being caused by frost when it is possible to avoid this by demanding "frost insulation" which can be procured at a small additional cost. Cisterns located in the roof should come in for particular attention, for no great expense is involved in the provision of a wood casing with the intervening space between wood and metal filled by slag wool.

Again, a noticeable saving in fuel could always be effected if the hot water service pipes in houses were cased with heat insulation; and although this is easily demonstrated on existing installations where insulation has been adopted, like protection against frost, it is a matter which is ignored more often than not.

A wider use of sound deadening materials, considered generally, apart from slag wool, has been found desirable in some flats, and in many of the newer houses, where the noise of valves in the lavatory and running water in the bathroom is noticeable. Here, too, however, slag wool is an ideal material for use.

It could also be utilized to advantage as an insulating material for pantry walls exposed to the heat of the sun, in cases where the pantry is unavoidably situated on the south side of the house. Fire protection for wooden mantels, which are often found touching the tiled surround of the fireplace, is another good instance of its application, for even where there is no actual risk of fire there is ample evidence of undue shrinkage in part of the woodwork.

Where slag wool is used in bulk, it must be held in place by some retaining support or casing, unless this condition is already fulfilled by that part of the structure concerned. For instance, consider its application as a sound-deadening material for floors. Here it is most convenient to cover the joists with a light intermediate floor, upon

which spacing strips are fixed to carry the true floor. These strips should be ¼ in. thicker than the desired depth of slag wool to be used; the slag wool is then merely packed in the space between the strips, before the floor is laid.

Alternatively, the wool can be carried by a light sub-floor fixed between the joists, for a 2-in. layer (usually sufficient for sound-deadening) will only weigh from 1½ to 2 lb. per ft. super. The wool should be packed closely but *not* tightly, and should be pressed just below the level of the strips, so that the carpenter will not be hindered when laying the true floor. In the construction first outlined, strips of felt paper can, if necessary, be laid between the secondary joists and the intermediate floor for the purpose of preventing direct transmission of sound through the woodwork.

Where slag wool is used for sound-deadening against brick walls or partitions, furring strips should be fixed to the wall and a thickness of wool from 1½ to 2 ins. packed in the intervening space between the laths. In roof work it can be packed between the rafters and carried by sheathing fixed beneath them; here the work should be commenced near the eaves and carried on, moving towards the ridge, the wool being packed in as the sheathing is done. Applied to roofs, it will be found very effective for over-riding the extreme temperature difference between winter and summer where there is "a room in the roof," or where the roof space has been made available for storage purposes by the provision of a floor.

SOCIETIES AND INSTITUTIONS

WEST YORKSHIRE SOCIETY OF ARCHITECTS

THE sixth and final lecture of the series given by members of the above society in conjunction with the local education authority, was delivered at the Huddersfield Technical Institute on March 20, by the president, Mr. Norman Culley, F.R.I.B.A., his subject being, "The Past, its Lessons; the Present and the Future."

Mr. Culley, by means of over one hundred lantern slides, traced the structural evolution of architecture through successive periods: the limited requirements of the Greeks, and the consequent simplicity of their buildings; the more complex needs of the Romans, leading to a love of magnificence; the unbalanced plans of mediæval structures, and their development of walled cities, with the cathedral or church as an æsthetic and spiritual centre; the world movement of the Renaissance; and, later, civic planning in the grand manner as developed in France.

He explained the various movements responsible for the so-called new architecture, and said that progress had been so rapid that many of their latest buildings were already out of date.

The vote of thanks was proposed and seconded by Messrs. A. L. Dyson and J. H. Milner, respectively.

THE UNIVERSITY OF LIVERPOOL

Following are the results of the examinations held at the University of Liverpool during March, 1931:

Faculty of Arts: Degree of B.Arch.—Fourth Examination:

(i) *Honours Design*

Bell, G. P.
Best, A. M.
Blair, W.
Ferriby, A. E.
Fidler, A. G. S.
Gardner - Medwin, R. J.
Gonsal, H. E.
Goodacre, N. W.
Hope, A. H.
Horsburgh, E. R.
Hubbard, R. P. S.
Lake, H. J.
Littler, F. H.
Lunn, N. S.
Naude, D. F. H.
Rathmell, M.
Smith, R. V.
Stammers, Constance S.
Winston, D.

(ii) *Honours Construction*

Coates, U. A.
Geary, K. W.
Jones, D. M.
Meiring, A. L.
Riad, M.
Roberts, R. E.

(iii) *Ordinary Degree*

Wilkinson, J. G.

Faculty of Arts: Diploma in Architecture.—Fourth Examination:

(i) *Distinction in Design*

Beckett, S. H.
Bennett, A. C.
Berger, L.
Crighton, A.
D'Alwis, H. T. S.
Davies, T. E.
Hernandez, L. M.
Lazarus, J.
MacIntosh, Jean
Mayo, Mary I.
Parkinson, J. L.
Peace, F. N.
Plews, C. E.
Rennie, H. G.
Richardson, Rachel J.
Rogers, V. W.
Sheridan, J. G. R.
Sydney, P. A.
Wyatt, H.

(ii) *Distinction in Construction*

Roberts, A.

(iii) *Ordinary Diploma*

Smith, H. B. K.

TOWN PLANNING

A dinner to celebrate the 21st anniversary of the Town Planning Act, will be held at the Holborn Restaurant, London, on April 17.

HEATING AND VENTILATING

At the twenty-seventh annual general meeting of the National Association of Heating, Ventilating and Domestic Engineering Employers, the president, Mr. F. A. Norris, reviewing the work of the Association for the past year, said substantial increases had been made both to the membership and funds.

The appointment of officers resulted in the re-election of Mr. Norris as president, for a third year; Messrs. R. C. Ching, Harry Walker, and J. L. Musgrave as vice-presidents; and Mr. Stanley J. Benham as honorary treasurer. The Council was completed by the appointment of Messrs. C. T. Bassett, George Crispin, R. M. Hampton and J. E. Steel.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Town Planning

MR. FREEMAN asked the Minister of Health how many local authorities had taken advantage of the Town Planning Act and how many had not done so; and whether, in view of the results so far achieved, he intended to take similar action with regard to country planning in rural and county areas.

Miss S. Lawrence said that the number of town-planning authorities in England and Wales was 1,764. The number of town-planning authorities who had prepared schemes which had already been approved, or were preparing schemes for approval for areas in their own districts was 493, and schemes had been approved or were being prepared for areas in 214 other districts by neighbouring authorities or joint committees. In addition, approximately 360 other town-planning authorities were represented on advisory joint town-planning committees. In reply to the latter part of the question, she referred Mr. Freeman to the Town and Country Planning Bill introduced last Friday.

Mr. D. G. Somerville asked if the Town and Country Planning Bill had been submitted to the different local authorities of the country for their comments; and whether the private interests affected would be afforded an opportunity of expressing their views by the grant of adequate time before the measure was submitted to the House in its later stages.

Miss Lawrence said that the Bill had not been submitted formally to all the local authorities for their comments, but it was drafted after prolonged conference with persons familiar with the problems, including persons experienced in local government. There would be plenty of opportunity for interested bodies to express their views, and the Minister would be very glad to arrange for conferences with representative bodies.

British Steel Window-Frames

Mr. Walker asked the Minister of Health if he would direct the attention of local authorities to the desirability of using British steel window-frames in their houses in preference to those of imported timber, in view of their greater durability and consequent ultimate economy.

Miss Lawrence said that the local authorities were generally well aware through other channels of the advantages claimed for steel window-frames, and the Minister did not think that any useful purpose could be served by his calling their attention specially to the matter.

LITERATURE

SHAPES IN STEEL

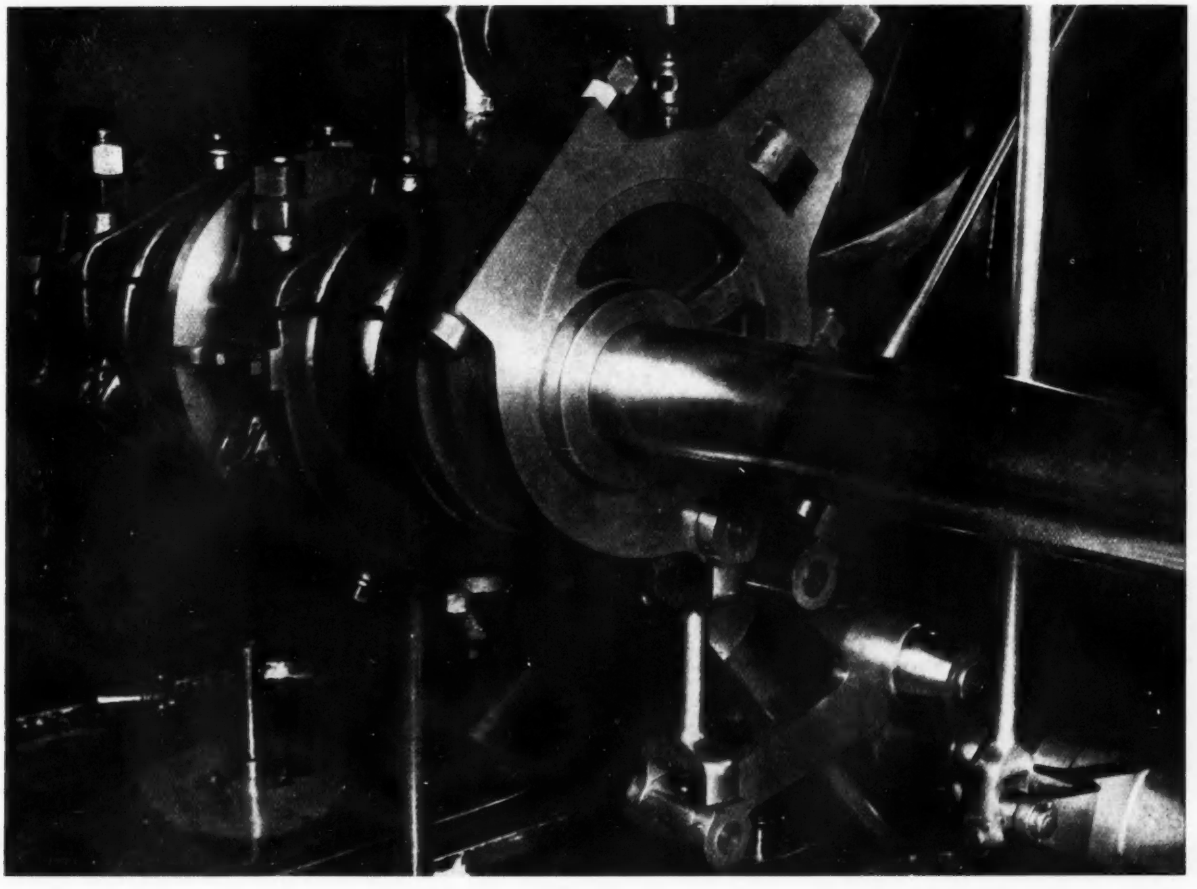
IT is humiliating to think that such a book as that now under review could not have been published in the country which was the first to industrialize, and for so long monopolized, the manufacture of steel; it is still more so to reflect that the D.I.A. could not hope to command sufficient moral and financial support to do for our own steel industry what the *Deutsche Werkbund* has done superlatively well for Germany's. *Eisen und Stahl* contains ninety-seven magnificent plates—one of which was reproduced as the frontispiece of the last issue of the JOURNAL—that are something more than intelligent propaganda for the many uses of steel. They represent a triumphant vindication of its intrinsic beauty—a clean, hard, shining beauty which has only been fully revealed to the eyes of the present generation: 1881 guiltily excused steel, with a wistful sigh for its cruel "utilitarian" necessity; 1931 exults in the ruthless sincerity of its naked strength.

In Herr Renger-Patzsch's photographs, furnace-cowls, magnetic grabs, slipway-sheers, mammoth flywheels and Temperley transporters reveal astonishingly imaginative forms, which only pedantry could deny are magnificently architectural. Crankshafts assume stylistic patterns as classical in their severity as Greek fret. Coal and ore conveyors move rhythmically along suspended gantries to feed cyclopean blast-furnaces. Molten ingots are transformed into accurately toothed gears. A titanic crane swings the mailed fist of its articulated chain-tackle over the Hamburg docks. Purring turbo-generators, with sheathed claws of spiral blading, crouch beside their alternators like tamed leopards. The bed-plates of a liner's boilers are disclosed monumental as the foundations of Diocletian's Baths. There is an exquisite "still life" of the parts of a typewriter. Order emerges from chaos, and the lucidity of function from crucibled formlessness, in the agglutinative stages accompanying the mass-production of motor-cycles and cash-registers. Dozens of skeleton electric irons descend a travelling belt like ghostly disembodied feet upon a staircase. To cross the Elbe bridge, shown on Plate 52, by train, is to experience a sickly, undulating sensation as though one were being chopped into chaff between the sinuously interlacing girders that alternatively support and sustain its platform. But the most superb exemplar of "The Architecture of Steel," illustrating its complete emancipation from architectural traditions, is the new suspension bridge over the Rhine between Mülheim and Cologne.

This knocks any of the much-trumpeted, timidly "architecturalized" suspension bridges of New York into a "cocked hat" in point of boldness and forthrightness of design.

There is only one criticism to make on this book, which applies to most German publications of its kind. There is no indication of the price on the dust-jacket. P. M. S.

Eisen und Stahl. By Albert Renger-Patzsch. Berlin: Hermann Reckendorff.



[*From* Eisen und Stahl.

Shafting of a 1,000 h.p. steam engine. Eccentric discs keyed onto the shafting actuate the rods which regulate the valve gears.

GRAVEYARD MONUMENTS

BETWEEN the English churchyard and the countryside there is a close relationship, and the tombstones in many villages are interesting examples of local craft and materials. In Wales, the headstones are frequently of slate; iron memorial slabs are found in Sussex near the old furnaces; and specimens of the curious "leaping boards" may still be seen in wooded districts. But the most common material was stone, and this was most usually the stone of the district; one of the worst modern disfigurements of recent years has been the erection in our country churchyards of monuments of alien materials, especially white Italian marble and granite.

The reports and pamphlets published by the British Institute of Industrial Art, the Civic Arts Association and the Central Council for the Care of Churches, are a timely protest against the practice now common among monumental masons of advertising, to the public, foreign-made articles to the exclusion of British materials and workmanship. The report points out that a large number of the smaller firms depend almost entirely upon imported Carrara blocks, employing one or two men to cut the letters and erect the stones. The result is that the British art and craft of graveyard monuments is crushed by these powerful organizations, and it is only individual monuments designed by architects that are carried out in British stone. The British Institute of Industrial Art has issued a series of designs for tombstones accompanied by full-size details suitable for modern graves and capable of being executed in local stone by any village mason, and monumental masons would do well to include such designs when seeking custom, in place of the books of hideous designs which are showered with an almost ghoulish eagerness upon a bereaved family.

The report on the Art of Graveyard Monuments also points out the absurd regulations that exist in many large cemeteries in urban areas, which forbid the use of anything except granite or Carrara marble, regulations which in the present industrial distress are, to say the least, unpatriotic.

In 1925 a conference between the British Institute of Industrial Art and the National Association of Monumental Masons resulted in the publication by the former body of a valuable little pamphlet, *Graveyard Monuments*, giving a list of various British quarries and the weathering for qualities of the stone and their suitability in different areas. Samples of these stones can be seen at the Victoria and Albert Museum.

The pamphlet also draws attention to the important rôle of lettering in all monumental inscriptions, and on this subject nothing could be better than the advice given by the Civic Arts Association and contained in Eric Maclagan's pamphlet, *On Inscriptions*.

The report of the Central Council for the Care of Churches deals exclusively with churchyards and embodies much of the advice given in the other pamphlets. It also deals with other ornaments of the graveyard, such as lych gates, sundials, notice boards, drainage, and the preservation of old monuments. The value of competent architectural advice, even in small matters, is insisted upon. This is, unfortunately, a very necessary warning, as many church councils in rural districts are habitually shy of specialists' advice, and country parsons, as a rule, are reluctant to share their "little brief authority" with another, especially when that other would seem to challenge their right to a last word on the monuments of the "parson's freehold." It is only when something unusual is proposed that a faculty is needed, alas! A white marble lachrymose angel is not today "unusual!"

LL. E. W.

Twelve Working Drawings of Graveyard Monuments. Price 6s. net. *The Art of Graveyard Monuments.* Price 6d. net. *Graveyard Monuments: Notes on Materials, Designs and Lettering.* Price 2d. net. All three published by the British Institute of Industrial Art. *The Care of Churchyards. Report of the Central Council for the Care of Churches.* Price 2s. net. *On Inscriptions.* By Eric Maclagan. Price 6d. net.

QUESTIONS THAT ARISE

Howling Winds

"Anxious" writes: "*I am interested in a ten-roomed villa on the edge of a moor. The south-westerly fronts are rather exposed, with the result that from the fireplace and chimney-stack in the westerly wall I get a tremendous amount of howling from the winds down the flue into the room. Several pots have been tried of the louvre type, but none seem to diminish this rather annoying sound. Can your expert suggest a remedy?*"

I imagine that some of the noise at any rate occurs outside, and I do not think it would be possible to stop that; but if it is thought that the noise occurs by wind coming down the chimney, I can only suggest that a lobster-back cowl would probably stop it. My impression is that the mere fact of the wind hitting an obstruction makes the noise. I think, however, it would be difficult to suggest a remedy without further investigation being made by your correspondent as to the precise seat of the trouble. H. D.

Asphalt or Timber Roofs

A. R. M. writes: "*I have been considering the question of laying asphalt upon wood flat roofing, but have always felt that there is a certain risk of failure in roofing of this type, and have in the past relied upon other materials. Professional friends and various builders have at times suggested this method of covering as a favourable proposition. What is your expert's opinion?*"

More confidence has been shown by architects during the last few years in the use of asphalt as a covering on timber flats, and I myself have had work of this type carried out with success, with the exception of one case.

Here, increased traffic on a road caused considerable vibration to the building, and trouble was experienced at the angle between the flat and the parapet wall.

I observed another bad failure when I examined a flat roof, similarly laid, adjoining a railway, where the asphalt had cracked very badly. Vibration is a most important factor in considering carrying out work of this kind.

Natural rock asphalt, laid by a good specialist firm upon boarding, firred to falls, covered with felt and expanded metal, should provide a satisfactory result. W. A. D.

Anti-Siphonage Pipes

W. T. B. writes: "*I should be glad of an opinion as to whether it is necessary to put anti-siphonage pipes to ground-floor water closets where six closets are taken into one manhole. The length of drain from each closet is about twelve feet.*"

There is no object in fixing anti-siphonage pipes to closets on ground floors where taken direct to manholes.

In this case the length of drain from each closet is long, and some sanitary authorities might insist on a vent pipe from the outgo of each trap connected to main vent pipe to act simply as a vent and not for the purposes of anti-siphonage.

I recently put in a range of sixteen water-closets at a public institution, and each branch was connected to a 6-in. drain with a manhole for rodding at each end. No trouble has been experienced with the siphoning of traps.

The only time it is necessary to provide anti-siphonage pipes is when, on upper floors, two or more closets are taken into a vertical soil vent pipe. W. A. D.

The Editor invites readers' enquiries on all matters connected directly or indirectly with architectural practice. These enquiries are dealt with by a board of experts, to which additions are constantly being made as and when the need arises. Readers must enclose name and address, and should send their enquiries to the Editor at 9 Queen Anne's Gate, S.W.1.

ARCHITECTURE—THE SOCIAL ART

Progress of Building

DURING the last four years 1,018,180 new buildings have been erected. Last year alone 239,780 buildings. In the past four years the detailed list was as follows: 877,190 houses; 29,616 shops; 3,123 places of amusement; 1,151 hotels and restaurants; 102,523 factories and warehouses; 1,866 schools and hospitals. In a hundred years 25,454,500 buildings! A new world. Building is the third largest industry in the country, if we include all its ramifications and allied trades. Now look at the muddle we have made with all this activity during the last hundred years; this is absolutely uneconomic, for it costs us enormous sums to clear up the mess periodically and enormous sums in wasted energy and time, besides the intangible wastage of health and morale caused by bad and ugly building.

"Act the Autocrat"

What is the remedy? What can be done? The answer can be summed up in one word—control—act the autocrat. Bring back the past to that extent. Of course we cannot make people artistic by law. No; but we can do what the autocrats of the past did about their buildings—appoint an expert. If individualism is not going to mean incoherence, if democracy is not going to mean the equal voice of the least competent—and the ultimate end of this would be simply disaster—democracy must learn to appoint experts or efficient individuals to the power of control in each and every sphere of life.

Control of Planning

In building, the first control is a town and country planning control; the second is that nobody but a competent designer shall be allowed to submit building plans to any authority for an application to build. There are many other controls which might operate with advantage in minor matters. There are signs that men are awakening to these needs—town-planning Acts and so on—and the one thing that we can do is to see that these are encouraged, developed and enforced. They do not form a substitute for the personal education of taste, but they will save us from the worst evils of the last hundred years. They will help us to keep in bounds the unruly development of our industrial civilization, this new era in the history of mankind, so different from the agricultural civilizations which have preceded it. We shall be able to keep a hold on the development while we try to gain a little wisdom and taste.

Preservation

We hear a great deal today about preservation. I do not say that it is not necessary, but what a melancholy reflection on our powers to replace! It is a negative attitude and no substitute for positive creative effort. It is impossible to maintain a bygone world; structures so preserved must, in the course of time, often appear like specimens in a museum—interesting, but unrelated to our life. Preservation can at best be viewed as a temporary measure, and the life of a building cannot be indefinitely prolonged. Sentimental souls may receive a shock when they realize that ancient buildings in towns, like Westminster Abbey, have scarcely any of their original external stonework left, and the Banqueting Hall in Whitehall was almost completely refaced in the early part of last century. Certainly we should perpetuate anything really worth keeping, so long as it has meaning for us, but veneration for past glories is no excuse for making no effort to equal or excel them in the present.

Lack of Unanimity

One of the great difficulties of our modern life is the extraordinary rapidity with which changes are taking place and the variety of opinion that exists, amounting often to a complete lack of unanimity. This is true not only of architecture, but of our whole life. The only architectural parallel is that of the Early Renaissance. In Elizabethan times we see, for example, the expression of a confusion of ideas when, just as in our own day, there were novel features introduced into architectural composition, disturbing the association of ideas, causing incongruities to appear by the juxtaposition of the old and the new. There are two great differences between our position and theirs. The æsthetic element was certainly dominant for them, whereas it is now lacking. The present change is also really much more profound and fundamental, for we are at the threshold of a new era in the history of mankind, and much of our previous experience cannot serve as a guide. The last change of this major sort was when man abandoned the pastural system for the agricultural. He is now drifting towards a scientific and industrial civilization.

Architecture and all the arts are an expression at once both personal and collective. What appears to me to be expressed at present is chiefly uncertainty and confusion, but ultimately, as things crystallize out, and the direction of our civilization becomes more definite, we shall begin to see a characteristic architecture evolving, and it must, unless history lies, turn out to be something very different from that which has ever existed before. If the social system changes, then architecture as the social art must change with it. Since we cannot go back, but must go forward, it is no good being alarmed by change and resisting it. The only possible policy is to direct it. Make a conscious effort to produce order, to wit, design substituting purpose for the confusion of haphazard development. We might start, for example, by producing a plan for London. The natural process of building and rebuilding would then ultimately allow us to mould it to our needs and desires. Now, if we want to direct a thing, it is not a bit of use trying for sentimental or other reasons to distort its growth. We cannot have an industrial civilization and then act as if it did not exist. It has advantages and limitations; we have got to accept them and make the most of them.

Industrial Methods of Production

I believe that industrial methods of production, far from being inimical to all art, has great potentialities in the hands of skilled and sympathetic designers, but with such tools and such processes we cannot expect to produce the same sort of goods as were produced by other means in the past. Most of our industrial design to date has been a shoddy imitation of hand-made goods. No progress can be made along such lines. The designer must create, the manufacturer must produce, and the people demand the truly characteristic machine-made thing. I have heard all the arguments against standardization, etc., etc., but I still remain convinced that the power-driven machine tool, rightly directed, will prove the greatest gift the gods have given to man, and it must and will fashion a new world.

[Extracts from a paper on "Architecture—the Social Art," read by Mr. R. A. Duncan, A.R.I.B.A., at the Architectural Association last Saturday, representing the last of the series of six non-technical lectures on Present-day Architecture. Mr. G. Grey Wornum, F.R.I.B.A., presided.]

ARCHITECTS' WILLS

Mr. Thomas Munro, of Inverness, architect, left £7,379 (personal estate).

Mr. John Kinross, R.S.A., of Edinburgh, architect, treasurer of the Royal Scottish Academy, left £5,562 (personal estate in Great Britain).

Mr. John Robert Earnshaw, of Bridlington, architect and surveyor, left £1,713 (net personalty £1,183).

LAW REPORTS

BUILDING LINE AWARD

Caterham Entertainments, Ltd. v. *Surrey County Council. King's Bench Division. Before Mr. Justice MacKinnon*

THIS case raised an interesting point in regard to compensation payable to the Caterham Entertainments, Ltd., for loss or damage sustained by them because a cinema was not allowed to be erected in front of the prescribed building line. The matter came before the Court upon a special case, stated for the opinion of the Court, by an arbitrator by direction of a King's Bench Divisional Court, to assess the compensation to be paid by the Surrey County Council to the Caterham Entertainments, Ltd.

Mr. Schiller, K.C., for the company, stated that in 1927 his clients' predecessor in title submitted to the Caterham Urban District Council plans for the erection of a cinema, with two shops in the Croydon Road, Caterham. The matter was referred to the County Council, and later the surveyor to the Urban Council informed the applicant that he had received notice of the County Council's intention to prescribe a building line. In those circumstances the plans would not be approved unless the building was shown set back to the building line. Upon that the company prepared a fresh set of plans for a smaller building, cutting out the two shops. These plans were approved and the building was completed in October, 1928. Soon after the work had been commenced, the County Council informed the company that the building-line order would be made, and it was made in January, 1931.

The matter went before the arbitrator on these facts, and he found that but for the intimation from the surveyor of the Urban Council, the cinema would have been erected to the original building line in accordance with the plans at first drawn. He further found that the company were induced to erect their buildings up to the building line and not beyond it by the conduct of the County Council, that the company were consequently induced to believe that they were not entitled to build beyond the proposed building line, and further, that if they built in accordance with the second plans, they would be compensated by the Council for any loss they might sustain, through being prevented from carrying out their original plans. The award of the arbitrator was in alternative forms, viz., for £4,902 and £7,902.

Counsel said the County Council had paid the £4,902, but his submission was that the company was entitled to the larger amount of compensation, viz., £7,902.

Mr. du Parcy argued the case on behalf of the County Council, maintaining that the proper compensation, having regard to all the facts of the case, was the sum already paid.

His lordship said he came to the conclusion that the award of £4,902 must stand. He did not think it was true to say that when the buildings were erected in accordance with the second set of plans, they were not allowed to be erected in front of the building line within the meaning of the sections of the Surrey County Council Act, 1925. He also found that the compensation to which the company were entitled was limited to the loss or damage sustained by reason of their not being allowed to extend their buildings as they existed in January, 1929, beyond the building line prescribed by the order of January, 1929. He made an order for the compensation to be £4,902.

CLOSING ORDER BY LOCAL AUTHORITY

John Waterer and Sons and Another v. *Huggins. King's Bench Divisional Court. Before the Master of the Rolls and Lord Justice Romer*

This was an appeal by the plaintiffs, the owners of a cottage at Bagshot, from a judgment of Judge Lailey, sitting at the Farnham and Aldershot County Court, awarding the tenant, Mrs. Huggins, £25 damages by reason of the cottage having been condemned or closed under the Housing Act, 1925.

Mr. Penning, for the appellants, said the question here was whether the defendant, the statutory tenant of the cottage, was entitled to recover the damages of £25 assessed by Judge Lailey, for the expenses of her removal from the cottage, owing to it having been closed under a closing order. Poplar Cottage was an old-world cottage, over a hundred years old, and was let at 5s. a week to Mr. Huggins. He died in 1925, and the present respondent remained in possession as the statutory tenant. In February, 1926, the appellants were served with a notice to render the cottage fit for habitation. Eventually the work was done and the rent was raised to 7s. a week. Shortly afterwards there were complaints as to the state of the roof, and the appellants executed repairs. In the end, however, in February, 1930, a closing order was made by the local authority, on the ground that the cottage was unfit for habitation. When the appellants claimed possession through the county court, the respondent counter-claimed for damages, and was awarded £25. She did not resist the claim for possession.

Counsel now submitted that the county court judge was wrong in holding that the original tenancy was subject to section 1 of the Housing Act, and in awarding the damages by reason of the closing order or the loss of the tenancy whilst the premises were protected by the Rent Restriction Acts.

Mr. Havers argued in support of the county court judge's findings.

The Court allowed the appeal, holding that the county court judge had misdirected himself in awarding the defendant £25 damages on her counter-claim.

The Master of the Rolls, in giving judgment, said the contention of the appellants was that there was no power for the judge of the county court to award the sum of £25, or, indeed, any less sum, and that the damages were too remote. It appeared to his lordship that they had to deal with the matter apart from the increase of rent and apart from any construction of the meaning or effect of a statutory tenancy.

As to the claim by the tenant for the removal of her furniture, his lordship pointed out that if she had gone out in the usual way it would have been her duty to have taken the furniture. To his mind, that seemed quite remote from any damage that could have been in the contemplation of the parties, and appeared to have arisen from the action of the authority who issued the closing order. That being so, the county court judge had misdirected himself, the damages being too remote.

Lord Justice Romer concurred.

CROWN LEASE: QUESTION OF CONSENT

The British Maritime Trust, Ltd. v. *Upsons, Ltd., Pearson Bros. (G. and H.), Ltd., and Mrs. A. M. Barker. Chancery Division. Before Mr. Justice Clauson*

The dispute in this action centred around a Crown lease granted in respect of the rebuilding of premises at the end of Regent Street, opposite Jay's, and an underlease, which contained a covenant that a mortgagor would not sublet without the consent of the mortgagees.

It appeared that in 1924 an agreement for a lease was entered into between Mrs. Barker's husband and the Crown, under which Mr. Barker was to pull down and re-erect new buildings on the block in question. The Prudential Assurance Co. agreed to advance up to £170,000 to Mr. Barker, and the mortgage contained the express covenant that the mortgagor would not sublet without the consent of the mortgagees. The buildings were duly commenced, and during their progress in 1926 Mr. Barker died and his widow became entitled to the property. There was a second mortgage to the British Maritime Trust, and it con-

tained the same negative covenant, but with the addition that consent would not be unreasonably withheld in the case of leases of twenty-one years at the best rents obtainable. Messrs. Upsons, without objection, were granted a sublease of the premises in June, 1927. In the December following, however, Mrs. Barker granted an additional underlease of the entrance lobby of 254 Regent Street, for eighty years at an annual rental of £17, without the knowledge or consent of the plaintiffs or the mortgagees. Plaintiffs, in May, 1928, took a transfer of the mortgage of the Prudential Assurance Co. Later there were foreclosure proceedings against Mrs. Barker, and a receiver was appointed, and it was not till then that the plaintiffs discovered the additional underlease. Messrs. Pearson Bros. were granted a sub-underlease in December, 1927, by Messrs. Upsons, Ltd., comprising the whole of the premises contained in the permitted underlease, and the additional underlease, for a period of twenty-eight years.

Mr. Spens, K.C., for the plaintiffs, said the upper part of the buildings comprised large blocks of offices worth an estimated rental value of well over £20,000 a year. There were entrances to the building from Argyle Street and Little Argyle Street, but the entrance from Regent Street was by far the more important entrance. Plaintiffs' complaint was that Messrs. Pearson had developed this lobby in such a way that people might miss the entrance altogether, with the result that it seriously depreciated the letting value of the offices in the building.

Mr. Swords, K.C., and Mr. Topham, K.C., for Messrs. Upsons, Ltd., and Messrs. Pearson Bros., submitted legal contentions on behalf of their clients.

His lordship, in the course of his judgment, said in his opinion it was quite clear that as between Mrs. Barker and the Prudential Co. she had no right to grant to Messrs. Upsons a lease of the lobby, and therefore as between them the lease was invalid. He further came to the conclusion that Messrs. Upsons knew all about the mortgagees' rights and that they were not in a position to say that the lease was binding on the mortgagees. With regard to the additional underlease, it had never been registered, and the time for its registration had expired. Whatever rights Messrs. Upsons might have in regard to an extension of the time for registration or obtaining a legal interest to pass on to Messrs. Pearson, it was here impossible to treat the grant by Mrs. Barker of the lobby as anything but a void grant to Messrs. Upsons. Under these circumstances Messrs. Pearson could not establish any legal interest in the lease, and their defence that they purchased for value without notice of the mortgagees' rights could not prevail. He made an order that the additional underlease was not binding on the plaintiffs, and ordered Messrs. Pearson to deliver up possession. He granted a suspension of the order for a month, with liberty to any of the defendants who desired to redeem the mortgages, to apply for an extension of the suspension.

COMPETITIONS OPEN

April 10.—Limited competition for proposed new offices, town hall, museum and library, for the Walworth Road, S.E., for the Southwark Borough Council. Experienced architects are invited to submit names, with a statement of executed works and experience, from whom six will be invited to participate in the competition. Assessor: Louis de Soissons, F.R.I.B.A., S.A.D.G. Each of the six architects will receive an honorarium of 200 guineas. Names to be submitted to D. T. Griffiths, Town Hall, Walworth Road, S.E.17, by April 10.

April 11.—Sending-in day. Garage for the temporary accommodation of motor vehicles, organized by management of the Building Trades Exhibition, Manchester (April 14 to April 25). Assessors: H. S. Fairhurst, F.R.I.B.A., John Swarbrick, F.R.I.B.A., and Professor A. C. Dickie, M.A., A.R.I.B.A. Premiums: £100, £30 and £20. Particulars from Provincial Exhibitions, Ltd., City Hall. Deansgate, Manchester.

April 18.—Sending-in day. Central Municipal Bank and Head Offices, Broad Street, Birmingham. Assessor: Sir Reginald Blomfield, R.A., F.R.I.B.A. Premiums: £400, £300, and £150. Conditions from Herbert H. Humphries, City Engineer and Surveyor, Council House, Birmingham. (Deposit £3 3s.)

April 30.—Sending-in day. Hospital for Infectious Diseases, Coventry, for the Coventry Corporation. Assessor: E. Stanley Hall, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

June 1.—Sending-in day. New Council School, to be erected at Blowers, Dudley. (Limited to architects within a radius of 15 miles of Dudley.) Assessor: Herbert T. Buckland, F.R.I.B.A. Conditions from J. Whaley, Director of Education, Education Offices, St. James's Road, Dudley.

June 16.—Sending-in day. (Last day for conditions was February 25.) Offices for the Ingham Infirmary, South Shields. (Limited to architects within the area of the Northern Architectural Association.) Assessor: George Reavell, O.B.E., F.R.I.B.A. Premiums: £250, £100 and £50. Conditions were obtainable from John Potter, Secretary, Ingham Infirmary, South Shields. (Deposit £2 2s.)

June 26.—Sending-in day. Offices for the City of Leicester Corporation, Charles Street, Leicester. Assessor: E. Berry Webber, A.R.I.B.A. Premiums: £300, £200 and £100. Conditions from A. T. Gooseman, Engineer and Surveyor, Town Hall, Leicester. (Deposit £2 2s.)

June 30.—Sending-in day. Latest date for conditions: April 15. New Branch Baths, Foleshill, for the Coventry Corporation. Assessor: F. J. Horth, F.R.I.B.A. Premiums: £210, £105 and £52 10s. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

No date.—War Memorial, Colston Avenue, Bristol. (Limited to Bristol architects and assistants.) Assessor: G. C. Lawrence, F.R.I.B.A. Conditions from the Editor, *Bristol Times and Mirror*, St. Stephen Street, Bristol.

THE ARCHITECTS' DIARY

WEDNESDAY, APRIL 1

CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Belgian and Dutch Mediæval Architecture." By Sir Banister Fletcher, P.R.I.B.A. **6.30 p.m.**

SATURDAY, APRIL 4

Sunrise, 5.35 a.m. Sunset 6.33 p.m.

MONDAY, APRIL 6

Easter Bank Holiday.

WEDNESDAY, APRIL 8

INSTITUTION OF STRUCTURAL ENGINEERS. Lancashire and Cheshire Branch. Annual General Meeting to be held at the College of Technology, Manchester. **7 p.m.**

THURSDAY, APRIL 9

SHEFFIELD, SOUTH YORKSHIRE AND DISTRICT SOCIETY OF ARCHITECTS AND SURVEYORS. Annual General Meeting, to be held at the University, Sheffield. **6.15 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "The Structural Engineer and his Vocational Training." By F. E. Drury, M.SC. 6.30 p.m. Yorkshire Branch. At the Metropole Hotel, Leeds. "The Erection of Sydney Harbour Bridge." By J. Stuart Lewis, M.I.STRUCT.E. 7 p.m. **6.30 p.m.**

FRIDAY, APRIL 10

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION, The Castle, Winchester. Council Meeting. 3 p.m. General Meeting. 6.15 p.m. **3 p.m.**

SATURDAY, APRIL 11

Sunrise, 5.17 a.m. Sunset, 6.45 p.m.

MONDAY, APRIL 13

R.I.B.A., 9 Conduit Street, W.1. "Modern Flats." By G. Grey Wornum, F.R.I.B.A. **8.30 p.m.**

TUESDAY, APRIL 14

BUILDING TRADES EXHIBITION, Manchester. Until April 25.

WEDNESDAY, APRIL 15

INSTITUTE OF LANDSCAPE ARCHITECTS. At the Royal Horticultural Hall, Greycoat Place, S.W.1. Discussion on "The Garden of the Future," to be opened by Edward Whyte. **3.30 p.m.**

INSTITUTE OF FUEL. At the Chemical Society's Rooms, Burlington House, Piccadilly, W.1. Annual General Meeting, followed by a paper on "The Smoke Problem: A Consideration of some of its Economic Aspects and the Difficulties of its Solution." By Arnold Marsh, M.SC. (TECH.). Chairman: John Charrington, Junr. **6 p.m.**

THURSDAY, APRIL 16

INSTITUTION OF STRUCTURAL ENGINEERS. South Wales and Monmouthshire Branch. At the Institute of Engineers, Park Place, Cardiff. "The Erection of Sydney Harbour Bridge." By J. Stuart Lewis.

AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE, 29 Lincoln's Inn Fields, W.C.2. "The Making of a Connoisseur, Part 10." By H. Mordaunt Rogers. **7.30 p.m.**

SOCIETY OF ANTIQUARIES, Burlington House, S.W.1. "Excavations in Bambata Cave, Rhodesia, and the Evidence at Victoria Falls relative to the Age of Man in South Africa." By Leslie Armstrong, Esq., M.C., F.S.A. **8.30 p.m.**

FRIDAY, APRIL 17

GARDEN CITIES AND TOWN PLANNING INSTITUTE, 3 Gray's Inn Place, W.C.1. Dinner to celebrate the Twenty-first Anniversary of the Town Planning Act, to be held at the Holborn Restaurant, London. Guest of Honour: The Rt. Hon. John Burns. Chairman: The Rt. Hon. The Earl of Lytton, P.C. 7.15 for 7.45 p.m. **7.15 p.m.**

SATURDAY, APRIL 18

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION, The Castle, Winchester. Excursion.

THURSDAY, APRIL 23

WEST YORKSHIRE SOCIETY OF ARCHITECTS, 62 Woodhouse Lane, Leeds. Annual General Meeting. **7 p.m.**

FRIDAY, APRIL 24

TOWN PLANNING INSTITUTE. At Caxton Hall, Westminster, S.W.1. "Rural Preservation and the Landowner." By Christopher Turnor. **6.30 p.m.**

MONDAY, APRIL 27

R.I.B.A., 9 Conduit Street, W.1. "Modern Bridges." By Maxwell Ayrton, F.R.I.B.A. **8 p.m.**

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "Problems in Modern Architecture." By H. Th. Wijdeveld. Also exhibition of the lecturer's drawings and designs. Until May 18. **8 p.m.**

TUESDAY, APRIL 28

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS, 1 Wilbraham Place, S.W.1. "Housing and Slum Clearance." By Ald. H. Prince. **7 p.m.**

THURSDAY, APRIL 30

SOCIETY OF ANTIQUARIES, Burlington House, S.W.1. "Report on the Excavations at Richborough." By J. P. Bushe-Fox, M.A., F.S.A. **8.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Yorkshire Branch. At the Metropole Hotel, Leeds. Annual General Meeting, followed by "The Production of Concrete Aggregates." By E. F. Sargeant, A.M.INST.C.E. **7 p.m.**

TRADE NOTES

A striking but unconventional feature of the housing section of *The Daily Mail* Ideal Home Exhibition, which opens at Olympia on April 7, will be the "Hush-Hush" house, designed by Mr. A. Trystan Edwards, A.R.I.B.A. It is a joint effort on the part of British manufacturers and builders to present a town house in every respect of twentieth-century character, and is intended to be a definite step in the war against noise. Many ingenious devices have been used in the floors, walls and ceilings to render the house soundproof. A "Hush-Hush" room is a feature of the house—a nursery where kiddies may romp at their noisiest, or where a gramophone, piano or loud-speaker can be played without a sound reaching the landing.

Among the manufacturers who are responsible for the work are the following: W. T. Lamb and Sons, brick and tiled fireplaces; John M. Newton and Sons, Ltd., glazing and "Vita" glass; Acetate Products Corporation, Ltd., decorations throughout with "Celvalac" cellulose finish; Mo and Domsjo Trading Co., Ltd., "Treetex" wallboard; S. W. Farmer and Son, Ltd., iron staircases; Huntley and Sparks, Ltd., "Cabot's Quilt"; James Latham, Ltd., doors; Electrolux, Ltd., cleaner, refrigerator and water softener; Troughton and Young, Ltd., electric lighting, fittings and fires; Crittall Manufacturing Co., Ltd., casements; Lewis Morgan & Co., Ltd., roof garden.

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In presenting the first issue of *Tentest News*, the Tentest Fibre Board Co. (1929), Ltd., feel that the information they are able to place before the architects and builders of Great Britain, Northern Ireland and the Irish Free State will give some idea of the increasing uses of Tentest and its adaptability in many different spheres. This material, a British product transported in British ships, was first used in England in 1922, since when sales have shown a remarkably steady increase. The contents in the first issue include illustrations and descriptions of buildings in which the product has been used, and the following letter, which should interest all who are faced with expensive roof repairs in which cost is a specially dominating factor.

Blagrave Street, Reading,
October 17, 1930.

Messrs. Tentest Co.,
Astor House, Aldwych, London, W.C.

DEAR SIRS,—I have recently been dealing with a large church in this town which has an ancient roof with exposed rafters and with plastering between the rafters. Trouble has been caused by the plaster falling.

I have got over this difficulty by fixing your Tentest sheets between the rafters by means of small fillets nailed to the rafters. So far as the appearance of this work is concerned, no one can see that the roof has been altered. An unexpected but very great improvement has, however, resulted from the work. The church is situated on a corner site where there is much traffic and noise. It is now found that the application of Tentest has resulted in the almost entire exclusion of the noise of traffic.

Previous to the fitting of Tentest, the acoustics of this church were remarkably bad, but I am assured by the Vicar that the acoustics have vastly improved since the fitting of Tentest.

Yours faithfully,
(Signed) W. ROLAND HOWELL, F.R.I.B.A.

The firm have also issued a new series of postcards on which are reproduced pencil sketches of Fleet Street, St. Clement Danes, Liverpool Cathedral, St. Paul's Cathedral, York Minster, the Guildhall, London, Windsor Castle, and Bristol University.

*

"External concrete wall construction may be continued at a temperature of 35° F., but the shuttering should be covered with old sacks as soon as the concrete is placed, good keys being left as usual for the next lift. When wooden shuttering is used, little, if any, protection is needed for the sides, and it is only necessary to cover the top of the wall with two or three layers of old sacks. The proportion of cement must be increased if it is desired to remove the shuttering at the same periods as are allowed for a temperature of 60° F. Floors need protection, especially near openings; the central portions will only be affected by a very severe frost." From *Cold Weather Concrete*, a leaflet issued by Messrs. G. and T. Earle, Ltd., of Wilmington, Hull, cement manufacturers. In another leaflet the firm explain the many advantages obtained by using paper sacks for cement.

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Owing to the continued increase in business, the "Prior" Oil Burner, Ltd., removed their general offices, on March 23, to more commodious premises at their works, 5 Crown Yard, Stanhope Street, N.W.1. Telephone number: Museum 1573 (two lines). The company's registered office will remain at Bristol House, 18 Holborn Viaduct, E.C.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office. All inquiries concerning inventions, patents and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated, readers should apply to the Patent Office, 25 Southampton Buildings, W.C.2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

7250. Klein, E., and Schreiber, O. Method of raising building walls. March 9.

7468. Airey, Sir E. Concrete construction for stairs or steps. March 11.

7583. Ferguson, J. H. Method for constructing walls, etc., with precast slabs, etc. March 12.

7879. Ferguson, J. H. Construction of slabs etc., of concrete, etc. March 14.

SPECIFICATIONS PUBLISHED

344446. Humbert, V. A. Flooring and like slabs, and floors, ceilings, and the like formed thereof.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors, specialists and sub-contractors for the buildings illustrated in this issue:

A Model Farm at Epping (pages 475–478). General contractors, Whiffen and Sons; George W. King, Ltd., Louden-King steel cow-barn fittings.

End House, Fife Road, E. Sheen (pages 482–483). General contractors, Limpus and Son. Laurence Turner, decorative wall panels; J. T. Morton, heating engineer; W. J. Bird, electrical engineer. Sub-contractors: Roberts, Adlard & Co., roofing; C. E. Welstead, Ltd., metal windows; F. Chubb and Son, external iron balconies; W. Bainbridge Reynolds, Ltd., wrought-iron balustrade, with bronze handrail to staircase.

Sunday School, Holmer Green, High Wycombe (pages 484–485). General contractor, Cecil James, who was also responsible for the demolition, excavation, foundations and dampcourses. Sub-contractors: Wells Brickfields, facing bricks; H. Young & Co., Ltd., structural steel; Maidenhead Tile Co., tiles; Acme Flooring and Paving Co. (1904), Ltd., wood-block flooring; Falkirk Iron Co., Ltd., stoves; Speirs & Co., door furniture; Rippers, Ltd., casements and joinery; Samuel Parkes & Co., Ltd., patent grip fittings; J. E. Lucas & Son, Ltd., folding partition; Harris, stonework; Percy C. Webb, Ltd., foundation tablet.

Cardboard Box Factory, Lea Bridge Road, Leyton, for D. Smith and Son (1924), Ltd. (pages 487–489). General contractors, Commercial Structures, Ltd. Sub-contractors: A. and J. Main & Co., Ltd., steelwork; Mellowes & Co., Ltd., north light glazing; Asbestos Cement Building Products, Ltd., pitched roof covering; Vulcanite, Ltd., flat roof covering; Luxfer, Ltd., lantern and stall lights; Jno. Jones & Co., "Steelcrete" floor finish; Norris Warming Co., Ltd., heating, iron stair cases and collapsible gates; Electrical Installations, Ltd., electrical equipment; Haywards, Ltd., shutters; Vertigan & Co., Ltd., wood block flooring; B. Finch & Co., Ltd., domestic hot-water supply and sanitary fittings; Crittall Manufacturing Co., Ltd., windows; Garton and Thorne, Ltd., lettering; Stuart's Granolithic Co., Ltd., concrete steps and stairs; Smith, Major and Stevens, Ltd., lifts.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The ACTON Corporation is to reconstruct the slipper baths in Salisbury Street.

The BARKING Education Committee has made arrangements in connection with the erection of the Erkeneald School, at a cost of £39,460: and Roding School, at a cost of £43,026, by direct labour.

Plans passed by BERMONDSEY B.C.: Alterations, "Half Way House" public-house, Rotherhithe New Road, for Messrs. Courage & Co., Ltd.; extensions, 19 Galleywall Road, for Messrs. W. S. Shuttleworth & Co., Ltd.: rebuilding, "Lord Nelson" public-house, Clarance Street, for Messrs. Watney, Combe, Reid & Co., Ltd.

The BERMONDSEY B.C. is to erect twenty-four flats at Elgar Street, at a cost of £16,929: forty-four flats between St. Paul's Lane and Beatson Street, at a cost of £26,255: and fifty flats on the Pages Walk site, at a cost of £26,745.

Plans passed by CAMBERWELL B.C.: Three shops, Old Kent Road, for Messrs. E. D. Pearcy, Ltd.: rebuilding, "King William" public-house, Camberwell New Road, for Mr. W. G. Ingram; rebuilding 361–3 Old Kent Road, for Mr. M. K. Mathews.

Plans passed at COULSDON: House, The Wend, for Messrs Thomas and Son: two houses, Bradmore Way, for Mr. H. C. Doddrell; house, Waddington Avenue, for Mr. P. Wynne-Williams; house, Woodfield Hill, for Mr. H. N. Jones; two houses, Valley Road, Kenley, for Messrs. E. O'Sullivan, Ltd.; fifty houses, Coulsdon, for Mr. A. G. Gresswell; two houses, Fairdene Road, for Mr. W. Cottage; six houses, Portnalls Road, for Mr. A. G. Gresswell; bungalow, Waverley Avenue, Kenley, for Messrs. O'Sullivan, Ltd.

The L.C.C. is considering the utilization of a cemetery site at DEPTFORD for a housing scheme.

The Middlesex C.C. is to prepare a scheme for adapting the mansion at White Webbs estate, ENFIELD, as a hospital.

Plans passed at HACKNEY: Six garages and store, Shacklewell Lane; factory, Bradbury Street; nine shops, Ridley Road.

The L.C.C. has passed plans submitted by Mr. C. Stanley Peach, on behalf of Messrs. B. Winstone and Sons, Ltd., for the erection of premises in Clerkenwell Road, Summers Street, Eyre Street Hill and Back Hill, HOLBORN.

The KENSINGTON B.C. is to borrow £6,500 for the purchase of land in Gregory Place, required for the future extension of the town hall.

Plans passed at LEWISHAM: Buildings, Cliff-view Road, for Mr. A. McDougall; formation of street, leading to Honor Oak Road, Forest Hill, for Mr. E. C. Christmas; additions, "Prince of Wales" public-house, Perry Rise, Forest Hill, for Mr. S. J. Funnell; houses, Thornsbeach Road, for Mr. H. R. Watt; five houses, Thorpewood Avenue, for Mr. G. T. Harman; petrol station, Sydenham Road, for Mr. H. T. Sayer.

SOUTHERN COUNTIES

Plans passed at BEXHILL: Masonic hall, Wilton Road, for Mr. G. Cash; three houses, Plemont Gardens, for Mr. J. E. Maynard; additions, Wilton Court Hotel, for Messrs. Callow and Callow; house, Holliers Hill, for Mr. E. Bunce; house, Woodgate Avenue, for Mr. J. Hunt; two houses, Cranston Avenue, for Mr. H. H. Ford; four shops, Parkhurst Road, for Mr. G. Leslie.

Mr. G. W. Warr is to develop an estate at Moulsecomb, BRIGHTON.

The BRIGHTON Corporation is to erect a motor-coach station.

Plans passed at BRIGHTON: Extension of office, Royal Albion Hotel, Old Steine, for Mr. H. J. Preston; alterations, "Sherry's," West Street, for Ye Mecca, Ltd.; three houses, Milner Road, for Mr. W. Fuller; additions, Old Ship Hotel, King's Road, for Messrs. R. Bacon & Co., Ltd.: addition to building, Hash's Dairy, Grantham Road, for Mr. W. I. Jenkin; cafe and cloakrooms, 13 Grand Junction Road, for Mr. C. J. Lyst; sixty-four houses, Widdicombe Way, Bevendean Estate, for Messrs. Braybons, Ltd.: parsonage, Russell Place and Kent's Court, for Mr. W. H. Carey; five houses, Ladies' Mile Road, for Mr. H. E. Roberts.

The Surrey C.C. has submitted to the Board of Control the layout plan for the new mental colony at Botleys Park, CHERTSEY, with plans for the adaptation of the mansion to provide temporary accommodation for eighty-six patients.

The EASTBOURNE Corporation has approved the layout of the Winchelsea site and plans of twenty-eight flats of one-bedroom-type in Rye Street, fourteen non-parlour two-bedroom type in Winchelsea Road, and twenty parlour-type in Wartling Road.

Plans passed by EASTBOURNE Corporation: Six houses, Longland Road, for Mr. A. J. Fellows; four houses, Moy Avenue, for Mr. F. C. Benz.

The HERNE BAY U.D.C. is to erect a further twenty houses in Claremont Street.

SOUTH-WESTERN COUNTIES

Plans passed at CHELTENHAM: Two houses and four shops, Gloucester Road, for Mr. O. A. Forty; three houses, All Saints Road, for Mr. G. W. Ward; two cottages, Church Street, Charlton Kings, for Mr. T. W. Smith.

The HAMPSHIRE Joint Mental Hospital Committee has adopted a revised scheme for extensions at Park Prewett hospital, providing for increased accommodation for 128 patients.

Plans passed at PAIGNTON: Two houses, Preston Down Road, for Mr. Arthur Savile; alterations, 37 Torbay Road, for Mr. Pelosi; house, Batson Gardens, for Mr. A. Jonas; bungalow, Marldon Road, for Messrs. Scrivens and West; house, Southfield Avenue, for Mr. A. E. Knight.

The TORQUAY Corporation has asked the Housing Committee to acquire land for the housing of tenants in Temperance Street and Lower Union Lane, in the event of the clearance schemes being sanctioned by the Minister of Health.

Plans passed at TORQUAY: Alterations and additions, The Grand Hotel, Station Road, for Mr. J. B. Gilley; two flats, Cleveland Road, for Mr. F. C. Yeo; new premises, George Street, for Messrs. Bendle Bros.; additional story, Shedden Hall, Shedden Hill, for Mr. W. R. Cutchey; four houses, Barton Hill Road, for Mr. F. White; house, Manscombe Road, Livermead, for Mr. J. H. Gibbs; six houses, Babbacombe Road, for Mr. G. W. Hands; clinics, Torbay Hospital, for the hospital trustees.

EASTERN COUNTIES

Plans passed at CHELMSFORD: Extensions to offices, Duke Street, for the Essex and Suffolk Equitable Insurance Society, Ltd.; house, The Essex Home School, for the council of the home school; house, rear of the Tulip Inn, Springfield, for Mr. J. E. W. Daines; extension to garage, London Road, for Eastern Automobiles, Ltd.: alterations, 16 High Street, for Messrs. E. J. Rippon and Sons; bungalow, Galleywood Road, for Mr. E. W. A. Brigden; house and bakery, Writtal Road, for Mr. A. C. Thompson.

A site has been obtained for the erection of a Roman Catholic school at CHELMSFORD.

The Essex Education Committee has purchased land in Berkeley Road, CLACTON, for the erection of a junior school.

Plans passed at LOWESTOFT: Two bungalows, Blackheath Road, for Mr. E. J. Westgate; two houses, Victoria Road, Oulton Broad, for Mr. G. A. Gaze; house, Corton Road, for Mr. H. J. Devereux; two houses, Yarmouth Road, Oulton Broad, for Mr. S. C. King; bungalow, Kirkley Park Road, for Mr. J. E. Westoby; layout of building estate, St. Margaret's Road, for Messrs. H. Warnes and Sons.

The Essex Education Committee has approved plans for the erection of a junior school at Rush Green, ROMFORD, at a cost of £14,000.

MIDLAND COUNTIES

The BIRMINGHAM Corporation has obtained sanction for a loan of £100,000 for waterworks.

Plans passed by the CHESTERFIELD Corporation: Ten houses, Manor Road, for Mr. G. F. Kirk; house, Saltergate, for Messrs. A. M. Crow and Sons; alterations to premises, Knifesmith Gate, for Messrs. W. Jephson and Son.

The COVENTRY Corporation is acquiring twelve acres of land for the extension of the Exhall infirmary.

The Board of Education has approved plans by the Notts Education Committee for extensions at EDWINSTOWE elementary school, at a cost of £8,358.

The NORTHAMPTON Corporation is to erect a further 108 houses and two shops on the Kettering Road estate.

The NORTHAMPTON Corporation has adopted a plan for the extension of the museum buildings in Guildhall Road.

The STOKE-ON-TRENT Corporation Electricity Committee has considered arrangements for the erection of a sub-station on land in Hanley Road, Sneyd Green, and has decided to appoint Mr. Harold Goldstraw as architect.

Messrs. Thornley and Sons, Ltd., are to develop the Lightwood Chase estate, STOKE-ON-TRENT.

The STOKE-ON-TRENT Corporation is to erect 4,000 houses within the next five years.

In connection with the proposed erection of 266 houses on the Lightwood Chase estate, the STOKE-ON-TRENT Corporation is to divert Sandon Road, at a cost of £13,000.

The Stoke-on-Trent Corporation has approved plans for proposed alterations to the Picture Palace, Station Road, TUNSTALL.

The WARRINGTON Corporation is to reconstruct the canal bridge at Loushers Lane, at a cost of £11,000.

The WARRINGTON borough engineer is to prepare plans for twenty-four houses on the Latchford estate.

NORTHERN COUNTIES

The BILLINGHAM Branch Library Committee is to erect two branch libraries.

The BIRKENHEAD Corporation has prepared a scheme for the clearance and rehousing of the St. Mary's Gate area.

The BIRKENHEAD Corporation has sold land in King's Road to the trustees of Christ Church, Bebington, for the erection of a parish hall.

The Crosville Motor Services, Ltd., are to erect a motor bus garage on land in New Chester Road, BIRKENHEAD.

The CHORLEY Corporation is seeking sanction to borrow £29,542 for the erection of houses on the Springs Road housing estate.

The ESTON U.D.C. has under consideration a proposal for the development of a further section of the Grangetown estate, by the erection of 340 houses.

Plans passed at ESTON: Additions, Queen's, Royal and Zetland hotels, South Bank, for the North-Eastern Breweries Co., Ltd.; bungalow, Flatts Lane, Normanby, for Mr. F. M. Lockwood; two houses, King Street, South Bank, for Mr. Miles; two houses, Hampden Street, for Mr. Miles.

The HASLINGDEN Corporation is to extend the municipal buildings at a cost of £9,000.

The HULL Corporation is to erect a further 282 houses on the Endyke Lane estate.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_2	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_2	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W.Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_1	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank ..	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_1	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey ..	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A*	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_3	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_1	King's Lynn	E. Counties	1 3½	11¾
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_3	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_3	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_3	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£	s.	d.
Bricklayer . . . per hour		1	8
Carpenter . . . ,,		1	8
Joiner . . . ,,		1	8
Machinist . . . ,,		1	9
Mason (Banker) . . ,,		1	8
,, (Fixer) . . ,,		1	9
Plumber . . . ,,		1	8
Painter . . . ,,		1	7
Paperhanger . . ,,		1	8
Glazier . . . ,,		1	8
Slater . . . ,,		1	8
Scaffolder . . . ,,		1	4
Timberman . . . ,,		1	4
Navvy . . . ,,		1	3
General Labourer . . ,,		1	3
Lorryman . . . ,,		1	5½
Crane Drivers . . ,,		1	7
Watchman . . . per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

	£	s.	d.
Grey Stone Lime . . . per ton	2	8	6
Blue Lias Lime . . . ,,	2	10	6
Hydrated Lime . . . ,,	2	16	0
Portland Cement . . . ,,	2	6	0
Ferro-crete . . . ,,	2	13	6
Thames Ballast . . . per Y.C.		8	9
¾" Crushed Ballast . . ,,		10	0
Building Sand . . . ,,		10	6
Washed Sand . . . ,,		11	6
2" Broken Brick . . ,,		9	6
¾" ,, ,, . . ,,		12	6
Pan Breeze . . . ,,		6	6
Coke Breeze . . . ,,		8	9

BRICKLAYER

	£	s.	d.
Flettons . . . per M.	3	1	6
Grooved do. . . . ,,	3	3	6
Stocks, 1st Quality . . ,,	4	18	6
,, 2nd ,, . . ,,	4	12	6
Blue Bricks, Pressed . . ,,	9	18	0
,, Wirecuts . . ,,	8	16	0
,, Brindles . . ,,	8	0	0
,, Bullnose . . ,,	10	8	0
Red Sand-faced Facings . . ,,	7	11	0
Red Rubbers for Arches . . ,,	15	0	0
Multicoloured Facings . . ,,	9	4	0
Luton Facings . . . ,,	8	16	0
Midhurst White Facings . . ,,	**5**	**0**	**0**
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:			
Stretchers . . . ,,	21	10	0
Headers . . . ,,	21	0	0
Bullnose . . . ,,	28	0	0
Double Stretchers . . ,,	30	0	0
Double Headers . . ,,	27	0	0
Glazed Second Quality, *Less* . ,,	1	0	0
,, Buffs and Creams, Add . ,,	2	0	0
,, Other Colours ,, . ,,	5	10	0
2" Breeze Partition Blocks . . per Y.S.		1	9
2½" ,, ,, ,, . . ,,		2	0
3" ,, ,, ,, . . ,,		2	3
4" ,, ,, ,, . . ,,		3	0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s.	d.	6" s.	d.
Straight pipes . . per F.R.	1	1	1	6
Bends . . . each	2	10	4	4
Taper bends . . . ,,	6	3	7	2
Rest bends . . . ,,	5	9	8	9
Single junctions . . ,,	3	9	5	9
Double ,, . . ,,	5	9	8	9
Straight channels . . ,,	2	6	3	2
¾" Channel bends . . ,,	7	8	—	
Channel junctions . . ,,	7	0	12	6
Channel tapers . . ,,	5	6	7	9
Yard gullies . . ,,	9	6	11	6
Interceptors . . ,,	18	6	25	9
Iron drain pipe . . per F.R.	2	3	3	5
Bends . . . each	6	0	13	0
Inspection bends . . ,,	15	3	24	0
Single junctions . . ,,	9	3	18	0
Double junctions . . ,,	14	0	27	6
Lead wool . . . lb.		6	—	
Gaskin . . . ,,		5	—	

MASON

The following d/d F.O.R. at Nine Elms:	£	s.	d.
Portland stone, Whitbed . . F.C.		4	6
,, ,, Basebed . . ,,		4	9
Bath stone . . . ,,		2	11
York stone . . . ,,			9
,, Sawn templates . . ,,		7	6
,, Paving, 2" . . F.S.		1	8
,, ,, 3" . . ,,		2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£	s.	d.
24" × 12" Duchesses . . per M.	31	0	0
22" × 12" Marchionesses . . ,,	28	0	0
20" × 10" Countesses . . ,,	20	5	0
18" × 10" Viscountesses . . ,,	17	0	0
18" × 9" Ladies . . . ,,	15	0	0
Westmorland green (random sizes) per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:			
20"× 10" medium grey per 1,000 (actual)	26	0	0
,, green . . ,,	27	15	0
Best machine roofing tiles . . ,,	5	0	0
Best hand-made do. . . . ,,	5	10	0
Hips and valleys . . . each			9½
,, hand-made . . . ,,			10
Nails, compo . . . . lb.			4
,, copper . . . . ,,		2	0

CARPENTER AND JOINER

	£	s.	d.
Good carcassing timber . . F.C.		2	6
Birch . . . as 1" F.S.			9
Deal, Joiner's, . . . ,, ,,			5
,, ,, 2nds . . ,, ,,			4
Mahogany, Honduras . . ,, ,,		1	3
,, African . . ,, ,,		1	1
,, Cuban . . ,, ,,		2	6
Oak, plain American . . ,, ,,		1	0
,, Figured ,, . . ,, ,,		1	3
,, Plain Japanese . . ,, ,,		1	2
,, Figured ,, . . ,, ,,		1	5
,, Austrian wainscot . . ,, ,,		1	6
,, English ,, . . ,, ,,		1	11
Pine, Yellow . . . ,, ,,		1	0
,, Oregon . . . ,, ,,			4
,, British Columbian . . ,, ,,			4
Teak, Moulmein . . . ,, ,,		1	3
,, Burma . . . ,, ,,		1	2
Walnut, American . . . ,, ,,		2	3
,, French . . . ,, ,,		2	3
Whitewood, American . . ,, ,,		1	1
Deal floorings, ¾" . . . Sq.	1	1	0
,, ⅞" . . . ,,	1	3	6
,, 1" . . . ,,	1	5	6
,, 1¼" . . . ,,	1	11	0
,, 1½" . . . ,,	1	15	0
Deal matchings, ¾" . . . ,,		16	0
,, ⅞" . . . ,,		17	6
,, 1" . . . ,,	1	6	0
Rough boarding, ¾" . . . ,,		18	0
,, 1" . . . ,,	1	0	0
,, 1½" . . . ,,	1	8	0

Plywood, per ft. sup.

Thickness	⅛"			¼"			⅜"			½"		
Qualities	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	3	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	½"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3'–11½" long ,,	7	9	1/3	1/8	3/–
Long screws 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3'–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket union . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58⅓	,, water .	45
Steam . . .	55	,, steam .	40

FITTINGS.

Gas . . .	47½	Galvanized gas .	37½
Water . . .	42½	,, water .	32½
Steam . . .	37½	,, steam .	27½

SMITH AND FOUNDER—*continued.*

	s.	d.
Rolled steel joists cut to length . . cwt.	9	6
Mild steel reinforcing rods, ⅜" . . . ,,	10	0
,, ,, ½" . . . ,,	9	9
,, ,, ⅝" . . . ,,	9	6
,, ,, ¾" . . . ,,	9	0
,, ,, ⅞" . . . ,,	9	0
,, ,, 1" . . . ,,	9	3
,, ,, 1¼" . . . ,,	9	0
,, ,, 1½" . . . ,,	9	0

Cast-iron rain-water pipes of ordinary thickness metal .	s.	d.	3" s.	d.	4" s.	d.
	F.R.		7		10	
Shoes . . . each	2	3	3	3		
Anti-splash shoes . . ,,	5	0	8	6		
Boots . . . ,,	3	3	4	6		
Bends . . . ,,	2	9	4	0		
,, with access door . . ,,	—		6	9		
Heads . . . ,,	4	0	5	0		
Swan-necks up to 9" offsets . ,,	4	0	6	3		
Plinth bends, 4½" to 6" . ,,	4	0	5	6		
Half-round rain-water gutters of ordinary thickness metal .	F.R.		5		6	
Stop ends . . . each			6		7	
Angles . . . ,,	1	7	1	11		
Obtuse angles . . ,,	2	0	2	6		
Outlets . . . ,,	1	9	2	3		

PLUMBER

	s.	d.
Lead, milled sheet . . . cwt.	23	0
,, drawn pipes . . ,,	23	6
,, soil pipe . . ,,	26	6
,, scrap . . ,,	13	0
Solder, plumbers' . . lb.	1	0
,, fine do. . . ,,	1	4
Copper, sheet . . ,,	1	0
,, tubes . . ,,	1	4

L.C.C. soil and waste pipes:	3"		4"		6"	
Plain cast . . F.R.	1	0	1	2	2	6
Coated . . ,,	1	1	1	3	2	8
Galvanized . . ,,	2	0	2	6	4	6
Holderbats . . each	3	10	4	0	4	9
Bends . . ,,	3	9	5	3	10	3
Shoes . . ,,	2	10	4	4	9	6
Heads . . ,,	4	8	8	5	12	9

PLASTERER

	£	s.	d.
Lime, chalk . . . per ton	2	8	6
Plaster, coarse . . ,,	2	10	6
,, fine . . ,,	5	10	0
Hydrated lime . . ,,	2	16	0
Sirapite . . . ,,	3	10	0
Keene's cement . . ,,	5	10	0
Sand, washed . . Y.C.		11	6
Hair . . . lb.			6
Laths, sawn . . bundle		2	4
,, rent . . ,,		3	9
Lath nails . . lb.			3½

GLAZIER

	s.	d.		s.	d.
Sheet glass, 21 oz. . . F.S.					3½
,, ,, 26 oz. . . ,,					4½
Arctic glass . . ,,					5
Cathedral glass . . ,,					6
Hartley's rough rolled . ,,					9
Do. wired plate . . ,,				1	3
¼" Polished plate, n/e 1 . ,,	1	0	to	1	3
,, ,, 2 . ,,	1	2	,,	2	7
,, ,, 3 . ,,	1	7	,,	2	5
,, ,, 4 . ,,	2	1	,,	2	11
,, ,, 6 . ,,	2	3	,,	3	2
,, ,, 8 . ,,	2	6	,,	3	6
,, ,, 12 . ,,	2	9	,,	3	8
,, ,, 20 . ,,	3	0	,,	3	11
,, ,, 45 . ,,	3	3	,,	4	1
,, ,, 65 . ,,	3	7	,,	4	6
,, ,, 90 . ,,	3	10	,,	4	9
,, ,, 100 . ,,	4	0	,,	5	0
Vita glass, sheet, n/e 1 . ,,				1	0
,, ,, ,, 2 . ,,				1	3
,, ,, ,, over 2 . ,,				1	9
,, ,, plate, n/e 1 . ,,				1	6
,, ,, ,, 2 . ,,				3	0
,, ,, ,, 5 . ,,				4	0
,, ,, ,, 7 . ,,				5	0
,, ,, ,, 15 . ,,				6	0
,, ,, ,,over 15 . ,,				7	6
Putty, linseed oil . . lb					3

PAINTER

	£	s	d.
White lead . . . cwt.	2	8	0
Linseed oil . . . gall.		3	3
Boiled oil . . . ,,		4	3
Turpentine . . ,,		3	4
Patent knotting . . ,,		14	0
Distemper, washable . . cwt.	3	0	0
,, ordinary . . ,,	2	5	0
Whitening . . . ,,		4	0
Size, double . . firkin		3	0
Copal varnish . . gall.		13	0
Flat varnish . . ,,		14	0
Outside varnish . . ,,		16	0
White enamel . . ,,	1	15	0
Ready-mixed paint . ,,		13	6
Brunswick black . . ,,		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		3	6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.		10	0
" to form basement n/e 5' 0" deep and cart away	"		11	0
" " 10' 0" deep and cart away	"		11	6
" " 15' 0" deep and cart away	"		12	0
If in stiff clay	add "		3	0
If in underpinning	" "		5	0
Digging, return, fill and ram	"		5	0
Planking and strutting to sides of excavation	F.S.		1	0
" " to pier holes	"			6
" " to trenches	"			6
" " extra, only if left in	"			3½
Hardcore, filled in and rammed	Y.C.		14	0
Portland cement concrete in foundations (6-1)	"	1	13	6
" " " (4-2-1)	"	1	18	6
" " " underpinning	"	2	2	0
Finishing surface of concrete, spade face	Y.S.			9

DRAINLAYER

		4" s.	d.	6" s.	d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	8	2	6
Extra, only for bends	Each	2	8	3	9
" junctions	"	3	9	4	6
Gullies and gratings	"	17	6	19	9
Cast iron drains, and laying and jointing	F.R.	5	6	7	0
Extra, only for bends	Each	12	6	18	6

BRICKLAYER

	£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	32	0	0
" " in cement	"	34	0	0
" Stocks in cement	"	41	10	0
" Blues in cement	"	62	0	0
Extra only for circular on plan	"	3	0	0
" backing to masonry	"	2	0	0
" raising on old walls	"	3	0	0
" underpinning	"	10	0	0
Fair Face and pointing internally	F.S.			3
Extra only for picked stock facings	"		1	0
" red brick facings	"		1	6
" blue brick facings	"		1	9
" glazed brick facings	"		4	6
Tuck pointing	"			10
Weather pointing	"			4
Slate dampcourse	"		1	0
Vertical dampcourse	"		1	3

ASPHALTER

		s.	d.
½" Horizontal dampcourse	Y.S.	5	6
½" Vertical dampcourse	"	7	6
½" paving or flat	"	5	6
1" paving or flat	"	6	6
1" × 6" skirting	F.R.	1	0
Angle fillet	"		2
Rounded angle	"		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1	1	6
Bath stone and do, all as last	"		15	6
Artificial stone and do.	"		16	6
York stone templates, fixed complete	"		14	0
" thresholds	"		16	0
" sills	"	1	3	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4	5	0
Do., 18" × 9"	"	4	2	0
Do., 24" × 12"	"	4	12	0
Westmorland slating, laid with diminished courses	"	6	10	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4	0	0
Do., all as last, but of machine-made tiles	"	3	11	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	12	0
Shuttering to sides and soffits of beams	F.S.		1	0
" to stanchions	"		1	0
" to staircases	"		2	0
Fir and fixing in wall plates, lintols, etc.	F.C.		5	0
Fir framed in floors	"		6	9
" " roofs	"		8	3
" " trusses	"		9	0
" " partitions	"		12	0
⅛" deal sawn boarding and fixing to joists	Sqr.	1	17	6
1" " " " " "	"	2	1	6
1½" " " " " "	"	2	7	6
2" × 2" fir battening for Countess slating	"		12	6
Do. for 4" gauge tiling	"		16	0
Stout feather-edged tilting fillet	F.R.			6
Patent roofing felt, 1 ply	Y.S.		2	6
" " " 2 "	"		3	0
" " " 3 "	"		3	6
Stout herringbone strutting to 9" joists	F.R.		1	0
1" deal gutter boards and bearers	F.S.		1	4
1½" " " " "	"		1	8
2" deal wrought rounded roll	F.R.			9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	15	0
1¼" do.	"	3	4	0
1½" do.	"	3	13	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	10
1¼" do.	"		2	1

CARPENTER AND JOINER—*continued.*

		s.	d.
1½" deal moulded sashes of average size	F.S.	2	3
2" " " " "	"	2	6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅝" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4	3
2" " " " "	"	4	6
Extra only for moulded horns	Each		9
1½" deal four-panel square, both sides, door	F.S.	2	6
2" " " " "	"	3	0
1½" " but moulded both sides	"	3	0
2" " " " "	"	3	6
4" × 3" deal, rebated and moulded frames	F.R.	1	6
4½" × 3½" " " "	"	2	0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2	0
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3	0
1½" deal moulded wall strings	"	2	6
1½" " outer strings	"	2	9
Ends of treads and risers housed to string	Each	2	0
3" × 2" deal moulded handrail	F.R.	1	6
1" × 1" deal balusters and housing each end	Each	2	6
1½" × 1½" " " "	"	3	3
3" × 3" deal wrought framed newels	F.R.	1	6
Extra only for newel caps	Each	7	6
Do., pendants	"	7	6

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists cut to lengths, and hoisting and fixing in position	Per cwt.		17	0
Riveted plate or compound girders and hoisting and fixing in position	"	1	3	0
Do. stanchions with riveted caps and bases and do.	"	1	2	0
Mild steel bar reinforcement ½" and up, bent and fixed complete	"	1	0	0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.		1	0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	15	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters	Per cwt.	1	19	6
Do. in flashings	"	2	2	0
Do. in covering to turrets, etc.	"	2	9	0
Do. in soakers	"	1	15	0
Labour to welted edge	F.R.			3½
Open copper nailing	"			3½
Close "	"			4½

Lead service pipe and fixing with pipe hooks	F.R.	½" s.	d.	¾" s.	d.	1" s.	d.	1¼" s.	d.	2" s.	d.	4" s.	d.
		1	3	1	8	2	2	2	9	3	10	—	
Do. soil pipe and fixing with cast lead tacks	"	—		—		—		—		—		6	0
Extra, only to bends	Each	—		—		—		—		2	3	6	6
Do. to stop ends	"	7		9		1	0	1	3	2	0	—	
Boiler screws and unions	"	3	6	4	0	5	6	8	0	—		—	
Lead traps	"	—		—		—		7	6	10	6	—	
Screw down bib valves	"	7	6	10	6	12	6	—		—		—	
Do. stop cocks	"	10	0	12	0	16	0	23	6	56	6	—	

		£	s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.		1	3
Extra, only stop ends	Each		1	0
Do. angles	"		1	6
Do. outlets	"		3	0
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.		1	6
Extra, only for shoes	Each		2	6
Do. for plain heads	"		5	6

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		3	9
Do. in n/w to beams, stanchions, etc.	"		5	6
Lathing with sawn laths to ceilings	"		1	6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"		2	6
Do. vertica	"		2	9
Rough render on walls	"		2	3
Render, float and set in lime and hair	"		3	0
Render and set in Sirapite	"		3	3
Render, backing in cement and sand, and set in Keene's cement	"		4	6
Extra, only if on lathing	"			9
Keene's cement, angle and arris	F.R.			8
Arris	"			3
Rounded angle, small	"			3
Plain cornices in plaster, including dubbing out, per 1" girth	"			2
1" granolithic pavings	Y.S.		5	0
1½" "	"		6	0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1	2	6
9" × 3" " " "	"	1	7	6
Extra, only for small quadrant angle	F.R.			9

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		8
26 oz. do. and do.	"	1	0
Arctic glass and glazing with putty	"	1	2
Cathedral glass and do.	"	1	3
Glazing only, British polished plate	"		8
Extra, only if in beads	"		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		8
Do. and distemper walls	"	1	0
Do. with washable distemper	"	1	3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax-polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	6
Hanging ordinary paper	from "	3	0

NUNEHAM COURTENAY CHAPEL, OXON.

PHOTOGRAPHS AND A MEASURED DRAWING OF THE WEST ELEVATION, WITH PORCH



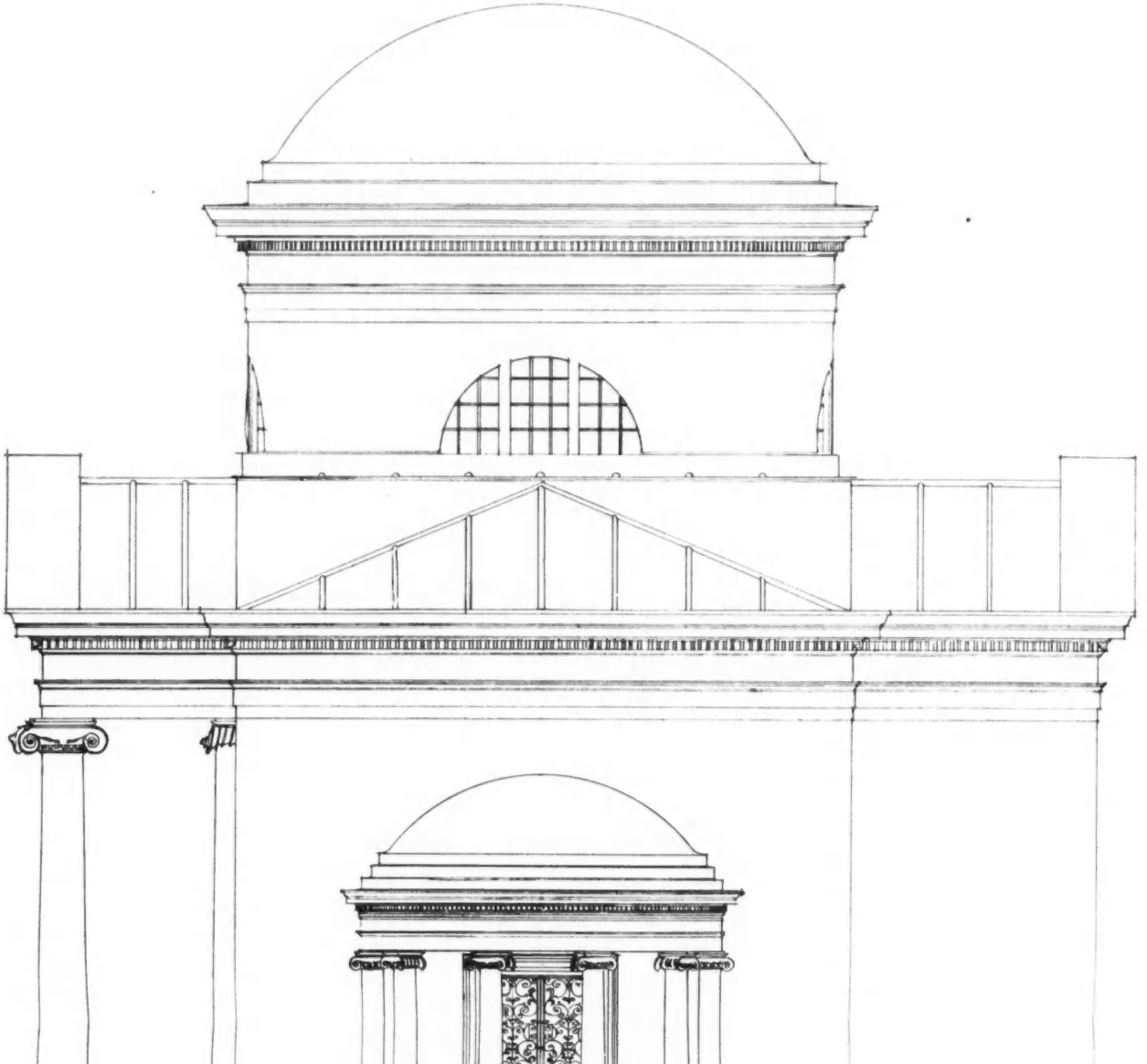
THE SEMI-CIRCULAR PORCH, WITH COLUMNS AND DOME

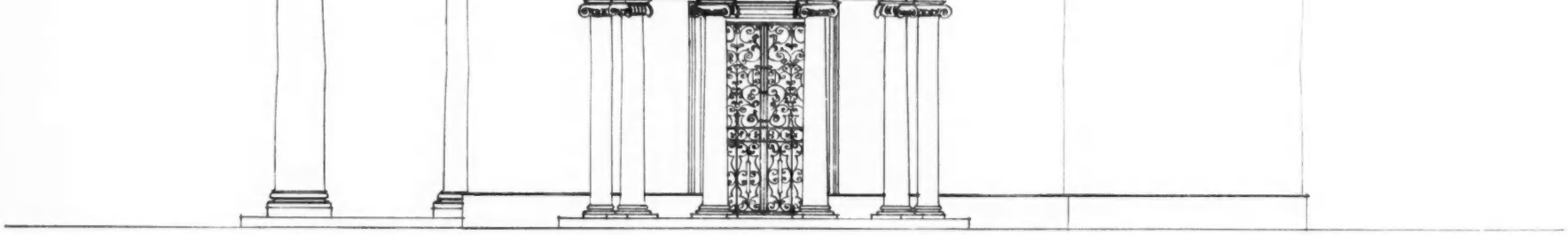
THE two photographs and the drawing published this week give prominence to the little semi-circular porch which adorns the western entrance of the chapel. Both here and in the main order and more particularly in the angle-volutes of the north portico, is observable the Greek influence which " Athenian " Stuart brought to bear on the details of Lord Harcourt's design. Stuart was, of course, the first British architect to introduce Greek mouldings into his work, and this (1764) is an early instance of his so doing.

The semi-circular porch is the counterpart, as regards size and general shape, of the apse at the east end, and, so far as the exterior of the building is concerned, the major axis is assumed to lie north and south, the north façade reading as a symmetrical composition. On entering the building, however, the axial arrangement is reversed, the east-west axis assuming preponderance.

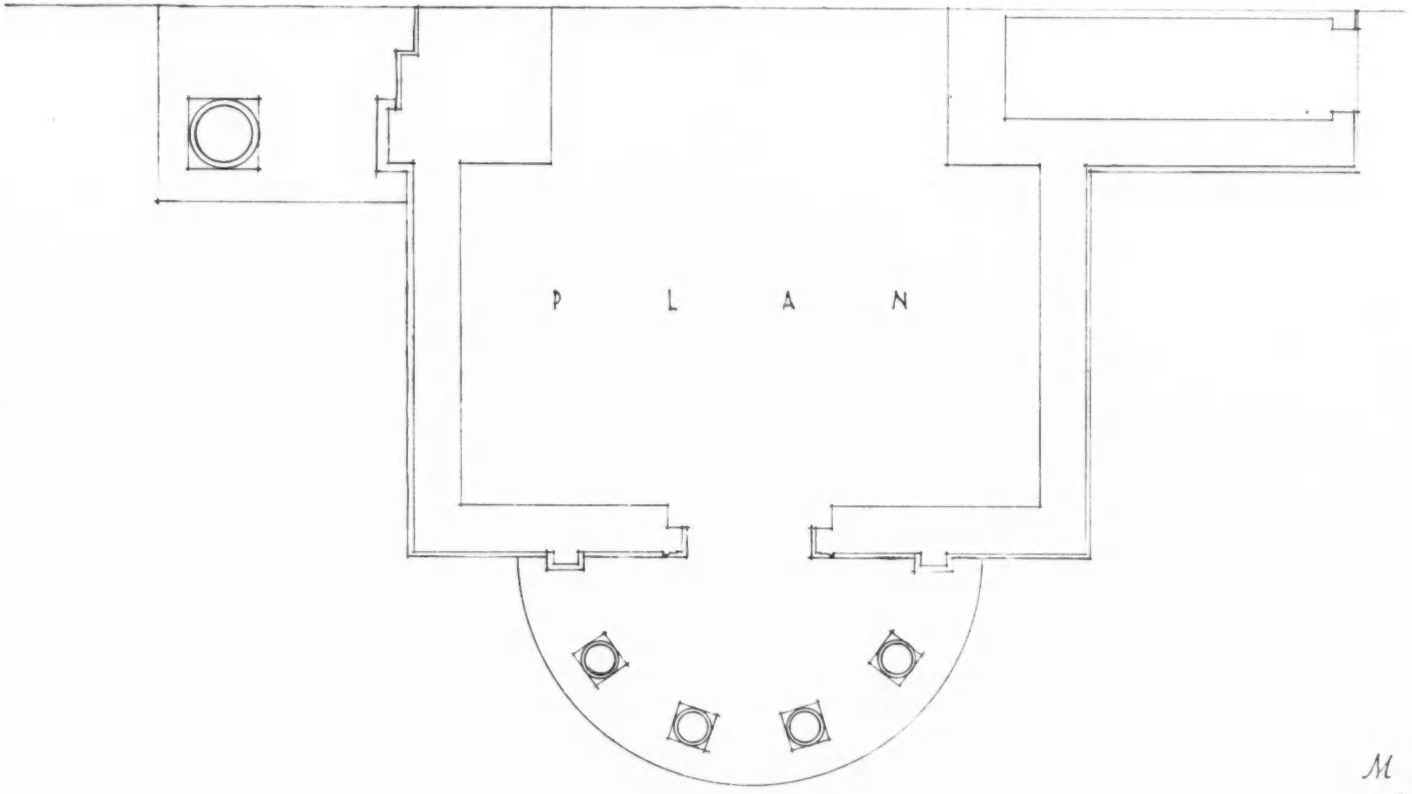
Other illustrations of this subject appeared with the issue for March 18, 1931.

THE CHAPEL, NUNEHAM PARK.





WEST ELEVATION

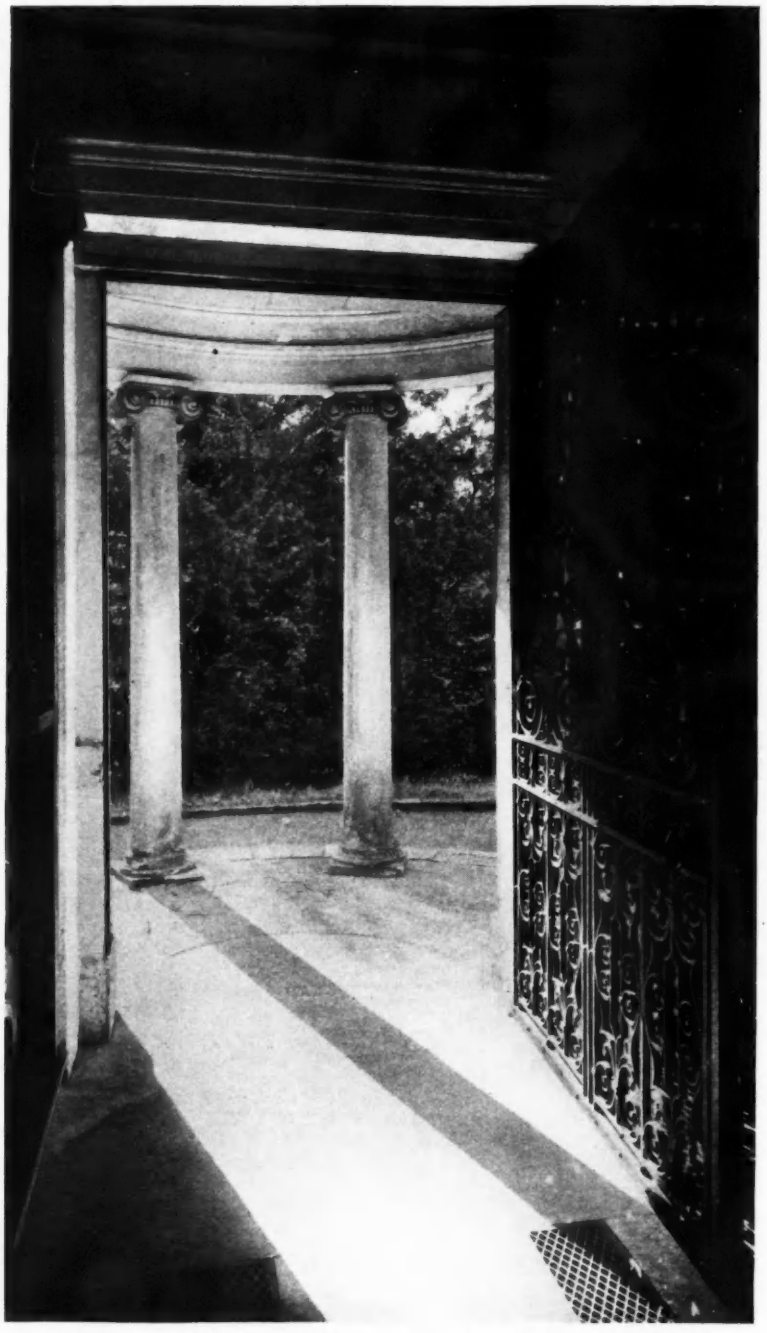


PLAN

Scale.

10 9 8 7 6 5 4 3 2 1 0 10 20 Feet

Mens et Delt.
HW Crickmay & JQ Lay



THE OUTLOOK TO PORCH WITH THE IRON GATE OPEN

WALL DECORATION, LIGHTS AND DOORS

A PHOTOGRAPH AND DETAIL DRAWINGS FROM THE STRAND PALACE HOTEL RESIDENTS' LOUNGE



Oliver P. Bernard, Architect.

SYCAMORE-PANELLED WALL, WITH DOORS TO DINING-ROOM

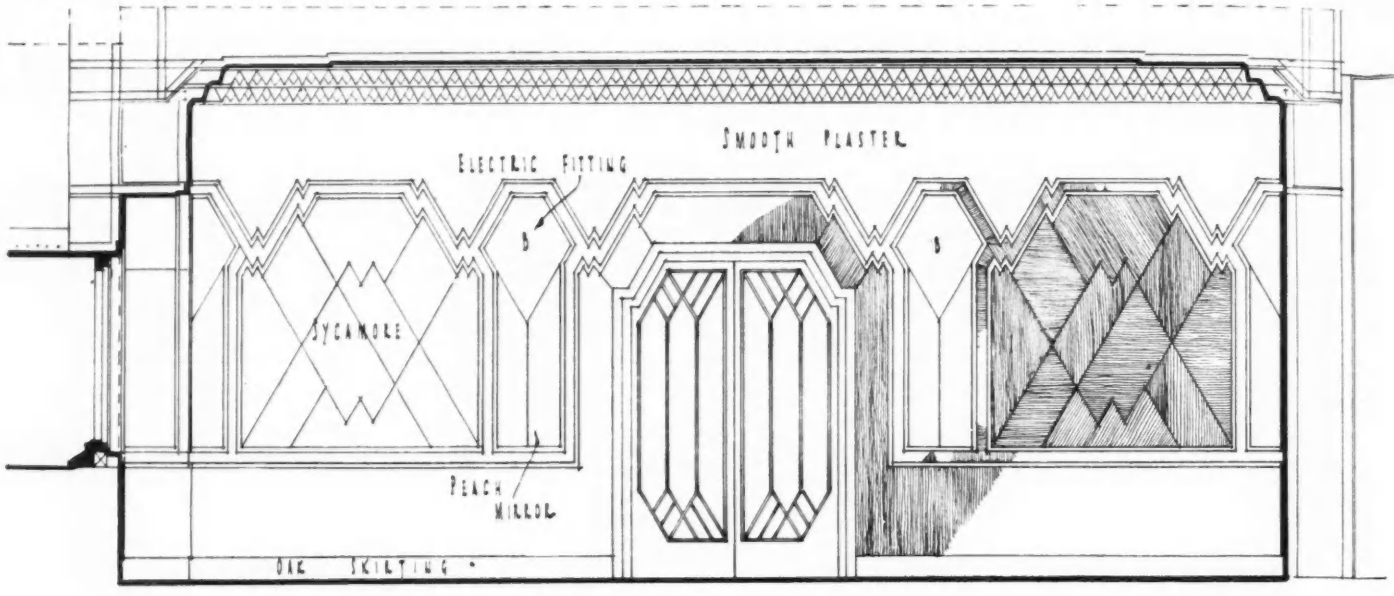
THE purpose of the scheme of this lounge or drawing-room for hotel residents is to provide a rich and restful environment apart from the more frequented parts of the building. The warm colouring of Empire timbers and mellow plaster work, and the judicious subdued lighting, screened and reflected by means of flesh-toned glass and peach mirrors, are contributory to that purpose.

The entrance doors are surrounded on both sides by bronze grilles, glazed with fired white cathedral glass. These surrounds are illuminated by continuously arranged tubular tungsten filament lamps.

The doors are of hardwood core, sheathed in burnished bronze, with bronze grilles on both sides of ¼-in. polished plate-glass panels, and bronze push plates and grips. The door frames are of solid Australian silky oak.

The wall panelling is of very choice sycamore veneer, framed with mouldings of solid Australian silky oak, enclosing styles of cross-banded African rose zebrano veneer. Arm-chairs and settees are of the same oak, upholstered with moquette. There is a table to match with ½-in. pale blue glass tops, bedded in stainless steel rims.

Ceiling, ventilated cornice and frieze are of plaster, finished in antique ivory enamel and oil varnish. The electric light fittings, wall and ceiling type of composite formation, are constructed of bronze metal work and fired flesh-coloured cathedral glass. The wall fittings are provided with sycamore veneered panels as backgrounds. Lower panels in continuation of the wall fittings are made of specially faceted and polished peach plate glass.

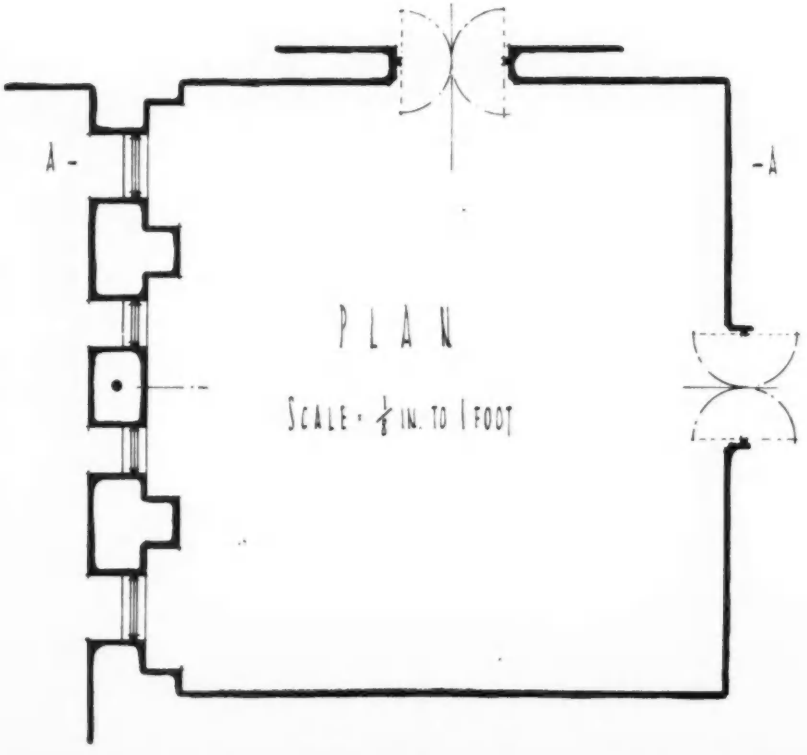


ELEVATION A-A
(SYCAMORE PANELLING)
SCALE = ½ IN. TO 1 FOOT

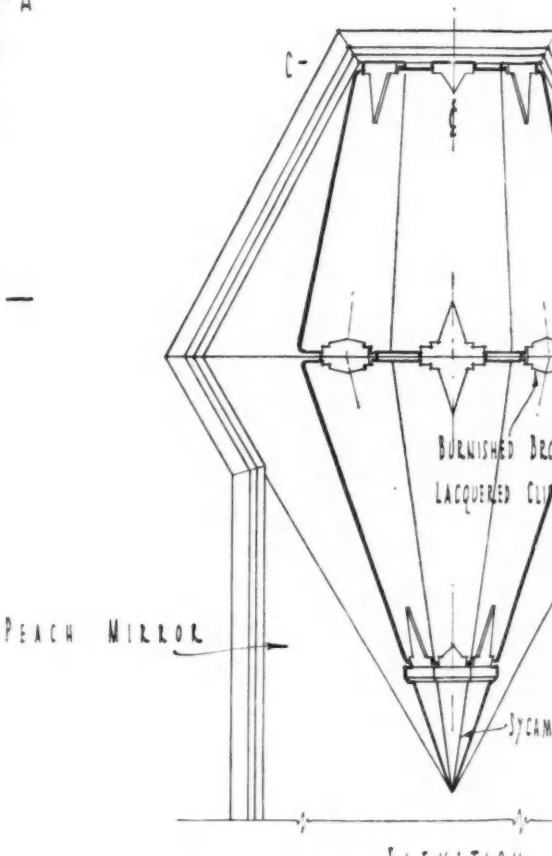
STRAND PALACE HOTEL. LONDON.

DRAWING ROOM.

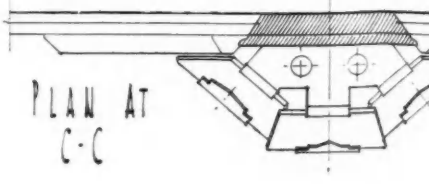
DETAIL OF WALL DECORATION.



PLAN
SCALE = ½ IN. TO 1 FOOT

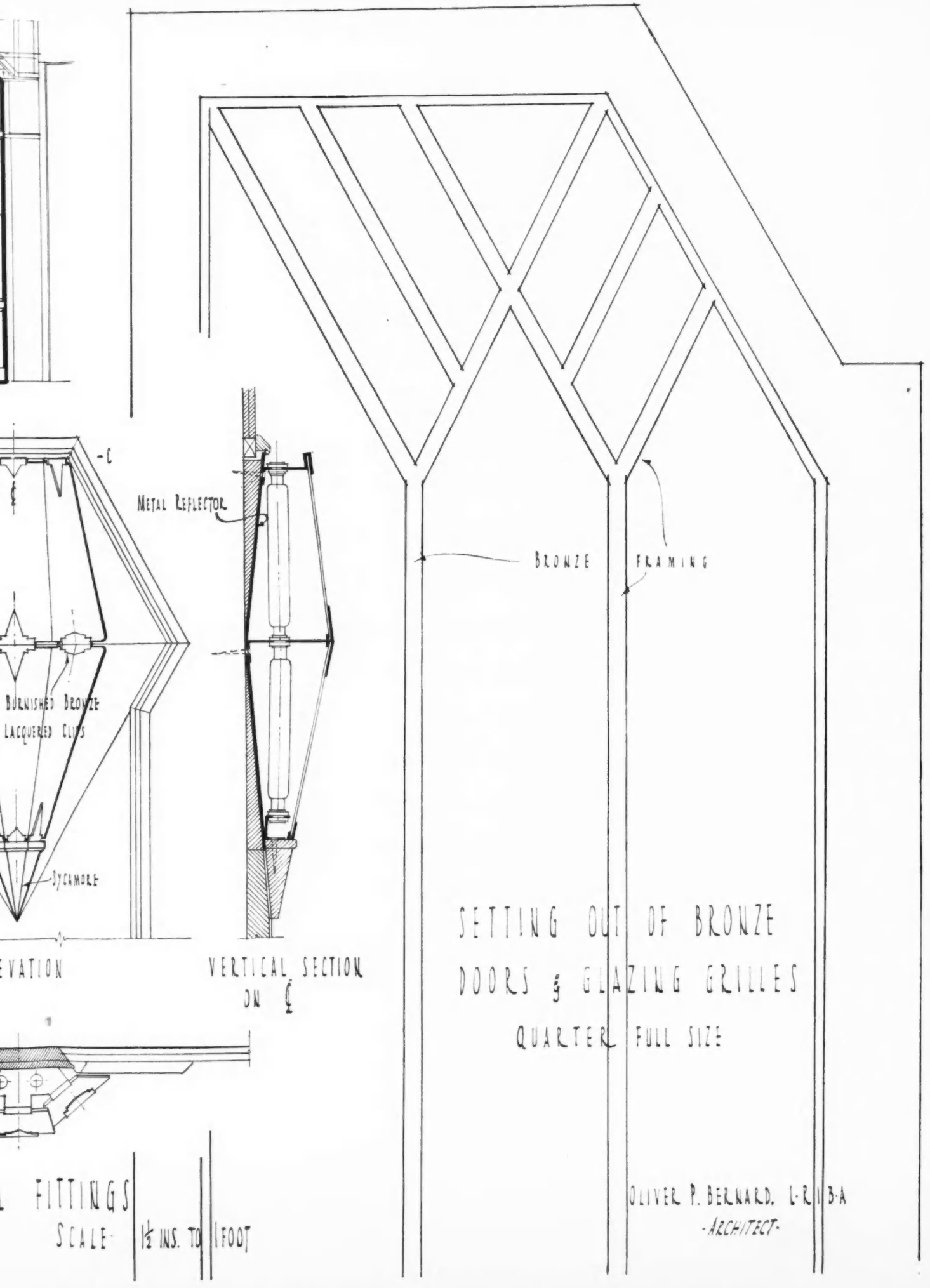


ELEVATION



PLAN AT
C-C

ELECTRIC WALL FITTI
AT "B" SCA



VERTICAL SECTION ON ℄

SETTING OUT OF BRONZE DOORS & GLAZING GRILLES

QUARTER FULL SIZE

OLIVER P. BERNARD. L·R·I·B·A
-ARCHITECT-

FITTINGS
SCALE ½ INS. TO 1 FOOT

SELECTED PRECEDENTS:

BRICK, STONE, AND FLINT WORK IN SUSSEX



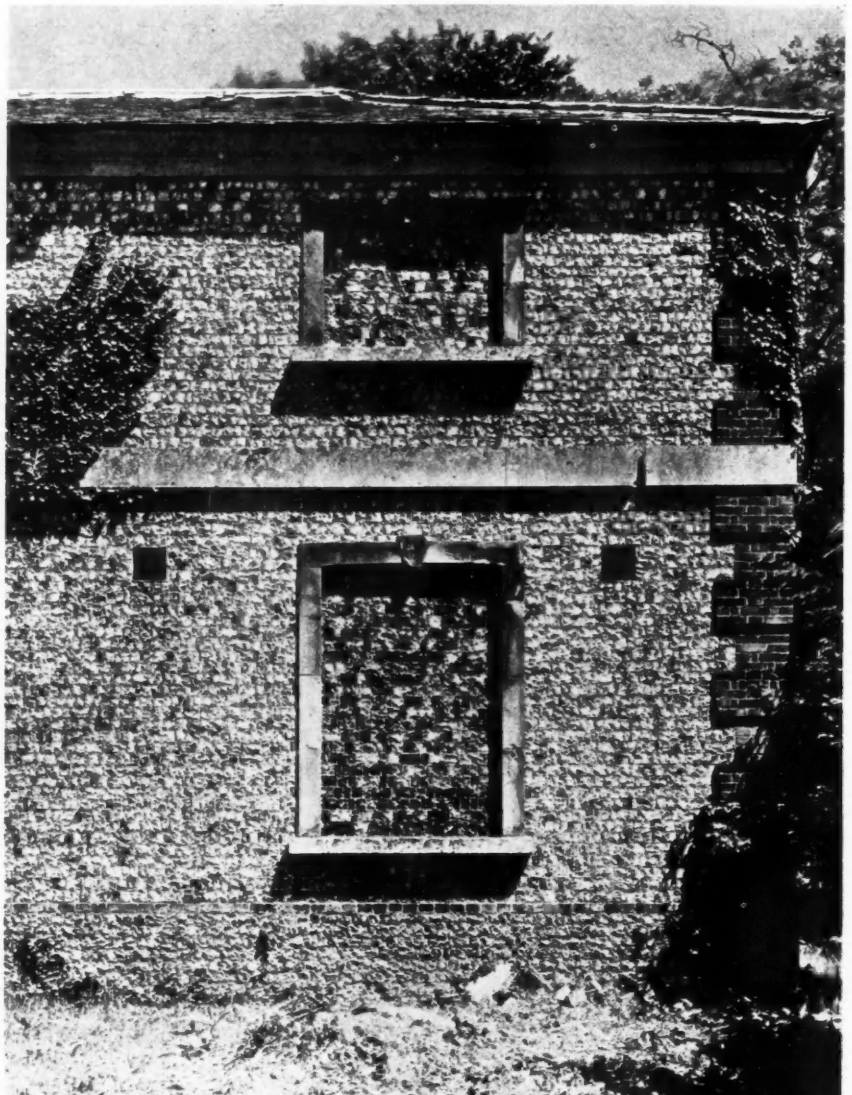
GATE PIERS AND GARDEN WALL AT GLYNDE HOUSE

IT is not often that a combination of three materials is used in building later than the mediæval era. These details from Glynde, Sussex, show brick, stone, and flint used together.

The brickwork is of the fine-jointed sort, typical of the latter part of the eighteenth century. The main body of the flintwork is squared. In the plinth of the stable-block (see photograph on next page), round flints are used with "knapped" face. Note the single brick course which divides this plinth off from the main part of the wall without any change of plane.

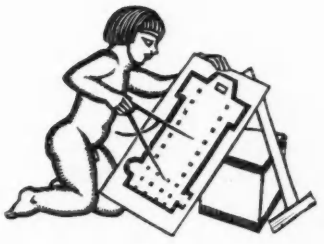
The inside of the gate-piers and garden wall have panels of flint projecting slightly from the brick face, thus giving an effect not unlike vermiculation in stonework. These panels, of squared flints, alternate with round-headed sunk panels of round ones.

C. B.



WALL OF STABLE BLOCK, GLYNDE HOUSE, SUSSEX

THE ARCHITECTS' JOURNAL



WEDNESDAY, APRIL 8, 1931

ARCHITECTS AND PLANNERS

THE reception given to the Government's Planning Bill, a measure of vital importance to every architect, building owner and builder in England, Scotland and Wales, has revealed an amazing ignorance of the significance of planning. The Bill both consolidates past legislation and extends the powers of local authorities to plan developed areas.

One London evening paper filled over a column proclaiming that certain clauses of the new Bill were a danger to the nation, in blissful ignorance of the fact that they had been law for the last ten years or more. Much must be forgiven to the lay Press, but even the dignified *Spectator* suggested that the officials at the Ministry of Health should be provided with an Advisory Committee. The writer had forgotten that the Chief Town Planning Inspector at the Ministry, Mr. G. L. Pepler, is also honorary secretary to the Town Planning Institute, and is more closely in touch with skilled experts than any other man in Great Britain. The *New Statesman* evidently thought that past legislation meant the planning of towns, and wrote foggily on the point. These are only stray illustrations to show how the public are being fed with unreliable information on a complex subject.

The truth is that the new Bill has ten new provisions. It enables planning schemes to be made for areas already built over and also for rural areas. It enables regional schemes to be made for regional matters, and supplementary schemes for local matters. It also aims at checking sporadic development, and in several different ways will tend to prevent ribbon development. It retains the old principle of liability to pay compensation, but wisely excepts from compensation cases where undesirable development must be prohibited. It increases betterment from 50 per cent. to 100 per cent. It enables special charges to be levied on property of which the value is increased by public improvement. Local authorities under it may acquire land compulsorily if necessary, so as to direct general development. The existing procedure is accelerated. In order to meet any complaint of excessive bureaucratic control, the validity of any scheme, or of any of its provisions, may be tested in the courts.

To architects, the clauses for checking the spoliation of the countryside will be of real interest. These bear many traces of inspiration from the Council for the Preservation of Rural England, and the Rural Amenities Bill introduced into Parliament some months ago. Architects will also be glad to know that local authorities will continue to have power under the Bill, as was provided under the Act of 1925, to preserve buildings of historic or architectural interest. The size, design, elevation, use and materials of a new building — in a word, its "character" — may be controlled.

But the heart of the Bill is the powers afforded for good development. We have in this respect been sadly lagging behind both the United States and Germany. At last a carefully-thought-out and cautious measure, which probably does not differ in principle from that foreshadowed five years ago by Mr. Neville Chamberlain, is before Parliament. Some architects may consider that the Bill does not go far enough, while some property owners may hold that it is an interference with private liberty. But in a modern community no man can live isolated, and town and country must be organized if there is not to be disorder and waste.

We are spending at the rate of £250,000,000 a year on building and public works without any concerted plan, and thus the heritage of the centuries is being thrown away. The Bill offers reasonable methods for reconciling the needs of development and of preservation. Every reader of THE ARCHITECTS' JOURNAL may well hope that Parliament, acting as a Council of State, will pass it into law soon after the Easter recess is over.



THE NEW HEADQUARTERS OF THE WESTMINSTER BANK

A perspective sketch by J. D. M. Harvey of the new head offices of the Westminster Bank, now nearing completion, in Lothbury, London, E.C. The design, by Messrs. Mewès and Davis, architects, won first place in a limited competition.

Features of the building, in addition to the banking hall, board and committee rooms, are luncheon, smoking and recreation rooms, and canteens. The old bank, demolished to make way for the new building, was designed by Professor C. R. Cockerell and Sir William Tite, in collaboration, in 1837.

NEWS & TOPICS

REMOVE THAT DISTRUST

IT says much for the common sense and forbearance of the promoters of the Architects (Registration) Bill that the measure has at last passed through the Standing Committee of the House of Commons. Concessions almost too numerous to mention have been made, but there still remains in the minds of the opponents of the Bill a profound distrust of the R.I.B.A. and everything connected with it. For the sake of the future of the Bill, it is to be hoped that something will be done to remove that distrust before the Bill comes up for report and third reading, which will be when the House assembles after the Easter recess.

AERODROME ARCHITECTURE

The first interim report of the R.I.B.A. Aerodromes Committee has now been published. The little-known work of this Committee is of extreme value, because aerodrome architecture is a new thing and, like most new things, requires a great deal of study. Especially is it true that the study of the general science of aerodrome design by architects tends to clarify the programme which we may suppose will be presented to architects with greater frequency as aerial transport increases. We have as yet in England little that may claim to have laid a foundation for an adequate aerodrome architecture, but the fine composite "station" buildings of Berlin and Hamburg point the way that we will undoubtedly follow.

*

It may be urged that aviation's claim to supplement, and, in part, to supersede other forms of transport is essentially the claim of speed—speed without danger or discomfort. But speed in the air is of little use without corresponding speed—and comfort—on the ground. The aeroplane sets a standard which the aerodrome must rival, and can only rival through the highest services of town planner, architect and engineer. It is in large measure true to say that the future of aviation now rests upon the ground.

EXHIBIT ALL THE SCHEMES

At the nineteenth annual meeting of the London Society held in the Clothworkers' Hall, Lord Crawford, speaking from the chair, said that he had hoped that before long a satisfactory solution of the Charing Cross Bridge problem might have been available. There seemed, however, to have been a number of reports issued on the matter, leaving one as much bewildered as ever before. He suggested that just as the London Society collected various schemes for the bridge in a very successful exhibition, so now the L.C.C. might be well advised to exhibit all schemes submitted to and made by this last committee, so that the Council and the general public might see from what data the Council was now to be called upon to deliver its judgment.

*

We are not the only people with bridge problems. New York has them and solves them with tremendous vigour in mighty suspension bridges. Stockholm also—where traffic has become positively nightmarish, especially in the "Town between the Bridges," the last word in bottlenecks—has decided to build a new bridge joining the north and south parts of the city. There has been much controversy over the site, æsthetic considerations having weighed heavily in favour of the position now definitely chosen. The coupling of æsthetics with Charing Cross Bridge sends our traffic experts into convulsions!

THE SCOTTISH NATIONAL LIBRARY

The controversy—no, battle—that rages over the site for the Scottish National Library is carried a stage farther in the right direction by the decision of the Edinburgh Town Council to support the architects in their contention that the larger alternative site in High Street is the better and the cheaper site.

*

The Government refused to take sides in the matter, for Edinburgh seems a rather dangerous corner for the Office of Works; but I imagine that the Edinburgh architects can well dispense with Government support, if such were likely. Their advice is so good that others now will see that it is taken.

THE LEICESTER COMPETITION

Reading the conditions of an architectural competition for a building to house Municipal Departments at Leicester, I was struck by what seemed to me to be the unreasonableness of the dates fixed for the answers to questions. Competitors are now starting on the initial problem, testing the conditions, working out areas, etc., and generally finding their way about. The drawings are to be sent in on June 26, which gives about three months for the competition. The last date for the receipt of questions is April 18, rather more than half-way through the competition, and for six or seven weeks competitors must work without information that may or may not have a vital bearing upon the problem, but at the least must be essential to a complete understanding of the programme set.

*

I wonder whether it would not be possible to answer questions at an earlier date, because I think many of them arise soon after a competitor has explored the conditions, and would be most valuably answered before he has become set in a certain solution, that may quite easily be the wrong one, through lack of proper information.

WANTED, A DETAILED PLAN

"I hope the building societies will come into a great crusade to help destroy every foul house in the country. Economy or no economy, the greatest waste today is the waste of human life, of human health and human strength. We shall never weather the storm until the rank and file are men who can stand up straight figures of health and strength." So spake Mr. Greenwood, the Minister of Health, addressing the Metropolitan Building Societies Association. He went on to urge for a closer co-operation between the State, local authorities, and building societies in an effort to build a million houses in England during the next five years.

*

One of the troubles of English housing, which has been a wonderful achievement despite many and serious blemishes, is the lack of a detailed plan showing where houses are most needed and where, therefore, they should be built—and how! Numerically the totals are impressive,

but so long as housing has depended on local authorities and not clearly on local population needs, it has been to that extent unplanned and spasmodic. A five-year plan to live up to its name should be a *detailed* plan, advisory if need be, but a plan of detailed housing nevertheless.

UNDERGROUND—ON TOP

Both the science and the art of railway architecture seem still to reside with the Underground and with them alone. What prompts me to this statement is a recent view of Hardwick's fine Waiting Hall at Euston, once so littered with railway bric-à-brac; then cleared at the coming of a new consciousness in matters of ordinary arrangement; now, alas! filled again, and with the most elephantine manifestation of new-born railway efficiency.

*

The thing, as Edgar Allen Poe would have said, is meant to be an inquiry bureau, and is magnificent with all that shiny wood and mock modernity can bring to it. And it is large. Ye gods! it is so large that it looks as though an enormous communal tomb had been erected to all L.M.S. directors for ever.

*

Yet this is the simple programme that had to be solved by the railway architect: to design an inquiry bureau of maximum capacity for all railway occasions in the largest and most magnificent waiting hall serving the public in any English station. The hall is protected, or can be quite easily protected, from draughts by double swing doors and is efficiently heated in all weathers, therefore no overhead protection is needed.

*

Great care should be exercised to safeguard the fine proportions and architectural decoration of the hall by making the additions in keeping with its surroundings, and as low as possible.

WISE EXPANSION

Time was when the extension of such a place as Bournemouth represented an evil nearly unmitigated, expansion being then merely expansion—more little houses, silly streets, and what not. The coming of town planning gives real point to the widening of the boundaries of a town which can claim to exercise, through planning foresight backed by a purse, a beneficent effect upon land. If, for instance, in absorbing several rural parishes, a river front, and a certain amount of historical association, Bournemouth can not only safeguard these places from the spoliation that would have followed in course of time but create new beauties through planning, then it is right and fitting that these places should be added to it. Never was town planning given greater point, and never, one might say, was it more necessary that a town, not conspicuously the result of planning, should lay down its future programme of works.

ALL-BRITISH DOORS OF EMPIRE WOODS

Work was commenced early last week on the construction of a door factory in the Midlands. Foundations have been laid and single-story walls already started. Roofing is ordered and within the next three or four weeks the work will be sufficiently advanced to permit the roofing material going into immediate use as delivered. The factory will be fitted with the latest type of British wood-working machinery, except in a few instances where special machinery is not available from English firms. It will operate solely on the mass-production of dowelled doors of the same sizes and types as those imported.

It is expected that the factory will be in operation by the end of May, and present plans provide for a capacity of about 350,000 doors yearly. I am told, however, building and plant have been laid out with a view to easy expansion if desired. I understand that the product of this factory, which will be made by almost entirely British machinery, by British labour and from Empire grown material will fulfil the requirements of the Ministry of Health and the many authorities who are now specifying an all-British door for their various housing schemes, etc. Whilst further details are not available at the present moment, there is a possibility that further factories on similar lines will be operated to strategic points—one near a West Coast port to enable the West Country to be served efficiently, and the other on the canal side near London to enable the South and South-East Coast to be covered.

BURLINGTON ARCADE REBUILDING SCHEME

I saw recently an illustration of the new Piccadilly frontage of the Burlington Arcade that carried me backwards, mentally protesting the while, into a period when curves were generous, sinuous, embracing and embraced. I found it hard to believe, yet there in the picture rose paired volutes, prodigious folds of plaster stone, from under which peered figures symbolic, the whole creation bounded by brackets in some far-off pagan manner, harking through the 'nineties to baroque grottoes and an age of architectural fun. Impossible, I thought—but this is London, England, echo answered.

OXFORD'S MILLION-POUND SCHEME

The long-awaited report of the Commission on "Library provision at Oxford" is now in the hands of members of Congregation. The Commission with infinite wisdom are averse to erecting a library upon a new site, and make instead far-reaching proposals for extending and reorganizing the old Bodleian Library upon a site on the north of Broad Street, either new reading-rooms and storerooms or a building that will be a store only. Their estimates for the extensions and enlargements total something just short of a million pounds.

MARBLE TREASURES FROM THE SEA

Out of the mud of the port of Piræus a dredging machine is discovering various archæological treasures. Here, at one time, stood an emporium where Greek sculpture was sold in the second century. There have already been dragged up marbles representing scenes from Homeric stories and a head of the Emperor Claudius. Why the owners of the shops threw the marbles into the sea is not yet known. Possibly during some civil commotion the shops were looted. At any rate, archæologists are delighted with the finds which they are making.

ANOTHER BOOK BY KARSHISH

I am glad to hear from the Editor that the arbitration case *Jago v. Swillerton and Toomer*, which appeared as a series of articles in this JOURNAL during the early months of last year, is to be published in book form by The Architectural Press today (April 8).

*

Readers who have enjoyed Karshish's books *The Honeywood File* and *The Honeywood Settlement* will find the new volume, which gives an exact picture of an arbitration case as it presents itself to those concerned with building contracts, no less interesting and instructive. An added feature of the book, I understand, is a foreword by Mr. William E. Watson, Barrister-at-Law, who vouches for the legal verity of the book. ASTRAGAL

ROMNEY'S HOUSE, HAMPSTEAD, N.W.



Rehabilitated for his own use

BY CLOUGH WILLIAMS-ELLIS

The main entrance, with, on the left, the garage. The porch, of which the arrangement is seen at close quarters in the view on page 512, serves both studio and house.

TWO years ago Romney's House was no more than a rather celebrated local white elephant, very much under the weather; gaunt, dilapidated and forlorn.

Since George Romney's day, it had become first a music hall and assembly rooms and then a club, each successive occupier having contributed something towards its degradation.

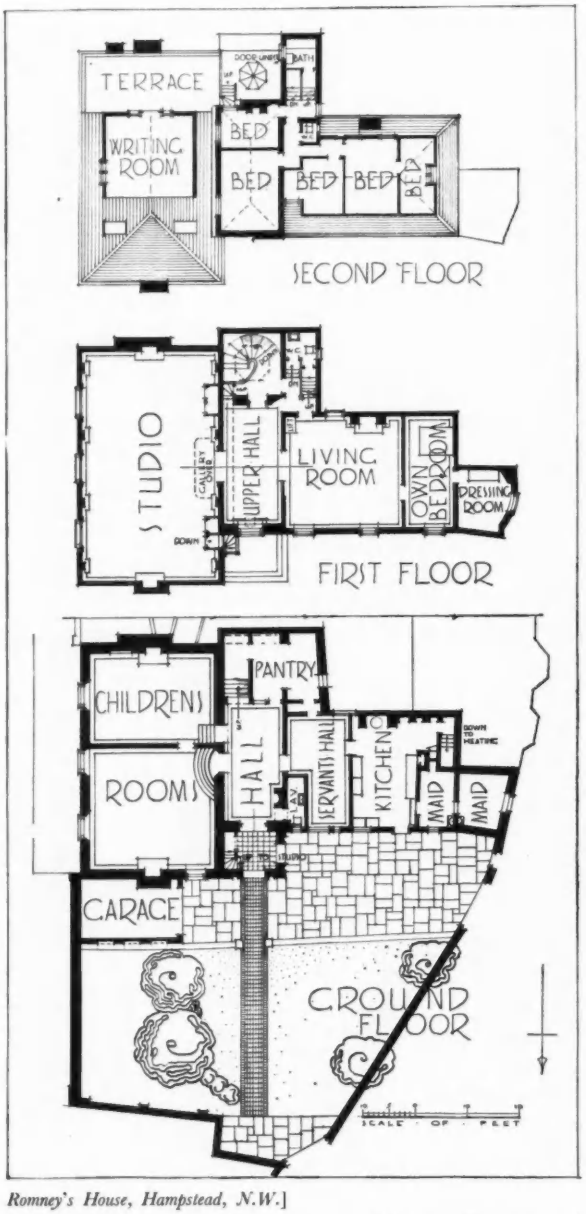
Then the freehold was bought by a brewery company, together with the Holly-bush Inn and several houses adjoining. Offers were made to Messrs. Benskin (the new owners) by a syndicate, desirous of demolishing the historic old building and of erecting a block of flats in its place.

This proposal was public-spiritedly rejected by the brewers, and they subsequently sold the place to Mr. Clough Williams-Ellis, who undertook to rehabilitate the place as a house and studio for himself.

Thanks to the historical associations of the house and to its intrinsic architectural interest, and thanks also to the good work of the Society for the Protection of Ancient Buildings, the London County Council wisely exercised the discretion that it possesses as to the nature of the alterations that may be permitted to old structures not



A general view of the west front, in which may be identified the entrance porch of the upper picture. It will be noted that a great deal of the structure is of timber, and was necessarily the subject of special arrangements with the authorities. The house bears a memorial plaque inscribed "George Romney, Painter, lived here, 1734-1802."



Romney's House, Hampstead, N.W.]

Sketch plans of ground-, first- and second-floors. The servants' quarters are entirely isolated; and the studio, upper hall and living-room make a fine suite.



[*Clough Williams-Ellis, Architect.*

The upper hall, seen from the top of the house staircase. To right and left are indications of the large double doors to studio and living-room, respectively.

built in conformity with the present bylaws, and allowed the retention, repair and extension of the weather-boarded construction that is characteristic of a good deal of the old Hampstead of the late eighteenth and early nineteenth centuries.

Happily also, the borough surveyor, as well as the architect of the brewery property adjoining, were eager for the substantial preservation of the *status quo*, so that details of the reconstruction were arranged with the utmost smoothness and goodwill.

But the work itself was both intricate and extensive, for the painter (who had been his own architect) had clearly held eccentric views on planning that later alterations had done little to mitigate.

When taken over by Mr. Williams-Ellis, the accommodation consisted mainly of the great picture-gallery, crudely cut into two by a subsequent partition, a couple of cavernous and ill-lit billiard rooms, a bar and servery, a big kitchen, an immense lavatory, with a formidable array of Late Victorian "sanitary goods," and a clutter of three or four perfunctory bedrooms.

The place had been empty for some years, and dilapidation was on the point of irretrievable ruin.

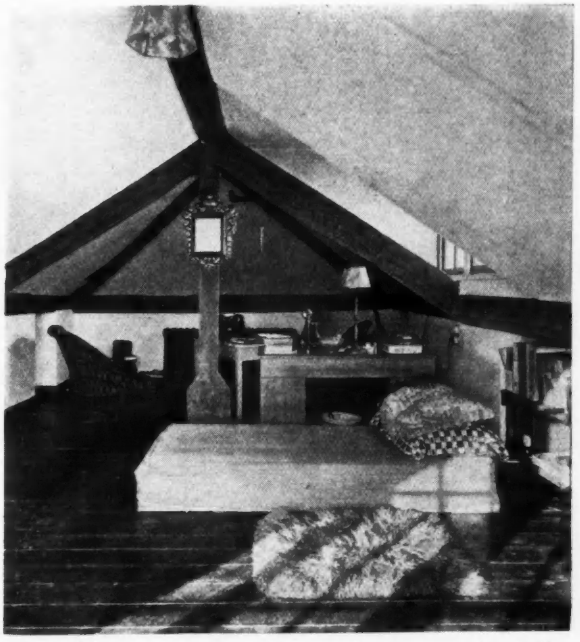
The present aspect of the place is sufficiently shown by the photographs, though the interior effects are largely dependent upon the colour combinations that have been employed.

Even now that the back of the house has been virtually rebuilt, a new staircase and top floor added, and roof gardens contrived at three different levels looking southwards right over and across London at a level above that of the Cross on St. Paul's, one still feels that the original builder would immediately recognize his old home and approve of what has been added to it.

Had he been able to enjoy the conveniences and comforts that his successor has introduced—not least the central heating and the great improvement in the sun-lighting of the house by the new windows to the south—Romney's life at Hampstead might well have been both longer and happier than in fact it was.



The lower hall, seen from inside the main entrance doors, and looking towards the house stairs, to the right of which is the pantry. Doorways in the left wall lead to the children's rooms; the opening on the right is to the servants' quarters.



The writing-room, in the roof, immediately over th studio. The camera has been placed just inside the French windows that give on to one of the three terraces now contrived in the house; on the right is seen another window.



Romney's House, Hampstead, N.W.] [*Clough Williams-Ellis, Architect.*

The living-room, looking towards the doors to upper hall and studio from the corner of the dividing wall shutting off the adjoining apartment, designated "own bedroom" on the plan. Beyond this again is a dressing-room, of which the window occurs in the quaint segmental bay that is a feature of the western elevation shown on page 509.



Inside the open porch are the stairs here shown, leading up direct to the studio on the first floor, independently of entry to the house, which is by means of the double doors seen to the right; they give on to the hall illustrated on page 511.

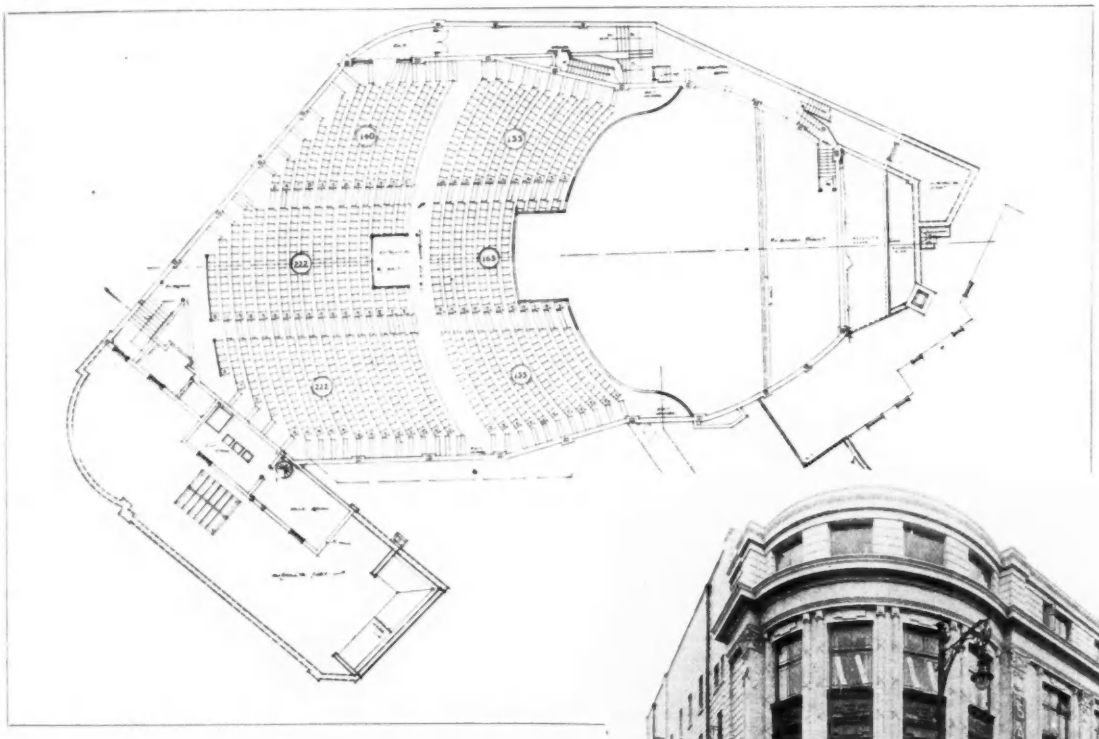


The entrance of ceremony to both studio and living-room being from the upper hall, the stairs here seen, ascending under an octagonal top light, supply access thereto. The bedrooms and bathroom, on the floor above, are reached by other stairs on the right.



Romney's House, Hampstead, N.W.] [*Clough Williams-Ellis, Architect.*

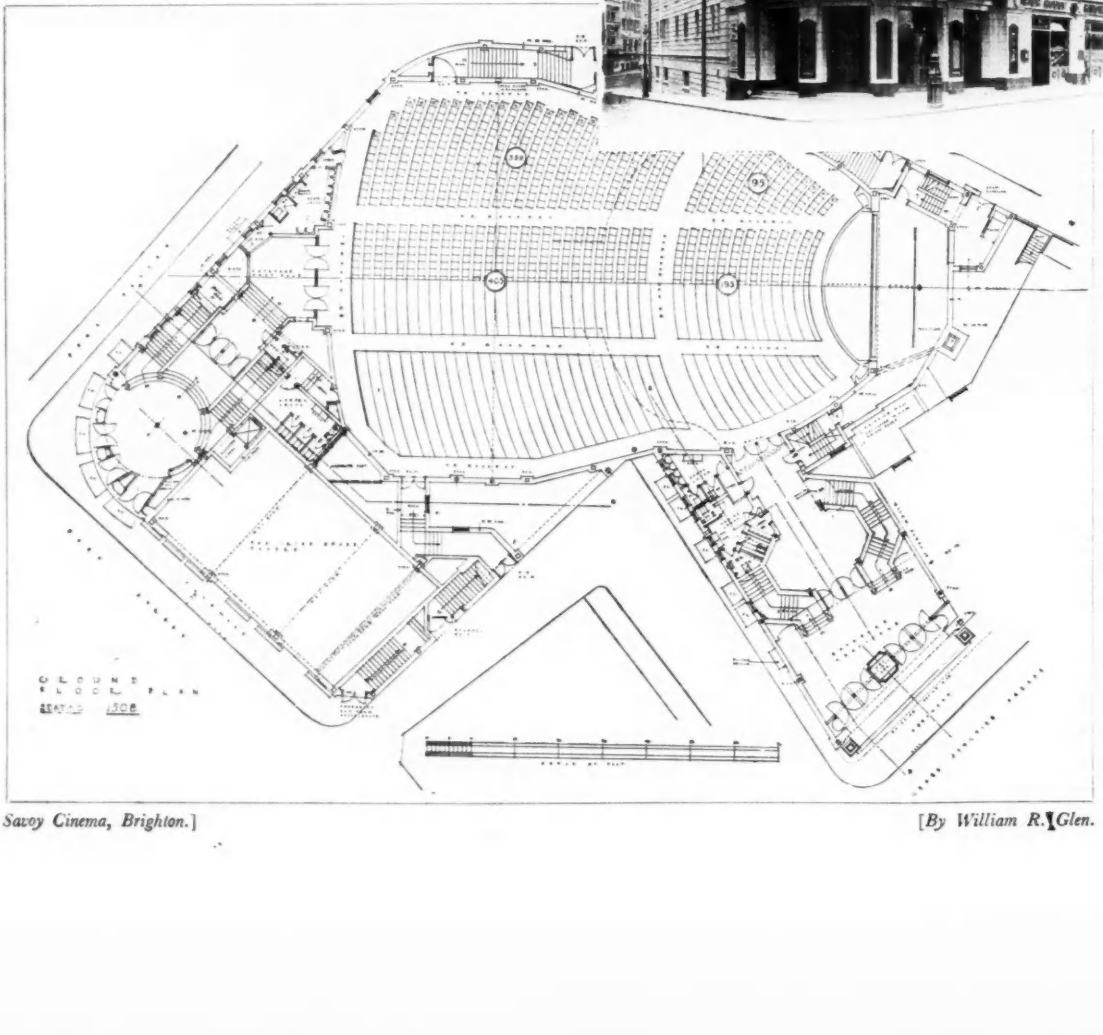
The fine proportions of Romney's studio are revealed by the gallery, though its slender lines tend to conceal its actual size. The open doors beneath give on to the upper hall, a view of which is illustrated on page 510. The double doors on the right of the gallery lead to the stairs, affording direct access to the entrance porch below, shown on the above page.



In the balcony there is seating accommodation for 1,059 persons. At this level are, above the stage, the organ chamber and the plenum plant; at the left-hand side of the proscenium is the generator room.



The Pool Valley, left, and the East Street façades. The entrance leads to the cinema and to two fully-licensed restaurant rooms. Tea and dance rooms are also provided.



On the ground floor are 1,508 seats, the total accommodation, including the balcony, being 2,567. Ladies' and gentlemen's retiring and cloak rooms are conveniently planned. Facilities for parking the patrons' cars, to the number of 300, are incorporated in the scheme.

Savoy Cinema, Brighton.] [*By William R. Glen.*



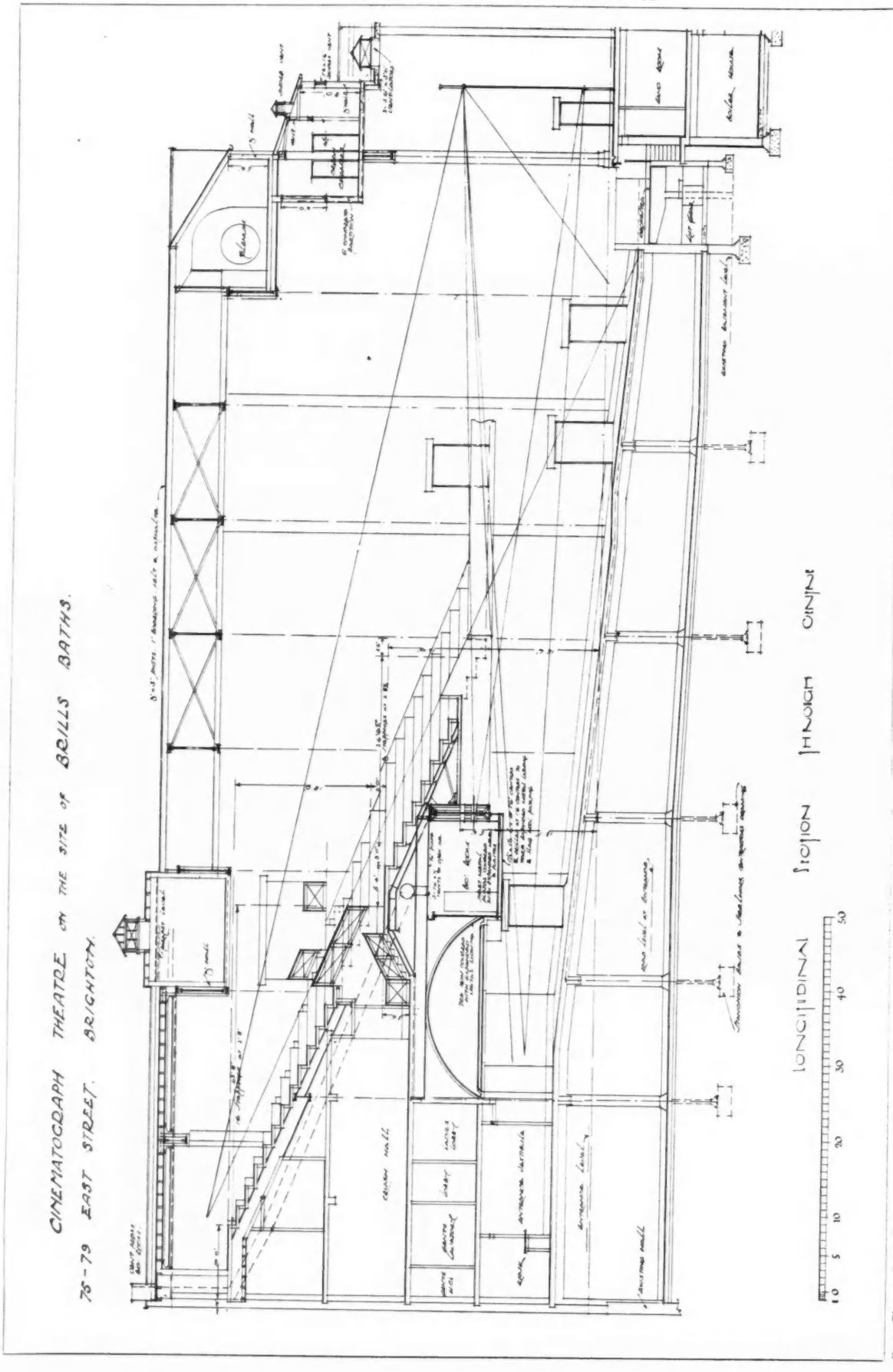
There are two entrances to the cinema : one from Grand Junction Parade, shown above; the other from the corner of East Street and Pool Valley, illustrated on the facing page. The entrance shown leads also to the café rooms.

THE SAVOY CINEMA, BRIGHTON

DESIGNED BY WILLIAM R. GLEN

THIS theatre stands in what might be termed the "Bond Street" of Brighton. It has two principal entrances, one from the Grand Junction Parade, and the other from the corner of East Street and Pool Valley. The building has a total seating accommodation for over 2,500 persons, and contains fully-licensed restaurant rooms, café rooms, and facilities for parking three hundred cars.

The auditorium has been given a semi-atmospheric treatment of an oriental character. The ceiling is painted a light sky blue, with, in the centre, a golden sun, through which light is flooded down on to the stalls. The upper wall surfaces display landscape and other scenes, carried out mainly in shades of blues and pale yellows, and of a character rather Japanese than Chinese. These scenes are framed by ornamented pilasters in stone and other colours, supporting a cornice from which con-



Savoy Cinema, Brighton.]

[*By William R. Glen.*

The architect's drawing of the longitudinal section. The system of ventilation has been designed to admit, as far as possible, fresh air at the main ceiling level and at ceiling level under the balcony, the vitiated air being extracted by fans through the balcony step risers. The whole of the air is thoroughly washed and is warmed or cooled to the desired temperature.

cealed light is cast both upwards and downwards on to the ceiling and the landscape.

The lower walls are treated in a more simple manner in warm tones of buff, with a dado in richer and more pronounced colours.

The marble used is San Stefano of specially selected quality, with large figure, and quarried in one of the groups of islands of Dalmatia. The coloured bands in the main entrance are Tinos (the green bands) from the island of Tinos, Greece; and the pink marble is Breche Rose, produced in Norway.

The general tone of the carpets in the auditorium is rose madder, with a pavement and cobble-stone design, on which, here and there, butterflies in a medley of tropical colours seem to have settled. The seats are covered in velvet in four different colours so as to blend not too obtrusively with the many tints employed throughout this part of the building. In the top left-hand corner of the stage curtain, the Chinese lettering is to be interpreted as meaning :

"Our noble patrons are humbly beseeched not to despise this unworthy entertainment."

This accords with the custom of a Chinese host, who refers to what he offers his guest in depreciatory terms.

The system of ventilation has been designed as far as possible to admit fresh air at the main ceiling level and the ceiling level under the balcony of the theatre, the vitiated air being extracted by fans through the balcony step risers. The size of the ventilating plant may better be imagined by the fact that 50 h.p. is necessary to drive the plant. The whole of the air is thoroughly washed and warmed or cooled to the desired temperature before being delivered to the theatre; thus, regardless of exterior climatic conditions, a complete change of air is effected six times per hour.

The dressing rooms, stage, toilets, vestibules, etc., are heated by means of low-pressure hot-water radiators. A centralized system of hot-water service is also installed. All the boilers necessary for these plants are oil-fired and fitted with electrically-operated automatic controls and regulators.

The electric light fittings were specially designed in collaboration with Mr. Glen, the architect, and Mr. Charles Muggeridge, the decorative consultant. All the fittings are constructed of copper to resist action of sea air, and—except in the auditorium and first- and second-floor tea rooms, where the finish is verdigris green—are coated with real silver and lacquered.

A special point has been made of making the theatre safe from the possibility of fire. In addition to being of fireproof construction, it is equipped with automatic sprinklers, a hydrant service and hand fire-extinguishers.

Over one million bricks were used in the construction of the cinema.



Savoy Cinema, Brighton.] [*By William R. Glen.*

The proscenium and the auditorium are given a semi-atmospheric decorative treatment of an oriental character. The stage curtains are of silk of a dark bottle-green colour, embroidered with a flight of butterflies.



The café on the second floor.

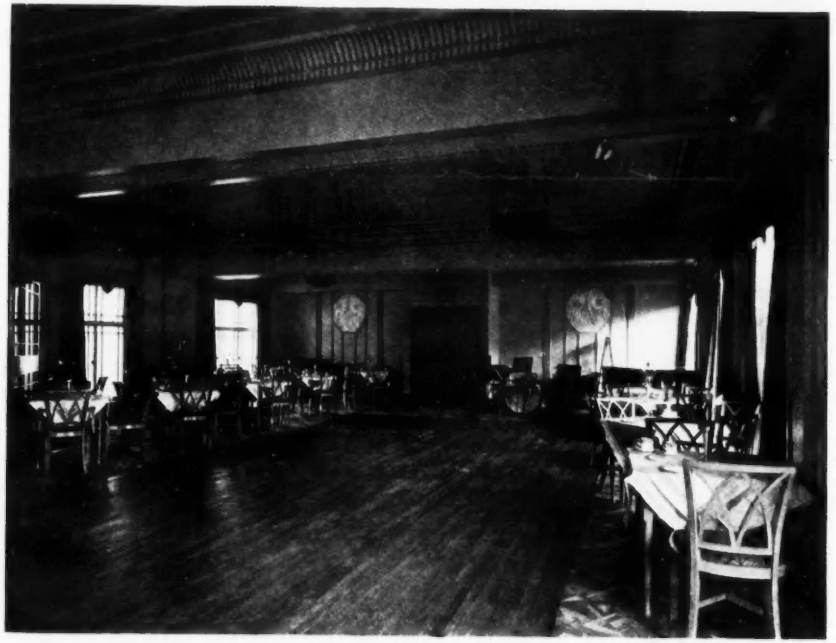


The restaurant on the first floor.



Savoy Cinema, Brighton.]

The entrance foyer from Grand Junction Parade.



[*By William R. Glen.*

The tea and dance room on the second floor.

LETTERS FROM READERS

Contemporary Decoration

SIR,—Musical friends squirm when I allude to Liszt as the gentleman of the piano; constant reconnaissance of the building industry persuades me that Mr. Arthur J. Davis is a gentleman in all that is implied by "Contemporary Decoration." I have now discovered a new composer named Others on the playbill of a theatrical revue, announced thus: "Music by Noel Coward and Others." How enjoyably Mr. Davis and I might discuss the subject in which it is my privilege to join issue with him, as "Contemporary Decoration by Gentlemen and Others."

Comparing Gentlemen with Others, we would probably agree that the former (in England) do not subordinate their imagination to ancient and subtropical ideas of decoration; moreover, that they do not reproduce pretentious and useless details as a burden to modern construction. Before deciding the liqueurs, our final verdict might be that Gentlemen consider the obligations of their commission in the light of existing necessity, always with due regard for justice to material.

Now, this fellow Others gets my goat, but, strange as it seems, he is not accounted for by Mr. Davis, who attributes contemporary decoration to artists working in two separate camps; he finally suggests that "the lifelessness of much English decoration is due to lack of scholarly knowledge in the equipment of our art students, whose work is too often of a timid and uninspired character." At this stage in a discussion it would be my policy to order the Courvoisier back again. Alas! by your leave, sir, cold print must record my view of the conclusions which Mr. Davis has arrived at, in a matter that concerned me long ago as an artist, and now as an architect.

There is no lack of scholarly knowledge in the equipment of my friend Others; his memory for ancient details is profound; nobody who ever heard him address a church foundation committee on the revitalization of Gothic thought would accuse him of timidity. Moreover, dear old Others gets fat commissions, fees and presentations for his archæological applications; he has likewise been known to decoratively emulate something that was actually and structurally new. Nobody who saw the bills of quantities would say his counting-houses for money barons, cathedrals for bishops, palaces for inanimate objects such as motor-cars, etc., are timid essays in decoration, not even the thousands who still exist in the slums of our noble cities.

Mark you, Others is a scholarly fellow, and the direct descendant of ancestors who invented decorative styles for stylish people. Those ancestors monopolized all the decoration that was done for the few people who could afford it. The rule of this trade union was that clients had to have decoration in duly recognized styles—or go without. The Victoria and Albert Museum proves that those periodical styles of decoration were not conceived with such misguided regard for hygiene and comfort, as we now indulge in, say, at Welwyn. Bygone gentry were hardy and spent much of their time in coaches, inns and on battlefields, thereby obtaining some vacation from their Castle Howards and moated granges. Meanwhile art students struggled on, some escaped the professors, many became professors and retired from practice.

However art students merit the sympathetic conclusions of Mr. Davis, everything depends on their capacity to resist the contamination of material circumstances. Poor old Others will tell any student that his fiercest competitors are contractors who can almost beat him at his own game; in fact, they will seek his patronage and that of his client at the same time, with decorative schemes of the most authentic accuracy or daringly imitative modernity. Between the contractors and Others our art students stand, as our potential contractors or controllers.

Are we not all students who must patiently realize that art means mastery and is not a professional prerogative that can be picked up in schools or ordained by institutions? My view of contemporary decoration is parallel to that of Mr. Davis. Timidity, lack of inspiration, to which I add lack of intimacy with material, are the common defects thereof. Those defects originate in our worn-out social impositions and political system, which our young students are now preparing to smash to smithereens. Instead of criticizing those students, I feel we owe them an apology for long-accumulated untidiness of their legacy.

> Woe unto him that saith to the wood, Awake; to the dumb stone, Arise, it shall teach! Behold, it is laid over with gold and silver, and there is no breath at all in the midst of it.

OLIVER P. BERNARD

Architecture versus *Engineering*

SIR,—Mr. Penty in his articles published under the heading "Architecture *versus* Engineering" has undoubtedly, and perhaps unwittingly, raised several points of great interest to many members of the building profession.

I had the pleasure of attending the meeting of the Design and Industries Association mentioned in his letter in your issue for March 25, at which he spoke as a champion of the so-called "Traditionalist" school of thought.

Having also followed the course of the literary debate as it has appeared in your correspondence columns, it seems to me that there are several points which Mr. Penty has raised which have hitherto not been discussed as fully as one might expect.

At the outset, may I enunciate the following principle which, I believe, summarizes the tenets at the present time of a great number of the more academically-minded members of the building professions, viz.: "Tradition for stable evolution—not for the sake of Tradition."

It is wrong to assume, and misleading to suggest, that all the protagonists of what are termed "Modernist" forms of building have cut themselves off from traditional influences. Mr. Penty admits that a structural revolution has taken place during the last half-century. He would be more accurate if he referred to the change as "accelerated evolution," brought about primarily by the demands of industry.

Let us consider the first applications in building, during the present civilization, of ferrous materials. History narrates that cast iron was employed as a substitute for masonry, first in the form of beams, and later as columns. Industry demanded the new element because it was more effective than its predecessors. Among other attributes cast iron enabled a considerable amount of space to be saved as compared with masonry units of the same load-bearing capabilities.

Actually, the cast-iron beam was first used over spans no greater than those which were previously bridged by masonry arches and lintels. The increased capabilities in this direction of the newly-adopted material were rapidly discovered, but, be it noted, in its first application its rôle was that of a traditional prototype.

With the advent of wrought iron, and later of mild steel under the direct stimulus of competition, the keynote of industry, the potentialities of the ferrous element in building developed so rapidly as to outstrip the ability of designers of building to cope with them. The natural result was the early steel-frame structure involving the beams which Mr. Penty mentions as having given him considerable æsthetic unrest.

However, the problem was soon decided by the architects of the time, and who shall say, even today, that the steel framework of a serious edifice is yet completely emancipated from the garb affected by its Georgian ante-

cedents ? The solution of the problem demanded the co-operation of architects with those responsible for the development of the new medium. It was not forthcoming then, and the resultant drift forms one of the most serious obstacles to the co-operation which intelligent members of the building professions are trying to promote at the present time.

However, a few of the more far-sighted of the engineers, with courage exceeding that of the orthodoxy, contrived to leave a mark, a sign of the times. In England we have the Crystal Palace; on the Continent, foreign contemporaries left equally interesting monuments. I have no desire to ascribe to the Crystal Palace, nor to any of the Continental examples referred to, any particular æsthetic virtues. They remain today to commemorate a great opportunity lost.

About thirty years ago was commenced the commercial preparation of Portland cement, and of cement concrete in the primitive form of that with which we are familiar at the present time. The properties of this material immediately attracted the attention of industry, and quite soon after its introduction engineers were conducting the preliminary work which has led to the present-day methods of reinforced concrete design and construction.

However, the increase in knowledge concerning this subject has been even more rapid than in the case of ferrous materials, and already it is only too manifest that the average architect has only the vaguest notion of the potentialities of the new material.

Essentially a plastic medium, it is almost invariably employed in the rôle of a solid or fixed unit.

Essentially suited to design in laminated forms, how often does one see it forced into the attitudes of materials which have now become, even in the eyes of the die-hard "Traditionalist," hopelessly obsolete ?

In addressing the meeting of the Design and Industries Association, Mr. Penty launched against this new medium certain allegations of a derogatory nature. He complained that reinforced concrete buildings were not sound-proof; also that masses of concrete, such as are employed in the form of column footings, required uneconomic expenditure of energy for their removal, when the buildings supported on them became obsolete. These, I affirm, are intelligent objections only if, having been examined, they are found to be insuperable; and I will maintain that such is not the case.

It is devoutly to be hoped that members of the building professions at the present time will not allow this opportunity for achieving a signal advance in the art and science of building to go unchallenged.

Any measure of success will demand co-operation.

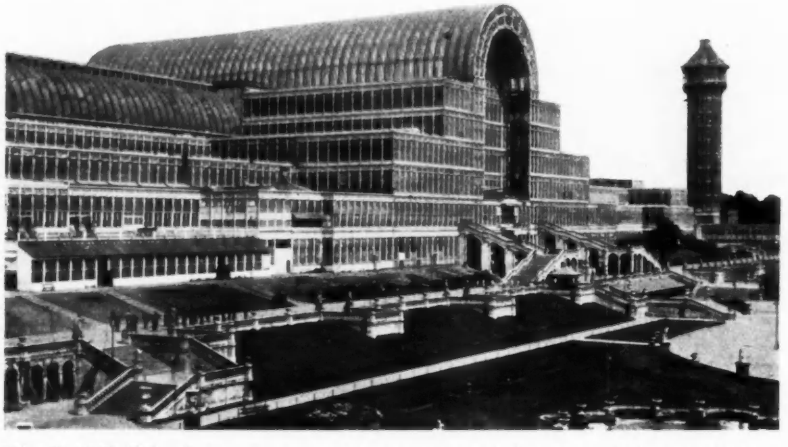
Mr. Penty, it seems, defines his attitude to the problem by claiming for the architect a *locus standi* in building independent of engineering. There is no question of the existence of a separate *locus standi*, but manifestly it cannot be independent of the engineer, nor of any other member of the corporation whose function is to build.

Co-operation demands confident interdependence, and without this is, for all practical purposes, non-existent.

Fortunately, a lead has been given in other parts of the world, notably in France and Germany, in facing the problems. The results achieved during the comparatively brief period since the work has been taken seriously in hand augur well for the future of building.

Tradition is undoubtedly a stabilizing attribute, having tremendous influence both on the rate and quality of development; but the tendency to manipulate it as a brake to progress should be sternly deprecated.

R. J. BRIDGLAND



Mr. R. J. Bridgland, in a letter on this page, says: "I have no desire to ascribe to the Crystal Palace, nor to any of the Continental examples referred to, any particular æsthetic virtues. They remain today to commemorate a great opportunity lost."

Simplified Quantities

SIR,—May I trespass upon your space to say that Mr. J. R. Taylor, in the JOURNAL for March 25, seems to me to be dodging the issue. Apparently he is not as conversant with the Standard Method as he would have us believe, for the amendments to the Standard Method, since publication, have been in the direction of simplifying them. One illustration will suffice as an example, i.e. glazing in wash-leather, india-rubber, flannelette or velvet. These have now to be described and the bedding materials measured separately, meaning that these materials are to be given separately from the glass. In other words, the tendency, as in this example, is to keep separate different kinds of materials, whereas formerly these were included in one item.

Mr. J. R. Taylor, in stating that "in their earliest form quantities were lists of materials . . ." overlooks the fact that he is condemning quantity surveyors, for do they not today prepare bills of quantities for stonework after the same manner? In this instance, it is merely a development of the principle which he condemns. One might just as well condemn the septic tank because it is a development of the principle of the covered-in ash pit.

Seeing that Mr. J. R. Taylor does not like my analogy of wooden sailing ships and steam-driven iron ships, perhaps that of horse-driven vehicles and mechanically-driven vehicles will suffice. The principle of propulsion is the same in each case—on wheels—though the motive power is different. Principle is not here in question, but modern needs demand a different application in motive power, hence, one has, or is, superseding the other.

Mr. J. R. Taylor may argue that because many architects are incapable of designing steel framed or reinforced structures, we must not have buildings of these kinds. But if architects will not supply these wants, others will, and are stepping into the breach, and if quantity surveyors will not supply simplified quantities, others will; and are doing so. Even manufacturers are alive to the need and are supplying useful data; one manufacturer goes so far as to give the quantities of materials per cubic yard of concrete in situ.

LYNN C. DOYLE

BRANCH OFFICE LIVERPOOL LANCS.

DESIGNED BY QUIGGIN AND GEE

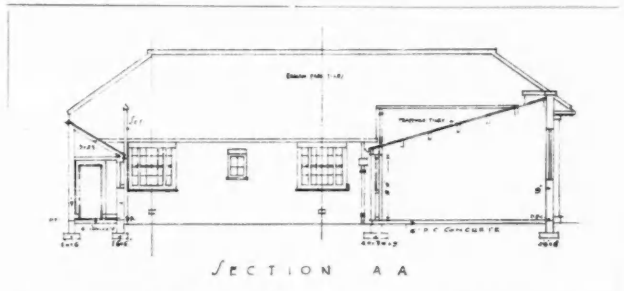


The entrance front. The external walls are faced with multi-coloured rustic bricks, flush jointed with a coarse cream mortar; the roofs are covered with hand made sand-faced multi-coloured tiles. The plinth and the architraves are executed in white cement.

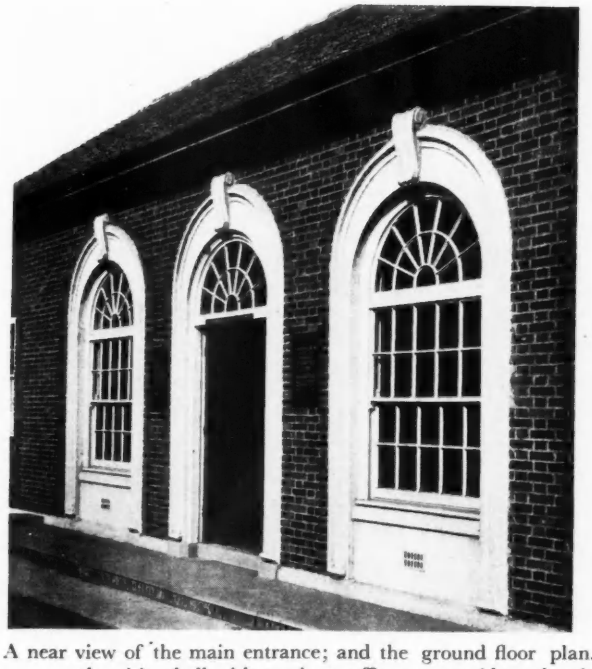
THIS building has been erected for and by Messrs. Richard Costain and Sons, Ltd., of Fazakerley, Liverpool, contractors, as a branch office. Situated in Mersey View, Waterloo, it has been built for the convenience of clients of the firm in that district and in Blundellsands.

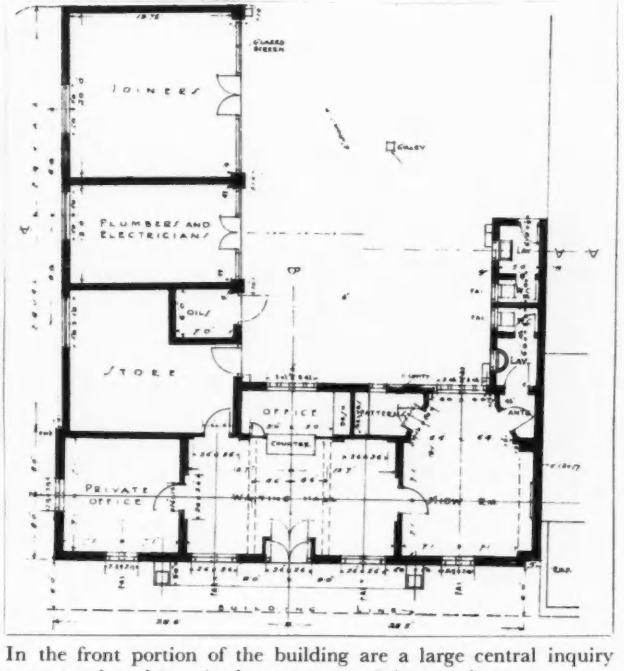
The main entrance is placed in the centre of the principal façade, and leads into a large waiting and inquiry hall, on the opposite side of which is a counter and office. On the left of the hall is a private office, and on the right is a showroom, in which are displayed decorative and other building materials and fittings. At the rear of the building are the stores, and the joinery, plumbers' and electricians' workshops. All the accommodation is planned on the ground floor.

The internal walls are finished with a rough textured cream coloured plaster. The fittings, wall panelling and joinery are in mahogany.



This section is taken through the lavatory block and the plumbers' and electricians' workshop. In elevation from left to right are the windows of the showroom, pattern room, and the office of the waiting hall, respectively. The building is one story high.





A near view of the main entrance; and the ground floor plan. In the front portion of the building are a large central inquiry and waiting hall with a private office on one side and a showroom on the other. At the rear are workshops and stores.

THE REGISTRATION BILL

[BY OUR SPECIAL PARLIAMENTARY REPRESENTATIVE]

STANDING Committee "A" of the House of Commons gave further consideration to the Architects (Registration) Bill on Tuesday, March 31.

Discussion was continued on Lt.-Col. Moore's Schedule, dealing with the constitution of the proposed Registration Council.

Mr. Kelly (Lab.) moved an amendment to provide that, in addition to the membership of the R.I.B.A. proposed, the President and the Vice-President of the R.I.B.A. should also be members of the Council.

Lt.-Col. Moore, however, opposed the amendment, because, as he pointed out, it was the first of a series of amendments which would eventually mean the addition of the presidents and vice-presidents of other societies composing the Council. It would ignore the whole question of proportional representation and would give to the smaller societies two additional members, and a representation entirely disproportionate to their strength.

The amendment was negatived by seventeen votes to six.

Paragraph (1) of the Schedule states that there shall be on the Council :

> One representative for each five hundred, or portion of additional five hundred, fellow, associate, or licentiate architect members of the Royal Institute of British Architects, to be elected on the passing of this Act, and thereafter annually in the same proportion by the Council of the said Institute.

Mr. Winterton (Lab.) moved to leave out the word "architect," which, he said, was unnecessary, and would prevent some estimable members of the R.I.B.A. being on the Council. Not all the members of the R.I.B.A. were architects. The Chairman of the R.I.B.A. himself was not an architect, but a surveyor. It would be very unwise to limit the composition of this Council to those who happened to be architects.

Lt.-Col. Moore opposed the amendment. He said that the Bill was a measure for the registration of architects, and all those societies who were concerned in the Bill were entitled to representation on an architectural basis. If the word "architect" was omitted, what would happen ? Take the Incorporated Association of Architects and Surveyors, who were at the back of most of the amendments to the Bill. They might have 1,100 surveyor members of that Association. They would be entitled, under the amendment, to three representatives—one for each 500 and one for the one hundred over. Take the Chartered Surveyors' Institution, which was also in this Bill. They had 7,000 qualified surveyor members, and they would be only entitled to the one given in the Bill. The position would become perfectly absurd. They would have one moderately small association, with three or more members, and they would also have one of the biggest associations of its kind with only one member.

The amendment was negatived.

Lt.-Col. Moore accepted an amendment, which was agreed to, to confine representation to persons "resident in the United Kingdom."

Mr. Winterton moved the addition of the following new paragraph : "One representative for each five hundred and portion of additional five hundred persons on the register, not being members of either the said institute or the said association, but being members parallel in status to the degrees of membership enumerated in the preceding subsection of this section of an incorporated architectural society of national scope recognized by the Council as an electoral body for the purposes of this Schedule of the Act, such representatives to be elected thereafter annually in the same proportion by the governing body of the said society." He said that there was a fairly big margin of architects who were not satisfied with either the R.I.B.A. or the Incorporated Association of Architects and Surveyors, and who might in future be disposed to form an association of their own. The amendment was simply a provisional clause to provide that if any considerable body of architects at any time desired to form another association, they should be permitted to elect exactly the same number of representatives on the registration authority as if they were already one of the existing associations to be represented on the Council.

Lt.-Col. Moore said he could not accept the amendment. It was one of the most confusing amendments he had ever seen, and he challenged any one to find out what it meant. What did "parallel in status" mean ? Who was to decide it ? Who was to decide what was "national scope" ? The amendment was perfectly absurd. The schedule which he had proposed gave fair proportional representation to every architectural association in the country, and brought on to the Council the right people.

Col. Newton-Moore (Conservative) said that the Council was already far too unwieldy, and they ought not to make it worse by accepting any additional representatives.

The amendment was negatived.

Mr. Winterton moved to omit the following four paragraphs [of the schedule :

> (iii) One representative for each five hundred, or portion of five hundred, architect members of the Faculty of Architects and Surveyors to be elected on the passing of this Act, and thereafter annually in the same proportion by the Council of the said faculty;
>
> (iv) One representative for each five hundred, or portion of five hundred, architect members of the Architectural Association (London) to be elected on the passing of this Act, and thereafter annually in the same proportion by the Council of the said association;
>
> (v) One representative for each five hundred, or portion of five hundred, architect members of the Association of Architects, Surveyors, and Technical Assistants, to be elected on the passing of this Act, and thereafter annually in the same proportion by the Council of the said association;
>
> (vi) One representative for each five hundred, or portion of five hundred, architect members of the provincial associations of any of the bodies hereinbefore referred to, taken together, to be elected on the passing of this Act, and thereafter annually in the same proportion at a conference of the said associations.

Taking first the paragraph (iii), he said that the Standing Committee was entitled to know something about the Faculty of Architects and Surveyors. He had been unable to find any evidence as to the numbers of this body or to discover any list of its members. It was not a *bona fide* architectural body, and should be deleted. Then as to paragraph (iv), the Architectural Association (London). This was an attempt once more to get in what was really an affiliated or an associated body to the R.I.B.A. to be given certain representation on the registration authority. The membership of this body was said to be about 1,800, and, of those, 270 were students at schools. It was really a combination of a school and a club, and there seemed to be no ground whatever for saying that for every 500 members they should have one representative on the registration authority. As to (v), the Association of Architects, Surveyors and Technical Assistants had been repeatedly referred to as the trade union of the architectural profession. He questioned that very much. It had close association with the R.I.B.A., which was an employers' association. He had evidence of that fact. Then, dealing with (vi), he said that this was not quite an attempt to get duplicate representation, but it was an attempt on the part of the promoting body to get unfair representation and a disproportionate amount of representation. The R.I.B.A. were to be congratulated on the way they had formed outside groups. If his amendment were accepted, it would make the passage of the Bill a great deal easier.

Lt.-Col. Moore said this was probably the most amazing and unfair suggestion yet made by the opponents of the Bill. It meant selecting arbitrarily two associations — the R.I.B.A. and the I.A.A.S.—as being representative. It

left out altogether four of the greatest architectural bodies in the country—the Faculty of Architects and Surveyors, the Architectural Association (London), the Association of Architects, Surveyors and Technical Assistants, and the great provincial societies who had done far better work for architecture than the I.A.A.S. had ever done. The strength of the various societies mentioned was as follows :

The R.I.B.A., approximately 6,000 members.

The I.A.A.S., approximately 1,800 members.

The Faculty, approximately 1,200 members.

The Architectural Association, over 2,000 members.

The Association of Architects, Surveyors and Technical Assistants, 1,200 to 1,500 members.

The big provincial societies, 3,000 members.

Why should they take out of representation those four great associations. They had earned the right to representation equally with, and even more than, the I.A.A.S. There would be no duplication between the R.I.B.A. and the great provincial societies.

The amendment was negatived by fourteen votes to five.

Lt.-Col. Moore accepted an amendment, which was agreed to, to increase the representatives of the Home Office on the Registration Council from three to five.

Mr. Winterton moved the insertion of the following section :

> The following bodies shall have the right on application to the Council to nominate at the passing of this Act and thereafter annually fifteen representatives, as follows :
>
> (v) One representative of each of the governing bodies of the Universities of Oxford, Cambridge, and London, and three others to be nominated by the Standing Committee of vice-chancellors and principals of the Universities of Great Britain and Ireland;
>
> (vi) Six persons (not being architects or persons on the Register) nominated by the Royal Society of Teachers, who shall have regard to the interests of elementary, secondary, and technical schools;
>
> (vii) One representative (not being an architect or person on the Register) to be nominated by each of the following bodies :
>
> The Union of Educational Institutions;
> The Workers' Educational Association;
> The Central Education Committee of the Co-operative Union.

Lt.-Col. Moore said he had every sympathy with the object of the amendment, but these bodies were already provided for on the Board of Architectural Education.

The amendment was negatived.

The schedule, as amended, was added to the Bill.

The Committee then considered the next schedule, dealing with the constitution of the Board of Architectural Education.

Lt.-Col. Moore accepted an amendment, which was agreed to, to include on the Board three representatives of teaching bodies nominated by the Royal Society of Teachers.

The following paragraph was also agreed to : " Four representatives of technical institutions teaching architecture, two of such representatives from London institutions and two from provincial institutions, to be nominated by the Association of Technical Institutions, and one representative of the art schools teaching architecture, to be nominated by the National Society of Art Masters."

It was also agreed to allot two representatives to the Institute of Builders and to the National Federation of Building Trade Operatives, and one representative to the Association of Headmistresses. The president and hon. secretary of the R.I.B.A. were omitted from the Board, as was also the chairman of the Allied Societies Conference. It was also decided to include on the Board " twenty-four members, being persons on the Register, to be appointed by the Council," so as to give a fair representation to architects themselves.

The schedule, as amended, was agreed to after the committee stage was concluded, and the Bill was ordered to be reported to the House.

QUESTIONS THAT ARISE

Parquet Flooring

H. G. writes : " *I have recently had laid upon a new deal sub-floor ⅜ in. Austrian oak blocks at ground-floor level, but have been forced to have a portion taken up and relaid, owing to the shrinkage of the deal sub-floor. The deal flooring was laid straight jointed. Would your expert advise me as to what precautions can be taken to counteract shrinkage? Is it necessary to lay a tongued and grooved sub-floor?*"

New flooring, whether straight-jointed or tongued and grooved, is liable to shrinkage, and moisture from the glue used in setting the blocks assists towards any movement.

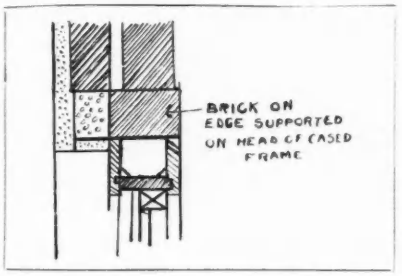
To avoid this risk I recently had a floor laid with tongued and grooved oak blocks of similar thickness to the blocks laid by your correspondent, upon a straight-jointed deal counter floor, but before laying the blocks the sub-floor was covered with plywood secured with clout nails.

Plywood of a thickness of $\frac{3}{16}$ in. will suffice, and I feel the extra small expenditure is well worth while. W. A. D.

Support for Brickwork

E. S. writes : " *Is it good construction to support brickwork on top of a cased frame, as shown in the accompanying sketch? I have done it in solid frames and have seen it detailed in illustrations, but I have often wondered if the cased frame was strong enough of itself, or if it should have some extra support.*"

The head of the frame should be made solid. Alternatively, a 2½ in. by ½ in. flat iron bar should be inserted, but I think the former method is the better. H. D.



Renovation of Ceilings

C. H. writes : " *In the course of the settlement of an account with a builder for the redecoration of a house, I have encountered considerable opposition regarding my decision to renovate some plastered ceilings. During my preliminary inspection of the house, I noticed that several of the ceilings, papered, were cracked and bulged in places. I required the paper stripped and the ceilings covered with new paper, and included in my specification the following clause : ' The builder is to allow for cutting out all loose and defective plaster, and to make good with plaster, including all work disturbed by the removal of paper.'*

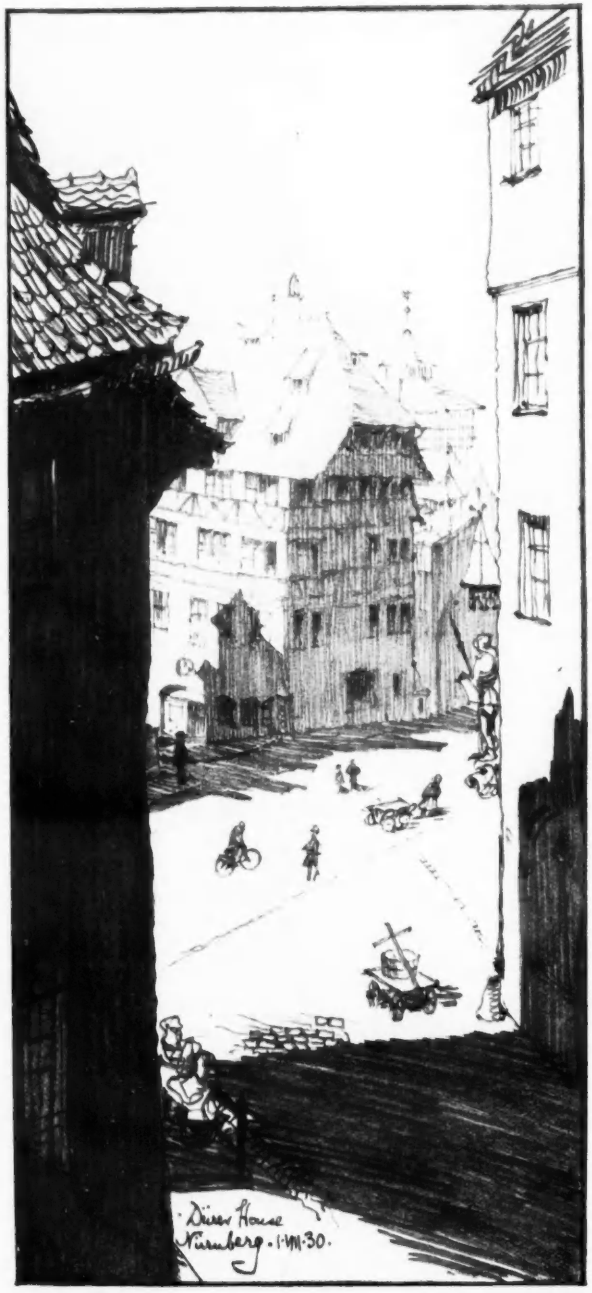
" *The majority of two ceilings fell away during the process of removing the paper, and the builder considered that owing to the amount of work involved the latter portion of the clause was unfair.*"

The clause inserted by your correspondent is sound enough to combat any claim by the builder for an extra for making good to plastered ceilings disturbed by the removal of paper, but it does not place a builder in a fair position when tendering.

It is true a builder who is keen on obtaining the work should examine the ceilings and, with his practical knowledge, provide a certain sum to cover possible repair. The few pounds added, however, may lose him the job, against other builders, who prefer to take the risk of the work being in a reasonably sound condition.

In this case I feel that, while C. H. should have, of course, included for cutting out, stopping, and making good to cracked or loose plasterwork, it would have been fairer to have included a provisional number of square yards of plastering in his specification, to cover the possibility of damage occurring on a large scale during the process of removing the paper. W. A. D.

THE SKETCH CLUB
TWENTY-SIXTH SESSION



The Dürer House, Nürnberg.



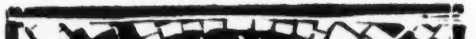
A Street in Salzburg.



A Street in Nürnberg.

(These three pencil sketches, by E. J. MacRae, are reproduced by kind permission of the author and of the Quarterly of the Royal Incorporation of Architects in Scotland.)

By A. N. Nimbgaonkar.



By E. Prentice Mawson.



By A. N. Nimbgaonkar. (Water-colour : $8\frac{3}{4}'' \times 10''$)

Delhi Gate.



By Percy May. (Woodcut : $3'' \times 2\frac{1}{2}''$)

Snow.

By E. Prentice Mawson. (Pencil: $8\frac{3}{4}'' \times 10''$)

The Erectheon, Athens.

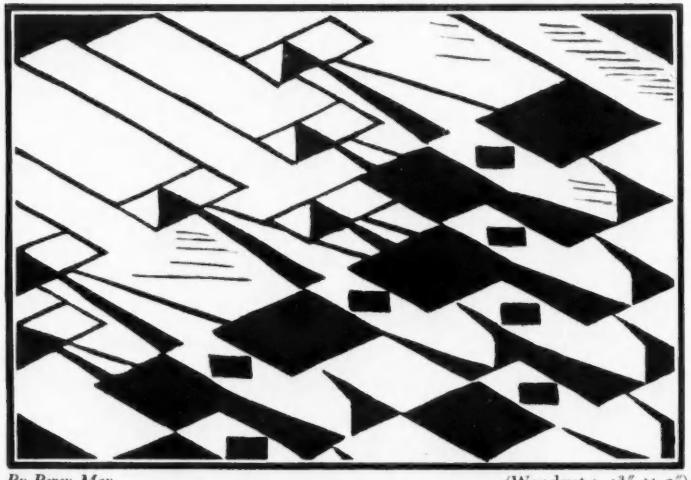


Three of the sketches here presented are souvenirs of a holiday in Central Europe last summer; one is the work of an Indian Associate of the I.I.A., who writes that this gate of Delhi, at the east end of the famous Chandni Chowk, was built by the Emperor Shah Jehan in red sandstone of Agra and Dholpur, except the finials, which are in Makrana marble; and two are wood-cuts. The last named were elicited by our recent note on the subject : our contributor states that they were cut in cherry-wood.



By R. A. F. Riding. (Pencil : $4\frac{1}{2}'' \times 7\frac{1}{2}''$)

St. Georges, Hanover Square.



By Percy May. (Woodcut : $4\frac{3}{4}'' \times 3''$)

Flight.



By R. A. F. Riding. (Water-colour : $5\frac{3}{4}'' \times 8''$)

Church Street, Windsor.

LITERATURE

THE COMPLEAT SWEDE

HOW our Swedish cousins must smile at our valiant bombardiers, Gill, Edwards, Towndrow, Penty, exploding one another's fallacies, whilst they, the Swedes, quietly assemble all the segments of truth scattered by the explosions, and present us with the whole truth in architecture and decorative art.

Dr. Nils Wollin has given us in *Modern Swedish Decorative Art* some 360 illustrations of the Swedish achievements, eight of the plates being in colour; and, by way of introduction, he tells us what steps were taken to bring about such results.

The subjects include furniture, lighting fittings, stone, stucco, metals, glass, ceramics, textiles and book bindings, and each has a separate note. The current exhibition at Dorland House should be visited, book in hand.

Under what circumstances and through what frame of mind did this brilliant St. Luke's summer of humanist art occur? It could hardly have happened anywhere else, for it sprang from a living tradition of textile handwork and dyework carried on by isolated farmers' families through the interminable northern winters. The patterns are not all native, but come, some from Egypt, where they were in use thousands of years before our era, some from Asia, some from Europe—yet by their arrangement they have grown unmistakably Swedish. To preserve and encourage their use, the Lovers of Handicraft Association was formed in 1874; schools of weaving under good artists have been started since; the National League of Home Craft Associations has helped to improve and distribute materials and working drawings.

The success of these home crafts and studios has had its effect on machine goods, whose manufacturers are now engaging the services of artists and so effecting a partnership between artist and mechanic.

In the glass industry, which by its nature relies, to some extent, on the individual hand work, this partnership is well established. The Kosta works engaged Edvin Ollers, the painter, to improve their patterns, and he introduced a number of simple blown forms bearing traces of pre-nineteenth century culture. The Orrefors works, in 1916, obtained the services of two other painters, Simon Gate and Edward Hald, and now enjoys world-wide fame. Their best engraved and coloured glasses are indeed "blood pieces." This success was due to the realization that the modern machines differ only in degree, not in kind, from the old implements, which also in their time were invented to speed up production. Professor Wollin tells how the Näfveqvarn ironworks "sought the assistance of several artists with a view to producing articles peculiar to the works and to modern times." The result was an astonishing success.

The Swedish Society of Arts and Crafts brought together artists and manufacturers for the Stockholm Homes Exhibition of 1917, which was held to improve the appearance of ordinary utensils. The results had immediate influence, not only in increasing the demand for designed machine work, but in stimulating hand work.

Meanwhile, the architects, beginning with Carl Westman, including especially Ragnar Östberg, Tengbom and Asplund, have been generous patrons of the crafts, and in many instances have been responsible for designs.

The moral I gather from Professor Wollin is that a mood of acceptance is necessary, an acceptance of tradition and of conventionalized pattern, of the limitations of material, of the national love of colour, of the naivete of the peasant, the skill of the mechanic, the æstheticism of the artist, and the business ability of the manufacturer. All these things have been, as it were, woven together by the Swedes with a skill so complete as to leave no gaps.

If we are to attain to an equal success in industrial art, we have somehow to make good our lack of a widespread peasant industry as a background. Our



From Modern Swedish Decorative Art.] [*By Dr. Nils G. Wollin.*

Combined sitting and dining room, by Kurt von Schmalensée.

last great craft was cart-building, which still shows a limited excellence in motor-body work. We also know how to plan and plant flower gardens, and the vast number of horticultural societies certainly gives opportunities for spreading home-crafts.

But perhaps the best approach is by way of the Englishman's undying interest in the morals of money. Since it is an understood thing that every object of industry shall be inoffensive, and if possible comely, it follows that our merchants cheat us when they sell goods without art and beauty. Comeliness is included in the price, and it is immoral not to provide it.

P. M. STRATTON

Modern Swedish Decorative Art. By Dr. Nils Wollin. London: The Architectural Press. Price 42s. net.

MEN AND BUILDINGS

REGISTRATION and Charing Cross Bridge apart, the interest of the architectural profession centres, today, upon the praiseworthy objects of interesting the layman in the art of architecture, and of enlisting his sympathy and understanding. To these ends a great many books have been written, and nearly all of them have failed in their efforts, through over- or under-estimation of the state of development at which the general public has arrived; some have assumed a knowledge which their readers have lacked, and so, by sheer indigestibility, have created little nourishment; others have, wisely, started at the beginning, but have not survived the pitfall of becoming mere treatises, unpalatable as school textbooks.

Out of this boneyard of educational endeavour a few stand alive and erect; and to their number is now added *Men and Buildings*, which makes of architecture a tremendous and thrilling adventure.

Mr. Gloag is one of those fortunate writers who has the gift of being astonishingly rude in the most charming and ingenuous fashion; nobody can take offence, but there lies some sort of a sting; this is possibly due to his use of restrained, but pungent sarcasm, which never lets his readers mistake it for mere spleen and so causes them to ignore its latent truth.

"Styles are not caprices of fantasy, but are intimately linked with the social customs, the prides and prejudices of their times." On this theme Mr. Gloag examines the influences which have played upon design from the earliest times up to the present day.

He compares the "humanist modernism" of mediæval and renaissance times with the "inhumanism" of the post-war self-consciousness; and yet, although the fourteenth century certainly emerges in a better light than does the twentieth, there is nothing implied in this book against living in one's own age; and the author is no less vehement in deploring the petty foibles and shams of the Elizabethans than he is in condemning the artificiality and striving to be "different" (as distinct from being intelligently contemporary) of some existing architects.

Piranesi, Mr. Gloag explains, "turned ruins into a romantic fashion." He has much to answer for; and it is strange to find so large a proportion of the general public earnestly following his lead, while so many of our best-known designers, of all sorts, are blandly assuming that nothing good ever came out of past experience. *Men and Buildings* will be of interest and instruction to both factions, because its outlook is so clear and well-founded that its arguments cannot be lightly dismissed.

M. L. A.

Men and Buildings. By John Gloag. London: Country Life. Price 8s. 6d. net.

ELECTRICITY FOR ARCHITECTS

THE architect who produced emotional elevations at the expense of sound planning is fortunately now becoming a rarity, a survivor from times of prosperity and spaciousness when architecture must on no account be influenced by common sense.

In our time we have been privileged to see architects who are more proud to have created workable plans than picturesque façades, and it is to be hoped that the influences of Mr. Waghorn's book, *Electricity for Architects*, will be the means of making life easier and happier for those thousands of us who live and work in the new houses, factories and office buildings which are springing up so rapidly all over England.

Undoubtedly the ultimate judgment of fine architecture is an æsthetic one, but to the modern mind, with its appreciation of precision and efficiency, there is a general condemnation when simple facts of use and need have been sacrificed to false economy or doubtful effect.

Electricity for Architects provides concise and pertinent electrical information of modern needs and necessities, which architects should incorporate or provide for in their planning, thereby giving us the full pleasure and comfort that electrical invention, thoughtfully installed, can provide. Too long have we tolerated all the inconvenience and exasperation caused through lack of what are, in reality, the elementary demands of electricity; and with the ever-increasing part electricity plays in our lives for comfort, service or entertainment, the greater the need for the study of this book by the architect, whose aim must be the welding and satisfactory arrangement of all the complicated elements that modern lives demand in the perfect building. This standard of electrical heating, lighting and service of all kinds grows daily, and vision must be used to lead, rather than to follow, this growth.

The diagrams are clear and simple, but the illustrations of interiors are scarcely representative of the many available examples which would be more likely to inspire the critical architect.

The inclusion of the photographs of interiors is justified by the point each demonstrates, but reflected in them is none of the freshness and charm of present good taste in furniture or decoration.

The diagrams of rooms in accordance with the Electrical Developments Association's specification are possibly adequately equipped with plugs and points, but decoratively are feeble. Why electrical details are diagrammatically indicated on such poor interior schemes is incomprehensible, especially as the book is intended for architects.

R. B. R.

Electricity for Architects. By C. Holmes Waghorn. London: Blackie and Son, Ltd. Price 6s. net.



Lighting treatment of a decorative mirror.

[*From* Electricity for Architects. *By C. Holmes Waghorn.*]

D

AN ATTITUDE TO TRADITION

The following is part of a manifesto issued by an association of young artists and critics who have adopted the title of the "Twentieth-Century Group." More will undoubtedly be heard of the activities of this group, which includes architects such as Mr. Joseph Emberton and Mr. Howard Robertson, designers like Mr. Serge Chermayeff, and men of letters like Mr. Mansfield Forbes. Meanwhile we print these paragraphs as one of the most lucid statements of the modern designer's position that we have yet seen, and the only one that will bear comparison with the pronouncements of our leading critics of literature.

WE suppose that leading designers of the past, whatever the decorative predilections of their time, preferred to harmonize *straightforwardly* the expression of needs, uses, ideas and emotions, in forms more or less patently appropriate to specific purpose, to the available materials and methods of construction, and to the social standing, the desires and the finances of their employers. Ornament that was, strictly speaking, unnecessary, would be lavished or withheld as circumstances dictated, and conscientious designers for those of mediocre purse would naturally concentrate on an elegant simplicity.

If twentieth-century designs are to characterize our age with genuine significance, and to justify architecturally its leading tendencies, it is clear that we too must concentrate on the meaning of these designer-preferences, and, above all, in their relation to the emphatic modern feeling for the contemporary manifestations of "elegant simplicity."

The much extended use of the expression "shipshape" is both symptom and idiom. We have heard it applied, e.g. to the latest London omnibuses, to charabancs, to aeroplanes, to kitchens, to restaurants, to grandstands, to bedrooms, to personal clothing. It is usual for women of the post-war decades neither to conceal nor flaunt their figures by means of their clothing; dress "follows" form with elegant subservience, and plays with studious simplicity the part of arresting structural interpreter. "Content" and "form" cannot, of course, in this sphere do more than achieve approximation, but the widespread aim and its attractive attainment are intimately significant of the modern trend. It is as though dress itself were qualifying to be appraised by standards approximating to the highly modern strictness of criteria in matters poetical or musical, where the formal envelope that, so to speak, is skin, is being sharply discriminated from the quasi-form that, aping skin, is no more than, really, skin-tight.

Such unity can be, has been, and is being achieved not so much by the reduction of ornament to what might be termed inevitable accent, as by the undeviating concentration upon adjustments (at once the simplest and the best) in relation each to other of proportions, shapes, projections, textures, colours.

We are of opinion that even good designers have ever since the war continued to flirt with this ideal rather than to espouse it.

This is no doubt due to the prestige of precedents which have held so long, so universal, and, in the course of time, so populous a sway as to favour them with an "expectation" that may well be described as automatic, and, indeed, should often be censured as blind. For in the last fifteen years the balance of society has changed, and changed prodigiously, and the post-war interplay between the new society and the ever-multiplying fertilities of science have put us into a different *kind* of age. Never has the present been so much a future-present, so little a present-past. In the spread and speed of these new lights the vested expectation to which we have referred is seen to be in the lag, nearly always inconveniently, too often absurdly and unbeautifully. The post-war decade has shown up all that, but even leadership has not yet fully realized, and followers have hardly begun to realize, the extent and nature of the gap.

To enforce our point we must review tradition with an eye, especially, to the interval between the present renaissance, the post-mediæval Renaissance, and the Industrial Revolution.

Until, we might say, quite recent times society was more or less rigidly graded in terms of status, beneath the unquestioned dominance of a feudal aristocracy. For this the instinct of display and the political device thereof can hardly ever have been separable; this instinct-practice passed insensibly to expand into a governing class habit. With unequivocating dominance went patronage, and leading designers were inevitably in some sort aspirants. For the most part they could not flourish but with a flourish, and florism (as Mr. Austin Reed has put it) gathered prestige with every sort of swag. The tradition, "the thing," was a grand tradition, weighted on the side of grandiosity, and lightening its weight with lavish efflorescence. Whatever the particular designer's preference, refinement came to mean addition much oftener than elimination, and with the upheaval *through*, rather than *against*, status of the industrial middle classes, aspirant snobbery gathered itself *en masse* (but in an age when æsthetic perfunctoriness became the boon companion of machinery) not to deplore but to endorse the plethoric tradition. First the Gothic Revival, then the Loire, Nuremberg, the Moors, Nouveau Art, all enriched unspeakably the nefarious mêlée, till into the *cul de sac* of the Edwardian decade there poured such a heterogeneous riot of decorative features and penchants as Rabelais himself could scarcely have conceived.

There followed the war, the slumps; mass-production, rationalization; the aeroplane (domesticated and commercial), the up-to-date, the democratic motor car; the decrease of the Great House and of large houses, no longer exemplary, the vast increase of flats; a far more widespread, fairer distribution of wealth, as marked a curtailment of space in living-room interiors; a great increase of the employed (in spite of unemployment), many fewer servants; the modern factory and the open-air and sun-bath movements, and a corresponding stimulation of the desire *within* the home for light, air, and with the restriction of space for its disencumbering.

All the recently established major factors are making, surely and cumulatively, for elimination—not, as in the past, of light, air, water, but of such furnishings, fittings and finishings as cause unnecessary dirt, dust, labour and expense.

To us, today, the cleaner the sweep the less to sweep; the less of pose, the serener the repose, whether for straining body, senses, eyes, mind and nerves.

And these are negative considerations; in their positive aspects they cry aloud to the alive, alert designer to freshen and exhilarate mere cleanness and serenity, to create in short a whole new-world ethos, in *new* day, not *latter*-day, design.

The demand is creative; not indeed for the initiated so much a demand as a clarion call from the ever-multiplying wealth of new materials, hygienic, bright, peace-inducing, exhilarating. The ratio of increase of such materials is, further, geometrical; the impulse and determination to avail from them should correspond.

How can we continue to imitate, to compromise the teeming creative opportunities, the creative spirit, and stimulus to spirit, of today by so insincere, so dearly-bought a form of flattery?

Most of the major precedents for imitation are at utter odds with the major factors taking precedence, and making precedents, today.

We believe that the spirit of a generation that has generated more, and more vital, change than, surely, any other, demands expression in architectural forms and renderings, whether exterior or interior, that have, outside this century, no virtual precedent.

To imitate the plethoric precedent amounts, today, to something not far short of artistic — and of ethical — suicide.

MANSFIELD FORBES

SOCIETIES AND INSTITUTIONS

WEST YORKSHIRE SOCIETY OF ARCHITECTS

MR. J. NEEDHAM presided at a meeting of the above society, when the associate members engaged in a debate at the Leeds headquarters on March 26, the subject for discussion being : " That architecture is of vital importance to the layman."

Mr. J. A. Naylor, opening in the affirmative, said that the world could not express itself without architecture, which revealed in history the social conditions, progress, religions, and events which were landmarks in the march of mankind. Architecture had supplied shrines for religion, homes for the living, and monuments for the dead. Ruskin told them that it was an art for all to learn, because all were concerned with it. One of man's primary instincts was to build a shelter and a stronghold, which afterwards developed into a desire to satisfy his emotions. The architect controlled the habits of the layman, and decided where he should breakfast and where he should hang his hat. He controlled the layman from the moment he got out of bed, until the hour that he retired to rest. How then could architecture be of anything but of vital importance to him ?

Taking the negative view, Mr. G. B. Stickney thought that any importance which architecture assumed in the mind of the layman was to a large degree subconscious. He thought it would be more true to say that the layman was of vital consequence to architecture. The duty of formally introducing the layman to architecture rested with the educationist, but the speaker felt sure that the former of these would be just as happy lacking the acquaintance. It was doubtful whether the mind was much influenced by its environment. Happiness came from within, and not from without.

Mr. E. Seel thought it was a very good thing that the layman was not vitally interested in architecture, so that it could be carried on free from lay interference.

Mr. S. Simpson said that the occupants of office blocks were exhilarated if these were of good design, and generally admired them; they felt proud to be occupied in a building of good design. In that sense architecture was certainly vital to the layman.

Mr. D. D. Harrison thought that the laity were none the worse for going through life without any true appreciation of architecture.

Mr. R. J. Edmondson thought that the sight of good architecture affected the layman favourably, though he might not always be able to express his feelings.

Mr. Norman Culley, the president, thought that architecture had the greatest influence on the minds of the public, however humble their station in life, but that modernist buildings would not tend to enhance their interest.

Mr. H. Waddington remarked that the inmates of warehouses and factories, if these were well planned, knew how to escape with the least danger to themselves, and in that sense architecture became of vital importance to them.

Messrs. F. Chippindale, F. R. Pullan, and R. C. Davis also took part in the debate, and on the vote being put, the majority of those present voted " That architecture was of vital importance to the layman."

DEVON AND CORNWALL ARCHITECTURAL SOCIETY

The annual meeting of the Devon and Cornwall Architectural Society was held at Exeter on March 28. Mr. John Bennett, the retiring president, occupied the chair.

After the annual report and balance sheet had been adopted, Mr. Bennett presented the prizes offered for the annual competition of measured drawings to Mr. P. J. T. Carter and Miss K. I. Maynard. The latter also received the prize offered by Mr. B. Priestley Shires, for pen - and - ink sketches.

Mr. Bennett, in an address which followed, said that opinions differed as to the real value of the " Development Scheme," with which was linked the Registration Bill, to the profession. Many held the view that the Bill did not go far enough, whilst others quite as stoutly declared that it went too far; but it must be remembered that the profession, in an organized sense, was not an old one, and real progress was always slow, measured by the span of a generation.

He suggested that we heard far too much about architects and far too little about architecture, and he appealed to every architect who was opposing either the development scheme, registration, or the R.I.B.A., to pause in his efforts, even if it meant personal sacrifice; and he would ask them to remember that the R.I.B.A. was the parent body, and had been for long years working in the interests of architecture and architects.

He would further say that if it had not attained all the success it should have, architects as a whole must take the blame.

One thing was certain, that until the profession made up its mind to weld itself into an organized body, under one banner, it would not be able to take that position in the community that its work demanded.

He therefore asked the architects of Devon and Cornwall to support the Development Scheme and the Registration Bill to the utmost of their power, and he hoped that all who were qualified and were not already members of the R.I.B.A. would now join under the provisions of the Development Scheme.

The following officers of the Council were elected for the ensuing year :

President, Mr. H. Victor Prigg, A.M.I.C.E.; vice-presidents, Messrs. A. S. Parker, F.R.I.B.A. and A. H. Ough, F.R.I.B.A.; past president, Mr. John Bennett, L.R.I.B.A.; honorary treasurer, Mr. S. Dobell; honorary auditor, Mr. L. F. Tonar, L.R.I.B.A.; honorary secretary, Mr. J. Challice, A.R.I.B.A.

The officers for the Councils of the Exeter and Plymouth branches of the Society were elected as follows :

Exeter Branch—Fellows : Messrs. R. M. Challice, A.R.I.B.A., W. J. M. Thomasson, A.R.I.B.A., E. Kemeys Jenkin, F.R.I.B.A., W. F. R. Ham, H. Alban Peters, A.R.I.B.A., and G. S. Bridgman, A.R.I.B.A. Associate member : Mr. D. W. Cooper.

Plymouth Branch—Fellows : Messrs. B. Priestley Shires, F.R.I.B.A., C. Cheverton, F.R.I.B.A., W. A. Vercoe, A.R.I.B.A., A. V. Rooke, F.R.I.B.A., and W. W. Wood, F.R.I.B.A. Associate member : Mr. A. T. Martindale, L.R.I.B.A.

The following members attended the meeting :

Exeter Branch : Messrs. N. G. Bridgman, F.R.I.B.A., G. S. Bridgman, A R.I.B.A., R. M. Challice, H. M. R. Drury, A.R.I.B.A., W. F. R. Ham, E. F. Hooper, L.R.I.B.A., E. Kemeys Jenkin, F.R.I.B.A., A. H. Ough, F.R.I.B.A., H. A. Peters, A.R.I.B.A., W. J. M. Thomasson, A.R.I.B.A., L. F. Tonar, L.R.I.B.A., E. L. R. Vining, F.S.I., D. W. Cooper, O. Parker, B. Roberts, S. T. L. Ralling, W. F. J. Sutton, P. E. Titley, W. F. Dickson, L. A. J. Heywood, H. W. Merrifield, F. G. Morey, L. J. North, S. J. Stone, and J. Challice, A.R.I.B.A.

Plymouth Branch : Messrs. E. G. Catchpole, A.R.I.B.A., Chas. Cheverton, F.R.I.B.A., H. Haughton, L.R.I.B.A., A. C. Norman, F.R.I.B.A., A. S. Parker, F.R.I.B.A., H. Victor Prigg, A.M.I.C.E., A. V. Rooke, F.R.I.B.A., B. Priestley Shires, F.R.I.B.A., H. R. Venning, L.R.I.B.A., E. Ashworth, S. J. Crispen, L.R.I.B.A., A. T. Martindale, L.R.I.B.A., Harold Watts, A.R.I.B.A., P. J. T. Carter, Miss K. Maynard, J. H. Serpell, and E. Woods.

CAMBRIDGE ARCHITECTS' ANNUAL MEETING

At the annual general meeting of the Cambridge Chapter of the Essex, Cambridgeshire and Hertfordshire Society of Architects, the following elections were made for the year 1931–32 :

Chairman, Mr. H. H. Dunn, F.R.I.B.A.; vice-chairman, Mr. Theodore Fyfe, M.A., F.R.I.B.A.; hon. secretary, Mr. N. Hurst, F.S.I.; hon. treasurer, Mr. I. T. Sifton, A.R.I.B.A.; hon. librarian, Mr. C. W. Craske.

TOWN AND COUNTRY PLANNING BILL

At a meeting of representatives of the National Housing and Town Planning Council, the Town Planning Institute, the Garden Cities and Town Planning Association, the Council for the Preservation of Rural England and the London Society, held in London, it was unanimously resolved that the bodies concerned should give general support to the Town and Country

Planning Bill, while reserving freedom to put forward such amendments as might be considered desirable during the Committee stage of the Bill.

TITE PRIZE AND SOANE MEDALLION

In the United Kingdom sixty students took part in the preliminary competition for the Soane Medallion, and 244 students took part in the preliminary competition for the Tite Prize.

The following students have been selected to take part in the final competitions :

THE SOANE MEDALLION

Bell, Brian McE. (Bartlett School of Architecture).
Carnegie, John D. (Edinburgh College of Art).
Harper, Denis R. (Liverpool School of Architecture).
Harrison, Donald D. (Leeds College of Art).
Hewitson, T. T. (Liverpool School of Architecture).
Hughes, John (Liverpool School of Architecture).
Kenyon, George (Liverpool School of Architecture).
Lunn, Norman S. (Liverpool School of Architecture).
Matthew, Robert H. (Edinburgh College of Art).
Mudd, Francis W. (Architectural Association).
Parker, Robert G. (Liverpool School of Architecture).
Sheridan, John G. (Liverpool School of Architecture).
Walker, H. R. M. (Architectural Association).

THE TITE PRIZE

Blair, William (Liverpool School of Architecture).
Brown, Clifford W. (Leeds College of Art).
Clavering, John C. (Durham University School of Architecture).
Cooper, Anthony (Architectural Association).
Couves, Dudley L. (Durham University School of Architecture).
Fermaud, L. H. A. (The Polytechnic, Regent Street, London).
Gollins, Frank (Birmingham School of Architecture).
Grice, Kenneth J. (Birmingham School of Architecture).
Hickton, Edwin H. (Birmingham School of Architecture).
Hope, Alan H. (Liverpool School of Architecture).
Jones, David M. (Liverpool School of Architecture).
Kerswill, F. E. (Bartlett School of Architecture).
Lake, H. John (Liverpool School of Architecture).
Ledoyen, Arthur (Birmingham School of Architecture).
Norcliffe, Howard (Liverpool School of Architecture).
Rowlands, Betty (Architectural Association).
Saurin, C. P. (Bartlett School of Architecture).
Searle, Cecil J. (Architectural Association).
Shepherd, Edwin (Leeds College of Art).
Smeeton, Reginald A. (Birmingham School of Architecture).

LAW REPORT

ARCHITECT'S CLAIM FOR FEES. JUDGE AWARDS £4,000

Tilden v. *Realty Trust, Ltd. King's Bench Division. Before Mr. Justice Rowlatt.*

THIS was an action by Mr. Philip Tilden, F.R.I.B.A., of Regent Street, against the Realty Trust, Ltd., of which Mr. W. A. Richards was managing director, claiming the balance of fees alleged to be due from defendants, in connection with a proposed block of flats in Hertford Street, Mayfair.

Plaintiff's case was that the defendants, under an agreement, engaged him to prepare plans, specifications, etc., for a building the defendants proposed to erect in Hertford Street, at a cost of £200,000, on which his remuneration was to be at the rate of $3\frac{3}{4}$ per cent. on the cost of building. Plaintiff alleged that the defendants agreed to commence building on or about January, 1929, or at any rate within a reasonable time, which they never did. Plaintiff admitted that he had received £1,450, for which he was willing to give the defendants credit. In the alternative, plaintiff alleged that he was entitled to be paid for his services by way of *quantum meruit*.

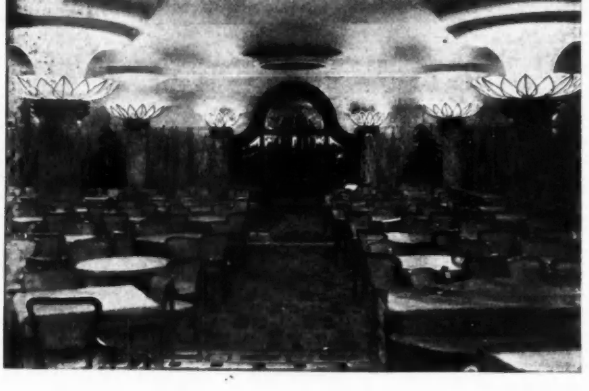
The defence was a denial of any such contract as alleged, and that the plaintiff in June, 1929, by letter and by the commencement of the present proceedings, refused to continue to act as architect. The defendants counter-claimed for £1,550, part of which was alleged to have been a loan, or alternatively they counter-claimed for the sum of £1,050.

Mr. Pritt, K.C., and Mr. W. Nicholls, appeared for plaintiff; and Sir F. P. M. Schiller, K.C., and Mr. H. G. Robertson for the defendants.

Mr. Pritt said the action was for damages for breach of contract or for fees on what might be called an abandoned scheme. The arrangements were made between the plaintiff and Mr. Richards, who was acting for the defendants, carrying on business in St. James' Square, London, with other associated companies.

It was stated that the defendants had settled with all the ancient lights claims for a sum of £13,000.

His lordship, in giving judgment, said this was an action by an architect to recover remuneration for work done. Here the architect had to make plans, and to his mind it was impossible for architects to do business if they had to do all that on speculation. Therefore, an architect who was induced to use all his skill as an architect and to put that skill into his labours, must be paid a fee to compensate him for labour thrown away. It was, in his lordship's view, an implied term between the parties that, if the contract did not go through, and the owner did not like to go on with it, then the owner must make some arrangements to pay the architect for what he had done. It was true that here there was delay. There were ancient light difficulties and other difficulties. But his lordship found as a fact that notices were given to the local authorities on December 24. To his mind it was obvious that this delay was not necessary. The work ought to have been begun before. Nothing had been done to date, because one owner on the site was standing out. The work was delayed in a way to cause serious hardship to plaintiff and was not expected. In his opinion, it was clear that there was to be a payment to the plaintiff for work he had done. The question, therefore, was what amount of remuneration was the plaintiff entitled to. The building would have cost over £200,000. In this matter he had to bear in mind that he had not been helped by the defendants with evidence. He gave judgment for the plaintiff for £4,000, after making the necessary adjustments, with costs.



Indirect lighting at Lyons' Oxford Street Corner House, London. (*See* book review on page 527.)

[*From* Electricity for Architects. *By C. Holmes Waghorn.*]

Announcement

Mr. S. Penn Smith, Architect and Surveyor, has removed his offices to 8 Millstone Lane, Leicester. Telephone Number : Leicester 20959.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

State-Assisted Houses

MR. GOSSLING asked the Minister of Health whether he could state the approximate total capital cost of all State-assisted houses erected in England and Wales between the years 1919–30, inclusive; and the total amount of housing subsidies paid from the Exchequer to local authorities in England and Wales during the same period.

Miss Lawrence said that information as to the capital cost of all State-assisted houses was not available, but it is estimated roughly at about £600 millions between 1919 and 1930. The total amount of Exchequer subsidies paid during the same period in England and Wales was £93,530,000, of which £82,045,000 had been paid to local authorities.

Mr. Gossling asked for figures showing the total number of dwellings in England and Wales at January 1 in each of the following years: 1911, 1921, and 1931.

Miss Lawrence said the only information available was that contained in the Census Reports for 1911 and 1921:

ENGLAND AND WALES
CENSUS FIGURES

	1911 April 2	1921 June 19
Structurally separate dwellings:		
Occupied	7,319,420	7,811,030
Vacant	434,048	218,833
Total	7,753,468	8,029,863

Note.—In 1911 structurally-divided houses were not separately identified, and the total dwellings shown for that year was understated to the extent by which such houses were returned as undivided structures instead of as flats or tenements.

Dumping of House Refuse

Mr. Mills asked the Minister of Health whether he intended to bring in a Bill with a view to legislation being passed to put an end to the nuisance and annoyance caused by the dumping of house refuse by one sanitary authority, in the area of another sanitary authority, without the latter authority's consent.

Miss Lawrence, who replied, said it was not proposed to bring in a Bill this session for dealing expressly with the dumping of refuse. But the Town and Country Planning Bill, recently introduced, would strengthen the hands of the planning authorities in preventing or controlling the use of land for such a purpose. Local authorities might also prevent nuisance if bylaws dealing with the disposal of refuse were made betimes and strictly enforced.

Weekly Rent on A 3 Houses

Miss Rathbone asked the Minister of Health what he estimated to be the full economic net rent on an A 3 house costing £400?

Miss Lawrence replied that the full rent required to be charged for a municipal house costing £400, without Exchequer or rate subsidy, was approximately 10s. 6d. a week, exclusive of rates.

COMPETITIONS OPEN

April 10.—Limited competition for proposed new offices, town hall, museum and library, in the Walworth Road, S.E., for the Southwark Borough Council. Experienced architects are invited to submit names, with a statement of executed works and experience, from whom six will be invited to participate in the competition. Assessor: Louis de Soissons, F.R.I.B.A., S.A.D.G. Each of the six architects will receive an honorarium of 200 guineas. Names to be submitted to D. T. Griffiths, Town Hall, Walworth Road, S.E.17, by April 10.

April 11.—Sending-in day. Garage for the temporary accommodation of motor vehicles, organized by management of the Building Trades Exhibition, Manchester (April 14 to April 25). Assessors: H. S. Fairhurst, F.R.I.B.A., John Swarbrick, F.R.I.B.A., and Professor A. C. Dickie, M.A., A.R.I.B.A. Premiums: £100, £30 and £20. Particulars from Provincial Exhibitions, Ltd., City Hall. Deansgate, Manchester.

April 18.—Sending-in day. Central Municipal Bank and Head Offices, Broad Street, Birmingham. Assessor: Sir Reginald Blomfield, R.A., F.R.I.B.A. Premiums: £400, £300, and £150. Conditions from Herbert H. Humphries, City Engineer and Surveyor, Council House, Birmingham. (Deposit £3 3s.)

April 30.—Sending-in day. Hospital for Infectious Diseases, Coventry, for the Coventry Corporation. Assessor: E. Stanley Hall, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

June 1.—Sending-in day. New Council School, to be erected at Blowers, Dudley. (Limited to architects within a radius of 15 miles of Dudley.) Assessor: Herbert T. Buckland, F.R.I.B.A. Conditions from J. Whaley, Director of Education, Education Offices, St. James's Road, Dudley.

June 16.—Sending-in day. (Last day for conditions was February 25.) Offices for the Ingham Infirmary, South Shields. (Limited to architects within the area of the Northern Architectural Association.) Assessor: George Reavell, O.B.E., F.R.I.B.A. Premiums: £250, £100 and £50. Conditions were obtainable from John Potter, Secretary, Ingham Infirmary, South Shields. (Deposit £2 2s.)

June 26.—Sending-in day. Offices for the City of Leicester Corporation, Charles Street, Leicester. Assessor: E. Berry Webber, A.R.I.B.A. Premiums: £300, £200 and £100. Conditions from A. T. Gooseman, Engineer and Surveyor, Town Hall, Leicester. (Deposit £2 2s.)

June 30.—Sending-in day. Latest date for conditions: April 15. New Branch Baths, Foleshill, for the Coventry Corporation. Assessor: F. J. Horth, F.R.I.B.A. Premiums: £210, £105 and £52 10s. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

No date.—War Memorial, Colston Avenue, Bristol. (Limited to Bristol architects and assistants.) Assessor: G. C. Lawrence, F.R.I.B.A. Conditions from the Editor, *Bristol Times and Mirror*, St. Stephen Street, Bristol.

THE ARCHITECTS' DIARY

WEDNESDAY, APRIL 8

INSTITUTION OF STRUCTURAL ENGINEERS. Lancashire and Cheshire Branch. Annual General Meeting to be held at the College of Technology, Manchester. **7 p.m.**

THURSDAY, APRIL 9

SHEFFIELD, SOUTH YORKSHIRE AND DISTRICT SOCIETY OF ARCHITECTS AND SURVEYORS. Annual General Meeting, to be held at the University, Sheffield. **6.15 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. "The Structural Engineer and his Vocational Training." By F. E. Drury, M.SC. 6.30 p.m. Yorkshire Branch. At the Metropole Hotel, Leeds. "The Erection of Sydney Harbour Bridge." By J. Stuart Lewis, M.I.STRUCT.E. 7 p.m. **6.30 p.m.**

FRIDAY, APRIL 10

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION, The Castle, Winchester. Council Meeting. 3 p.m. General Meeting. 6.15 p.m. **3 p.m.**

SATURDAY, APRIL 11

Sunrise, 5.17 a.m. Sunset, 6.45 p.m.

MONDAY, APRIL 13

R.I.B.A., 9 Conduit Street, W.1. "Modern Flats." By G. Grey Wornum, F.R.I.B.A. **8.30 p.m.**

TUESDAY, APRIL 14

BUILDING TRADES EXHIBITION, Manchester. Until April 25.

WEDNESDAY, APRIL 15

INSTITUTE OF LANDSCAPE ARCHITECTS. At the Royal Horticultural Hall, Greycoat Place, S.W.1. Discussion on "The Garden of the Future," to be opened by Edward Whyte. **3.30 p.m.**

INSTITUTE OF FUEL. At the Chemical Society's Rooms, Burlington House, Piccadilly, W.1. Annual General Meeting, followed by a paper on "The Smoke Problem: A Consideration of some of its Economic Aspects and the Difficulties of its Solution." By Arnold Marsh, M.SC. (TECH.). Chairman: John Charrington, Junr. **6 p.m.**

THURSDAY, APRIL 16

INSTITUTION OF STRUCTURAL ENGINEERS. South Wales and Monmouthshire Branch. At the Institute of Engineers, Park Place, Cardiff. "The Erection of Sydney Harbour Bridge." By J. Stuart Lewis.

AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE, 29 Lincoln's Inn Fields, W.C.2. "The Making of a Connoisseur, Part 10." By H. Mordaunt Rogers. **7.30 p.m.**

SOCIETY OF ANTIQUARIES, Burlington House, S.W.1. "Excavations in Bambata Cave, Rhodesia, and the Evidence at Victoria Falls relative to the Age of Man in South Africa." By Leslie Armstrong, M.C., F.S.A. **8.30 p.m.**

FRIDAY, APRIL 17

GARDEN CITIES AND TOWN PLANNING INSTITUTE, 3 Gray's Inn Place, W.C.1. Dinner to celebrate the Twenty-first Anniversary of the Town Planning Act, to be held at the Holborn Restaurant, London. Guest of Honour: The Rt. Hon. John Burns. Chairman: The Rt. Hon. The Earl of Lytton, P.C. 7.15 for 7.45 p.m. **7.15 p.m.**

THE ROYAL SANITARY INSTITUTE Sessional Meeting in the Guildhall, Poole. Welcome by the Mayor, 4 p.m. Discussions will be opened on "Some Aspects of Municipal Sanitation," by E. J. Goodacre, A.M.INST.C.E., Borough Surveyor; "Prospect and Retrospect," by Alderman J. C. Julyan, J.P., C.C., and "Diphtheria Immunisation at Work," by George Chesney, M.B., D.P.H. Chairman: Edward Willis, M.INST.C.E., F.S.I., M.INST.T. (Chairman of the Council of the Institute). **5 p.m.**

SATURDAY, APRIL 18

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION, The Castle, Winchester. Excursion.

ROYAL SANITARY INSTITUTE. At Poole. 10.30 a.m. Meet at the Park Gates East (site of new Municipal Buildings), for a drive round the Borough to inspect Municipal Activities. 1 p.m. Lunch at the Haven Hotel, Sandbanks. 4/6 each. 4 p.m. Tea at the Branksome Dene Chine Cafe by invitation of the Council. **10.30 a.m.**

THURSDAY, APRIL 23

WEST YORKSHIRE SOCIETY OF ARCHITECTS, 62 Woodhouse Lane, Leeds. Annual General Meeting. **7 p.m.**

FRIDAY, APRIL 24

TOWN PLANNING INSTITUTE. At Caxton Hall, Westminster, S.W.1. "Rural Preservation and the Landowner." By Christopher Turnor. **6.30 p.m.**

MONDAY, APRIL 27

R.I.B.A., 9 Conduit Street, W.1. "Modern Bridges." By Maxwell Ayrton, F.R.I.B.A. **8 p.m.**

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "Problems in Modern Architecture." By H. Th. Wijdeveld. Also exhibition of the lecturer's drawings and designs. Until May 18. **8 p.m.**

TUESDAY, APRIL 28

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS, 1 Wilbraham Place, S.W.1. "Housing and Slum Clearance." By Ald. H. Prince. **7 p.m.**

TRADE NOTES

In presenting a brochure entitled "Celotex Insulation," the intention of the Merchant Trading Co., Ltd., is to portray and picture the many and varied uses to which this building material can be put. The products are made of cane fibre, and some of the suggested uses are: stucco or plaster base and interior lining and decorative panel work, insulation of roofs and prevention of condensation and sweating, cold storage and refrigerator work, heating and ventilating installations, noise abatement and quietening of offices, hospitals, etc., and prevention of sound transmission, acoustical correction of auditoriums, churches, schools, etc. It is stated that many charming effects can be secured by the use of stains, paints, stencils, and plastic paint over Celotex, and notes upon the application of plastic paints, wallpaper, and various interior finishes are given in the Celotex specification book. Cut stone-work effects are obtainable by trimming the Celotex into units of the proper size and bevelling the edges to produce a "V" groove at each joint. It is claimed that the insulation value of Celotex has been established by internationally-known laboratories at 0·33 B.T.U.'s per hour, per square foot, per degree Fah., per inch thickness, and that the heat conductivity is 0·33 B.T.U.'s per hour, per square foot, per degree Fah., per inch thickness. The building board is made in the following sizes: 3 and 4 ft. wide, 8 to 14 ft. long, and $\frac{7}{16}$ in. thick or "double thick" $\frac{7}{8}$ in. It is claimed that no special tools or skill are required, as it is sawn and nailed in place like wood, and that no special frame is necessary as studs, joists, and rafters are spaced as in ordinary construction, and the boards nailed directly to the wood framework. The manufacturers state that Celotex is now used in every country in the world and in nearly 500,000 homes. In fact, it is stated that the material has travelled all over the world.

*

Messrs. British Monomarks, Ltd., have issued a number of interesting leaflets, with "snappy" headings, describing the advantages of the Monomark system and how it works. It is pointed out that the firm have made arrangements with the General Post Office, whereby all letters received by them, from whatever part of the world, which are addressed to a Monomark, shall be immediately handed over to British Monomarks, Ltd. At Monomark House these letters are not opened, but enclosed in new envelopes, fully addressed to the owner of the Monomark, re-stamped, and immediately returned to the Post Office for prompt despatch. The address of the owner of the Monomark may be anywhere in the United Kingdom. The manufacturer stamps his Monomark upon his product. An architect, contractor, or anyone wishing to make inquiries about the product, and not knowing the maker or seller, need only write upon an envelope the Monomark appearing upon the product, add "London, W.C.1," and post it in the ordinary way. A manufacturer or merchant may adopt as his Monomark either the brand name of his goods, e.g. BCM/HOTFIRE, or the initials of his firm, e.g. BCM/JBCO (James Brown & Co.). All Monomarks are absolutely unduplicated. Every registered Monomark with the addition of "London, W.C.1" is a full and sufficient postal name and address. In one of the leaflets are reprinted testimonials from many prominent architects who prefer to see building materials Monomarked. Sir Edwin Lutyens, R.A., writes: "Every architect, when extending a house, has experienced trouble in matching fittings and material. Monomarks on such articles will mean that a supplier can be communicated with without difficulty or expense."

*

Messrs. John Walsh Walsh, Ltd., glassware manufacturers, of the Soho and Vesta Glassworks, Birmingham, are now proprietors of Messrs. T. J. Hands and Son, Ltd. (incorporating Messrs. A. Arculus & Co.), having acquired as from December 15, 1930, the goodwill and certain assets of these concerns. All key workmen are being retained, therefore requirements and supplies will be maintained and executed by the same workmen and from the same moulds as previously. The services of Messrs. H. J. Hands, T. S. Arculus and R. N. Arculus are also available to supervise and execute orders for customers to whom they have previously supplied goods. Extensive additions and alterations are now being carried out at the Soho and Vesta Works, to which address the whole of the above organizations, at present located at Chester Street and Cecil Street, Birmingham, will soon be transferred. Special plant is being installed to accommodate the amalgamation, and with the alliance of the above concerns the company claim that they will be in an unequalled position to give comprehensive service to clients in the manufacture of the many varieties of glassware requisitioned.

*

Silicate of soda is the subject of a booklet just issued by Messrs. G. and T. Earle, Ltd., cement manufacturers, of Hull. Silicate of soda is a general term which covers materials of widely differing composition, but the chief necessity where concrete is concerned is the presence of the correct proportion of silica, and the firm claim to be in a position to offer a special grade of silicate of soda for application to concrete. It is stated that very many tests under strict laboratory control, and the practical experience of products manufacturers and engineers, have proved that the use of silicate of soda, as an application to the surface of set concrete, results in a hardening action coupled with a reduction in porosity. The chemical effect of silicate of soda upon concrete is the subject of some discussion, but it is stated that the action may be summarized by stating that a mixture of silicate of lime and hydrated silica is precipitated in the pores of the concrete. This mass, it is claimed, is absolutely insoluble in water, and becomes a dense surface skin which is extremely resistant to abrasion: the result being comparable with the case-hardening of steel.

*

A trainload of British steel reinforcing bars—over 360 tons, with a total length of forty-six miles—was recently rolled for the new Ford Works at Dagenham in one day by the United Strip and Bar Mills, branch of the United Steel Companies, Ltd., Sheffield. The individual bars varied in length between 69 and 73 ft. It is claimed that no other plant in this country, and few in Europe, are capable of rolling daily outputs as large as this. The bars were rolled to the order of the contractor, Messrs. John Mowlem & Co., Ltd.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:

Romney's House, Hollybush Hill, Hampstead, N.W. (pages 509-513). General contractors, Mitchell and Sons. Sub-contractors: Merchant Trading Co., Ltd. (Celotex); Freeses fluid waterproofing materials; Beaven and Sons, Ltd., central heating and boilers, plumbing and sanitary fittings; Tyler and Freeman, electric wiring, electric heating and bells; Gillham and Jones, electric light fixtures; J. H. Boobbyer and Sons, casements and window furniture; H. H. Martyn & Co., Ltd., decorative plaster.

The Savoy Cinema, Brighton (pages 514-518). General contractors, M. J. Gleeson, Ltd. Sub-contractors: W. H. Blake & Co., Ltd., steelwork; W. Draper & Co., Ltd., electrical equipment; H. Morris & Co., Ltd., seating; Shaws Glazed Brick Co., Ltd., terra-cotta; J. Jeffreys & Co., Ltd., heating and ventilation; H. H. Martyn & Co., Ltd., fibrous plaster and paintwork; Clark Vigilant Sprinklers, Ltd., fire appliances; A. Emanuel and Sons, Ltd., electric light fittings; White & Co., Brighton, Ltd., timber; Haywards, Ltd., pavements lights; Sussex Brick Co., Ltd., bricks; Channel Haulage Co., haulage; Ross, Ltd., projection apparatus; John Compton Organ Co., Ltd., organ; Robert Adams, door springs, locks, furniture, etc., throughout building; Chas. Walker & Co., marble work; George Freeman, Ltd., plaster; G. W. Dawes and Son, plumbing and glazing; A. Coltman & Co., Ltd., display cases, etc.; Harvey & Co., demolition; Marshall, plasterwork; Express Lift Co., Ltd., lifts.

The photographs of the Savoy Cinema (pages 514 and 516 to 518) are reproduced by courtesy of Shaws Glazed Brick Co., Ltd., and H. H. Martyn & Co., Ltd.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The L.C.C. has granted a licence to Associated British Cinemas, Ltd., for a proposed cinema in King's Road, CHELSEA.

The CHELSEA B.C. is acquiring property in the vicinity of World's End Passage for a housing scheme.

The CROYDON Corporation has obtained sanction to borrow £34,000 for the extension of Thornton Heath baths.

Messrs. Rawlings, Butt and Bowyer, are to purchase land in Oaks Lane, ILFORD, for the erection of a Nonconformist church and school buildings.

The POPLAR B.C. has approved the layout for the scheme comprising three blocks of flats in Glengall Road, Millwall.

The POPLAR B.C. has obtained sanction to borrow £4,000 for the erection of a public washhouse in Sophia Street, and £2,035 for the machinery equipment.

The Coulsdon U.D.C. has approved plans submitted by Westminster Cinemas, Ltd., for the Orpheum Cinema in Brighton Road, PURLEY.

Plans passed at PURLEY: Store, 26 Russell Hill, for Major H. G. Harris; conversion of house into three flats, Whytecliffe Road, for Mr. R. Reynard; four houses, Northwood Avenue, for Mr. T. A. Parker; two houses, Woodcrest Road, for Messrs. R. D. Taylor Ltd.; house, Manor Wood Road, for Mr. M. H. Workman; two houses, Dale Road, for the Beeches Building Co.

Plans passed at SANDERSTEAD: Bungalow, Kingswood Way, for Mr. Redford; house, Purley Bury Close, for Messrs. W. J. Frewing and Sons; eight houses, Beechwood Road, for Messrs. G. and C. A. Parris; five houses, Lime Meadow Avenue, for Mr. T. Whichelo; house, Churchway, for Mr. F. Flood; two houses, Addington Road, for Mr. F. Knight; ten houses, Sanderstead Road and Purley Downs Road, for Mr. S. Jones.

Plans passed at SELSDON: Two houses, York Road, for Messrs. James and Woodworth; house, York Road, for Mr. L. J. Manning; two houses, Addington Road, for Mr. B. Brown.

The L.C.C. has passed plans, submitted by Messrs. Hillier, Parker, May and Rowden, on behalf of Midland Shop Properties, Ltd., for the erection of premises in Broad Street, Berwick Street, Kemp's Court, and Hopkins Court, SOHO.

The SOUTHWARK B.C. is considering the establishment of nursery schools.

The WANDSWORTH B.C. has approved plans submitted by Messrs. McLaughlin and Harvey, Ltd., for the erection of a theatre on a site in Streatham Hill, abutting on Ardwell Road.

The WANDSWORTH B.C. has passed plans, submitted by Mr. H. S. Scott, for the erection of a cinema on a site in Upper Tooting Road, abutting on Derinton Road and Lessingham Avenue.

Plans passed at WANDSWORTH: Four houses, New Park Road, for Messrs. J. Chubb & Co.; alterations, 17–21 Mitcham Road, Tooting, for Mr. A. Walker; conversion into flats, 23 Carlton Road, Putney, for Messrs. T. Williams and Son; blocks of dwellings, Clapham Park Estate, for Messrs. C. Miskin and Sons, Ltd.; two houses, Sellincourt Road, Tooting, for Messrs. F. Watts & Co.; two houses, Woodfield Grove, for Mr. A. Soden; stores Point Pleasant, Southfield, for Messrs. Wallis Gilbert and Partners; three houses, Strathdale, Streatham, for Mr. S. Boothman; two houses, Ockley Road, for Messrs. Wates, Ltd.; two houses, St. James's Road, Balham, for Mr. W. J. Goodchild.

The L.C.C. has passed plans, submitted by Mr. B. W. H. Scott on behalf of Messrs. Godfrey Phillips, Ltd., for the erection of buildings on the site of 4–10 Great Pearl Street, and 2–22 Little Pearl Street, WHITECHAPEL.

SOUTHERN COUNTIES

The HERNE BAY U.D.C. has approved plans for a fire station in High Street, at an estimated cost of £2,500.

Plans passed at HERNE BAY: Alterations, Electric Joinery Works, Beach Street, for Messrs. C. H. H. Kenworthy, Ltd.; amusement hall, St. George's Parade, for Messrs. Ironside and Son; shop, Sea Street, for Messrs. Woolf Bros.; bungalow, Bournemouth Drive, for Messrs. Goodwin and Russell, Ltd.; three bungalows, Central Avenue, for Mr. F. J. Line; bungalow, Linden Avenue, for Messrs. J. Howell and Son; house, Linden Avenue, for Messrs. Goodwin and Russell, Ltd.; house, Gordon Road, for Messrs. Keeler and Clarke.

The NEWBURY Corporation Housing Committee has asked the borough surveyor to prepare plans for the erection of twenty-eight houses on land at Camp Close.

The NEWBURY Corporation is to erect seventy-six houses in London Road.

The OXFORD Education Committee is to discuss with the Wesleyan trustees plans for proposed new buildings.

The OXFORD Corporation has approved preliminary plans submitted by Messrs. Kennedy and Nightingale on behalf of Balliol College, for extensions to Manor House, Holywell.

The Sealand Petroleum Co., Ltd., is to erect works at Paulsgrove, PORTSMOUTH.

SOUTH-WESTERN COUNTIES

Messrs. Gibbs and Davies are to erect eighteen houses in Redcatch Lane, BRISTOL.

The BRISTOL Corporation has leased a site on the Knowle housing estate to the Church Extension Committee, for the erection of a church.

MIDLAND COUNTIES

The LEICESTER Co-operative Society, Ltd., is to erect shops in Winstanley Drive, at a cost of £10,000.

Plans passed at SMETHWICK: Alterations to shop, 148 Three Shires Oak Road, for Messrs. Wrensons, Ltd.; alterations to shop, 464 Bearwood Road, for Mr. W. Barker; eight houses, Pitcairn Road, for Mr. J. Reece; rebuilding workshops, Bearwood Road, for Messrs. Crosbie and Dunn; four shops, Bearwood Road, for Mr. E. Hewitson.

NORTHERN COUNTIES

Plans passed at BOLTON: Extension, Fairclough Street, for Messrs. John Dickinson & Co., Ltd.; four houses, Church Road, for Messrs. Haddock and Bowling; two houses, Green Lane, for Mr. W. Jones; five houses, Chorley Old Road, for Mr. James Latham; additions to secondary school, Mount St. Joseph's, Hawthorne Road, for the Governors; twenty-five houses, Hulton Lane, for Messrs. Stott and Sons.

The CHESTER Corporation proposes the erection of 300 houses on the Lache Farm estate.

Preliminary plans have been prepared by the management of the proposed Southcoates Lane R.C. school, HULL, for 300 junior and mixed children.

The LANCASHIRE County Council is to provide a new public elementary school for about 500 senior mixed children on a site near Bromley Cross station.

The LANCASTER Corporation has arranged with Messrs. James Mansergh and Sons for the design and supervision of the new reservoir, to be constructed at a cost of £250,000.

The Ministry of Health has held an inquiry into the scheme of the LIVERPOOL Corporation for the development of the Walton Hall estate as a park, at a cost of £37,000, with lakes, pavilions, and bandstand, etc.

The MANCHESTER Corporation Housing Committee recommends expending £402,000 on the erection of the first 1,000 houses on the Wythenshawe Estate, the former parish of Northenden.

The MANCHESTER Corporation has obtained sanction for a loan of £16,000 for the erection of a tuberculosis dispensary in Oxford Road.

The Ministry of Health is to hold an inquiry into the proposal of the OLDHAM Corporation to erect a public washhouse at Hollinwood.

The SEAHAM HARBOUR U.D.C. Housing Committee is to erect an additional 104 houses on the Carr House estate.

The Durham County Council has passed plans of the proposed new offices at SEDGEFIELD, for the staffs of the Guardians' Committee and the area surveyor.

The West Riding C.C. is to construct a bridge at Kirk, SMEATON FORD, at a cost of £7,300.

Plans passed at SOUTH SHIELDS: Alterations and additions, King Street, for Messrs. Marks and Spencers, Ltd.; alterations to bakery, rear of Lord Street, for Messrs. Smith Bros.; alterations, "Alnwick Castle" public-house, East Holborn, for Messrs. J. Buchanan, Ltd.; alterations, "Ship Inn," Marsden Road, for Messrs. T. A. Page and Son; conversion into flats, 22 Baring Street, for Capt. Rae.

The STOCKTON-ON-TEES Corporation is seeking sanction for loans of £47,000 for alterations and extensions at the public baths, and £44,000 for the extension of the municipal buildings.

Plans passed at STRETFORD: Eight houses, Coleridge Road, for Messrs. Smith and Allcock, Ltd.; alterations, 250 Upper Chorlton Road, for the District Bank, Ltd.; office, Ashburton Road, for Mr. A. Leigh; shop fronts, 77–79 Darnley Street, for Messrs. Pendleton and Dickinson; shop fronts, 890 Chester Road, for Mr. R. E. Parry.

The SUNDERLAND Education Committee is to enlarge the Commercial Road elementary school for the accommodation of an additional 1,000 children.

Plans passed at TYNEMOUTH: Four houses, Manor Road, for Mr. J. R. Wallace; extension to church hall, for Messrs. Marshall and Tweedy, on behalf of the trustees of Coach Lane Wesleyan church; eight houses, Lansdowne Terrace, for Messrs. F. R. N. Haswell and Son; two houses, Kenners Dene estate, for Mr. A. K. Tasker.

Plans passed at WARRINGTON: Workshop, 11 Museum Street, for Mr. J. Benson; semi-permanent church, Henshall Avenue, for the Rev. J. L. Cullen; extensions, Old Brewery Works, Flag Lane, for Mr. J. Bennett; street building in works area, for galvanizing plant, Bewsey Road and Dallam Lane, for the Pearson and Knowles Engineering Co., Ltd.; alterations and extensions, 3 Winmarleigh Street, for the trustees of the Y.M.C.A.

The YORK Education Committee has given instructions to have plans prepared for the extension required to Mill Mount school.

WALES

The University College of Wales, ABERYSTWYTH, has approved designs by Mr. H. V. Lanchester, F.R.I.B.A., for the layout of the Penglas site, for the erection of the new college buildings.

Mr. A. F. Webb has prepared plans for the erection of a church at GARNDIFFAITH.

The LLWCHWR U.D.C. is seeking sanction to borrow £20,000 for the erection of municipal offices.

The SWANSEA borough architect is to prepare plans for the remodelling of the Plasmarl council school.

Plans passed by SWANSEA Corporation: Alterations, 228 High Street, for Messrs. Taylors (Cash Chemists), Ltd.; premises, Murton Grange, Clyne Common, for Mother-General of Nazareth House; lecture hall, Bible College, Derwen Fawr Road, for Dr. D. Jenkins; alterations, 7-8 Castle Street, for Messrs Montagu Burton, Ltd.; additions, St. Gabriel's Church, Bryn Road, for the Vicar; four houses, Bohun Road, for Mr. John Willis.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_2	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_2	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W.Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood ..	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank ..	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey ..	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester ..	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland ..	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter	1 8
Joiner	1 8
Machinist	1 9
Mason (Banker)	1 8
,, (Fixer)	1 9
Plumber	1 8
Painter	1 7
Paperhanger	1 8
Glazier	1 8
Slater	1 8
Scaffolder	1 4
Timberman	1 4
Navvy	1 3
General Labourer	1 3
Lorryman	1 5½
Crane Drivers	1 7
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . . ,,	2 10 6
Hydrated Lime . . . . ,,	2 16 0
Portland Cement . . . . ,,	2 6 0
Ferro-crete . . . . ,,	2 13 6
Thames Ballast . . . . per Y.C.	8 9
¾" Crushed Ballast . . . ,,	10 0
Building Sand . . . . ,,	10 6
Washed Sand . . . . ,,	11 6
2" Broken Brick . . . ,,	9 6
¾" ,, ,, . . . ,,	12 6
Pan Breeze . . . . ,,	6 6
Coke Breeze . . . . ,,	8 9

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . ,,	3 3 6
Stocks, 1st Quality . . . ,,	4 18 6
,, 2nd ,, . . . ,,	4 12 6
Blue Bricks, Pressed . . . ,,	9 18 0
,, Wirecuts . . ,,	8 16 0
,, Brindles . . ,,	8 0 0
,, Bullnose . . ,,	10 8 0
Red Sand-faced Facings . . ,,	7 11 0
Red Rubbers for Arches . . ,,	15 0 0
Multicoloured Facings . . ,,	9 4 0
Luton Facings . . . . ,,	8 16 0
Midhurst White Facings . . ,,	**5 0 0**
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . . ,,	21 10 0
Headers . . . . ,,	21 0 0
Bullnose . . . . ,,	28 0 0
Double Stretchers . . ,,	30 0 0
Double Headers . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . . ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¾" Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers. . . ,,	5 5	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . . ,,	5	—

MASON

The following d/d F.O.R. at Nine Elms:	s. d.
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . ,,	4 9
Bath stone . . . . ,,	2 11
York stone . . . . ,,	6 9
,, Sawn templates . . ,,	7 6
,, Paving, 2" . . . F.S.	1 8
,, ,, 3" . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20"×10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . as 1" F.S.	9
Deal, Joiner's, . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . ,, ,,	1 1
Deal floorings, ⅜" . . . Sq.	1 1 0
,, ½" . . . ,,	1 3 6
,, ¾" . . . ,,	1 5 6
,, 1¼" . . . ,,	1 11 0
,, 1½" . . . ,,	1 15 0
Deal matchings, ⅜" . . . ,,	16 0
,, ½" . . . ,,	17 6
,, 1" . . . ,,	1 6 0
Rough boarding, ¾" . . . ,,	18 0
,, 1" . . . ,,	1 0 0
,, 1½" . . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	⅛"	¼"	⅜"	½"
Qualities	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch	4 3 2	5 4 3	7½ 6 4½	8½ 7 6
Alder	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6
Gaboon Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –
Figured Oak 1 side	8½ 7 –	10 8 –	11½ – –	1/6 – –
Plain Oak 1 side	6½ 6 –	7½ 7 –	9½ – –	1/0 – –
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½"	¾"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket union . . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

Per cent.		Per cent.
Gas . . . 62½	Galvanized gas	50
Water . . . 58½	,, water	45
Steam . . . 55	,, steam	40

FITTINGS.

Per cent.		Per cent.
Gas . . . 47½	Galvanized gas	37½
Water . . . 42½	,, water	32½
Steam . . . 37½	,, steam	27½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ⅜" . . . ,,	10 0
,, ,, ½" . . . ,,	9 9
,, ,, ⅝" . . . ,,	9 6
,, ,, ¾" . . . ,,	9 0
,, ,, ⅞" . . . ,,	9 0
,, ,, 1" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0

Cast-iron rain-water pipes of	3" s. d.	4" s. d.
ordinary thickness metal .	F.R. 7	10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6
Half-round rain-water gutters of ordinary thickness metal .	F.R. 5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	23 0
,, drawn pipes . . . ,,	23 6
,, soil pipe . . . ,,	26 6
,, scrap . . . ,,	13 0
Solder, plumbers' . . . lb.	1 0
,, fine do. . . . ,,	1 4
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . .	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . ,,		1 3
¼" Polished plate, n/e 1 . ,,	1 0 to	1 3
,, ,, 2 . ,,	1 2 ,,	1 7
,, ,, 3 . ,,	1 7 ,,	2 5
,, ,, 4 . ,,	2 1 ,,	2 11
,, ,, 6 . ,,	2 3 ,,	3 2
,, ,, 8 . ,,	2 6 ,,	3 6
,, ,, 12 . ,,	2 9 ,,	3 8
,, ,, 20 . ,,	3 0 ,,	3 11
,, ,, 45 . ,,	3 3 ,,	4 1
,, ,, 65 . ,,	3 7 ,,	4 6
,, ,, 90 . ,,	3 10 ,,	4 9
,, ,, 100 . ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		1 3
,, ,, ,, over 2 . ,,		1 9
,, ,, plate, n/e 1 . ,,		1 6
,, ,, ,, 2 . ,,		3 0
,, ,, ,, 5 . ,,		4 0
,, ,, ,, 7 . ,,		5 0
,, ,, ,, 15 . ,,		6 0
,, ,, ,,over 15 . ,,		7 6
Putty, linseed oil . . lb		3

PAINTER

	£ s d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 4
Patent knotting . . . ,,	14 0
Distemper, washable . . . cwt.	3 0 0
,, ordinary . . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR	£ s. d.
Digging over surface n/e 12″ deep and cart away . . . Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away . . ,,	10 0
,, to form basement n/e 5′ 0″ deep and cart away . . ,,	11 0
,, ,, 10′ 0″ deep and cart away . . ,,	11 6
,, ,, 15′ 0″ deep and cart away . . ,,	12 0
If in stiff clay . . . . . add ,,	3 0
If in underpinning . . . . . ,, ,,	5 0
Digging, return, fill and ram . . . . . ,,	5 0
Planking and strutting to sides of excavation . . . . F.S.	1 0
,, ,, to pier holes . . . . . ,,	6
,, ,, to trenches . . . . . ,,	6
,, ,, extra, only if left in . . . . . ,,	3½
Hardcore, filled in and rammed . . . . . Y.C.	14 0
Portland cement concrete in foundations (6-1) . . . . ,,	1 13 6
,, ,, ,, (4-2-1) . . . . ,,	1 18 6
,, ,, ,, underpinning . . . . ,,	2 2 0
Finishing surface of concrete, spade face . . . . . Y.S.	9

DRAINLAYER	4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately) . . . . . F.R.	1 8	2 6
Extra, only for bends . . . . . Each	2 8	3 9
,, junctions . . . . . ,,	3 9	4 6
Gullies and gratings . . . . . ,,	17 6	19 9
Cast iron drains, and laying and jointing . . . . F.R.	5 6	7 0
Extra, only for bends . . . . . Each	12 6	18 6

BRICKLAYER	£ s. d.
Brickwork, Flettons in lime mortar . . . . . Per Rod	32 0 0
,, ,, in cement . . . . . ,,	34 0 0
,, Stocks in cement . . . . . ,,	41 10 0
,, Blues in cement . . . . . ,,	62 0 0
Extra only for circular on plan . . . . . ,,	3 0 0
,, backing to masonry . . . . . ,,	2 0 0
,, raising on old walls . . . . . ,,	3 0 0
,, underpinning . . . . . ,,	10 0 0
Fair Face and pointing internally . . . . . F.S.	3
Extra only for picked stock facings . . . . . ,,	1 0
,, red brick facings . . . . . ,,	1 6
,, blue brick facings . . . . . ,,	1 9
,, glazed brick facings . . . . . ,,	4 6
Tuck pointing . . . . . ,,	10
Weather pointing . . . . . ,,	4
Slate dampcourse . . . . . ,,	1 0
Vertical dampcourse . . . . . ,,	1 3

ASPHALTER	s. d.
½″ Horizontal dampcourse . . . . . Y.S.	5 6
½″ Vertical dampcourse . . . . . ,,	7 6
½″ paving or flat . . . . . ,,	5 6
1″ paving or flat . . . . . ,,	6 6
1″ × 6″ skirting . . . . . F.R.	1 0
Angle fillet . . . . . ,,	2
Rounded angle . . . . . ,,	2
Cesspools . . . . . Each	5 0

MASON	£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete . . . . . F.C.	1 1 6
Bath stone and do, all as last . . . . . ,,	15 6
Artificial stone and do. . . . . ,,	16 6
York stone templates, fixed complete . . . . . ,,	14 0
,, thresholds . . . . . ,,	16 0
,, sills . . . . . ,,	1 3 6

SLATER AND TILER	£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″ . . . . . Sqr.	4 5 0
Do., 18″ × 9″ . . . . . ,,	4 2 0
Do., 24″ × 12″ . . . . . ,,	4 12 0
Westmorland slating, laid with diminished courses . . . ,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course . . . . . ,,	4 0 0
Do., all as last, but of machine-made tiles . . . . ,,	3 11 0
Fixing only, lead soakers . . . . . Doz.	9
tripping old slating and clearing away . . . . . Sqr.	10 0

CARPENTER AND JOINER	£ s. d.
Flat boarded centering to concrete floors, including all strutting Sqr.	2 12 0
Shuttering to sides and soffits of beams . . . . . F.S.	1 0
,, to stanchions . . . . . ,,	1 0
,, to staircases . . . . . ,,	2 0
Fir and fixing in wall plates, lintols, etc. . . . . F.C.	5 0
Fir framed in floors . . . . . ,,	6 9
,, ,, roofs . . . . . ,,	8 3
,, ,, trusses . . . . . ,,	9 0
,, ,, partitions . . . . . ,,	12 0
⅛″ deal sawn boarding and fixing to joists . . . . . Sqr.	1 17 6
1″ ,, ,, ,, ,, ... ,,	2 1 6
1½″ ,, ,, ,, ,, ... ,,	2 7 6
3″ × 2″ fir battening for Countess slating . . . . ,,	12 6
Do. for 4″ gauge tiling . . . . . ,,	16 0
Stout feather-edged tilting fillet . . . . . F.R.	6
Patent roofing felt, 1 ply . . . . . Y.S.	2 6
,, ,, ,, 2 ,, ... ,,	3 0
,, ,, ,, 3 ,, ... ,,	3 6
Stout herringbone strutting to 9″ joists . . . . . F.R.	1 0
1″ deal gutter boards and bearers . . . . . F.S.	1 4
1½″ ,, ,, ,, ,, ...	1 8
2″ deal wrought rounded roll . . . . . F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off . . . . . Sqr.	2 15 0
1½″ do. . . . . ,,	3 4 0
1¾″ do. . . . . ,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall . . . . . F.S.	1 10
1½″ do. . . . . ,,	2 1

CARPENTER AND JOINER—*continued.*	s. d.
1½″ deal moulded sashes of average size . . . . . F.S.	2 3
2″ ,, ,, ,, ,, ... ,,	2 6
1½″ deal-cased frames, double hung, of 6 × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ¾″ parting beads, and with brass-faced axle pulleys, etc., fixed complete . . ,,	4 3
2″ ,, ,, ,, ,, ... ,,	4 6
Extra only for moulded horns ,, ... Each	9
1½″ deal four-panel square, both sides, door . . . . . F.S.	2 6
2″ ,, ,, ,, ,, ... ,,	3 0
1½″ ,, but moulded both sides . . . . . ,,	3 0
2″ ,, ,, ,, ,, ... ,,	3 6
4″ × 3″ deal, rebated and moulded frames . . . . . F.R.	1 6
4½″ × 3½″ ,, ,, ,, ... ,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers . . . . . F.S.	2 0
1½″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages . . . ,,	3 0
1½″ deal moulded wall strings . . . . . ,,	2 6
1½″ ,, outer strings . . . . . ,,	2 9
Ends of treads and risers housed to string . . . . . Each	2 0
3″ × 2″ deal moulded handrail . . . . . F.R.	1 6
1″ × 1″ deal balusters and housing each end . . . . . Each	2 6
1½″ × 1½″ ,, ,, ,, ... ,,	3 3
3″ × 3″ deal wrought framed newels . . . . . F.R.	1 6
Extra only for newel caps . . . . . Each	7 6
Do., pendants . . . . . ,,	7 6

SMITH AND FOUNDER	£ s. d.
Rolled steel joists cut to lengths, and hoisting and fixing in position . . . . . Per cwt.	17 0
Riveted plate or compound girders and hoisting and fixing in position . . . . . ,,	1 3 0
Do. stanchions with riveted caps and bases and do. . . . ,,	1 2 0
Mild steel bar reinforcement ½″ and up, bent and fixed complete . ,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g. . . . . F.S.	1 0
Wrot-iron caulked and cambered chimney bars . . . Per cwt.	1 15 0

PLUMBER	£ s. d.
Milled lead and labour in flats, gutters . . . . . Per cwt.	1 19 6
Do. in flashings . . . . . ,,	2 2 0
Do. in covering to turrets, etc. . . . . ,,	2 9 0
Do. in soakers . . . . . ,,	1 15 0
Labour to welted edge . . . . . F.R.	3½
Open copper nailing . . . . . ,,	3½
Close ,, ... ,,	4½

	½″ s. d.	¾″ s. d.	1″ s. d.	1½″ s. d.	2″ s. d.	4″ s. d.
Lead service pipe and fixing with pipe hooks . . . F.R.	1 3	1 8	2 2	2 9	3 10	—
Do. soil pipe and fixing with cast lead tacks . . . ,,	—	—	—	—	—	6 0
Extra, only to bends Each	—	—	—	—	2 3	6 6
Do. to stop ends . ,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions . . . ,,	3 6	4 0	5 6	8 0	—	—
Lead traps . . ,,	—	—	—	7 6	10 6	—
Screw down bib valves . . . ,,	7 6	10 6	12 6	—	—	—
Do. stop cocks . ,,	10 0	12 0	16 0	23 6	56 6	—

	£ s. d.
4″ cast-iron ¼-rd. gutter and fixing . . . . . F.R.	1 3
Extra, only stop ends . . . . . Each	1 0
Do. angles . . . . . ,,	1 6
Do. outlets . . . . . ,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on . F.R.	1 6
Extra, only for shoes . . . . . Each	2 6
Do. for plain heads . . . . . ,,	5 6

PLASTERER AND TILING	£ s. d.
Expanded metal lathing, small mesh . . . . . Y.S.	3 9
Do. in n/w to beams, stanchions, etc. . . . . ,,	5 6
Lathing with sawn laths to ceilings . . . . . ,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc. . . . . ,,	2 6
Do. vertical . . . . . ,,	2 9
Rough render on walls . . . . . ,,	2 3
Render, float and set in lime and hair . . . . . ,,	3 0
Render and set in Sirapite . . . . . ,,	3 3
Render, backing in cement and sand, and set in Keene's cement . ,,	4 6
Extra, only if on lathing . . . . . ,,	9
Keene's cement, angle and arris . . . . . F.R.	8
Arris . . . . . ,,	3
Rounded angle, small . . . . . ,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth . ,,	2
1″ granolithic pavings . . . . . Y.S.	5 0
1½″ ,, ,, ,, ... ,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed . ,,	1 2 6
9″ × 3″ ,, ,, ,, ... ,,	1 7 6
Extra, only for small quadrant angle . . . . . F.R.	9

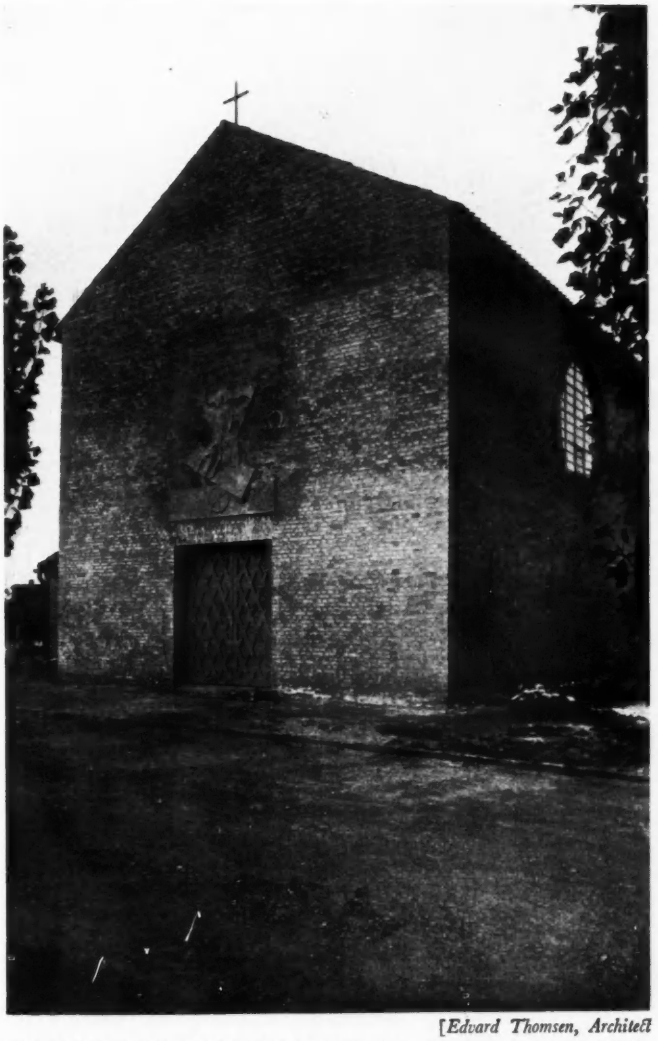
GLAZIER	s. d.
21 oz. sheet glass and glazing with putty . . . . . F.S.	8
26 oz. do. and do. . . . . ,,	1 0
Arctic glass and glazing with putty . . . . . ,,	1 2
Cathedral glass and do. . . . . ,,	1 3
Glazing only, British polished plate . . . . . ,,	8
Extra, only if in beads . . . . . ,,	2
Washleather . . . . . F.R.	4

PAINTER	s. d.
Clearcolle and whiten ceilings . . . . . Y.S.	8
Do. and distemper walls . . . . . ,,	1 0
Do. with washable distemper . . . . . ,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces . ,,	3 3
Do. on woodwork . . . . . ,,	3 6
Do. on steelwork . . . . . ,,	3 0
Do. and brush grain and twice varnish . . . . . ,,	5 6
Stain and twice varnish woodwork . . . . . ,,	1 11
Stain and wax-polish woodwork . . . . . ,,	4 6
French polishing . . . . . F.S.	1 2
Stripping off old paper . . . . . Piece	2 6
Hanging ordinary paper . . . . . from ,,	3 0

SCALE DRAWINGS

ENTRANCE TO A MORTUARY CHAPEL

STAIRCASE IN A COUNTRY HOUSE



[*Edvard Thomsen, Architect*

ENTRANCE TO MORTUARY CHAPEL, ORDRUP, DENMARK

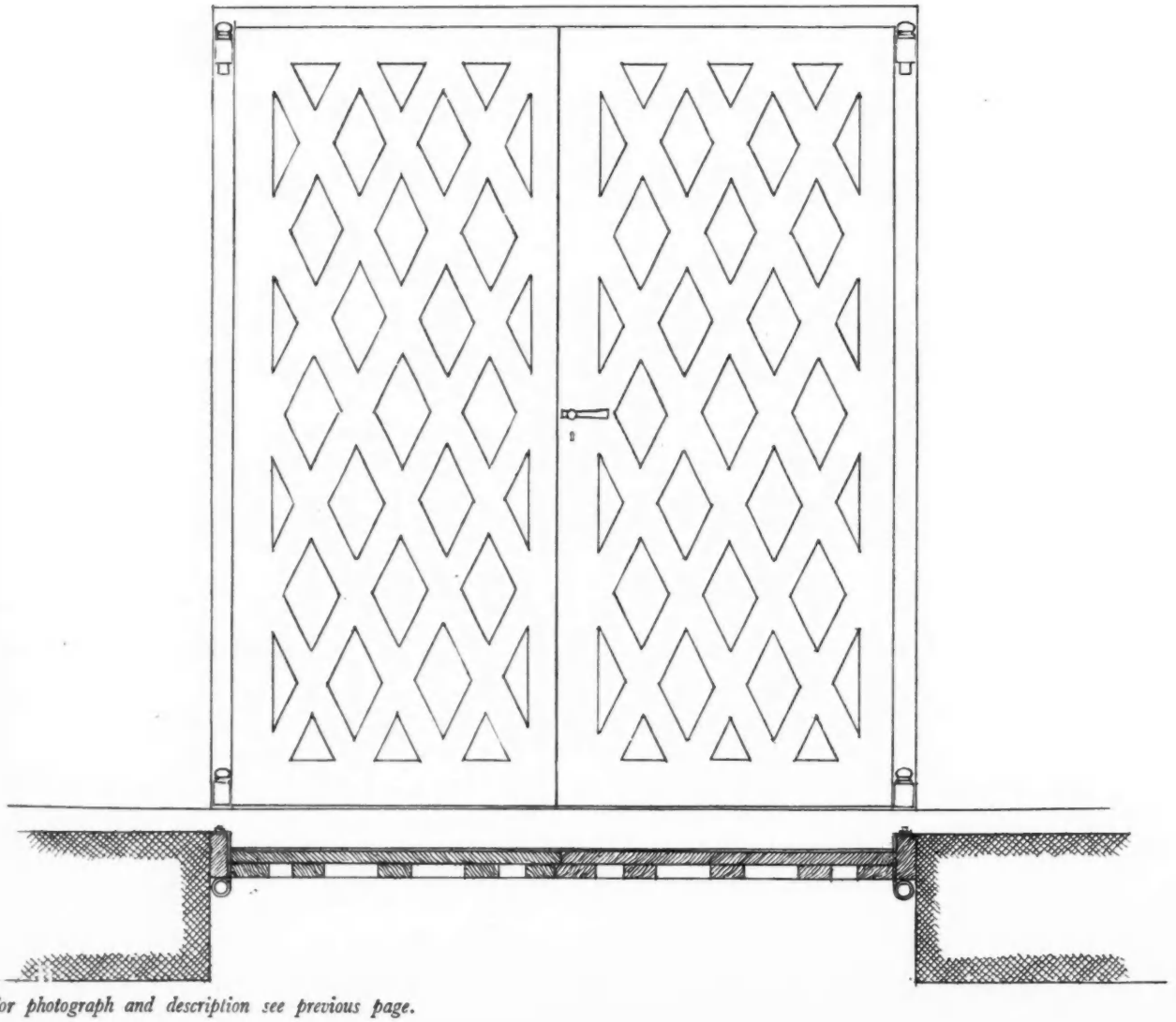
THIS straightforward, though strikingly austere, blank wall treatment relies for its effect on the design and proportion of its sculptured enrichment, and the simple lozenge pattern of the door immediately beneath. The walls are of Danish stock bricks, a pleasant light red in colour, set in ordinary mortar joints, and laid in alternate courses of headers and stretchers. The red roofing tiles slightly overlap the beams at the gable ends, which allows their edges to serve as a slightly scalloped finish to the otherwise unbroken wall head.

The large block of yellow limestone representing the figure of Christ, and the smaller Alpha and Omega symbols on either side of it, were built into the wall, and then carved in situ.

The Ordrup Chapel, like Professor Thomsen's well-known Crematorium Chapel in Copenhagen, is a modern example of mural sculpture, offset by a large surface of plain wallage devoid of any architectural detail.

The drawing overleaf is reproduced to a scale of 1 : 20.

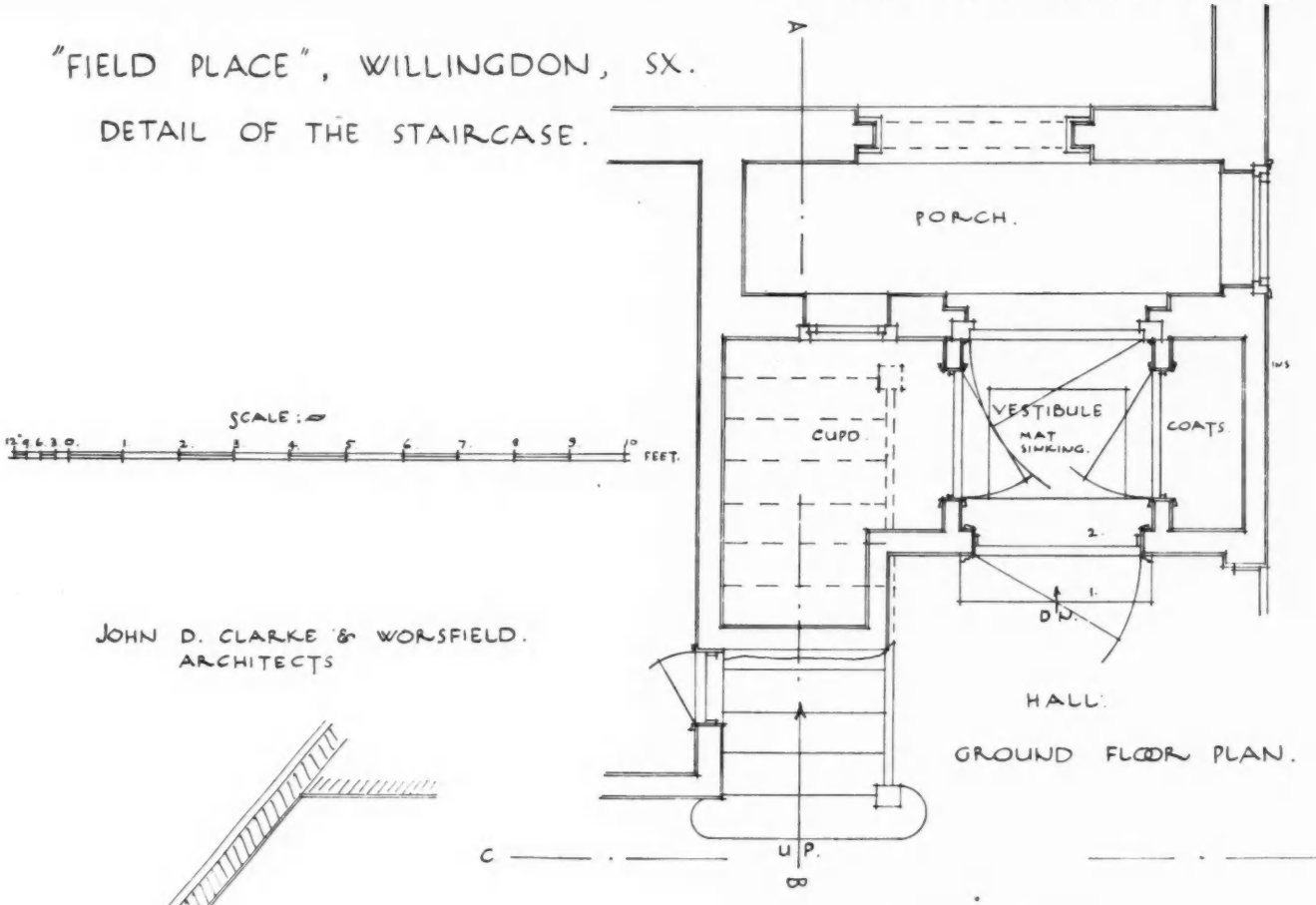




For photograph and description see previous page.

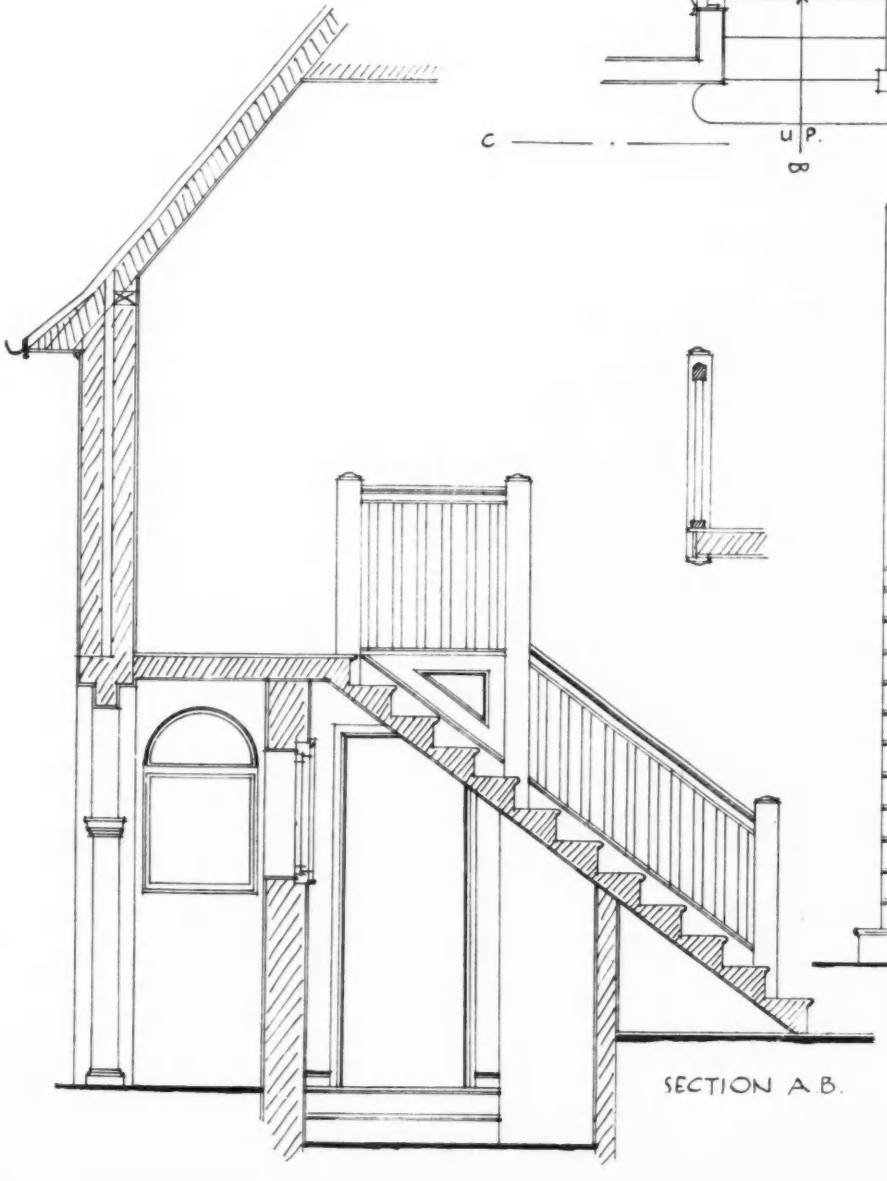
"FIELD PLACE", WILLINGDON, SX.

DETAIL OF THE STAIRCASE.

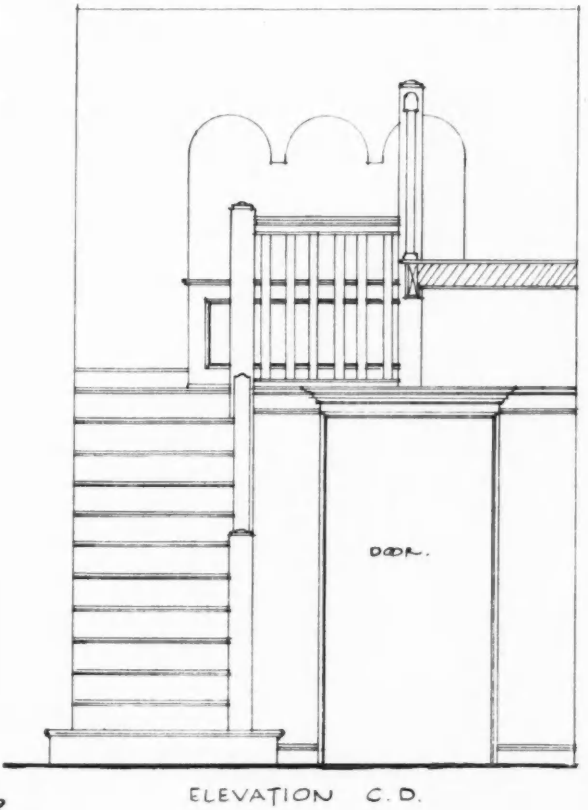


GROUND FLOOR PLAN.

JOHN D. CLARKE & WORSFIELD.
ARCHITECTS

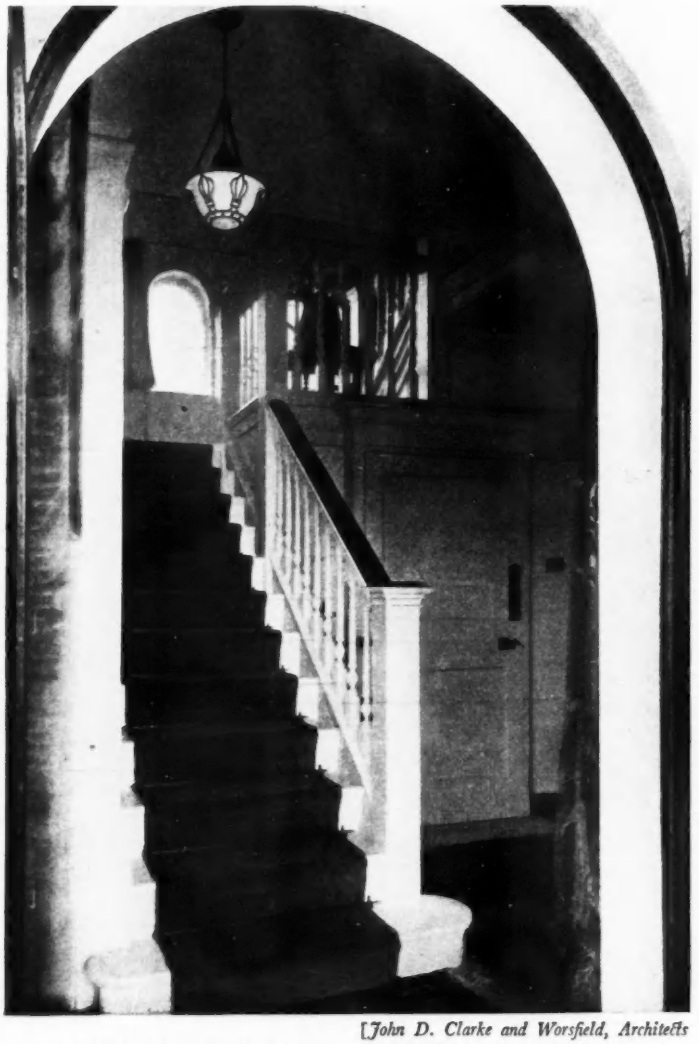


SECTION A.B.



ELEVATION C.D.

For photograph and description see following page.



[*John D. Clarke and Worsfield, Architects*

A COMPACTLY PLANNED STAIRCASE, LOBBY, ETC.

IN a modern house, where the maximum of accommodation is demanded at a minimum cost, it is generally found necessary to make use of space underneath the staircase. But in order to do so effectively, the staircase needs to be specially planned. In that illustrated, above and on the previous page, with such ship-like compactness was the space utilized that accommodation was found for a porch, lobby, lavatory and coat cupboard. An extension of the landing helped to make this possible, and provided an interesting variation to what might otherwise have been quite an ordinary staircase.

The moral is obvious. When cost is a first consideration, the art of the architect becomes of particular value; the client obtains, through the activity of his architect's brains, an effect of permanency and richness in ordinary materials, whereas he is apt to think this can only be got by heavy expenditure.

The material is deal, with a thin ebonized mahogany capping to the handrail.

LANDOR'S OLD HOME AT WARWICK

PHOTOGRAPH AND MEASURED DETAIL DRAWINGS OF THE PRINCIPAL FAÇADE



THE MAIN FRONT OF LANDOR HOUSE, AS IT APPEARS TODAY

LANDOR HOUSE adjoins a gateway at the lower end of Warwick, on the road to Leamington. Built in 1775, it was for some time the home of the poet from whom it derives its name. The building is stamped with the Dutch influence which was making itself felt in Warwick at this time. Note the glazed wood fanlight, which is distinctly like that above the door to the Town Hall, Edam. The quoins are formed of brickwork, ended with stucco and painted.

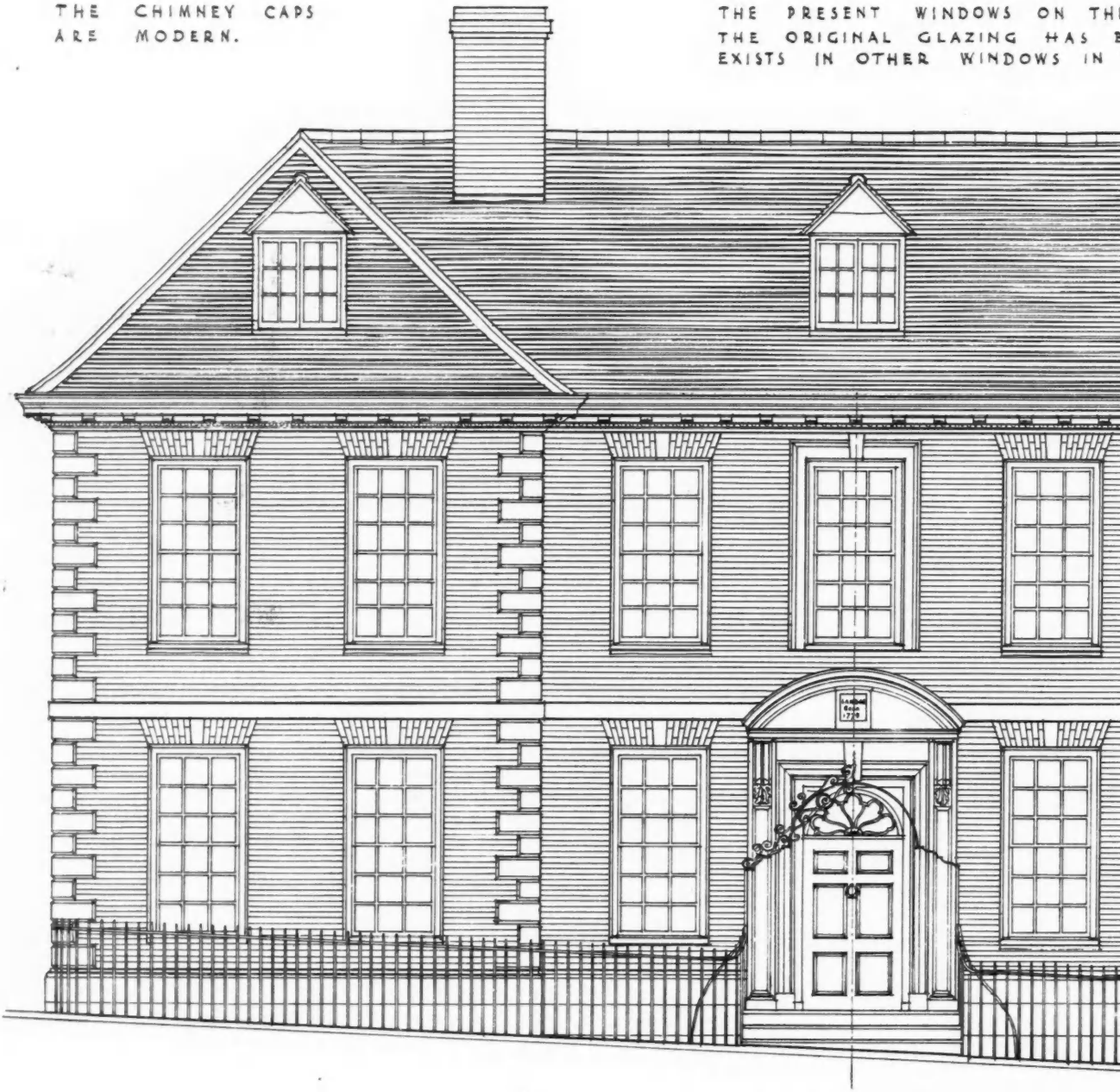
Measured drawings of the main front appear on the following three pages. That reproduced overleaf shows the sashes divided into square panes. Only one window thus glazed is preserved and is situated on the side of the house.

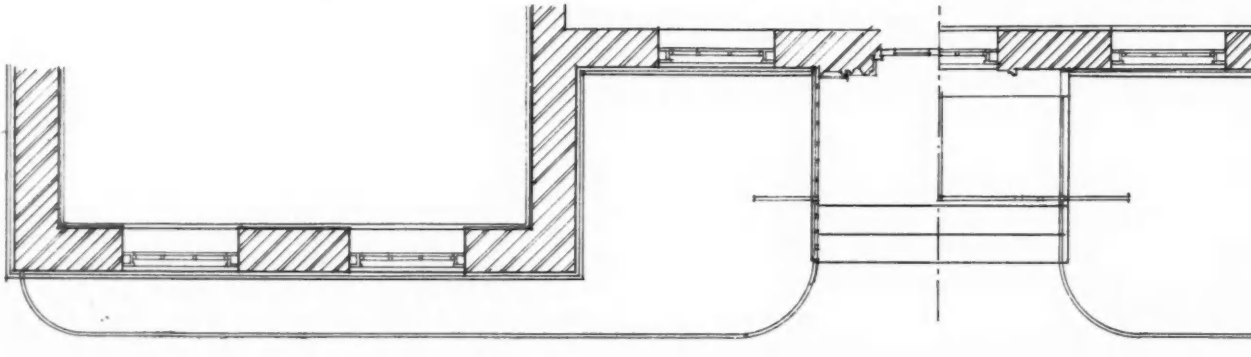
The building has been extended at the rear during recent years and now functions as a school for girls.

LANDOR HOUS

THE CHIMNEY CAPS ARE MODERN.

THE PRESENT WINDOWS ON TH
THE ORIGINAL GLAZING HAS B
EXISTS IN OTHER WINDOWS IN





HALF GROUND FLOOR

Scale ft. 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

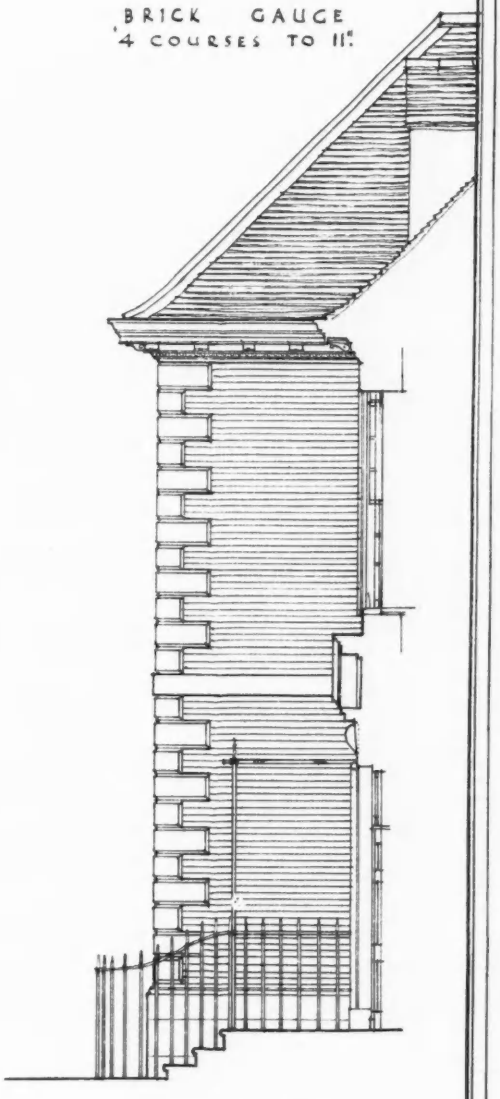
DUSE, WARWICK.

ON THIS FRONT ARE MODERN.
HAS BEEN SHEWN AS IT STILL
OWS IN THE SIDE OF THE HOUSE.

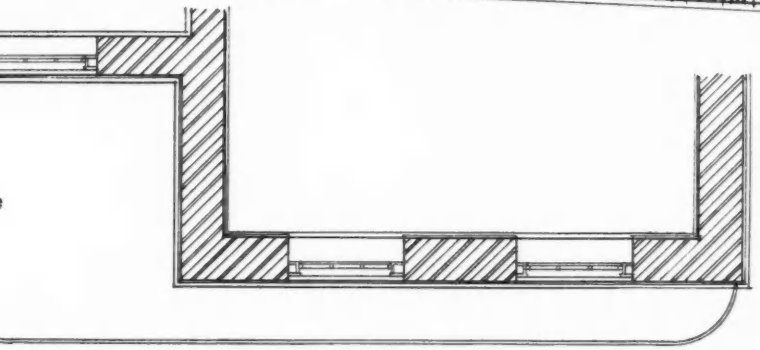


THE HIPS ARE
OF LEAD ROLLS.

BRICK GAUGE
4 COURSES TO 11".



SECTION
AT CENTRE



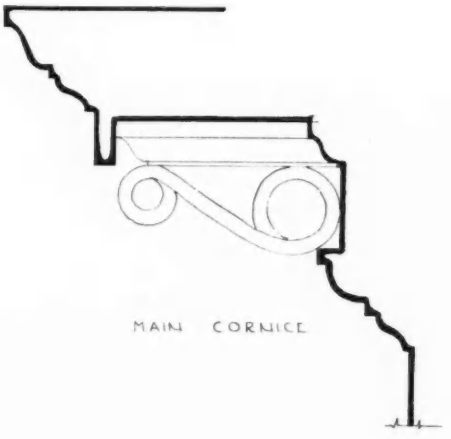
HALF FIRST FLOOR

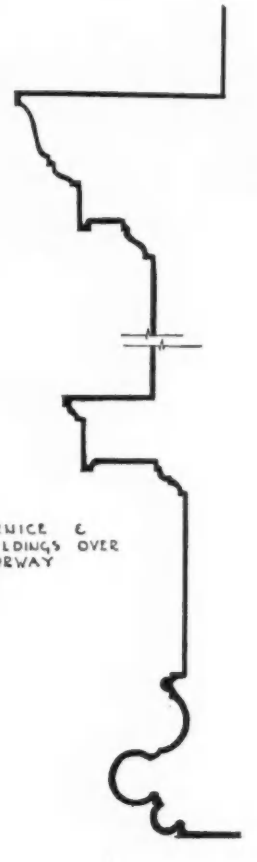
17 18 19 20 of feet.

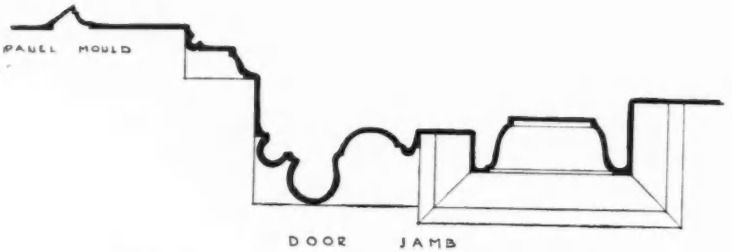
MEASURED AND
DRAWN BY
T. H. ROGERS AND
F. R. S. YORKE

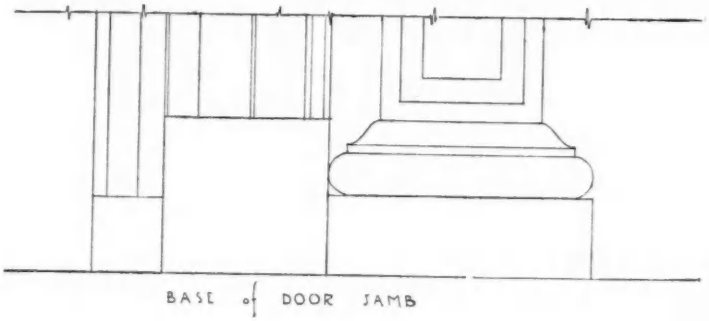
DETAILS
LANDOR HOUSE
WARWICK

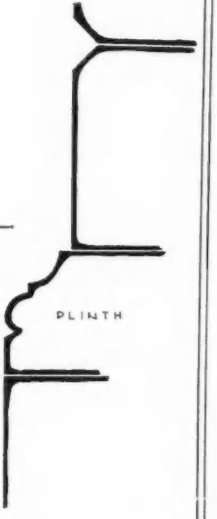


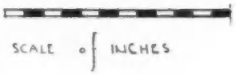












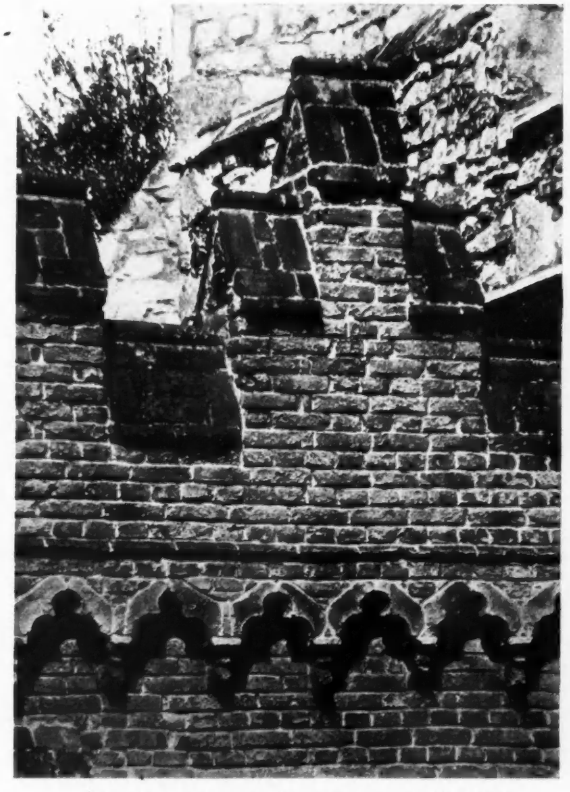
MEASURED & DRAWN BY
T H ROGERS &
F R S YORKE

SELECTED PRECEDENTS:

PRACTICAL BRICK-CUTTING AND BRICK-BUILDING



TOWER PARAPET, FRYERNING



DETAIL OF SOUTH PORCH, RAYLEIGH

THE early-sixteenth-century bricklayer—master bricklayer—was thoroughly alive to the necessity of protecting his thick walls from penetration by rain with copings, also of brick. In designing these he was influenced by work of his predecessors and, although no longer required as fortifications, he adhered to the crenellated form of parapet. This met his requirements, so far as design was concerned, as well as any other, and it produced a fine skyline. Sometimes these copings were weathered on one side only, as at Fryerning, but many on both sides, as at Rayleigh, and, in all, crenelles as well as merlons were weathered.

The detail from Rayleigh is especially interesting, because the weatherings vary in their widths, and these variations produce no less than five variations in bonds out of the six instances which the photograph includes. The crowning course of all consists of bricks cut to roll (or three-quarter-round) section.

At Sandon (see photograph reproduced overleaf), Fryerning and Rayleigh the parapets have corbel tables, the design of which is debased machicolations. At Sandon and Fryerning these are in the form of brick arches, but at Rayleigh they are cusped trefoils. Each trefoil is produced by two bricks of ordinary dimensions, on which one cusp is cut by hand, and these spring from imposts of thin bricks laid flat, which, in turn, rest upon carved brick-on-edge corbels. Where the spacing (which is determined by the irregularity of the walling bricks) is too wide, queen closers are inserted between the cusped bricks. There seems to have been no precise setting-out of the work, which is worked from the quoins after the space between has been roughly divided and the positions of the corbels approximately determined. Similar cusped bricks are found in many buildings of this period. Here two produce a trefoil, but four can be used to produce a cinquefoil arch. Those at Rayleigh are roughly cut, others are more carefully formed and have, also, triangular sinkings on their faces.

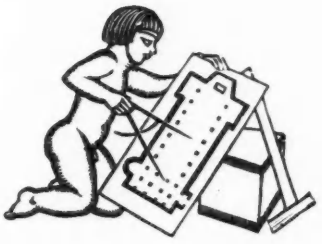
Sandon Church tower is a remarkable example of brick-building. Its diaper-work is shown in the illustration, but the brick vaults of the tower and of the turret cannot be illustrated. Each is a dome, without ribs, and that of the tower is about 13 ft. in diameter.

NATHANIEL LLOYD



SANDON CHURCH, ESSEX: A REMARKABLE EXAMPLE OF BRICK-BUILDING

THE ARCHITECTS' JOURNAL



WEDNESDAY, APRIL 15, 1931

A GREAT ADVENTURE

" The new R.I.B.A. building, by reason of its representative character, is likely to be held by the present and by future generations of architects and the general public to be an example of the best work of our time."

—FROM THE CONDITIONS OF THE COMPETITION.

FOR close upon a hundred years the R.I.B.A. has occupied discreet and retiring premises in Conduit Street, W., from which, like a Pope imprisoned, it has governed an ever-widening profession. Its projected move into new headquarters, on one of the finest streets in London, would be at any time an event of transcendent importance. Coming at this juncture of our history, at the moment of a possible wide extension of authority already acknowledged in all parts of the Empire, and during a period of architectural change as vexed yet more hopeful than the last upheaval of taste, who can measure the possibilities of this event impending, or tell the consequences to follow the building by architects of their own headquarters ?

It will be a grand hostage to fortune; and the grander in that the Institute will put to the test a competitive system by which it has set great store, and from which over a long period of time it has reaped rewards, mainly great, and very seldom negligible. So there comes to every ambitious member of the profession an opportunity gilded and shining with greatness, a competition combining the whole of architecture—that will tax all the powers of man.

The corner site on Portland Place is a fine one, splendidly visible, and of noble dimensions. As a site for a building of any sort it offers tremendous opportunities, but it is not until one comes to read the well-constructed conditions of the competition that one begins to realize what scope lies there for fine planning and imaginative handling of parts. For this building must have, in the best sense of the word, a soul. No layer-cake of office floors, cased in brick or stone, can possibly result from a building that must, by nature of its purpose, serve grandly, be planned from within outward and upward—a unified organization of fine spaces inside, before ever its outer casing is given expression.

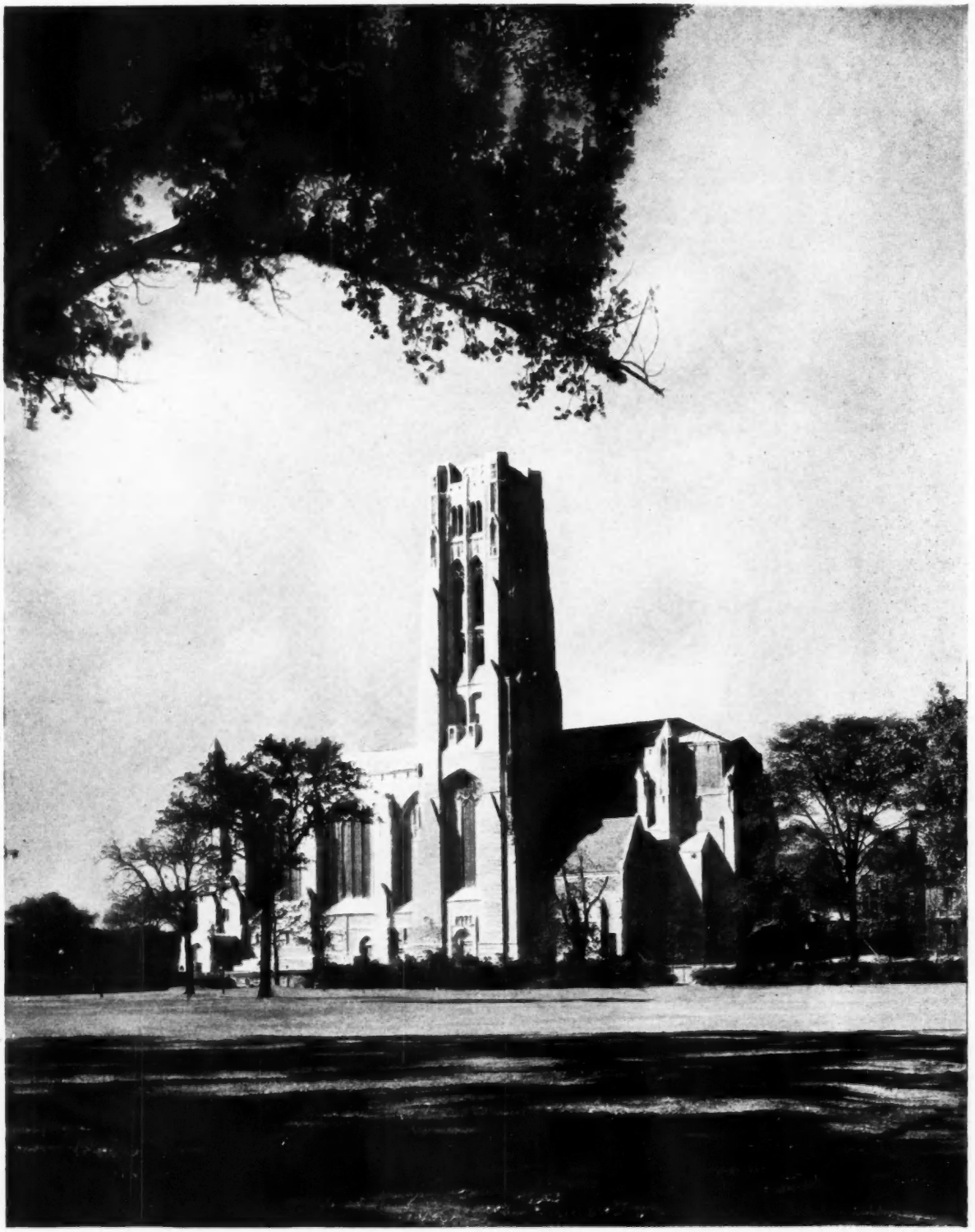
This realization gathers weight with a recital of the building requirements, which include, apart from offices and smaller rooms, a fine entrance hall and staircase, a meeting room to seat 400, a council room to seat sixty-nine, exhibition galleries covering 6,000 square feet, council dining-room, members' rooms, and last, but not least, a library fit to house what is probably the finest collection of architectural works in the world.

These together form a programme of wide range and considerable complexity, calling for such combination of logic and imagination as occurs but rarely. More than this, in its representation of the architectural profession, and as the temple of the mistress art, this building must reflect that part of architecture about which are gathered the painters and sculptors, and craftsmen in all materials. It is here much more than a competition building; for it will be judged by its detail, by its power to assimilate the work of others, and command the best services of those arts that should look to architecture for stimulation and guidance, but whose misfortune it is generally to be overlooked by the rough-and-ready competitive system.

This seems to us to be an aspect of this competition that may have a considerable bearing upon this and future work if it is given the sympathetic consideration its importance deserves. If the greatest part of architectural design is planning, the character of a building can only be bodied forth in its detail; and greatness of plan has become pomposity where logic was not wedded to fine imagination.

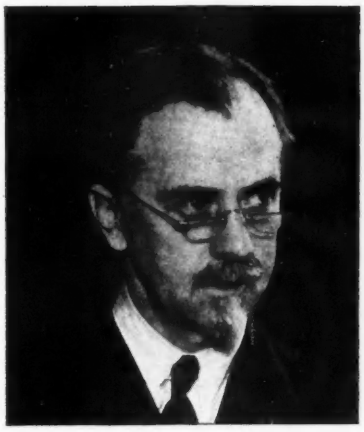
The Board of Assessors should remove most of our fears in this respect, for they are representative of the different aspects of architectural thought to an extent which we did not dare to hope for when we discussed this same question in May of last year, and in their conditions of competition they are broad and sympathetic, inviting imagination without loss of definiteness.

Three years from hence the new home of the Institute will be completed and in occupation. The first stage is full of promise. The rest remains with the gods and the assessors.



CHICAGO UNIVERSITY CHAPEL

The original design for this building, here seen from the south, was under reconsideration, on the score of cost, by the architect, Bertram Grosvenor Goodhue, at the time of his death. The chapel has since been erected from plans completed by his associates; it represents part of the last donation to the University by John D. Rockefeller, and has cost over £400,000. Further photographs and a description appear on pages 543 to 546 of this issue.



NEWS & TOPICS

On this page are reproduced portraits of the five assessors of the competition for the new R.I.B.A. headquarters, the conditions of which have been issued and are summarized on pages 562–563

Charles Holden



Sir Giles Gilbert Scott

DEVELOPING SCOTLAND'S COUNTRYSIDE

THE "Save the Scottish Countryside" Exhibition, now open at Glasgow School of Art, is a sound progressive affair. Englishmen are apt to forget that Scotland has many traditions in building that are well worth developing. This exhibition will, if it does nothing else, help to bring the best of Scottish Domestic Architecture—native building craft as well as native style of design—before the public for their reconsideration.

★

It is to be hoped that every burgh and county council in Scotland will send its surveyor to school at this exhibition, not to "periodize" his future work, but to develop his usually feeble sense of background. Admirable models of town-planning schemes and modern cottages, combined with an array of photographs of every conceivable type of old and new cottage, house and bridge, explained by pugnacious but intelligent captions, should delight and stimulate every visitor.

SCOTTISH BRIDGES—OLD AND NEW

The photographs of old and new bridges, mainly a comparison between the concrete work of Sir Owen Williams and the world-famous series of eighteenth-century Wade bridges, gives food for thought. Owen Williams at his best and most "functional"—over the Spey at Newtonmore—is very good indeed, though no more sincere or economical than Wade; while Wade in a more ceremonious mood, as at Aberfeldy, though slightly ridiculous, compares favourably with Sir Owen Williams's bridge over the Findhorn River, or of that at Fort William.

★

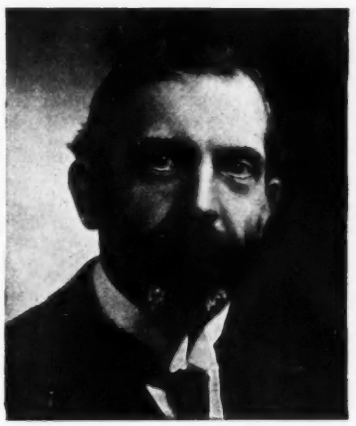
In the exhibition these modern bridges are generally labelled "experiments," and for his work Sir Owen Williams deserves gratitude, as he has provoked a healthy interest in this side of Scottish road development that has hitherto been stifled by general lethargy. To develop a practical and intelligent faculty of criticism, however, Scotsmen must turn a very nearly deaf ear to reactionary and sentimental invective against modernism *qua* modernism. That such invective should have been even muttered by Sir D. Y. Cameron, in his otherwise admirable speech prior to the opening of the Exhibition, was unfortunate, as misleading the public as to the objects which the Association for the Preservation of Rural Scotland pursues.

A CAPTIVE TO BIG BUSINESS

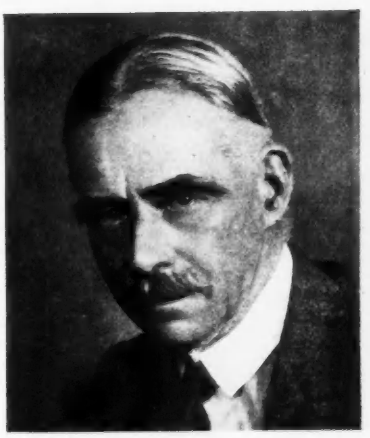
America is a strange place: that is, America of the cities. The contrast between Al Capone and the forthcoming World Fair, both of Chicago, would be amusing if one could forget how odious it really is; but there is another manifestation of the absurdity of modern American civilization in the "Radio City" which John D. Rockefeller, junior, is causing to be built upon a site in Fifth Avenue, New York.



Robert Atkinson



Henry V. Lanchester



Dr. Percy S. Worthington

I have nowhere seen a really clear account of what this colossal aggregation of skyscrapers is to be used for, other than that it will be a sort of headquarters of "radio," about which it is hoped to gather all arts, so that in the same group you will find cinemas, theatres, an opera house, a whole race of radio performers and experts, with, of course, a radio-tower, all-dominating. The joke of the thing is only realized by such as have managed to elude, as an American friend on holiday in England put it to me, the ceaselessly iterated banalities of advertising with which every item, and especially every "classical" item, is prefaced and prologued. For the "radio" in America was long ago bought by *big business*, and the whole thing is barren and soulless, when it is not actively anti-social.

REPLANNING THE LIVERPOOL RIVER FRONT

The announcement of a competition for the replanning of the Liverpool river front some time ago is very soon to be confirmed by the issue of conditions of competition, which, according to the Press, will include provision for a large hotel, public baths, and spacious promenades.

★

The Pier Head at Liverpool was the scene of an ambitious municipal enterprise that miscarried. A great space was cleared many years ago, docks were filled in, and a level site formed by the river bank, upon which could have been laid down the main lines of a development that would have made this present competition unnecessary; all this, at no expense to the community. Instead, the City Council allowed three buildings of most ill-assorted shapes to occupy the exceptionally fine sites created, and the competition resolves itself into the time-honoured problem of how best to expatiate the follies of one administration by the compromises of the next.

A UNIQUE OPPORTUNITY

The churchyard of St. Bartholomew the Great, West Smithfield, is a doleful spot, and very properly—if perhaps somewhat tardily—the Rector and Churchwardens are seeking powers to remove the crooked headstones and monuments to the north, south and west walls, and convert the ground into a flower garden with seats.

★

In this connection *The Times* of a week ago published a letter from Mr. Chatterton, who offers a suggestion with which I very cordially concur. His proposal is that the remaining earth be dug out, a matter of a few feet only, in order to expose the bases of the columns of Rahere's Norman nave, which most probably lie buried beneath. It is well known to archæologists that the present churchyard occupies a large part of the site of the nave of the old Priory Church, so that the likelihood of a dramatic discovery is almost a certainty. The prospect is certainly an alluring one, and well worth the trifling outlay involved.

DEVON'S TUMBLE-DOWN COTTAGES

In Devon, where cottages are of great importance in the point of usefulness and æsthetics, the County Council is utilizing the Rural Housing Act of 1926 to re-condition over six hundred and twenty dilapidated cottages. The average rent charged is 3s. 7d. per week, and the average cost of reconditioning about £190, which compares favourably with the lowest that could be charged for new cottages, and has the added virtue that leaves us with what we most value—that we may look upon beauty without wondering about the state of the drains. It is interesting to see how an Act that has been very little used can be put to such profit under intelligent and enthusiastic administration.

THE NEW TOWN PLANNING BILL

That such is hard to come by is a rather gloomy reflection when one attempts to anticipate the effect of the new Town and Country Town Planning Bill (foolish name!). The powers conferred upon local authorities by that Act are so wide, and cover so much that is within the province of æsthetic discrimination, that it will require for its implementation (another foolish word, but official to the core!) a race of men that no surveyor's institute has yet produced.

★

The crux of the matter is indeed beginning to be evident, for such powers as are contained in this Bill *must* go hand in hand with the overhaul of the uneconomic, amateurish system of local government, or the law must be administered with the active support of competent town-planning consultants and architects. Otherwise the powers of this Act will not be invoked, which would be a pity; or, being invoked, cure will be much worse than the disease. Town planners are proved to be one-sided planners, or they would have looked to their tools before they started their job.

A GREAT DEPARTMENTAL STORE FOR LEEDS

Sir Reginald Blomfield is following up his street design for the Headrow, Leeds, with a scheme for a great departmental store for Messrs. Lewis. The building looks rather like Gamages in so far as it is a great mass of English Renaissance architecture sitting on top of shop windows. It is a matter for congratulation that the single design for this street should be carried so far forward, and this great store will be, without doubt, an accession to the city. It constitutes at the same time a step upwards for Lewis's, who have not been good builders in the past. And yet, I cannot see how this building, with its Georgian windows, columns, etc., can hope to be a modern store, because these windows light great floors where crowds fight for bargains, though they obviously pretend to do otherwise.

YOU DON'T SAY!

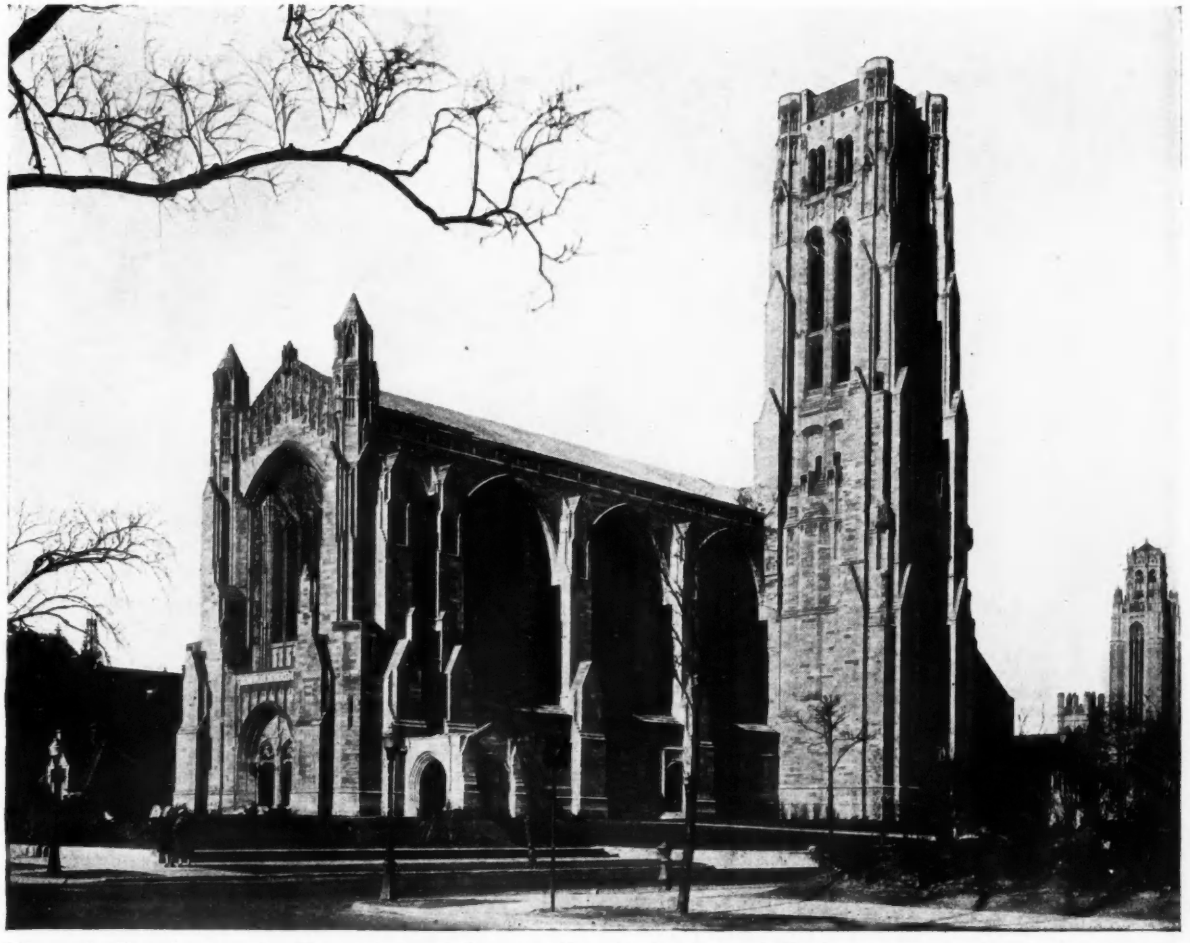
"On a slope of the Downs near Leatherhead, Surrey, overlooking Ranmore Common, Miss Marion Duckham, elder daughter of Sir Arthur Duckham, the industrialist and president-elect of the Federation of British Industries, is building a house. She intends to live in it after her marriage next June. She is—

Employing her own workmen,
Driving truckloads of material,
Loading and unloading hundreds of bricks a day,
Helping to lay bricks,
Giving a hand with the carpentry, and
Supervising the whole construction."

—From *The Evening Standard* for *April 1*.

But the whole point of the thing is contained in the note in brackets. (See Pictures on PAGE TWELVE.)

ASTRAGAL



The south side and west end. The original project was cruciform in plan, but, as built, the tower forms a large eastern transept, set off but not balanced by a shallow western transept; thus, the plan is irregular. The material is Indiana limestone.

CHICAGO UNIVERSITY CHAPEL

(Bertram Grosvenor Goodhue and Associates: architects)

DESCRIBED BY L. MARNUS

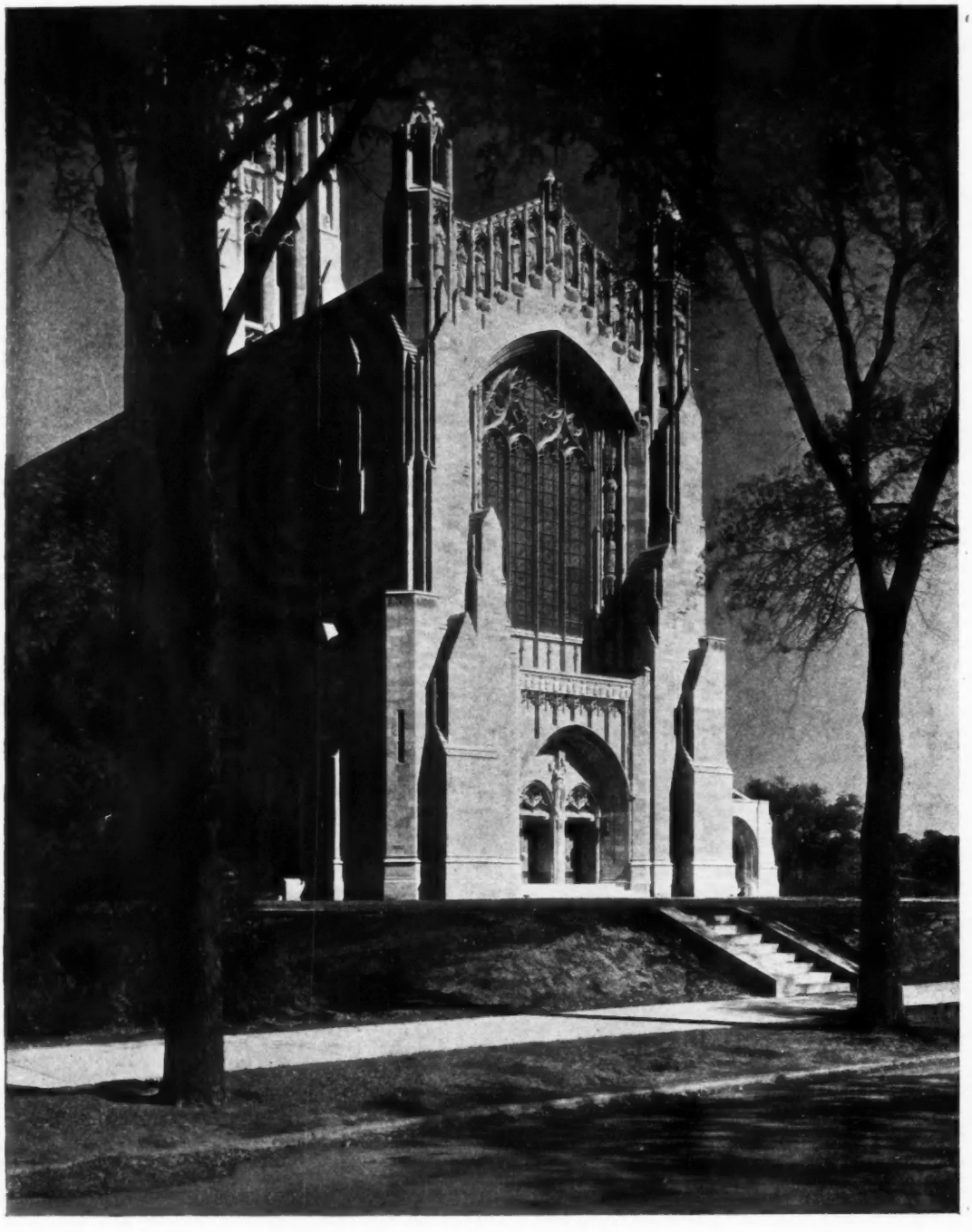
A DIFFICULT problem faced the Goodhue Associates, Messrs. Mayers, Murray and Phillips, when the brilliant career of their chief was suddenly terminated by his death, leaving them with an inheritance of several very large undertakings unfinished.

Among them was the Chicago University Chapel. As early as 1917 Bertram Grosvenor Goodhue was commissioned to prepare plans, and two years' study resulted in the creation of a notable church design in the Gothic style. The achievement was one of consistently developing life. Every detail was Goodhue at his best, powerful and bold. The tower was to surmount the crossing of the flat-roofed transepts, which were to give a symmetrical cruciform shape to the plan. If this church had been executed, it would have been a treasure to America in particular, and to the world in general. As it appears now, it has fallen far short of the intention, although the revised design has been carried out by the Goodhue Associates with the greatest respect for the original conception.

The rejection of Goodhue's first proposal was due to the fact that the estimates were found to be nearly £200,000 wide of the mark. The project was laid aside until the spring of 1924, when revisions were started in order to reduce the cost. But Goodhue did not live to complete the reconsidered design.

The plan of the church as built consists of five square bays, approximately 40 ft. in each direction, with the tower forming a large eastern transept. Opposite to it, a shallow western transept causes a great irregularity in the plan, but affects the balance of the exterior even more discordantly.

To the north the church is terminated by the chancel, which is planned especially for convocations, with seats all around the walls, and the president's chair on the axis. Behind this rises the 35-ft. stone reredos, which, however, is of an unsatisfactory form, and will undoubtedly be changed sooner or later. This reredos contains twelve statues of prominent Christian preachers from the earliest days down to the present time, gathered about the central figure of Christ.



Chicago University Chapel.]

The west end is enriched with many sculptures. The figure over the pier dividing the double entrance represents St. George; at the ridge of the gable is a series illustrating the Course of Religion from Abraham to the Reformation.

On each side of the chancel are seats for the choir, with additional seats for antiphonal singing in the gallery at the opposite, or south side, of the church. Its arrangement is rather unusual—a gallery in two stories, with organ cases at each side, forming an interesting frame of skilfully wrought woodwork to the large south window.

The square bays are divided by transverse arches of the same width (6 ft.) as the piers beneath. The arches have been decorated with panels and medallions of coloured glazed tiles, executed from cartoons by Miss Hildreth Meière. But it is doubtful whether the new method of forming the transition between piers, arches and ceiling ribs is an improvement upon the usual capital cluster, or moulded band, as it lacks constructional sureness.

The vaults, which are of Guastavino tiles, are treated in a manner unique among Gothic structures, since the 15-in. diagonal ribs of the same tiles meet against a circle of open tilework. The brightness of the interior is striking, for, although the light is tempered by amber-tinted glass, the huge clerestory windows throw everything into broad daylight, and no shadows lurk in the corners. The windows in the clerestory are 15 ft. by 43 ft., while the great south window is 20 ft. 6 ins. by 38 ft. 9 ins.; and the north or chancel window is one of the largest tracery windows in America, being 25 ft. by 46 ft.

[*By B. G. Goodhue and Associates.*



The interior, looking towards the east window and stone reredos, which is designed to carry statues of twelve prominent preachers, grouped about the figure of Christ. The chapel is 265 ft. long, over 73 ft. wide, and nearly 80 ft. high.

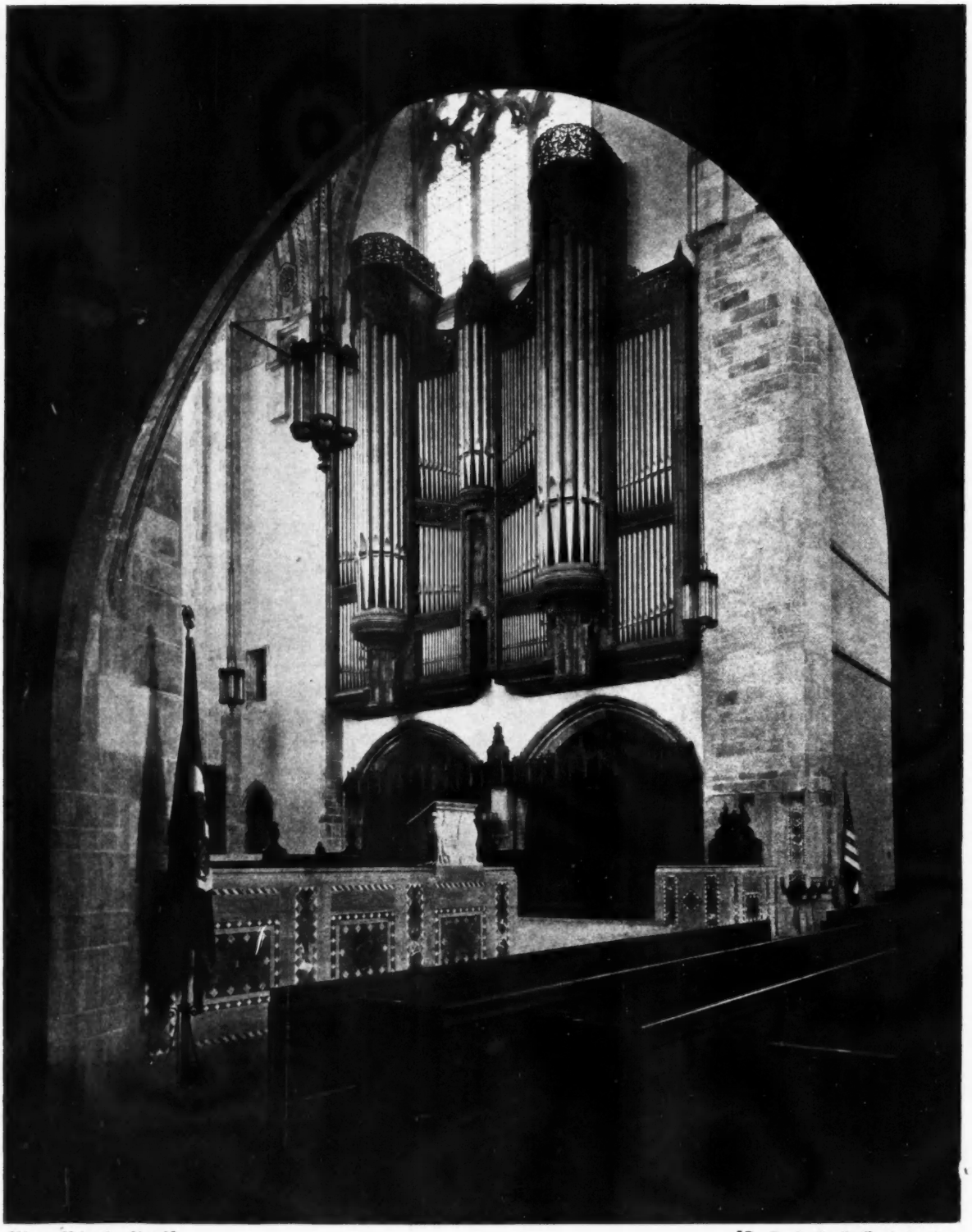
The length and width of the chapel are, respectively, 265 ft. by 73 ft. 7 ins. Interior height to the ceiling is 79 ft. 5 ins., and the height of the tower above grade is 207 ft. The church has normally a seating capacity of 1,789; but with additional seats in the aisles, chancel and galleries the total can be brought up to 2,218.

The finest aspect of the exterior is the south elevation with the main entrance —a wonderful mass of masonry and of buttresses.

The figure over the pier dividing the double entrance, which represents St. George about to slay the Dragon, is sculptured by Lee Lawrie, one of America's greatest masters. The figure is much too large for the niche; but this is symbolical. Continually in action, the saint would always find his niche too small.

The crowning feature of this refined and beautiful elevation is the gallery of life-size figures above the window at the ridge of the gable, which represent the Course of Religion from Abraham to the Reformation. These figures are the work of the sculptors Ulric Ellerhusen and Lee Lawrie.

The chapel is built of Indiana limestone at a cost of about £420,000. It is one of the gifts to Chicago University by John D. Rockefeller, and was included in the donation of ten million dollars pledged on December 13, 1910. From an architectural point of view it was intended to be the central feature of the University group, dominating it



Chicago University Chapel.] *By B. G. Goodhue and Associates.*

The chancel, looking across the church to the south side. In the foreground are the seats for the choir. Just above the light fitting to the left of the organ can be seen the beginning of one of the tiled arch decorations described in the text and more clearly seen in the view on page 545.

by the spirit of religion. Dr. Goodspeed writes in the Chapel Guide: "The University Chapel represents the happy conjunction of a great benefactor with a great architect. It embodies the last gift of the former and the last work of the latter, and in the annals of art and benevolence it was already historic even before it was completed."

WESTMINSTER'S NEW PUBLIC BATHS

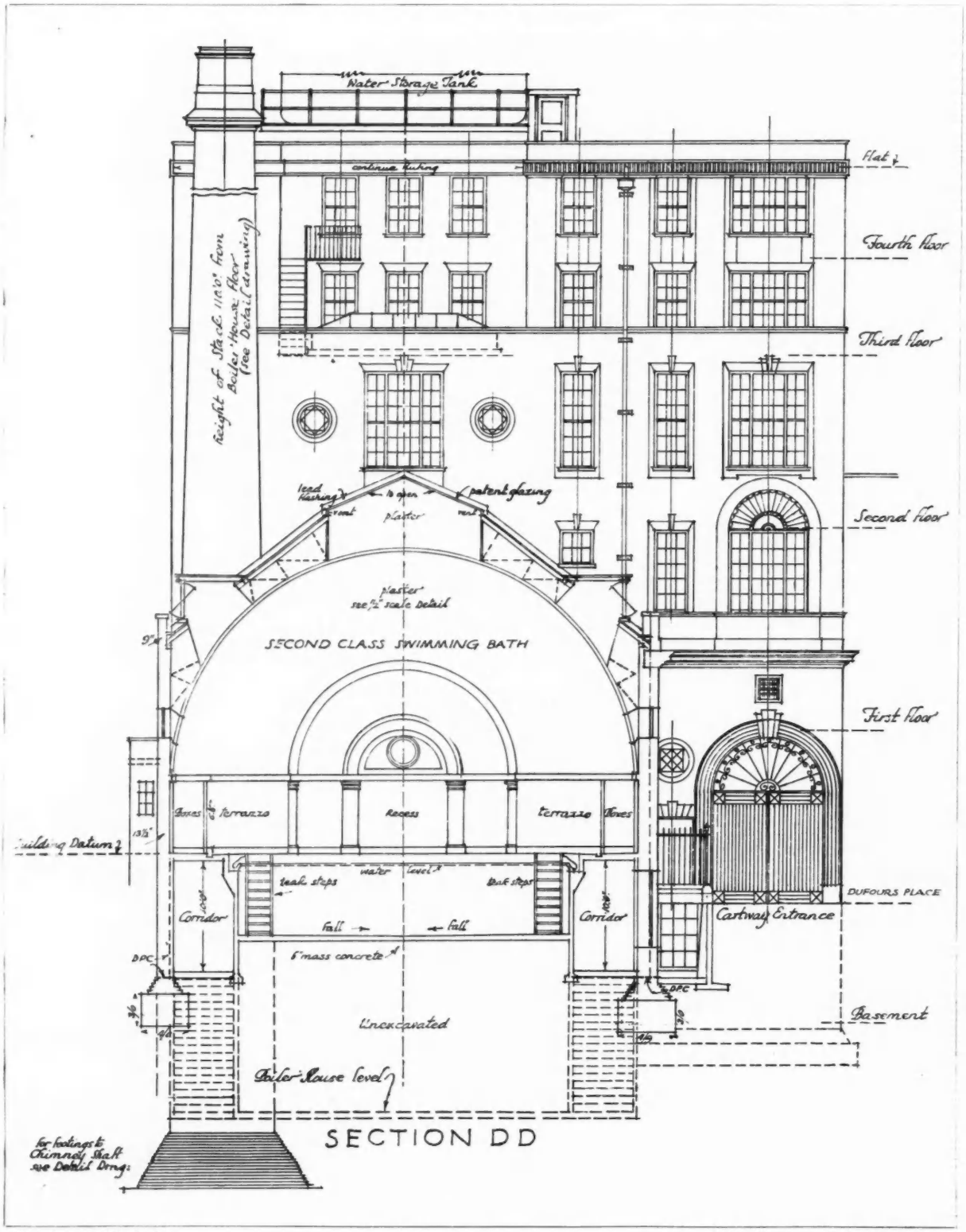
DESIGNED BY A. W. S. AND K. M. B. CROSS



The Dufours Place front, looking towards the cartway entrance to the highways department. It is finished in multicoloured facing bricks, with Portland stone dressings. The roof is covered with sand-faced tiles. The windows on the left light the second-class swimming bath.

THE new building erected in Marshall Street, W.1, to house the public baths, maternity and child-welfare centre, rates offices and highways department of the Westminster City Council, will be opened by the Mayor (Capt. J. E. C. Bennett, J.P.) on Friday next, April 17. Building operations extended over a period of two years. The most important department is that devoted to the public baths, access to all sections of which is obtained from a centrally-planned crush hall, lined with Hopwood stone, and having an office for the service of tickets, towels, etc.

Ranges of slipper baths, amounting to 100 in all, are planned on the first, second and third floors. The divisions to each department are constructed of terrazzo with wall linings to correspond, and all the joinery work is teak. In the basement are an establishment laundry and towel store, the speedy service of towels being arranged by a hand lift to the ticket office in the crush hall.



Westminster Public Baths.] [*By A. W. S. & K. M. B. Cross.*

A cross section through the second-class swimming bath; a longitudinal section and a photograph appear in one of the special supplements this week. On the left of the cartway to the highways department is the entrance to the public laundry and mangling room on the second floor.



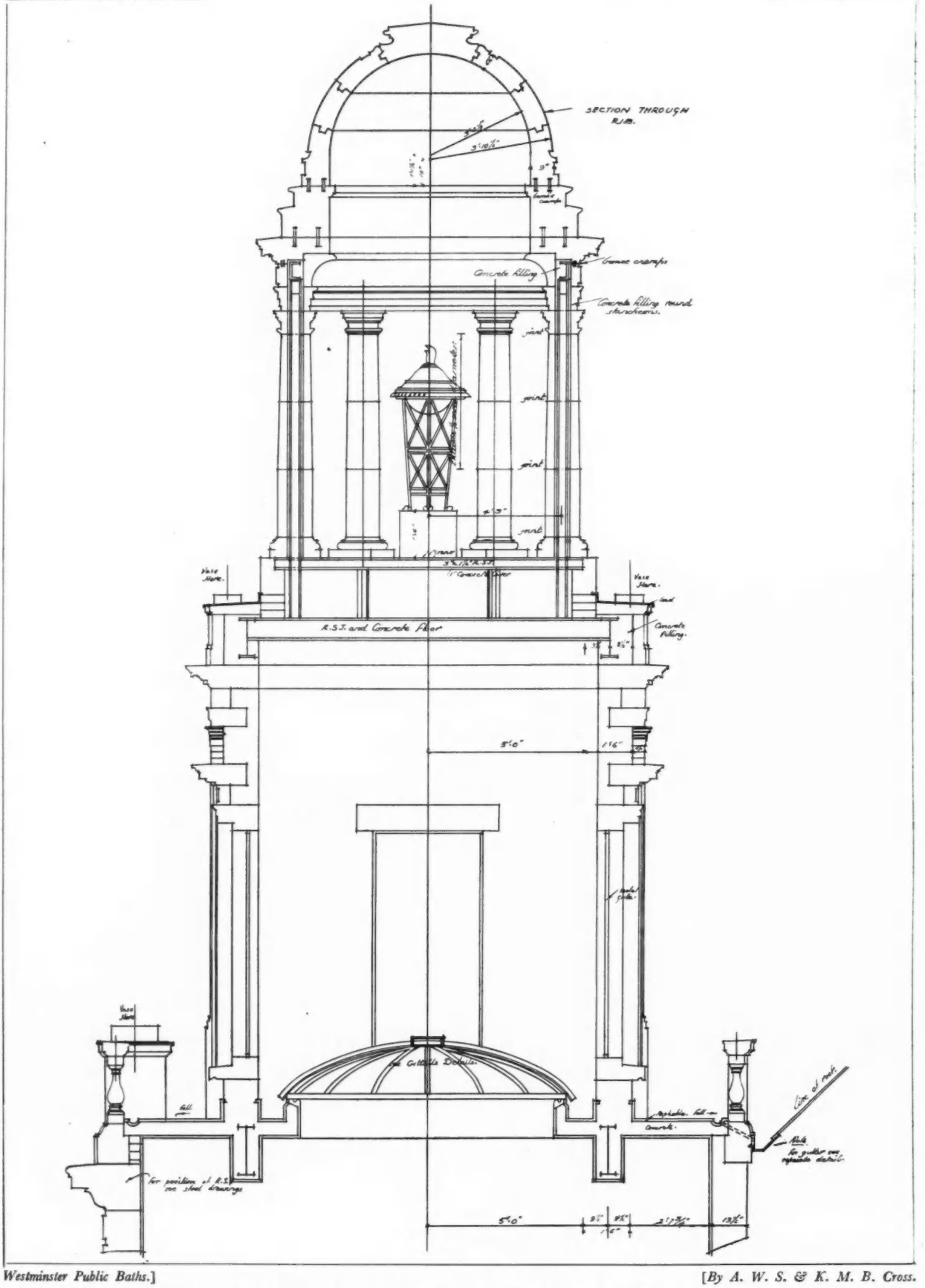
Westminster Public Baths.]

A near view of the lower story of the Marshall Street façade, which is faced with similar materials to those used for the Dufours Place front. The roof is covered with Lombardic tiles; entrance doors and windows are of bronze.



[*By A. W. S. & K. M. B. Cross.*

The crush hall showing, through the open door, the first-class swimming bath. On the left is the ticket office, planned between the two baths entrances, for men and women, respectively, from Marshall Street.



Westminster Public Baths.] [*By A. W. S. & K. M. B. Cross.*

This section through the tower at the west corner of the Marshall Street front should be compared with the photograph reproduced on the facing page. The dome is carried on a 7 in. by 3½ in. rolled steel ring, which in turn is supported by six 5 in. by 4 in. steel stancheons encased in Portland stone columns.

The maternity and child-welfare centre comprises an office, waiting rooms, and a suite of consulting rooms. Here the greater part of the joinery is teak or mahogany, and hardwood block floors are provided.

The public laundry department comprises mangling room, waiting and cloak rooms and offices. The public laundry is complete with washing compartments, washing machines, hydro-extractors and drying horses.

A considerable portion of the back part of the site is occupied by the highways depot, comprising on the ground floor a large truck-store, with a cartway entrance from Dufours Place, and on the first floor a mess room of similar dimensions. Ample storage space for materials is allowed for in the basement, and is connected to the ground floor by an electric goods hoist. There is also a special drying-room for the use of street cleaners in bad weather. The rates office is planned on the first floor.



The Arms of the City of Westminster, carved above the cartway entrance in Dufours Place to the highways department. C. W. Dyson-Smith, sculptor. See also photograph on page 547.

Centrally situated in the rear portion of the site is the boiler house, which has a battery of cast-iron sectional boilers with calorifiers over. Two vertical steam boilers serve the whole building with hot-water supply and heating. Internal telephones connect all the principal rooms in each department with the exchange.

The entrance doors and all windows to the Marshall Street front are of bronze, and specially sculptured figures, by Mr. Dyson-Smith, support the Arms of the City of Westminster above the projecting bay window.

The dome of the tower is faced with Portland stone, and owes its integral stability to the system of masonry jointing employed, the top terminal stone forming the keystone to the whole. The dome is carried on a 7 ins. by 3½ ins. rolled steel ring, which is in turn supported by six 5 ins. by 4 ins. steel stanchions which are encased in the Portland stone columns. The columns have their centres cut away to accommodate the steel stanchions, and the steel ring is cased in built-up Portland stone.





Westminster Public Baths.] [*By A. W. S. and K. M. B. Cross.*

The tower, and the window beneath it on the main front. The dome, as will be seen from the section on the facing page, owes its integral stability to the system of masonry jointing employed, the top terminal stone forming the keystone to the whole. The inner side of the dome is of highly finished masonry, and is illuminated by flood lighting from a wrought iron tripod.

LETTERS FROM READERS

Contemporary Decoration

SIR,—I have read with considerable interest the letters that have appeared in the recent issues of the JOURNAL expressing views on the lecture which I gave at the Royal Society of Arts on "Contemporary Decoration."

I think there is a great deal to be said for and against the study of past styles, but I endeavoured to show, by a careful selection of lantern slides, that we have among us today many artists and designers who can produce schemes of interest and beauty which are neither the work of servile copyists nor of unrestrained experimentalists.

I do not think that the remarks I made should be criticized without, at the same time, considering the photographs which were shown to illustrate them.

ARTHUR J. DAVIS

The Ancient Monuments Bill

SIR,—Had I the pleasure of Mr. Davidson's acquaintance I should have realized that he is not the Philistine which the wording of his first letter suggests. I do not know why he accuses me of having an official mind.

I am well aware that Stonehenge is not Gothic, but it is, I should have thought, a matter of common knowledge that the great majority of such ancient monuments as require architectural treatment are Gothic. If Mr. Davidson really believes that architects competent to do this class of work are to be found in all parts of the country, I suggest that he should ascertain from the various learned societies interested in these matters the names of such architects as they can recommend. I was once interested in such an inquiry, and we could not obtain a single name from the adjacent group of counties.

Mr. Davidson complains that official staffs do work on private monuments which they have refused to schedule. He may be unaware that some of our finest monuments cannot be scheduled because they are occupied. Buildings occupied otherwise than by a caretaker cannot be scheduled. There may be cases in which the preservation of such buildings is of greater importance than the maintenance of "professional etiquette." (LORD) RAGLAN

The Ideal School Hall

SIR,—Mr. Happold, judging from his letter in your issue for March 25, is, I fear, in his effort to uphold his idea of an Ideal School Hall, losing his sense of proportion. In addressing myself to Mr. Happold only, I assume that he is chiefly responsible for the ideas expounded in the original article, but should this be erroneous, I offer my apologies.

I gather from his first article and subsequent letter that the stage in the assembly hall of a school is used, apart from roll call, etc., for terminal or annual plays and for concerts. These concerts are "rare occasions," when, he declares, "a clear view of the stage is unnecessary." I can only assume that Mr. Happold always has a front seat at concerts, and has never had that exasperating experience of being a back bencher, resulting in a strong temptation to knock off the heads of all the people in front to obtain a clear view of the performer. However, assuming for the sake of argument that he is right, the result is that the stage is actually required only for the terminal or annual productions. Mr. Happold must know from his experiences as the producer of amateur theatricals, that in preliminary rehearsals a stage is quite unnecessary, and only in the final dress rehearsals, prior to the actual performances, is its use essential. This means that the stage will be used once, or at most, three times a year.

The stage, according to Mr. Happold, should be a "workmanlike stage with its lighting set, its apparatus for putting up stage settings and hanging curtains, and all the paraphernalia essential for easy dramatic production." It is quite apparent that this is altogether in excess of the requirements of a school stage to be used on such rare occasions, being an unnecessary expense and luxury in a modern school. Admittedly, a stage is necessary in present-day schools, but this should be kept as simple as possible, and should be regarded as a place for the teaching of dramatic actions, rather than the focal point of a theatre. This valuable space, lying idle for so many weeks of the school year, is very suitable for accommodating the school library. Mr. Happold may express all his surprise at such an idea, and include in his own feelings those of all practical schoolmasters, but he is evidently unacquainted with the knowledge that this idea has already been exploited. The L.C.C., considered one of the most up-to-date and go-ahead authorities in educational matters, have carried out this scheme with success, and, as a minor point, to the satisfaction of the schoolmaster.

My point that, with the library on the stage, the hall is easily accessible for use as a working library, has evidently been missed by Mr. Happold. This provides room for many readers, either singly or in small groups, to read in peace, a point which he stresses. I note his remarks upon the open timber roof, which he evidently associates with Victorian education, and feel that he does not appreciate the inadvisability of a flat roof with lantern lights for a hall of this nature. Condensation on the lights is always a source of trouble, and the difficulty of obscuring these lights during cinematograph performances has yet to be overcome in an entirely satisfactory manner.

Mr. Happold complained in his article of "the limitations imposed by inadequately designed buildings, often of recent date, but built by persons out of touch with the developing needs of modern educational practice." While he may be thoroughly acquainted with these "developing needs" I feel that he criticizes modern educational buildings in ignorance of the efforts of present-day school architects fully acquainted with educational progress and possessing expert knowledge of school design. A. G. ALEXANDER

Concrete Architecture

SIR,—A statement in Mr. Penty's third article on concrete architecture should not, I think, be passed unchallenged. I refer to his reference to the weathering (or, rather, lack of it), in artificial stone.

An artificial stone face consists, necessarily, of at least 75 per cent. of natural stone which will "weather" exactly the same as a natural stone face, the only difference being that the erosion is strictly limited by the cement matrix. This in no way affects the appearance of the external face to which Mr. Penty refers.

An examination of examples of both types of stone of the same age will, I think, convince him of this fact.

P. H. BALL

Simplified Quantities

SIR,—Despite his opening remarks as to what he believes to be my want of knowledge of the Standard Method of Measurement, I much enjoyed the letter from Mr. Lynn C. Doyle that appeared in your issue for April 8, and, in particular, I have to thank him for so obligingly changing his analogy, though I must confess that I find neither of his new ones more apt than that which preceded them.

As I understand him, what Mr. Lynn C. Doyle desires, is that bills of quantities should be prepared as lists of materials in the same form as that which they have ultimately to be ordered by the builder. To this I reply that the difficulties are, for practical purposes, insuperable. I also contend that it was in some such form that the earliest attempts at preparing "bills" of quantities were made, and that it was because of the many mistakes

that were inevitable, and the disputes that arose, that these methods had to be abandoned.

In advocating a return to these out-of-date methods, Mr. Lynn C. Doyle appears to believe that he is progressive, and likens himself to those who substituted the mechanically propelled for the horse-drawn vehicle, but in reality he (to keep to the metaphor) is backing a loser and flogging a dead horse.

J. R. TAYLOR

Steel v. Reinforced Concrete

SIR,—Years ago a discussion was held at the Institution of Civil Engineers on the durability of iron structures, and the conclusion reached was that structures of such magnitude as the Clifton suspension bridge could, with occasional repairs, be expected to endure for about three hundred years. I have often wondered whether any of the world's great reinforced concrete structures will last half as long.

The principal source of danger arises, of course, from the combination of two materials of elasticities differing so widely as those of steel and concrete; and the difficulty is emphasized when these materials are exposed to transverse stress, as in beams and floor slabs. In a beam, for example, the extension of the tension rods under a stress of 14,000 lb. per sectional sq. in. is more than sufficient to rupture the concrete adhering to it, with the result that cracks occur which, in course of time, may be expected to extend until the concrete at the points of greatest stress would gradually be brought into a crumbling condition.

In steel structures the parts requiring most careful attention are the rivets. But loosened rivets are easily detected and reinstated; whereas tension and shear rods embedded in concrete cannot be examined, however loose or affected by corrosion.

Alternating Stresses

In a steel girder or rolled beam there are two flanges, both capable of sustaining the same stress, either tensile or compressive; but in reinforced concrete this condition is attainable only by means of top armouring, owing to the dual nature of the materials. A manufacturer once told me that in designing a warehouse floor of reinforced concrete he assumed in his calculations that every span of the floor would be fully loaded. By this means he thought to provide a sufficient margin of strength to meet all contingencies. But when the floor came into use, the owner of the building loaded some of the spans and kept others free, and the effect was that, in the case of an unloaded span between two that were fully loaded, tension was developed in the upper surface of the unloaded space, rupturing the concrete and threatening the destruction of the floor.

Columns

In columns of reinforced concrete we have steel rods of slender proportions in compression, embedded in concrete which sustains them and prevents them from deflection by its lateral resistance. A further security is afforded by steel bands around the column, binding the whole together.

This heterogeneous construction is open to the objection that the compressive resistance of the concrete is far less than that of the steel, and hence there may be a partial crushing of the former, which of course is entirely concealed from view. I know of a district surveyor who, in his discretion, refused to allow the use of reinforced concrete columns, insisting upon the employment of steel stanchions instead. I do not know his reasons, but perhaps they were based upon the objection named above. Another disadvantage about these columns is their necessary bulk. Whatever the load may be, a too slender form of column must be avoided, as involving the possibility of deflection which would bring the convex side of the concrete into tension, causing cracks which would endanger the stability of the column. Accordingly, the usual proportion does not exceed 18 diameters in height.

A solid cylindrical steel column of 5½ ins. diameter and 12 ft. high will safely support a load of 100 tons; whereas a concrete column with 4 per cent. of reinforcement would need a diameter of at least 14 ins. to carry the same amount. This is a fact which would appeal to the non-professional mind of a factory owner, who wants all available space for the conduct of his business.

Supervision

A further disadvantage attaching to the use of reinforced concrete is the necessity of constant and minute supervision during the progress of the work. The contractor must be certain that every rod or bar is laid exactly in its correct position, otherwise serious consequences might ensue; and this is a cause of considerable anxiety to him, and must be reflected in the cost of the structure.

Shuttering

The necessity of shuttering presents an obvious objection to reinforced concrete construction, especially in London or other large towns, where land is of high value and rapid building an urgent necessity. Here again is a consideration that must impress the mind of a building owner, since to him the interval between the erection and removal of shuttering, by retarding the progress of the works, prolongs the time that must elapse before the premises can be available for business. It is not alone a question of money. A break in the continuity of business means more than the cessation of receipts; it means the diversion of orders to other firms with consequent loss of connection.

The simplicity and safety of steel construction render it free from any of the objections enumerated in the foregoing brief notes.

GEORGE H. BLAGROVE

The New Zealand Disaster

SIR,—A member of this Association who has a practice in a district not far from the area devastated by the recent New Zealand earthquake, writes:—

"Nothing which the Dominion has witnessed since the war days matches the dauntless spirit of the good folk of Napier and Hastings, who have set to work to rehabilitate their homes and businesses."

"Surely this sturdy determination among the population of the shattered area deserves the best of results. The two cities, within twelve miles of each other, have the loveliest and most fertile setting to be found anywhere in New Zealand."

"The re-building of the area is the town-planners' glorious opportunity. The first step—temporary buildings only—has been wisely taken, and there is much authoritative support in and out of Hawke's Bay for the proposal to replan the area. Perhaps the best result could be obtained by the institution of a world-wide competition, destined to restore Napier and Hastings as a model district, worthy of the province's fertile and beautiful acres and the nation's answer to the calamity."

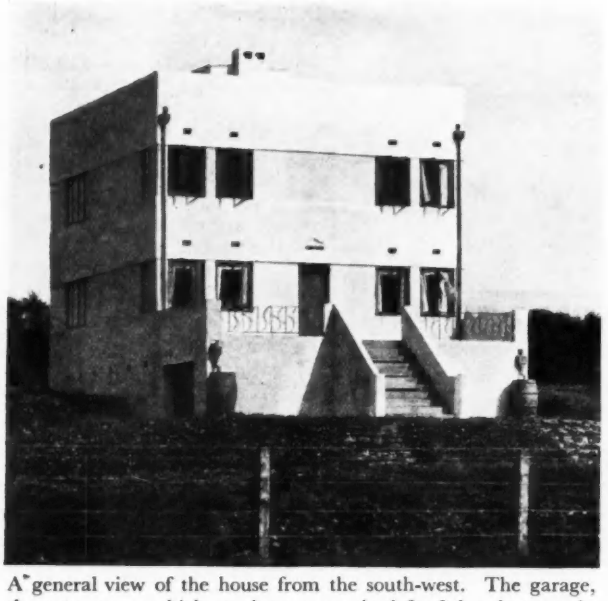
It will be interesting to see whether or not our member's suggestion is taken up.

G. B. J. ATHOE
(SECRETARY, INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS)

R.I.B.A. EXHIBITION

"The Architecture of Modern Transport" has been selected by the Exhibition Committee of the R.I.B.A. to form the subject of this year's exhibition, to be held at 9 Conduit Street, W.1. It will consist of photographs, drawings and models of architectural and decorative subjects connected with modern transport, and is intended to illustrate the latest developments in such work both in Europe and America.

The exhibition will be formally opened by Mr. H. G. Wells on Tuesday, April 21, at 3 p.m., and it will remain open until May 22, between the hours of 10 a.m. and 8 p.m. (Saturdays 5 p.m.).



A general view of the house from the south-west. The garage, the entrance to which can be seen on the left of the photograph, is planned beneath the terrace. The windows are of metal, treated to prevent corrosion by the sea air.



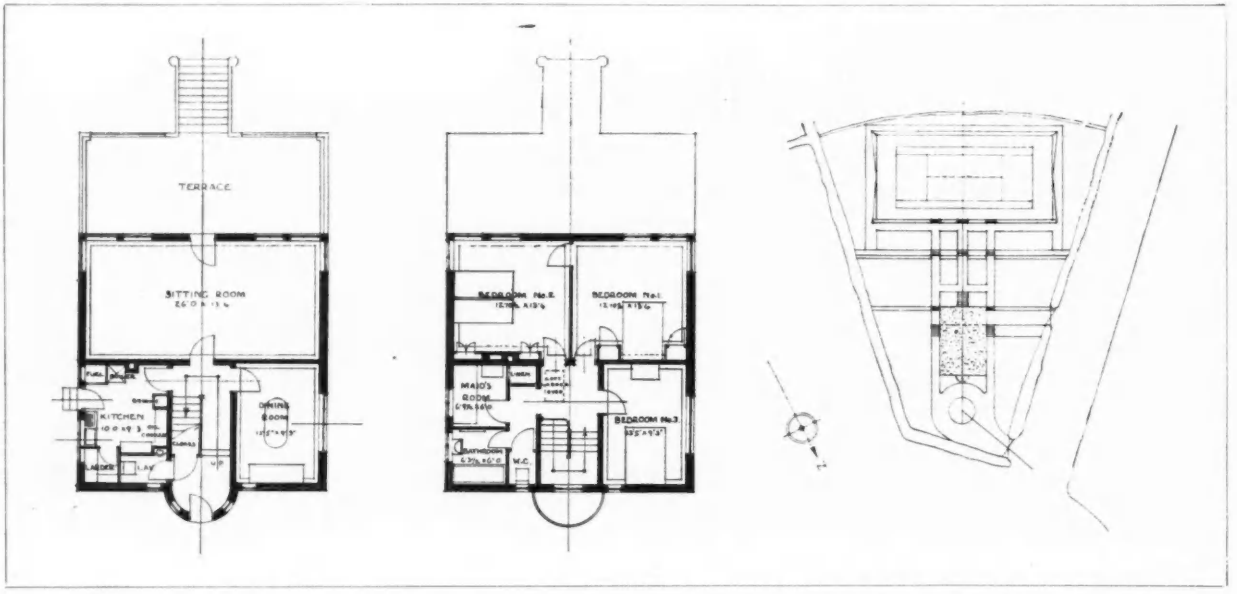
The main front. The walls are of concrete blocks, the outer web 4½ ins. thick generally, and 4 ins. at window level. They have been given a white and waterproof finish. The monogram above the first-floor windows is incised in vermilion.

AN ARCHITECT'S HOME IN SOUTH DEVON

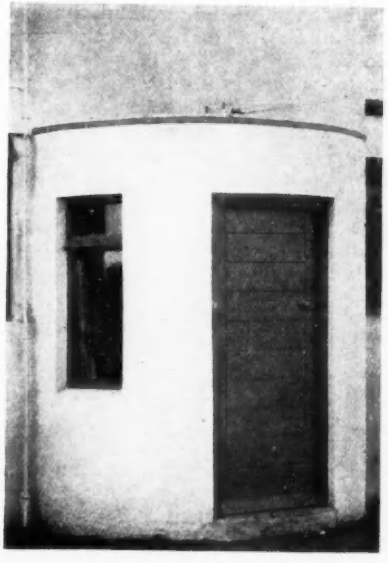
DESIGNED FOR HIS OWN OCCUPATION BY W. W. WOOD

THE site chosen for the erection of Oversound House, Down Thomas, South Devon, designed by Mr. W. W. Wood for his own occupation, is situated on a natural escarpment facing south, overlooking and sloping down towards the sea. To the west is Plymouth Sound, and across the breakwater are seen Cawsand Bay, Penlee Point, Rame Head and the Cornish coast towards and beyond Looe. The view to the east is largely pastoral, with the top of the Great Mewstone showing up above the edge of the cliffs. Looking north, there are red and green fields and hedges, with a row of stone-built straw-thatched cottages on the horizon.

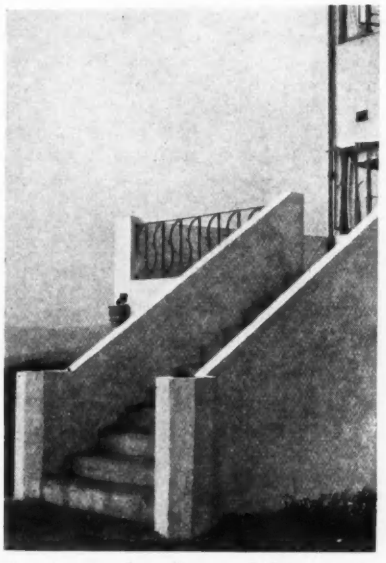
All the workmen and materials had to be brought seven-and-a-half miles by road from Plymouth, and the work



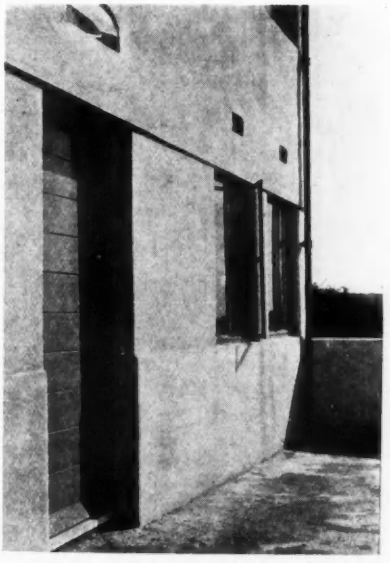
Site, ground- and first-floor plans. The principal feature of the planning is the subservience of everything else to the production of one large room. The dining-room is just big enough for its purpose, so is the kitchen, and by economizing in the sizes of these and the adjacent offices, it was possible for the architect to produce a lounge 26 ft. long and 13½ ft. wide. This faces due south and possesses four south windows, one east window and one west, so that it has the sun all day long.



The main entrance door is coloured yellow, into which a tinge of orange has been introduced. The band around the parapet has been painted a jade green.



The steps, and a glimpse of the wrought iron balustrade on the garden front. They lead up to the terrace, shown in the adjoining right-hand photograph.



The terrace door is of deal, and is surmounted by a bas-relief panel, depicting earth, sky and sea, worked in cement and painted red, blue and green, respectively.

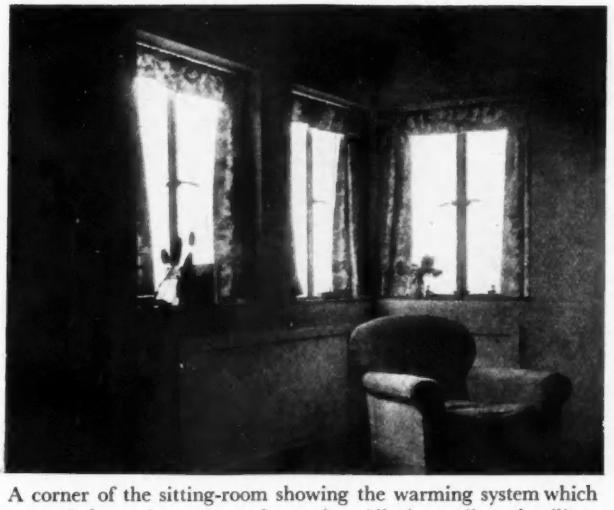
done during the winter months. These two conditions made it difficult to find a builder willing to accept the contract at a reasonable figure. The work was eventually undertaken by Mr. Harry Holmes, of Plymouth.

The site slopes to the south, and the road running parallel to it does likewise. In order to be logical and economical it was necessary to evolve a design which took full advantage of this variation in levels. And out of this grew the terrace with the garage underneath. The exposed nature of the house would have meant much trouble with slates when the south-westerly gales blew.

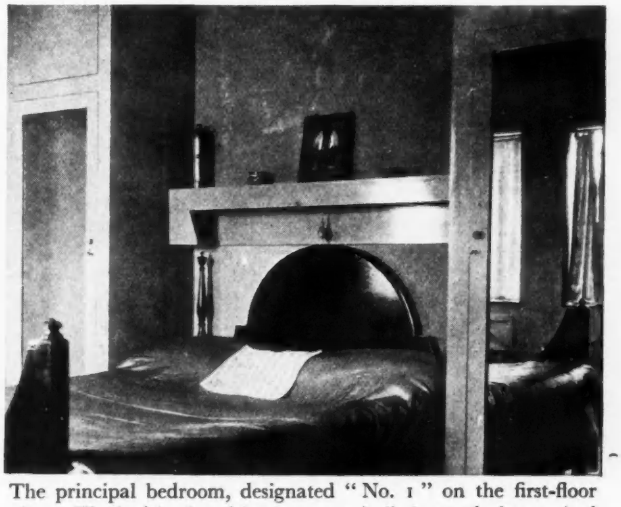
Mr. Wood had got used to a flat roof in Cairo, where there was a *terrasse* on which dinner was served during hot weather, and another on which he slept. So he therefore determined on a flat roof, and its popularity for sun bathing is already established.

Another point was his liking for an even temperature throughout a house, in summer and in winter; thus rayrad panels were fixed in openings in the walls and were suitably insulated to prevent loss of heat. One small boiler in the kitchen warms both house and water. The one chimney is hidden from view in the middle of the roof.

The walls are all of concrete blocks, the outer web $4\frac{1}{2}$ ins. thick generally, and 4 ins. at window level. The 2-in. cavity has been carefully preserved, even behind the radiators, and on the inside of it there is a 3-in. skin of breeze. The reinforced lintels are the full thickness of the walls, and on the garden front, as will be noted from the photograph on the facing page, start well round each corner and tie in the whole façade, at the same time



A corner of the sitting-room showing the warming system which is carried out by means of panels. All the walls and ceilings throughout the house—except in the dining- and bathrooms—are yellow, all the floors are green and all windows jade coloured. The skirtings on the ground floor are painted a blue jade and the furniture is a jade green.



The principal bedroom, designated "No. 1" on the first-floor plan. The bed is placed between two built-in wardrobes, united by a shelf. This has a pocket at either end for books. A cabin reading-lamp, bell push and wireless plug are placed at the centre out of sight beneath the shelf. The windows reflected in the wardrobe glass overlook the terrace.

spreading the weight of the floors above on to the outer as well as the inner web.

The roof of the garage (and floor of the terrace) is of concrete between filler joists—all the other floors are of timber, as also is the main flat roof. To avoid movement in the latter, insulating material was fixed to the decking and also on the under sides of the joists, with the result that it is proof against variations in temperature and sound.

The windows are of metal, treated to prevent corrosion by the sea air; each consists of one pane of glass, and are easy to clean. Ultra-violet ray glass was used in the south windows of the lounge and in the nursery.

The staircase is wide and the going easy. A solid balustrade has been used on the terrace steps, but on the staircase it is open, and every second baluster slopes to emphasize the upward movement. The balusters are jade and silver, with a natural oak handrail and jade strings. An unusual feature is the filling of the lower spandrel with a radiator to warm the entrance hall.

The lighting generally is from ceiling panels filled with obscured satin-finished glass, each opening being fitted with a powerful reflector to throw the light down into the room.

The dominant note in the colour scheme is one of cheerfulness. The exterior is white, with jade green wood and metal work, except the two principal doors which are yellow, and bright lime yellow curtains.

A sense of unity has been preserved throughout the interior by making all walls and ceilings yellow—except the dining-room and bathroom—all the floors green, and all windows jade. On the ground floor the architraves and skirtings are blue jade, the doors silver and the door furniture chromium-plated. The dining-room walls and ceiling are distempered with a stippled jade finish on a white ground, the ceiling slightly lighter than the walls and all else, as for the other ground-floor rooms. The bedrooms have butter-yellow built-in wardrobes and doors, with jade green knobs and blue jade skirtings and architraves. The door handles are chromium-plated. The bathroom is white, with abstract patterned inlaid linoleum on the floor, and the window is green.

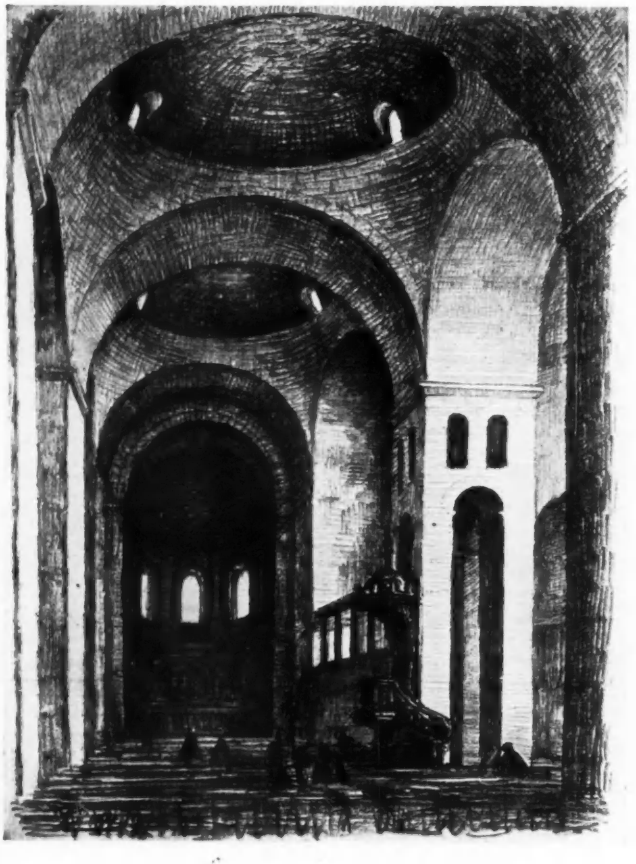
Loss of time and cost of transport, due to distance from the nearest station, added greatly to the cost, but even with these disadvantages the price per cubic foot has worked out at the satisfactory figure of 1s. 4¼d.

LITERATURE

"STONE DRAWINGS" BY ROGER FRY

THIS series of ten lithographs may be entitled "stone drawings" less by reason of any purely lithographic technique than because of the poetry which the artist has hammered out of his petrous subjects.

The massive integrity of squared stone, the naked grey and white of rock in which man has cut churches, like a sculptor carving a symbol of eternity, at Aubeterre and St. Emilion; the high lights in the Cluny Museum, that tomb of the Antique—these are rendered with a sure perception, and an intellectual joy in the past from mere loveliness. In no subject has the prettiness of moulding or carving been chosen except to accentuate bare form. The quality of stone as stone has been emphasized. In the rock-cut church of St. Emilion, for instance, there are but three arched holes and five planes of blank wall; those planes are treated with a texture so broad and satisfying that the eye wants no incident. If architects succeed in finding their way to a bare, truthful and unforced modernism, Mr. Fry will be there, waiting to render their buildings.



A miniature reproduction of Saint Front, Periqueux.

[*From* Ten Lithographs by Roger Fry.

The effect of the drawings as a whole is of great scale, of great breadth, alternating with depth to form a pattern, of a naïveté in technique which discounts the merely clever. Beyond all that, Mr. Fry, in the Romanesque subjects, seems to record the inspiration of the builders; he makes me at least realize that inspiration as an ideal of divine civics, and the structural forms on which he fixes my contemplation are the co-ordinated masonry of the civitas Dei. Of these subjects, St. Front is the most characteristic. Notre Dame, Clermont Ferraud, has a softer beauty and a more careful technique. It has the widest appeal of the series—a succession of late Romanesque columns, capitals and arches, light flooding in through the aisle windows between the dark pylons of masonry and, to break the pattern, a dark rich wooden pulpit, snared in the line of its wreathed rail.

As companion to this drawing is the light-filled composition of Aubeterre—curved roofs and an octagonal column standing like the spout and spray of some petrified eocene's foam.

Then, having received this much of integrity and solid grandeur, we are shown the humanism of the English Renaissance in Wren's Library at Cambridge—trees, like unreluctant Daphnes, embrace the building and the sunlight whilst the water





From The House Improved.] [*By Randal Phillips.*

"Wickham Barn," before and after alteration. Allen and Potter, architects. In the reconstruction the whole of the interior woodwork was retained, and the fireplaces were so arranged that no cutting of beams was necessary. A damp-course was inserted under the main sill of the barn, the timber framework was filled in with breeze blocks, and a complete outer skin of multi-coloured bricks was built. There are two ponds adjacent, and over one of these a little bridge was erected, leading to the entrance.

grotesquely flashes a blessing from its wavey, stained, cracked mirror.

I do not know by what process the reproductions have been made, but I believe they are the best reproductions of personality in drawing which have been done in England. Every stroke, each idiom, all the bleedings of light from the shadows, which have been effected by scraping or some unknown surgery of the knife, show as clearly as on the originals. Every plate seems to be the true mark of the artist. I congratulate the printer and the publishers.

P. M. STRATTON

Ten Architectural Lithographs. By Roger Fry. Edition limited to forty portfolios for sale, each of which is numbered and signed by the artist. Price 15 guineas net. A few copies of each individual lithograph are also available at £2 2s. each. London: The Architectural Press.

FACE LIFTING FOR HOUSES

THE greater part of this book has already appeared in one of our contemporaries devoted to domestic architecture and furnishing, and has been co-ordinated by Mr. Randal Phillips into a handy volume. It is suitable for the young practitioner who is wrestling with what is probably his first job, altering a house; and shows him how his elders and betters have carried through similar jobs. Perhaps it was meant also to whet the appetite of possible clients. If it does so, the list of architects and their addresses, discreetly printed like a bibliography on the last page but one, must be considered as the meat after a full grace.

Several chapters are given to the cure of common defects in builders' work, a helpful page or two shows the best and cheapest ways of adding the inevitable garage, and a note on house purchase warns the purchaser of the law's procedure; (and the omission of directions how to mortgage is somewhat astonishing). The author then takes us to a London basement house, a stable, a baker's shop, a smithy, a barn, and other buildings, converted respectively into dwellings for human beings.

There are general hints on how to work the miracle, and these are mainly sound, but the improvement of a bathroom door by covering it with mirror glass should include a special precaution to prevent the glass being cracked by the banging of the door. Again, the wooden transformations over ugly fireplaces are liable to shrink to bits; and the gulley for a car-wash should not be an ordinary trap.

The examples shown of the many cottages gutted for the new poor have woefully lost their scale both in building work and furniture, with the shining exception of Mr. H. C. Hughes' "Garner Close" at Grantchester. Characteristically, the most useful improvements in every case are in the kitchens. Mr. Sandford is given well-deserved credit for ventilating his gas cooker by an open space of half inch each side the register plate into the flue above. This plate has its sides turned up to catch dust. The excellent plan of this kitchen and the recessing of fitments and space for working should be noted. The only questionable points are the absences of cheerful curtains (due, apparently, to the placing of the plate rack) and an electric light for the sink.

As is fashionable in architectural books of today, the author reserves his moral indignation for the Victorian period, and out of sheer perverseness I am beginning to see beauty in the buildings of that time. Anyhow, we all agree that no period is more difficult to improve! Mr. Morley Horder succeeded fairly well with his basement house for Sir Lawrence Weaver, but his subject was a Late Georgian reminiscence and he added his own reminiscences of the Georges. Every other Victorian subject has externally been changed from the underdone to the overcooked; and internally no one has guessed what to do with the lofty rooms and high windows, and has added dadoes, low fireplaces and generally the very shapes to spoil the proportions of the rooms. There seems a fortune awaiting the designer (probably a woman) who can get inside the Victorian skin and improve the Victorian house in the Victorian manner.

P. S.

The House Improved. By Randal Phillips. London: Country Life, Ltd. Price 7s. 6d. net.

THE SKYSCRAPER: ITS ECONOMIC HEIGHT

THE Skyscraper—a Study of its Economic Height, issued by the American Institute of Steel Construction, throws a refreshing light not only upon skyscraper construction, but on the general economic and social aspects of the tall building.

In America the financial basis of building has been the subject of very keen study, and readers of the volume will get an insight into the commercial values which are every day becoming more important to the architectural profession. It is, perhaps, too well known to merit comment that the American system of planning, with a keen eye on financial returns, is one of the noteworthy features of architectural development, and one which



From The House Improved] [*By Randal Phillips.*

A view of a remodelled kitchen in a typical Victorian house in South Kensington. G. Christopher Sandford, architect. The range has been removed, and its place taken by an independent boiler and a gas cooker, set side by side in the tiled recess.

perhaps has given to American architecture a greater stimulus than any other factor.

The economics of height are dealt with in a thorough, businesslike way and inter-related to such matters as public health, public safety and traffic congestion in a manner both informative and instructive.

G. J. K.

The Skyscraper: A Study in the Economic Height of Modern Office Buildings. By W. C. Clark and J. L. Kingston. New York: The American Institute of Steel Construction.

QUESTIONS THAT ARISE

Floor Covering

T. A. A. writes: "*We are concerned with the floor covering of a modern five-storied building. The floors are constructed of 1¼-in. boards, secured to 2-in. by 2½-in. fillets fixed to a reinforced concrete floor with metal clips. There is only, therefore, a 2-in. ventilation space between the concrete and the boards, and the surface of the floor would be completely sealed by the waterproof cement used for the floor covering. Does your expert consider this 2-in. ventilation space adequate to prevent deterioration of the wood floor?*"

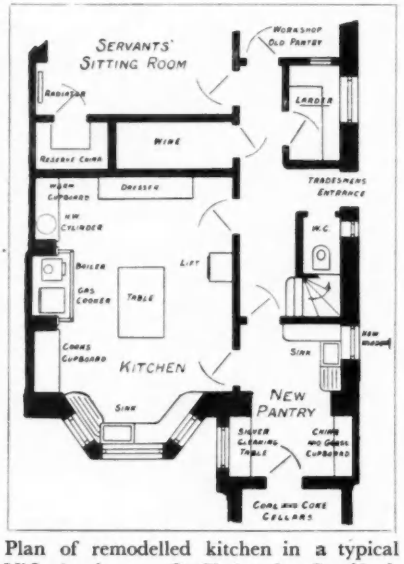
If this floor is really of solid reinforced concrete, there will necessarily be a collection of moisture while the concrete is drying out, and this will probably cause the fillet, at any rate, to perish.

If linoleum or rubber flooring is put on the boards, they may perish also. In my judgment, it would be wise to introduce some through ventilation to the 2-in. space, and the fillets should be grooved deeply at intervals, in order that the air can percolate between the spaces.

I should also consider using straight joint flooring, which allows a little natural ventilation. H. D.

Plaster for Walls

K. K. writes: "*What plaster does your expert recommend where it is necessary to paint or distemper the walls immediately a building is completed? The contemplated building is a factory, and the inconvenience of carrying out internal decorations, when once the machinery is installed, will be readily understood. In some of the recent London stores it will be noticed that there are no signs of the wall plaster being damp; the colours are also fast.*"



Plan of remodelled kitchen in a typical Victorian house. G. Christopher Sandford, architect. See photograph above.

It is reasonably safe to do this upon plastering finished in Keene's cement on a Portland backing, provided that the brickwork beneath has been given an opportunity of drying out. This might, however, prove an expensive finish for a factory, and a preferable alternative would be a reliable hydrated lime plaster, painted with an undercoat of one of the special paints having a tung-oil-resin basis, with any desired finish, or distempered in waterbound distemper, using an earthy pigment not likely to discolour.

A further alternative even lower in cost and quite suitable for factory work would be to face internally in sand-lime bricks (unplastered) with flat-struck joints distempered. The usual cause of blotchy paint and distempering on new work is saponification of the paint by the action of free lime from cement or plaster-liberated during hydration and setting. E. G.

Maple Flooring

R. S. writes: "*In connection with schools I am erecting, I have specified a large quantity of 1¼-in. maple flooring, laid on wood joists, in rooms varying from 20 ft. to 35 ft. wide. I can find no one who really has any practical experience of laying this flooring, and should be glad of any information on this point, in view of the tendency for this wood to expand when damp. As solid wood skirtings are used, it is difficult to leave room for expansion against the walls.*"

American maple flooring has for many years been widely used and makes an admirable floor for hard wear. It is much used for roller-skating rinks, engineering shops for light work, factories, public halls, and for flooring and wall-lining to squash racquet courts.

Like all other materials, however, its peculiar qualities must be respected. When nailed to fillets let into concrete, the surface of concrete should be well tarred to prevent steam rising, and in rink floors and the better factory floors the maple is laid in narrow widths on a deal floor.

In the particular case referred to by your correspondent, the concrete covering the site should be given an opportunity to dry out before the floor is laid. There should be ample cross-ventilation, to which end sleeper walls should be built honeycomb. The boards should be only lightly cramped up so as to let them lie up close without being compressed, and the skirtings described must be grooved or rebated or otherwise disposed so that the floor can expand laterally. If the boards are not cramped up the allowance for lateral expansion might be omitted, but in that case the use of cramps ought to be definitely forbidden as well as the use of all alternative devices.

H. B. C.

THE SPECIFICATION WRITER

Rural Cottage Specifications: Type iv. South-Western Counties and Wales

BY EDWIN GUNN

COTTAGES intended for districts where plastered cob or rubble walling and thatch are the old tradition, thatch being commonly replaced by Roman tiles. As a variant in Cornwall and Wales, roughly squared masonry and slated roofs may be used. Either mode calls for simple shapes and avoidance of roof intersections. A sheltering porch is an essential in these wet and windy districts.

WALLS (ALTERNATIVES)

FOR MASONRY DISTRICTS.—All as specified for type ii (see issue for February 18, page 286), but quoin blocks at all external angles to be cast with angle fillets fixed in mould so that blocks lack arrises. Slurry with waterproofed cement as in type ii.

FOR PLASTERED DISTRICTS.—All as last, including softened arrises, but external faces dressed with two coats of milk-white concrete paint well brushed in.

Chimney caps to have 3-in. weathering of treble course of stout slates laid breaking joint in cement and pitching both ways from ridge to a fall of 3 ins. each way. Pots to be 9-in., flue linings projecting 3 ins.; slate weathering to be cut and fitted and well grouted.

ROOFS (ALTERNATIVES)

FOR THATCH DISTRICTS.—The design lends itself admirably to thatching, but where that is impossible, lay a course of stout slates in cement full thickness of walls, bedded in cement and projecting 3 ins. to form soffit and receive tiling along all eaves and up verges. Carefully set out width of porch, "trunk-lift" dormers, and intervening spaces to exact width of a multiple of the tiles when received, and cover roof slopes with 2-in. × ¾-in. sawn fir battens, 13½-in. gauge, strongly nailed for tiling.

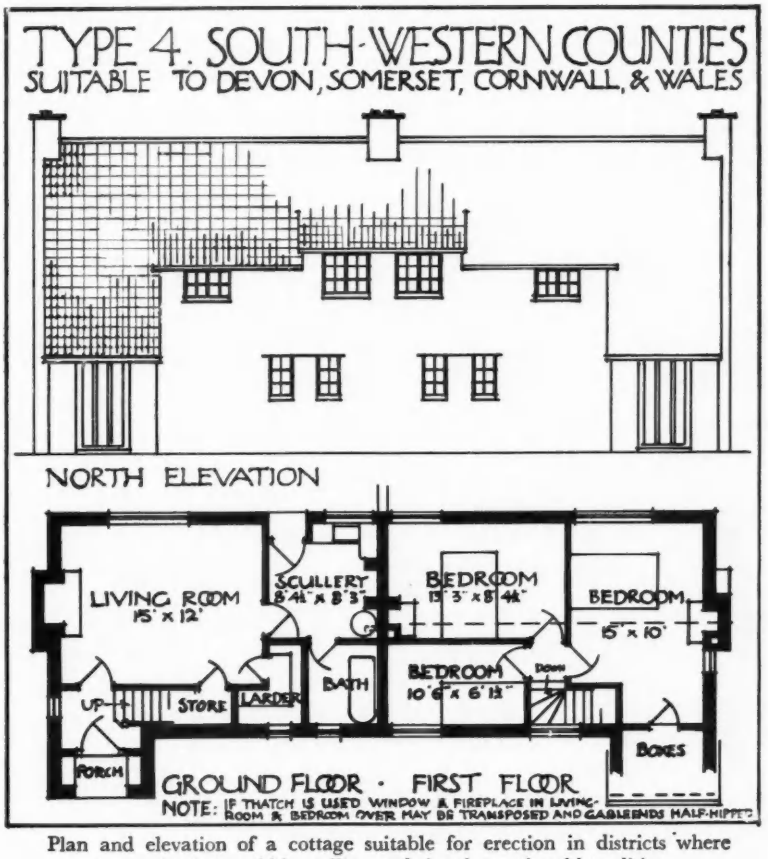
Lay to roof slopes Bridgwater hand-made sand-faced interlocking Roman double-roll tiles in dun colour, laid without nailing, but all margins soaked and bedded solidly in cement on the slate under-eave and gable courses.

Battens are to be carried over gable undercloak to within 2 ins. of face, the open verge being neatly pointed up. Cover the ridge with half-round ridge tiles of similar make and colour, bedded in haired mortar and pointed in cement.

FOR SLATE DISTRICTS.—Lay slate eaves and verge courses as last described. Cover the roofs with 3-in. mesh galvanized rabbit netting well stretched over rafters, and lay thereon bituminous roofing felt lapped 3 ins. at all joins and secured by slating battens.

Lay thereon third quality Cornish grey slating in size 16 ins. × 8 ins. or smaller, each slate centre-nailed with two yellow composition slate nails to 1½-in. × ¾-in. battens, spaced to 6½-in. gauge or closer, to give equal lap for smaller size. Slating at all verges to be bonded with slate-and-half widths and tilted up on undercloak to prevent overrunning. Eaves and ridge to have proper doubling courses. Cover the ridge with blue Staffordshire whole-back ridging, well soaked and bedded in cement.

Boarded spandrel-cheeks of "trunk-lift" dormers to be covered with slate-and-half slates over 4-lb. lead soakers laid in with roof slating, the courses setting at right angles to roof slopes with single lap, covering nail-holes by 3 ins.



Plan and elevation of a cottage suitable for erection in districts where plastered cob or rubble walling and thatch are the old tradition.

WINDOWS, DOORS AND PAINTING

WINDOWS to be standard metal cottage casements, with wide frames and lugs for building in, and to be built in reveals so as to stand 2 ins. behind the wall face and leave ¾-in. open space each side for cement filling. Form 3-in. projecting hood over all windows not close to eaves, with double course of slate in cement, set slightly weathered.

External window cills to be formed with ¾-in. sawn slate set at an angle of 45° and well pinned up to metal frame. Internal window jambs to be plastered at slight splay with waterproofed cement rendering coat so as to close up space of ¾ in. left round iron frame. Rendering to be left rough for plaster internally, and exposed face round frame externally to be pointed up neatly and covered by external surface-treatment described under walling.

EXTERNAL DOORS.—Similar to internal doors, but covered externally with ¾-in. boarding and twice splayed cover fillets, well nailed on. Seats in porches to be 2-in. sawn elm slabs, built in as walls rise.

EXTERNAL PAINTING.—All external ironwork, including metal casements and frames, to receive two coats of bituminous paint in standard grey.

External doors to have three coats of lead and oil paint finished in selected strong bright colour.

The Advance in Specification Writing

SPECIFICATION writing may be defined as the art of describing from a two-dimension drawing the materials and work necessary to create a three-dimension building. If under this definition the Hebraic building specifications of the Old Testament must be ruled out as being rather the highly coloured memories of structures already built, then the origin of specification writing is embedded in respectable antiquity.

The earliest document which can be claimed as the lineal ancestor of the modern specification was written by Philo, the architect for the Arsenal of Athens, in 346 B.C. It begins with a description of the foundations and walling, giving the depth of the former and the dimensions of the ashlar for the latter. Then follow the usual clauses for paving, carpenter's work and roof coverings, also details of shelving and racks, the whole concluding with this sentence: "All these things the contractor shall execute in accordance with the agreed specification and the pattern delivered by the architect." Such a method of building is far nearer to modern practice than any that was employed throughout the Middle Ages. Whether the "devis" mentioned by mediæval writers really correspond with what is understood as a specification is a point for archæologists, but the description which accompanied Brunelleschi's design for the dome of Florence Cathedral in 1420 is certainly such, as it describes both the materials and methods of construction. The buttresses are to be built of macegno stone, and the rainwater is to be carried off in marble the third of an ell broad—in sentences such as these one recognizes the real note!

SPECIFYING IN WILLS

One type of specification peculiar to the Middle Ages is that contained in wills. The best known are those for Eton College and King's College Chapel in the will of Henry VI, and the elaborate directions of Henry VII for his tomb and chapel at Westminster. But a less exalted example is that contained in the will of Peter Blundell, dated June 9, 1599, for the erection of a school at Tiverton. He gives clear directions for the dimensions of the various rooms, the construction of the floors and windows, the arrangement of the kitchen and the chimney, ending with the boundary fences and gates. How many modern clothiers, one wonders, could compose such a technical document.

The letters of John Webb sent with his plans and details of Lamport Hall to Sir Justinian Isham in 1654–7 are really short specifications, but it appears that of necessity much was left to the workmen without detailed supervision, and also that instructions were often given separately to individual trades. But the mention of Thomas Sargenson appears to refer to a contractor rather than to a tradesman, as he has to do with both masonry and carpenter's work.

SEVENTEENTH-CENTURY FRENCH METHODS

An interesting French specification exists, made by Etienne Martelange about 1681, for work in the town of Vienne. It describes generally the materials, but lacks precision, and includes such clauses as "ordinary doors are to be made according to the common use and practice, and as advised by expert workmen." After a statement of this kind one is almost prepared for another clause where the contractor is left to choose whichever he pleases in all cases where the elevation differs from the plan. In France at the end of the seventeenth century it would seem that the usual method was to agree upon a schedule of prices before beginning the work, and to measure up on completion. Such was the practice of Colbert for the Royal buildings, and it was probably general. Something of the same method may be deduced from the Greenwich Hospital papers in the possession of the R.I.B.A. (1696). Here the various contractors give detailed specifications of the work they propose to do, and their prices in tendering.

William Salmon, in the preface to his *London Art of Building*, published in 1734, claims that his book is intended "to improve the young Practitioner," and for this purpose he calls his attention to "directions for measuring several Artificers' work." There are chapters on geometry, design, and the Orders, also list of prices and building construction details, but nowhere in the book is there anything that can be recognized as a relative of the modern specification.

It was the advent of the contractor at the beginning of the nineteenth century—child of the new industrial age—that finally crystallized the specification into its modern form. A new era had dawned. Henceforward the architect does not deal with his craftsmen, but with one who has made himself responsible for all the work of the building at a price; the workmen will be paid by him, but he, too, has to live, and the margin between receipts and expenditure is "contractor's profit."

The specification has therefore to be made exact and full, and the difference between those written at the beginning and end of the century illustrate the advance in building science, the mechanization of labour, and consequent elimination of the building craftsman.

In 1826 the specification for the High School, Edinburgh, by Thomas Hamilton, is mostly taken up with descriptions of stonework and the neo-Grec ornament. Glazing is specified as "crown glass," and the sanitary clauses for this type of building would nowadays be considered meagre in the extreme and capable of horrifying the most easygoing sanitary inspector. The specification writer seems to have had an uneasy feeling that all may not be well, and adds "when the explanation of any part of the work has been omitted it is to be understood that the manner of execution is to approximate as nearly as possible to such other parts."

The specification for Holloway Jail, built by J. B. Bunning in 1852, is very vague as to drainage, and the cisterns are still of sawn slate.

The Wilts Lunatic Asylum at Devizes, built by Wyatt and Brendon in 1849, has a special specification at the end for the cast-iron beams and columns. The drains are to be of glazed stoneware, but the w.c.s are to have "large D traps" and pan closets. A few years later (1852) the specification for a school at Brixton, also by J. B. Bunning, gives an elaborate description of the built-up slate urinals with the method of water cleansing. This specification also includes a king bolt roof truss with cast-iron head to take the principal rafters of timber—a strange hybrid-looking thing that one hoped never lived outside the pages of the old *Rivington's Building Construction.*

A specification for houses in the Rue de Rivoli, Paris, printed in Donaldson and Glen's book of Specifications, shows that the French practice approximated very closely to our own. In it the work is taken floor by floor instead of by trades, and the decoration clauses are written room by room. One might also call it a forerunner of the modern "group specification idea."

EARLY AMERICAN EXAMPLES

Mr. David Emerson has collected several interesting memories of early American specifications. Thus, in 1834, he finds the specification for Madison County Jail, Mississippi, designed by John Laurance, so brief that it might have been written on a single sheet of foolscap paper. In America these scanty specifications lasted longer than in this country, and it was not until 1888 that they began to expand into the modern volumes. Reinforced concrete was in the experimental stage, and when one thinks of the use made of it in America today it is hard to realize that up to nearly the end of

the nineteenth century it was only known in that country by reports of the experiments carried out by Considere and other engineers in Europe.

In 1870 Pewtner's *Comprehensive Specifier* was published in London. It consists of model clauses for every possible item, and in the preface the author suggests that all the architect has to do to prepare his specification is to go through the book copying such clauses as apply to his particular job.

Some of the items make curious reading when it is remembered that the book was only written some sixty years ago.

For foundations, Portland cement is not recommended, but the concrete is to be composed of six parts of stone ballast to one of stone lime, the latter being broken to a powder and only slaked with water immediately before mixing with the aggregate. In depositing, it is to be thrown from a scaffold 10 ft. high into the trenches. Damp-proof courses may be of lead, asphalt, or vitreous stoneware, but not of slate. A note on cast-iron columns and beams is included, but no hint of calculations for stresses. Electric light and bells are unknown, but the gas specification is elaborate. While plate glass is in the market, crown glass appears to be still obtainable at a commercial price. Perhaps the sanitary specification illustrates the advances made subsequently in building science as well as anything. Pewtner's book includes the "D" as the only form of trap; the bath is of copper or galvanized iron, and is supported in place on a wooden cradle. Manholes at bends or junctions of drains do not exist.

THE ADVENT OF STEEL

Wightwick's *Hints to Young Architects* was a very popular handbook and ran into several editions, but although, in 1895, Huskisson Guillaume had largely rewritten the sixth edition, it still falls far short of modern requirements. Iron, both wrought and cast, holds the field, but steel has made an appearance. The process of Mr. Bessemer is described as a novelty, and a curious note is added that as steel in compression is twice as strong as in tension, the lower flange should be twice the upper in sectional area. The great revolution of the steel and concrete age is still in the future.

The dead hand of the London Building Act for a long while prevented the exploitation of the new materials, and the first reinforced concrete structure of any size in London was the extension to the General Post Office on the site of the old Christ's Hospital. With the revision of the Building Act and the new clauses relating to steel and concrete, things began to move. Not only did reinforced concrete and steel largely supplant brick and wood, thus requiring a new set of clauses upon Portland cement, rods, connections, rivets and other details, but new articles, such as metal windows, patent partition blocks, patent glazing and shop fronts appeared, all of which helped to swell yet further the bulk of the specification. Electric power and heating, ventilation, lift machinery, and a host of proprietary articles poured in and bid fair to submerge the specification writer, so much so that in this country and in America it has ceased to be a one-man job, and the assistance of civil engineer and specialist must be sought by the architect of any large building. The old architect used to sit down and write his specification longhand and at leisure on several sheets of foolscap. Today, his descendant, aided by such a bulky publication as *Specification*, and assisted by a typist and shorthand writer, is called upon to produce a document running into some hundred pages, and covering an ever-widening field of technical knowledge.

LL. E. WILLIAMS

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Public Offices Sites Amendment Bill

MR. LANSBURY, the First Commissioner of Works, moved the second reading of the Public Offices Sites Amendment Bill, which is designed to amend the provisions of the Act of 1912 "in respect of, among other things, the line beyond which buildings may not be erected on certain lands in the City of Westminster." He said that the vital question was whether the restriction placed on a portion of the area of land concerned should be allowed to remain. The only part of the area to which the restriction referred was the Whitehall Gardens end. If the building line were not brought forward, they would take away something like a third of the value of the site as a building site.

The London County Council at first agreed with the proposals of the Government, but a few weeks later changed their mind, and opposed the Bill. The Westminster City Council, who were also opposed to the Bill, took the view that not only must the building line on the Embankment be restricted, but the gardens must also be maintained in front of Montague House on the Whitehall site. The Office of Works were strongly of opinion that if they had to choose whether the open space should be on the Embankment or in Whitehall, it was desirable to choose Whitehall. His predecessor in office had consulted the Fine Arts Commission on the architectural aspects of the question, and the Commission had definitely reported in favour of reserving the space in Whitehall and of advancing the building line on the Embankment. The necessity for more Government buildings was due to the growth of departmental staffs since 1912.

It was proposed to house in the new buildings the Air Ministry, the Ministries of Labour and Transport, the Board of Trade, the Ministry of Agriculture and Fisheries, the Cabinet Office, the Dominions Office, and the Stationery Office, the combined staffs of which numbered 7,000. In the Whitehall area just now a very considerable number of the staff were working in basements which were never built to house them at all. People working in them were able to work for a certain length of time, but they were not able to work continuously because of the bad air and the fact that they had to work by artificial light.

With regard to the question of cost, they reckoned that on the entire cost of these buildings they would save annually about £40,000. But he wished to be quite frank. Although it was true that the money paid to the Crown Lands was money that went from one pocket to another, it might be taken into account. On the face of the figures, taking the rental value of the freehold and the interest on the money spent for the new building, they reckoned that on the balance they might pay out £10,000 or £15,000 extra cost. Nobody could make a really definite estimate. If the prices of material continued to drop, they might get a much cheaper building than they would expect to get if they were to begin building immediately. He was not asking for any money or any sanction for building, but for the removal of restriction on the area so that plans might be prepared. No building could start for at least eighteen months, because if the restrictions were removed there was the question of appointing an architect. Then there would be the preparation of the plans, and finally the step of asking the House for permission to do the work. It was proposed to ask the House to refer the Bill to a Committee of both Houses, before which the L.C.C., the Westminster City Council, and any other interested parties would be able to appear.

After debate, in which the Bill was severely criticized, the second reading was agreed to, and the Bill referred to a Joint Committee of Lords and Commons.



Where the new building will stand, in the north-east angle of the cross formed by Portland Place and Weymouth Street.

THE R.I.B.A.'s NEW BUILDING

THE site acquired by the R.I.B.A. for their new headquarters is situated on the east side of Portland Place, with a frontage to Weymouth Street, as will be seen from the above view. It should be noted that any questions which the competitors desire to ask must be received by the Secretary, R.I.B.A., 9 Conduit Street, W.1, not later than August 4. The replies to the questions will be published in the *R.I.B.A. Journal* for September 19 next. The latest date for the submission of designs is March 31, 1932. Following is the schedule of the accommodation required, extracted from the conditions of the competition. These should be kept to as nearly as possible by the competitors, but it is left to them to plan the building as they think proper, bearing in mind its great purpose.

Schedule of Accommodation

A dignified entrance hall with spacious and well-planned staircase is essential; also provision for the Hall Porter.

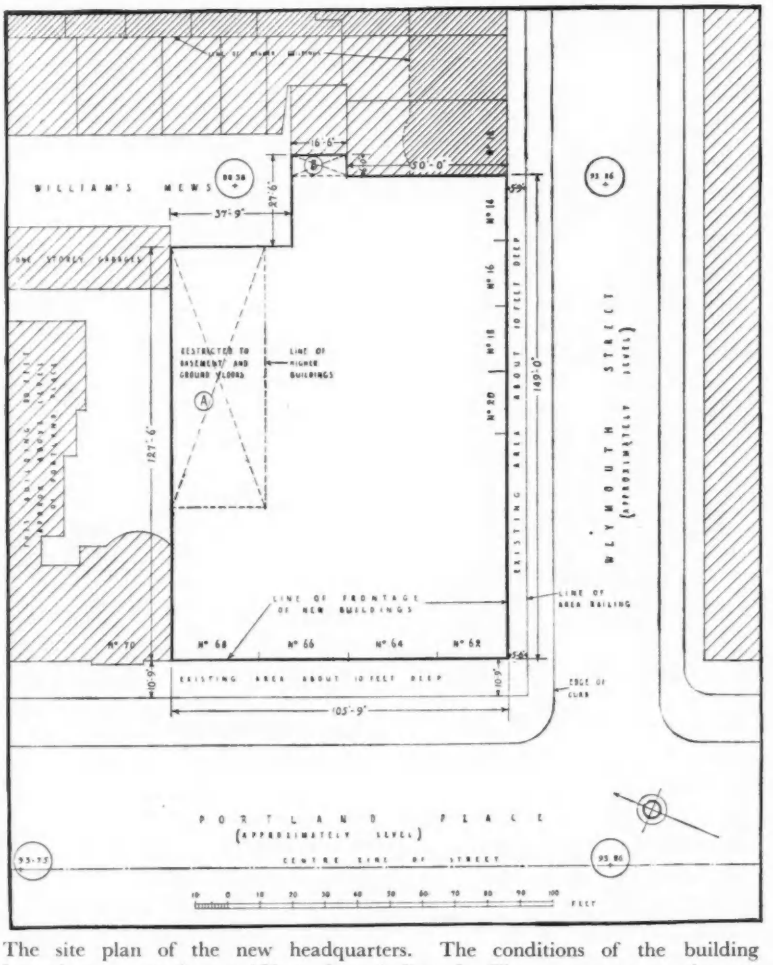
Administration (A, B, C, and D should be on the ground floor. For all other rooms the floor level is optional.)

(A) : President's room, 400 sq. ft.; Secretary's room, 400 sq. ft.; Room for Secretary's Clerk, 150 sq. ft.; Assistant-Secretary's room, 250 sq. ft.; also a small lavatory for the use of the President.

(B) : Visitors' waiting room convenient to (A), (C) and (D), 150 sq. ft.

(C) : Secretary to Board of Architectural Education's room, 350 sq. ft.

(D) : General office allocated as follows : Inquiry space with counter, say, 275 sq. ft.; 75 super ft. per clerk for 25 clerks, 1,875 sq. ft.; 50 super ft. per typist for 10 typists, 500 sq. ft. Total, 4,350 sq. ft., General strong room,



The site plan of the new headquarters. The conditions of the building lease impose certain restrictions, here indicated. The pavements on the two main frontages may be taken as being level, but Williams Mews is several feet lower.

addressograph room, filing and storage for drawings, minute books, letter books, files, etc., conveniently accessible from the general office.

Committee Rooms : At least two of which should be capable of being converted into one.

One committee room, 1,000 sq. ft.; one committee room, 500 sq. ft.; two committee rooms of 400 ft. each, 800 sq. ft.; two arbitration rooms of 400 ft. each, 800 sq. ft. Total. 3,100 sq. ft.

Library

Main library, 3,500 sq. ft. Additional accommodation : Additional book stacks or galleries to bring the bookcase area up to the 6,000 ft. required. Librarian's private room with cupboard safes (easily accessible from library), 400 sq. ft.; waiting room (adjoining librarian's room, but accessible without passing through library), 240 sq. ft. The following rooms should be easily accessible from library : Cataloguing room, 200 sq. ft.; repairs room, 140 sq. ft.; students' room, 160 sq. ft.; students' room, 110 sq. ft. Stack room providing bookcase area of 1,000 ft. for little-used books (see [*a*] in notes), about 500 sq. ft.

The Meeting Room

To have seating accommodation for approximately 400 persons, a platform and provision for cinema, 2,500 sq. ft. (The seating is to be fixed and so arranged as to give a clear view of the speaker and the screen.)

The Council Room

To seat sixty at tables, including nine on the platform, 1,500 sq. ft. *Note.*—The seating and fittings of the library, meeting room and council room should be indicated on the plans. The acoustics of those rooms used for speaking should be carefully studied. Exhibition galleries (not necessarily top-lighted), 6,000 sq. ft. These should be planned so that the use of movable screens will be possible and so as to be available also as examination rooms. It is suggested that the largest room should be of fine proportions suitable for a banqueting room to accommodate 400 persons with service room for outside caterers. Council club dining-room, 1,000 sq. ft.; accommodation for members in any suitable form for the purposes of reading, writing and light refreshments—say, a minimum of 1,500 sq. ft.; women members' retiring room, 200 sq. ft.

Cloak rooms and lavatories for members (both male and female) must be provided with suitable circulation, so as to avoid congestion in the case of receptions, meetings, etc. A night watchman is to be employed and no caretaker's quarters will be needed.

Full advantage should be taken of the London Building Regulations to provide upper floors, for letting as offices, with separate staircase and lifts entered from Weymouth Street, and special consideration will be given to the amount and suitability of the floor space so provided.

Ample provision should be made for heating and ventilation plant with space for calorifiers and for an artesian well and oil storage. These will serve the entire building.

Special Notes on Library

The material, both in books and drawings, in the R.I.B.A. library is vast and of considerable value. The problem is to ensure that this material shall be used to the best advantage and that the information it offers shall be made easily accessible. The form in which the accommodation is to be provided is left entirely to competitors, but it must be such as to combine all the requirements of an absolutely modern library with perfect administrative facilities and equipment and for the storage, use and care of books. It may be situated on any floor or in any position where quiet is assured.

The library can be divided into three divisions : (1) the periodical section; (2) the lending section; (3) the reference section.

These may be separated or planned as divisions of one main room, subject to the following considerations :

The Periodical Section should be readily accessible without passing through or interference with the quiet of the reference section, but it should not be entirely cut off from the rest of the library. It may contain shelving for books.

The Lending Section may have " open access " if this could be arranged for without detriment to the quiet of the other sections, but the latter requirement is of major importance. There should be an inquiry desk with ample space for catalogues near the library entrance, in a position where the Assistant Librarian, who will be in charge of both the lending and the general catalogues, can exercise supervision over the library generally.

The Reference Section is the most important part of the library, and needs ample space, quietude, ready access to books by readers and staff and, of course, good light. It may have bays for various classes of readers, but should, at the same time, be easy to supervise.

Ample space should be provided for cases in which to exhibit rare books and prints, and, possibly in combination with the bookcases, cabinets for prints and drawings.

Library : Book Accommodation

The total accommodation required for books, etc., will be met by the provision of a vertical superficial area of book cases measuring 7,000 sq. ft., of which the lending section will require 1,000 sq. ft. The height of these cases should not exceed 7 ft. 6 ins. and 5,000 sq. ft. may be arranged in the periodical and reference sections, or in stack rooms or galleries open to, and accessible from, the reference section of the library. The remaining 1,000 sq. ft. for little-used books (*a*) (see Schedule) need not be adjoining or even on the same floor as the library, but should be reasonably accessible from it. The 7,000 sq. ft. provide for what is regarded as reasonable future expansion.

The additional accommodation mentioned in the schedule may be on two or more floors, equivalent in total height to the main library.

Good day light in every part of the library is essential, except in a general stack room, if provided. Top light is admissible, but side lighting is preferred.

Any subsidiary floors within the library should be provided with their own independent staircase or staircases, and if a lift is found to be desirable it should be of sufficient size to take an attendant and book trolley.

SOCIETIES AND INSTITUTIONS

NORTH STAFFORDSHIRE ARCHITECTS AT DINNER

MR. FRANCIS JONES, F.R.I.B.A., responding to the toast of the "R.I.B.A. and the Allied Societies," proposed by Mr. W. Stanley, at the fifth annual dinner of the North Staffordshire Architectural Association, said we lived in an age of great architectural activity, which afterwards would come to be known as one of distinctive architectural movement and enthusiasm. There could be no doubt that the majority of the people at work in the architectural profession now, and in the next few years, would be found to be those trained in the architectural schools inspired by the R.I.B.A. and by the Board of Architectural Education, which was an integral part of it.

Mr. Duncan Campbell, F.R.I.B.A., in reply, referred to the affiliation of the North Staffordshire Association to the Liverpool Society.

Mr. J. B. Adams, F.R.I.B.A., president, said that during the past year a North Staffordshire Panel of Architects had been formed under the scheme developed by their first president, Mr. Reginald T. Longden, F.R.I.B.A., and adopted by the Institute. The object of the panels was to provide sound and suitable designs for dwellings at a nominal cost, and by means of this scheme better types of small houses would be provided.

SOUTHEND ARCHITECTS' ANNUAL MEETING

At the annual meeting of the Southend Chapter of the Hertfordshire Society of Architects, held at the School of Arts and Crafts, Southend, the following officers were elected :

Chairman : Mr. Norman Evans, L.R.I.B.A.; vice-chairman, Mr. H. R. Cowley, F.R.I.B.A.; hon. treasurer, Mr. George F. Grover, L.R.I.B.A.; hon. librarian, Sir Charles Nicholson, Bt., M.A., F.R.I.B.A.; and hon. secretary, Mr. H. Ayshford, L.R.I.B.A. Committee : Messrs. Percy G. Hayward, F.R.I.B.A.; D. H. Burles, F.R.I.B.A.; Percy R. Fincher, F.R.I.B.A.; J. Saunders and Councillor O. H. Cockrill, A.R.I.B.A.

ROYAL SOCIETY OF BRITISH SCULPTORS

At the annual general meeting of the above Society Mr. W. Reynolds-Stephens was elected (for the tenth year of office) president; Mr. Gilbert Bayes was elected vice-president ; and Mr. C. L. Hartwell, R.A., hon. treasurer.

DORMAN LONG SCHOLARSHIP

Following are the conditions of the Dorman Long Travelling Scholarship, 1931.

The Scholarship was founded for the purpose of encouraging and developing in Great Britain knowledge of steel-frame construction, and to provide an opportunity for travel and study. The principal points in connection with this scholarship, organized by the Institution of Structural Engineers, are :

1 : The age of candidates should be under thirty.

2 : The competition will consist of an examination, held at a number of centres on June 20, 1931, when candidates will be given a set of framing plans, and a pillar schedule, such as are usually supplied by consulting structural engineers, and they will be required to provide shop detail drawings, mill order sheets, specification, and cutting lists for the members marked on the plans. The sitting will be followed by a period of twenty-one days, during which candidates will have to make and submit finished drawings and lists.

3 : The winning candidate will be awarded a gold medal and £300, and will be required to travel to Canada and study building conditions in that country.

LAW REPORTS

HOUSE OF LORDS APPEAL—MINISTER OF HEALTH'S ORDER CONFIRMING IMPROVEMENT SCHEME HELD VALID

Minister of Health v. *The King—ex parte Yaffe. House of Lords. Before Lords Dunedin, Warrington, Tomlin, Thankerton and Russell of Killowen*

THEIR lordships by a majority allowed the appeal by the Minister of Health from an order of the Court of Appeal, setting aside an order of the King's Bench Divisional Court, whereby a rule nisi for certiorari calling upon the Minister of Health and the Liverpool Corporation to show cause why an order of the Minister of November, 1928, confirming an improvement scheme known as the Liverpool, Queen Anne Street, Improvement Scheme, 1928, should not be quashed, was discharged. The Court of Appeal ordered that the writ of certiorari should go to the Minister of Health to bring up the confirmation order to be quashed as an excess of his jurisdiction.

The facts of the litigation were as follows: The rule nisi had been granted at the instance of Mr. Yaffe, an estate agent of Liverpool, it being alleged on his behalf that the Minister had no jurisdiction to make the order of November, 1928, for the following reasons: That the scheme as submitted to the Minister was not an improvement scheme within Part 2 of the Housing Act, 1925, because it contained no concrete proposal for the development of the land within the Queen Anne Street area after acquisition by the Liverpool Corporation; that it did not provide for the rearrangement or reconstruction of any of the streets or houses in the area; that it provided that land within the area might be sold, leased or otherwise disposed of as the Corporation might think fit, and that the estimates which accompanied the scheme were insufficient; that the local inquiry which the Minister caused to be held in May, 1928, was void, because there was no improvement scheme within the meaning of the Act to be inquired into; that the modified scheme which purported to have been confirmed by the Minister was not an improvement scheme within the Act, since it did not indicate the manner in which the lands were to be developed and was not accompanied by any layout plan; and, finally, that a clause purporting to incorporate in the scheme plans to be made subsequently by the Corporation and approved by the Minister was *ultra vires*.

The question of importance raised by the case was whether the confirmation of a scheme—good or bad—by the Minister gave it statutory effect and prevented the Court from inquiring into it.

The King's Bench Divisional Court, by a majority, held that where the Minister had made an order bona fide intended and purporting to be made under section 40, subsection 5 of the Housing Act, 1925, confirming an improvement or reconstruction scheme, no question of *ultra vires* could be raised in a court of law.

The Court of Appeal held that where a scheme was unauthorized by the Act an order made by the Minister in purported confirmation of the scheme had no statutory effect and was liable to be quashed by certiorari.

After long legal argument, the Law Lords, with one dissentient—Lord Russell of Killowen—came to the conclusion that the scheme, as confirmed, was a good scheme, and that the appeal should be allowed, and that the judgment of the King's Bench Divisional Court, although on very different grounds, should be restored. Their lordships were glad to reach this result, as no one could possibly look at these proceedings without being convinced that they were a genuine scheme of sweeping away an insanitary area and replacing the old by new and sanitary houses. There was no trace of any oblique motive.

ALLEGED ANNOYANCE FROM A HOARDING: JUDGMENT

Stening and another v. *Abraham and others. Chancery Division Before Mr. Justice Farwell*

This was an action by Mr. A. F. Stening and Mr. E. J. Baker, partners in the firm of Chancellors, estate agents, of The Quadrant, Richmond, against Mr. S. Abrahams and others, trading as the Swift Service Cleaning and Repairing Co., seeking a declaration that an advertisement hoarding across the front of 34 The Quadrant, Richmond, which was occupied by the defendants, was erected in breach of covenants contained in the lease granted to defendants by the plaintiffs.

It appeared that the plaintiffs granted the defendants a lease for twenty-one years from 1921, and plaintiffs' case was that, without their consent, the defendants granted a licence to A. A. Sites, Ltd., to erect on the front of the premises an advertisement hoarding, in contravention of the covenants of the lease, which provided that no part of the premises should be sub-let without previous consent, that no additions or structural alterations be made, and that no act be committed which might be, or become, a nuisance or annoyance.

Sir Herbert Cunliffe, K.C., stated that the whole of the second- and third-floor frontage of the premises was covered by the hoarding, and it projected a few feet above the roof level. The hoarding was removed, as it failed to comply with the local bylaws, but defendants still maintained that they were entitled under the lease to erect a hoarding at the premises and keep it there if the local regulations were fulfilled. His clients considered that the hoarding detracted from the amenities of the place and they had had complaints about it.

Evidence was given on behalf of the plaintiffs and the defendants.

His lordship, in giving judgment, said his view was that an addition which altered the appearance of the premises while it was there, but on removal the original structure remained unaltered, was not a structural alteration. If for the erection of the hoarding it had been necessary to cut away part of the stonework, then it might well have been that that amounted to a structural alteration.

Dealing with the covenant relating to assigning or sub-letting any part of the premises, his lordship said he came to the conclusion that there had been no parting with possession.

The case was, however, different when he came to the covenant which had regard to annoyance. Here the plaintiffs had made out their case, as he had had evidence that the hoarding was a source of annoyance, that the standing of the house had been lowered, and its monetary value affected. The hoarding was an annoyance to the lessor, and was likely to cause annoyance to a normally-minded person. Under these circumstances the plaintiffs succeeded on this ground and he granted them a declaration, with the costs of the action.

CONSTRUCTION OF A CONTRACT

Waddington and Son v. *Folkestone Corporation. King's Bench Division. Before Mr. Justice MacKinnon*

This was an action arising out of a contract for the construction of sewers at Folkestone.

The plaintiffs were Messrs. Waddington and Son, civil engineers and contractors, carrying on business at Carter Knowle Road, Sheffield, and they brought an action against the Folkestone Corporation to recover the sum of £782 for work and labour done for defendants in Tram Road, under a contract of March, 1927.

Plaintiffs' case was that under the contract they undertook to construct

a high-level intercepting sewer in accordance with the general conditions, drawings, etc., and that it included some tunnelling. Plaintiffs said that they constructed 117 lineal yards of sewer and 16 lineal yards of other sewer, and that the defendants had wrongly priced the work at £14 10s. and £13 8s. per yard respectively, whereas the price should have been £20 5s. per yard, which was the rate allowed for tunnelling, as the work in question was tunnelling. The plaintiffs in the alternative claimed the amount at the tunnelling rate.

The defendants by their defence pleaded that the tunnelling was done by the plaintiffs at their own convenience and with the consent of defendants. They also said that the certificate of their engineer was final and binding upon plaintiffs.

Evidence was given on behalf of the plaintiffs' case and for the defence by the Borough Engineer.

His lordship gave judgment for the defendants with costs. He said the question was whether this particular work was to be paid for upon the footing alleged by the defendants or at the rate of £20 5s. for tunnelling. He thought that the defendants' contention was right and that the rate for the work was as alleged by the defendants, and not at the tunnelling rate. The tunnelling had been done evidently by the plaintiffs to suit their own convenience. Judgment for the defendants with costs.

DANGEROUS STRUCTURE NOTICE

Cullman v. *Brandon.* *King's Bench Division.* *Before Lord Darling and a special jury*

This was an action by Mr. Wm. Cullman, a diamond dealer, of Croxted Road, West Dulwich, claiming damages for alleged trespass in connection with his lease of three rooms at 44 Hatton Garden, and the corner of Cross Street, from his landlord, Mr. H. Brandon, of Old Bond Street.

Defendant denied the plaintiff's allegation that after buying the premises in 1927 he had made the plaintiff's life a burden and a misery in order to get him out, because he desired to pull down the building and erect another on the site. Plaintiff, who had about 8 years of his lease to run, paid a rental of £34 a year. Defendant further pleaded that he had offered the plaintiff alternative accommodation, free removal and £50 pending the rebuilding of 44 Hatton Garden.

Mr. Croome Johnson, K.C., for the plaintiff, said the defendant offered his client certain rooms in the new building to be erected, but the terms were not acceptable. Workmen later came to the building, removed the roof and pulled down the ceilings and did over £200 worth of damage to his belongings.

Sergt. Sullivan, K.C., for the defendant, said his client received a dangerous structure notice and had to comply with it. He had to pull down, and offered the plaintiff other accommodation.

Evidence was called for the defence to show that the walls of the plaintiff's rooms were dangerous and had to be pulled down. Behind the panelling all the brickwork had perished.

The jury returned a verdict for the defendant and his lordship entered judgment accordingly, with costs.

COMPETITIONS OPEN

April 18.—Sending-in day. Central Municipal Bank and Head Offices, Broad Street, Birmingham. Assessor: Sir Reginald Blomfield, R.A., F.R.I.B.A. Premiums: £400, £300, and £150. Conditions from Herbert H. Humphries, City Engineer and Surveyor, Council House, Birmingham. (Deposit £3 3s.)

April 30.—Sending-in day. Hospital for Infectious Diseases, Coventry, for the Coventry Corporation. Assessor: E. Stanley Hall, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

June 1.—Sending-in day. New Council School, to be erected at Blowers, Dudley. (Limited to architects within a radius of 15 miles of Dudley.) Assessor: Herbert T. Buckland, F.R.I.B.A. Conditions from J. Whaley, Director of Education, Education Offices, St. James's Road, Dudley.

June 16.—Sending-in day. (Last day for conditions was February 25.) Offices for the Ingham Infirmary, South Shields. (Limited to architects within the area of the Northern Architectural Association.) Assessor: George Reavell, O.B.E., F.R.I.B.A. Premiums: £250, £100 and £50. Conditions were obtainable from John Potter, Secretary, Ingham Infirmary, South Shields. (Deposit £2 2s.)

June 24.—Sending-in day. King Edward VI. School, Mill Lane and Wilton Road, Southampton, for the Governors of the School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums, £150, £100 and £50. (Deposit, £1 1s.). Full particulars are obtainable from G. A. Waller, Clerk to the Governors, 7 Albion Place, Southampton.

June 26.—Sending-in day. Offices for the City of Leicester Corporation, Charles Street, Leicester. Assessor: E. Berry Webber, A.R.I.B.A. Premiums: £300, £200 and £100. Conditions from A. T. Gooseman, Engineer and Surveyor, Town Hall, Leicester. (Deposit £2 2s.)

June 30.—Sending-in day. Latest date for conditions: April 15. New Branch Baths, Foleshill, for the Coventry Corporation. Assessor: F. J. Horth, F.R.I.B.A. Premiums: £210, £105 and £52 10s. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

No date.—New Central Library, Market Place South, Birkenhead. Assessor: A. N. Prentice, F.R.I.B.A. (Conditions are not yet available.)

No date.—War Memorial, Colston Avenue, Bristol. (Limited to Bristol architects and assistants.) Assessor: G. C. Lawrence, F.R.I.B.A. Conditions from the Editor, *Bristol Times and Mirror*, St. Stephen Street, Bristol.

THE ARCHITECTS' DIARY

WEDNESDAY, APRIL 15

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Industrial Lighting." By D. R. Wilson, C.B.E. Chairman: Sir John H. Parsons, C.B.E. **8 p.m.**

LIVERPOOL ARCHITECTURAL SOCIETY, Bluecoat Chambers, School Lane, Liverpool. Annual General Meeting.

INSTITUTE OF LANDSCAPE ARCHITECTS. At the Royal Horticultural Hall, Greycoat Place, S.W.1. Discussion on "The Garden of the Future," to be opened by Edward Whyte. **3.30 p.m**

INSTITUTE OF FUEL. At the Chemical Society's Rooms, Burlington House, Piccadilly, W.1. Annual General Meeting, followed by a paper on "The Smoke Problem: A Consideration of some of its Economic Aspects and the Difficulties of its Solution." By Arnold Marsh, M.SC. (TECH.). Chairman: John Charrington, Junr. **6 p.m.**

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. Students' Meeting. "Some Considerations on the Economic Design of Small Reinforced-Concrete Girder Bridges for Highway Use." By F. C. Ball, B.SC. Chairman: Sir E. Owen Williams, K.B.E. **6.30 p.m.**

Daily Mail IDEAL HOME EXHIBITION, Olympia. Until May 2. **10 a.m. to 10 p.m.**

BUILDING TRADES EXHIBITION, Manchester. Until April 25.

THURSDAY, APRIL 16

INSTITUTION OF STRUCTURAL ENGINEERS. South Wales and Monmouthshire Branch. At the Institute of Engineers, Park Place, Cardiff. "The Erection of Sydney Harbour Bridge." By J. Stuart Lewis.

AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE, 29 Lincoln's Inn Fields, W.C.2. "The Making of a Connoisseur, Part 10." By H. Mordaunt Rogers. **7.30 p.m**

SOCIETY OF ANTIQUARIES, Burlington House, S.W.1. "Excavations in Bambata Cave, Rhodesia, and the Evidence at Victoria Falls relative to the Age of Man in South Africa." By Leslie Armstrong, M.C., F.S.A. **8.30 p.m.**

INSTITUTION OF CIVIL ENGINEERS. Students' visit to the Dagenham Works of the Ford Motor Company.

FRIDAY, APRIL 17

LONDON SOCIETY. At the Royal Society of Arts, John Street, Adelphi, W.C.2. "Noise: A Modern Plague of London." By Dr. Dan. McKenzie, F.R.C.S. Chairman: Carmichael Thomas.

GARDEN CITIES AND TOWN PLANNING INSTITUTE, 3 Gray's Inn Place, W.C.1. Dinner to celebrate the Twenty-first Anniversary of the Town Planning Act, to be held at the Holborn Restaurant, London. Guest of Honour: The Rt. Hon. John Burns. Chairman: The Rt. Hon. The Earl of Lytton, P.C. 7.15 for 7.45 p.m. **7.15 p.m.**

THE ROYAL SANITARY INSTITUTE Sessional Meeting in the Guildhall, Poole. Welcome by the Mayor, 4 p.m. Discussions will be opened on "Some Aspects of Municipal Sanitation," by E. J. Goodacre, A.M.INST.C.E., Borough Surveyor; "Prospect and Retrospect," by Alderman J. C. Julyan, J.P., C.C., and "Diphtheria Immunisation at Work," by George Chesney, M.B., D.P.H. Chairman: Edward Willis, M.INST.C.E., F.S.I., M.INST.T. (Chairman of the Council of the Institute). **5 p.m.**

SATURDAY, APRIL 18

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION, The Castle, Winchester. Excursion.

ROYAL SANITARY INSTITUTE. At Poole. 10.30 a.m. Meet at the Park Gates East (site of new Municipal Buildings), for a drive round the Borough to inspect Municipal Activities. 1 p.m. Lunch at the Haven Hotel, Sandbanks. 4/6 each. 4 p.m. Tea at the Branksome Dene Chine Cafe by invitation of the Council. **10.30 a.m.**

BERKS, BUCKS AND OXON ARCHITECTURAL ASSOCIATION. Annual General Meeting, to be held in the Hall of the University College, Oxford. **2.45 p.m.**

MONDAY, APRIL 20

LONDON SOCIETY. Visit to the New Dorchester Hotel, Park Lane, W.1. (Limited party only.) **3 p.m.**

TUESDAY, APRIL 21

R.I.B.A., 9 Conduit Street, W.1. Exhibition of "The Architecture of Modern Transport," to be opened by H. G. Wells. 3 p.m. (Until May 22. 10 a.m. to 8 p.m. Saturdays, 10 a.m. to 5 p.m.). **3 p.m.**

WEDNESDAY, APRIL 22

INSTITUTE OF FUEL. At the Grand Hotel, Birmingham. "The Smoke Problem: A Consideration of some of its Economc Aspects and the Difficulties of its Solution." By Arnold Marsh, M.SC. (TECH.). **6.15 p.m**

THURSDAY, APRIL 23

WEST YORKSHIRE SOCIETY OF ARCHITECTS, 62 Woodhouse Lane, Leeds. Annual General Meeting. **7 p.m.**

FRIDAY, APRIL 24

TOWN PLANNING INSTITUTE. At Caxton Hall, Westminster, S.W.1. "Rural Preservation and the Landowner." By Christopher Turnor. **6.30 p.m.**

LONDON SOCIETY. Visit to the Church of St. Margaret, Broadway, Westminster, S.W.1. **3 p.m.**

TRADE NOTES

The following letter has been received by the Silicate Paint Company from Messrs. R. Best and Son, decorators and contractors, of 26 Walcot Street, Bath. It is dated January 29, 1931. The photograph referred to is reproduced on this page. "Gentlemen,—We feel you would be interested in the following details pertaining to your Duresco. In 1907 the end walls of St. Michael's Church were washed off and distempered with two coats of your Duresco and decorated in same. This year it was decided to try and get them washed, and we were asked to do the work. It was with a feeling of great uncertainty that we undertook to do the same, for the walls were what we thought gone beyond washing, and so very black. However, we put some careful men on the work, and to our great surprise, it has washed up most beautifully, and looks as fresh and good as the day it was done. It so struck us at the great difference of what was washed and the old work not done, we decided to have the enclosed photo taken and felt sure you would like to see it, and feel interested, for if it had been done with oil paint it could not have washed better, and perhaps not so good. We might say we showed your agent of Messrs. Rowe Bros. while doing the work, and they expressed their surprise and astonishment at the great difference. Please return this photo and oblige.—Yours respectfully, R. Best and Son."

*

The Ragusa Asphalte Paving Co., Ltd., have been selected to carry out the asphalting work at Messrs. Shell Mex' new headquarters, to be known as Shell Mex House, in the Strand, formerly the Hotel Cecil.

*

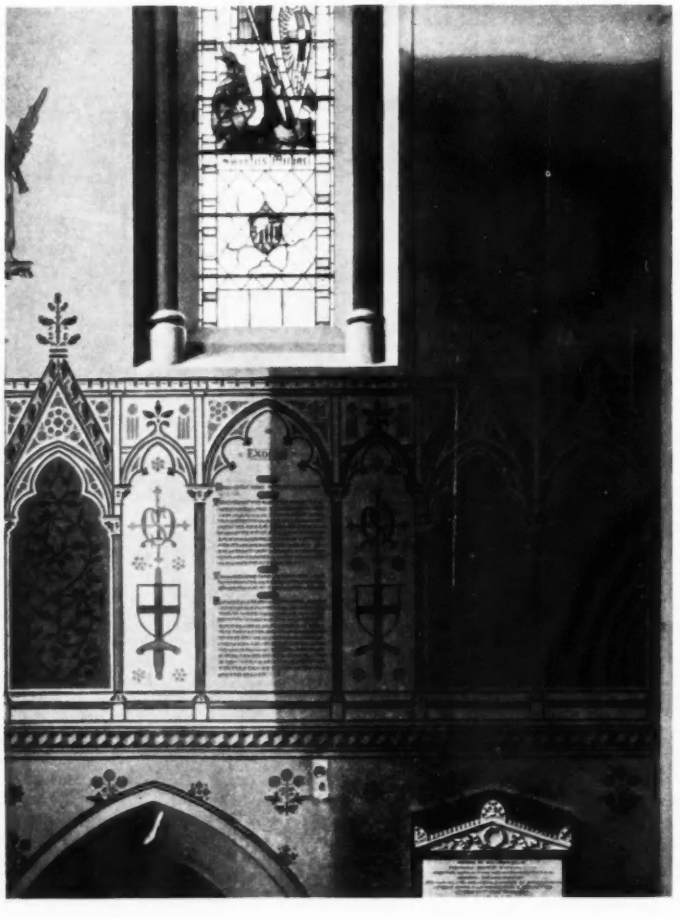
Owing to expansion of business the Hollow Steel Floor Co., Ltd., of Middlesbrough, have opened an office at 400 Abbey House, Westminster, where their representative is Mr. E. Davies. Telephone number: Victoria 3669.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:

Westminster Public Baths, Marshall Street, W.1 (pages 547–551; also supplements). General contractors, Bovis, Ltd. Sub-contractors: Diespeker & Co., Ltd., terrazzo; Ragusa Asphalte Paving Co., Ltd., asphalt; H. T. Jenkins and Son, Ltd., marble; Acme Flooring and Paving Co. (1904), Ltd., wood-block flooring; Carter and Aynsley, Ltd., ironmongery; Morris-Singer Co., and Starkie Gardner, Ltd., wrought-iron and bronze railings, etc.; H. H. Martyn & Co., Ltd., fibrous plaster; Crittall Manufacturing Co., Ltd., metal windows and lantern lights; Ewarts and Son, Ltd., lightning conductors; Ayres, Ltd., diving stages; Lyon & Co., electric clocks and telephones; Luxfer, Ltd., fire-resisting glazing; Stephens and Carter, Ltd., steel scaffolding; Express Lift Co., Ltd., lifts; Kennicott Water Softening Co., Ltd., water filtration; Willment Bros., aggregate for concrete; Bath and Portland Stone Firms, Ltd., Portland stone; Z. D. Berry and Sons, heating engineers; Cement Marketing Co., Ltd., cement; Expanded Metal Co., Ltd., metal lathing; Duncan Watson & Co., electric lighting; Burn Bros., Ltd., drainage; Finch & Co., Ltd., lavatories and w.c.s; Stourbridge Glazed Brick Co., glazed bricks and tiles; Carter & Co., Ltd., fireclay scum trough; Dorman Long & Co., Ltd., structural steel; Davis Bennett & Co., Ltd., slipper baths; United Strip and Bar Mills, Ltd., steel rods for reinforced concrete; Macinlop, Ltd., rubber paving.

Oversound House, Down Thomas, South Devon (pages 554–556). General contractor, H. Holmes. Sub-contractors: Mackallen Heating Co., Ltd., heating and hot and cold water services; Ruberoid Co., Ltd., roofing; Crittall Manufacturing Co., Ltd., windows; Adamsez, Ltd., Rownson, Drew and Clydesdale, Ltd., and Twyfords, Ltd., sanitary fittings; Penrose and Son, plumbing; Moysey and Son, painting and decorating; W. G. Heath & Co., electrical wiring; Merchant Trading Co., Ltd., internal doors and Celotex insulation; West of England Joinery Co., Ltd., external and garage doors; Lewisham Timber Co., Ltd., entrance gates; Loft Ladders, Ltd., loft ladder; N. F. Ramsay & Co., Ltd., door furniture; Roanoid, Ltd., cupboard and external door furniture; Septic Tank Co., Ltd., sewage disposal; W. H. Treeby and Son, wrought-iron balustrading.



A photograph of one of the walls in St. Michael's Church, Bath, before and after it had been cleaned. (See note on this page.)

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office. All inquiries concerning inventions, patents and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated readers should apply to the Patent Office, 25 Southampton Buildings, W.C.2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

9159. Wagner, M. Devices for fixing roof plates, etc., in position. March 25.

9310. Airey, Sir E. Concrete constructions for floors. March 27.

9505. Waller, J. H. de W. Building construction. March 28.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Plans passed at BARKING: Office and stores, Alfred's Way, for Mr. F. Goymer; mission hall, Gascoigne Road, for the Barking Baptist Tabernacle; additions, 108 Boundary Road, for Mr. Lewis; fourteen shops and sixteen garages, Longbridge Road and Lodge Avenue, for Messrs. Hooker and Rogers; six houses, Longbridge Road, for Mr. H. Ranson; church, Wood Lane and Hewitt Road, for the Bishop of Chelmsford.

The BARKING U.D.C. is to obtain two sites for the erection of branch libraries on the Becontree housing estate.

The BARKING U.D.C. has obtained sanction to borrow £100,000 for the erection of schools on the Becontree housing estate.

The Essex Education Committee has approved plans for the erection of a junior school at CHADWELL HEATH, at a cost of £15,000.

Plans passed at CROYDON: Alterations and additions, Grant Bros., High Street, for Messrs. Hall, Jones and Dewhurst; additions, 43 Selsdon Road, for Messrs. Ebbutt and Son; alterations and additions, 21 Park Hill Rise, for Mr. Oliver Law; fifty-two houses, Park Crescent and Shirley Way, for Messrs. J. Cronk and Son; three shops, South End, for Morris Estates, Ltd.; additions and new hall, Suffolk Road, for Messrs. Castle Bros., Ltd.; alterations and additions, Grand Parade, High Street, for Express Dairy Co.; bungalow and workshop, Torridge Road, for Mr. P. Richardson; warehouse additions, Old Palace Road, for Messrs. Pickfords, Ltd.; two houses, Kilmarton Avenue, for Mr. H. G. Rodda; thirty-two houses, Lakehall Gardens, for Mr. P. Richardson; thirty-eight houses, Stafford Road and Stafford Way, for Messrs. Smith & Co.; three shops, High Street, for Mr. H. N. Dering; ten houses, Canham Road, for Mr. P. Richardson; two houses, Havelock Road, for Mr. H. J. Martin; alterations and additions to administrative block and a new disinfecting addition, Mayday Road hospital, and factory and office, Dingwall Road, for Messrs. H. Berney and Son; sixteen houses, Birchanger and Elborough Roads, for Mr. J. Thorman; four shops, Devonshire Terrace, for Messrs. Burcote, Ltd.; two shops, Wickham Road, for Mr. G. Peskett; alterations, 11–13–15 North End, for Messrs. G. Baines and Sons.

The Middlesex C.C. is to prepare a scheme for the complete development of the Redhill institution, EDGWARE, in preference to a proposal of the old Board of Guardians to erect a nurses' home, at a cost of £31,000.

The FINCHLEY U.D.C. has obtained sanction to borrow £18,000 for the erection of the open-air swimming bath.

Plans passed at FINCHLEY: Four houses, Winnington Road, for Messrs. R. Hart and Sons; twelve flats, Station Road, for Mr. W. Hollis, jun.; house, Litchfield Way, for Mr. A. Wood; house, Ossulton Way, for Mr. G. C. Swanson; two houses, Allandale Avenue, for Messrs. C. W. B. Simmonds; shop, Ballards Lane, for Mr. W. H. O. Ainslie; twenty-nine houses, Vines Avenue, for the West Streatham Building Co., Ltd.; extension, rear of 65 High Street, for the International Tea Co. Stores Ltd.; eight houses, Blandford Close, for Mr. H. Lawrance.

The GREENWICH B.C. is to erect thirty-six houses on the Charlton estate, at a cost of £16,500.

The Middlesex C.C. has acquired a site in Broom Lane, GUNNERSBURY, for the erection of houses for tenants displaced by the construction of the Chertsey arterial road.

Messrs. Charles Spreckley & Co., Ltd., are to extend their premises in Uxbridge Road and Pennard Road, HAMMERSMITH.

Plans passed at ILFORD: Twenty houses, Reynolds Avenue, for Messrs. P. G. Ashton and Sons; eight houses, Embassy Gardens, for Messrs. V. and F. Jenner; twelve houses, Mayesford Road, for Messrs. P. G. Ashton and Sons; 158 houses, South Park Drive, Dawlish Drive and Chudleigh Crescent, for Mr. T. Aldridge; fourteen houses, Shannon Terrace and Chadwell Heath Lane, for Mr. G. T. Siegerts; addition to factory, Grove Road, for Messrs. Chas. Morgan & Co.; addition to joinery works, for Messrs. F. Stimpson, Ltd.; forty-three houses, Glenwood Gardens, for Mr. A. Smith; nine houses, Westcliffe Gardens, for Mr. T. Anders; alterations and additions, 191 High Road, for Mr. J. W. Lohden; additions, Metropolitan Cable Works, Grove Road, for Mr. F. Smith; additions, 36–38 Rosemary Drive, for Mr. T. A. Clark; twenty-four houses, Kenwood Gardens, for Mr. T. Anders; four houses, Hereford Gardens, for Mr. A. P. Griggs; eighteen houses, Kelsie Gardens, for Mr. G. F. Siegerts; eight houses, Meadway, for Mr. J. R. Leftley; two shops, High Road, for Mr. J. Heathcote; club hall, Ilford Lane, for Mr. T. Anders; 107 houses, Brockham Drive and Otley Drive, for Mr. J. Aldridge; estate offices, Tomswood Hill, for Mr. A. J. Jennings; Congregational church, Woodford Avenue, for Messrs. Smee and Houchin; six houses, South Park Road, for Mr. G. Cushing; United Methodist Sunday School, Ilford Lane, for Messrs. Dixon Hill & Co.; alterations and additions, 9 Cranbrook Road, for Messrs. J. Lyons & Co., Ltd.; twenty-seven garages, Ilford Lane, for Mr. J. E. Challen.

The L.C.C. has passed plans, submitted by Mr. C. P. Duckering, on behalf of Messrs. Albert Brittain, Ltd., for the erection of premises on the site of 39–47 Wedmore Street, ISLINGTON.

The London Electric Railway Co. is to reconstruct KNIGHTSBRIDGE Station.

The Southern Railway Company proposes to lease land between LADYWELL and CATFORD railway stations to the Greyhound Racing Association, for the purpose of a greyhound race-track.

The L.C.C. has passed plans, submitted by Mr. W. E. Trent, for the erection of a cinema upon a site abutting on Loampit Vale, Molesworth Street, and Rennell Street, LEWISHAM.

The L.C.C. are to erect premises for the stores department at PECKHAM, at a cost of £26,500.

The POPLAR B.C. is purchasing a site in East Ferry Road for the erection of forty-eight flats and four cottages.

The Middlesex C.C. has obtained sanction to borrow £82,512 for the erection of a new infirmary, alterations to the annexe and alterations to the female wing at the SPRINGFIELD mental hospital.

Plans passed at WESTMINSTER: Building, 17–21 Northumberland Avenue, for Messrs. Hart and Waterhouse; building, South Africa House, site abutting on Trafalgar Square, Strand and Duncannon Street, for Messrs. G. Head & Co.

SOUTHERN COUNTIES

Plans passed at EASTBOURNE: Two houses, Dillingburgh Road, for Messrs. Mark Hookham, Ltd.; house, Baldwin Avenue, for Mr. A. Ford; house, Prideaux Road, for Messrs. W. Baldwin & Co.; dairy, 295 Seaside, house, Chamberlain Road, house, Northiam Road, and warehouse, Longstone Road, for Mr. W. R. Hamblyn; house, Northiam Road, for Mr. C. M. Wood; house, The Goffs, and motor showrooms, offices and flats, Cornfield Road, for Mr. F. C. Benz; house, Upland Road, for Mr. A. E. Hill.

Plans passed at HASTINGS: Two houses, Downs Road, for Messrs. J. Lester and Sons; house, Upper Church Road, St. Leonards, for Messrs. Hutchinson and Sons; house, Tower Road, St. Leonards, for Messrs. Vine and Sons; six houses, St. Helen's Road, for Mr. J. S. D. Dicks; two houses, Burry Road, St. Leonards, and house, Fairlight Road, for Mr. J. Hunt; tea rooms, Pevensey Road, St. Leonards, for Messrs. Callow and Callow; two houses, Battle Road, for Mr. G. F. Miller; two houses, Ochiltree Road, St. Helen's, for Mr. F. W. Southwell; house, Milward Road, for Messrs. Ward, Son and Wray; twelve houses, Hoads Wood Road, for the Cinque Ports Building Co.

The WORTHING Corporation has obtained the sanction of the Ministry of Health to the scheme for the erection of new municipal offices at a cost, exclusive of the site but inclusive of furniture, of £122,533.

SOUTH-WESTERN COUNTIES

Plans passed at CHELTENHAM: Two houses and four shops, Gloucester Road, for Mr. O. A. Forty; three houses, All Saints' Road, for Mr. G. W. Ward; house and shop, Tennyson Road, for Mr. W. H. Bedford; house, Gretton Road, Winchcomb, for Mr. W. Higgs; house, Church Street, Charlton Kings, for Mr. C. Smith.

Plans passed at TORQUAY: Two houses, Burridge Road, for the Chelston Building Co.; two houses, Avenue Road, for Mr. A. Chippendale; five houses, Dower Estate, for Messrs. J. Lloyd and Son; new premises, Torwood Street, for Messrs. Amusement Parks, Ltd.; six bungalows, Coombe Lane, for Mr. S. England; four houses, Reeves Road, Chelston, for Mr. P. D. Cavanna.

MIDLAND COUNTIES

The Derbyshire Education Committee has decided to erect elementary schools at BORROWASH, at a cost of £9,000; at CHADDESDEN at a cost of £8,000; and at SPONDON, at a cost of £9,500.

The BURTON-ON-TRENT Corporation has acquired a site in Curzon Street for the erection of a welfare centre.

The Derbyshire Education Committee is to prepare plans for extending the Girls' High School at BUXTON, at a cost of £10,000.

The Derbyshire Education Committee is to enlarge the CHESTERFIELD technical college, at a cost of £9,000.

The Derbyshire Education Committee is to enlarge the GLOSSOP Grammar School, at a cost of £10,000.

Plans passed at OXFORD: Two houses, Staunton Road, for Manor Estate Co.; alterations, 12 Queen Street, for Messrs. Boots, Ltd.; two houses, Binsey Lane, for Mr. D. Mealing; house and shop, Towns Road, for Mr. E. Haines; house, Sandfield Road, Headington, for Mr. Collier; house, Great Headley Estate, for Messrs. Cripps and Stuart; two houses, Great Headley Estate, for Mr. A. C. Carter; house, Great Headley Estate, for Mrs. C. M. Clark; two houses, Iffley Road, for Messrs. Knowles and Son; house, Cuckoo Lane, for Manor Estate, Ltd.; house, Crescent Road, for Mr. J. H. Tucker; shop, Towns Road, Cowley, for Messrs. J. Wells and Sons; showrooms, offices, garages, etc., St. Aldate's, for Mr. H. W. Smith; house, Lucerne Road, for Mr. F. H. White.

The Staffordshire Education Committee is to provide a new public elementary school at STOCKTON BROOK.

The Derbyshire Education Committee is to erect new premises for the Clay Cross secondary school at TIPTON HALL, at a cost of £18,000.

NORTHERN COUNTIES

The HULL Education Committee has purchased land adjoining the Derringham Bank housing estate, for the purpose of a school site and playing-fields.

Messrs. Gelder and Kitchen, on behalf of the trustees of the Methodist Church Council, are obtaining four sites on housing estates from the HULL Corporation, for the erection of churches.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_2	Aylesflury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_3	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_3	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W.Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank ..	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester ..	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey ..	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_1	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter . . . . ,,	1 8
Joiner . . . . ,,	1 8
Machinist . . . . ,,	1 9
Mason (Banker) . . . . ,,	1 8
,, (Fixer) . . . . ,,	1 9
Plumber . . . . ,,	1 8
Painter . . . . ,,	1 7
Paperhanger . . . . ,,	1 8
Glazier . . . . ,,	1 8
Slater . . . . ,,	1 8
Scaffolder . . . . ,,	1 4
Timberman . . . . ,,	1 4
Navvy . . . . ,,	1 3
General Labourer . . . . ,,	1 3
Lorryman . . . . ,,	1 5½
Crane Drivers . . . . ,,	1 7
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . ,,	2 10 6
Hydrated Lime . . . ,,	2 16 0
Portland Cement . . . ,,	2 6 0
Ferro-crete . . . ,,	2 13 6
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . . ,,	10 0
Building Sand . . . ,,	10 6
Washed Sand . . . ,,	11 6
2" Broken Brick . . . ,,	9 6
¾" ,, ,, . . . ,,	12 6
Pan Breeze . . . ,,	6 6
Coke Breeze . . . ,,	8 9

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . ,,	3 3 6
Stocks, 1st Quality . . . ,,	4 18 6
,, 2nd ,, . . . ,,	4 12 6
Blue Bricks, Pressed . . . ,,	9 18 9
,, Wirecuts . . . ,,	8 16 0
,, Brindles . . . ,,	8 0 0
,, Bullnose . . . ,,	10 8 0
Red Sand-faced Facings . . ,,	7 11 0
Red Rubbers for Arches . . ,,	15 0 0
Multicoloured Facings . . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . . ,,	21 10 0
Headers . . . . ,,	21 0 0
Bullnose . . . . ,,	28 0 0
Double Stretchers . . . ,,	30 0 0
Double Headers . . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . ,,	6 3	7 2
Rest bends . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
½" Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers . . ,,	5 6	7 9
Yard gullies . . ,,	9 6	11 6
Interceptors . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . ,,	5	—

MASON

	s. d.
The following d/d F.O.R. at Nine Elms:	
Portland stone, Whitbed . . . C.	4 6
,, ,, Basebed . . . ,,	4 9
Bath stone . . . . ,,	2 11
York stone . . . . ,,	6 9
,, Sawn templates . . . ,,	7 6
,, Paving, 2" . . . . F.S.	1 8
,, ,, 3" . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20" × 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . as 1" F.S.	9
Deal, Joiner's, . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . ,, ,,	1 1
Deal floorings, ¾" . . . Sq.	1 1 0
,, 1" . . . ,,	1 3 6
,, 1¼" . . . ,,	1 5 6
,, 1½" . . . ,,	1 11 0
,, 1¾" . . . ,,	1 15 0
Deal matchings, ¾" . . . ,,	16 0
,, 1" . . . ,,	17 6
,, 1¼" . . . ,,	1 6 0
Rough boarding, ¾" . . . ,,	18 0
,, 1" . . . ,,	1 0 0
,, 1½" . . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	¼"			½"			¾"			1"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany 1 side	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½"	¾"	1"	1¼"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket union . . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

Per cent.		Per cent.
Gas . . . 62½	Galvanized gas .	50
Water . . . 58½	,, water .	45
Steam . . . 55	,, steam .	40

FITTINGS.

Per cent.		Per cent.
Gas . . . 47½	Galvanized gas .	37½
Water . . . 42½	,, water .	32½
Steam . . . 37½	,, steam .	27½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ¾" . . . ,,	10 0
,, ,, ⅝" . . . ,,	9 9
,, ,, ½" . . . ,,	9 6
,, ,, ⅜" . . . ,,	9 0
,, ,, ¼" . . . ,,	9 0
,, ,, 1" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0

Cast-iron rain-water pipes of ordinary thickness metal	F.R.	3" s. d.	4" s. d.
Shoes	each	2 3	3 3
Anti-splash shoes . . .	,,	5 0	8 6
Boots	,,	3 3	4 6
Bends	,,	2 9	4 0
,, with access door . . .	,,	—	6 9
Heads	,,	4 0	5 0
Swan-necks up to 9" offsets .	,,	4 0	6 3
Plinth bends, 4½" to 6" . .	,,	4 0	5 6
Half-round rain-water gutters of ordinary thickness metal .	F.R.	5	6
Stop ends	each	6	7
Angles	,,	1 7	1 11
Obtuse angles . . .	,,	2 0	2 6
Outlets	,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	21 0
,, drawn pipes . . . ,,	21 6
,, soil pipe . . . ,,	24 6
,, scrap . . . ,,	11 0
Solder, plumbers' . . . lb.	1 0
,, fine do. . . . ,,	1 4
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3" F.R.	3"	4"	4"	6"
Plain cast . . .	F.R.	1 0	1 2	2	2 6
Coated . . .	,,	1 1	1 3	2	2 8
Galvanized . . .	,,	2 0	2 6	4	6
Holderbats . . .	each	3 10	4 0	4	9
Bends	,,	3 9	5 3	10	3
Shoes	,,	2 10	4 4	9	6
Heads		4 8	8 5	12	9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . . ,,		9
Do. wired plate . . ,,		1 3
¼" Polished plate, n/e 1 . ,,	1 0 to	1 3
,, ,, 2 . ,,	1 2 ,,	1 7
,, ,, 3 . ,,	1 7 ,,	2 5
,, ,, 4 . ,,	2 1 ,,	2 11
,, ,, 6 . ,,	2 3 ,,	3 2
,, ,, 8 . ,,	2 6 ,,	3 6
,, ,, 12 . ,,	2 9 ,,	3 8
,, ,, 20 . ,,	3 0 ,,	3 11
,, ,, 45 . ,,	3 3 ,,	4 1
,, ,, 65 . ,,	3 7 ,,	4 6
,, ,, 90 . ,,	3 10 ,,	4 9
,, ,, 100 . ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		1 3
,, ,, ,, over 2 . ,,		1 9
,, ,, plate, n/e 1 . ,,		1 6
,, ,, ,, 2 . ,,		3 0
,, ,, ,, 5 . ,,		4 0
,, ,, ,, 7 . ,,		5 0
,, ,, ,, 15 . ,,		6 0
,, ,, ,,over 15 . ,,		7 6
Putty, linseed oil . . lb.		3

PAINTER

	£ s d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 4
Patent knotting . . . ,,	14 0
Distemper, washable . . . cwt.	3 0 0
,, ordinary . . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

	£ s. d.
Digging over surface n/e 12″ deep and cart away . . . Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away . . Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away . . ,,	11 0
,, ,, 10′ 0″ deep and cart away . . ,,	11 6
,, ,, 15′ 0″ deep and cart away . . ,,	12 0
If in stiff clay . . . . . add ,,	3 0
If in underpinning . . . . . ,, ,,	5 0
Digging, return, fill and ram . . . . . ,,	5 0
Planking and strutting to sides of excavation . . . . F.S.	1 0
,, ,, to pier holes . . . . . ,,	6
,, ,, to trenches . . . . . ,,	6
,, ,, extra, only if left in . . . . . ,,	3½
Hardcore, filled in and rammed . . . . . Y.C.	14 0
Portland cement concrete in foundations (6-1) . . . . ,,	1 13 6
,, ,, ,, (4-2-1) . . . . ,,	1 18 6
,, ,, ,, underpinning . . . . ,,	2 2 0
Finishing surface of concrete, spade face . . . . . Y.S.	9

DRAINLAYER

	4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately) . . . . . F.R.	1 8	2 6
Extra, only for bends . . . . . Each	2 8	3 9
,, junctions . . . . . ,,	3 9	4 6
Gullies and gratings . . . . . ,,	17 6	19 9
Cast iron drains, and laying and jointing . . . F.R.	5 6	7 0
Extra, only for bends . . . . . Each	12 6	18 6

BRICKLAYER

	£ s. d.
Brickwork, Flettons in lime mortar . . . . . Per Rod	32 0 0
,, ,, in cement . . . . . ,,	34 0 0
,, Stocks in cement . . . . . ,,	41 10 0
,, Blues in cement . . . . . ,,	62 0 0
Extra only for circular on plan . . . . . ,,	3 0 0
,, backing to masonry . . . . . ,,	2 0 0
,, raising on old walls . . . . . ,,	3 0 0
,, underpinning . . . . . ,,	10 0 0
Fair Face and pointing internally . . . . . F.S.	3
Extra only for picked stock facings . . . . . ,,	1 0
,, red brick facings . . . . . ,,	1 6
,, blue brick facings . . . . . ,,	1 9
,, glazed brick facings . . . . . ,,	4 6
Tuck pointing . . . . . ,,	10
Weather pointing . . . . . ,,	4
Slate dampcourse . . . . . ,,	1 0
Vertical dampcourse . . . . . ,,	1 3

ASPHALTER

	s. d.
½″ Horizontal dampcourse . . . . . Y.S.	5 6
½″ Vertical dampcourse . . . . . ,,	7 6
½″ paving or flat . . . . . ,,	5 6
1″ paving or flat . . . . . ,,	6 6
1″ × 6″ skirting . . . . . F.R.	1 0
Angle fillet . . . . . ,,	2
Rounded angle . . . . . ,,	2
Cesspools . . . . . Each	5 0

MASON

	£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete . . . . . F.C.	1 1 6
Bath stone and do, all as last . . . . . ,,	15 6
Artificial stone and do. . . . . ,,	16 6
York stone templates, fixed complete . . . . . ,,	14 0
,, thresholds . . . . . ,,	16 0
,, sills . . . . . ,,	1 3 6

SLATER AND TILER

	£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″ . . . . . Sqr.	4 5 0
Do., 18″ × 9″ . . . . . ,,	4 2 0
Do., 24″ × 12″ . . . . . ,,	4 12 0
Westmorland slating, laid with diminished courses . . . ,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course . . . . . ,,	4 0 0
Do., all as last, but of machine-made tiles . . . . ,,	3 11 0
Fixing only, lead soakers . . . . . Doz.	9
tripping old slating and clearing away . . . . . Sqr.	10 0

CARPENTER AND JOINER

	£ s. d.
Flat boarded centering to concrete floors, including all strutting Sqr.	2 12 0
Shuttering to sides and soffits of beams . . . . . F.S.	1 0
,, to stanchions . . . . . ,,	1 0
,, to staircases . . . . . ,,	2 0
Fir and fixing in wall plates, lintols, etc. . . . . F.C.	5 0
Fir framed in floors . . . . . ,,	6 9
,, ,, roofs . . . . . ,,	8 3
,, ,, trusses . . . . . ,,	9 0
,, ,, partitions . . . . . ,,	12 0
½″ deal sawn boarding and fixing to joists . . . . . Sqr.	1 17 6
1″ ,, ,, ,, ,, ... ,,	2 1 6
1½″ ,, ,, ,, ,, ... ,,	2 7 6
½″ × 2″ fir battening for Countess slating . . . . ,,	12 6
Do. for 4″ gauge tiling . . . . . ,,	16 0
Stout feather-edged tilting fillet . . . . . F.R.	6
Patent roofing felt, 1 ply . . . . . Y.S.	2 6
,, ,, ,, 2 ,, ... ,,	3 0
,, ,, ,, 3 ,, ... ,,	3 6
Stout herringbone strutting to 9″ joists . . . . . F.R.	1 0
1″ deal gutter boards and bearers . . . . . F.S.	1 4
1½″ ,, ,, ,, ,, ,, ... ,,	1 8
2″ deal wrought rounded roll . . . . . F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off . . . . . Sqr.	2 15 0
1¼″ do. . . . . ,,	3 4 0
1½″ do. . . . . ,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall . . . . . F.S.	1 10
1¼″ do. . . . . ,,	2 1

CARPENTER AND JOINER—*continued.*

	s. d.
1¼″ deal moulded sashes of average size . . . . . F.S.	2 3
2″ ,, ,, ,, ,, ... ,,	2 6
1½″ deal-cased frames, double hung, of 6 × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ⅝″ parting beads, and with brass-faced axle pulleys, etc., fixed complete . . ,,	4 3
2″ ,, ,, ,, . . ,,	4 6
Extra only for moulded horns . . . . . Each	9
1½″ deal four-panel square, both sides, door . . . . F.S.	2 6
2″ ,, ,, ,, ... ,,	3 0
1½″ ,, but moulded both sides ,, ,, ... ,,	3 0
2″ ,, ,, ,, ... ,,	3 6
4″ × 3″ deal, rebated and moulded frames . . . . F.R.	1 6
4½″ × 3½″ ,, ,, ,, ... ,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers . . . . . F.S.	2 0
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages . . . ,,	3 0
1¼″ deal moulded wall strings . . . . . ,,	2 6
1½″ ,, outer strings . . . . . ,,	2 9
Ends of treads and risers housed to string . . . . Each	2 0
3″ × 2″ deal moulded handrail . . . . . F.R.	1 6
1″ × 1″ deal balusters and housing each end . . . . Each	2 6
1½″ × 1½″ ,, ,, ,, ... ,,	3 3
3″ × 3″ deal wrought framed newels . . . . . F.R.	1 6
Extra only for newel caps . . . . . Each	7 6
Do., pendants . . . . . ,,	7 6

SMITH AND FOUNDER

	£ s. d.
Rolled steel joists cut to lengths, and hoisting and fixing in position . . . . . Per cwt.	17 0
Riveted plate or compound girders and hoisting and fixing in position . . . . . ,,	1 3 0
Do. stanchions with riveted caps and bases and do. . . . ,,	1 2 0
Mild steel bar reinforcement ½″ and up, bent and fixed complete . ,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g. . . . . F.S.	1 0
Wrot-iron caulked and cambered chimney bars . . . Per cwt.	1 15 0

PLUMBER

	£ s. d.
Milled lead and labour in flats, gutters . . . . . Per cwt.	1 17 6
Do. in flashings . . . . . ,,	2 0 0
Do. in covering to turrets, etc. . . . . ,,	2 7 0
Do. in soakers . . . . . ,,	1 13 0
Labour to welted edge . . . . . F.R.	3½
Open copper nailing . . . . . ,,	3½
Close ,, ... ,,	4½

	½″ s. d.	¾″ s. d.	1″ s. d.	1½″ s. d.	2″ s. d.	4″ s. d.
Lead service pipe and fixing with pipe hooks . . . F.R.	1 2	1 7	2 1	2 8	3 8	—
Do. soil pipe and fixing with cast lead tacks . . . ,,	—	—	—	—	—	5 9
Extra, only to bends Each	—	—	—	—	2 3	6 6
Do. to stop ends . ,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions . . . ,,	3 6	4 0	5 6	8 0	—	—
Lead traps . . . ,,	—	—	—	7 6	10 6	—
Screw down bib valves . . . ,,	7 6	10 6	12 6	—	—	—
Do. stop cocks ,,	10 0	12 0	16 0	23 6	56 6	—

	£ s. d.
4″ cast-iron ½-rd. gutter and fixing . . . . . F.R.	1 3
Extra, only stop ends . . . . . Each	1 0
Do. angles . . . . . ,,	1 6
Do. outlets . . . . . ,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on . F.R.	1 6
Extra, only for shoes . . . . . Each	2 6
Do. for plain heads . . . . . ,,	5 6

PLASTERER AND TILING

	£ s. d.
Expanded metal lathing, small mesh . . . . . Y.S.	3 9
Do. in n/w to beams, stanchions, etc. . . . . ,,	5 6
Lathing with sawn laths to ceilings . . . . . ,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc. . . . . ,,	2 6
Do. vertical . . . . . ,,	2 9
Rough render on walls . . . . . ,,	2 3
Render, float and set in lime and hair . . . . . ,,	3 0
Render and set in Sirapite . . . . . ,,	3 3
Render, backing in cement and sand, and set in Keene's cement ,,	4 6
Extra, only if on lathing . . . . . ,,	9
Keene's cement, angle and arris . . . . . F.R.	8
Arris . . . . . ,,	3
Rounded angle, small . . . . . ,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth . ,,	2
1″ granolithic pavings . . . . . Y.S.	5 0
1½″ ,, ,, ,, ... ,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed . ,,	1 2 6
9″ × 3″ ,, ,, ,, ... ,,	1 7 6
Extra, only for small quadrant angle . . . . . F.R.	9

GLAZIER

	s. d.
21 oz. sheet glass and glazing with putty . . . . . F.S.	8
26 oz. do. and do. . . . . ,,	1 0
Arctic glass and glazing with putty . . . . . ,,	1 2
Cathedral glass and do. . . . . ,,	1 3
Glazing only, British polished plate . . . . . ,,	8
Extra, only if in beads . . . . . ,,	2
Washleather . . . . . F.R.	4

PAINTER

	s. d.
Clearcolle and whiten ceilings . . . . . Y.S.	8
Do. and distemper walls . . . . . ,,	1 0
Do. with washable distemper . . . . . ,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces . ,,	3 3
Do. on woodwork . . . . . ,,	3 6
Do. on steelwork . . . . . ,,	3 0
Do. and brush grain and twice varnish . . . . . ,,	5 6
Stain and twice varnish woodwork . . . . . ,,	1 11
Stain and wax-polish woodwork . . . . . ,,	4 6
French polishing . . . . . F.S.	1 2
Stripping off old paper . . . . . Piece	2 6
Hanging ordinary paper . . . . . from ,,	3 0

WESTMINSTER PUBLIC BATHS

GROUND-FLOOR PLAN AND PHOTOGRAPHS OF FIRST- AND SECOND-CLASS SWIMMING BATHS



A. W. S. and K. M. B. Cross, Architects

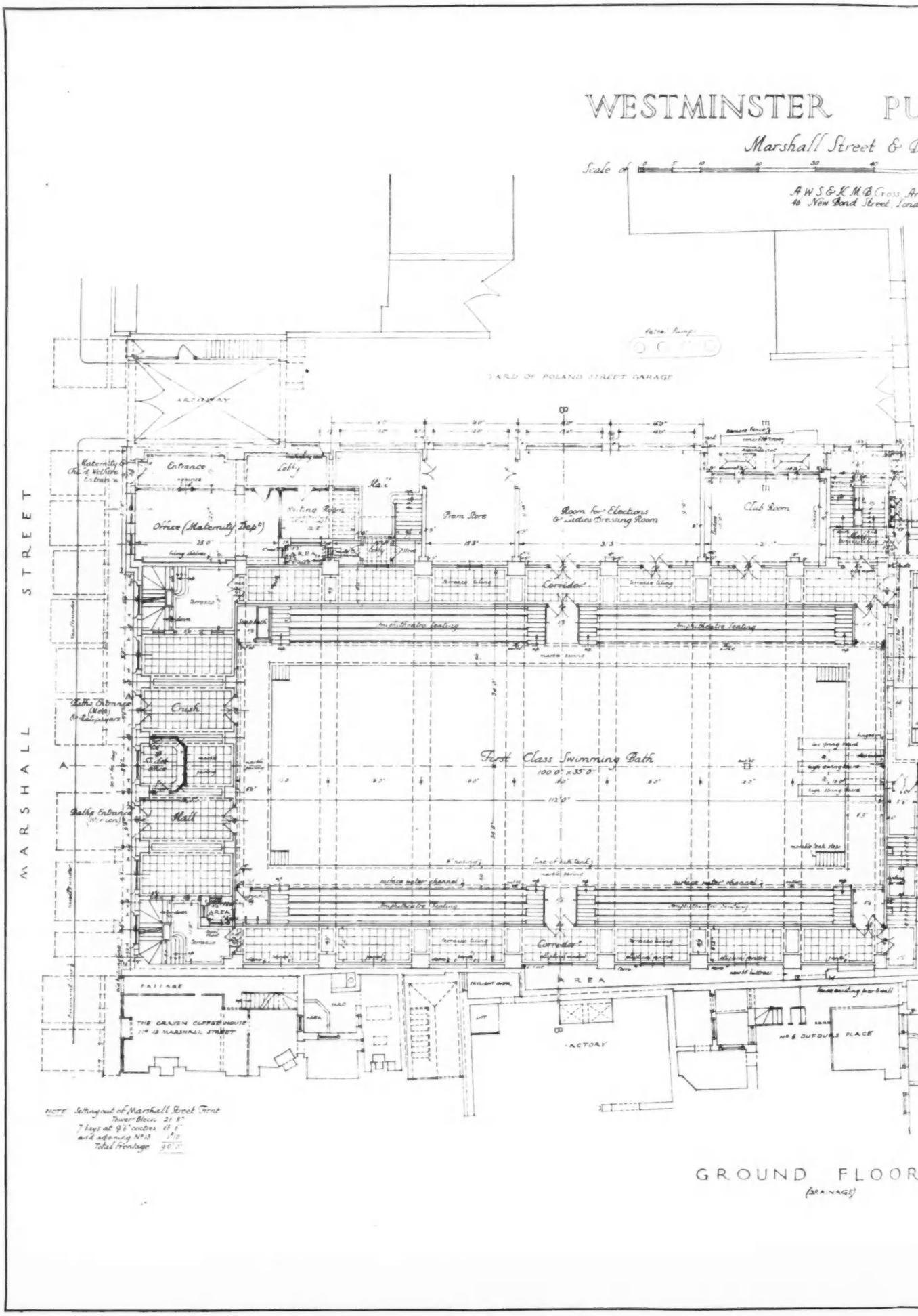
THE FIRST-CLASS SWIMMING BATH

THIS swimming bath is 100 ft. long by 35 ft. wide, the water depth varying from 3 ft. 6 ins. at the shallow end to 10 ft. at the deepest part of the diving pool. The latter is a new feature in covered swimming baths and is specially designed to permit of high-diving competitions.

The swimming bath is of reinforced concrete and is lined with Sicilian white marble with dark Swedish green marble lines inlaid for the guidance of swimmers. Round the pond is a bath platform or footway, finished with a special type of non-slippery paving. The large barrel roof, 112 ft. by 68 ft., is of reinforced concrete and, like the end walls, is lined with Sicilian white marble, relieved with panels of Swedish green.

Seating is planned on the amphitheatre system, and is of teak. The folding dressing-boxes also are of teak. Floodlighting is employed, powerful electric lamps being concealed in a specially formed marble trough running from rib to rib above the dressing-boxes.

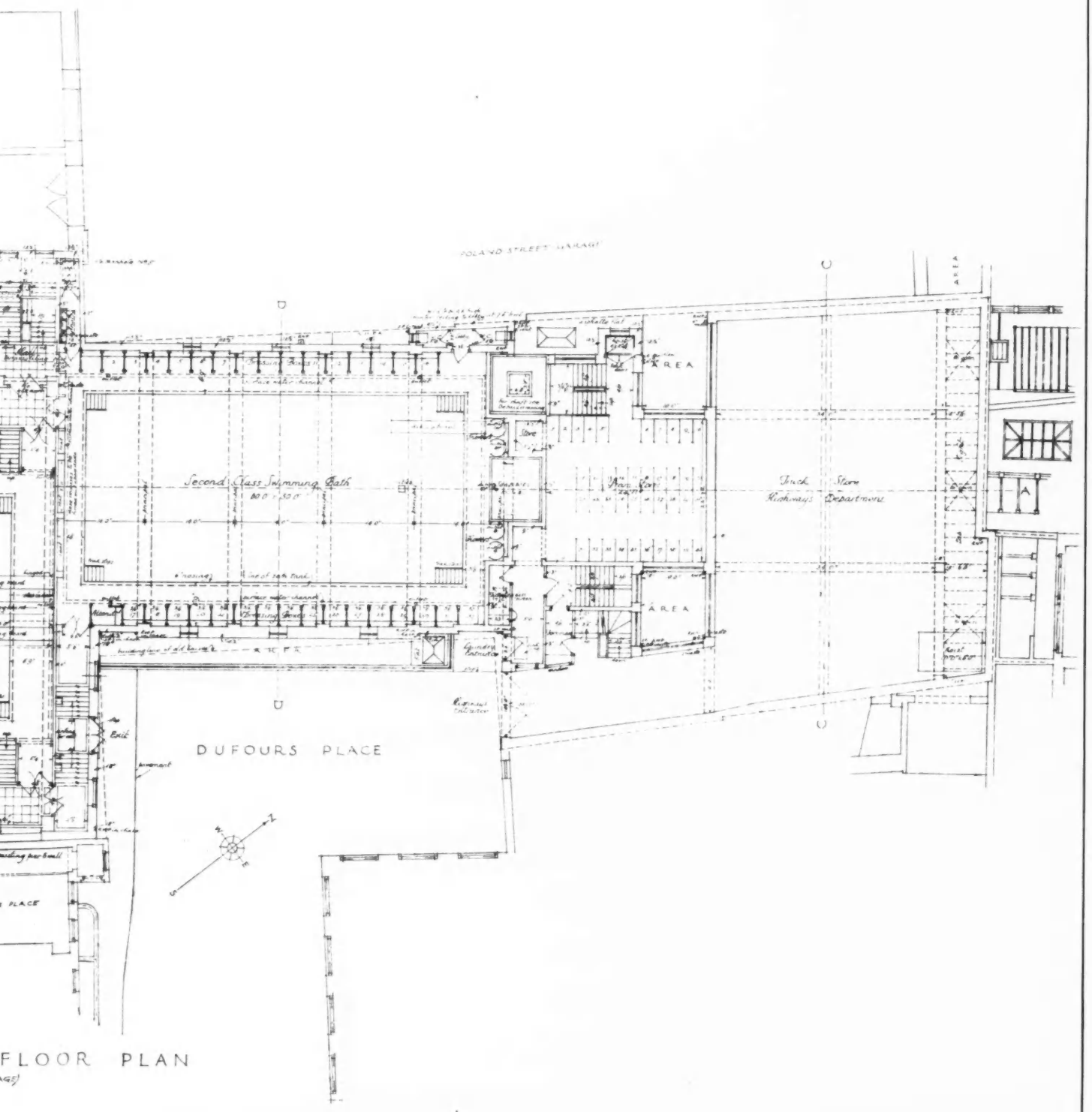
In the wall at the shallow end of the bath hall is a niche (see photograph above) in which an infant "Merman" and two dolphins, by Walter Gilbert, form the integral part of a small fountain. Ventilation is by two extract fans at either end of the ceiling, and also through the bronze grilles masking the cross-ventilating lantern lights.


WESTMINSTER PU
Marshall Street &
Scale of
A W S & K M B Cross Ar
46 New Bond Street, Lond
YARD OF POLAND STREET GARAGE
ARTIGWAY
Entrance
Lobby
Hall
Office (Maternity Dept)
Waiting Room
Pram Store
Room for Elections & Ladies Dressing Room
Club Room
Corridor
Amphitheatre Seating
Crush
Hall
First Class Swimming Bath
100'0" x 35'0"
112'0"
Corridor
AREA
PASSAGE
THE CRAVEN CLIFFS HOUSE
No 13 MARSHALL STREET
ACTORY
No 6 DUFOURS PLACE
MARSHALL STREET
NOTE Setting out of Marshall Street Front
Tower Block 21'8"
7 bays at 9'6" centres 67'6"
add adjoining No 13 1'10"
Total frontage 90'0"
GROUND FLOOR
(DRAINAGE)

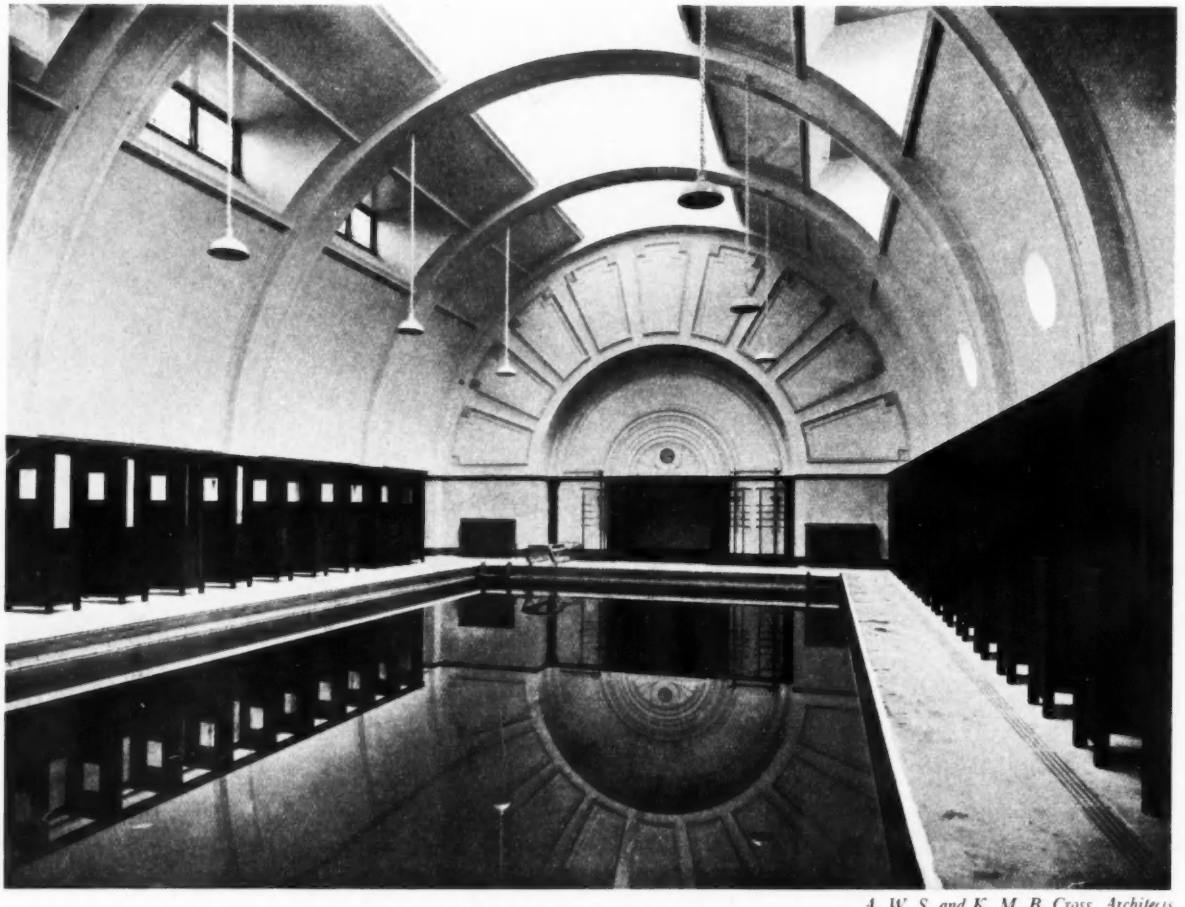
PUBLIC BATHS

Street & Dufours Place

K.M.B. Cross, Architects.
Bond Street, London, W.1



FLOOR PLAN



A. W. S. and K. M. B. Cross, Architects

THE SECOND-CLASS SWIMMING BATH

THE above swimming bath will be used chiefly by children and non-swimmers. It is 60 ft. long by 30 ft. wide, and is constructed of reinforced concrete, and lined with white glazed tiles. As in the case of the first-class swimming bath, the dressing-boxes are of teak, and special non-slippery paving is used for the footways round the pond.

Filtration plant for the purification of the water in both ponds is installed in the basement, a complete turnover of the water being obtainable in four hours.

For further photographs and drawings see other special supplement published this week, and pages 547 to 551 of this issue.

WESTMINSTER PUBLIC BATHS

SECTION, SECOND FLOOR PLAN; AND PHOTOGRAPH OF MAIN FRONT



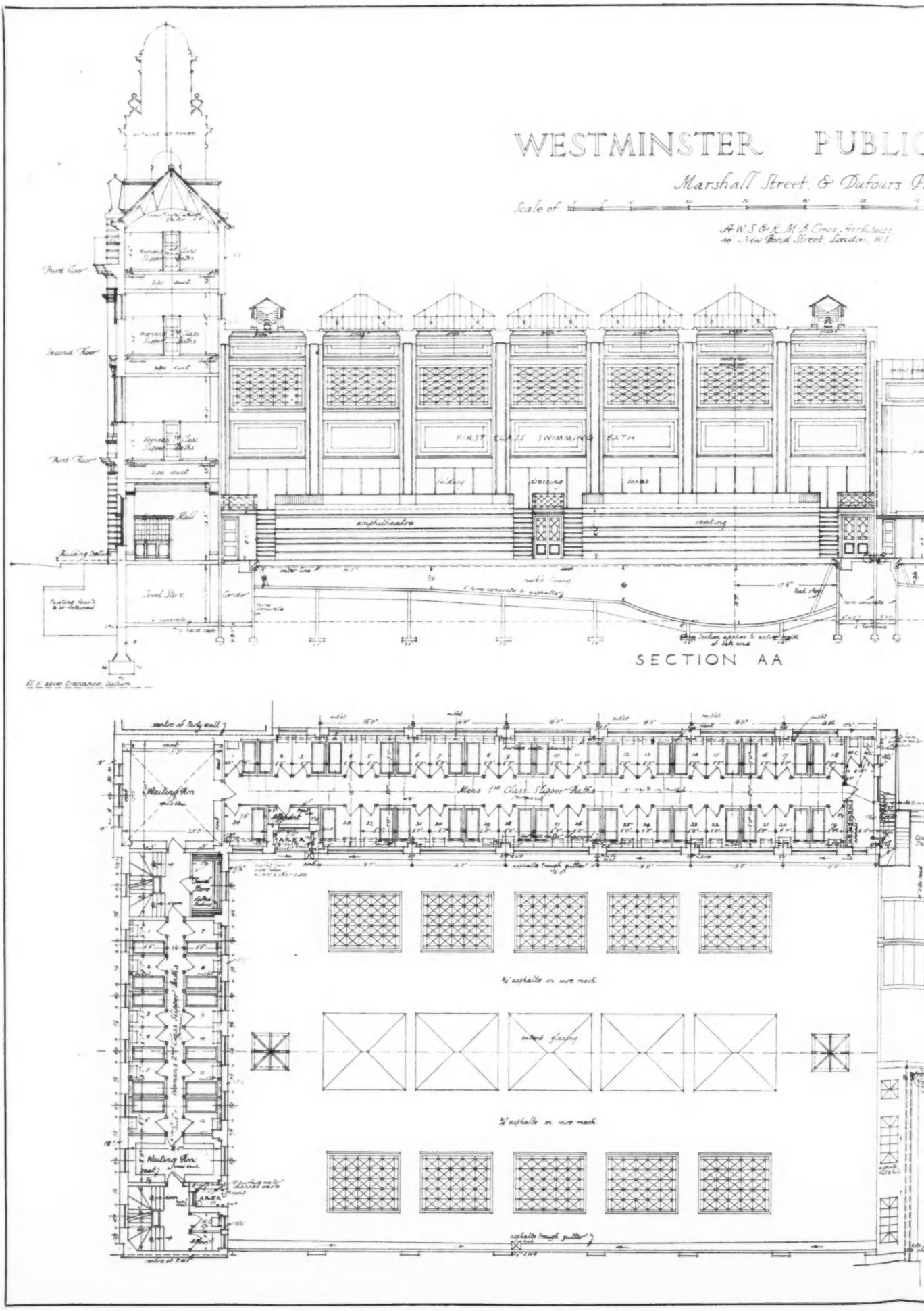
A. W. S. and K. M. B. Cross, Architects

THE PRINCIPAL FAÇADE TO MARSHALL STREET

ON Friday next, April 17, the Mayor of Westminster will officially open the new building erected for the City Council in Marshall Street and Dufours Place, W.1, to house the public baths, maternity and child welfare centre, rates office and highways depot.

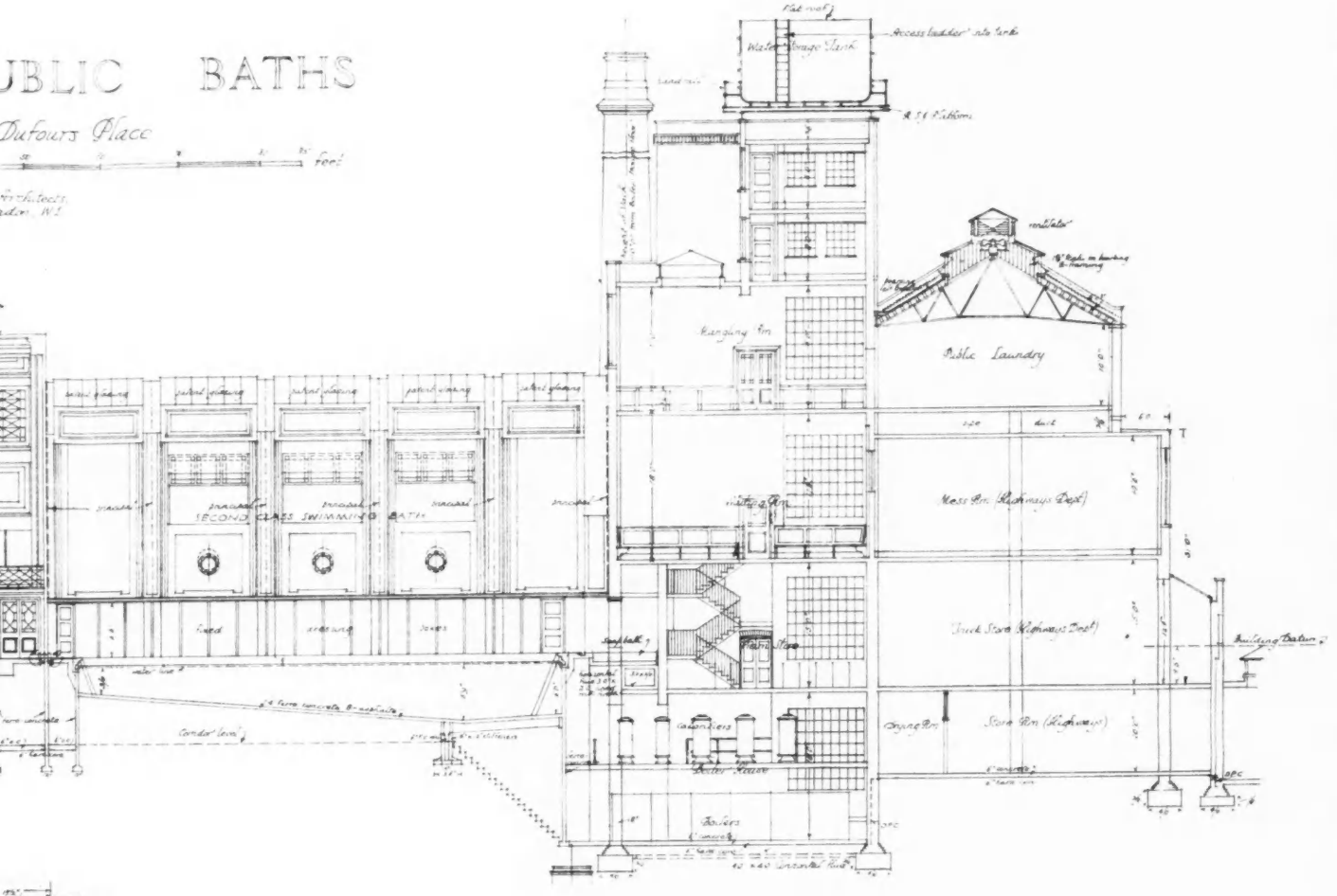
The most important department is that devoted to public baths, the principal entrances to which are from Marshall Street. The public laundry—complete with washing compartments, washing machines, hydro-extractors and drying horses—and the mangling room are entered from Dufours Place. From Marshall Street also a separate entrance leads to the maternity and child welfare centre.

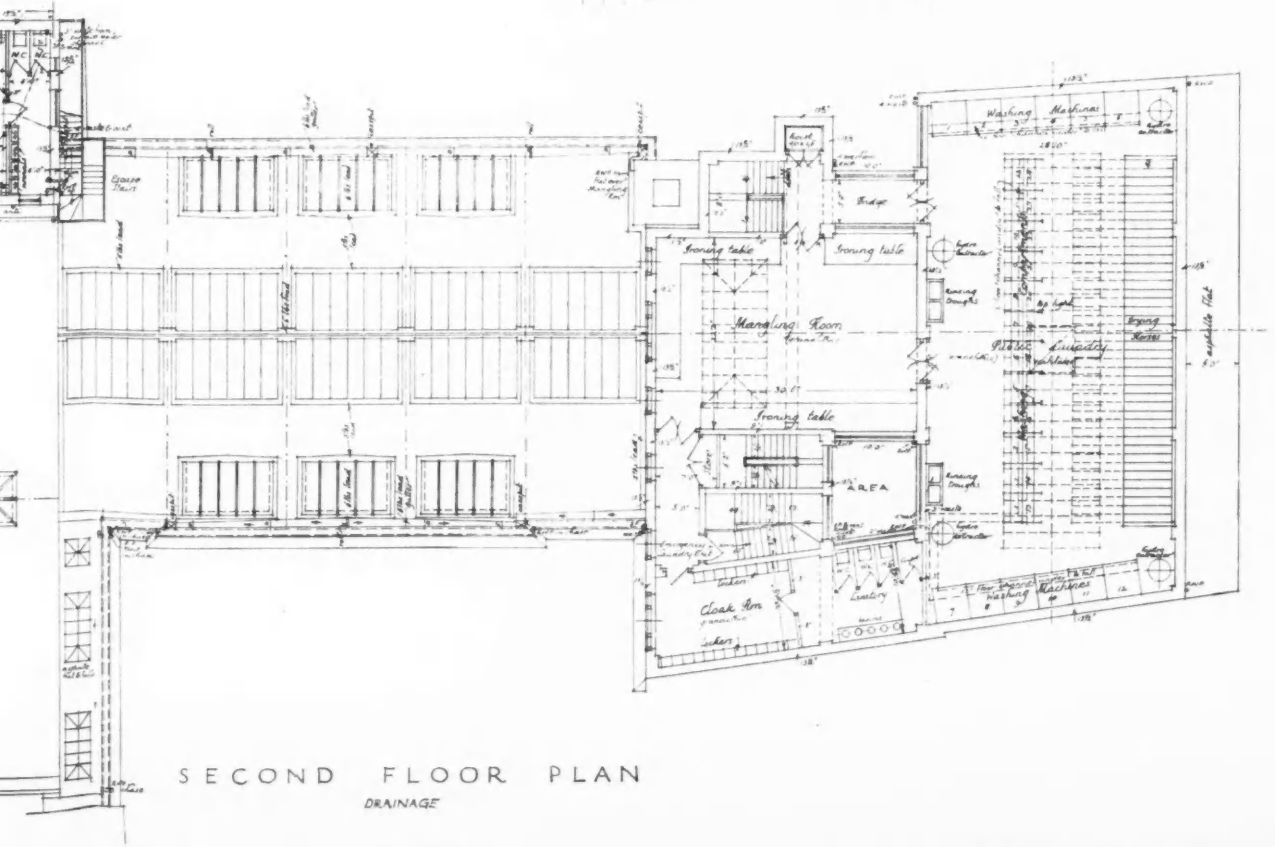
The plan overleaf should be studied in conjunction with that reproduced on the other special supplement published this week, and with the photographs and drawings appearing on pages 547 to 551 of this issue.


WESTMINSTER PUBLIC
Marshall Street & Dufours P
Scale of
A.W.S.&R.M.B. Cross, Architects,
40 New Bond Street, London, W.1
Third Floor
Second Floor
First Floor
Building Datum
Jewel Store
Corridor
FIRST CLASS SWIMMING BATH
amphitheatre
seating
SECTION AA
Mens 1st Class Slipper Baths
Waiting Rm
AREA
Jewel Store
Women's 2nd Class Slipper Baths
Waiting Rm
AREA
centre of Party wall
centre of P.W.
asphalte trough gutter
3/4" asphalte on wire mesh
patent glazing
3/4" asphalte on wire mesh
asphalte trough gutter

UBLIC BATHS

Dufours Place





SECOND FLOOR PLAN

DRAINAGE

SELECTED PRECEDENTS:

"THEIR EXITS AND THEIR ENTRANCES"



THE GATEWAY OF WOLSEY'S COLLEGE, IPSWICH

THE entrance to Wolsey's College, Ipswich, illustrated above, is an important structure. The tablet carved with arms is of stone but surrounded by a brick moulding. Above this is a panel filled with cut brick quatrefoils, much weatherworn, but of unusual design. The entrance has undergone considerable repairs and the trefoil arches on either side of the coat of arms have been depressed and mutilated. Attention may be drawn to the good effect produced by the octagonal brick shafts on each side, which, though they have lost their finials, are still pleasing owing to the well-proportioned diminishing of their sections.

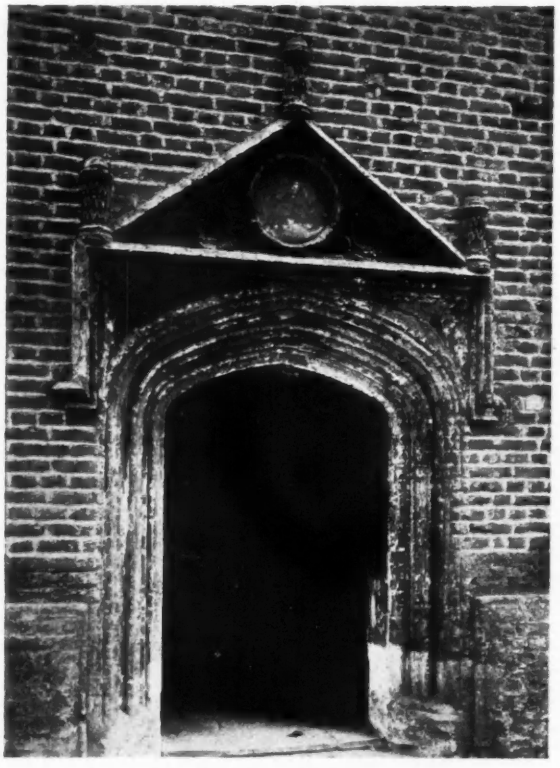
Of the four doorways illustrated overleaf, that of Eastbury Manor House, Barking, gives into the porch from which the hall entry opens. The pediment is filled with brick tracery, cut from ordinary bricks, and the pinnacles are also of cut brick. The whole was coated with a thin layer of plaster to simulate stone—a common practice in East Anglia.

The west doorway of Holy Trinity Church, Colchester, is of Saxon origin, built of Roman bricks re-used. The bricks vary in thickness from 1½ ins. to 3½ ins. It should be remembered that Roman bricks were made from plastic clay, beaten out flat and cut up into rectangular "cakes" of irregular sizes. Mediæval bricks (which in early examples measure approximately 12 ins. by 6 ins. by 1½ ins.) were made in moulds and were fairly regular in their dimensions, whereas Roman bricks are found a few inches or up to two or three feet in length.

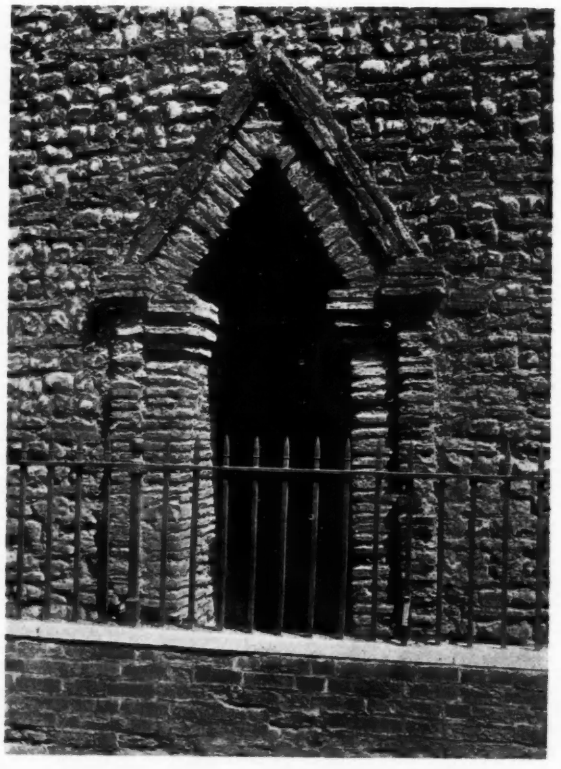
The west doorway at St. Botolph's Priory, Colchester, is built of Roman bricks re-used, but the moulded and carved shafts and orders are of stone—notwithstanding a widespread tradition that they are of brick.

The west doorway of Ingatestone Church is a good example of early sixteenth-century brickwork in five orders. Later, these may be found reduced to one and a wide deep cove.

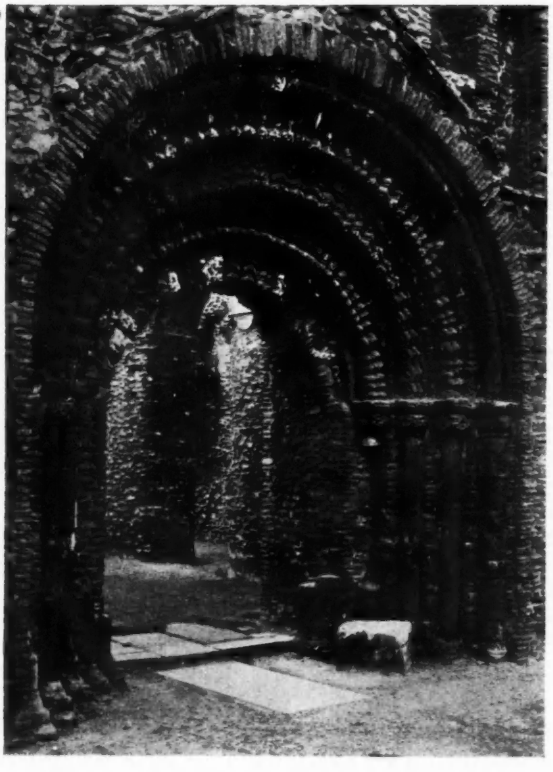
NATHANIEL LLOYD



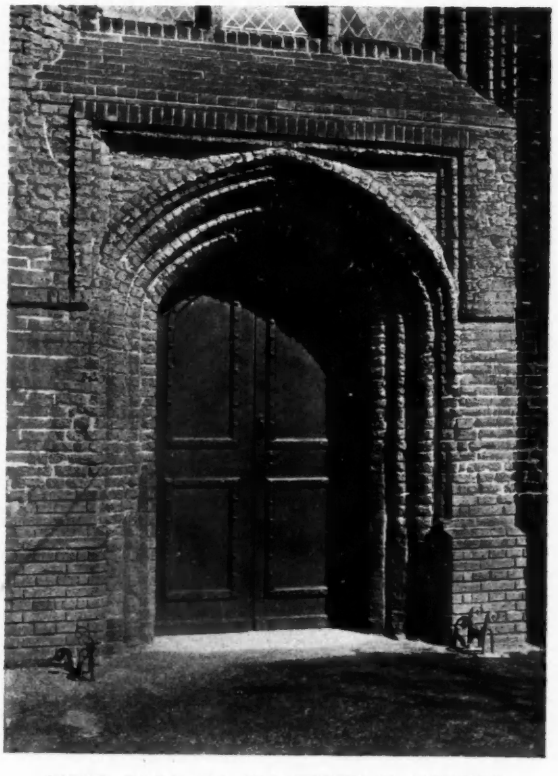
EASTBURY MANOR HOUSE, BARKING



HOLY TRINITY CHURCH, COLCHESTER

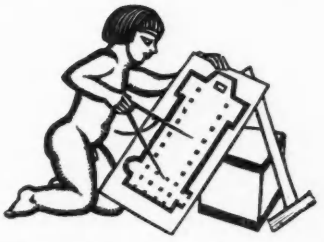


SAINT BOTOLPH'S PRIORY, COLCHESTER



WEST DOOR OF INGATESTONE CHURCH

THE ARCHITECTS' JOURNAL



WEDNESDAY, APRIL 22, 1931

HOMES TO LIVE IN

IT is so characteristic of these early years of the twentieth century for new ideas to seize the public fancy, condense into a catchphrase or slogan and then completely drop out of knowledge and be forgotten, that the usual emergence each year of the Ideal Home, and its persistence as a rubbing post for popular conceptions of housing, is remarkable.

At the outset the Ideal Home was the symbol of a quest, like the Holy Grail; it was a banner under which crusaders in the cause of beautiful and economic small houses all marched. The originator of the movement—for the movement was well established before popular recognition acclaimed it—was C. F. Annesley Voysey; and other original designers have tested in the past, and still are testing, the principles he inculcated by applying fresh thought and adapting new materials and methods of construction to small houses as he first did forty years ago.

The significance of this movement has been sunk into the consciousness of the masses, as a nail might be beaten into its head, by the commercially-inspired slogan, "Ideal Homes"; but in spite of various popular journals devoted to this subject, which have undoubtedly educated the public in good taste, and which hold out the glamour of pretty, small houses—much as the fashion papers traffic in beautiful dress—it is very doubtful whether this Ideal Home of the lower middle classes satisfies in the least what should rightly be their ideal of home. Voysey and his followers designed for those who could afford to build the economical houses they designed, and also could afford to live in them when built; but the Ideal Home has come to mean a thing which the person it is designed for can neither afford to build properly nor properly to live in.

An ideal home ought, obviously, to signify a house that is an ideal of home; but this the Ideal Home makes no serious attempt to do. The need of the lower middle class is for a house in which the family life may be lived in comfort with the minimum of hired service; that is to say, it is a house in which the needs of the inmates have been simplified so that the house makes upon them no other demands than belong to the full enjoyment of that state of life to which they have been called. The Ideal Home, so called, does nothing of the kind; on the contrary, it sets up an unattainable standard of the dainty, the fascinating and the refined, and inculcates a snobbish emulation in social eminence which it is a burden to its inmates to support and which is beyond their attainment.

It was the same emulation which, during the affluence that accrued to the working classes during the war, led to their investment in pianos; not because any inmate of the house knew how to play that instrument, but solely as a mark of social distinction. It is such deplorable ambitions that the Ideal Home inculcates and aspires to satisfy. It sets up a standard of cheap luxury instead of solid comfort, and under an avowed purpose of saving labour, enormously complicates the business of living.

It seems to be a fixed principle of the Ideal Home that if the owner cannot afford a thing he shall not go without it but buy a substitute for it; and if he cannot afford the common substitute satisfy himself with a substitute for that substitute.

The first step towards the realization of an ideal home is the complete effacement of the drawing-room, which, as it now exists, is little more than a fetish. Though it is usually the biggest and most important room in the house, yet it is that most completely sundered from any association with the true tastes, occupations or recreations of the inmates. Its elegancies and esteemed refinements are commonly unrelated to any of the needs of those that use it, and it exists in defiance of comfort and in mere pursuit of an ambition in its inmates to appear more genteel and more conspicuous in culture and social height than their neighbours.

This ambition is itself built on ignorance of the fact that in the houses of the wealthy the drawing-room is rarely used except for the reception of guests before dinner is served; and that the lounge, billiard-room, library and boudoir are alone resorted to, while the drawing-room may remain under the dust-sheets of the family's last exodus until the next.

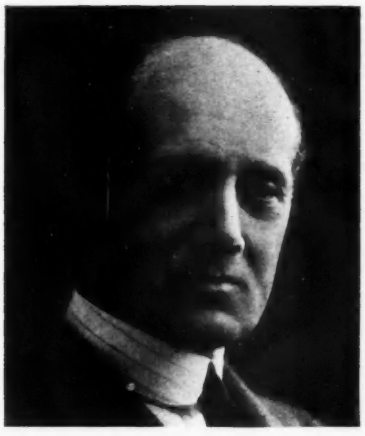
If once the seemliness and comfort of the unabashed living-room were realized by the aspirant to the ideal home, much else would follow. The individuality which should belong to every home, but which is lost in the popular conception of the Ideal Home, would return to it, and if people fed in their kitchens, with a scullery recess shut off by folding-doors, the labour-saving question would be answered, as it was long ago answered by those who traditionally had to wait on themselves.

Let us end the pursuit of fictitious ideals, and get back to reality in house building.



THE ARCHITECTURE OF POWER

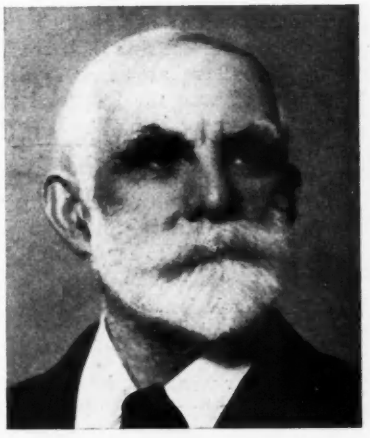
A photographic study of the Power Station of the Swiss State Railways, at St. Gothard, Switzerland, one of the many exhibits now on view at the R.I.B.A. Exhibition of "The Architecture of Modern Transport," which was opened by Mr. H. G. Wells at 9 Conduit Street, W.1, yesterday. See also Astragal's note on page 576.



NEWS & TOPICS

Mr. W. Curtis Green, A.R.A., F.R.I.B.A., has been elected a member of the Athenæum Club, under the famous Rule II. Dorchester Hotel, for which his firm are the architects, is illustrated on pages 577-582 of this issue.

The Rt. Hon. John Burns, the chief guest of honour at the Garden Cities and Town Planning Association's dinner, held last Friday, to commemorate the twenty-first anniversary of the Town Planning Act.



THE R.I.B.A. PRESIDENT-ELECT

IN nominating Dr. Raymond Unwin as the next President of the R.I.B.A., the Council of the Institute has chosen to do honour to one who occupies a unique position in the architectural profession. His has certainly been a remarkable career. Starting practice as an engineer in the Derbyshire industrial districts, he early acquired a passion for social reform, and it was partly through the influence of William Morris and Edward Carpenter, with whom he was on terms of friendship, that he conceived the ambition to devote himself to a campaign for an improved standard of housing. For some years, in collaboration with his partner, Mr. Barry Parker, he enjoyed a large practice as a domestic architect. When Mr. Ebenezer Howard formulated his ideal of the Garden City, Dr. Unwin became his staunchest champion and rapidly acquired the position of virtual director of the movement on its architectural side. His work in this connection is too well known to require much comment. Suffice it to say that it will have a permanent influence upon the town-planning movement in England. The first garden village laid out by Dr. Unwin was at Earswick, Yorkshire, which he was commissioned to design by Mr. Joseph Rowntree. His success in performing this task led to his being appointed the chief architect to Letchworth, the first Garden City. Subsequently, he was responsible for the layout of the Hampstead Garden Suburb, which has been the parent of so many others all over the country.

★

I am privileged to have known Dr. Unwin for a number of years, and can pay tribute to his remarkable qualities of character, which have secured for him a large number of devoted friends. Although always an ambitious man who has consistently sought the attainment of personal power in the field of activity which he has chosen for himself, he has made it abundantly clear that he was striving for public causes, the triumph of which he regarded and persuaded others to regard as highly desirable. Not content with having proved to the satisfaction of himself and his collaborators the main principles underlying the system of "open development" in housing, he determined to obtain the authority which would be derived from an official position in a Department of State. Some years before the war he was appointed Town Planning Adviser to the Local Government Board, but it was not until 1919 that he had his great opportunity. Then, as Chief Architect to the Housing Department of the Ministry of Health, he was able to make obligatory the adoption of garden suburb principles in all the State-aided schemes which were initiated under Dr. Addison's Housing Act. The idealist had now turned administrator with almost dictatorial powers. Dr. Unwin proved himself to be extraordinarily efficient as a Civil Servant. Invariably suave in manner, he was successful in coping with recalcitrant local authorities not immediately willing to accept the gospel of "twelve houses to the acre," and with the numerous contractors and building merchants whose monetary claims appeared exorbitant. On resigning from the Ministry of Health, Dr. Unwin was appointed Chairman of the Committee for the Regional Planning of London, where his unique experience of town-planning problems still finds scope. Dr. Unwin has the additional qualification, very valuable but in the past not too often found in presidents of the R.I.B.A., of being a first-rate public speaker.

THE "GODFATHER" OF TOWN PLANNING

No more fitting person could have been chosen to be the chief guest of honour at the Garden Cities and Town Planning Association's dinner to commemorate the coming-of-age of town-planning legislation than the Rt. Hon. John Burns, who, twenty-one years ago, was the political sponsor and pioneer of the town-planning movement. I confess I have seldom before looked forward to listening to an after-dinner speaker with so much keenness as I did on this occasion. The Rt. Hon. the Earl of Lytton, who presided, before calling upon Mr. Burns, referred to the early days of town-planning and the great work the once-famous statesman had done on its behalf. He said he could not describe Mr. Burns as the father of town-planning, because this mantle fell upon the shoulders of Sir Ebenezer Howard, but he was justly entitled to be named the "godfather" of the movement.

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Then, Mr. Burns arose to break his seventeen years of abstention from public speaking, and discoursed with remarkable eloquence on many subjects connected directly and indirectly with town-planning. He referred to its early days, the difficulties they encountered in passing the first Act which enabled local authorities to "town plan" as they wished; how he favoured the English ideal standard and conception of home life and country life to that of all other countries. His opinion on the housing problem is particularly interesting. "I was born in a slum, and I have slept in Windsor Castle and in Pentonville, so I ought to be, and I am, a competent authority on housing conditions. Back-to-back houses are the

greatest injustice ever inflicted on the industrial poor of Lancashire and Yorkshire." He advised us "never to advocate the erection of barrack-like buildings for the poor, or to have anything to do with the skyscraper. America had seen the folly of it; we in England don't want it, *and won't have it.*" I, personally, think that the 100 ft. building regulations will never be surpassed. He urged that we should raid the road fund, and spend half of it on town planning, slum clearance and other work of a similar kind. Certainly a bright idea, but what would Mr. Snowden have to say about it?

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At the conclusion of his speech, lasting about an hour and a half, and punctuated by the cheers and nods of approval of every one of the 300 diners as he brought out witticism after witticism, he received tumultuous applause, and I feel that in the near future we shall see more of the "godfather" of town-planning in public life.

ANOTHER HONOUR FOR CURTIS GREEN

Another honour has fallen to Mr.W. Curtis Green. I hear that he has been elected to the Athenæum Club, under the famous Rule II. The rule provides for the direct election each year of a limited number of persons eminent in science, literature and the arts, or in the public services. These gentlemen are not subject to the general ballot. It is not uninteresting to note that Mr. Lytton Strachey and Mr. Henry Stuart Jones, the distinguished archæologist, make up the trio now selected. This is not the first time that the profession of architecture has received recognition from the Athenæum Committee. I understand that Sir Herbert Baker, Mr. Dawber, Sir Giles Gilbert Scott, Sir John Simpson, Mr. Tapper and Sir Aston Webb were all chosen as members by this method.

THE ARCHITECTURE OF MODERN TRANSPORT

The exhibition of "The Architecture of Modern Transport," which was opened by Mr. H. G. Wells yesterday at the R.I.B.A., is of special interest, because it represents the first attempt ever made to skim the cream off this subject of world-wide importance. Modern transport has made our civilization unlike any which has preceded it; it has changed the whole appearance of town and country, and there are many and drastic changes yet to come. It is comforting to know at first hand that the paraphernalia of railways, aerodromes and power stations can be very beautiful and satisfactory, and that the R.I.B.A. is stimulating public interest and opinion to the point of seeing that they are so.

★

Architects will, of course, visit the exhibition if they possibly can; the public, I hope, will do likewise. From this point of view the *pièce de résistance* is likely to be the large section devoted to filling-stations. This much-maligned structure is here shown in a variety of forms; some urban, some rural, but all settling into their surroundings and all of a high level of design. This section alone is an object-lesson to those who suppose that a filling-station *must* be ugly and out of place; and at the same time it demolishes the last shred of excuse for the monstrosities which line the roads in this country and abroad.

ALL-BRITISH DOORS FROM EMPIRE WOODS

Great progress has been made with the scheme, outlined in my note in the issue for April 8, for the erection of a factory in the Midlands for the manufacture of all-British doors from Empire timbers. The factory is situated near Sheffield and negotiations have been completed with the Rothervale Manufacturing Company, Ltd., and the Merchant Trading Company, Ltd., whereby the former firm will produce the doors and the latter will market them. The doors will be made from Dominion-grown timber, felled and sawn in Canadian British Columbia and shipped to this country in British vessels; and the plywood will be of the best Canadian British Columbia veneer logs manufactured in British Columbia. The finished article, therefore, will consist of Empire timber, produced in a British factory by British labour. The new door will be named the Britco, and will fulfil the requirements of civic, municipal and other authorities.



A pencil sketch of Mr. A. Trystan Edwards, A.R.I.B.A., drawn by Miss Gwen Evans. He was architect for the "Silent House" at the Building Trades Exhibition of 1930, and also the "Hush - Hush - House" at the *Daily Mail* Ideal Home Exhibition, now open at Olympia.

TRYSTAN EDWARDS, A.B. (R.N.V.R.), A.R.I.B.A.

Mr. Trystan Edwards assures me that he became an architect because, when he was a young man and wondering what to do, his parents reminded him that he had enjoyed playing with bricks as a child. If all the children who played with bricks decided to become architects, how very overcrowded the profession would be! But this curious reason for deciding Mr. Edwards's career has been more than justified. Within a week of this great decision he was working in Mr. (now Sir) Reginald Blomfield's office, where he remained for three years. From there he went to the Liverpool School of Architecture. During this period he read Nietzsche and Anti Plato, and applied their teachings to architecture. The theories which Mr. Edwards then formed he has held consistently ever since, as is shown in his books, *Things which are Seen, Good and Bad Manners in Architecture*, and *Architectural Style*.

★

When the war came, Mr. Edwards signed on as an A.B. in the Navy. Although the life was entirely new to him, he found the atmosphere of the lower deck so congenial that he now claims the Navy as his "spiritual home." After the war he joined the R.N.V.R., and is probably the only architect who goes to sea regularly as an A.B. He pays high tribute to the Navy in his very interesting book *Three Rows of Tape*.

★

From the "Silent Navy" Mr. Edwards turned his attention to "Silent Houses." The detrimental effect of noise on humanity has been irrefutably proved, and as civilization grows noisier so the importance of silence increases. For the Building Exhibition of 1930 Mr. Edwards designed a number of rooms, using sound-proof and sound-absorbing materials. At this Exhibition he showed how sound could be eliminated and controlled inside a house. His "Hush-Hush-House" at the Ideal Home Exhibition takes more into consideration the elimination of outside noise.

ASTRAGAL



The hotel as seen from Hyde Park. The upper stories afford magnificent views over London, especially over the Park. Underground, in a building equivalent in size to one-third of that above ground, are a garage, kitchen and Turkish baths.

DORCHESTER HOTEL, PARK LANE, W.

W. CURTIS GREEN, A.R.A., AND PARTNERS, ARCHITECTS

DESCRIBED BY J. R. LEATHART

A FURTHER stage has been reached in the change of character of Park Lane by the completion of the hotel on the site of Dorchester House. Political and economic circumstances have transformed during the past three years a world-famous thoroughfare from a private to a public residential quarter.

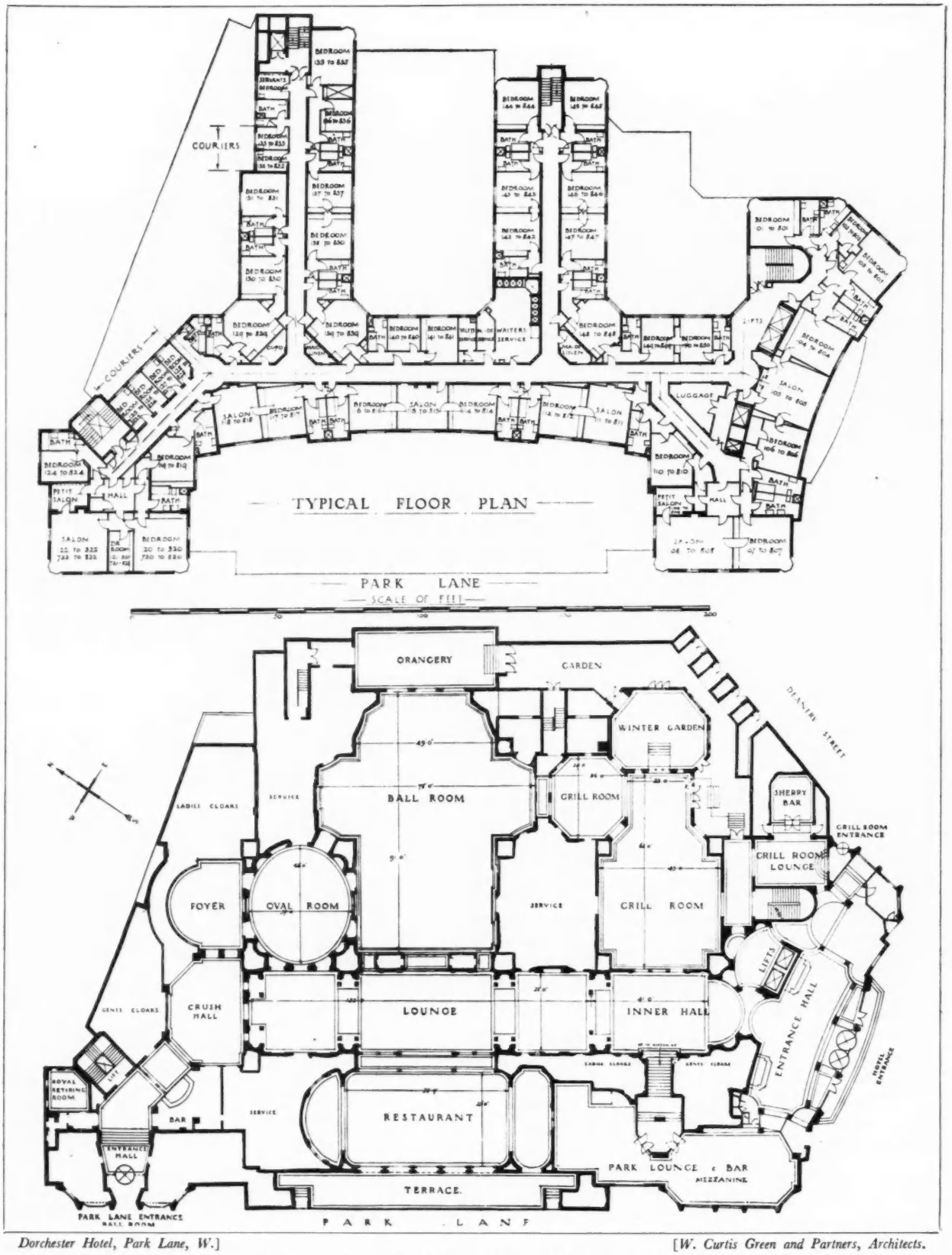
Communal eating to the accompaniment of jazz bands supersedes the dignity of the private house dinner party; three- or four-room suites with a bathroom to each bedroom now take the place of a sixteen- or twenty-bedroom mansion with one bathroom for host and guests, respectfully attended upon by a large staff of well-trained servants. Inevitably the spaciousness and quietude of the old order is being replaced by the fretfulness and hurry of the new.

Robert Stayner Holford, for whom Vulliamy designed and built Dorchester House during the years 1850 to 1860, determined to have done with the deadening banality of mid-Victorian architecture; with his great wealth and his architectural dilettanteism he inspired his architect to reproduce an Italian Renaissance palace, and decorated and adorned his mansion internally in the most sumptuous manner. With its formality, both in design and layout, its rigid adherence to traditional stylism, and in its setting, Dorchester House reached a high level of achievement for a Victorian town mansion. For sixty-nine years it stood as an example of all that affluence and social position represented in an industrial age, but in the end it succumbed to commercial syndicalism. Its fall may be said to have symbolized the end of an epoch of national prosperity of unprecedented magnitude, in which individual effort predominated. As modern changes in national life brought about the end of Dorchester House, so is it apt that its successor is essentially neoteric both in conception and in realization.

The new hotel contains eighty salons and 300 bedrooms, each with its own bathroom, distributed on eight floors, below which, on the ground floor, are accommodated the entrance halls, lounge and bar, restaurant, grill room, ballroom and reception rooms, winter garden, orangery, a Royal retiring room, service rooms, cloak rooms, and a sherry bar.

Twelve to fifteen hundred people can dance, and 700 people dine simultaneously in the great ballroom, which is 91 ft. long by 78 ft. wide. The sherry bar and grill room are decorated in the Spanish style, and the restaurant with its terrace and bar lounge overlook the Park. In addition to these luxurious features, the fair sex has been treated with the utmost consideration, for there are provided such essential aids to feminine loveliness as Turkish baths, gymnasium, beauty parlour, slimming rooms, and hair-dressing rooms.

In fact, in this country we are beginning to follow the example which the great cities of the United States have set in hotel planning and equipment for the last twenty years or so.



Dorchester Hotel, Park Lane, W.] [*W. Curtis Green and Partners, Architects.*

Plans of the ground floor and a typical upper floor. The former is designed all on one level, without steps. Special features are the lounge and halls. These are planned as a single apartment running the entire length of the building and give direct access to the public rooms.

This imitative movement is long overdue, and as the hotel promoters consider that "places are judged by the hotels they possess, and the skill with which they are conducted, more than by any other single set of circumstances," the star of London should reach its ascendancy without further delay, assisted by this latest and most wonderful of all English hotels.

site, which has an area of 68,000 sq. ft., in which certain predetermined structural conditions were set up by the disposition of the great reinforced concrete piers carrying the superstructure, the architect has woven the pattern of the principal rooms. The cruciform shape of the ballroom, the "oval room," the nearly octagonal grill room, and winter garden, the flat apsidal end to the restaurant, on the two entrance halls—the main angle one, and the ballroom, Park Lane, secondary one. The convenient adjacency of the cloakrooms to the entrances is noteworthy in that they are common to all the public rooms, and unnecessary duplication with consequent confusion to the public is thus avoided. The three large service rooms communicate direct with the kitchens



Dorchester Hotel, Park Lane, W. [*W. Curtis Green and Partners, Architects.*

At the junction of Deanery Street and Park Lane is the main entrance to the hotel, which contains eighty salons and 300 bedrooms, each with direct access to the open air on the main façades. A separate entrance to the ballroom is provided at the other end of the building on the Park Lane front.

In many ways the building is remarkable for the engineering skill displayed in a project originally conceived by Sir Owen Williams and carried on by his successors, Messrs. Considère.

The outstanding point of interest in the planning of the principal floor is the entire absence of internal lighting courts. Within the perimeter of the provide a multiformity of room shapes, and a sense of variety and a pleasant feeling of surprise impress the visitor as he passes from room to room; not the least skilful part of the plan is the intercommunication between all entrances and all rooms.

The great lounge and crush halls have their common axial ends terminating on the floor below, to which the waiters descend with their orders and return to the floor above with the food. The elimination of service lifts from the kitchens to the serveries is considered to ensure greater efficiency in service, and so in modern hotel planning we return to the pre-lift era so to speak.

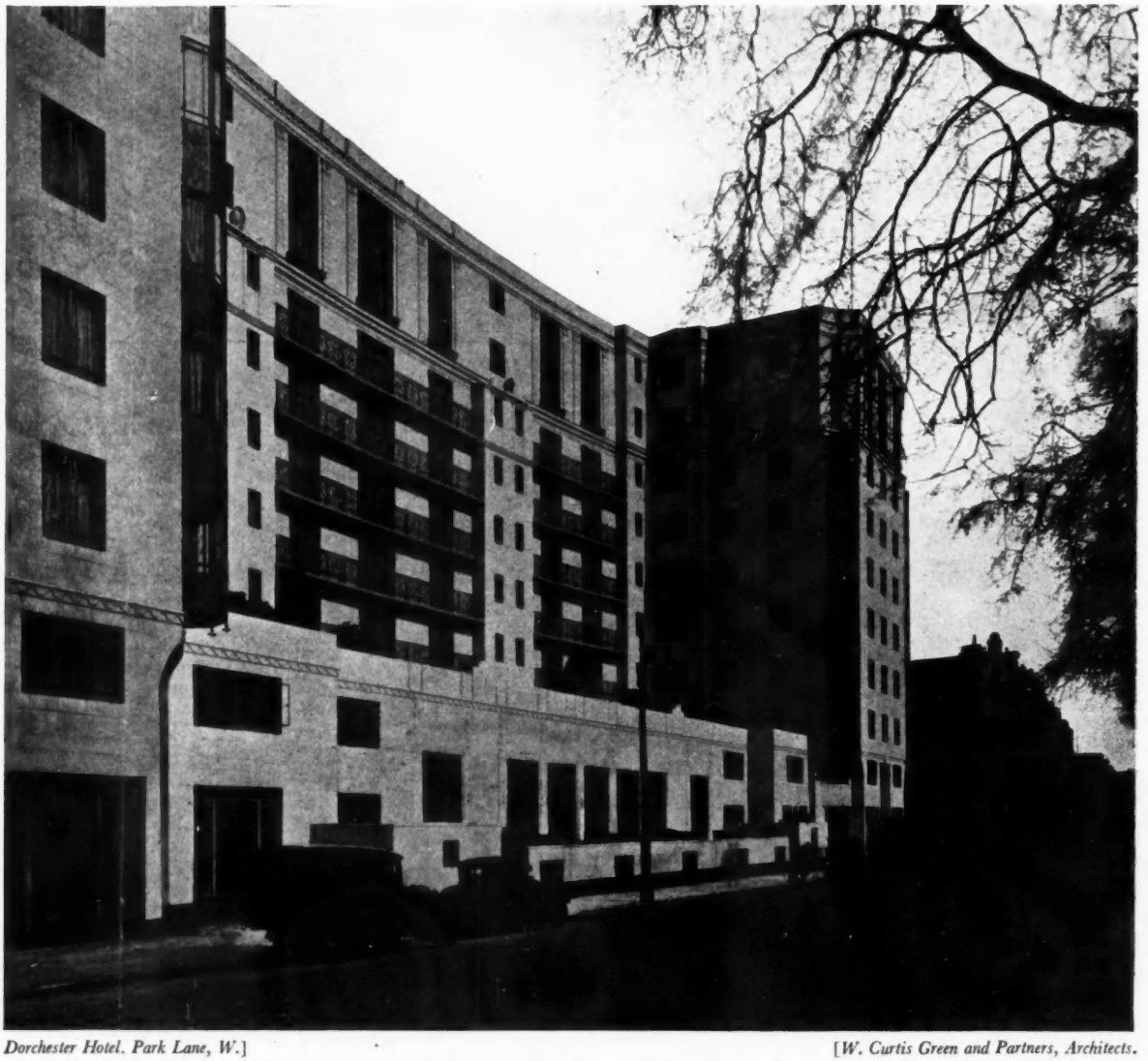
The ventilation of the main rooms is

by means of the plenum system. Air, cleaned, warmed or cooled, according to the season, is pumped into them at ceiling level, and extracted at floor level with trunking, which gathers into the extraction chamber on the lower floor. The intake room is on the roof, and the fresh air passes down vertical ducts to the ceiling level of the ground floor. The splitting of these ducts into horizontal trunking which reaches every part of the public rooms, and the further subdivision into small inlet slots in the ceilings, must have provided a pretty problem for the architects in their disposal of them throughout the building.

The further installation of inter-communicating telephones, lampson tubing, vacuum cleaning tubing, electrical wiring, the heating system, and the complicated and extensive drainage necessary to a hotel with 300 baths, lavatory basins, and w.c.s, all controlled and accommodated by the patience and ingenuity of the architects, merely indicates the stress and strain of present-day practice. And yet there are people who aver that an architect does insufficient to justify the payment of his fees; the remuneration is in fact usually insufficient to merit so much labour.

In these days of architectural conflict, when the advocates of modernism hold wordy warfare with the forces of traditionalism, it may be of interest to recall the abhorrence expressed by certain people for the use of reinforced concrete in Park Lane. Why Park Lane should be singled out for this detestation has never been explained; it may be that the insistent association of brickwork with the Park is somewhat obscure. The fact remains that such an essentially modern building as a hotel has been constructed by modern methods, and elevationally designed to express the construction, despite the noisy publicity of the brick-and-nothing-but-brick-for-Park-Lane school of thought.

The chief point of criticism levelled against reinforced concrete construction is on æsthetic grounds. The drab grey colour of concrete is undoubtedly depressing, and in London the introduction of coloured aggregate to enliven



Dorchester Hotel. Park Lane, W.] [*W. Curtis Green and Partners, Architects.*

The Park Lane façade. The entire structure is of reinforced concrete, faced with polished marble-concrete blocks. In constructing the hotel 2,000 miles of steel reinforcing rods, 50,000 tons of gravel and sand, 140,000 square ft. of marble-concrete blocks, and 500,000 Fletton bricks have been used.



Looking into the lounge towards the ballroom entrance from Park Lane. It forms part of the large central space which gives direct access to the public rooms. On the left is the restaurant, and on the right the ballroom.



Dorchester Hotel, Park Lane, W.] [*W. Curtis Green and Partners, Architects.*

Looking from the lounge into the inner hall towards the entrance hall to the hotel from Park Lane. The staircase on the right leads to the Park lounge on the mezzanine floor. Facing it, on the left, is the grill room with its sherry bar.

the effect has proved to be quite unsuccessful. The Fortune Theatre originally constructed in this manner, and hammer-dressed to expose the coloured aggregate, after a few years became so dingy that recently the whole surface of the concrete walling has been painted over in a light buff colour.

Concrete walling untouched from the forms as it must be, to express sincerely the construction, is not elegant, however much the design may indicate the nature of the construction. The problem of surface cracking, due to expansion and contraction in concrete, is a serious one, for which no solution has yet been found.

At the "Dorchester," the engineer's ingenious idea of using permanent shuttering to the poured concrete walls has been adopted. The outer shuttering is built up of reconstructed polished marble slabs 2 ft. 6 ins. long by 11 ins. high by 2 ins. thick, keyed and grooved on the outer edges; the inner shuttering is constructed of cork slabs of similar dimensions. The poured reinforced concrete walls between are 7 ins. thick for a height of 100 feet. It is interesting to learn that the addition of 50 feet in height would not have necessitated the thickening of the concrete beyond the 7-in. thickness. To express the veneer character of the outer casing, the joints of the terrazzo slabs are not bonded as in masonry, but run in vertical lines from top to bottom. It is hoped that expansion and contraction will be taken up in these vertical joints without unsightly cracks developing in the wall faces. Mouldings and ornament in the same material are kept in very flat relief, further to accentuate the facing character of the material and the design. The inner cork shuttering acts, of course, as a sound and temperature insulator, and is plastered on the exposed face as for ordinary walling.

The colour of the terrazzo slabs is a soft warm yellow obtained by the use of finely crushed Botticino marble mixed with buff coloured cement, and face polished. There is little doubt that this form of construction is unique in conception and execution, and that it is a bold and fearless experiment in building by modern methods in modern material. The rapidity with which the constructional work was executed is exemplified by the fact that each complete upper story, external and internal walls, and one floor was built in one week. The total time of eight weeks for the eight upper floors of this building constituted a record for rapid progress in this country.

In addition to the precaution against surface cracking already spoken of, additional expedients have been effected to counteract the expansion and

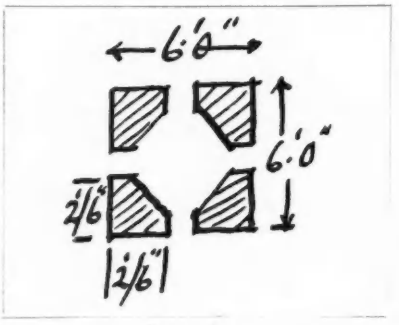


Figure One.

contraction tendency in concrete work. The great angle bay windows which form such conspicuous features of the composition act as breaks in the continuity of the walling, and thus serve to take up lateral expansion throughout the building. In this manner again has practical necessity been adroitly used by the architects to achieve a decorative end.

The arrangement of the upper floors with the repetition of bedrooms and bathrooms is excellently contrived. There are no enclosed areas to trap kitchen smells and to accentuate the noise from the working quarters of the hotel. The difficulty of the disposition of the point loads of the upper floors, closely subdivided as they are by comparatively small rooms, in relation to the big unobstructed areas on the principal floor under, is contrived in a manner which characterizes this building as an amazingly ingenious and novel example of reinforced-concrete construction.



Dorchester Hotel, W. [*W. Curtis Green & Partners, Architects*

The oval room, as seen through one of the doors from the foyer.

The area of the ground floor is subdivided into rectangular units measuring 56 ft. by 35 ft.; at the intersecting salient angles of these unit areas great concrete legs are placed. Each leg consists of four subsidiary piers as indicated in figure one. The overall dimension of each reinforced leg is 6 ft. square, and the arrangement of the four piers leaves a free central shaft in which is disposed the drainage from the upper floors, and in some instances the vertical ventilating ducts. At first-floor level, and carried by the legs, a reinforced concrete raft 3 ft. thick spans the entire area of the building, and on this foundation the whole of the eight-floor superstructure is carried, the point loads of which are supported without regard to the piers beneath.

The upper floors could thus be planned with complete freedom of action, and without interfering with the large floor areas of the public rooms on the ground floor. There are, in fact, two distinct buildings, one connected to the top of the other.

A few facts regarding the construction of the "Dorchester" may be of interest. The cubic contents of the building below ground level is approximately one-third of the superstructure. The building operations, including the demolition of the old house, have taken but eighteen months to complete.

It is estimated that 6,500,000 man-hours have been worked, and the wages bill alone is in the neighbourhood of half a million sterling. 40,000 tons of earth were excavated in the work below street level. 2,000 miles of steel reinforcing rods have been used in the concrete work, and 500,000 Fletton bricks. There are approximately 140,000 sq. ft. of terrazzo facing slabs on the elevations, and the mileage of cables for lighting, telephones, and bells, is equally impressive to contemplate.

Modernism in architectural design has many adherents. Some follow the iconoclastic French school, some worship at the Mendelsohn shrine, others again seek their inspiration at the feet of Swedish masters, but most of them follow the shadow and miss the substance. And the substance is surely the æsthetic expression of modern methods of construction, with materials that are inherent to the structure, and not applied to the surface as a decorative veneer afterwards.

In the building under review the former condition is fulfilled, and it thus ranks as one of the best examples of genuine modern design and construction in this country to date.

THE GIRL GUIDES' NEW HEAD-QUARTERS

TATCHELL AND WILSON, ARCHITECTS

THE site of this building, which is L-shaped, was acquired by the Guides in 1928, and building operations commenced in 1929 with the first section, on completion of which, and before the erection of the second section, H.R.H. Princess Mary laid the foundation stone on May 23, 1930.

This first section lies behind that fronting to Buckingham Palace Road and extends the whole length of Palace Place with the return frontage to Palace Street.

The completion of both sections has been somewhat delayed on account of the fact that the bed of an old river was discovered in the course of the excavations, and this necessitated the construction of a reinforced cellular raft over the whole site.

The building is six stories in height, including the basement, and is planned to accommodate not only the administrative departments, but also the showrooms for the display of Guide and camp equipment, stock rooms, and packing and dispatch rooms for this important branch of headquarters activities. The latter sections are contained in the basement, and goods from the packing room are conveyed by an electric hoist to a loading dock in the floor above, for delivering into Palace Place.



The main entrance front to Buckingham Palace Road; the doors give direct access to the shop illustrated below. The ground-floor plan is given on page 586.

On the ground floor are the showrooms, which have their principal entrance in Buckingham Palace Road and the staff entrance in Palace Street.

The first floor contains the council chamber and committee rooms, the general secretary's office, and offices for the overseas, training and equipment departments. Here also are the reception and waiting rooms.

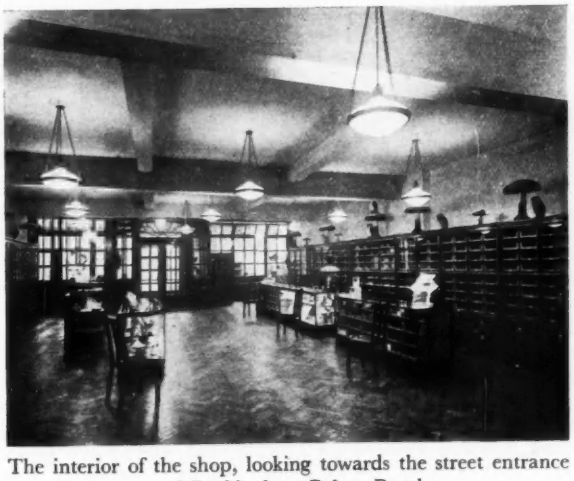
The finance and general offices are accommodated on the second floor.

On the third floor are the tailoring rooms, the offices for the publications and editorial departments, and the registration department, together with rest rooms for the staff.

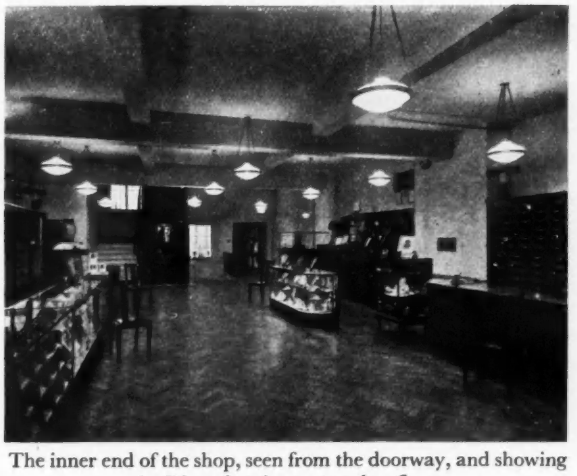
On the fourth or top floor there is an extensive library, a spacious dining-room, served by a kitchen with electric cooking apparatus, and housekeeper's quarters.

The building throughout is of fireproof construction and there are hydrants on all floors. A vacuum cleaning plant is placed in the basement with suction points in suitable positions on each floor; and in addition to the electric hoist there are two electric passenger lifts.

The headquarters were opened by H.M. the Queen on March 20 last.



The interior of the shop, looking towards the street entrance and Buckingham Palace Road.



The inner end of the shop, seen from the doorway, and showing the lift and staircase to other floors.

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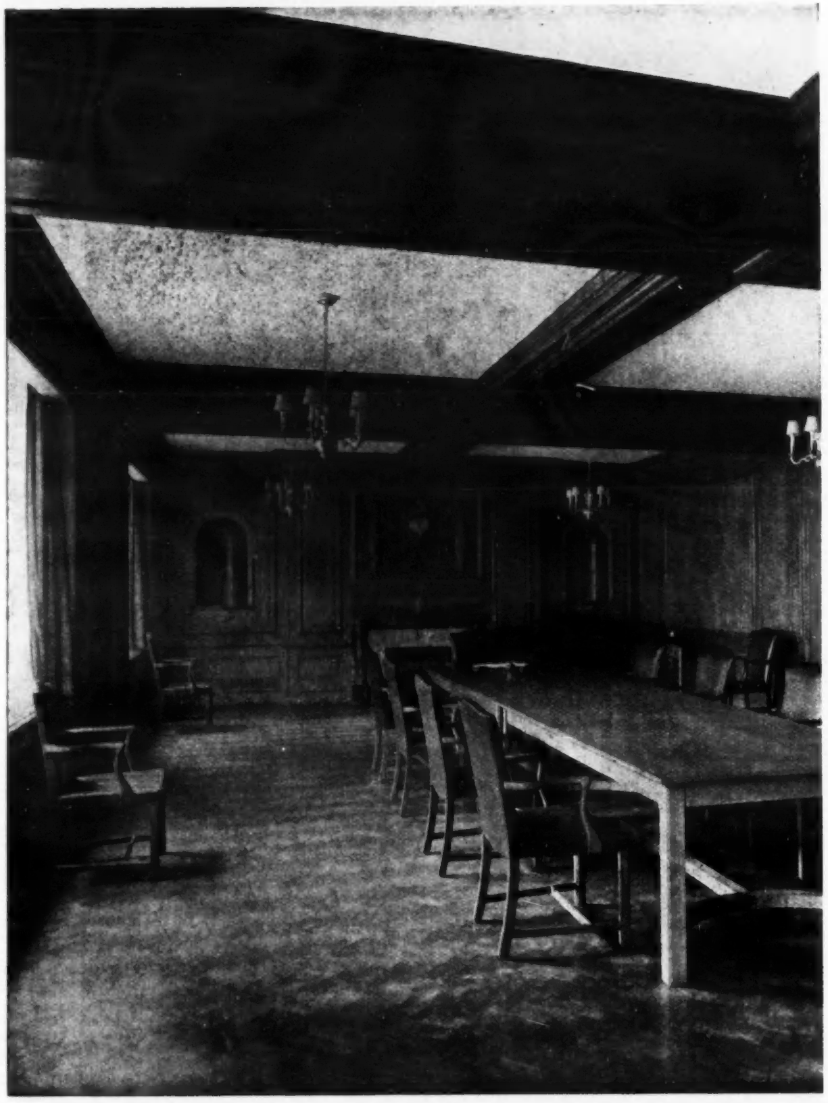
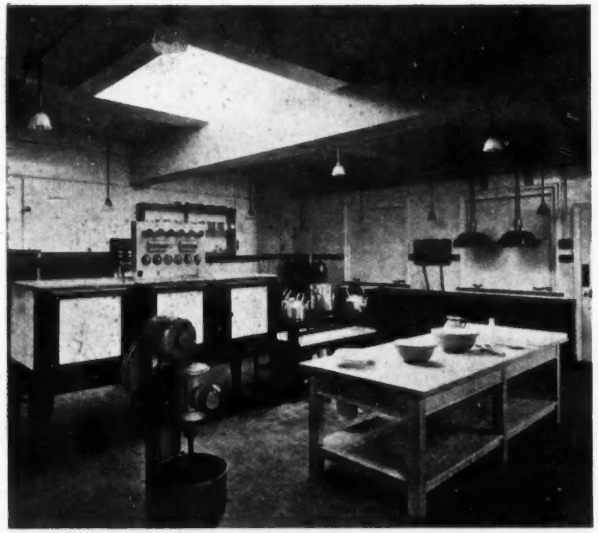


The south end of the council chamber, on the first floor of the Palace Place section of the building. Above the fireplace is a clock surrounded with carved enrichments; on either hand are alcoves, also enriched. The panelling and furniture is in English oak.



A corner of the restaurant on the fourth floor. Of the adjoining kitchen a glimpse may be seen through the right-hand hatchway in the far wall : of these, there are three, though only two are here shown. A view of the kitchen itself appears on the facing page.



The kitchen, showing the electrically-heated range, hot-plates, etc. Full advantage has been taken of labour-saving appliances.



The general secretary's office, which is situated on the first floor, adjoining the council chamber.



The book and music shop in the Palace Place section—the complement, in the L-shaped plan, of that facing the main frontage.



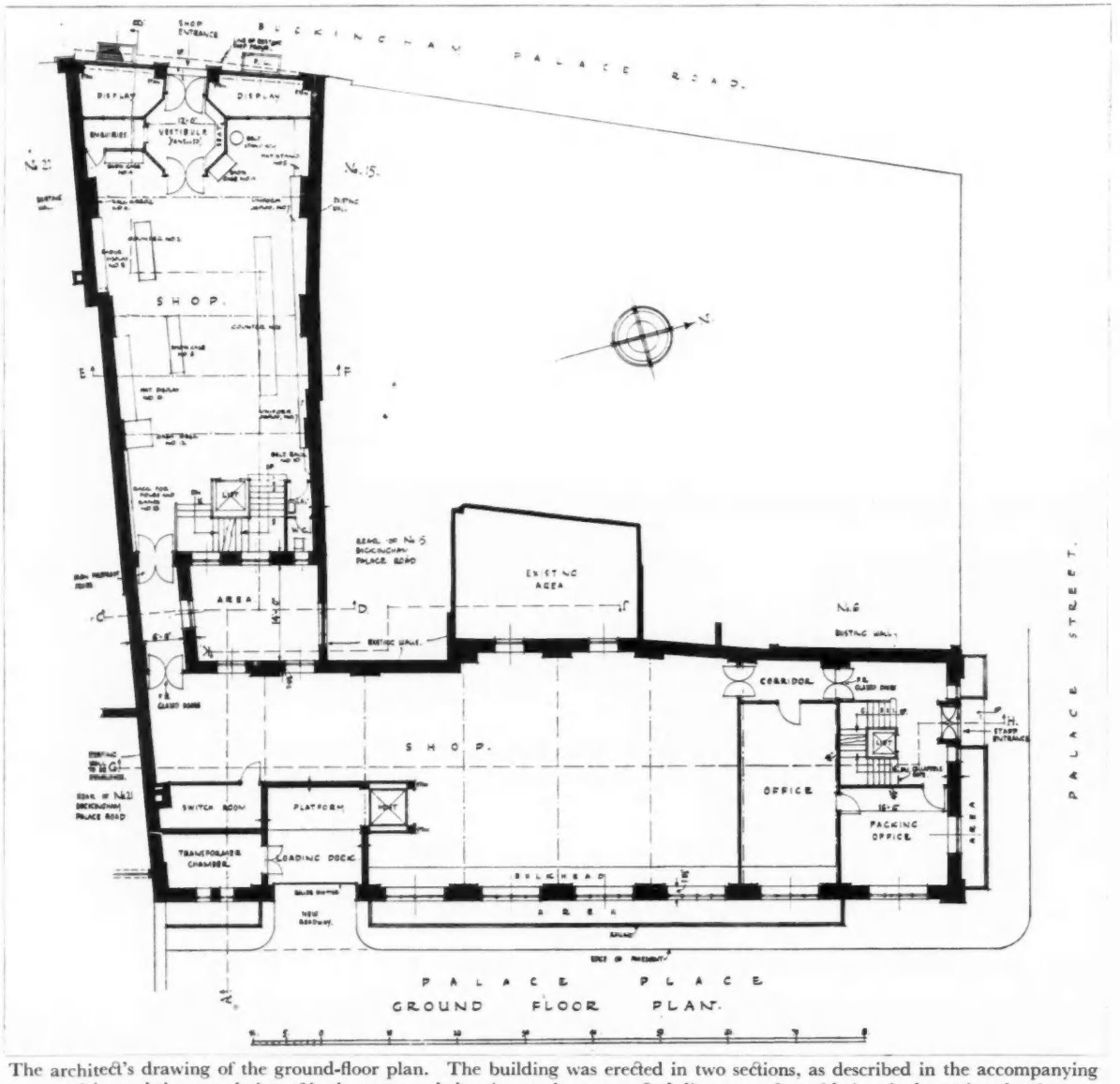
Girl Guides' Headquarters, Buckingham Palace Road, S.W.]

The showroom devoted to the display of camp equipment in the Palace Place section of the building. The staff entrance is behind the tent.

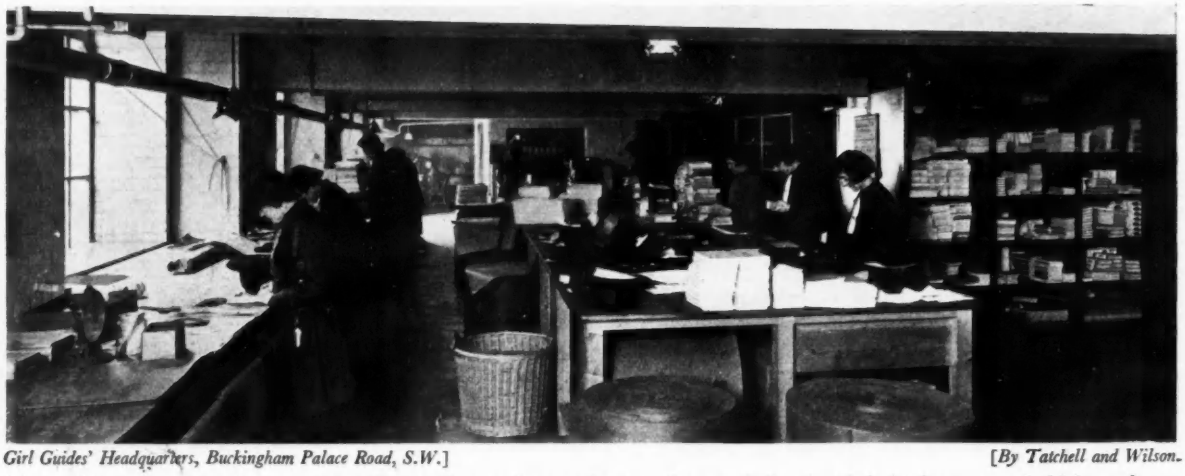


[*By Tatchell and Wilson.*

On the third floor is an extensive tailoring department, well-lit, like all the rooms, by windows that in this case overlook Buckingham Palace Road.



The architect's drawing of the ground-floor plan. The building was erected in two sections, as described in the accompanying article, and the completion of both was retarded owing to the unexpected discovery of an old river-bed crossing the site.



Girl Guides' Headquarters, Buckingham Palace Road, S.W.] [*By Tatchell and Wilson.*

The packing room in the basement of the Palace Place section looking south towards the electric hoist, by means of which goods are raised to the loading dock for delivery vans, provided in Palace Place itself. The windows look out on to this thoroughfare.

LETTERS FROM READERS

The Smoke Problem

SIR,—Was it not Alexander the Great who, on requesting to be told what favour he could confer on the popular sage of his day, was informed that the greatest was to "get from between me and the sun"? Whatever form the intimation took, it has even more significance today.

At a recent meeting in London of the Institute of Fuel, a gathering of fuel and combustion experts discussed once again the standing problem of smoke prevention. Again one heard of the nine million tons of smoke that are poured each year from our domestic and industrial chimneys; of the spoliation of our buildings, the disastrous effects on vegetation, the appalling effects on health by inhalation of poisonous matter and the obscuring of the sun's rays; and of the £80,000,000 worth of real wealth lost through smoke discharge.

Unfortunately, the constructive part of the discussion resolved itself into little more than a plea for a wider education of the public and the industrialist in the harmful effects of smoke and the methods of preventing it. As usual, there was some attempt to shift the blame on to the other man and re-allocate responsibility. It must be admitted that a judicial tribunal would be compelled to classify the modern power station as the least serious offender, on account of its equipment and trained personnel; for the search after higher thermal efficiency has inevitably forced the central power station to deal with smoke discharge as one of its sources of loss. The small industrial steam-raiser, however, comes under severe criticism and one can but approve of any effort to bring him into line that does not involve a restriction on industrial development.

The big problem of smoke from domestic fires is so difficult that it is often evaded and attention concentrated instead on industrial smoke. But the domestic problem still remains. The adoption of smokeless fuels appears to be the only solution, and that is not an entirely satisfactory one under present conditions. It is one thing to demonstrate the possibility of burning smokeless fuel in a grate which happens to be suitable, but quite another thing to repeat the performance in a thousand other existing grates. It is these latter appliances, too, which are often the worst offenders when burning bituminous coal. Personal prejudice is not the only deterrent to the adoption of smokeless fuel, and not all the unsuitable grates in the country date back to the Victorian era; many were installed during the last year or two.



The interior of "Toots" Barn, Caversham, during demolition.

The subject is worth much more consideration from the architect than it has yet received, for a smokeless atmosphere would considerably widen his scope in constructional and decorative materials. After all, why should not the architect include in his activities and responsibilities the complete conception of comfort heating in the house? At present he is too apt to leave it to the heating engineer (when the latter is employed), or accept without question conventional ideas. Hence the lack of co-ordination between architectural features and heating requirements which is so often observable, particularly in small property. A. H. H.

Barn Architecture

SIR,—I enclose snapshots of the barns at "The Plough," East Hendred, Berkshire, and "Toots Farm," Caversham, Berkshire.

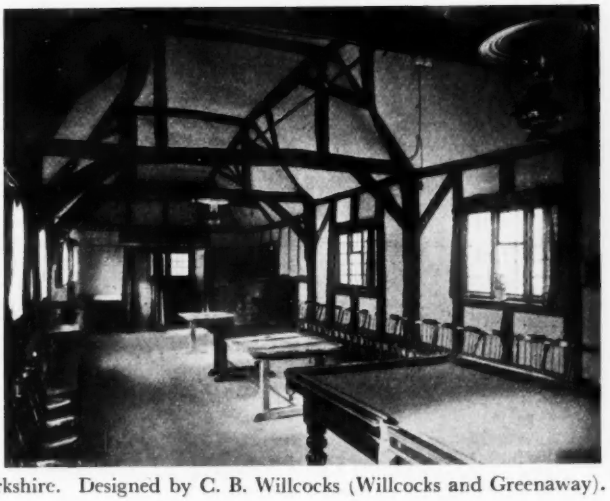
At "The Plough" a refreshment room was desired, also garage accommodation and storage for coal, so it was proposed to pull down the old barn and stables, and erect a new asbestos roofed building.

Fortunately the architects, I understand, were consulted in the matter, and advised the restoration of the existing buildings, which were a feature of the village. The near half-timbered end of the building, as shown in the photograph, was the stables.

This, together with the lower part of the old barn, has been made into the refreshment room, as shown on the internal illustration. The walls were covered externally with elm weather-boarding, and lined internally with wall-board, and the whole of the building was re-thatched. The restoration probably cost about half the cost of new buildings. The remaining part of the building is used as a garage and coal store.

"Toots Farm" barn, at Caversham, was pulled down recently to clear the site for new villas. A medium sized hall is very much required in this district, and the barn could have been converted at a reasonable cost. P. G. H.

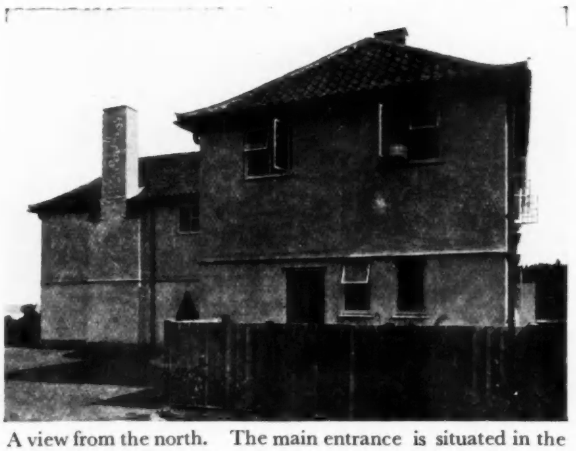




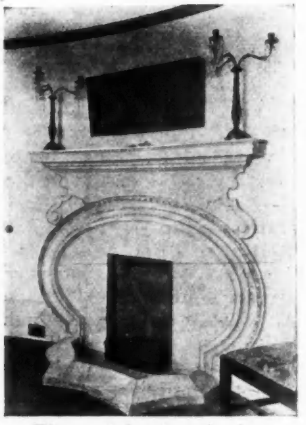
Exterior and interior views of the "Plough" Inn, East Hendred, Berkshire. Designed by C. B. Willcocks (Willcocks and Greenaway).



The fireplace in the drawing-room is of Corsham stone.



A view from the north. The main entrance is situated in the angle of the L-shape plan. The door shown is for tradesmen.



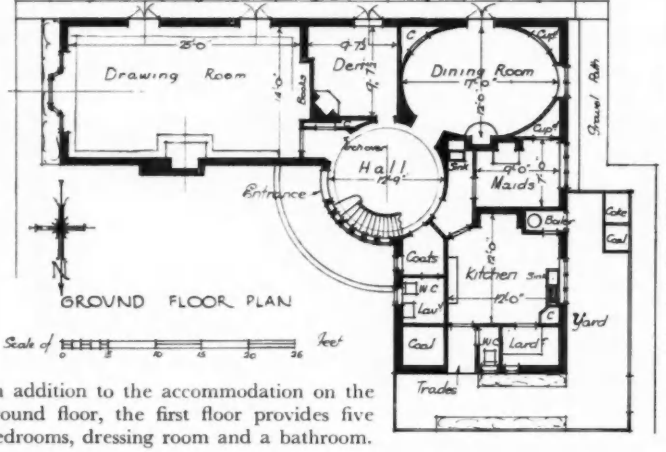
The oval fireplace in the dining room.

HOUSE AT IGHTHAM

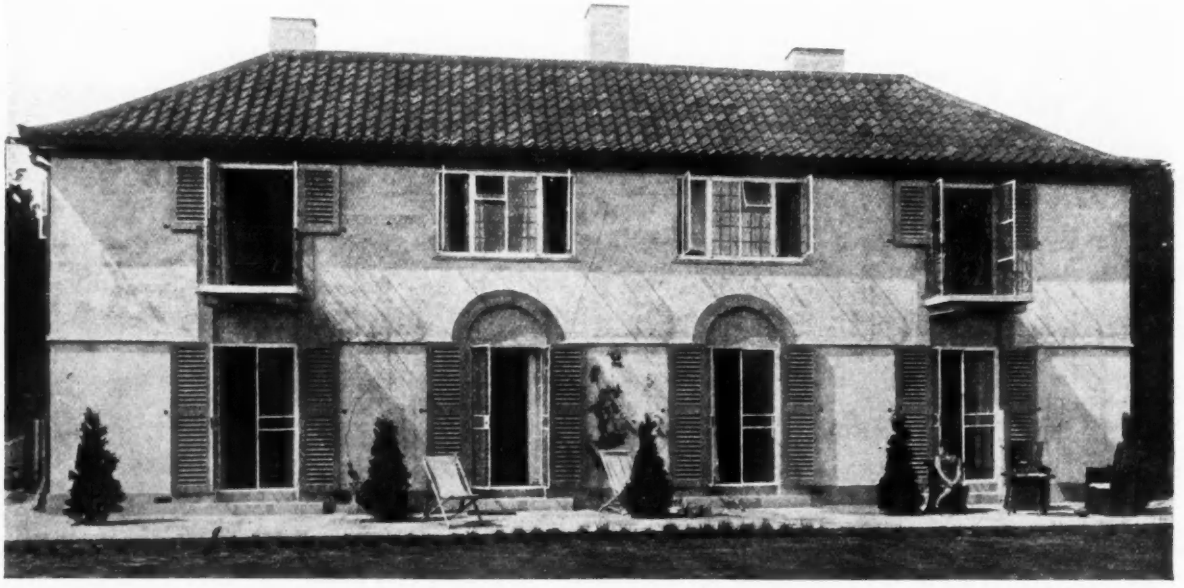
DESIGNED BY THOMAS RAYSON

THE site of "Ladywood," Ightham, Kent, is situated at the top of a small hill, affording magnificent views to the south and east. It is served by a lane, and is about a quarter of a mile from the main road. It was stipulated by the client that she should have an oval dining-room, circular hall and a rectangular drawing-room. The walls are of brick, stuccoed with white cement left from the wood float, and the roof is covered with hand-made pantiles. The eaves are of elm, and the windows of steel casement, set in painted wood frames and filled with lead glazing. The ground floor is laid with oak. An interesting feature of the interior of the house is the oval fireplace in the dining room. This was a work of considerable masonic skill, as the curve was elliptical on plan and elevation.

The garage (not shown on the plan) is situated on the north side, opposite the main entrance.



In addition to the accommodation on the ground floor, the first floor provides five bedrooms, dressing room and a bathroom.



The wrought-iron balconies on the south front, here illustrated, were designed on a seventeenth-century example. The terrace is of York stone, and the lawn is levelled and surrounded by herbaceous borders and a macra capa hedge.

THE TOWN PLANNING BILL

[BY OUR SPECIAL REPRESENTATIVE]

ALTHOUGH subject to some criticisms of detail, notably in regard to its provisions for compensation and betterment, the Town and Country Planning Bill was read a second time without a division in the House of Commons last week.

The Object of the Bill

Mr. Greenwood, in explaining the Bill, said that desecration now threatened not merely the towns, but the countryside of England with all its quiet beauty. The object of the Bill was to carry a stage further the work of town planning begun by Mr. John Burns in 1906, and to add another stone to the Government's housing and development policy. That policy must be judged as a whole. Its object was, on the one hand, to secure for the nation the conditions of wise economic development, and, on the other, to provide for the people the conditions of a healthy life. It was a conscious policy of national planning, and one of the first essentials must be the production of sufficient new houses. The congestion and the slums which were the result of lack of foresight in the past must be ended, and by wise constructive planning they must see to it that the conditions created by their forefathers would never be created again. It was impossible to measure with any accuracy the losses that had been incurred through the neglect of planning in the past. Between 1889 and 1911 the London County Council had spent £7,800,000 on street widening at an approximate cost of £280,000 per mile, and in the half-century before the war street widening had cost Liverpool £5,000,000, Leeds £2,500,000, and Bradford £3,200,000. In recent years there had been a considerable development in town-planning schemes, and regional planning had also come to the front. It was of vital importance that areas which were cleared of slum property should be developed on sound economic lines, and that local authorities should proceed on a definite plan. Had town planning been in operation more effectively since the war, hundreds of thousands of houses built under the various Housing Acts would have been placed in better positions and would have been better distributed.

Planning Extended to Built-up Areas

The first clause of the Bill made it clear that planning should now be extended to built areas. In effect, the local authorities of the country were being enabled, individually and jointly, to control the future development of the land in Great Britain. Under the Bill, regional committees would make regional schemes, to be filled in afterwards by the local authorities with supplementary schemes. It was laid down that the details of the scheme could be provided by supplementary orders. Referring to general development orders, he said that, as the law was at present, the owner of a piece of land might build a house on it where he liked, provided he complied with the bylaws, whether or not there was any means of access to the house. Then there were the long winding rows of bungalows and petrol stations from our big towns. All that kind of sporadic development was bad. The local authorities were given powers to specify areas in which development should not take place until the time was ripe and a general development order was issued. The power might seem rather drastic, but he thought that after the experience they had had of bungaloid growth, it ought to be given. It was clear that in exercising their powers, the local authorities should see that private interests were not unfairly restricted. Any person, therefore, who wished to undertake development in an area controlled by a development order might apply to the responsible authorities for permission. That should do something to prevent deliberate restriction of development, and, at the same time, prevent the disorganized development which had been so ugly a feature of post-war years.

Right to Receive Compensation

As to compensation, in the existing legislation the principle was accepted that the right to receive compensation was to be excluded in respect of certain kinds of provisions, if those provisions appeared to the Minister to be reasonable. That principle was continued and extended in Clause 18. At present, it applied to provisions relating to the space of buildings, and their height, density and character. As no one appeared to know what the character of a building really meant, the Government had tried to set out what was meant in plain terms. They had dropped the term "character" and substituted size, design, elevation, materials used, and the use of the building. There was provision prohibiting or restricting building because the land was unsuitable, the classic instance of which was the case of land known to be subject to flooding. There was also provision prohibiting the use of land for a purpose likely to involve danger or injury to the health of the neighbourhood, or to be seriously detrimental to it. He had in mind in that respect refuse dumps. Another provision limited the number and prescribed the size of streets entering a public highway. It was clear that where land, such as flooded land, was permanently unsuited for building, it should not be so used; and if people would persist in using it for building, there was no legitimate reason why that action should carry compensation.

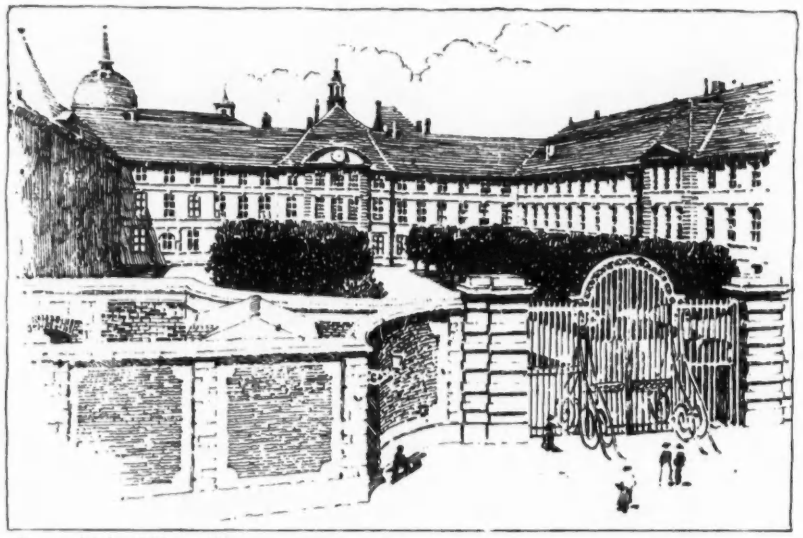
There was also no reason why, if land was forbidden to be used, if its use was likely to be injurious to health or seriously detrimental to a district, compensation should be paid. At present a local authority could claim one-half of the betterment which accrued from a scheme, and the scales were pretty well weighted against the local authority. He saw no reason why the local authority should not be able, as a result of this scheme, to claim 100 per cent. of the betterment. That was provided for in Clause 19. He was not going to say that the claim for betterment would be made in every case, but it would be a valuable negotiating weapon in the hands of local authorities when dealing with their schemes. It was provided that the betterment charge should not be enforced in the case of land used for agricultural purposes so long as the land was so used, but it was provided that the charge should accumulate at a fixed rate of interest, and would become payable when the land ceased to be used for agricultural purposes.

The same provision applied to the improvement charge. At present, local authorities had no power to levy a special charge on owners in respect of public improvements other than their power to levy betterment. Clause 27 provides that, if a local authority carried out a public improvement in planning an area, they should be enabled to levy the whole, or an appropriate part, of the cost on the owners whom they were actually benefiting. Machinery was provided for settling any difference of opinion between the local authority and the person on whom the charge was levied, and appeal machinery had been established with a view to the settlement of this question. It would be open to a local authority, when they acquired, say, an open space, to levy the whole or part of the charge of that on the owners of the lands which were benefited by the provision of the open space. The provision with regard to garden cities and satellite towns was, in principle, that contained in existing legislation. If new garden cities were to be established and developed successfully, they should be planned properly from the outset. They should be part of a properly organized scheme.

THE SKETCH CLUB

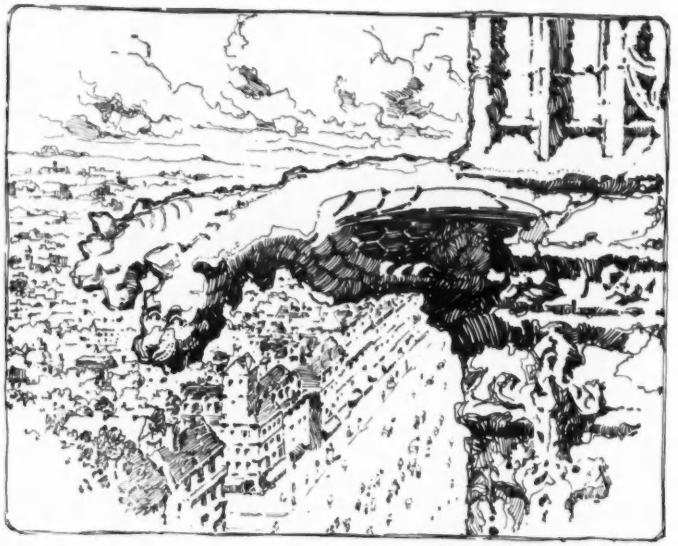
TWENTY-SEVENTH SESSION

Being Drawings in Rouen and Paris, France, by P. Hepworth.



(Pen-and-ink : 8½″ × 5⅞″)

The Hôtel Dieu, Rouen.



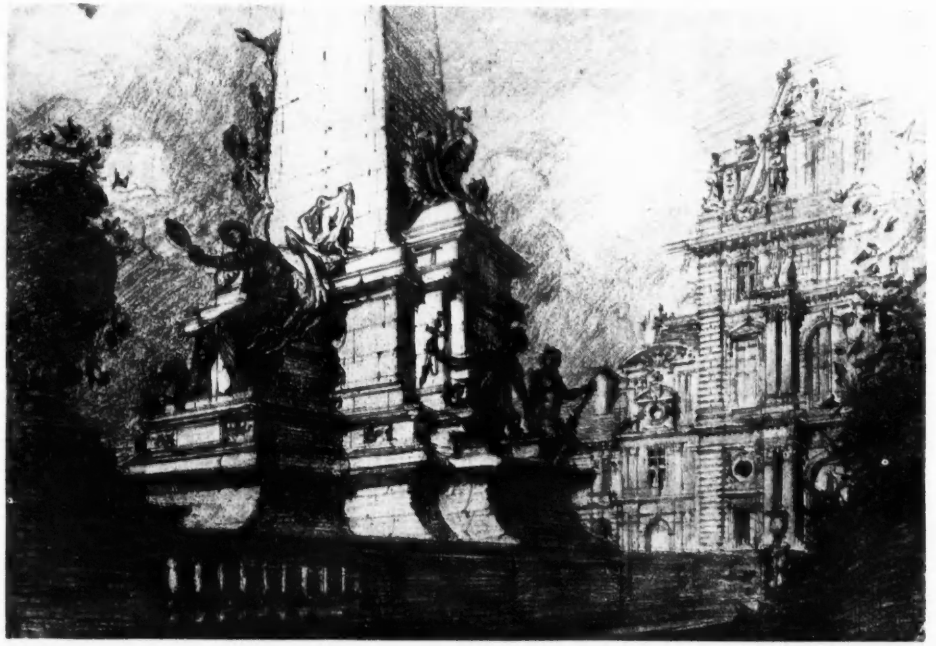
(Pen-and-ink : 7¾″ × 6¼″)

Gargoyles at Notre Dame, Paris.



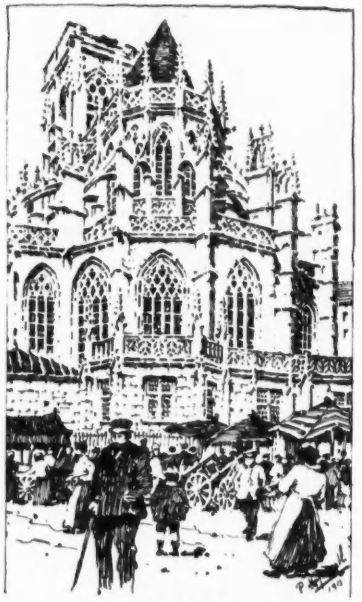
(Pen-and-ink : 6¾″ × 9½″)

Louis XV Doorway, Rue des Cordeliers, Rouen.



(Pencil : 21½″ × 14¾″)

The Gambetta Monument, Tuileries, Paris.



(Pen-and-ink : 5½″ × 9½″)

Eglise Saint Vincent, Rouen.

Louis XV Doorway, Rue des Cordeliers, Rouen.

The Gambetta Monument, Tuileries, Paris.

(Pencil : $21\frac{1}{2}'' \times 14\frac{3}{4}''$)

(Pen-and-ink : $5\frac{1}{2}'' \times 9\frac{1}{2}''$)

Eglise Saint Vincent, Rouen.



(Pen-and-ink : $6'' \times 9\frac{1}{2}''$)

The Place Jeanne d'Arc, Rouen.



(Pen-and-ink : $5\frac{1}{4}'' \times 11''$)

The South Transept, Rouen Cathedral.



(Pen-and-ink : $7\frac{1}{2}'' \times 10\frac{1}{4}''$)

Rue de la Grosse Horloge and Rouen Cathedral.

MODERN FLAT ARCHITECTURE

A LECTURE[1] BY G. GREY WORNUM



Mr. G. Grey Wornum

IN preparing my paper, I have been strongly moved to put before you mainly the work that has been designed and carried out by the London County Council. I am restricting myself almost entirely to the subject of housing the working classes, and I hold that nowhere in the world today is such a high standard of housing maintained as by this great London body. We have all heard talked of so much the attractions of the Vienna housing, the originality and ambition of the German housing, the quaintness of the Dutch housing, that we have left very much unsung the saneness of the English housing.

To commence with, I am going to describe very briefly the first efforts in London to legislate for better working-class housing, and the arrival of the London County Council to take the helm and develop its housing to the extent it embraces today.

It was not until 1851 that public attention was drawn in Parliament to the terrible condition of working-class housing in London. The late Earl of Shaftesbury pointed the finger.

Statistics show in 1842, in the parish of St. George's, Hanover Square, there were over 900 families each living in one room. Other parts of London were worse, and conditions in the provincial towns were no better.

As a result of the Earl of Shaftesbury's pleadings, in 1851 two Acts were passed. One effected the purchase or erection of lodging-houses by parishes, subsidized as necessary out of the poor rate, but certain borrowing powers were given them for purposes of capital expenditure. The other Act empowered the Metropolitan Police to supervise common lodging-houses in respect of morality, sanitation and repair.

An Act was also passed to control the number of persons living in one house; and, in 1855, an Act gave corporate existence to communities surrounding the City of London.

Acts of 1866 and 1867 gave further facilities beyond the 1851 Act for borrowing for building purposes on a forty-year loan.

1868 saw an Act to enforce landlords to keep their lettings in suitable repair, and included forced demolition of unsanitary houses and laid down scales of compensation. For the working of this Act medical officers of health were first appointed.

1875 produced further powers beyond the previous Act, and enabled whole areas considered unsanitary to be condemned and demolished.

These Acts did not, however, work smoothly or produce the desired result, namely, sufficient and suitable working-class housing.

During 1884–85 a Royal Commission sat to investigate the subject. The chief recommendation of this body was that the power conferred by the Acts in existence on vestries and public bodies be handed over to the Metropolitan Board of Works and the City Commissioners of Sewers. This recommendation became law under the Housing of the Working Classes Act, 1885.

In 1888 the Local Government Act transferred this authority to the L.C.C. The Council soon found that the various Acts required consolidating;

[1] *Modern Flats.* By G. Grey Wornum, F.R.I.B.A., read before a meeting of the R.I.B.A. on Monday, April 13, last.



A view of the courtyard of the flats on the Easthill Estate of the London County Council.

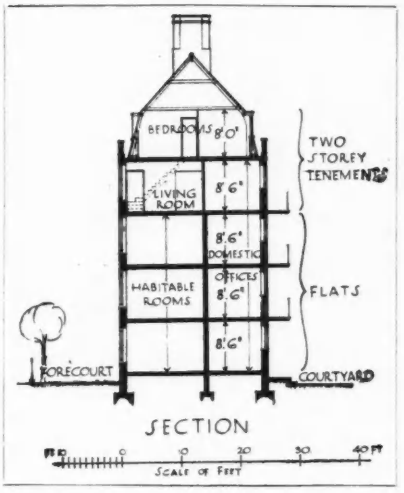
and overhauling, and the Housing of the Working Classes Act, 1890, resulted. From this date the fine building record of the L.C.C. commences. The L.C.C. admits of a Superintending Architect to the Council, and a large staff under him. Mr. Topham Forrest, who fills the former rôle, has earned the praise of the whole profession for the conduct of his department, with all its ramifications, apart from his duties as supervising architect. The enormous amount of building, however, has to be decentralized. This is achieved by the appointment of a certain number of principal assistants, who become, in effect, themselves architects to certain schemes under the supreme control of the supervising architect. This system has drawn some first-class men to the department and produced far better results than the Office of Works system. I feel sure that in connection with certain L.C.C. schemes I am about to describe I may mention the name of Mr. Minton Taylor, in whose hands many housing schemes have been developed. One may say that he has devoted his life to the tenement problem, and having known him for some years I have not yet plumbed the depths of his experience.

Most of the important housing schemes abroad are built outside the cities. No city has so difficult a problem to face as London. She is troubled by enormous areas of slum, consisting of occupied houses, both by their density and condition, unfit for human habitation. Before any rebuilding can be commenced the existing tenants have to be housed elsewhere. Many of them must live centrally in the metropolis, so as to be near their work, and such land as they would occupy is expensive.

The Tabard Garden Estate, before the rebuilding in 1917, consisted of 16½ acres, with a density of over eighty houses to the acre. I need hardly mention that the maximum density that State-aided housing allows is twelve to the acre. I may further add that a density of sixty to the acre brings houses 12 ft. back to front of each other.

In the layout plan as now completed, about half the former population is housed and an area of five acres of recreation ground is created. A standard of planning was set to give every living-room 160 sq. ft., and every bedroom 100 sq. ft. minimum. The scheme houses 4,500 people, though there may have been some births since my statistics were made.

This scheme was started before the war, and there was not then the pressing need for density that there is today. The new scheme at Easthill, Wandsworth, allows of sixty-six flats per acre, and the housing of two persons per habitable room was allowed for. Since the passing of the 1930 Act a density of 1⅔ persons per habitable room is allowed for in rehousing schemes. Such is the difference in result between two-story and five-story building, new slums are not being created by these modern tenement blocks.



A section of one of the blocks of flats on the Easthill Estate of the London County Council.

Having accepted as a fact that the higher you build these tenements the more ground you have for recreation purposes—keeping, of course, to a fixed density of population—the question arises as to how high one should build.

Under stress of terrible overcrowding the L.C.C. some years ago planned nine-story blocks for the Ossulston Street area in Kentish Town. This height necessitated both lifts and central heating and hot water. On examination the scheme was found to be too costly. A lift was tried out at Tabard Street and is still there; its cost at Ossulston Street for nine stories was estimated at £211 per annum without an attendant, who would cost a further £150. The lift at Tabard Street is unlocked by the tenant when required, but does not help his visitors, and no further lifts have been installed. The Ossulston Street scheme, however, fired Messrs. Barnes and Davidson to produce a very interesting scheme for Limehouse, which ran to eleven stories and covered an area greater than Hampton Court. This was to rehouse 2,500 persons from Limehouse Fields. A particular innovation in the planning was the arrangement of two-story dwellings with the outside approach balconies passing the lower floors of each tenement only. Central heating, hot water and lifts were schemed, and a small balcony court was given each flat. This scheme, as far as I know, has never matured.

With the relaxation of the London Building Act, five-story buildings (one-story being in the roof) can be erected with 13½-in. outside walls throughout, and this appears to be the economic height to build at present.

A survey of the plan evolution of the L.C.C. tenement brings out more clearly than any other means the salient points in the modern planning of such buildings.

When Mr. Minton Taylor first joined the L.C.C. in 1892, tenements such as those at Poplar were being built. They were four stories high and flat-roofed. The stairs served two flats on each floor, and the cost was 1s. 1d. per cubic foot. Peabody Buildings, Guinness Trust Buildings, and other housing organizations all followed this model more or less.

In 1893 an improvement was effected by introducing a small outside balcony that gave facilities for drying, washing and the storage of refuse pails. It also gave ventilated access to the w.c.

Mr. Minton Taylor soon felt that these buildings were too costly, and that, by providing four flats to a stair on each floor, considerable saving could be effected. In 1895 was evolved the plan of an inside corridor serving four flats per floor, and across this corridor was a lock-up w.c. for each tenant and a communal scullery on each landing.

This had hot water laid on, and shortly afterwards a bath was installed in this room for use of the tenants. No water was laid on to the flats themselves, and a communal laundry was built for household washing. This, at the time, was considered worth while, since this block was part of a large scheme covering twenty acres. This type block was roofed with a pitched roof, and the cost came right down to 9d. per foot cube.

In the plan of the Millbank block, 1899, Mr. Taylor achieved five flats per floor to one staircase, on the same lines as the former, but a communal laundry, with copper, was installed on each landing above the ground floor in place of the central estate building for that purpose.

Mr. Riley was appointed superintending architect in 1898, and he considered the type plan so far evolved as unhealthy in regard to the w.c. approach. He evolved the outside balcony approach system to the various flats, the forerunner of that most favoured today.

The first schemes consisted of long outside balconies, served off staircases at each floor level, and these balconies ran regardlessly past bedroom and living-room windows. Modifications were soon made, and a balcony past a living-room window was allowed to remain as satisfactory, but bedroom

windows on these public approaches were avoided. Improvements were then made to avoid passing the living-room windows.

One of the great difficulties of tenement planning has been the satisfactory provision of laundry facilities.

I referred some time back to the communal laundry at Boundary Street in 1895. This arrangement proved unsatisfactory, owing to the estate being situated in one of the very worst quarters in London, and it was alleged that the women, when at the tub, disagreed and caused trouble.

For years subsequent to this, coppers were provided in each self-contained tenement, but no doubt at terrible cost to health. Those who study the causes of rheumatism hold that the drying of damp clothes in living-rooms claims a large quantity of sufferers of this scourge, and at the least predisposes them to it. It is only in the last year or two that the L.C.C. have tried out using the topmost story of their tenements for laundry drying. I believe I may say that Mr. Taylor was responsible for the idea. He argued that all the warmth of the building from the flues collected there, and that outdoor facilities for drying were useless on more than one-third of the year, and were then uncertain. A certain amount of bedroom space is sacrificed, but the amenities and improvement to health are well worth while. I may mention here that, normally, 7 ft. of washing line are allowed for each family, and, assuming five washing days per week, this is equivalent to a weekly 35 ft. per flat. Two to three washings can be dried in sequence, in these roofs, per day.

I am now going to describe tenement blocks for which Mr. Minton Taylor is responsible under the control of Mr. Topham Forrest.

The magnificent estate at Easthill, Wandsworth, built on land formerly occupied by almshouses of the Fishmongers' Company, deserves much praise. The buildings attain a close density—they are only 50 ft. apart—and constitute an important decanting scheme for condemned housing elsewhere. It is estimated that the trimmings such as gauged brick arches, stone courses, etc., constitute a penny a week on the rent of each flat.

Owing to the closeness of the blocks to each other, aspect was sacrificed, and all approach balconies were placed away from the road frontage, so as to give a pleasanter look-out from all living-rooms. The site falls very considerably from back to front, and called for very skilful handling. The dark corners formed in each court contain the staircases. The four staircases connect up at the third-floor level, and form alternative means of escape from fire.

I referred to the original nine-story scheme for the Ossulston Street estate. The first buildings on the revised scheme have now been completed, and purport to be an answer to the demand for Viennese flats in London. I think the layout is extremely attractive, and the planning embodies all that is best on the L.C.C. lines, but I do not think the rendered walls are suitable to London. The neighbourhood is extremely dirty, and for some reason we do not seem able to use cement-rendering in this country without crazing.

The Larkhall Estate, Clapham, has been introduced in this paper since, in accommodation, they are similar to working-class flats, though their finish is slightly better. Such accommodation, moreover, is all that a large number of the middle class can afford. The scheme is an important one in being the first big private enterprise to provide, without subsidy, flats at a reasonably low rent to suit limited incomes. The scheme is due to the initiative and imagination of Sir Theodore Chambers. The estate originally comprised old Victorian houses, with well-treed gardens. One-quarter of the scheme has been built at present. The general planning and construction are based on the L.C.C. lines, with the exception of introducing two-story flats at the first-floor level. This was the same solution of the balcony approach problem as exercised by Messrs. Barnes and Davidge in their scheme for Limehouse.

Two small, electrically-equipped laundries were included in each of the first few blocks, but were not patronized by the tenants. The scheme as built was made possible by a forty-year loan by the L.C.C. on a valuation of nine-tenths of the cost. The cost of the buildings, exclusive of the gardens and site work, but including the hot water, was 1s. 7d. per foot cube.

Scandinavian flats help us very little in planning. The prevalence of the inside bath and water-closet, especially the latter, makes their system inapplicable to this country. I must say, however, a few words about the serious effort they have made ever since the organizing of the Housing Exhibition at Stockholm in 1930.

It was decided that flats and houses should be built without subsidy and let at rentals scaled to income. It was held necessary that every adult person should have his or her own bedroom —minimum size of rooms to be 96 sq. ft., and rooms 8 ft. 10 ins. high. The parallel strip layout of blocks is favoured, set diagonally on the compass and facing a little more east than west, to equalize the solar heat. They favour high buildings, and are putting up twelve-story blocks in Stockholm. It is maintained that high building costs less and that six-story blocks cost more than four-story blocks. Taking a rental of 8½ per cent. to 10 per cent. on capital cost, the average flat costs 21s. a week against 18s. 8d. for the average house. The house for comparison is one built of timber, with boarded exterior and walls lined inside with their special cardboard. Lifts are estimated at £88 per annum for six stories and £446 for twelve stories, to take six or seven persons. Such flats as they plan for two to three persons occupy only 387 sq. ft., cost £40 to £50 per annum exclusive of rates, and consist of living-room with two beds (or a bedroom with living table and two chairs), a small dining-room with bed in it, a small kitchen with borrowed light, and a bath and w.c. with no outside window.

I have not a very good word to say about modern Dutch flats. Their low standard is due to two main factors—one is that they are planned by speculative builders and not architects, and the other is that the rating and loan systems all encourage poor accommodation and finish. To obtain building loans, the façades have to be designed by qualified architects who get paid £1 per yard of façade for their work, and they have to make the best of the plans provided. The rating authorities assess their valuation on the standard of living of each tenant, and the provision of a bath sends the rating up and the amount of loan down.

I saw some blocks in Amsterdam last summer, some eight stories high. Each main stair was constructed of wood, and was 3 ft. wide and served two flats per floor. The floors throughout were of wood, and there was no secondary means of escape from fire. The whole construction was extremely shoddy.

Germany has done a great deal of experimenting in housing since the war. She has produced some fine layout plans, but she has not attained charm with much of it. The buildings are often so brutal or mechanized. Most of the German schemes are working-class flats for middle-class rents.

It seems curious that the Germans with their vast schemes in Hamburg, Berlin, Leipzic, Cologne and other cities do not organize their heating and hot water—no central systems are installed. Yet, by organization and standardization the fitting up of their kitchens is exemplary.

Since the L.C.C. schemes are subsidized, and therefore their flats are not let at an economic rent, one may well ask whether it is possible for any private individual or public body to build working-class dwellings without subsidy.

LITERATURE

JAGO *v.* SWILLERTON AND TOOMER

THIS very carefully constructed and humorous account of a typical building arbitration case is likely to afford amusement to all, while it serves a very useful purpose by indicating the doubts and dangers which arise if a dispute once passes into the realm of law.

The author clearly shows how easily the award might have been one adverse to both architect and builder, and the difficulty of weighing and adjudicating on the relative merits of technical and scientific evidence. Also the personality of witnesses has weight in every case, quite apart from the actual merits of the evidence given.

We see how "Colonel" Jago's personality creates an unfavourable impression irrespective of one which, though it has no bearing on the merits of his case, has undoubted influence on the final result. The respondents also have the advantage of a leading counsel who puts his case in the most adroit manner; while in their technical witness, Mr. Randegger, an exceedingly good choice has been made, which undoubtedly tells heavily on the final result.

I doubt whether any arbitrator would have allowed Mr. Pitfall to indulge in his very pointed personalities at "Colonel" Jago's expense, apart from the fact that such personalities would only have their full effect in a case before a jury; and this part of the case appears to be bordering on the realm of caricature; but this can hardly be held to be a defect, since it does indicate the manner in which the licence sometimes allowed by both judges and arbitrators can be used to a witness's discomfiture.

The whole construction of the case and the manner in which it is presented is characterized by the great care and accuracy of all the author's work; nothing is omitted or overlooked, while, in his portrayal of the various characters, there is abundant room for Mr. Creswell's sense of humour and knowledge of detail which make his characters living beings instead of dummies. The Reverend Holroyd Averil's evidence affords an exceedingly good example of the manner in which slight and almost irrelevant evidence may be dragged into any case, and the characteristic manner in which wearers of the "cloth" emphasize the nature of their calling.

The arbitrator is also exceedingly well drawn. We are made sensible of the position he worthily occupies, and are uncertain of his attitude till we finally read his award and put the book down with a feeling of relief that both builder and architect have escaped the manifold perils of the law.

I congratulate the author on a most useful and entertaining book which makes us hungry for more.

H. W. WILLS

Jago v. *Swillerton and Toomer*. By H. B. Creswell. London: The Architectural Press. Price 5s. net.

PAINT AND ITS PART IN ARCHITECTURE

THE supervision of painting and decorating is an extremely exacting duty, although it has been lessened during late years by the advance in the manufacture of paint, washable distemper and water paint.

Originally, the decorator received the raw materials and prepared them to suit the requirements of the architects' specification, but today, with many reliable ready-mixed paints on the market, the architect has to hand material which, if selected from the products of a reliable maker, is likely to produce better results than material "knocked up" by the decorator on the works.

Despite the assistance provided by modern plant and research work, the architect is constantly faced with failure of the materials, which, though at times reflecting upon the maker, more often than not originates in the faulty preparation of the ground work, as well as the difficulties encountered with the treatment of plastered and cement rendered surfaces.

The speed with which work is required, cut prices which at times leads to the employment of incompetent workmen, and the present-day difficulties in obtaining seasoned wood, retard the effort to gain satisfactory finishings. Added to these troubles, there is in some instances the burden of loosely worded clauses in specifications.

Manufacturers of paint are in the habit of issuing booklets, which, though necessarily calling attention to the capabilities of their own products, occasionally impart practical information of value.

Messrs. Jenson and Nicholson have advanced a step farther, and have compiled and published a reference book dealing with *Paint and Its Part in Architecture*, which would form a very useful addition to the library of the architect.

Whilst taking the opportunity of advertising their products, the book is full of readable matter, embodying chapters on the nature and character of colour, the general qualities of pigments, and a considerable amount of useful information for the preparation of specifications and the supervision of decoration work.

In a chapter under the title of "standardization" the decoration of various surfaces is dealt with. The authors, in dealing with the treatment of newly plastered and cement-rendered surfaces with paint, indicate that they are clearly conversant with the risks which are attendant upon operations of this nature, and agree that the work should be allowed thoroughly to dry out and provide the opportunity for the alkaline salts to become neutralized by the action of the weather.

A possible remedy is suggested by priming with a paint made with a non-saponifiable vehicle, which they and other manufacturers of repute place upon the market. Specifications sometimes include for the application to a new cement surface with two coats of sulphate of iron or zinc, 2 lb. to the gallon, dissolved in hot water, but research work has shown that this cannot be entirely depended upon.

It is generally agreed that the presence of free lime is the cause of failure, and investigations at the Building Research Station in the case of cement rendered surfaces indicates that the action between the alkali salts and free lime forms caustic soda and potash which, reacting upon the oil, forms a mass of a soapy nature.

It is considered inadvisable to paint upon new plaster or cement under twelve months, the safest method being the temporary treatment of the surface with a water paint or cheap distemper.

Referring to the application of size to walls before painting, the authors very properly point out the inadvisability of preparing wall surfaces in this manner, which is only intended to save time and material.

A seemingly small matter, which is sometimes carelessly treated, is the sealing of knots in woodwork. Two coats are necessary, composed of methylated spirit and shellac, and this should be laid on thinly, well brushed out. Knotting is at times dabbed on, forming a ridge which is difficult to obscure.

W. A. D.

Paint and Its Part in Architecture. Compiled and published by Jenson and Nicholson, Ltd. Price 21s. net.

Publications Received

Georgian England. By A. E. Richardson, F.R.I.B.A. London: B. T. Batsford, Ltd. Price 21s. net.

Architectural Drawing Perspective and Rendering. By Cyril Farey and A. Trystan Edwards. London: B. T. Batsford, Ltd. Price 16s. net.

Housing: The County Borough of Southampton. Southampton: Hood & Co., Ltd.

IN THAT CONTINGENCY

The following abstracts of inquiries represent a number of those recently submitted to the Building Research Station and their replies thereto :

Lime Mortar Failing to Harden

AN architect stated that, whilst lime mortar gauged 1 : 10 with white cement used for brickwork was quite satisfactory inside the building, in nearly all the boundary walls no setting had taken place during the six months they had been erected.

Lime mortar consisting of ungauged non-hydraulic lime and sand has no chemical set such as is obtained with cement; the hardening is entirely due to drying out and carbonation. Experiments carried out at the Building Research Station on the tensile strength of lime mortars, gauged with different quantities of Portland cement, made up with ordinary washed builders' sand in the proportions by volume of three of sand to one of grey hydrated lime, indicated that an addition of 20 per cent. (by volume of the lime) of Portland cement was needed to produce any significant strength in the mortar.

The gauging of lime mortar with 10 per cent. of cement would probably be sufficient to impart slight setting properties to the material, but it would not produce a mix having any appreciable strength, and would not render it immune from frost action. Frost is probably the cause which has prevented the hardening of the mortar outside the building, while inside material appeared to be satisfactory. The different drying conditions would be an added reason for the difference of behaviour between the two situations.

Chalk Pisé Filling for Cavity Construction

Information was required on the advisability of filling the cavity in a timber frame bungalow lined on the outside with asbestos cement sheeting and internally with a fibrous wallboard, with a chalk cement mixture in the proportions of about 20 : 1.

The filling is likely to give certain definite advantages in that the heat losses by conduction through the walls should be somewhat reduced and, in addition, the higher thermal capacity of the wall should make the building more comfortable. Air leakages should also be reduced.

The only drawback is that some trouble may be experienced until the moisture, introduced with the chalk filling, has dried out. The asbestos cement facing will prevent the evaporation of moisture to the exterior of the building. Many of the fibrous wallboards are liable to be adversely affected when saturated with moisture, and will certainly undergo considerable shrinkage when they do finally dry out. There is also the danger that the damp conditions may lead to the growth of moulds on the interior lining material.

A chalk cement mix of 20 parts of chalk to 1 part of cement was found to give a satisfactory wall in experimental cottages erected at Amesbury. A certain amount of shrinkage occurred, but this would not matter in the type of construction proposed. It would probably be quite unnecessary to add any water to the mix, as chalk usually has a high water content when freshly excavated.

Waterproof Concrete

A local authority required information regarding waterproofing treatment for concrete work in a swimming bath.

The subject of the value of waterproofing admixtures for concrete is a highly controversial one, and an investigation has been started at this Station. The following observations, based on information at present available, may be of assistance.

For obvious reasons we are unable to discuss specific proprietary articles. There is a very large number of integral waterproofing compounds on the market, and these materials are of various types : many of them possess certain common characteristics, and they may be roughly classified by composition into the following categories :

Pore-filling.		Water-repellent.	
Inactive.	Active.	Inactive.	Active.
Chalk	Alkaline silicates	Calcium soaps	Soda or potash
Magnesia	Sulphates of aluminium or zinc	Waxes and fats	Soap used alone, or together with
Talc	Chlorides of aluminium or calcium	Coal tar residues and bitumen	1. Calcium chloride
Fullers earth	Iron filings plus ammonium chloride	Vegetable oils	2. Alkaline silicates
Gypsum		Resins	3. Lime
Iron filings			
Silicates of alkaline earths			

"Active" agents are those which depend for their effect upon the formation of insoluble products by means of chemical reaction, either with a second reagent, or with ingredients of the concrete itself.

The above represent ingredients which occur in known proprietary waterproofers. The actual product as sold may be in the form of powder, paste or liquid, and may contain any of these ingredients either alone or in admixture. The ingredients are sometimes in solution, or in aqueous emulsion with gelatin, glue or casein as the emulsifying agent. Some in powder form are incorporated with the dry mix, and others are added to the gauging water.

It is perhaps worthy of note that most of these preparations are of secret composition and, for this reason, it would be inadvisable to attach great importance to any one series of experimental results, since the composition of a secret proprietary article may be completely altered at any time. Such changes in the composition of secret preparations are believed to have been made in certain instances which have been brought to our notice.

In considering the advantages to be gained by the use of integral waterproofing compounds, it is necessary to examine the manner in which penetration of water is likely to occur under practical conditions.

In concrete work the majority of the cases of serious penetration which occur are usually found to be due to the development of shrinkage cracks, or to defects in construction, rather than actual penetration of the mass of the concrete. Construction joints, cracks at angles, bonding of floors to walls, and voids where ties for formwork have been embedded are the most common causes of penetration of moisture. It is extremely unlikely that the use of an integral waterproofing admixture would be of the slightest use in counteracting defects of this kind. Some time ago we investigated a case of serious percolation of water into the basement of an important building in London. A widely advertised integral waterproofing compound had been used and, although the general mass of the concrete was dry, water had penetrated at numerous defective points, of the kind just indicated, and had at times been sufficient to submerge the pumps provided for sewage ejection, so that these were put out of service. In this particular instance the considerable extra cost involved by the addition of the integral waterproofer was certainly not justified by the results obtained.

The question of the permeability of concrete and mortars is dependent on a very large number of varying factors, which can hardly be discussed in the scope of a letter. The subject is dealt with in Building Research Technical Paper No. 3, *The Permeability of Portland Cement Concrete*.

It should be appreciated that by careful attention to proportioning, mixing water content and curing conditions, concretes can be made

sufficiently impermeable to satisfy all normal requirements without the addition of any special admixture. Under practical conditions, however, it is rarely possible to achieve anything approaching a perfect result, and it remains to determine whether the additional degree of impermeability imparted by an admixture is a justification for the expense involved. It is, perhaps, not generally realized that the cost of many of the proprietary integral waterproofing agents is considerable. In the proportions ordinarily recommended the cost of a cubic yard of concrete will be increased by amounts varying between 12s. and 17s., and this makes allowance for the material alone. It seems to us that the same or less expenditure devoted to more careful proportioning and supervision of concreting might result in a greater degree of impermeability, than could be obtained by the addition of an integral compound to a less carefully prepared mix. It is obvious that in the case of a lean mix, a considerably greater proportion of cement could be used, and this would result in very much decreased permeability, and in all probability higher strength as well.

Comprehensive investigations are at present in progress here on the subject of waterproofing of concrete, and until this work is complete, it is not possible to give any more definite opinion than that already stated.

SOCIETIES AND INSTITUTIONS

R.I.B.A. ELECTION OF MEMBERS

THE following have been elected to membership of the R.I.B.A. :

As Fellows (7)

Allen, F. H.
Clayton, J.
Cruickshank, H. W.
Dawbarn, G. R.
Landstein, R. A.
Loweth, S. H.
Overy, C. R.

As Associates (17)

Bartlett, C. J.
Beattie, I. H. K.
Dark, F. W.
Doran, P. J.
Geens, A. E.
Good, N. D.
Hemm, G.
McDonald, D. C.
McMorran, D. H.
Maitland, R. W.
Maxwell, H. S.
Murray, E.
Sanderson, J. K. M.
Sein, M. T.
Steel, E. D.
Than, O.
Williams, R. A.

As Licentiates (133)

Anderson, J. H.
Annakin, A. B.
Barber, F.
Begley, W. W.
Beveridge, T. J.
Black, A.
Bladon, J. E.
Broadhead, A. R.
Brown, E. O.
Buckingham, G. J.
Bucknole, E. H.
Butcher, R. F.
Butler, A. R.
Capsticks, T.
Cavanagh, L. F.
Chisholm, J. G.
Coales, H. F.
Cocke, I.
Cooper, K. J.
Davies, J. G.
Dawson, E.
Deane, H.
Dearden, A. R.
Doe, A. T.
Downe, W. A.
Duncan, S. E.
Duncan, T. V.
Easdale, R. G.
Ellston, R. H.
Eunson, A.
Evans, G.
Fitzgerald, A. S.
Floyd, A.
Franks, H. W.
Gallannaugh, B. W. L.
Gardner, A. B.
Gayton, H. J.
Gill, L. M.
Goldie, L. L.
Griffiths, F. R.
Hally, D.
Ham, W. F. R.
Hardy, G. B.
Hartley, C.
Hartley, J. E.
Hattrell, W. S.
Hemsley, H. L.
Hill, J. R.
Hollier, J. H.
Hooper, A. H.
Hughes, J. L.
Jeffery, T. E.
Jewson, N.
Johnston, W.
Jones, J. M.
Jones, M. W.
Jones, R. L.
Kapadia, P. P.
King, W. J.
Lewis, A. W.
Lloyd, N.
Lomer, E. C.
MacKenzie, A.
McNab, J.
Marshall, H. C.
Massey, P. G.
Mercer, J. F. L.
Methuen, Hon. A. P.
Moore, T.
Morgan, W. R.
Morley, H. H.
Morris, C. E.
Morris, D. E. G.
Mulvaney, J. L.
Mundy, G. T.
Newton, F.
Nicoll, A. D.
Parker, T. F.
Parkin, L.
Parkinson, G.
Parrish, J. P.
Peart, V. H. B.
Pedley, E. W.
Pendleton, W.
Phipps, A. S.
Pike, G. W. R.
Porteus, F. W.
Ralph, S. M.
Randle, G.
Ranger, E.
Ravenhill, F. C.
Restall-Gardiner, R.
Richardson, L.
Rickaby, F. R.
Roberts, W. W.
Rodd, B. H. T.
Ross, J. A.
Rumsby, W. S.
Russell, P. G.
Scarborough, H. E.
Schumann, C. G. J. L.
Scott, F.
Servant, W. J. D.
Sherman, J. A.
Sherwood, Capt. H.
Simpkin, W.
Skilling, R. S.
Slater, W. H.
Smith, E. M.
Smith, J. A.
Smith, S. V.
Smith, T. E.
Swan, C. A. R.
Tanner, S. T.
Thomas, E. A.
Thomas, E. G.
Tomalin, F. W.
Turnbull, F. W.
Varney, F. A.
Vass, R. C.
Warner, G.
Watkins, J. F.
Westrup, G.
Whinney, H. C. D.
Whiteing, R. H.
Wilkinson, R. E. B.
Willett, S.
Williamson, J. S.
Womersley, A.
Woodland, W. A.
Woolnough, C. A. E.
Wyatt, C. E. A.
Yearsley, H. A.

R.I.B.A. COUNCIL MEETING

Following are some notes from a recent meeting of the Council of the R.I.B.A. :—

The Scottish National Library : The President was authorized to send a letter to *The Times* supporting the efforts which are being made by the Edinburgh Architectural Association to obtain reconsideration of the proposal to build the new Scottish National Library on the site of the Sheriff Court Building in Edinburgh.

The National Association for the Prevention of Tuberculosis : Mr. Lionel G. Pearson, F.R.I.B.A., was appointed to represent the R.I.B.A. at the annual conference of the National Association for the Prevention of Tuberculosis.

The International Illumination Congress, 1931 : Mr. John Swarbrick, F.R.I.B.A., was appointed to represent the R.I.B.A. at the International Illumination Congress.

Revision of the London Building Act—Appointment of Advisory Committee : Mr. Louis Blanc, L.R.I.B.A., was appointed to represent the R.I.B.A. on the Advisory Committee which has been set up by the L.C.C. to investigate the revision of the London Building Act.

The Fellowship : The Council, by a unanimous vote, elected the following architects to the Fellowship under the powers defined in the Supplemental Charter of 1925 :

Messrs. E. G. Cohen (Past-President of the Royal Institute of the Architects of Western Australia); A. R. L. Wright, L.R.I.B.A. (Past-President of the Royal Institute of the Architects of Western Australia).

Membership : The following Members were elected : As Honorary Corresponding Member, 1; as Fellows, 16; as Associates, 53; as Licentiates, 99.

Reinstatement : The following ex-members were reinstated : As Fellows : Mr. E. Hardwick-Terry. As Associates : Messrs. Henry Stanley Morran and Norman Fraser Shanks.

Applications for Election as Licentiates under Section III (f) of the Supplemental Charter of 1925 : Two applications were approved.

Resignations : The following resignations were accepted with regret : Miss Maud Amy Margaret White, A.R.I.B.A., and Messrs. Henry Sime Badenoch, L.R.I.B.A.; George Harry Robert Oldfield, L.R.I.B.A.; Albert Edward Seaman, L.R.I.B.A.

Election of Students : The following Probationers were elected as Students of the R.I.B.A. :—

Atkinson, J. R. (Architectural Association).
Cahill, T. J. (University of Manchester).
Craven, A. D. (Leeds College of Art).
Crighton, A. (Liverpool School of Architecture).
Davies, T. E. (Liverpool School of Architecture).
Dilks, J. S. (University of Manchester).
Geens, A. E. (Intermediate Examination).
Hebeler, B. A. (Architectural Association).
Hoar, H. F. (University of London).
Kilgour, S. (Robert Gordon's Colleges, Aberdeen).
Laidler, G. G. (Architectural Association).
Littler, F. H. (Liverpool School of Architecture).
McLay, L. M. (Leeds College of Art).
Mallows, E. W. N. (Architectural Association).
Oram, B. (Leicester College of Arts and Crafts).
Parkinson, J. L. (Liverpool School of Architecture).
Rennie, H. G. (Liverpool School of Architecture).
Rice, E. M. (Leeds College of Art).
Scaife, E. F. (University of Manchester).
Shepherd, E. (Leeds College of Art).
Tetlow, M. B. (University of Manchester).
Thomas, I. A. (University of Manchester).
Waller, A. D. (R.W.A. School of Architecture, Bristol).
Westwood, B. P. (Architectural Association).
Whyman, G. P. (University of Manchester).
Will, R. G. (Robert Gordon's Colleges, Aberdeen).
Wood, B. E. (University of Cambridge).
Young, A. R. (Birmingham School of Architecture).

IRISH ARCHITECTS' ANNUAL MEETING

At the annual meeting of the Irish Architectural Association, held in Dublin on April 14, the following members were elected officers for the forthcoming year :

President, Mr. C. A. Harrington; vice-president, Mr. H. V. Millar; hon. treasurer, Mr. D. M. Turner; hon. librarian, Mr. E. D. Buckley; hon. secretaries, Messrs. E. J. Crowe and D. R. Sheridan. Committee : Messrs. H. Coleman, W. H. H. Coke, J. A. Doyle, L. F. Giron, C. F. Higginbotham, A. E. Jones, D. M. O'Dwyer, J. O'Gorman, and Manning Robinson.

SCOTTISH ARCHITECTS

At the monthly meeting of the Council of the Royal Incorporation of Architects in Scotland, intimation was made that Mr. J. Maclaren Ross, A.R.I.B.A., London, had offered a gift to the Incorporation of his late father's architectural library, consisting of some 300 volumes.

In accepting this handsome gift, the Council decided that the volumes would be indexed and preserved as a special collection in memory of their late distinguished collector and owner.

On the recommendation of the President's Committee, the Council selected Mr. Alex. N. Paterson, A.R.S.A., R.S.W., F.R.I.B.A., Glasgow, ex-president of the Incorporation, to design a wall memorial in St. Giles's Cathedral of the late Sir Robert Lorimer, ex-president.

The following were elected members of the Incorporation :

Fellow : Mr. F. R. Burnet. Associates : Messrs. A. J. MacLaren and R. M. Noad. Students : Messrs. J. Morrison, P. M. D. Currie, Arch. M'Beth, and J. A. M'Morland.

INSTITUTE OF BUILDERS' ANNUAL DINNER

Lord Burnham, proposing the toast of " The Institute of Builders " at their annual dinner, held at the Carpenters' Hall on Tuesday of last week, said he did not suppose there had ever been a time when the functions of such a body as the Institute could be more usefully exercised than at the present moment, when they were passing through great changes in respect of architecture and materials.

Mr. R. Costain, president, in reply, said that the Institute of Builders had found it incumbent on itself to attempt to guide the policy of the R.I.B.A. in the formulation of a Bill now before Parliament for the registration of architects. It was small wonder that there should be differences of opinion between builders and architects, because there had been differences in the R.I.B.A. itself. If the builders had considered their own personal advantage, they would have been content to let sleeping dogs lie, but they considered the welfare of their industry as essential to the welfare of the country. The Institute had offered to co-operate with the R.I.B.A. in drafting an effective measure, but so far no word had been received from the R.I.B.A.

Lord Amulree, replying to the toast of " The Guests," proposed by Mr. S. P. Purkiss Ginn, appealed to municipal authorities in the various town-planning schemes which they might put forward to reserve or purchase sites for landing places or aerodromes. The minimum area required for a landing place and aerodrome was 75 acres, but the Ministry urged a provision of from 150 to 200 acres. If action were taken now, sites could be obtained at reasonable rates.

THE SMOKE PROBLEM

Mr. Arnold Marsh, M.SC.TECH., in a paper on " The Smoke Problem : A consideration of some of its economic aspects and the difficulties of its solution," read before the Institute of Fuel, at Burlington House, W.1, on Wednesday last, said the causes of smoke produced by industrial processes could be dealt with under four main headings : 1 : Inadequate plant, necessitating continuous or occasional overloading; 2 : Inefficient or ill-equipped plant; 3 : Plant unsuitable for the requirements, or fuel unsuitable for the plant; 4 : Unskilful, negligent or otherwise incorrect firing.

Under the heading of legislation, the lecturer pointed out that the smoke nuisance, being a national one affecting the whole population, could be best dealt with by legislative means, and of the legislation existing at the present time two things can be said. First, that it was in many ways inadequate; and secondly, that that part of it which was valuable was inadequately used. [*A letter on this subject is printed on page 587.*—ED., A.J.]

BUILDING CONFERENCE

A conference organized for the purpose of advocating greater efficiency and economy in the building industry, through the wider use of British Standard Specifications for building materials, was held on Tuesday of last week, at the Institution of Civil Engineers. Mr. E. J. Elford, M.INST.C.E., presided.

The question of introducing some measure of simplification in general building commodities in everyday use, also came under review.

The Rt. Hon. Arthur Greenwood, P.C., M.P., Minister of Health, said this riot of variety in building materials and commodities must, he thought, be a nightmare to everybody concerned with building problems. He would be sorry himself to reach that dead level of uniformity some people feared, but in the standardization of materials there were large advantages to be gained and very few disadvantages to be met if the standardization of specifications were pursued on the wise and tolerant lines which the Association had laid down as the principle upon which their work should always be carried forward.

He was satisfied that within the practical limits of standardization there were possibilities of economy which ought to be grasped in the present circumstances, particularly during this time of severe economic stress, since waste was the last thing that this country could afford.

He felt sure that in the long run, one of the most important factors determining the amount of house building which would be carried on, was the actual cost of building, and if by improved standardization of materials and commodities we could do something to squeeze out the waste due to the multiplicity of design for one and the same article, something would have been done in the interest of national economy as well as of house building.

The Minister said he would even go farther, and say that wise standardization might lead to substantial improvements in design. After all, no one could really believe that all the designs were the result of the most careful thought; some were surely due to accident and some to the desire to be different from other people. It might be that this concentration on the question of standardization, within such limits as were practicable, might lead to improvement in design and perhaps also improvement in economy.

It would certainly make it far easier to carry out work of repairs and renewals. Indeed, from whatever angle the problem was considered, it meant in the long run economy of effort, economy in financial expenditure, and it would, he thought, be in the best interest of both producers and consumers, and indeed all those engaged in whatever capacity in the building industry of this country. He hoped, therefore, that out of this Conference today would come a great movement which would bring to the building industry further standardization and further British Standard Specifications.

After proposing a vote of thanks to Mr. Greenwood for his address, Mr. Elford said as the title of the British Engineering Standards Association no longer represented the present scope of the work, one of the first acts of the Council was to consider the dropping of the terms " Engineering " in the title, and a specially-called general meeting of the members of the Association would shortly be called to decide upon the exact form of the new title.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Building Progress

MANY interesting matters in regard to housing were raised during a debate on the Vote for the Ministry of Health in the House of Commons last week.

Mr. Greenwood said that the response which had been made by local authorities to the request that they would submit their housing programme for the next five years under the Housing Act, 1930, showed that during those years there would be a substantial increase in housing activities, amounting to between 90,000 and 100,000 houses a year. If the amount of building by private enterprise was maintained, and it showed no signs of falling off, there would be another 100,000 houses a year provided from that source. He believed that the local authorities fully realized the responsibilities which the Act of last year placed upon them to carry out slum clearance, but he felt bound to point out that if local authorities failed to carry out their duty, the powers conferred upon the Ministry of Health by the Act would be exercised.

During the last three years the average cost of building a non-parlour house had steadily declined. In 1928 it was £362, and in 1930 it was £340. It was clear that, as things stood now, with the addition of the sum of say £75, for land, sewers, roads, and so forth, the average cost of the house was still rather over £400. In his view, that was still too high if the full value of the Act of 1930 was to be obtained. Without sacrificing essentials or quality, it still seemed to him that there was room for improvement in the cost of house-building. He had been in consultation with local authorities, and he hoped they would do what they could to force down prices.

He had asked the Committee which was dealing with the problem of building prices and materials to consider a new survey of the whole of the prices of materials which contributed to the cost of houses with a view to seeing whether prices could be further reduced. That morning he had opened a conference of people concerned with the building industry and the building of houses to see whether, by further standardization, it might not be possible at the same time to reduce prices and to improve design and simplify specifications. He thought that in these difficult times the local authorities had responded extraordinarily well to the appeal that had been made. He did not pretend that he was satisfied; but he would be hard to satisfy.

In the discussion which followed, the Minister was subject to much criticism. Sir Kingsley Wood, for the Unionists, said that the Government policy had been timorous and half-hearted. The number of unemployed was now three times what it was when the Socialist Government assumed office. The rate of building was only two-thirds of the rate in 1927. The reduction in the price of building had been arrested. In short, there had been less houses, no lower rents, more money from the taxpayer, and more unemployment in the building trade. Without private enterprise, house-building would have been in a hopeless position.

Eventually, however, the vote was carried by 199 votes to 72.

COMPETITIONS OPEN

April 30.—Sending-in day. Hospital for Infectious Diseases, Coventry, for the Coventry Corporation. Assessor: E. Stanley Hall, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

June 1.—Sending-in day. New Council School, to be erected at Blowers, Dudley. (Limited to architects within a radius of 15 miles of Dudley.) Assessor: Herbert T. Buckland, F.R.I.B.A. Conditions from J. Whaley, Director of Education, Education Offices, St. James's Road, Dudley.

June 16.—Sending-in day. (Last day for conditions was February 25.) Offices for the Ingham Infirmary, South Shields. (Limited to architects within the area of the Northern Architectural Association.) Assessor: George Reavell, O.B.E., F.R.I.B.A. Premiums: £250, £100 and £50. Conditions were obtainable from John Potter, Secretary, Ingham Infirmary, South Shields. (Deposit £2 2s.)

June 24.—Sending-in day. King Edward VI. School, Mill Lane and Wilton Road, Southampton, for the Governors of the School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums, £150, £100 and £50. (Deposit, £1 1s.). Full particulars are obtainable from G. A. Waller, Clerk to the Governors, 7 Albion Place, Southampton.

June 26.—Sending-in day. Offices for the City of Leicester Corporation, Charles Street, Leicester. Assessor: E. Berry Webber, A.R.I.B.A. Premiums: £300, £200 and £100. Conditions from A. T. Gooseman, Engineer and Surveyor, Town Hall, Leicester. (Deposit £2 2s.)

June 30.—Sending-in day. Latest date for conditions: April 15. New Branch Baths, Foleshill, for the Coventry Corporation. Assessor: F. J. Horth, F.R.I.B.A. Premiums: £210, £105 and £52 10s. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions: August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

No date.—New Central Library, Market Place South, Birkenhead. Assessor: A. N. Prentice, F.R.I.B.A. (Conditions are not yet available.)

No date.—War Memorial, Colston Avenue, Bristol. (Limited to Bristol architects and assistants.) Assessor: G. C. Lawrence, F.R.I.B.A. Conditions from the Editor, *Bristol Times and Mirror*, St. Stephen Street, Bristol.

THE ARCHITECTS' DIARY

WEDNESDAY, APRIL 22

R.I.B.A., 9 Conduit Street, W.1. Exhibition of "The Architecture of Modern Transport." Until May 22. 10 a.m. to 8 p.m. (Saturdays, 10 a.m. to 8 p.m.). **10 a.m.**

GARDEN CITIES AND TOWN PLANNING ASSOCIATION, 3 Gray's Inn Place, W.C.1. Visit to various housing estates. Meet at the Association's premises at 10 a.m. Also a tour, starting at the same time, will be held on Thursday, April 23. **10 a.m.**

INSTITUTE OF FUEL. At the Grand Hotel, Birmingham. "The Smoke Problem: A Consideration of some of its Economic Aspects and the Difficulties of its Solution." By Arnold Marsh, M.SC. (TECH.). **6.15 p.m.**

Daily Mail IDEAL HOME EXHIBITION, Olympia. Until May 2. **10 a.m. to 10 p.m.**

BUILDING TRADES EXHIBITION, Manchester. Until April 25.

THURSDAY, APRIL 23

WEST YORKSHIRE SOCIETY OF ARCHITECTS, 62 Woodhouse Lane, Leeds. Annual General Meeting. **7 p.m.**

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. See heading under April 22.

FRIDAY, APRIL 24

TOWN PLANNING INSTITUTE. At Caxton Hall, Westminster, S.W.1. "Rural Preservation and the Landowner." By Christopher Turnor. **6.30 p.m.**

LONDON SOCIETY. Visit to the Church of St. Margaret, Westminster, S.W.1. **3 p.m.**

SATURDAY, APRIL 25

Sunrise, 5.47 a.m. Sunset, 8.9 p.m.

LONDON SOCIETY. Visit to the John Compton Organ Company's Works, Chase Road, Willesden, N.W.10. **3 p.m.**

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS. Visit to Mallinson and Sons' Timber Yard, 130–140 Hackney Road, E.2. **2.30 p.m.**

MONDAY, APRIL 27

R.I.B.A., 9 Conduit Street, W.1. Modern Bridges." By Maxwell Ayrton, F.R.I.B.A. **8 p.m.**

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "Problems in Modern Architecture." By H. Th. Wijdeveld. Also exhibition of the lecturer's drawings and designs. Until May 18. **8 p.m.**

TUESDAY, APRIL 28

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS, 1 Wilbraham Place, S.W.1. "Housing and Slum Clearance." By Ald. H. Prince. **7 p.m.**

WEDNESDAY, APRIL 29

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Stainless Metals." By Professor Sir Harold Carpenter, M.A. Chairman: Sir William J. Larke, K.B.E. **8 p.m.**

THURSDAY, APRIL 30

SOCIETY OF ANTIQUARIES, Burlington House, S.W.1. "Report on the Excavations at Richborough." By J. P. Bushe-Fox, M.A., F.S.A. **8.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Yorkshire Branch. At the Metropole Hotel, Leeds. Annual General Meeting, followed by "The Production of Concrete Aggregates." By E. F. Sargeant, A.M.INST.C.E. **7 p.m.**

FRIDAY, MAY 1

ROYAL SANITARY INSTITUTE. At the Town Hall, Batley. "Housing, with special reference to the Housing Act, 1930, from the aspect of a Town Councillor." By Councillor Hamilton Crothers, J.P., followed by Councillor H. S. Houldsworth, D.SC., and Thomas Gibson, M.D. **5 p.m.**

SATURDAY, MAY 2

Sunrise 5.33 a.m. Sunset 8.20 p.m.

ROYAL SANITARY INSTITUTE. Meet at the Town Hall, Batley, for tour of housing estate and waterworks. **1.30 p.m.**

WEDNESDAY, MAY 6

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Preservation of the Countryside." By Major-General Sir Fabian Ware, K.C.V.O., K.B.E. Chairman: The Rt. Hon. Earl of Crawford and Balcarres, P.C. **8 p.m.**

THURSDAY, MAY 7

LONDON CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Steel Framing." By J. Stuart Lewis, M.I.STRUCT.E. **7.30 p.m.**

FRIDAY, MAY 8

INSTITUTION OF STRUCTURAL ENGINEERS. South Wales and Monmouthshire Branch. At the Institute of Engineers, Park Place, Cardiff. "The Structural Engineer and His Vocational Training." By F. E. Drury M.S.C.

SATURDAY, MAY 9

Sunrise 5.20 a.m. Sunset 8.31 p.m.

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS. Visit to St. Bartholomew-the-Great, Smithfield, E.C. **2.30 p.m.**

LONDON CENTRAL SCHOOL OF ARTS AND CRAFTS. Visit to Dorman Long and Company's Works, Nine Elms. **2 p.m.**

WEDNESDAY, MAY 13

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Architecture in Concrete on the Pacific Coast." By Major R. A. B. Smith, M.C. **8 p.m.**

LAW REPORT

BUILDING PLANS: RIGHT OF REFUSAL TO APPROVE

The King v. *The Corporation of Scarborough, ex parte Western Properties (London), Ltd. King's Bench Divisional Court. Before the Lord Chief Justice and Justices Avory and Humphreys*

THIS matter came before the court on a rule which called upon the Corporation of Scarborough to show cause why they should not hear and determine, according to law, an application by the Western Properties (London), Ltd., for the approval of plans for six lock-up shops to be erected within the borough.

Mr. R. M. Montgomery, K.C., for the Corporation, said the point raised by the case was whether the Corporation had power, when dealing with an application for the approval of certain building plans, to refuse that approval when there were in existence in the covenant covering the title to the land restrictions as to the nature of the building to be erected thereon.

In June, 1929, continued counsel, Western Properties purchased a house and 1,300 square yards of land in Scarborough. On that site they proposed to erect six lock-up shops. Plans were submitted to the Corporation and they declined to approve the plans because of a restriction which they said appeared in the covenants on the land preventing any property being built that was not for human habitation. To this the Western Properties objected and contended that the question of restrictions was one that did not concern the Corporation and was one which they had no authority to consider.

Counsel observed that the Western Properties appeared to think that there was no one who could now insist that the restriction should be observed. They had tried to get rid of that difficulty by going to an official arbitrator, but they had failed to have that part of the covenant removed. Under these circumstances counsel submitted that the Corporation were entitled to take into consideration questions of restrictions, seeing that the development of the town might be seriously affected by the proposed erections.

Mr. Joshua Scholefield, K.C., for the Western Properties, said his submission was that the shops would not, if erected, contravene the bylaws of the Corporation. That being so, he contended that the Corporation could not disapprove the plans. In his opinion a public body could not take part in this matter of restrictive covenants, as it was merely a private dispute. He argued that the Corporation had no right to decline to approve the plans.

The court held that the Corporation had the right to have regard to the restrictions in the covenant when dealing with application for approval of the plans, and discharged the rule.

The Lord Chief Justice, in giving judgment, said the court had to remember that Scarborough was not a commercial town, but a seaside resort consisting mainly of dwelling-houses. There seemed to be no doubt that the Western Properties could erect the shops, but it did not follow that they could not be proceeded against for breach of covenant. It appeared as if that must have been in the minds of the company when they applied to an official arbitrator to have the restrictions removed from the covenant, under the Law of Property Act, 1925. In all the circumstances of the case he was not prepared to say that when the Corporation took into consideration the restrictions in the land they had allowed their minds to be diverted or distracted by matters that were extraneous or irrelevant. He, however, arrived at this decision with some reluctance.

Justices Avory and Humphreys concurred.

TRADE NOTE

The whole of the exterior of the Venesta Stand at the Manchester Building Trades Exhibition is constructed in Venesta birch, toned to a suitable shade to go with the copper plymax lettering. The screen or division between the firm's stand and the next shows the standardized named grades of Venesta birch, which are all made under the same conditions and sorted only according to the number of knots and similar timber defects. The division is 1 ft. thick, and let into it are four roundabouts showing various Venesta products, including Empire timbers such as Burma padouk and Australian walnut, and also panels of decorative plymax. The outside of the office section is made with Venesta Specnot birch. A copper plymax sliding-door, $\frac{7}{8}$ in. thick (showing the thin rigidity of plymax) opens into an oak room, equipped for doing business and supplying technical information. Leading from this room through another copper plymax door is a conference room, which is panelled in Sapele mahogany. The tables in both rooms are made with copper plymax. The floor of the stand is made of Venesta birch plywood.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Dorchester Hotel, Park Lane, W.1 (pages 577-582). General contractors, Sir Robert McAlpine and Sons. Sub-contractors : Ragusa Asphalte Paving Co., Ltd., asphalt; Fenning & Co., Ltd., Diespeker & Co., Ltd., Art Pavements and Decorations, Ltd., and Marble Mosaic Co., Ltd., concrete facing blocks; London Brick Co. and Forders, Ltd., Phorpres Flettons; Tunnel Portland Cement Co., Ltd., Portland cement; Jas. Woodward, Ltd., glazed bricks; Frazzi, Ltd., J. A. King & Co., Ltd., and Huntley and Sparks, Ltd., partitions; Henry Hope and Sons, and Shepherd Tobias & Co., Ltd., glass; Luxfer, Ltd., patent glazing; Cashmore Art Workers, cast lead; Vigers Bros., Ltd., wood-block flooring; London Plenum Heating Co., central heating; Carron Co., Ltd., stoves and cookers; Davey Paxman & Co., Ltd., boilers; T. Clarke & Co., Ltd., electric wiring for lighting, heating and power; Bagues, Ltd., Allom Bros., Ltd., Troughton and Young, Ltd., Maple & Co., Ltd., Newbury & Co., and C. Harvey & Co., Ltd., electric light fittings; Carrier Engineering Co., Ltd., ventilation; Nicholls and Clarke, Ltd., W. N. Froy and Sons, Ltd., and Shanks & Co., sanitary fittings; Henry Hope and Sons, casements; Elliott & Co., M. Pollock & Co., and Wylie and Lochhead, Ltd., fireproof doors; A. D. Dawnay and Sons, Ltd., and Light Steelwork (1925), Ltd., iron staircases; S. Elliott and Sons (Reading), Ltd., revolving doors, joinery; H. Arnault, sunblinds; Birmingham Guild, Ltd., metalwork; M. Pollock & Co., Heaton Tabb & Co., Ltd., Wylie and Lochhead, and A. E. Lindsey and Son, Ltd., joinery; J. Whitehead and Sons, Ltd., marble; Carter & Co., Ltd., tiling; Martin Van Straaten, Ltd., Minton Hollins & Co., Ltd., and J. G. Nicholls, Ltd., tiling; G. Matthew, Ltd., W. N. Froy and Sons, Ltd., and Carron & Co., mantles; Shapland and Petter, furniture; Fredk. Sage & Co., Ltd., showcases; Waygood-Otis, Ltd., lifts; H. A. Booth, Ltd., gas-fitting and plumbing; United Steel Companies, Ltd., steel for reinforcement ; Cement Marketing Co., Ltd., "Snowcrete" slabs made with marble chippings; General Cleaning Contractors, Ltd., cleaning down exterior.

Imperial Headquarters, Girl Guides' Association, Buckingham Palace Road, S.W.1 (pages 583-586). General contractors, Henry Knight and Son. Quantity surveyors, Gardiner and Theobald. Sub-contractors : Benham and Sons, Ltd., cooking apparatus; British Vacuum Cleaner and Engineering Co., Ltd., cleaning; Considere Constructions, Ltd., reinforced concrete raft; Durbin and Sons, sanitary and hot water engineering; Jacob, White & Co., Ltd., electrical engineering; Sidney Laughton, decoration and furniture to council chamber; Luxfer, Ltd., electric copper glazing; Mather and Platt, Ltd., fireproof doors; E. Pollard & Co., Ltd., shop front and shop fittings; W. Bainbridge Reynolds, Ltd., ornamental metalwork; James Ritchie and Sons, goods lift; Sankey-Sheldon, steel lockers; Siegwart Fireproof Flooring Co., Ltd., floors; Smith, Walker, Ltd., constructional engineers; Stuarts Granolithic Co., Ltd., staircases; Waygood-Otis, Ltd., passenger lifts; C. E. Welstead, Ltd., metal windows; Yannedis & Co., door furniture and ironmongery; Zeta Woodblock Flooring Co., Ltd., wood-block floors.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Plans passed at COULSDON: Six houses, Portnalls Road, for Mr. A. G. Gresswell; four houses, Stoneyfield Road, for Messrs. Chittenden and Simmons, Ltd.; two houses, Holmfield Road, for Mr. W. Sales; four houses, Stoats Nest Road, for Mr. W. C. Midmer; five bungalows, Waverley Avenue, Kenley, for Messrs. E. O'Sullivan, Ltd.

Messrs. T. Rider and Son, Ltd., have prepared a scheme for the development of a site in the vicinity of DULWICH COMMON.

Plans passed at PURLEY: Two houses, Old Lodge Lane, for Mr. H. Powis; two houses, Dale Road, for the Beeches Building Co.; house, Monahan Avenue, for Mr. H. Lawrence; house, Hartley Way, for Mr. F. A. Freeman; house, Woodcote Valley Road, for Mr. E. A. Matthews; two houses, Haydn Avenue, for Old Lodge Estates, Ltd.

The Coulsdon U.D.C. is to obtain land in Limpsfield Road, SANDERSTEAD, as a site for a fire and ambulance sub-station.

SOUTHERN COUNTIES

The OXFORD Education Committee has obtained a site in Marston Road for the erection of an elementary school.

Plans passed at PORTSMOUTH: Sixteen houses, Merrivale Road, for Messrs. McCarthy Bros.; twelve houses, Stride Avenue, for Mr. F. D. McLaren; nineteen houses, Copnor and Amberley Road, for Messrs. Dye Bros.; six houses, Merrivale Road, for Mr. A. H. Le Santo; sixteen houses, Tangier Road, for Mr. C. Attwell; enclosed balconies, Commercial Road, for the Committee of the Royal Portsmouth Hospital; additions and alterations, Pembroke Road, for Portsmouth and South Hants Eye and Ear Infirmary; three houses, Mayles Road, for Mr. J. May; petrol depot, Southampton Road, for Sealand Petroleum Co., Ltd.

SOUTH-WESTERN COUNTIES

The BRISTOL Corporation Baths Committee recommends the construction of a swimming bath at an estimated cost of £33,406, for the districts of Avonmouth, Shirehampton and Sea Mills.

Plans passed at PLYMOUTH: Assembly hall, rear of 28, 30 and 32 Mutley Plain, for Mr. J. R. Randall; six houses, North Down Road, for Mr. C. Jope; five houses, Coleridge Road, for Mr. W. G. Hurrell; alterations and additions, 55, 56 and 57 St. Aubyn Street, for the trustees of Devonport Y.M.C.A.; six houses, Venn Crescent, for Mr. J. H. Dyer; new club premises, 68 and 69 Chapel Street, Devonport, and 9 St. Aubyn Street, for Devonport Liberal Association; three shops, Cobourg Street, for Mr. J. F. Stephens; seven houses, Green Park Avenue, for Mr. J. Neal; house, Breen Park Road, for Mr. L. S. Trevan; four houses, Segrave Road, for Mr. H. L. Pile; fifty-two houses, Elms Building Estate, for St. Aubyn Estates, Ltd.; shop, Laurel Road, for Mr. H. Drew; five bungalows, Crowndale Estate, for Mr. H. Mills.

The TORQUAY Education Committee has asked Mr. B. Widdows to prepare plans for the erection of an infants' school at Barton.

MIDLAND COUNTIES

The DUDLEY Education Committee has obtained a site on the Brewery Fields estate, for the erection of an elementary school.

Plans passed at DUDLEY: Six houses, Church Road, Netherton, for Mr. H. Smart; clinic, adjoining Guest Hospital, Tipton Road, for the Board of Governors; alterations, Imperial Buildings, High Street, for Messrs. F. W. Cook and Son, Ltd.; two houses, St. James's Road, for Mr. H. H. Ball; two cottages, Bunn's Lane, for Mr. J. Pickerell.

The MARKET HARBOROUGH U.D.C. is purchasing land for a housing site.

Plans passed at NORTHAMPTON: House, Beech Avenue, for Mr. H. W. Richardson; rubber solution store, Chaucer Street, for Goodliff Manufacturing Co., Ltd.; sub-station, Covington Street, for Northampton Electric Light and Power Co., Ltd.; eight houses, Billing Road, for Messrs. E. H. Tibbs & Co., Ltd.; house, Queen's Park Parade, for Messrs. E. D. Sharman and Son; house, Park Avenue, for Mr. Ian Munro; club house, Cotton End, for Northampton Greyhound Racing Association; two houses, Park Avenue, for Mr. S. G. Sale & Co.; additions, Duke of York, St. Andrew's Road, for Messrs. T. Manning & Co., Ltd.

The Ministry of Health has sanctioned the scheme of the NUNEATON Corporation for the provision of new municipal buildings and public library, at a cost of £92,000.

The WALSALL Corporation is seeking a grant for a scheme for the remodelling of the baths, including the provision of filtration plant, at a cost of £13,000, from plans prepared by Mr. Drysdale, architect.

NORTHERN COUNTIES

The CARLISLE Corporation is to erect 100 houses on the Currock estate and 130 houses on the Raffles estate.

The CARLISLE Watch Committee is considering the provision of a new borough police-station.

Plans passed by the CARLISLE Corporation: Alterations to Warwick Road cinema, for Messrs. P. L. Browne and Son; two houses, Old Knowle Road, for Mr. H. H. Hodgkinson; two houses, Brampton Road, for Mr. S. W. B. Jack.

Plans passed at HULL: Four houses, Kirk Ella, for Mr. H. Smith; 161 houses, Willerby Road, for Mr. J. H. Vickerman; eighteen houses, off Goddard Avenue, for Mr. A. Johnson; three houses, Bricknell Avenue, for Mr. H. Sanderson; eight houses, Willerby Road, for Mr. F. C. Polley; eight houses, Cottingham, for Mr. F. J. Whiting; four shops and houses, Hall Road, for Messrs. R. W. and J. H. Barnett; estate layout, Endyke and Inglemire Lanes, for Mr. P. T. Kettlewell; six houses, Ings Road, for Mr. H. Needler; fourteen houses, off Holderness Road, for Mr. G. T. Spruit; fifteen houses, Stephenson Street, for Mr. T. Wardell.

The Lancaster and Morecambe Town Councils and the Carnforth U.D.C. have agreed to combine in connection with the management of a new central isolation hospital, to be erected in LANCASTER, to accommodate eighty-six beds, the estimated cost being £50,000.

The LANCASTER Town Council has decided to erect a new central school in the Skerton district, at an estimated cost of £21,390.

The LANCASTER Corporation has decided to construct the Langthwaite storage reservoir, at a cost of £250,000, by direct labour.

The LEEDS Corporation is seeking sanction to borrow £89,880 for the erection of additional houses on the Middleton, Hawksworth Wood and Potternewton housing estates.

The LEEDS Watch Committee has passed plans for the erection of a stadium, etc., at the junction of Meanwood Road, Sheepscar Street and North Street.

The LIVERPOOL Education Committee is to enlarge the Council school in Shiel Road, from plans prepared by Messrs. Briggs and Thornely.

The LIVERPOOL Corporation is considering the purchase of the site of the Kirkdale Homes for the erection of about 900 tenements, for rehousing tenants to be displaced from insanitary areas.

The MANCHESTER Corporation is to carry out alterations and additions to the mental block at Crumpsall Institution, at a cost of £5,336.

The Ministry of Health has held an inquiry into the proposal of the OLDHAM Corporation for the erection and equipment of wash-houses, at a cost of £12,000.

The ROTHERHAM Corporation Housing Committee has approved plans for the erection of forty-six houses, together with a recreation and reading room, for the accommodation of aged persons on the Herringthorpe Estate.

The ROTHERHAM Corporation Housing Committee has instructed the town clerk to make inquiries with regard to additional sites for the purpose of erecting houses to accommodate tenants disturbed by proposed clearances.

The SANDBACH R.D.C. is acquiring a site for the erection of seventy-five houses.

Plans passed at SHEFFIELD: Six houses, Norwood Road, for Mr. J. C. Mason; four houses, Stradbroke Avenue, for Messrs. W. and E. Sadler, Ltd.; house and shop, Bellhouse Road, for Mr. Cobbett; house and shop, Nether Shire Lane, for Messrs. Rhodes and Mitchell; house, Bents Road, for Mr. W. Newsome; six houses, Abbey Lane, for Mr. J. L. Conway; two houses, Hutcliffe Wood Road, for Mr. C. Mander; four houses, Wostenholm Road, for Miss Bagshaw; four houses, Slayleigh Lane, for Mr. J. W. Sivil; house, Abbey Lane, for Mr. J. Barker; two houses, Harley Road, for Mr. W. Green; ten houses, Whirlow Grove Road, for Mr. A. Ramsey; six houses, Delph House Road, for Messrs. Simpson Bros.; house, Folds Lane, for Mr. G. Sharpe; house, Milden Road, for Mr. P. H. Slater; two houses, Folds Lane, for Mr. A. Yeardley; house, Ecclesall Road, for Mr. W. Green; two houses, Norton Lees Crescent, for Messrs. Bonser Bros.

The SHIPLEY U.D.C. Health Committee recommends that approximately 100 houses be provided on the Busy Lane and Carr Lane sites.

Plans passed at SHIPLEY: Office and stores, Manor Lane, for Mr. J. Petty; two houses, Wrose Road, for Messrs. A. and F. Mellor; shops, Leeds Road, for the Windhill Industrial Co-operative Society, Ltd.; twenty-two houses, High Busy Lane and Acacia Drive, for Mr. A. Booth.

Plans passed by STALYBRIDGE Corporation: Houses, Ridge Hill Lane, for Messrs. Swallow and Taylor; sub-station, Hartshead, for Central Electricity Board.

The SUNDERLAND Corporation has passed plans submitted by Mr. J. Waite, for the erection of a dance hall at the Millfield cinema.

The WEDNESBURY Corporation is to erect sixty-six houses on the Lloyd Street estate.

The YORK Corporation Estates Committee has received an application to purchase a site for a Congregational church on the Burton Stone Lane estate.

Plans passed at YORK: Four houses, Jamieson Terrace, for Mr. W. Johnson; house and business premises, Campleshon Road, for Mr. W. H. Lacy; business premises, Fifth Avenue, for York Corporation; house and business premises, Acomb Road, for Mr. H. C. Fawcett; house, Heslington Lane, for Mr. F. Wilson; ten houses, Burnholme estate, Heworth, for Mr. J. N. Dunn; two houses, Ainsty Avenue, for Ainsty Building Estates; six houses, Middlethorpe Lodge estate, for Mr. T. Place.

SCOTLAND

Messrs. Wharrie and Colledge, surveyors, have obtained land from the GLASGOW Corporation, adjoining the Possilpark workshops of the Royal Glasgow Asylum, for the erection of a technical training school for the blind.

The GLASGOW Education Committee is to extend the Glasgow High School, Elmbank Street.

The GLASGOW Education Committee is to obtain a site at King's Park, for the erection of an elementary school.

WALES

The SWANSEA Corporation has approved plans, prepared by the borough architect, for the proposed branch library in the Oystermouth ward.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_2	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_3	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W.Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_3	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_3	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Bursiem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_3	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank ..	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EAST-BOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_3	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey ..	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A*	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_3	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_1	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12-15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_1	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_3	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_3	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_3	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_3	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_3	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£	s.	d.
Bricklayer . . . . per hour		1	8
Carpenter . . . . ,,		1	8
Joiner . . . . ,,		1	8
Machinist . . . . ,,		1	9
Mason (Banker) . . . ,,		1	8
,, (Fixer) . . . ,,		1	9
Plumber . . . . ,,		1	8
Painter . . . . ,,		1	7
Paperhanger . . . ,,		1	8
Glazier . . . . ,,		1	8
Slater . . . . ,,		1	8
Scaffolder . . . . ,,		1	4
Timberman . . . . ,,		1	4
Navvy . . . . ,,		1	3
General Labourer . . . ,,		1	3
Lorryman . . . . ,,		1	5½
Crane Driver . . . ,,		1	7
Watchman . . . . per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

	£	s.	d.
Grey Stone Lime . . . per ton	2	8	6
Blue Lias Lime . . . ,,	2	10	6
Hydrated Lime . . . ,,	2	16	0
Portland Cement . . . ,,	2	6	0
Ferro-crete . . . ,,	2	13	6
Thames Ballast . . . per Y.C.		8	9
¾" Crushed Ballast . . ,,		10	0
Building Sand . . . ,,		10	6
Washed Sand . . . ,,		11	6
2" Broken Brick . . . ,,		9	6
¾" ,, ,, . . . ,,		12	6
Pan Breeze . . . ,,		6	6
Coke Breeze . . . ,,		8	9

BRICKLAYER

	£	s.	d.
Flettons . . . . per M.	3	1	6
Grooved do. . . . ,,	3	3	6
Stocks, 1st Quality . . ,,	4	18	6
,, 2nd ,, . . ,,	4	12	6
Blue Bricks, Pressed . . ,,	9	18	0
,, Wirecuts . . ,,	8	16	0
,, Brindles . . ,,	8	0	0
,, Bullnose . . ,,	10	8	0
Red Sand-faced Facings . ,,	7	11	0
Red Rubbers for Arches . ,,	15	0	0
Multicoloured Facings . ,,	9	4	0
Luton Facings . . . ,,	8	16	0
Midhurst White Facings . ,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:			
Stretchers . . . ,,	21	10	0
Headers . . . . ,,	21	0	0
Bullnose . . . . ,,	28	0	0
Double Stretchers . . ,,	30	0	0
Double Headers . . ,,	27	0	0
Glazed Second Quality, *Less* . ,,	1	0	0
,, Buffs and Creams, Add . ,,	2	0	0
,, Other Colours ,, . ,,	5	10	0
2" Breeze Partition Blocks . . per Y.S.		1	9
2½" ,, ,, ,, . . ,,		2	0
3" ,, ,, ,, . . ,,		2	3
4" ,, ,, ,, . . ,,		3	0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s.	d.	6" s.	d.
Straight pipes . . per F.R.	1	1	1	6
Bends . . . each	2	10	4	4
Taper bends . . . ,,	6	3	7	2
Rest bends . . . ,,	5	9	8	9
Single junctions . . ,,	3	9	5	9
Double ,, . . ,,	5	9	8	9
Straight channels . . ,,	2	6	3	2
¼ Channel bends . . ,,	7	8	—	
Channel junctions . . ,,	7	0	12	6
Channel tapers. . . ,,	5	6	7	9
Yard gullies . . . ,,	9	6	11	6
Interceptors . . . ,,	18	6	25	9
Iron drain pipe . . per F.R.	2	3	3	5
Bends . . . each	6	0	13	0
Inspection bends . . ,,	15	3	24	0
Single junctions . . ,,	9	3	18	0
Double junctions . . ,,	14	0	27	6
Lead wool . . . lb.		6	—	
Gaskin . . . . ,,		5	—	

MASON

The following d/d F.O.R. at Nine Elms:	s.	d.
Portland stone, Whitbed . . . F.C.	4	6
,, ,, Basebed . . . ,,	4	9
Bath stone . . . . ,,	2	11
York stone . . . . ,,	6	9
,, Sawn templates . . ,,	7	6
,, Paving, 2" . . . F.S.	1	8
,, ,, 3" . . . ,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£	s.	d.
24" × 12" Duchesses . . per M.	31	0	0
22" × 12" Marchionesses . ,,	28	0	0
20" × 10" Countesses . . ,,	20	5	0
18" × 10" Viscountesses . ,,	17	0	0
18" × 9" Ladies . . . ,,	15	0	0
Westmorland green (random sizes) per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:			
20"× 10" medium grey per 1,000 (actual)	26	0	0
,, green . . ,,	27	15	0
Best machine roofing tiles . ,,	5	0	0
Best hand-made do. . . ,,	5	10	0
Hips and valleys . . . each		9½	
,, hand-made . . . ,,		10	
Nails, compo . . . . lb.		4	
,, copper . . . . ,,		2	0

CARPENTER AND JOINER

	£	s.	d.
Good carcassing timber . . F.C.		2	6
Birch . . . . as 1" F.S.		9	
Deal, Joiner's, . . . ,, ,,		5	
,, ,, 2nds . . ,, ,,		4	
Mahogany, Honduras . . ,, ,,	1	3	
,, African . . ,, ,,	1	1	
,, Cuban . . ,, ,,	2	6	
Oak, plain American . . ,, ,,	1	0	
,, Figured ,, . . ,, ,,	1	3	
,, Plain Japanese . . ,, ,,	1	2	
,, Figured ,, . . ,, ,,	1	5	
,, Austrian wainscot . ,, ,,	1	6	
,, English ,, . . ,, ,,	1	11	
Pine, Yellow . . . ,, ,,	1	0	
,, Oregon . . . ,, ,,		4	
,, British Columbian . ,, ,,		4	
Teak, Moulmein . . ,, ,,	1	3	
,, Burma . . . ,, ,,	1	2	
Walnut, American . . ,, ,,	2	3	
,, French . . . ,, ,,	2	3	
Whitewood, American . . ,, ,,	1	1	
Deal floorings, ¾" . . . Sq.	1	1	0
,, 1" . . . ,,	1	3	6
,, 1¼" . . . ,,	1	5	6
,, 1½" . . . ,,	1	11	0
,, 1¾" . . . ,,	1	15	0
Deal matchings, ¾" . . ,,		16	0
,, 1" . . ,,		17	6
,, 1¼" . . ,,	1	6	0
Rough boarding, ¾" . . ,,		18	0
,, 1" . . ,,	1	0	0
,, 1¼" . . ,,	1	8	0

Plywood, per ft. sup.

Thickness	¼"			½"			¾"			¾"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon												
Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak												
1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak												
1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¾"	1"	1¼"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket union . . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . . ,,	10	1/1	1/6	2/2	4/3
Tees . . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . . ,,	3½	5	8	1/–	2/–
Backnuts . . . ,,	2	3	5	6	1/1
Iron main cocks . . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . . .	55	,, steam .	40

FITTINGS.

Gas . . .	47½	Galvanized gas .	37½
Water . . .	42½	,, water .	32½
Steam . . .	37½	,, steam .	27½

SMITH AND FOUNDER—*continued.*

	s.	d.
Rolled steel joists cut to length . . cwt.	9	6
Mild steel reinforcing rods, ¾" . . . ,,	10	0
,, ,, ⅞" . . . ,,	9	9
,, ,, 1" . . . ,,	9	6
,, ,, 1¼" . . . ,,	9	0
,, ,, 1½" . . . ,,	9	0
,, ,, 1¾" . . . ,,	9	0
,, ,, 2" . . . ,,	9	0
,, ,, 2½" . . . ,,	9	0
,, ,, 3" . . . ,,	9	0
,, ,, 4" . . . ,,	9	0

	3" s.	d.	4" s.	d.
Cast-iron rain-water pipes of ordinary thickness metal . F.R.	7		10	
Shoes . . . . each	2	3	3	3
Anti-splash shoes . . ,,	5	0	8	6
Boots . . . . ,,	3	3	4	6
Bends . . . . ,,	2	9	4	0
,, with access door . . ,,	—		6	9
Heads . . . . ,,	4	0	5	0
Swan-necks up to 9" offsets . ,,	4	0	6	3
Plinth bends, 4½" to 6" . ,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal . F.R.	5		6	
Stop ends . . . . each	6		7	
Angles . . . . ,,	1	7	1	11
Obtuse angles . . . ,,	2	0	2	6
Outlets . . . . ,,	1	9	2	3

PLUMBER

	s.	d.
Lead, milled sheet . . . . cwt.	21	0
,, drawn pipes . . . . ,,	21	6
,, soil pipe . . . . ,,	24	6
,, scrap . . . . ,,	11	0
Solder, plumbers' . . . . lb.	1	0
,, fine do. . . . ,,	1	4
Copper, sheet . . . . ,,	1	0
,, tubes . . . . ,,	1	4

L.C.C. soil and waste pipes:	3"		4"		6"	
Plain cast . . . F.R.	1	0	1	2	2	6
Coated . . . ,,	1	1	1	3	2	8
Galvanized . . ,,	2	0	2	6	4	6
Holderbats . . . each	3	10	4	0	4	9
Bends . . . ,,	3	9	5	3	10	3
Shoes . . . ,,	2	10	4	4	9	6
Heads . . . ,,	4	8	8	5	12	9

PLASTERER

	£	s.	d.
Lime, chalk . . . per ton	2	8	6
Plaster, coarse . . . ,,	2	10	6
,, fine . . . ,,	5	10	0
Hydrated lime . . . ,,	2	16	0
Sirapite . . . . ,,	3	10	0
Keene's cement . . . ,,	5	10	0
Sand, washed . . . Y.C.		11	6
Hair . . . . lb.			6
Laths, sawn . . . bundle		2	4
,, rent . . . ,,		3	9
Lath nails . . . lb.			3½

GLAZIER

	s.	d.		s.	d.
Sheet glass, 21 oz. . . F.S.					3½
,, ,, 26 oz. . . ,,					4½
Arctic glass . . . ,,					5
Cathedral glass . . ,,					6
Hartley's rough rolled . ,,					9
Do. wired plate . . ,,				1	3
¼" Polished plate, n/e 1 . ,,	1	0	to	1	3
,, ,, 2 . ,,	1	2	,,	1	7
,, ,, 3 . ,,	1	7	,,	2	5
,, ,, 4 . ,,	2	1	,,	2	11
,, ,, 6 . ,,	2	3	,,	3	2
,, ,, 8 . ,,	2	6	,,	3	6
,, ,, 12 . ,,	2	9	,,	3	8
,, ,, 20 . ,,	3	0	,,	3	11
,, ,, 45 . ,,	3	3	,,	4	1
,, ,, 65 . ,,	3	7	,,	4	6
,, ,, 90 . ,,	3	10	,,	4	9
,, ,, 100 . ,,	4	0	,,	5	0
Vita glass, sheet, n/e 1 . ,,				1	0
,, ,, ,, 2 . ,,				1	3
,, ,, ,, over 2 . ,,				1	9
,, ,, plate, n/e 1 . ,,				1	6
,, ,, ,, 2 . ,,				3	0
,, ,, ,, 5 . ,,				4	0
,, ,, ,, 7 . ,,				5	0
,, ,, ,, 15 . ,,				6	0
,, ,, ,,over 15 . ,,				7	6
Putty, linseed oil . . lb.					3

PAINTER

	£	s.	d.
White lead . . . . cwt.	2	8	0
Linseed oil . . . . gall.		3	3
Boiled oil . . . . ,,		4	3
Turpentine . . . . ,,		3	4
Patent knotting . . . ,,		14	0
Distemper, washable . . cwt.	3	0	0
,, ordinary . . ,,	2	5	0
Whitening . . . . ,,		4	0
Size, double . . . firkin		3	0
Copal varnish . . . gall.		13	0
Flat varnish . . . ,,		14	0
Outside varnish . . . ,,		16	0
White enamel . . . ,,	1	15	0
Ready-mixed paint . . ,,		13	6
Brunswick black . . . ,,		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		3	6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.		10	0
" to form basement n/e 5' 0" deep and cart away	"		11	0
" " 10' 0" deep and cart away	"		11	6
" " 15' 0" deep and cart away	"		12	0
If in stiff clay add	"		3	0
If in underpinning "	"		5	0
Digging, return, fill and ram	"		5	0
Planking and strutting to sides of excavation	F.S.		1	0
" " to pier holes	"			6
" " to trenches	"			6
" " extra, only if left in	"			3½
Hardcore, filled in and rammed	Y.C.		14	0
Portland cement concrete in foundations (6-1)	"	1	13	6
" " " (4-2-1)	"	1	18	6
" " " underpinning	"	2	2	0
Finishing surface of concrete, spade face	Y.S.			9

DRAINLAYER		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	8	2	6
Extra, only for bends	Each	2	8	3	9
" junctions	"	3	9	4	6
Gullies and gratings	"	17	6	19	9
Cast iron drains, and laying and jointing	F.R.	5	6	7	0
Extra, only for bends	Each	12	6	18	6

BRICKLAYER		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	32	0	0
" " in cement	"	34	0	0
" Stocks in cement	"	41	10	0
" Blues in cement	"	62	0	0
Extra only for circular on plan	"	3	0	0
" backing to masonry	"	2	0	0
" raising on old walls	"	3	0	0
" underpinning	"	10	0	0
Fair Face and pointing internally	F.S.			3
Extra only for picked stock facings	"		1	0
" red brick facings	"		1	6
" blue brick facings	"		1	9
" glazed brick facings	"		4	6
Tuck pointing	"			10
Weather pointing	"			4
Slate dampcourse	"		1	0
Vertical dampcourse	"		1	3

ASPHALTER		s.	d.
½" Horizontal dampcourse	Y.S.	5	6
½" Vertical dampcourse	"	7	6
½" paving or flat	"	5	6
1" paving or flat	"	6	6
1" × 6" skirting	F.R.	1	0
Angle fillet	"		2
Rounded angle	"		2
Cesspools	Each	5	0

MASON		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1	1	6
Bath stone and do., all as last	"		15	6
Artificial stone and do.	"		16	6
York stone templates, fixed complete	"		14	0
" thresholds	"		16	0
" sills	"	1	3	6

SLATER AND TILER		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4	5	0
Do., 18" × 9"	"	4	2	0
Do., 24" × 12"	"	4	12	0
Westmorland slating, laid with diminished courses	"	6	10	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4	0	0
Do., all as last, but of machine-made tiles	"	3	11	0
Fixing only, lead soakers	Doz.			9
tripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	12	0
Shuttering to sides and soffits of beams	F.S.		1	0
" to stanchions	"		1	0
" to staircases	"		2	0
Fir and fixing in wall plates, lintols, etc.	F.C.		5	0
Fir framed in floors	"		6	9
" " roofs	"		8	3
" " trusses	"		9	0
" " partitions	"		12	0
½" deal sawn boarding and fixing to joists	Sqr.	1	17	6
1" " " " "	"	2	1	6
1½" " " " "	"	2	7	6
2" × 2" fir battening for Countess slating	"		12	6
Do. for 4" gauge tiling	"		16	0
Stout feather-edged tilting fillet	F.R.			6
Patent roofing felt, 1 ply	Y.S.		2	6
" " " 2 "	"		3	0
" " " 3 "	"		3	6
Stout herringbone strutting to 9" joists	F.R.		1	0
1" deal gutter boards and bearers	F.S.		1	4
1½" " " " "	"		1	8
2" deal wrought rounded roll	F.R.			9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	15	0
1¼" do.	"	3	4	0
1½" do.	"	3	13	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	10
1½" do.	"		2	1

CARPENTER AND JOINER—*continued.*		s.	d.
1½" deal moulded sashes of average size	F.S.	2	3
2" " "	"	2	6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅝" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4	3
2" " " "	"	4	6
Extra only for moulded horns	Each		9
1½" deal four-panel square, both sides, door	F.S.	2	6
2" " " "	"	3	0
1½" " but moulded both sides	"	3	0
2" " " "	"	3	6
4" × 3" deal, rebated and moulded frames	F.R.	1	6
4½" × 3½" " "	"	2	0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2	
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3	0
1½" deal moulded wall strings	"	2	6
1½" " outer strings	"	2	9
Ends of treads and risers housed to string	Each	2	0
3" × 2" deal moulded handrail	F.R.	1	6
1" × 1" deal balusters and housing each end	Each	2	6
1½" × 1½" " "	"	3	3
3" × 3" deal wrought framed newels	F.R.	1	6
Extra only for newel caps	Each	7	6
Do., pendants	"	7	6

SMITH AND FOUNDER		£	s.	d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.		17	0
Riveted plate or compound girders, and hoisting and fixing in position	"	1	3	0
Do. stanchions with riveted caps and bases and do.	"	1	2	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1	0	0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.		1	0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	15	0

PLUMBER		£	s.	d.
Milled lead and labour in flats, gutters	Per cwt.	1	17	6
Do. in flashings	"		2	0
Do. in covering to turrets, etc.	"		2	7
Do. in soakers	"	1	13	0
Labour to welted edge	F.R.			3½
Open copper nailing	"			3½
Close "	"			4½

	½" s.	½" d.	¾" s.	¾" d.	1" s.	1" d.	1½" s.	1½" d.	2" s.	2" d.	4" s.	4" d.
Lead service pipe and fixing with pipe hooks F.R.	1	2	1	7	2	1	2	8	3	8	—	
Do. soil pipe and fixing with cast lead tacks "	—		—		—		—		—		5	9
Extra, only to bends Each	—		—		—		—		2	3	6	6
Do. to stop ends "	7		9		1	0	1	3	2	0	—	
Boiler screws and unions "	3	6	4	0	5	6	8	0	—		—	
Lead traps "	—		—		—		7	6	10	6	—	
Screw down bib valves "	7	6	10	6	12	6	—		—		—	
Do. stop cocks "	10	0	12	0	16	0	23	6	56	6	—	

	£	s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	3
Extra, only stop ends	Each	1	0
Do. angles	"	1	6
Do. outlets	"	3	0
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	6
Extra, only for shoes	Each	2	6
Do. for plain heads	"	5	6

PLASTERER AND TILING		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		3	9
Do. in n/w to beams, stanchions, etc.	"		5	6
Lathing with sawn laths to ceilings	"		1	6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"		2	6
Do. vertical	"		2	9
Rough render on walls	"		2	3
Render, float and set in lime and hair	"		3	0
Render and set in Sirapite	"		3	3
Render, backing in cement and sand, and set in Keene's cement	"		4	6
Extra, only if on lathing	"			9
Keene's cement, angle and arris	F.R.			8
Arris	"			3
Rounded angle, small	"			3
Plain cornices in plaster, including dubbing out, per 1" girth	"			2
1" granolithic pavings	Y.S.		5	0
1½" " "	"		6	0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1	2	6
9" × 3" " " "	"	1	7	6
Extra, only for small quadrant angle	F.R.			9

GLAZIER		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		8
26 oz. do. and do.	"	1	0
Arctic glass and glazing with putty	"	1	2
Cathedral glass and do.	"	1	3
Glazing only, British polished plate	"		8
Extra, only if in beads	"		2
Washleather	F.R.		4

PAINTER		s.	d.
Clearcolle and whiten ceilings	Y.S.		8
Do. and distemper walls	"	1	0
Do. with washable distemper	"	1	3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax-polish woodwork	"	4	
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	6
Hanging ordinary paper	from "	3	0

A BERLIN CINEMA FAÇADE

A PHOTOGRAPH AND DETAIL DRAWINGS OF THE "PICCADILLY," CHARLOTTENBURG



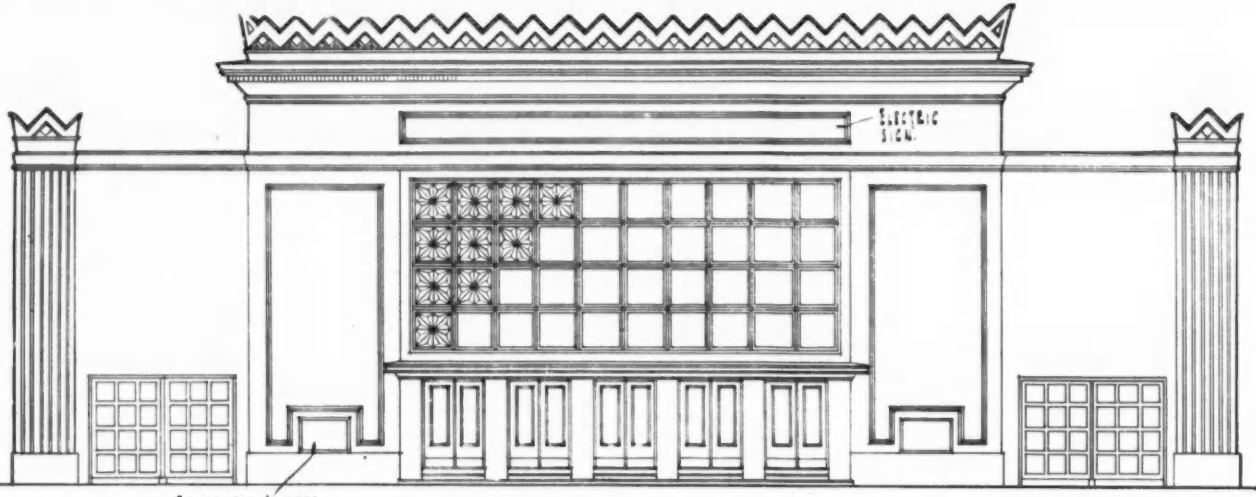
Fritz Wilms, Architect

THE EXTERIOR AS SEEN AFTER DARK

THE fenestration of the example of "night architecture," illustrated above and in the detail drawings overleaf, has an affinity with the rose-window of a cathedral: both rely on the repetition in mass of small units of glazing. The forty little diamond-faceted windows of identical design here enclosed within a simply-moulded frame constitute, when illuminated, a very effective piece of publicity for the cinema, which is expressed in an unexceptionable architectural idiom. This great central panel of fretted and patterned light is set off by the sweep of the entrance marquise immediately below, and the bands of blank wallage above and on either side of it.

The rather fantastic, but here quite legitimate, denticulation of the roof parapet acts as a discreetly intriguing foil to the studied sobriety of the whole composition. It is particularly gratifying to note that advertisement of the films shown is confined to a neatly bevelled bill-board on either side of the entrance, and an illuminated band for displaying the title of the picture of the week, placed just under the overhanging cornice.

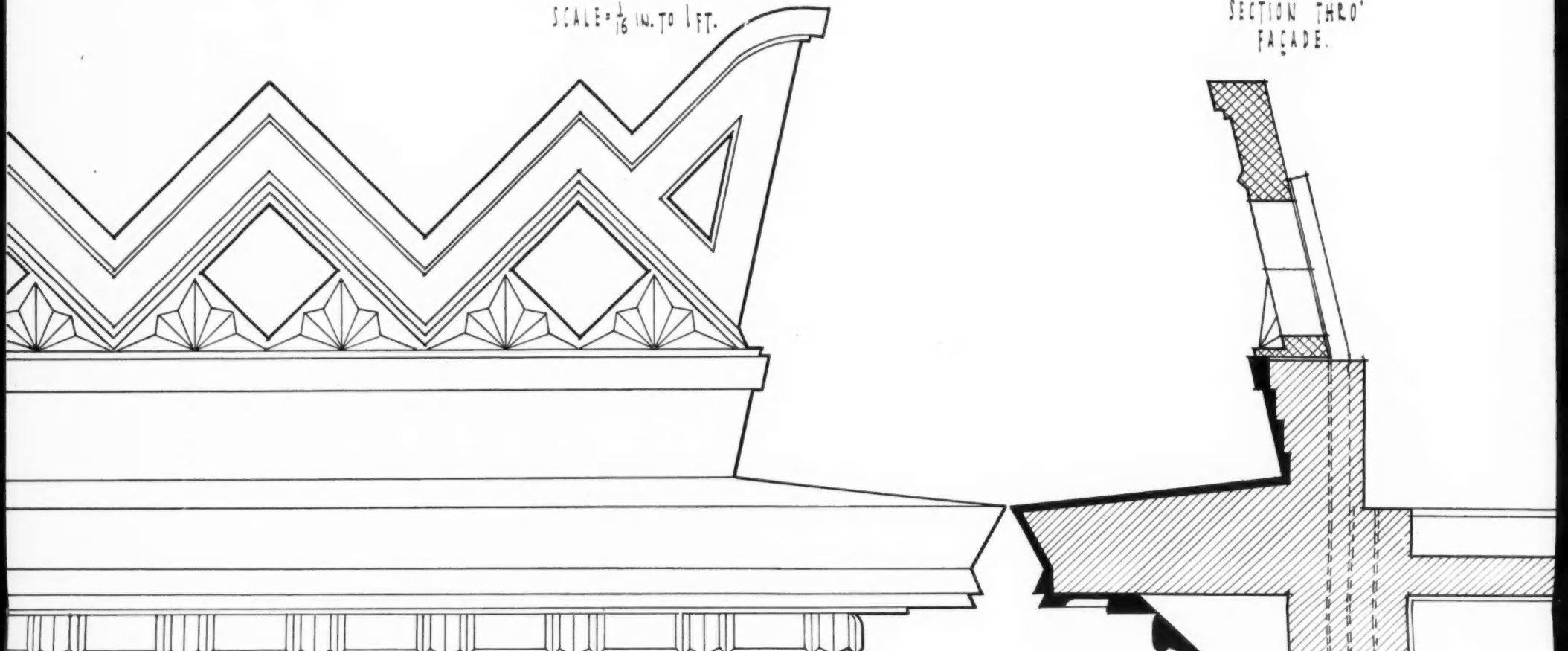
Unlike many picture-theatres designed primarily for their effectiveness under flood-lighting, or as so-called "neutral" backgrounds for startling neon signs, the street elevation of the "Piccadilly" is as pleasant to look at by day as it is arresting by night. It is one of the few cinemas in which the internal illumination of the entrance foyer also provides the external lighting of the façade: a sensible economy worthy of more general adoption.

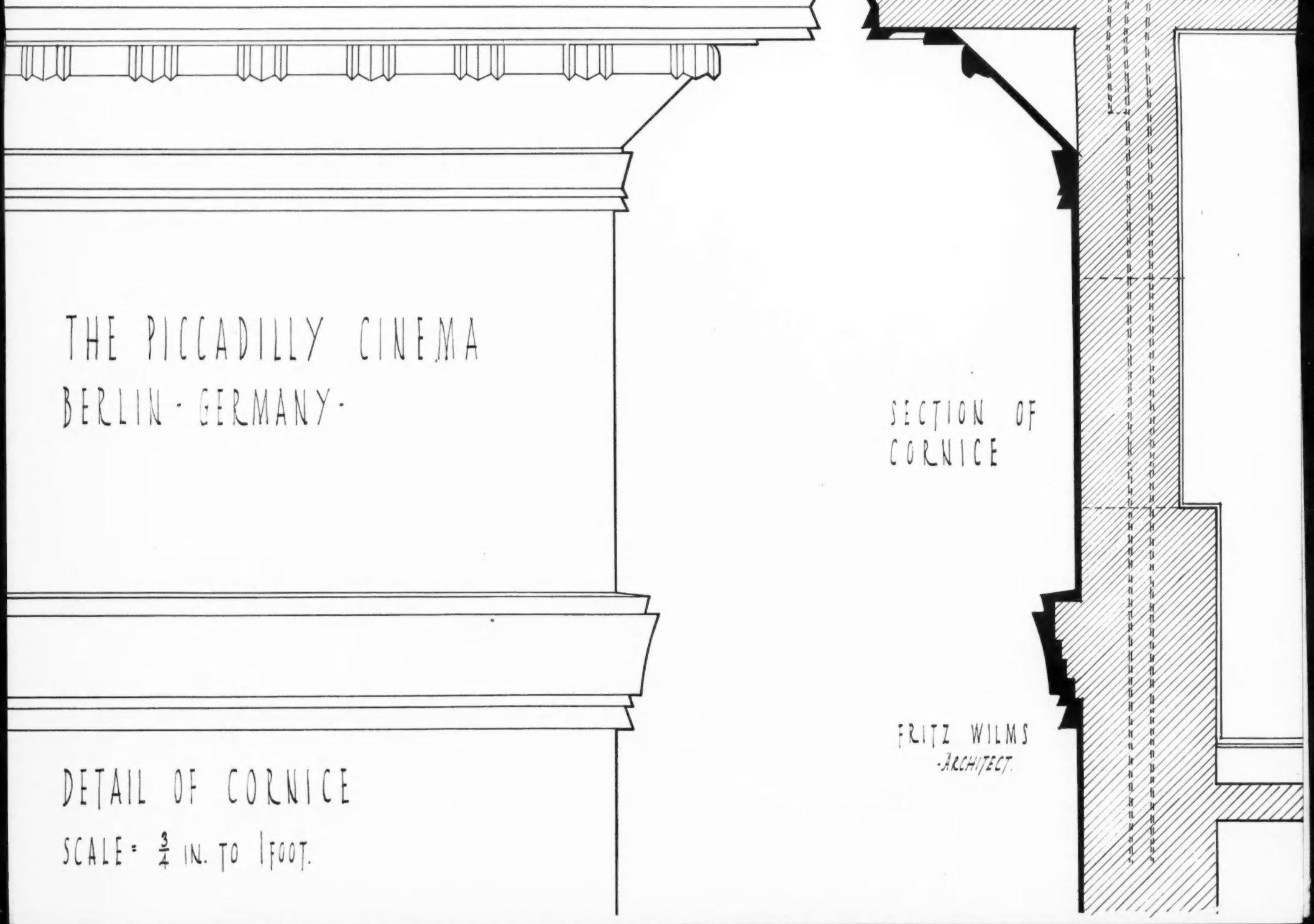


FRONT ELEVATION
SCALE = 1/16 IN. TO 1 FT.



SECTION THRO' FAÇADE.





THE PICCADILLY CINEMA
BERLIN - GERMANY -

DETAIL OF CORNICE
SCALE = $\frac{3}{4}$ IN. TO 1 FOOT.

SECTION OF
CORNICE

FRITZ WILMS
-ARCHITECT.

NUNEHAM COURTENAY CHAPEL

A PHOTOGRAPH AND MEASURED SECTIONAL DRAWING OF THE INTERIOR



LOOKING ACROSS THE CENTRAL COMPARTMENT TOWARDS THE ALTAR

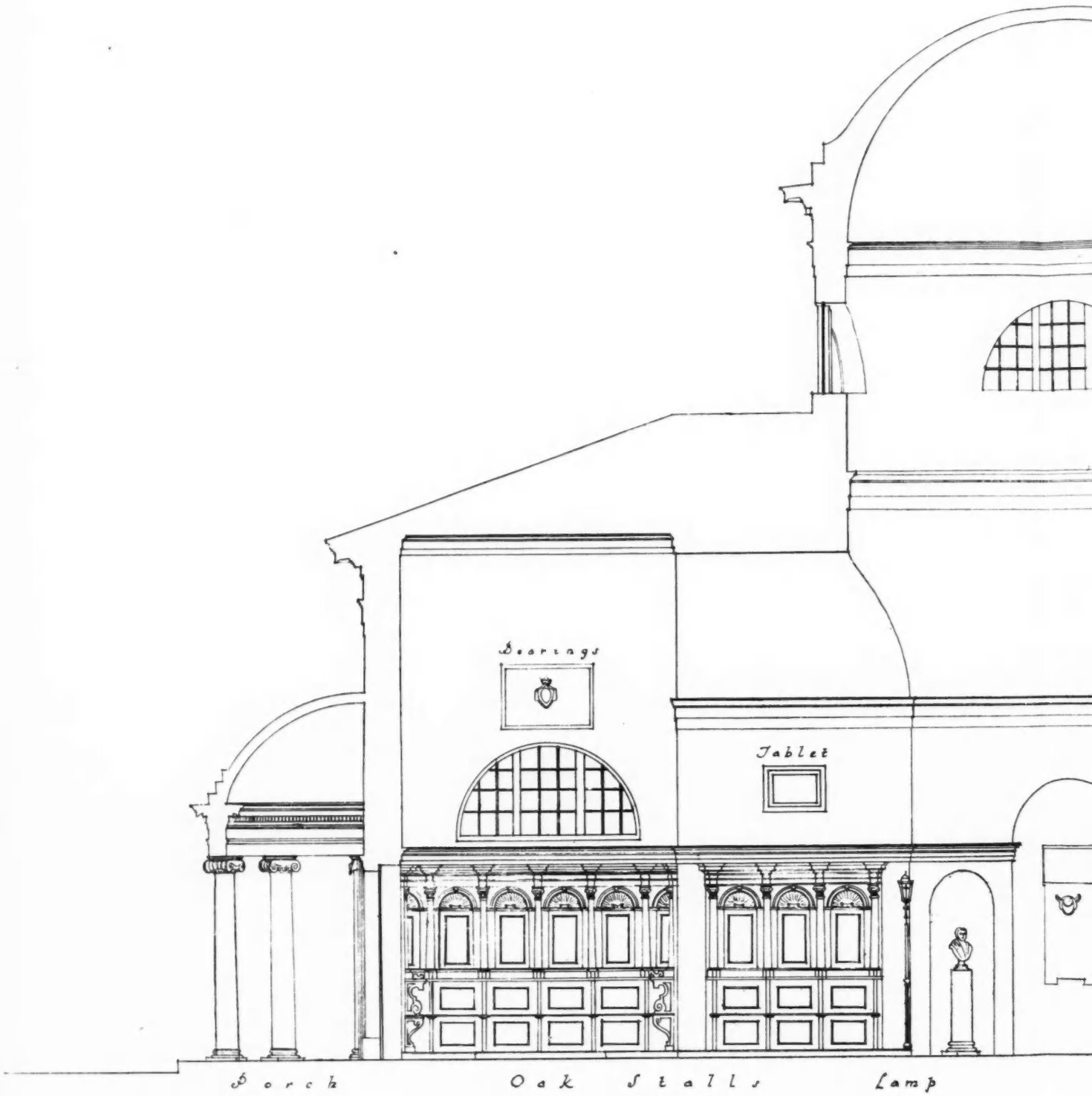
THE interior of the chapel consists, as shown on the measured drawing reproduced overleaf, of three main compartments united by narrower barrel-vaulted portions. The central compartment, circular on plan, rises into the dome, while the east and west compartments have flat ceilings.

The present furnishings of the chapel are of recent date. The original decorations, carried out "in a simple and appropriate manner" by the first Earl, consisted of the Harcourt arms in French tapestry, another tapestry representing the chiefs of the twelve tribes of Israel at the Passover, and an altar-piece—the Good Samaritan—painted by William Mason.

The latter was an exceedingly versatile parson who, besides being poet and painter, composed several hymn-tunes which were performed by a barrel-organ in the chapel. He also laid out the flower-garden adjoining. On the whole, in spite of an ungainly plan, the interior is shapely and well lighted; the central space, with its segmental windows, is particularly good.

[Photographs and measured drawings of exterior features of the chapel appeared in supplements to the issues of THE ARCHITECTS' JOURNAL for March 18 and April 1, 1931.]

THE CHAPEL, NU

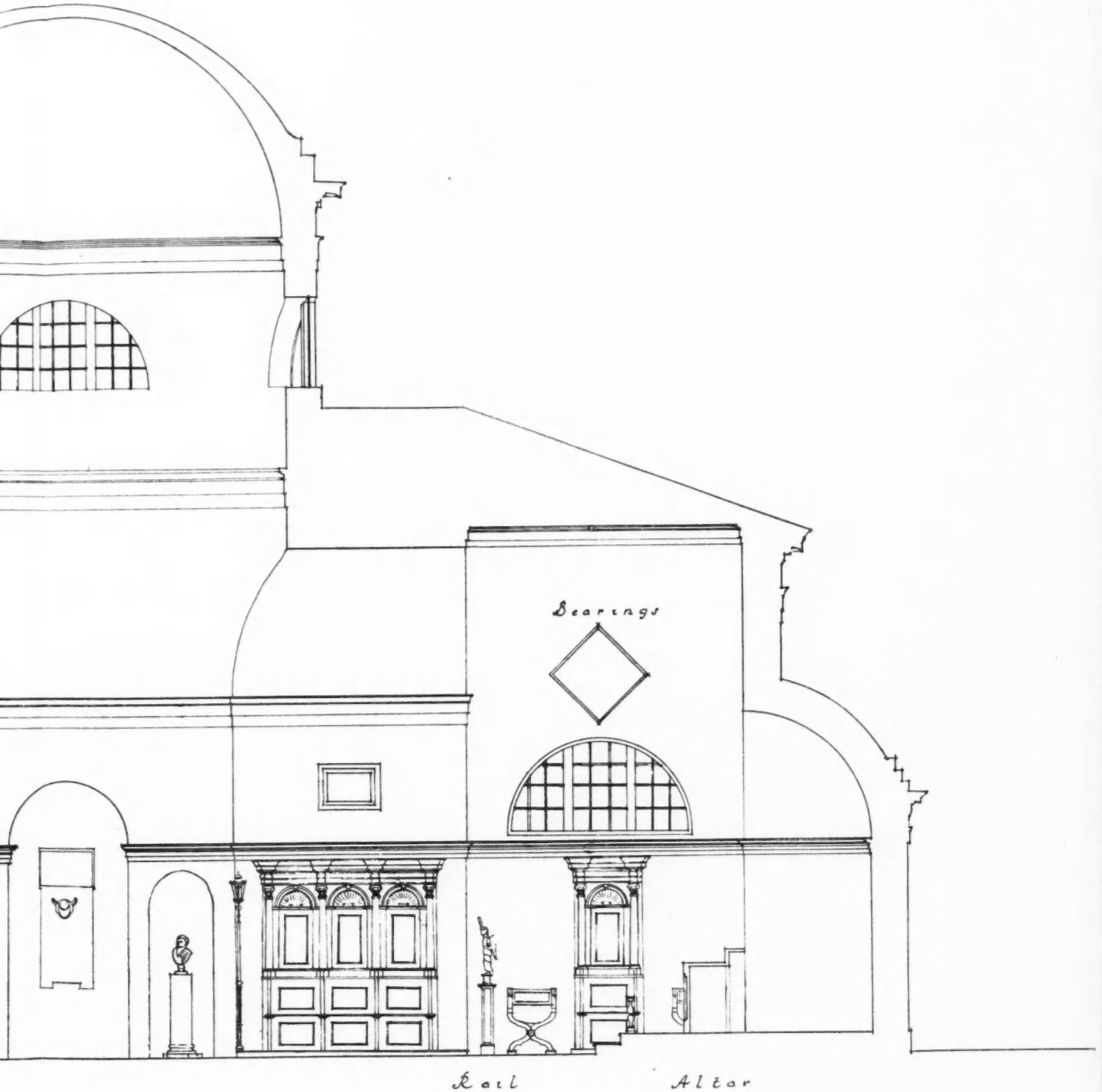


LONGITUDINA

Scale:

10 9 8 7 6 5 4 3 2 1 0 10 20 30 Feet

. NUNEHAM PARK.



N A L S E C T I O N

Mens et Delt:
H.W Crickmay & G.Q Lay.

SELECTED PRECEDENTS:

ENGLISHMEN'S "CASTLES"



1 TERRA-COTTA PARAPET, LAYER MARNEY HALL, ESSEX

GATEHOUSES, which during the mediæval period were extra-strongly fortified points of a fortress, became important forms of arrogant display. The gatehouse of Layer Marney Hall, figure two, is the most astonishing of these remarkable "towers," rising, as it does, to a height of eight stories and providing considerable housing accommodation. The link between the two towers is of less height and consists of three loftier stories, those of the first and second floors being furnished with large windows of terra-cotta. These are of pure Italian design and contrast with the typical Tudor windows on either side of them. The parapet also is of terra-cotta.

Hadleigh Towers, figure three—actually the present Deanery—is of more restrained and entirely English design and workmanship. It includes many of the details of brick craftsmanship found in other East Anglian buildings.

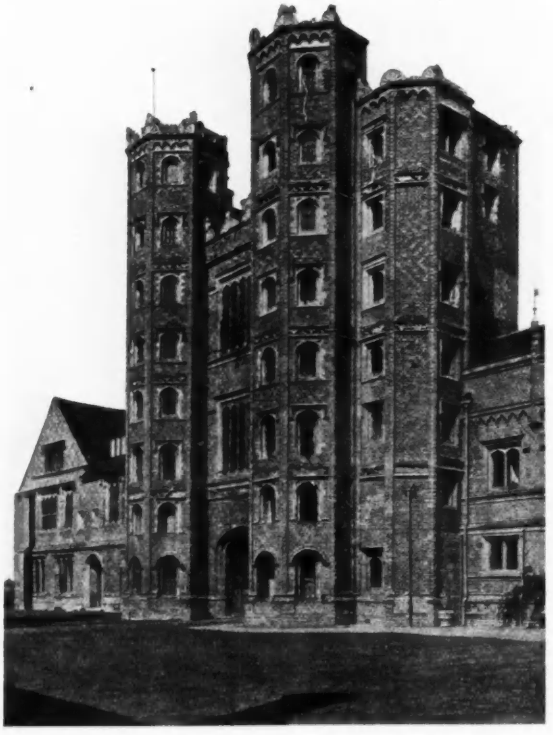
West Stow Hall Gatehouse, figure four, is fortunate in still having its tower finials of cut brick and a brick panel over the entrance made of ordinary bricks, some cusped to form quatrefoils, but most plain—a good effect produced by simple means.

The towers of Gainsborough Old Hall, figure five, are of another type, less ornate than the others illustrated. Attention may be drawn to the effect of the great mass of brickwork of the chimney in the foreground.

The terra-cotta parapet of Layer Marney Hall, figure one, has a foreign appearance above the native corbel-table. It is cream-coloured, and has stood three hundred years' weather in a high and exposed position without deterioration. Layer Marney is a store of contemporary terra-cotta. In the church, a few yards distant, are two tombs of the same material made by the same Italian craftsmen.

NATHANIEL LLOYD

2





3

4



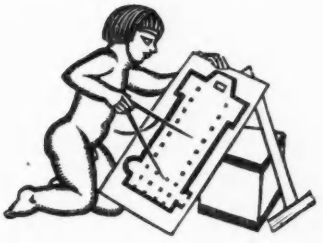


5

2 *LAYER MARNEY HALL, ESSEX*
4 *WEST STOW HALL, SUFFOLK*

3 *HADLEIGH TOWERS, SUFFOLK*
5 *GAINSBOROUGH OLD HALL*

THE ARCHITECTS' JOURNAL



WEDNESDAY, APRIL 29, 1931

THE ARCHITECTURE OF TRANSPORT

THE architect, in his greatest and most useful capacity of planner, has, we know, suffered an eclipse which the magnitude of the recent rebuilding of London serves only partially to cover; for the need for the planning of building is universal, while the actual work which architects are today being called upon to do is limited to what is vulgarly called *architecture*, and is recognizable as something differentiated from the common run of building by varying degrees of ornamentation.

Though this is not strictly true, it would be true to say that the architect has no *command* over building works of an utilitarian nature; especially where these serve some new function that is imperfectly adjusted to the social machine, and to the elements of a traditional style of architecture. By reason of this, it has been left to architects to discover the beauty of grain silos and warehouses they never built; and to admire the work of engineers who never called them into consultation. Much, indeed, that requires the discipline of the ordering faculty of an architect has flown into other channels, and in this country at least, represents a loss to the profession which only great efforts of understanding and appreciation will enable it once more to make its own.

In no branch of building is this more true than in what we may call the architecture of transport, for as transport stands for speed, mobility and the dynamic idea, by so much is it divorced from the terms of traditional architecture, though not from the basic principles of order and proportion.

If, as we believe, the exhibition which was opened last week by Mr. H. G. Wells represents a planned policy of the R.I.B.A. to explore the world for examples of works that serve new purposes—and old purposes, too—in a grand way, then we can congratulate ourselves that we shall be led upon a road that carries us towards the wide expansion of the idea of architecture, to the lasting benefit of ourselves and the community. The establishment of one fact in this progress towards understanding is worth hundreds of arguments.

The exhibition which is now on view at the R.I.B.A. galleries is a collection of very many established facts, covering a wide field, but arranged so as to reinforce, by comparison one with another, their individual importance as links in a connected chain of evidence. This is a very important exhibition, for it is an adventure into an undiscovered world for very many people —and the discovery was made by architects !

No one looking at the great aerodromes of Berlin and Hamburg, the impressive canal works at Heidelburg, or the jolly petrol stations scattered over Germany or Holland, could doubt that they were the work of architects. Nor, comparing them with the rare examples of our own good work, could imagine that architecture in England is not destined to assume the same command over the *whole* of building, our lesson once fairly learnt.

But we are sadly behind our neighbours in nearly every branch of the architecture of transport. Amateurs playing with styles where we should be fully-grown artists handling the parts of building with command and assurance.

We may approach this exhibition, therefore, with some humility, for we doubt whether the R.I.B.A. has ever before collected so much that may be of profit to us and so little that is merely pictorial. Let us hope that it marks the first stage of a comprehensive survey of the new conditions of our art.



AT THE BUILDING TRADES EXHIBITION, MANCHESTER.

The stand of Venesta, Ltd., at the Building Trades Exhibition at Manchester, was designed by Wells Coates, and placed first in the competition that was specially organized for the occasion.

The design compresses into the available space a number of instructive illustrations of the uses to which the various Venesta products may be put.

The designer had to solve a traffic problem for salesmen and for potential customers, provide adequate space for displaying and inspecting the firm's exhibits, and also arrange office accommodation that would allow privacy for interviews and facilities for clerical work.

The entire stand shows Venesta products actually in use, while special samples of plywood and Plymax are displayed on rotating panels. Concealed trough lights pour illumination over these revolving displays, and they appear against a back screen which separates the stand from the adjoining site. The counter, which is in one span, supported with steel at its end, carries along its centre a strip of lettering giving the title and address of the firm, thereby achieving both legibility and visibility. (The fascia that is legible but is skied above the narrow aisle of an exhibition hall is not always visible.)

The offices form a compact block, showing, externally and within, the adaptability and decorative quality of the materials the stand was designed to display. They are lit indirectly through glazed circular apertures in the ceiling. Everywhere, space, instead of being filled to the utmost limit of capacity, is handled so that an air of spaciousness is preserved.

This stand is an example of compact planning, and it holds no hint of the austerity that the single-minded pursuit of functional perfection and structural frankness is popularly supposed to produce.



Mr. H. G. Wells, who opened the exhibition of "The Architecture of Modern Transport" at the R.I.B.A. on Tuesday of last week.

NEWS & TOPICS



Mr. Maxwell Ayrton, F.R.I.B.A., whose paper on "Modern Bridges," read before the R.I.B.A. on Monday night, is reported on page 629.

THE REGISTRATION BILL : LITTLE OPPOSITION FROM THE LORDS

THE House of Commons has given a third reading to the Architects (Registration) Bill, and there seems little now in the way of the measure becoming law this session. The House of Lords last year approved of the principle of the Bill, and presumably, therefore, the present Bill will meet with little serious opposition in the Upper House. But the measure differs so much from its original draft as to be almost unrecognizable. During the brief debate on the third reading in the Commons well-deserved tributes were paid to Lieut.-Col. Moore, without whose tact and forbearance such a result could not have been achieved. He made every concession possible, and spared no effort to meet the views of all parties.

THE TIME AND PROGRESS SCHEDULE

I heartily agree with the spirit of Mr. Alfred Bossom's recent letter to *The Times*, in which he urges the wider employment of architects as the cure for more ills than one generally imagines. I am even more with him when he points the moral of the Time and Progress Schedule. This, in plain words, signifies a planned building programme for every job, and has been employed at the moment upon a few large and very successfully completed buildings. And there is no earthly reason why it should not apply to small work as to great, the deference paid to the traditional slowness of domestic building being a charge upon the industry with which we might very well dispense.

★

It is of importance that architects should realize not only that the Time and Progress Schedule saves time and money, but that it puts him once more into complete authority over the conduct of work, a good deal of which he does not now supervise and cannot therefore check. A very complete description of the system appears in the 1931 edition of *Specification*.

A PLAN FOR LONDON—

It might seem at first that the London Society's plea for a Plan for London, further emphasized in a pamphlet issued by the Society, runs counter to Dr. Raymond Unwin's fine work on the Regional Plan for Greater London. But there is no essential competition in the proposals. Dr. Unwin, with the limited means at his disposal, has attacked the fringes of a problem, the centre of which is in process of dislocation, a condition responsible for many of the evils on the outskirts. Town planning has been powerless to remedy the state of the central areas before the coming of the new Bill; and while the country at large has been gradually brought under forms of planning control, London and the other great centres of urbanism have continued to multiply their troubles, even unto complete stagnation.

★

The London Society must realize that the job of working out a plan for Central London, or for London as a whole, requires the co-ordinated efforts of a group of experts, such as produced the wholly admirable studies that resulted in the Regional Plan of New York, and that they cannot sit down to draw a plan. Their agitation, as I understand it, is for the institution of a planning board, or similar body, capable of examining the WHOLE problem of London, and putting their findings into the form of a plan. New York took some five or more years over their plan, which is a short time when one considers the mass of data compiled and the thoroughness of the recommendations. Those same five years have seen the acceleration of the rate of congestion which now leaves us, here, with no real alternative to a plan.

—EVEN FOR LONDON'S REFUSE

There is some talk of co-ordinating the dust-collecting services for London. About time, most people think; and leave it at that. But the problem is of gigantic proportions, as all London's problems are. Some boroughs collect their own refuse, others let to contractors, and few people know by what divers routes this undesirable by-product of civilization reaches its final resting-place. This question alone exercises the ingenuity of the various engineers concerned, and must inevitably resolve itself into more waste of time, money and combustible material than we can afford.

★

The police force, water supply, the organization of the port, and much else has been co-ordinated to our lasting benefit, and the remaining anachronisms must surely give place to something more reasonable and economical.

★

This is the sort of work that should rightly come within the scope of a planning board of all talents; for how can we hope to wield properly the tools that new planning powers put into our hands if the disjointed government of London prohibits a free hand in its carrying out?

A SUCCESSFUL EXHIBITION

The Swedish Exhibition in London closed last Wednesday and most of the exhibits will go back to Sweden. From the point of view of the Swedish manufacturers and artists whose products make up this exhibition their visit

has been a great success, which has resulted in much business for their export trade. From our point of view I think it has been no less successful, even if it be through the hard lesson to our makers of glass, pottery and metal work, of seeing the Royal Family and social people of all sorts buying freely of the beautiful wares.

★

I can only hope that no one who could have visited the exhibition allowed the moment to pass, for it can truthfully be said, I think, that no exhibition of its size could show so much that was of the highest excellence both of design and execution, and so little that was negligible.

★

The Swedes have of late been taxed with "preciousness," especially by the swashbuckling fundamental functionalismists, but the peculiar twist which they have given to simple conceived forms, and the wealth of spontaneous decoration which their joyful attitude to design has evoked, seems to me to uncover an aspect of civilization too nearly threatened by the grosser Americanization of life, and one that would come naturally to us if we could give ourselves the chance of free expression.

★

I am very glad to hear that one immediate result of the exhibition is the commission by the Ashtead Potters of a dining service to Metcalf, the sculptor who was responsible for the delightful coinage of the Irish Free State.

THE "DORCHESTER"

The Dorchester Hotel was formally opened last week with a large inaugural luncheon. Those whom the threats of a concrete building in Park Lane thoroughly frightened must find their worst fears allayed by the suave terra-cotta-like facing of the new building; while those who were expecting a glass-and-concrete exposition of Continental modernity must be either disappointed or very pleased, according to the tenor of their expectations.

LIGHTING THE GLOOMY RECESESS

The following extract from *The Observer* of just 100 years ago should be compared with the proposals of various "experts" for lighting the gloomy recesses of the official schemes for Charing Cross Bridge :

> "*Thames Tunnel.*—By an extraordinary contrivance, the gas lighting in the Thames Tunnel is made to assume the appearance of sunshine passing swiftly over a meadow. Its brilliancy commences at the entrance, and as it progresses onwards, leaves an illusory shade behind it. The effect is very pleasing, and is produced by simple pumping machinery. Both the scientific and curious have expressed themselves much gratified with the ingenuity of its plan."

Where is the sunshine of those wavering gas jets now ?

SHIP DESIGN AND DECORATION

The new C.P.R. liner the *Empress of Britain* may become a very serious rival of the *Bremen* and *Europa*, that is, so far as mechanical efficiency is concerned. Of the other increasingly important side of ship design one cannot say with so much certainty that our genius for design has outstripped that of our rivals. From all accounts the accommodation is of the most luxurious and of a spaciousness hitherto unknown in ocean travel, the result quite probably of the newly instituted habit of world cruising and the longer periods of voyage occasioned by it.

Much appears to have been done to make the accommodation of the liner and its design more in keeping with the times than is usual in British ships. I can, however, think of half a dozen young men who might have been included in the mural painters selected. Efforts should have been made to bring as much skill and imagination to the task as would have placed the interiors of this boat in a special niche of its own, and that could have been done at no great and overpowering expense.

BRITISH GLASSWARE

It is doubly instructive that the Exhibition of British Glass and Glassware at Selfridge's coincided with the Swedish Exhibition at Dorland House, since both demonstrated the strength and weakness of the British manufacturers' position. On the technical side the exhibits of British electric-light bulbs, plate-glass, ultra-violet-ray glass, bottles and jars, can face any competition. The wireless valve bulbs, optical lenses and laboratory glassware also made a brave show, and were probably equal to anything of a similar kind turned out from foreign factories today.

★

But in the domestic and ornamental objects, while the material was excellent, there was scarcely one piece of really good design, if we except the copies of old work. Two of these, the reproduction of a Roman bottle and a vase copied from an altarpiece by Hugo van der Goes, showed to what heights the glass-maker could rise if he had good artists to design for him. The cut glass was mostly overcut, as if designed with no other object than to display virtuarity by crowding the maximum amount of ornament on to each piece. The result was vulgarity. One feels certain that these tumblers, wine glasses and jugs would have delighted the heart of the Victorian paterfamilias—they look expensive !

THE WICKED ARCHITECT AGAIN

Too much importance need not, perhaps, be attached to the remarks made by Mr. Hunt, the L.C.C. valuer, at a luncheon of City Fathers. Mr. Hunt is annoyed with the interfering architects for being "able to impose their views so as to obstruct the provision of an urgent public requirement (to wit, St. Paul's Bridge), notwithstanding that they had *neither statutory nor financial responsibilities in the matter*"—the italics are mine. He deplored that this twenty-year-old scheme, for which property of the value of nearly one and a half millions was purchased, should be abandoned, and another speaker, in reply, assured him that it was only dormant.

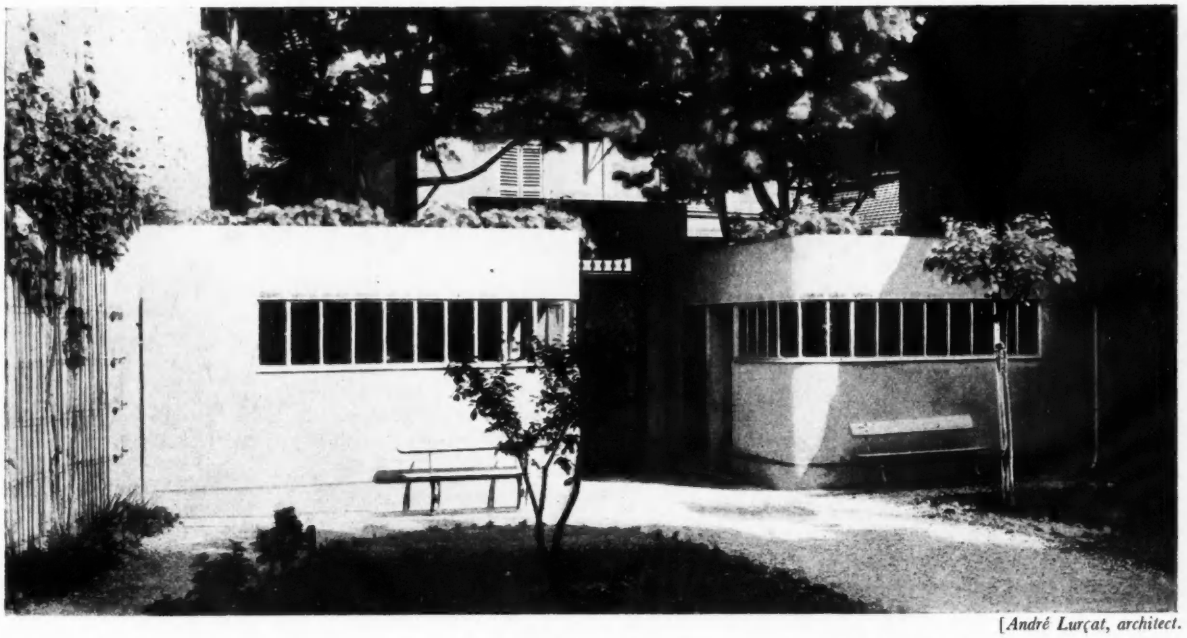
★

Let Mr. Hunt be assured of the following points : (1) No traffic scheme sanctioned twenty years ago has the slightest relevance to present needs; (2) the discharge of further traffic across the junction of Cheapside and Newgate Street would help no one, and make confusion worse confounded; (3) even were it a natural convenience to traffic, the safety of St. Paul's should bar it; (4) everyone knows that the scheme, as originally propounded, would have meant the spending within the City boundaries accumulated funds of the Bridge House Estates; (5) the architects can at least be absolved from self-interest in their action, since they certainly do not benefit by the *status quo*, whereas from the extensive remodelling, work for some of them must arise.

ASTRAGAL

ANDRÉ LURÇAT'S "ARCHITECTURE"

BY P. MORTON SHAND



[*André Lurçat, architect.*

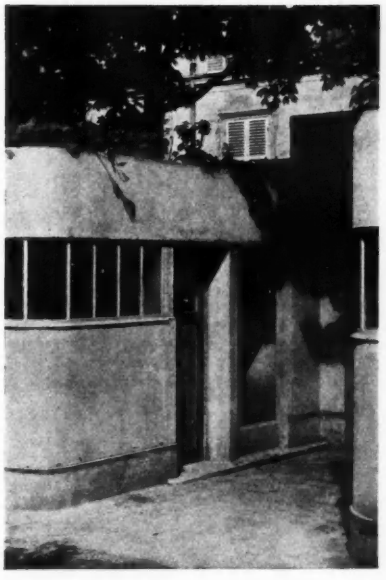
A conservatory and potting-shed arranged as twin lodges at the garden entrance to a block of flats at Bagneux, near Paris. By this means architectural dignity is given to what are more often unsightly or nondescript wooden structures, and the banality of a back gate is redeemed by a modicum of formal emphasis.

MODEST as are its dimensions, André Lurçat's book on *Modernist Architecture* is undoubtedly the most important work on the subject that has yet appeared. He is no self-advertiser, preferring the problems of work in hand to the limelight of polemical proselytism.

As he says himself, rather pointedly, "everyone engaged in this new movement in architecture should be actuated by great disinterestedness and modesty." He has set such an admirable personal example in this respect that his book should win over more people to Modernism than many modernistic architects have yet succeeded in alienating from it.

It is, indeed, something of a feather in the cap of the publishers of the *Manifestations de l'Esprit Contemporain* that the first of the series—or was this only an alphabetical tribute ?—should have been devoted to architecture; and that they should have succeeded in persuading M. Lurçat to write it, and a forthcoming companion volume on town planning.

The book is—for a French one, at least—well printed, in short, succinct, axiomatic paragraphs. Not all the illustrations, however, seem strictly relevant to the text. It is a sober, moderate, thoughtful and untechnical statement of the aims and achievements of the Modernist School and its interpretation of the lessons to be learned from the evolution of architecture, written in perfectly simple and beautifully lucid French. There is no display of superiority, no rant or wild idealism, no rhetorical appeal for a eugenically Prussianized Utopia of civic edification.



One of the doorways of the potting-shed. The roof is crowned with a parapet of growing plants.

"In our day," says M. Lurçat, "there exist many admirable works of technique, but up to the present no work of modern architecture has been produced that possesses true quality."

The reason he gives for this frank and honourable admission is that, so far, modernist architects have had no chance of attacking any more ambitious problem than the war legacy of housing deficiency.

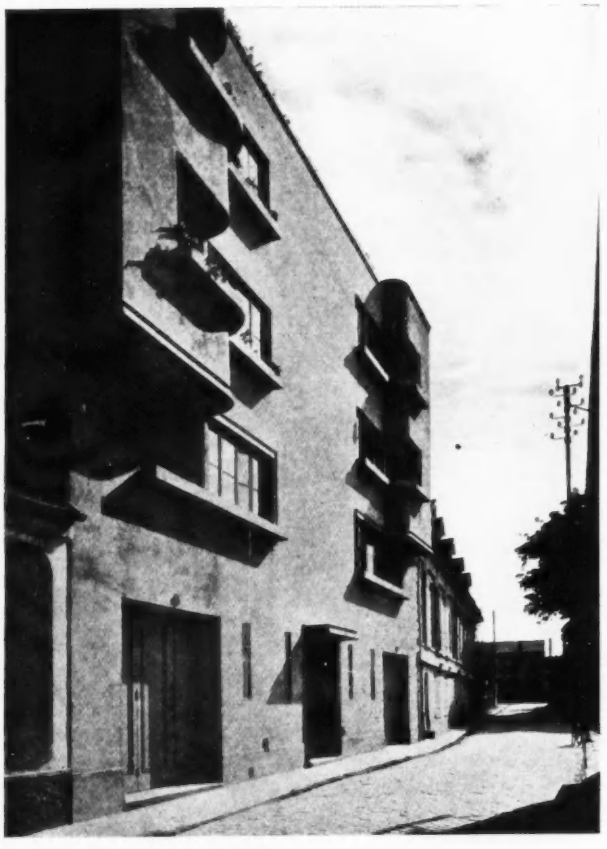
This is true of France, but scarcely of other countries identified with the movement. "Before thinking of the house, we have to think of the town," he adds, taking as his text a passage from Paul Valéry: "'Tell me—since you are so sensitive to the effects of architecture—haven't you noticed in your walks through this town that among the buildings which people it some are dumb, others are articulate, while others, again, though these are the fewest, actually sing ?'" M. Lurçat would have our modern towns, no less than their separate streets and houses, singing for very joy.

It is a fine ideal, not incompatible with veracity to functional expression.

M. Lurçat is no enemy of *rational* decoration. He considers the decadence of sculpture due to the decadence of architecture itself. "Henceforth we shall be able to employ sculpture on our façades in a manner that will no longer be superfluously ornamental. By attracting the light and concen-

D

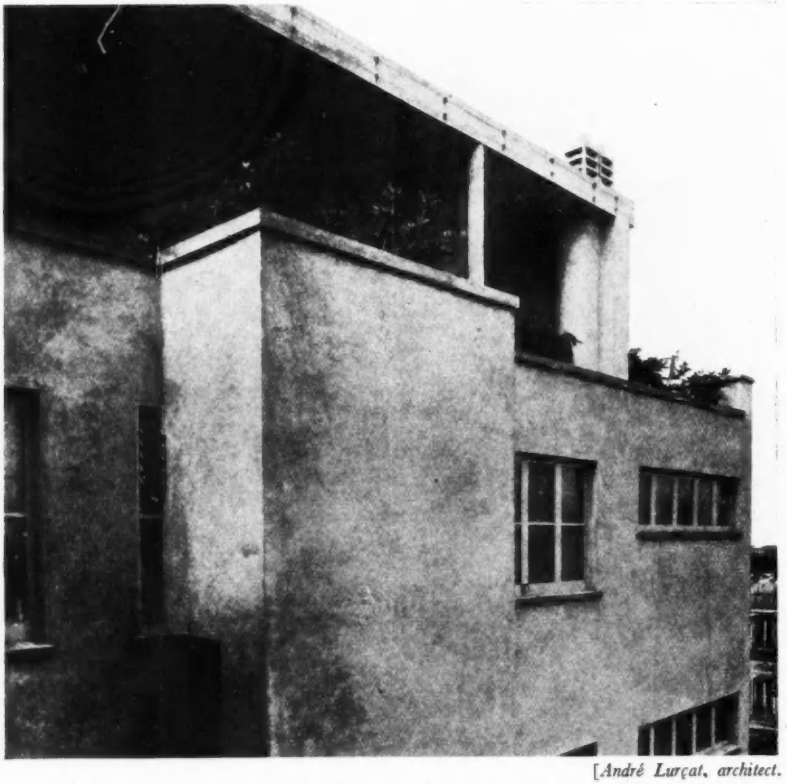
Modernist Architecture. By André Lurçat. The first volume of the series *Les Manifestations de l'Esprit Contemporain*. Paris: "Au Sans Pareil." Price, 25 francs.



Block of flats, Bagneux, near Paris. The street façade is of slightly Modern Dutch appearance.



A view of the back of the flats at Bagneux, looking over the roof-garden.



[*André Lurçat, architect.*

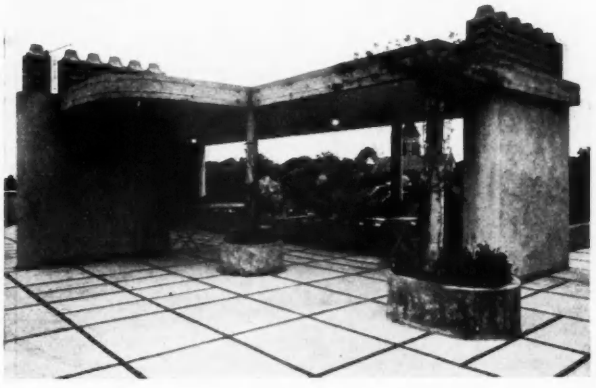
The roof of the top story and the pergola of the roof-garden of the above flats form a loggia providing shelter from passing showers and too dazzling sunshine. This space can also be used for sun-bathing, or sleeping out in hot weather.

trating it on expanses of wallage, sculpture will help to complete them with an essential element that is often lacking." In the same way he hopes for a revival of fresco painting, objective but not academic.

"It would be a signal error to imagine that any architecture can be based on poverty or an exaggerated economy of materials. Past centuries stand to witness that, on the contrary, scope for the development of an epoch of fine architecture can only be found in an age of prosperity. At present the economic factor is, to an all too predominant extent, the governing one, and this inevitably hampers development. All the same, there is a very real and immutable economic law which ought to be observed in every building in order that it may achieve lasting quality. A building simply conceived, and constructed with simple materials, has a good chance of embodying simple beauty."

"The structure of a building, like the skeleton of a man, is not pleasing to the sight, because its forms have been designed for strict utility rather than æsthetic harmony. None of the various materials now available for forming its outer skin are really satisfactory. What we need is a substance that is cheap in first cost, applicable in a dry state, waterproof, easy of maintenance, and capable of manufacture with a finer surface on the inside than the outside. This durable and washable coloured revetment is sure to be discovered by industry before long. (It is curious that M. Lurçat, like most of the modernists, prefers to ascribe new inventions to industry rather than to science.) Colour allows walls to end abruptly, or to prolong themselves in an optical sense; to increase or diminish space. An exterior wall visible from a room, and of the same colour as itself, gives the illusion of largely augmenting the dimensions of the latter."

The architect, he thinks, will soon be called upon to organize the interiors of our homes as well as their exteriors. Furniture will then become an integral



The pergola awning of the roof-garden: decorated with louvred chimney-pots.



A back view of the block of flats shown on the facing page: another plain and orderly elevational treatment.

part of architecture. To change the shape of existing furniture does not make it "modern." To achieve modernity it must be permeated with the new spirit. Consciousness of its utility must take precedence of the quest for mere beauty. It should be made on the human scale in order to serve us, and be in harmony with our lives, without causing us physical or mental encumbrance.

"Modern houses, being asymmetrical, appear more truthful and natural. The lake dwellings of prehistoric man are precedents for the house supported on piles. The flat is a far simpler form of roof than the gabled, and therefore gives greater æsthetic satisfaction. Moreover, it needs no upkeep and permits of the addition of fresh stories with a maximum of facility and a minimum of demolition. Seen from the air, our towns are intolerably hideous in their chaos of disordered gables. A house draws its life from its windows, but a landscape rarely presents itself in a vertical sense. England showed the way in the generalization of windows arranged horizontally."

M. Lurçat fears that an excess of individuality in the immediate future may lead to a relaxation of architectural discipline for which our age is not yet ripe. "Do not the personality and originality of a work of art exist and manifest themselves independently of the artist's will?" he asks.

"The nineteenth century appears to us, architecturally speaking, as an age of great discoveries incompletely expressed: expressed, that is, only as predictions, or vague indications, of what the new truth might prove to be. In it technique was largely in advance of the artists, and seems to have had the effect of stifling their creative impulse. Imbued with an outworn classicism, they were unable to divine the fundamental importance of iron construction. They used it only half-heartedly, or for subsidiary purposes, and thus derived no plastic value from it. The exploitation of the new material was left to the daring engineers



[*André Lurçat, architect.*

M. Guggenbuhl's house, in Paris, detail of the garden door of the *salon*. The step is continued on either side as a window-box, thereby effecting an intimate and immediate union between house and garden.



The roof garden of M. de Sales's villa at Boulogne-sur-Seine, taken from under the concrete canopy of the columned summer-house.



[*André Lurçat, architect.*

Another view of the same roof-garden showing the view obtained from it, and the asymmetrical arrangement of the cement flower-boxes.

of this epoch." (M. Lurçat cites our own Crystal Palace as a *chef-d'œuvre* among its *travaux d'art.*) But the day of iron, except as an adjunct, is passing.

Perhaps the most interesting parts of this book are those dealing with "La Surface," "La Modénature," or Proportion (pages 168–170), and "Monuments" (pages 75–81). M. Lurçat says that "a monument ought, before all else, to possess adequate functional qualities. . . . The purely decorative monument (such as the fountain or memorial group), being functional only in the sense of its plastic volition, can rarely be envisaged in this present age of general reorganization on modern bases."

It is, however, difficult to perceive what functional qualities, practical or plastic, such an essentially "modern" monument as Professor Walter Gropius's extraordinary cubist *Denkmal*,* which affrights the tranquil air of that sedate haunt of classicism, Weimar, could possibly pretend to. Or is it, perhaps, intended to be a Steiner stylization of the rude labours of the cromlech-builders, symbolized neo-druidically as a flash of lightning frozen into Hy-ribbed concrete? And, if so, why was it not erected in front of the Goetheaneum at Dornach?

THE ARCHITECTS (REGISTRATION) BILL

[BY OUR SPECIAL PARLIAMENTARY REPRESENTATIVE]

THE Architects (Registration) Bill passed its Third Reading in the House of Commons on Friday, April 17, and was read a first time in the House of Lords on April 21. Following is a report of the Third Reading in the Commons.

The Definition of the word "Architect"

On Clause 2 (Interpretation), Mr. McShane moved:

> The expression "registered architect" means a person registered under this Act in respect of the business of designing structures and the supervision, in his capacity of designer, of the erection of structures.

He said that a definition was necessary because the architect, in the nature of things, had not only a province of his own, but had frequently to encroach upon the provinces of other kindred interests. If they were going to give statutory recognition to a profession, they ought to make quite clear what the profession was and exactly what its duties were supposed to be. Mr. Winterton seconded.

Lieut.-Colonel Moore, for the promoters, said that this point in regard to the definition of the word "architect" was fully discussed in Committee, and the difficulties were very clearly realized as to how best to define it. The original wording in the Bill was "bona-fide architect." It was realized that that might be open to misinterpretation, and it was then agreed to leave out the words "bona fide" and simply have the word "architect." They all felt, and the House would probably feel, that the simplicity of the word "architect" was possibly the easiest means of getting out of the difficulty. Other professions which had sought registration had found exactly the same difficulty. They did not believe that a similar insertion would make in any way clearer what the word "architect" means. This amendment meant that the architectural professions were encroaching on other professions of equal dignity and standing, such as structural engineering and civil engineering. All those great bodies were concerned with the business of designing structures and the supervision of those structures. They did not want to interfere with their duties, and he was sure they would feel in exactly the same way towards the architectural profession. It would be very unfair, unwise and unjust to take upon themselves these responsibilities and offend other great professions which were on the borderline of the architectural profession, and he asked the House to reject the amendment.

The amendment was rejected by 107 votes to 35.

The Speaker, referring to the large number of amendments on the Order Paper, said that he understood that the Bill was very fully discussed in Committee, and it seemed to him that it would not be in accordance with the proper procedure of that House, particularly upon Bills of that kind, for a debate which was very full in Committee to be repeated on the Report stage. That did not seem to be the reason for which the Report stage existed, and therefore he would have to refuse to call a great many of the amendments.

The Register of Architects

Mr. McShane moved amendments to Clause 3 (Council to set up and maintain a Register of Architects) which were accepted, providing that the Council should publish the register twenty-seven months after its passing of the Act instead of twelve; to have on the register simply the name and address of the person registered, and

not his qualifications; and provide that the certificate of registration should remain the property of the Council and be surrendered by the holder on removal from the register.

On the motion of Lieut.-Col. Moore a further amendment to Clause 3 was adopted, providing that the body was to be called the Architects' Registration Council of the United Kingdom.

Mr. G. Wilson moved to amend Clause 5, setting out the persons entitled to be registered without examination, by including persons who had a degree or diploma from any university in Great Britain and Northern Ireland. He said that at Cambridge and other universities there were schools of architecture, and students attending them might conclude that their degrees or diplomas would not be sufficient unless the words he proposed were added to the clause.

Mr. McShane, who opposed the amendment, thought the clause as it stood was sufficient for the purpose. It provided that

> Every person who has gained or gains in architecture a degree or diploma recognized by the Council as qualifying for registration

shall be entitled to be entered in the register, and he was satisfied that the Council would so regard the degree or diploma of a university.

Mr. Ede supported the amendment. He said that one of his reasons for doing so was that he desired to see the universities more and more concerned with the education of young persons intended for every walk of life. Especially did he desire to see the two great residential universities concerned more and more with the practical affairs of life rather than simply with literature, mathematics and classics, which were particularly useless in the matter of earning a living outside journalism and book-making.

Sir H. Samuel said he thought the Bill was right as it stood. He did not see why there should be a kind of side avenue to registration. The House was asked to say that the diploma of any of the minor universities which might set up an architectural school was to be accepted as qualifying for the architectural profession. If the standard was of a high level, no doubt the Council would recognize the diploma. But they could not see what the future would bring. All the universities were not up to the standard of Oxford or Cambridge.

Lieut.-Col. Moore said the promoters had an absolutely open mind with regard to this matter. He felt, however, that the present wording of the Bill fully covered the situation.

The amendment was by leave withdrawn.

Qualifications for Registration

Mr. Winterton moved to delete Clause 7 (Council to prescribe future qualifications for registration). He said they had a great controversy in Committee on the question of the instrument which was to be set up by the Board of Architectural Education, and among other improvements that were made in the Bill was that a very comprehensive Registration Council was formed. It was given full and complete powers with regard to the registration of architects, and to the extent to which the Committee upstairs accepted that alteration of the original structure of the Bill it naturally affected other provisions in the Bill which set up other statutory committees. Now, for the first time, it was proposed to give full powers to the Registration Council by way of admission, examination and registration, and then, in Clause 7, to begin to whittle away those powers by recognizing and giving statutory authority to what was, in effect, a private instrument and a specific school of architecture, the Board of Architectural Education. It would be altogether contrary to the main purpose of the Bill if they first of all gave full powers to the registration authority and then confused the issue by setting up another board entirely which would advise the Council. The Board of Architectural Education was an existing body which was brought holus-bolus into the Bill, and it was, unfortunately, not a body which was acceptable to the whole of the architectural profession.

Why should this particular instrument of one particular architectural organization only be put in the Bill? Why not put in the Bill also the examinations board of the Incorporated Association of Architects and Surveyors, the building examinations board of the Faculty of Architects, and the examining board of any of the universities? Why this preferential position for this particular Board of Architectural Education? The answer was that it happened to be the handmaiden of the promoters of the Bill. It would be a public scandal if an organization representing, after all, only a minority of the architects of this country could use a private institution of this kind to give a preferential position in an Act of Parliament, and say,

> "Through this gate only, this examination only, shall you be able to enter the architectural profession,"

and that the advice of this particular private outside body should be the controlling advice to the registering authority. It was undemocratic and unfair and unjust.

Mr. Kelly seconded the amendment.

Mr. Harris said if what the last speaker said were correct, that one organization was to have a privileged position as an examining body, he would be the first to fall in with the opposition to this clause. He did not see why one educational board should have a monopoly of carrying out examinations in the future and testing the qualifications for architecture. That would be going too far. But, so far from the R.I.B.A. being in that position, the Bill proposed that Parliament itself should lay down in the Bill what character the board should take. If there was any criticism of the board, it was rather that it was too comprehensive, too wide, too large, and had too big a number of organizations represented. It was really a democratic body in the wider sense. It might almost be said to be a mass meeting, because there were no fewer than seventy members drawn from other organizations, and it was to be the authority responsible for setting examinations. The size and character of the board was due to the benevolence of the promoters in trying to meet every opposition in the most reasonable spirit. He could not help having a suspicion that there were some people who did not want us to have a proper examination for the qualification of registered architects. Clause 7 was an essential part of the Bill. Without it the promoters would be wise to drop the Bill.

He was informed that the examinations of the R.I.B.A. had been going on for many years, while, on the other hand, this mushroom organization (the Incorporated Association of Architects and Surveyors), which was promoted for one purpose, and one purpose only, to prevent this kind of Bill from becoming an Act of Parliament, and had had no examinations up to the present, wished, now that they had this Bill, to invent an examination for the purpose of bluffing the House of Commons. Mr. Culpin, who was a Labour Alderman of the London County Council, and a former president of this mushroom organization, had resigned all connection with it. Lieut.-Col. Moore, in a very conciliatory spirit, had given very reasonable prominence to this new organization: he was going to get it into the Bill, and Mr. Winterton ought to be satisfied with that.

Mr. Bracken objected to charges being brought by the opponents of the Bill against the R.I.B.A.

"Protect the Public"

Mr. McShane, who supported the amendment, said he was in favour of the registration of architects, but he wanted to see the public protected. If this Bill had passed as it was introduced on the Second Reading, it would have been nothing short of a public scandal. He could claim credit along

with his hon. friends for having, in a large measure, prevented that from happening. Unless Clause 7 was radically dealt with there would be no working-class boy who would ever have the chance of moulding another building as beautiful as the one in which they were assembled. He had nothing against the R.I.B.A., but it was a trade union, and he protested that the House of Commons should give to a trade union a power over and above and beyond the supreme power of the Council. The Board of Architectural Education was a chartered instrument of the R.I.B.A.

Institute of Builders' Memorandum

The Institute of Builders had issued a memorandum stating that :

> It will be seen from Clause 7 that the Bill provides, first, that the Registration Council must accept for recognition the examinations recommended by only one board of education. It provides that the Registration Council shall employ only one examining board, and that the Registration Council shall have no authority to regulate the decisions of the Board of Architectural Education.

He was anxious that this Bill should go through as a decent Registration Bill for all architects; but let it be remembered that the membership of the R.I.B.A. numbers somewhere about 7,000 architects, so that, by this clause, complete power was to be given into the hands of that organized body of 7,000, not merely of examination, but of moulding the curriculum and raising the standard of education so that no lad of his class would have any opportunity whatever of entering the profession. He was a registered teacher, and he wanted to see men who were architects given proper safeguards, and he wanted the public to be protected. If the Bill passed in its present form, for many a year those who came would say it was incredible that the British House of Commons gave such powers. His position had been simplicity. When the Bill first went upstairs, he said, "Give me an independent council representative of the architects and the allied and kindred interests and the public. Let that council appoint its own committees, its admission committee, its registration committee, its discipline committee, and you can have your Bill." That was surely a fair offer. It was perfectly straightforward and simple. It was because that was not granted that these interminable difficulties had been caused and devious means had been adopted to get forward what should have been a plain, simple instrument for giving a label and qualification to architects.

Mr. Stewart also supported the amendment. The board, he said, should be subject to the authority of the Council.

Sir M. Macdonald suggested that the views of both sides might be met if, instead of making it mandatory on the Council to recognize the examinations of the R.I.B.A., it should be made permissive only. The apparent hold of the R.I.B.A. over the Council would thus be removed.

Mr. Halford Knight said it was not correct to say that the examinations contemplated by the Bill were only examinations by the R.I.B.A. The widest possible limits had been searched to bring within the ambit of the Bill all interests and all classes which ought to be in it.

Lieut.-Col. Moore, in opposing the amendment, said that the board proposed in the Bill was an independent Board of Architectural Education, and it had, at the moment, no charter. The whole object of the Bill was to raise the standard of architecture and examinations, so as to produce a better type of architect in the future than in the past. The present board had worked for twenty-eight years to the complete satisfaction of every architectural student, every architect and every architectural organization. It was a body that had advised His Majesty's Government. The London County Council went to it for advice and were represented on it. All those efforts were to be suddenly scrapped : they were to undo the work which had slowly and wearily evolved during twenty-five years and to hand over the duties of this great organization—this widespread, widely-represented, democratic organization—to a committee of this new, purely professional, council. The amendment would stereotype architectural education.

The amendment was rejected by 169 votes to 54.

Fees for Registration

An amendment, moved by Mr. Bracken, was agreed to, providing that half the fees of registration should be spent on scholarships and grants to enable poor boys and girls to go to the universities or schools on the schedules.

Sir M. Macdonald moved an amendment to delete the Institution of Civil Engineers from the list of bodies having the right to elect representatives to the Council. He said that he did so on behalf of the Institution, which had given no authority for the insertion of their name in the list.

The amendment was agreed to.

Lieut.-Col. Fremantle moved an amendment adding the Faculty of Architects and Surveyors to the Admission Committee set up under the Bill.

Lieut.-Col. Moore said that the amendment would give unfair representation to so small a body. One representative would be adequate, and he moved that the amendment be amended to that extent.

Lieut.-Col. Fremantle accepted this, and the amendment was agreed to in this form.

On the motion for the Third Reading,

Mr. McShane said he was exceedingly sorry that Clause 7 was not deleted. He felt sure that those who voted for the retention of that clause would regret the course which they had taken. While the Bill would confer the principle of registration on a vast body of people, the public, and particularly those who came from very poor homes, would not get the opportunities which they would have had if Clause 7 had been left out.

Lieut.-Col. Fremantle said he had not taken any part in opposing the Bill, but he thought that the R.I.B.A. had made a mistake in requiring registration, and his view was that the State made a mistake in registering any body unless it was necessary from the point of view of life and death. It was for that reason that medical registration was required, and special privileges of this kind should not be conferred unless they dealt with matters of life and death. This Bill attempted to standardize something which could not be standardized, and it was not in the interests of the public to take action of this kind.

Mr. Winterton said those who had been critical of this measure had had only one object in view, and that was the protection of the interests of the public, and to keep the door as wide open as possible to every working-class boy and girl to enter this honourable profession. He hoped that when this measure reached the House of Lords certain small inadvertencies with which they had not been able to deal might be corrected. The Bill was by no means perfect. Under its provisions a man may appeal against being taken off the register, but there was no provision by which he could appeal when anybody refuses to put him on the register.

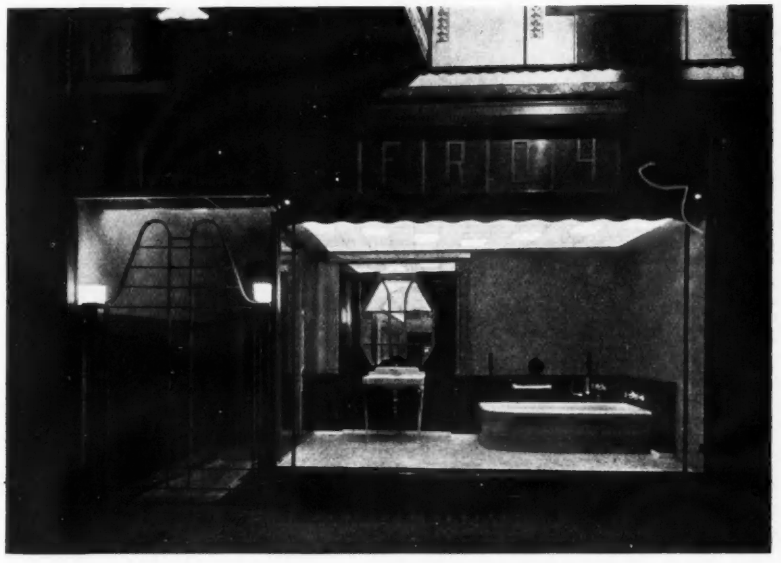
Congratulations for Lieut.-Col. Moore

He (Mr. Winterton) congratulated Lieut.-Col. Moore on the successful carrying through of the very difficult and complicated measure. Some of them had fought the Bill very strenuously, but he would like to testify to the uniform courtesy of the hon. and gallant member in his conduct of the measure. They had not all the same temperament, but it was fine to have the strength of a giant, and it was merciful not to use a giant's strength. He hoped that the Bill would lead to the building up of a very honourable profession, and he trusted they would realize that they had a great prerogative, and that they would always be open to creative ideas from whatever source they might come.

The Bill was read the third time.

FROY'S SHOW-ROOMS BOND STREET, W.

STANLEY HALL AND EASTON AND ROBERTSON, ARCHITECTS



The main entrance front is flanked by a display window carried out in Australian black bean, relieved by narrow bands of green. An interesting feature is the method of lighting the window, by concealed lamps recessed in a series of deep ceiling coffers. A direct view through the showrooms is seen through the "œil-de-bœuf" window.

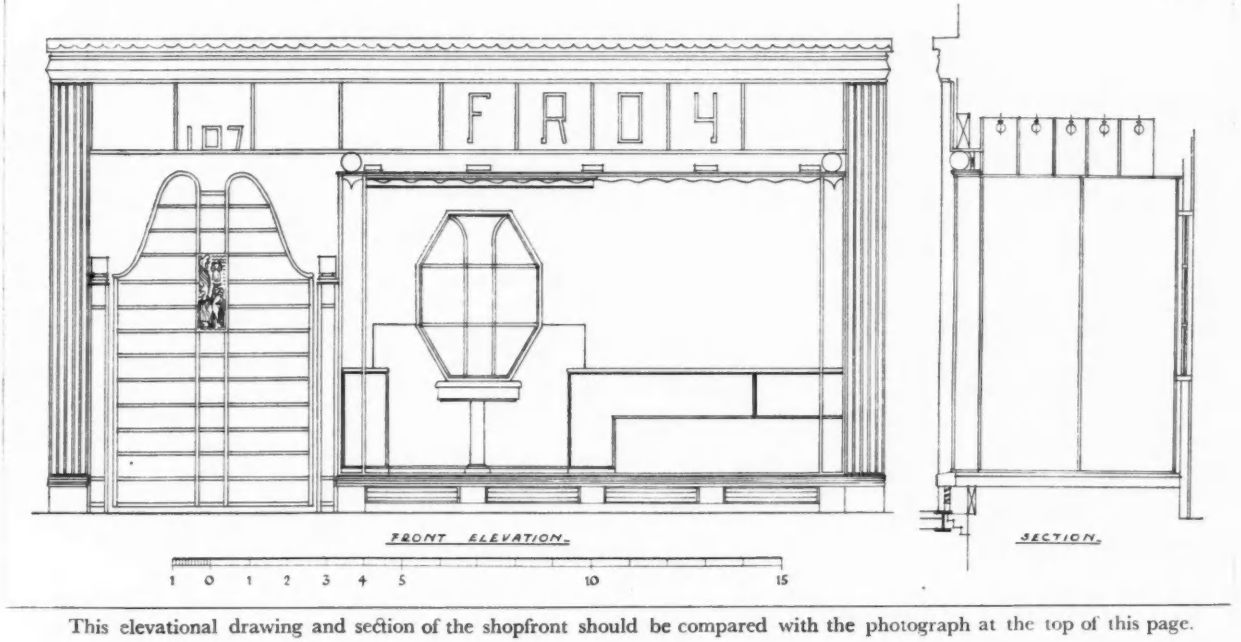
TO manufacture a good article, carefully designed, and then to display it for sale in a setting which has nothing of the character of the article, is an error which has been frequently committed in recent years. But one excuse for this has been the growth of the modern spirit, which has developed amazingly in the design of the articles presented for display, while architecture, which provides the setting, has of necessity been slower to reflect the new ideals.

Recently, however, twentieth-century design has affirmed itself sufficiently to convince the public of its stability. And many commercial firms have decided to rebuild their premises or alter them in such a way as to take full advantage of modern technique. The result, in most of the successful cases, has been less the flaunting of a so-called modern fashion, than the achievement of a sympathetic expression of the aims and methods of today. Into this latter category fall the new showrooms which have just been completed for Messrs. W. N. Froy and Sons, at No. 107 New Bond Street.

The principal showrooms are on two floors, ground and basement, and were formed by the complete internal reconstruction of what were exceedingly old-fashioned shop premises, having, however, the great advantage of light and access at both extremities. No heating facilities or boiler flue existed in the old building, and it was therefore decided to heat by electricity, through invisible panels which are incorporated in the ceilings.

The entrance door leads to a large octagonal room fitted as a bathroom-de-luxe. On the axis of this room is a central corridor with a segmental barrel roof, and on either side are bathrooms carried out in notes which range from the most direct modern to a suave suggestion of tradition.

Colour plays an important part in this aspect of the design, the keynote being the use of coloured baths and fixtures. And colour is also present, but in very discreet masses and tones,



This elevational drawing and section of the shopfront should be compared with the photograph at the top of this page.



The large octagonal room, taken from just in front of the main entrance door. It is provided with concealed ceiling lighting and is rich in Pedrara, Swedish, Vert Antiquo and Botticino marbles. On the left is the central corridor, leading to the staircase hall.

in the larger and loftier section of the showrooms, which is approached through the central vaulted corridor.

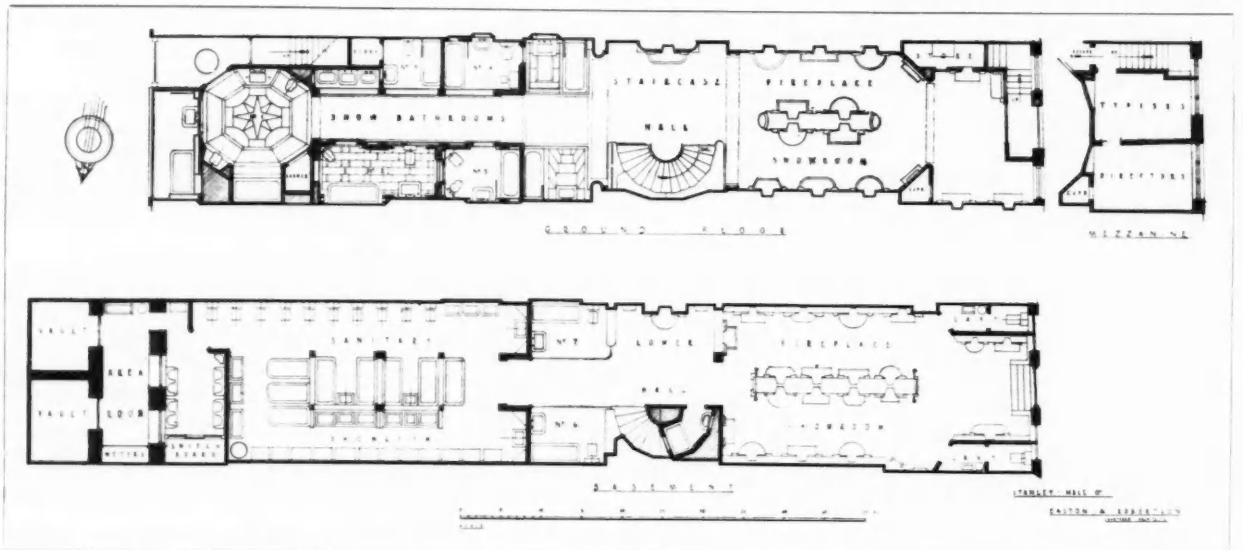
This portion of the design reveals the interest which modelling of form, the discriminating use of glass, and modern effects of light can lend to a single unit of space.

Thus the architects have been successful not only in providing a large area for display, but in producing an admirable sense of spaciousness.

An open semi-circular staircase set against a wall of mirror glass, leads to the lower floor. This floor, like that above, is again divided into two sections: sanitary ware and fireplaces. Light colouring, cheerful lighting by cubes of glass, and an orderly harmony in the placing of exhibits are features of the design.

Particularly interesting on this floor is the fitting up of a space beneath the stairs as a bathroom in miniature—on a scale of minute and careful finish which recalls some of the tiny bathrooms at the Stockholm Exhibition.

The showrooms as a whole, including the exhibits, achieve a unity which is to the advantage of both goods and background. The lesson to be gained is the value of an architectural setting, in which the character of the goods displayed is fully considered from the outset. Owners and architects have obviously made a close and harmonious study of the problem. The result is one which must inevitably encourage a closer connection between commerce and design; for it demonstrates in the most practical and convincing way the benefit of understanding and co-operation between architect and manufacturer.



Froy's Showrooms, Bond Street, W.] [*By Stanley Hall and Easton and Robertson.*

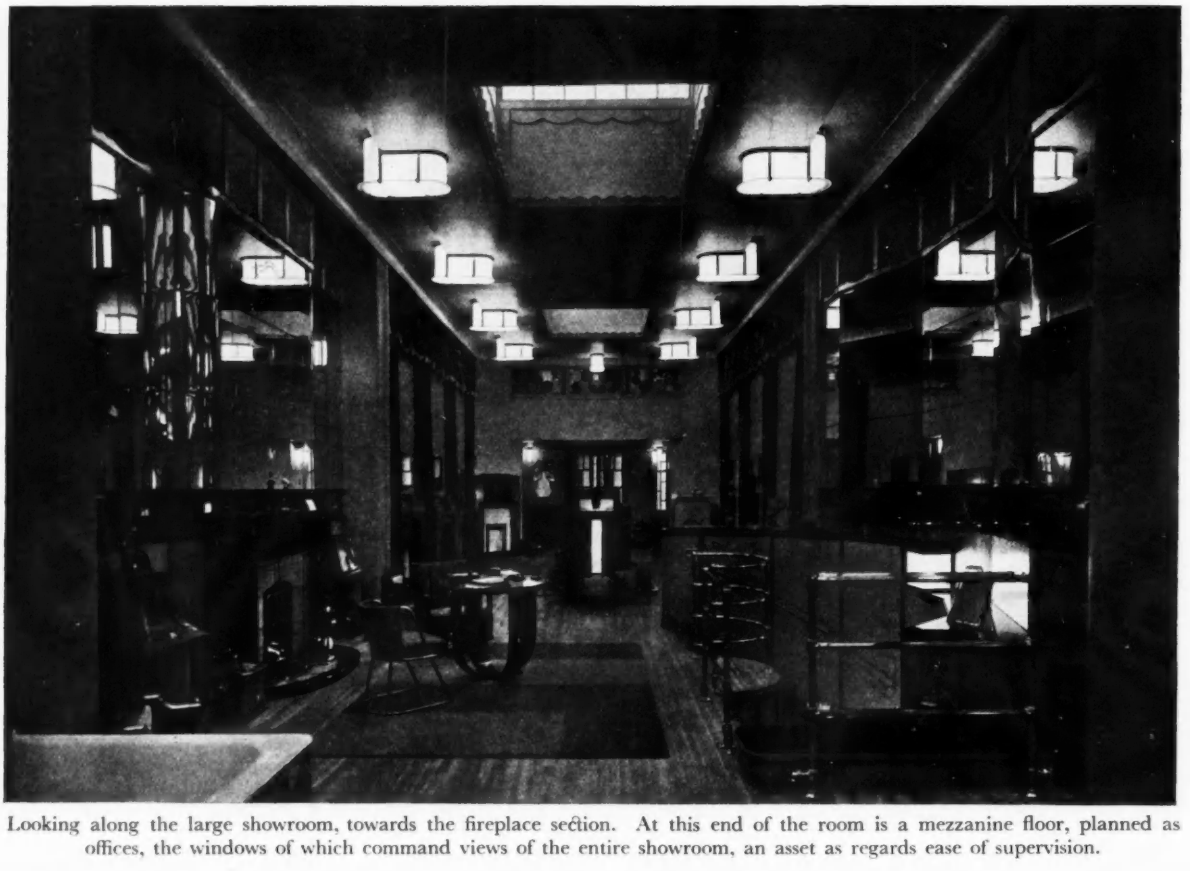
The ground-, basement- and mezzanine-floor plans. The showrooms are devoted primarily to the display of bathroom and sanitary fittings, and fireplace equipment of all types, with special emphasis of those designs which are most suitable for incorporation in buildings of modern character. This fact has influenced the architects in the conception of the plan and decorative treatment.

[*By Stanley Hall and Easton and Robertson.*

The open semicircular staircase, set against a wall of mirror glass, leads to the lower floor. Its projecting balustrade is formed of towel rail, and the handrail is composed of grab-rails of steel and glass elements ingeniously adapted to the purpose.

Frey's Showrooms, Bond Street, W.]

The large octagonal room, looking towards the main entrance door. It is fitted up as a bathroom-de-luxe. On the left is seen part of the octagonal window, through which is obtained, looking from the street, an axial vista of the interior of the building.



Looking along the large showroom, towards the fireplace section. At this end of the room is a mezzanine floor, planned as offices, the windows of which command views of the entire showroom, an asset as regards ease of supervision.

Froy's Showrooms, Bond Street, W.] [*By Stanley Hall and Easton and Robertson.*

The large showroom, looking towards the corridor leading to the main entrance. Note the separation of the fireplace exhibits by curtains. On the left is seen the fireplace, drawings of which are reproduced in one of our special supplements, this week.

LETTERS FROM READERS

The Inadequacy of the Architect

SIR,—"The Inadequacy of the Architect" was the arresting phrase which caught my eye on the contents bill of a recent issue of *Cornhill*. Why is it that the poor fellow never creeps into the public press, but to be condemned? Intelligent criticism from outside the profession is, above all things, what modern architecture most needs—anything is better than the neglect with which notable new buildings are commonly met; but the argument in the case of the *Cornhill* commentator seems built up on a series of glaring fallacies.

It is truly claimed by the writer that the visible results of the architect's public efforts are in the main not modern architecture, but the equally solid truth that the public will always get the architecture it deserves is evidently not appreciated, and the contributory truth that in the vast majority of cases the architect (being desirous of practising) is obliged to conform to numberless circumstances settled for him by outside influences, which he is powerless to change, is not even glimpsed. As a representation of the outlook of the rising school of architects, the writer's picture shows him to be wholly out of touch with the position, which as described by him savours of the end of last century, when the elder architects, now in thriving practice, obtained their (mostly inadequate) training.

The picture which he draws of the young architect roaming the world filling his sketchbooks with ancient and picturesque titbits, intended partly to be extracted and rehashed as items of his future work, but chiefly with the hope of qualifying for a sojourn as a Prix de Rome Student in order to absorb a grounding of obsolete detail, may represent the practice of Victorian days, but anyone acquainted with the course of modern architectural education knows it to be ludicrous. The best commentary on these suggested aims and results of Prix de Rome training is a recital of the main facts of the well-known Amersham case, in which a modernist house (on the lines advocated in the *Cornhill* article) was being built by a Rome scholar for an archæological professor of the school!

The public will always regard the strange as "ugly"—and they may be right, since no one seems able to define beauty, or to prove that it does not consist (in part at least) in a stirring of familiar chords—and in this instance their objections to the intrusion were so vigorous that heaven and earth (or at least the Ministry of Health) were moved to a public inquiry on a side issue, which resulted in the stifling of a part of the modernist intentions. Is it to be wondered at that the trite "safety first" line is commonly followed?

The writer of the article follows familiar ground in belauding the functional design of the modern motor car, omnibus, Tube train, and other engineering achievements. He may be granted his satisfaction, but would he have felt it twenty years ago, and is he justified in expecting perfection in functional architecture today, when its practice is so little encouraged that its "growing pains" have hardly yet begun? He cites the Underground Station at Piccadilly Circus as nearly perfect from the precision and nicety with which it fulfils its programme, apparently in ignorance that this and all the recent Underground work is the production of an "inadequate" modern architect.

Architects are also blamed for not compelling local authorities to replan their towns on noble lines, in bland indifference to the fact that from Wren's day to Charing Cross Bridge the architect has never been accorded a chance of controlling municipal street plans, which in this country are considered the function of policemen, sewer engineers, and the land agents of affected property owners.

Ah, well! perhaps the poor architect will survive, but it seems a pity that critics will not understand that, except in rare instances and on a minor scale, he cannot translate his ideas into concrete fact except with the trust and at the expense of employers—which places him at a disadvantage as compared with all other forms of artist or technician in expressing his convictions.

EDWIN GUNN

The Ideal School Hall

SIR,—As an architect of nearly twenty years' experience of school work, I have read with considerable interest the letters of Messrs. A. G. Alexander, F. C. Happold, and H. C. Hughes, as printed in your recent issues.

I have had experience of a school stage being used for the double purpose of a library and also as a division room, and must say that it has on each occasion proved quite successful.

As Mr. Alexander states, to design an enlarged gallery (which incidentally does not fully function properly as such), for the use of a library, is to my mind unnecessary when the stage is only used once or twice a year for play purposes. This is unwarranted extravagance.

I think that Messrs. Happold and Hughes still have a good deal to learn on economic school planning.

F. H. LOWETH

The Ancient Monuments Bill

SIR,—I have to thank Lord Raglan for his further reply to my letter on the above subject.

He shows an official type of mind most clearly by his persistent refusal to admit that any architect, outside an official department, is competent to carry out restoration work.

He cannot know much about architecture if he thinks ancient architecture can be classed under the two heads of "Stonehenge" and Gothic.

On one occasion it seems he consulted a "learned society" with a view to securing the services of a qualified restoration architect, and, because they were unable to give him the name of such an architect, he assumes that there is none in Britain.

I should never dream of consulting a "learned society" for such information, as I have studied the work of my contemporaries in most parts of the country, and am well acquainted with their abilities through personal observation and through continual contact with the leading architectural journals for many years.

Let me give Lord Raglan a parallel case. During the war I had occasion to require the true and magnetic position of a certain town in connection with the working out of ranges and direction for the artillery. I asked the major of our battalion if he could tell me. He stated that he could not, and that he did not believe that any officer in the brigade could tell me. Would I be justified in broadcasting this statement as evidence that no British Army officer knew his job?

I have never complained about official architects carrying on a private practice. I have protested against it for many years, and will continue to do so till the Institute compels the Government to make it a law that no Government or municipal servant on full-time work is allowed to carry on private work.

Returning to the question of ancient monuments, there are hundreds of monuments neither occupied by inhabitants or caretakers which should be scheduled for preservation and which are neither Gothic nor of the same date as Stonehenge.

WILLIAM DAVIDSON

Waterproof Concrete

SIR,—In your issue for April 22 you published the abstract of a report by the Building Research Station which referred to a case where the waterproofing of the basement of a large

building by the admixture with the concrete of a "widely advertised integral waterproofing compound" proved ineffectual owing to the penetration of water at numerous points where structural defects had occurred, *although the general mass of the concrete was dry.* As our own waterproofing compound is probably the most widely advertised of all such materials, we should like to correct any mistaken impression this report might give, and also remove any possible misunderstanding of the reasons that prompt this letter, by stating that 'Pudlo' brand waterproofer was *not* the material referred to in this case.

We are concerned, however, with the conclusion that the writer of the report has drawn from the premises. No one will disagree with the statement that the use of an integral waterproofing admixture is unlikely to counteract defects of construction, but to say that because such structural defects did occur in this particular instance the results did not justify the cost of the integral waterproofer, is putting the cart before the horse.

There is abundant evidence that, given proper forethought and the care in construction which constitutes good workmanship, concrete, waterproofed with a reliable integral admixture, gives results that are not surpassed in efficiency by any other methods, and in some cases these results are achieved under conditions that could not otherwise be overcome except at a disproportionate expense.

KERNER-GREENWOOD AND CO., LTD.

QUESTIONS THAT ARISE

Thatchboard

"Architects" write: "*We should be very glad to have the opinion of your expert on thatchboard as a building material. We are proposing to use it for partitions plastered on both sides, and for suspended ceilings. We have heard that in some cases decay in the material, caused presumably by the wet plaster, has resulted in an unpleasant vegetable smell, which does not entirely wear off. Is this true?*

"*When thatchboard is used as shuttering for concrete flats, it is thought that the weight of concrete and water would force the damp right into the material, in spite of the fact that it is under 100 lb. per square inch compression. With ordinary plastering on partitions there would not be this great compression, and we think that the tendency would be for the plaster and the thatchboard to dry out in the normal way.*

"*This is a serious matter for us, as we have used thatchboard as partitions in a house completed six months ago. There has been no sign of trouble, and we think that, if decay due to damp was going to appear at all, it would have done so by now. Thatchboard seems to have valuable heat- and sound-insulating properties.*"

It is true that when the thatchboard is damp it gives off an unpleasant odour, but this disappears when the material dries out.

I have had no experience, nor have I heard complaints of the return of this odour after the work has once become quite dry; and in view of the fact that there is no traceable capillary action with the material, and also that the material is not hygroscopic, there is no danger of the material becoming damp unless it is fixed in a very wet position.

If rendered with reasonably impervious rendering on the outside and plastered on the inside, the material will not be subject to deterioration and will remain dry and odourless.

The usual precautions have to be taken to prevent access of moisture and to facilitate the breathing of the material as in the case of ordinary timber work, and if thatchboard is prevented from becoming saturated with water during the construction of the building, little difficulty should be experienced in drying out the plaster work.

It may be interesting to note that the vendors of this product have secured a certificate of the Institute of Hygiene in connection with this material, and also that the insecticide, with which they impregnate it, acts as a deodorant.

C. W. G.

Oak Flooring

H. H. D. writes: "*I notice in your issue for April 8 a reply to* "H. G." *giving a remedy for, or rather a precaution against, shrinkage in deal sub-flooring affecting oak blocks laid on it. I myself have had some trouble with new deal floors when covering them with* $\frac{1}{4}$*-in. rubber. As the boards warp, the rubber shows a series of waves. Using very narrow boards has reduced this warping but not eradicated it. Do you think that* $\frac{3}{16}$*-in. plywood laid on the boards before the rubber would ensure the rubber lying perfectly flat? It is presumed that the solution used to fix the rubber flooring will not affect the plywood.*"

I have found that $\frac{3}{16}$-in. plywood nailed in large sheets over a smooth sub-floor, and carefully butted, will provide a perfectly flat surface for linoleum or rubber.

Some people suggest linen strips as a covering to the joints of the plywood, but I do not think that this is necessary.

The plywood should be nailed at fairly close intervals at the edges and at various places over the surface of each sheet.

It would be better to fix sheeting with joiners' pins. W. A. D.

The Editor invites readers' enquiries on all matters connected directly or indirectly with architectural practice. These enquiries are dealt with by a board of experts, to which additions are constantly being made as and when the need arises. Readers must enclose name and address, and should send their enquiries to the Editor at 9 Queen Anne's Gate, S.W.1.

Decay of Shingles

L. B. writes: "*About forty years ago I erected a lychgate in my parish, and as the spire of the church was covered with oak shingles, the gate was covered with the same materials.*

"*These latter materials now show signs of decay, and are twisting up at the edges and splitting. I cannot understand why this happens, as the spire, which was re-shingled in 1860, is still as good as new. A friend from Canada who visited us last summer said that the roofs in that country were covered with cedar shingles, instead of oak, and I wonder if these would be more desirable.*"

Your correspondent does not give the pitch of the lychgate roof, and this is probably the cause of the decay of the shingles. Oak shingles should never be laid to a less slope than 60°, as otherwise the water does not run off quickly enough.

It is the action of the sun on wet shingles that causes the twisting and decay; thus a church spire once shingled should last well over 100 years without attention, while a flatter roof may need attention in a very few years, in spite of the fact that the same shingles were used on both.

Cedar is used in Canada extensively for roofing, but the life of these roofs made from sawn cedar shingles is only about fifteen years. The shingles are delivered on the job about twelve inches wide and split by the roofer into three before laying. W. D.

Building Rates

"A.R.I.B.A." writes: "*Will you please inform me as to the building rates for all trades that were in force in Weston-super-Mare during December, 1930?*"

The following are the rates of wages payable at Weston-super-Mare during December, 1930:

		s.	d.
Bricklayers	per hour	1	5
Carpenters	,,	1	5
Joiners	,,	1	5
Masons	,,	1	5
Plasterers	,,	1	5
Plumbers	,,	1	5
Painters	,,	1	5
Labourers	,,	1	0½



A view through one of the passages, showing the well-laid-out central gardens, on three sides of which the homes are planned. The walls are faced with multicoloured bricks; the roofs covered with hand-made tiles.

EARL HAIG MEMORIAL HOMES, LIVERPOOL

G. G. WORNUM, AND HARRIS AND HOBSON, JOINT ARCHITECTS

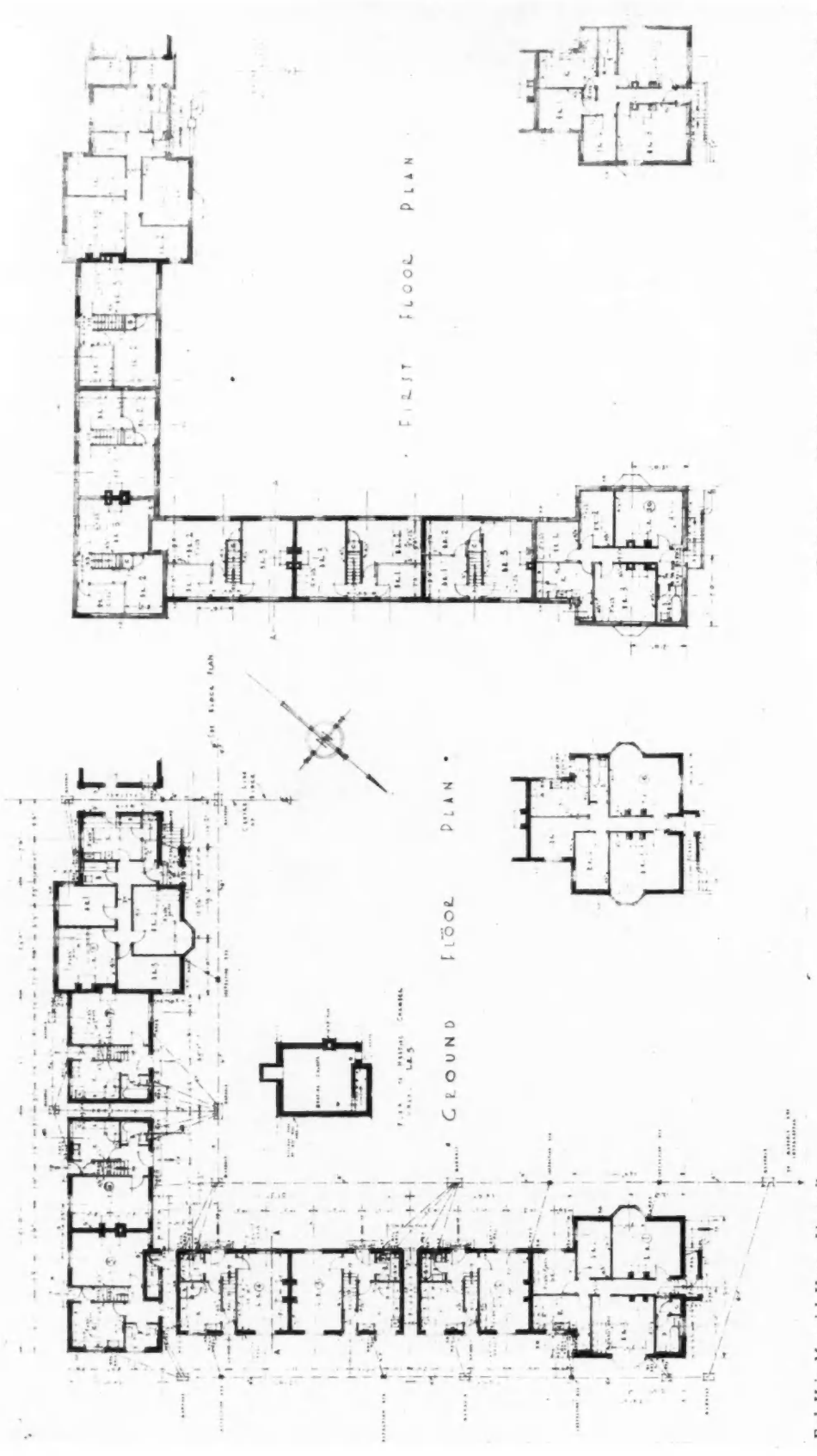
THE "Douglas Haig" Memorial Homes, Muirhead Avenue, Norris Green, occupy a site of some two acres and adjoin one of the finest housing estates in the country. The scheme includes an electrically-equipped laundry and a recreation ground for children. A central heating system supplies all the houses with hot water; and the principal bedroom in each is fitted with a basin with running hot and cold water.

The walls are faced with multi-coloured bricks, with light cement joints; and the roofs are covered with hand-made tiles. The tiles which surround the fireplaces, baths and sinks, etc., have been decorated and glazed by disabled men.

A small memorial has been erected in the gardens. This bears, on one side, a portrait of the late Field-Marshal Earl Haig, carried out in terra-cotta, and on the other a portrait of Thomas Ogden, to the generosity of whose son the buildings owe their origin. This latter portrait is in bronze and bears the following inscription:

> Thomas Ogden, 1833–1890. This group of Douglas Haig Memorial Homes enshrines the name of a good citizen of Liverpool whose eldest son, Thomas Ogden, bore half the cost of thus doing honour to the great Field-Marshal.

The joint architects for the work are Mr. G. G. Wornum (of de Soissons and Wornum) and Messrs. Harris and Hobson, of Liverpool.



Earl Haig Memorial Homes, Liverpool

[*G. G. Wornum (de Soissons and Wornum), and Harris and Hobson, joint architects.*

Ground- and first-floor plans. The buildings comprise twelve houses and eight flats, occupying a site of some two acres, and includes a laundry and a recreation-ground for children.

LITERATURE

MONASTIC BUILDINGS

MUCH has been written from time to time on monasteries and monastic life in England, and most of our monastic churches and ruined buildings have been treated individually from some aspect, but hitherto so comprehensive and concise a volume as that by Mr. R. Liddesdale Palmer has not been available.

Moreover, the pleasant format and production of *English Monasteries in the Middle Ages* add greatly to its value for ordinary reading as distinct from occasional laborious reference. The *Outline of Monastic Architecture and Custom from the Conquest to the Suppression* is amply illustrated with photographs, plans and diagrams; it mingles discriminately items of technical, historical and social significance, and is arranged in nine convenient chapters, clearly subdivided.

The first of these sketches briefly the rise of Early Christian monasticism and the gradual transition from anchorite to cenobite, and outlines the origin and history of the principal monastic Orders, their differences in rule and purpose, and the variants that sprang from them. The monastery as an organism is next examined, and an account is given of the daily life and routine, the personnel, and the relation of the community to the outer world, together with some notes on internal government.

The plan of monastic buildings in general, including the church, is next explained, and the particular influence of the rule and customs of various Orders on arrangement and plan. A whole chapter is devoted to the Cistercian church, in which the original Burgundian characteristics became influenced by English features and those of the Ile de France, developing gradually an individuality which displayed traits of the austerity and simplicity distinguishing the Cistercian rule. Later developments of plan and interior arrangements of the churches built by this Order are closely examined, and the reason for particular variations are expounded. The effect of external events upon monastic buildings is exemplified in the fact that the disappearance of the screen walls in Cistercian churches after the Black Death was due largely to the diminished number of lay brethren, whose presence had previously necessitated some definite provision for separating their nave from the monks' quire. Such changes and adaptations to fresh conditions became consolidated and crystallized in the later monastic church, with which a fifth chapter is concerned. The development at this time in many churches of a "saint's chapel," where relics were preserved, was a practical measure, as were also new developments in plan providing for circulation of great crowds of pilgrims.

Apart from the church, a comprehensive survey is made of the various buildings within the "cloister," or enclosed portion of the monastery, and their disposition in relation to one another, whether determined, as in certain cases, by the nature of the rule of the Order, or, as in some examples, by exigencies of site. There follows a chapter on the extra-cloistral buildings, from infirmary to gatehouse, guesthouse, almonry, schools, lay-infirmary, and so forth, not omitting some reference to the monastic water-supply, with its conduits and settling tanks and cisterns.

The two final chapters of this well-planned book are entitled respectively "The Master Builder" and "The Building of a Monastery." In them are gathered some records of fact and some reasonable conjecture regarding mediæval architectural design and practice, plans, drawings, building organization, and the status of the master mason and the workmen. Due distinction is made between the *magister operis*, or *magister fabricæ*, and the *magister cementarius*, the latter having





Earl Haig Memorial Homes, Liverpool.] [*G. G. Wornum (de Soissons & Wornum) and Harris and Hobson, joint architects.*

A near view of one of the houses, showing a typical entrance porch, which is painted cream; and the memorial bearing the portrait in bronze of Thomas Ogden. On the other side is a portrait of Earl Haig.

"no necessary connection with the monastery in which he worked beyond that expressed in the terms of his contract, often very rigid." Some common misconceptions concerning craft gilds are dispelled, and a section is devoted to the work of the masons, with some notes on masons' marks. Mural paintings and other internal decoration, including hangings and furniture, are touched upon in a few pages.

The lack of a general index, other than that of names and places, is a disadvantage in a book of this kind, and here and there one is conscious of disappointing omissions. But the whole is distinguished by a style that is vivid, fluent and concise, and suggestive of reserves of information, even though the couple of hundred pages contain an astonishingly full "outline." Indeed, it might be described rather as an outline with a wash of warm living colour painted in between the lines.

V. M. C.

English Monasteries in the Middle Ages: An Outline of Monastic Architecture and Custom from the Conquest to the Suppression. By R. Liddesdale Palmer, A.R.I.B.A. London: Constable & Co., Ltd. Price 24s. net.

MODERN BRICK-MAKING

EACH decade brings a new edition (this is the third) of this standard work to which the harassed brick manufacturer turns for guidance when perplexed by the vagaries of clays, kilns and machinery. It appeals to a greater public also, that is concerned in development of estates or the opening up of new brickfields.

Mr. Searle's outlook is essentially that of the "practical man," and what he has to say about the visual qualities of brick, as in chapter xii, on facing bricks, is written in a spirit of tolerance. He is no apostle of beauty, no pioneer of improved textures and colours, but assumes the attitude of the calm, dispassionate judge summing up the case without partiality and without interest. He says:

> What is regarded as "pleasing" in the appearance of facing bricks varies from time to time. For some years, bricks with a smooth surface of uniform red colour (the so-called "Ruabon" and "Accrington" red) were chiefly in demand, and brick manufacturers in many parts of the country endeavoured to produce such bricks, but during the last twenty years the fashion has changed, and "rustic" and "multicoloured" bricks are now in greater demand, as well as "hand-moulded bricks," which have always been appreciated.

The fact is that brick which is "pleasing" when used in one way may be "unpleasing" when used in another. For gauged work and for rougher walling built to set off gauged work, a brick should be regular and comparatively, or even quite, smooth. The introduction of roughly-formed, rough-textured, multicoloured bricks into such a scheme might be devastating. In other relations these produce charming results, which must appeal even to those brickmakers and builders who have been brought up on such standards of bricks and jointing as are still displayed in every text-book, and to which they cling with piteous fidelity. Yet a little study of the works of that great master of architecture and of the use of brick, Sir Christopher Wren, would soon demonstrate that he knew how to handle brick like "Accrington Red" and the smoothest textures as well as rough bricks laid with thick joints to produce picturesque effects or, perhaps, to serve as foils to bring out contrasts of colour or texture.

Notwithstanding a widespread belief to the contrary, æsthetics are applicable to the brick-making trade, and a greater application would benefit not only the trade but those engaged in it. An enterprise in which all effort is confined to profit-making is deadening in its effects upon those controlling it. One in which there are ambitions and aspirations inspires and elevates the character of those engaged in it.

Although Mr. Searle's interest in "pleasing" appearance is limited, he enters into details of many methods by which "pleasing" effects may be produced. Costly hand-moulded and picked facings may be left to look after themselves, for these represent a small proportion of the total number of bricks manufactured. What is wanted is improvement in the texture and colour of common brick (brick which, necessarily, must be used externally for most buildings), but such improvement must not materially increase costs. Mr. Searle describes a number of treatments supplementary to the ordinary processes for large production but involving small additional expense.

Of these, scraping or scratching surfaces are least satisfactory, whilst those involving the use of coarse sand promise best. Sand falling out of the surface of a brick when burned, which Mr. Searle deprecates, seems likely to produce just the varied texture that may be required, for that is exactly what did happen to the ancient bricks now much admired and of a kind so valuable for many purposes.

NATHANIEL LLOYD

Modern Brick-making. By Alfred B. Searle. London: Ernest Benn, Ltd. Price £3 3s. net.

THE BUILDINGS OF OTHER DAYS

THE author of several unassuming but reliable books on various aspects of life and building in the past has presented *The Buildings of Other Days* to a non-technical public in a form which readily appeals.

For half-a-crown members of the increasingly large circle of those who are "interested" in old buildings can acquire a considerable amount of the type of information which gives zest to their motor trips and to their visits to old towns and villages, without exacting too great a tax of mental application, or drawing too exhaustively on historical or architectural scholarship.

All sorts of odds and ends of fact, fancy and tradition find a place in one or other of the sections, but the book is one in which the reader may have confidence. The old fancy, beloved of local guide-books, that the cross-legged effigies invariably represent Crusaders, is dispelled in a brief convincing paragraph, and picturesqueness is nowhere offered by the author in place of probability. It is nevertheless the human interest, naturally, that is stressed rather than technical details, because the aim is to show in outline that "as the body to the spirit, so the structure of buildings to the life that is lived within them." The abundant illustrations by the author add spice to a palatable and wholesome menu for the appetite of those for whom it is provided.

C.

The Buildings of Other Days. By Sidney H. Heath. London: George Philip and Son, Ltd. Price 3s. net.

STAGECRAFT FOR AMATEUR THEATRICALS

IT is a well-known fact that stagecraft for amateur theatricals contains many pitfalls. A common fault is the inadequacy of well-constructed equipment and the lack of consideration given to the small details which go to make up successful staging.

The Small Stage and its Equipment briefly describes the requirements for the amateur stage and is profusely illustrated by diagrams.

The author points out the importance of efficient electrical and mechanical equipment for the stage in its bearing upon the successful production of a play. However good the actors may be, ineffective apparatus will negative their efforts.

In this little book, stagecraft becomes comparatively simple and the lack of technical terms makes it readily understandable to the layman; a feature which should certainly appeal to the enthusiastic amateur dramatist.

It is perhaps a pity that photographs were not introduced to show the ensemble effects of the small stage, as I feel that this would have helped in illustrating some of the more important points. One point which will, I am sure, be appreciated is the simple manner in which the author suggests methods of construction for the various apparatus, methods which can be followed by the most inexperienced amateur.

It is truly a complete guide to the essentials of good staging.

R. W. M.

The Small Stage and Its Equipment. By R. A. Wilson. London: Allen and Unwin. Price 5s. net.

THE SPECIFICATION WRITER

Some Adaptable Details from Switzerland

THE Swiss chalet makes no claim to be considered as great architecture, but there is scarcely any type of building in Europe more perfectly adapted to its environment. In

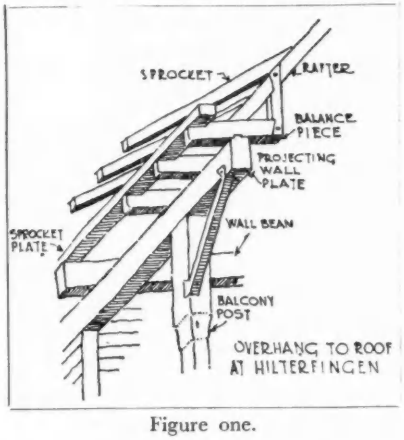


Figure one.

a country of mountains and fir trees, subject to extremes of climatic change and to the violent storms that sweep down the narrow valleys, the Swiss peasant, through centuries of experiment, has evolved a dwelling strong and comfortable, built of local timber, and capable of withstanding the fiercest buffets of the weather. In detail there is frequently a striking similarity between the Swiss method of construction and that of other timber-growing countries, especially Scandinavia, but any attempt to reproduce the chalet design outside Switzerland has resulted in an architectural blunder of the worst type.

Yet there are certain details and methods of construction in these chalets which are applicable—*mutatis mutandis*—to wood buildings in this country.

One of the most interesting of these methods is the arrangement of the foot of the main rafters. To avoid undue wind pressure the roof is laid to an exceptionally low pitch, and in winter the snow accumulates to a considerable depth, which adds a heavy load to the weight to be carried on the wide overhanging eaves and gable ends. Three feet of snow is not an uncommon depth to lie on the roof of an Oberland chalet, and it is a covering that increases largely the warmth of the house.

A common method of roof construction is shown in figure one, where the wall plate is projected beyond the main wall and supported from below

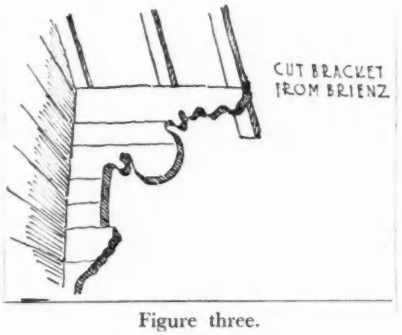


Figure three.

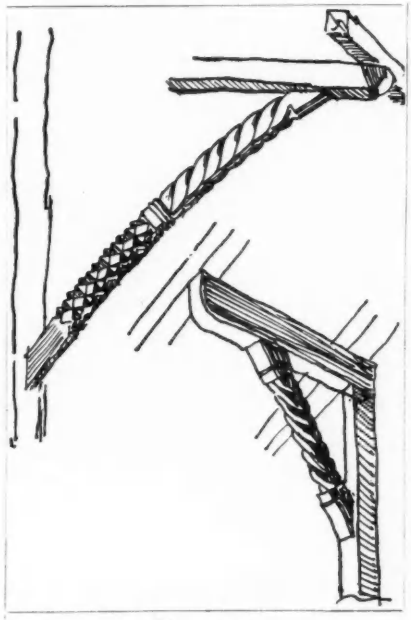


Figure two.

by a strut. In some cantons these struts are ornamented (figure two), and in others the strut is replaced by a system of wood corbels. On this wall plate are laid short cross beams, and into the centre of these are notched the main rafters, a short vertical brace connecting the inner end of the cross beam to the rafter at about the level of the top of the sprocket piece. These sprockets are much longer than the usual type, being sometimes nearly a third the length of the main rafter, and their outer end is supported on a sprocket plate halved to the outer end of the cross brace. This arrangement makes a very strong construction over the gable ends, which frequently project some 4 or 5 ft.

Where the wall plate and often the purlins are supported by wood corbelling, this is usually built up by projecting the wood framing of the house wall, frequently cut into the most fantastic shapes (figures three and four).

The wooden balconies under both

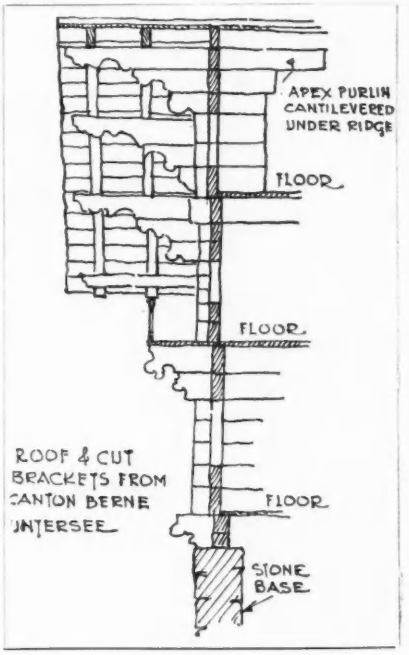


Figure four.

eaves and gables are one of the most typical Swiss features. These balcony fronts are hardly ever made with balusters but of solid planking, with the edges fret-cut to form patterns where the planks are placed side by side. This is a charming and simple method of ornament that might be adapted to staircase design (figure five).

Where the cross walls cut into the external they are often halved and the ends left projecting. This feature is equally common in Sweden, but the Swiss builders do not cover these projections with boarding; instead, they frequently ornament the ends. The main planking of the chalet also is often laid with a slight projection,

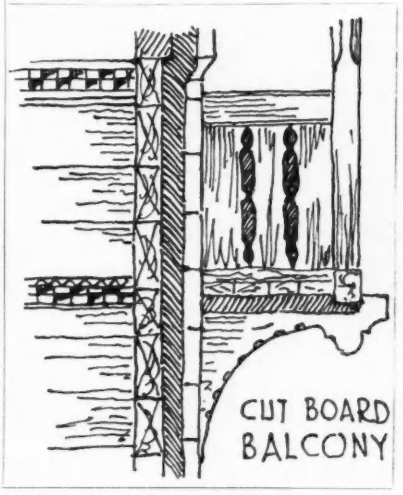


Figure five.

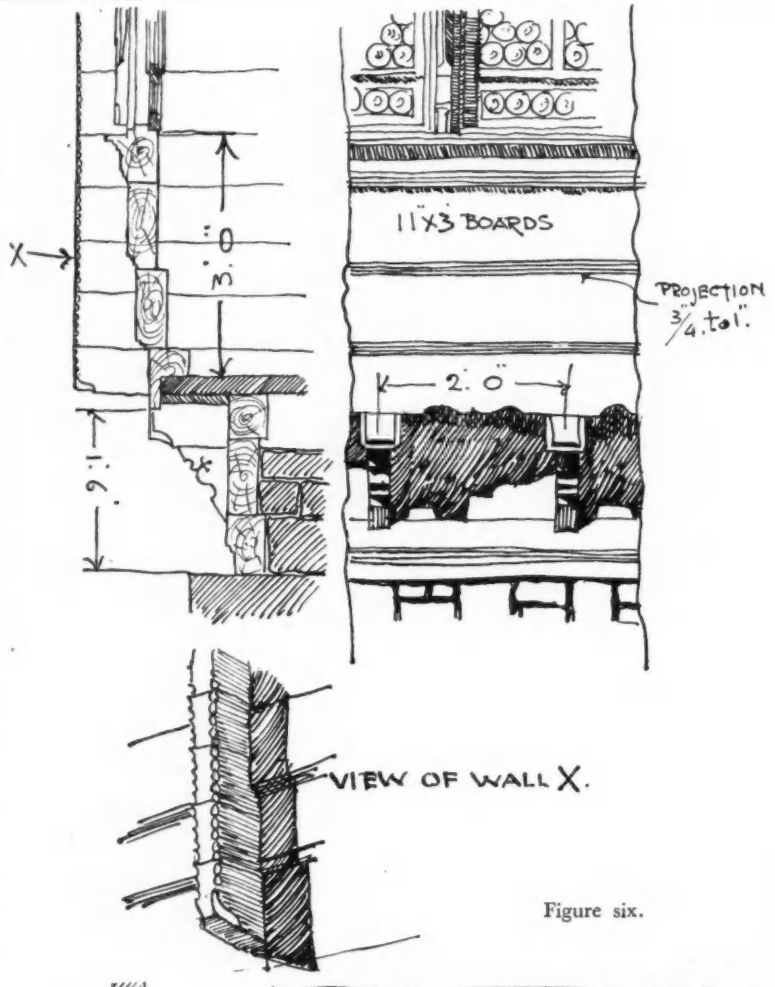
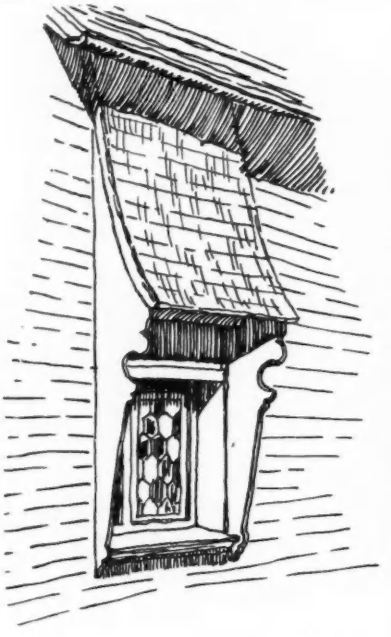


Figure six.



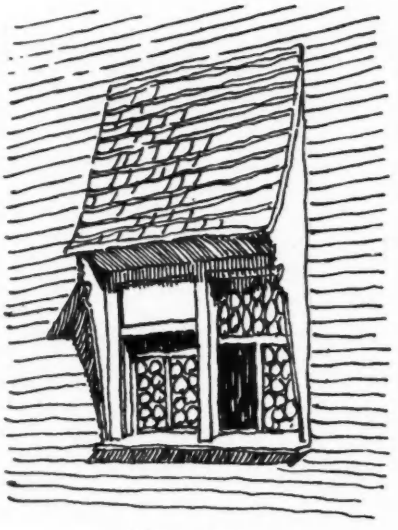


Figure seven.

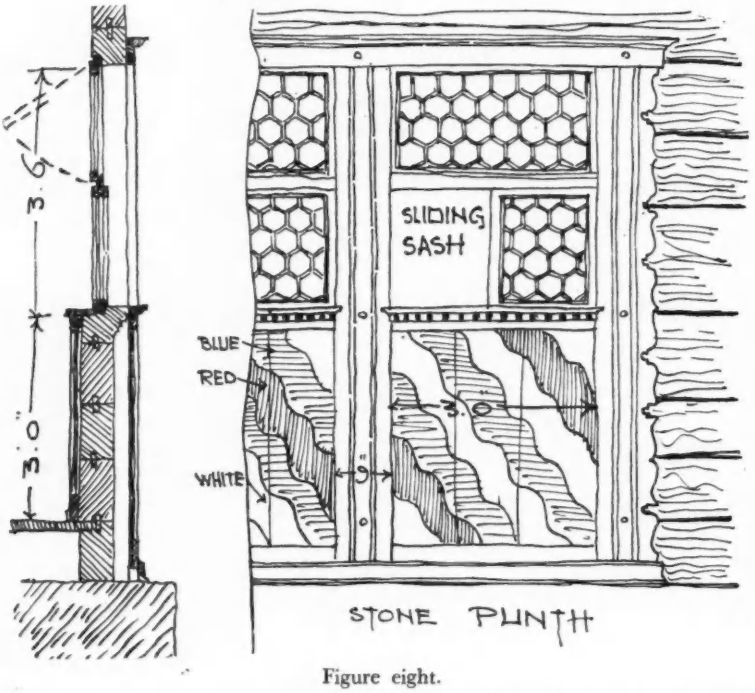


Figure eight.

having the under side of the plank worked with a small moulding, which gives variety to the otherwise plain wall (figure six).

Windows display a great variety between canton and canton, sometimes between village and village. The shutters in the canton of Uri are distinguished by a diamond-shaped decoration, while those surrounding the Lake of Thun have a wave pattern in bright colours, of which the castle at Spiez and the restored château at Oberhofen are typical examples. In the canton of Appenzal a very charming feature is made of the windows by means of cut wood cheeks carrying a projecting pent roof (figure seven).

The most common form of window is one with a sliding sash and fanlight divided by a transom. Often an external shutter is made to slide either from the side or bottom as an extra protection for bad weather (figure eight). Very common features, again familiar in both Switzerland and Scandinavia, are the fretwork slips planted externally on to the sides of the frames. These are often worked into elaborate patterns and add a further touch of cheerfulness. All forms of ornament are those which can be worked with simple tools—the chisel, the spokeshave and the fret-saw. The addition of painted figures and mottoes is common, especially in the High Alps, in villages like Grindelwald and Adelboden. It is all executed with a neat precision that makes the term "pretty" seem the most appropriate description of these little dwellings. A typical example of chalet construction is shown in figure nine. LL. E. W.

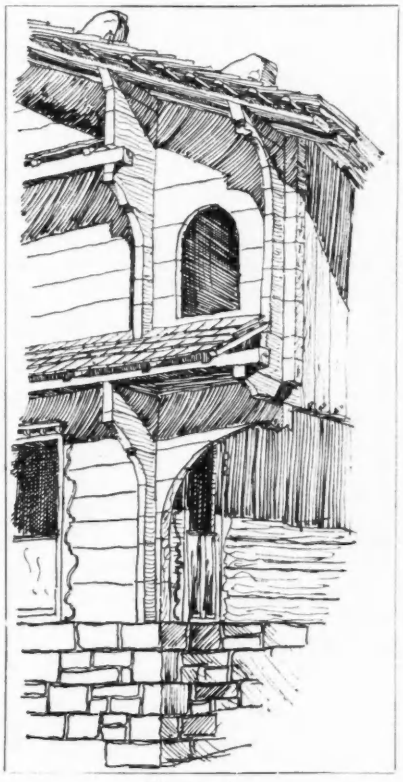


Figure nine.

Aluminium as an Architectural Metal

DURING the last twelve months there has been a noticeable increase in the use of aluminium for architectural purposes. Typical aluminium work now includes spandrels, mullions, sills, cornices and crestings, facias, grilles and a variety of castings primarily employed for decorative purposes.

As a metal, aluminium is particularly adaptable for conditions which necessitate its exposure to the weather, as it is subject only to surface "oxidation" after long exposure to varying atmospheric conditions, and this oxidation is very uniform over the whole of the exposed surface and in effect is quite distinct from "corrosion."

Oxidation will reach a certain stage if unhindered and will then protect the metal from further attack by the weather. Other points which favour the use of aluminium as a constructional metal are the facts that it can be obtained in a variety of forms (sheets, bars of different sections, extruded mouldings, and castings), that it is readily workable, and that it is light in weight yet sufficiently strong for many architectural needs. It also lends itself readily to decorative purposes on account of the variety in finishes, and combinations of finishes, which may be obtained.

Ordinarily it does not require paint for protection, but when a coat of paint is necessary to carry out some definite colour scheme there are two advantages which may be claimed for the metal as a base for the application of paint. First, owing to its high resistance against atmospheric corrosion, and to the fact that it is only an infinitely thin film of oxide which may form under long conditions of exposure, there is no possibility for the paint film to become dislodged. Secondly, the metal itself can serve as one of the "colours" in a combination effect, where almost any other colour is used.

Aluminium castings coming direct from the sand moulds at the foundry have a general silvery appearance, with a slight tinge of blue. When the metal is polished this blue tinge becomes more pronounced, and the surface acquires a high degree of light-reflecting power. Sand-blasting produces a matte finish, akin to frosted glass but essentially grey, with little or no power to reflect light. Darker shades of grey are obtained by using carborundum powder instead of sand as the pressure blasting material; this change in colour is caused by minute particles of carborundum becoming firmly embedded at the surface of the metal. A satin finish is obtained by the application of wire brushes (preferably mechanically-driven) or with the aid of emery cloth.

Sand-blasted spandrels, and also those finished by a process of "de-plating" aluminium-silicon alloy castings, have the peculiar feature of resembling glass when viewed at a distance and will therefore merge with the windows and appear as uniform grey lines. The de-plating process also seems to have wide possibilities from a decorative aspect, as the de-plated surface is a dark velvet grey of varying intensity which contrasts well with the silver sheen of the polished metal. This process is an electrolytic one which merely removes some of the aluminium at the surface of the alloy and thus causes the silicon constituent to become visible; it is easily carried out at any modern foundry which is equipped for the surface finishing of the castings produced.

Under modern foundry conditions it is now possible to cast aluminium spandrels measuring 5 ft. by 10 ft. Floodlighting units, complete with suspended lantern, lotus flower projector, bracket and bracket support castings, all in aluminium, are also an important development, as the complete assembly for such units weighs less than 200 lb. Where such units are adopted, or wherever aluminium fittings are used on the exterior of a building, there is no danger of the adjacent stonework becoming streaked or stained by the action of rain upon the metal.

CHARLES H. BUTCHER

CONCRETE FOR BRIDGES

MR. MAXWELL AYRTON, F.R.I.B.A., discussing the uses of concrete for bridges, in a paper on "Modern Bridges" read before the R.I.B.A. on Monday night, said that concrete should never under any circumstances be cemented over—many bridges were condemned as concrete which had been treated in this way—had they been stone and so cemented they would have been just as ugly.

The unpleasant skin of cement left on the surface when the shuttering was removed was of no value and should be removed. There were various processes. In work such as blocks or precast work, the face might be wire brushed and the unbroken face of the aggregate exposed. There were chemical preparations which might be used to prevent the external skin of cement from setting until such time as the shuttering was struck and the surface then wire brushed. Again the surface might be left until fully set and hard, and then bush hammered, tooled or carved. A strong mix of concrete, say 3 : 1½ : 1 with a fine aggregate of say ¾ down, might be carved in as much detail and delicacy as a coarse granite.

Colour mixtures in concrete had not so far been very satisfactory, but the use of different coloured aggregates

were most interesting, and the cost was so small an item on the whole that it need not be seriously considered.

One thing that had been definitely learned was the necessity for first-rate workmanship and material in the timber forms or shuttering. Heavy timber must be used and ample strutting—boarding should be not less than 2 inches, and should be grooved and tongued. Ply board as a surface lining might be used where large even surfaces were desired.

Care must also be taken that the "lifts" from day to day's work were considered in the design very much as coursing had to be considered in masonry. A day's work might be a 2 ft. lift with the result that every 2 feet there would appear a distinct change in the appearance of the concrete. This probably was due to the cement settling down at the bottom of each lift while in a liquid state.

A slight groove or rustication would overcome this, or two or three courses of roof tiles laid in the concrete had a very pleasing effect.

Wansford Bridge, on the Great North Road, was, he continued, one of the very few, if not the only example, of a mass concrete bridge that was without any reinforcement, with a centre span of 105 feet, and was, he thought, one of the finest examples of concrete finished in the country. The colour was a warm creamy brown. Great width and extreme flatness were the characteristic of modern bridges and in consequence the parapets which formed so large a part of the æsthetic beauty of the early bridges, particularly when they rose to a steep gradient no longer counted to the same extent.

In many instances there was nothing to call one's attention to the fact that one was approaching or even crossing a bridge. He felt that this definitely justified in certain cases some form of superstructure, as in the case of the Lea Valley Viaduct and bridge over the Lea Navigation River.

He was well aware that this could be defended solely upon æsthetic grounds, but to arrive at 100 per cent. efficiency there must be a proportion of thought and expenditure allowed for, which must not be regarded as unnecessary expense.

There was no doubt that the future of concrete as a monumental material was full of possibilities, but those could only be discovered by the frank acceptance of the material with all its difficulties and disappointments, using it as engineers would have us use it, but adding to it that spirit which was lacking from any design produced solely upon scientific principles. Some maintained that provided a building was designed on perfect principles of science, that it would not be improved or aided by æsthetic considerations.

That was entirely fallacious. It was definitely our work to provide that indefinable spirit and glamour which could only be accomplished by honestly endeavouring to use to its utmost everything that modern science gave.

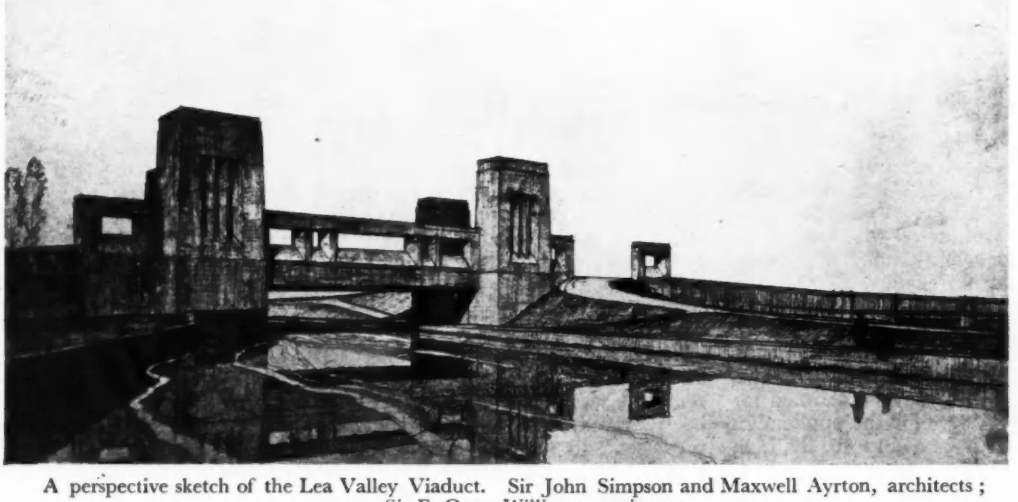
SOCIETIES AND INSTITUTIONS

MODERN TRANSPORT

SIR BANISTER FLETCHER, presiding at the opening of "The Architecture of Modern Transport" Exhibition, said it was the second of a series which had been arranged on new lines. The first was the International "Exhibition of Modern Commercial Architecture." It was held two years ago, and it had since been shown in many of our large provincial cities, and had been seen, he believed, by upwards of 100,000 people.

Mr. H. G. Wells, who opened the Exhibition, said when he looked at the exhibits and thought of the things which they promised, building in transparent material and material which we would throw into almost any form and light in almost any fashion, he could not help feeling we must be in the dawn of an Age of Architecture. But we were not only now capable of those developments, but economic and social forces were making it necessary that they should occur. Architecture was not only opening up enormous possibilities, but he thought architecture was going to be almost compulsory upon the world in the time that was coming. Unless the next few decades were going to be an age of social collapse—which was highly improbable—he thought we might almost certainly say it would be an age in which the architect would be the most significant and the most interesting of all men. He happened to have been spending a good deal of his time, the last year or two, in trying to puzzle out certain relationships in economic life. He was enormously impressed by the fact that what we used to consider were the necessities of mankind were being produced by a smaller and smaller proportion of active workers. We had a growing mass of unemployed people for whom employment had to be found. He did not believe that any sort of private market, any sort of individual buying, would ever take up the slack of economic life again and employ the masses which, through no fault of their own, were coming out of work.

Absolutely new forms of employment had to be found. And the obvious thing, plain as daylight, it seemed to him, was that we had to undertake immense architectural enterprises; we had to accept this possibility of re-housing all mankind, of rebuilding



A perspective sketch of the Lea Valley Viaduct. Sir John Simpson and Maxwell Ayrton, architects; Sir E. Owen Williams, engineer.

every city in the world, replanning the roads, the countryside, and the whole layout of human life.

It was not an Utopian suggestion he was making; it was a plain necessity. If we did not get over, in some way, to an enormous collective enterprise of that kind, he saw nothing for it but social disaster. And so, as he thought, there was too much common sense in humanity to go smash. He thought we could look forward to a time when towns would rebuild themselves, just as now we go to the tailors for a new suit of clothes; when people would no more dream of living in houses fifty or a hundred years old, in haunted houses in which unknown people had died; which was still for many of us a normal thing to do. That sort of thing would pass rapidly out of people's minds, and rehousing and rebuilding would become as normal an occupation as seed-time and harvesting every year.

BERKS, BUCKS AND OXON. ARCHITECTURAL ASSOCIATION

On Saturday, April 18, the eleventh annual meeting of the Berks, Bucks and Oxon. Architectural Association was held at Oxford. The seventy members and guests who were present were welcomed at the Town Hall by Councillor H. S. Rogers, and were shown the Corporation plate, afterwards visiting the Pathological Laboratory and Rhodes House.

Sir Michael Sadler, addressing the members at the annual meeting in the hall of University College, said the skill and taste of architects were essential factors in the beauty of a country. A pre-eminent virtue of the great architect was self-abnegation and the avoidance of self-assertion in design when beauty depended upon respectful regard for adjacent buildings and the contour and colour of the street or countryside. The architect had to practise opposite virtues. It was right that he should be mindful of tradition, but on the other hand he must be brave in experiment. A good architect was not a copy-cat, nor did he kick over the traces.

To make a modern city beautiful, Sir Michael continued, was a difficult task, but it had definition. To keep beautiful the English countryside was another definite problem, but we in England had now to face, in addition to those two tasks, a third, which was a blend of both. It often happened that a region which should be thought of as an architectural one, was divided between the areas of two separate local authorities. One of those might be enterprising, the other parsimonious. One might not equal the other in public-spirited intelligence. It lay with us as individual citizens, and as citizens working together in societies, to use whatever power of persuasion we had in getting adjacent local authorities to keep in step and to share common ideals. In this work the help, advice and good will of permanent officials in London and in the local authorities were indispensable, but they themselves would be the first to acknowledge that in England bureaucracy itself dared not go bail for beauty.

The President, Mr. H. Hutt, who presided, said he appreciated particularly the reference made by Sir Michael Sadler to the need for yielding in some particulars to tradition. The tendency was to sneer at tradition and anything savouring of the past, but they should do their utmost to prevent desecration.

The report of the Council for 1930–31, presented by the hon. secretary, Mr. E. Steward Smith, showed a year of steady work and a large increase in membership.

The report stated that, under the town-planning legislation, local authorities had been able to acquire some control over elevations of proposed buildings. It had been thought advisable that steps should be taken to form advisory panels to assist authorities in the three counties in preventing the erection of unsightly buildings. In most areas, volunteers had been obtained, and two or more Fellows of the Association had been allotted to each rural and urban district. The local authorities had now to be informed of the arrangements made.

The following officers were elected for the ensuing year :

President, Mr. T. Lawrence Dale, F.R.I.B.A.; vice-presidents, Messrs. A. W. Saxon Snell, F.R.I.B.A., H. J. Stribling, A.R.I.B.A., and R. F. Dodd, F.R.I.B.A.; hon. secretary, Mr. W. Austin Daft, A.R.I.B.A.; hon. treasurer, Mr. T. T. Cumming, F.R.I.B.A.; hon. auditor, Mr. C. B. Willcocks, F.R.I.B.A.

Among those present were the following :

Messrs. T. Rayson, A.R.I.B.A., R. F. Dodd, F.R.I.B.A., J. E. Farrell, G. T. Gardner, F.R.I.B.A., R. A. Rix, A.R.I.B.A., W. R. Howell, F.R.I.B.A., W. D. Hartley, A.R.I.B.A., G. B. Mennell, R. D. Mennell, H. Hutt, F.R.I.B.A., E. Steward Smith, A.R.I.B.A., A. Cooper, A.R.I.B.A., I. Hannen, C. H. Riley, L.R.I.B.A., A. Foxley, F.R.I.B.A., T. Lawrence Dale, F.R.I.B.A., S. E. Burrett, C. B. Willcocks, F.R.I.B.A., J. R. Greenaway, A. T. Doe, C. Gill, F.R.I.B.A., H. W. Rising, F.R.I.B.A., H. M. Hutt, T. F. Thomson, N. W. Harrison, F.R.I.B.A., R. Hunt, A.R.I.B.A., A. B. West, F.R.I.B.A., H. J. Stribling, A.R.I.B.A., H. S. Rogers, F.R.I.B.A., E. P. Warren, F.R.I.B.A., G. R. Mager, S. A. Cook, C. W. Paddick, G. H. Farley, L.R.I.B.A., T. H. W. Dance, L.R.I.B.A., R. G. Brocklehurst, E. T. Cumming, F.R.I.B.A., K. Adlam, J. C. Blair, C. S. Kimpton, A.R.I.B.A., A. Saxon Snell, F.R.I.B.A., W. J. Freeman, A.R.I.B.A., J. T. Saunders, F.R.I.B.A., and W. Walcot, F.R.I.B.A.

LIVERPOOL ARCHITECTS' ANNUAL MEETING

At the annual meeting of the Liverpool Architectural Society the following members were elected officers for the ensuing year :

President : Prof. L. P. Abercrombie, M.A., F.R.I.B.A., who was also elected the representative of the Council of the R.I.B.A.; vice-presidents : Messrs. L. Barnish, F.R.I.B.A., and L. H. Keay, F.R.I.B.A.; hon. secretary : Mr. J. S. Allen, B.ARCH., A.R.I.B.A.; Members of the Council—Fellows : Messrs. Duncan A. Campbell, F.R.I.B.A., Harold A. Dod, M.A., A.R.I.B.A., Gilbert W. Fraser, M.C., F.R.I.B.A., Ernest Gee, F.R.I.B.A., D. G. McIntosh, F.R.I.B.A., T. T. Rees, F.R.I.B.A., and B. M. Ward, F.R.I.B.A.; Associates : Messrs. W. Dougill, M.A., B.ARCH., A.R.I.B.A., and C. H. Hutton, B.ARCH., A.R.I.B.A.; hon. treasurer : Mr. E. J. Dod, A.R.I.B.A.; hon. librarian : Mr. E. W. Honeyburne, A.R.I.B.A.; hon. auditors : Messrs. W. P. Horsburgh, F.R.I.B.A., and H. S. Silcock, B.ARCH., A.R.I.B.A.

In the report of the Council for the year 1930–31 it is stated that the present membership of the Society consists of eighty-one Fellows and fifty-three Associates, a total of 134. There are also nine Hon. Fellows, nine Hon. Associates and sixty-four Students.

WEST YORKSHIRE SOCIETY OF ARCHITECTS

Mr. Norman Culley, F.R.I.B.A., president, occupied the chair at the annual general meeting of the above, held at its Leeds headquarters, on April 23, when the council's report for the recent session was presented to the members.

The report stated that during the official year five hon. members, three members and twenty-four associate members had been admitted and two associate members had been transferred to the members' class.

The total membership on March 31, 1931, was 348, compared with 319 at the end of the fifty-fourth session, a net gain of 29 members. Of these 298 were professional members, and the balance of 50 included 40 hon. members, 1 life member and 9 quantity surveyors.

CONCRETE BRIDGES

Mr. T. J. Gueritte, M.I.STRUCT.E., at a joint meeting of the Institution of Structural Engineers and the British Section of the Société des Ingénieurs Civils de France, held on Thursday last, delivered a lecture on the reinforced concrete bridges of Monsieur Freyssinet.

In the construction of concrete or reinforced concrete arches of great span, said Mr. Gueritte, the question of the center played a most important part, not only as regards the design, but also as regards cost. It might be said that the cost of the temporary work for important spans, which had been too often unduly high, because sufficient attention had not been paid to its design, had proved to be one of the causes of the comparatively slow rate of increase in the span of reinforced concrete bridges. This question had to receive careful consideration in the case of the reinforced concrete viaduct at Elorn-Plougastel, the main part of which consisted of three spans 567 ft. each in the clear.

M. Freyssinet had pointed out that the various engineers had advised the use of centers either metallic or in reinforced concrete the arched part of which could be incorporated into a permanent reinforced structure. But this would be useful only

were it possible to reduce thereby the maximum stresses in the completed structure. But in practice this could not be realized, therefore M. Freyssinet adhered to his previous practice of using timber centers.

But it should be borne in mind that the methods used for the construction of timber centers were often quite unsuitable to the nature of this material. Scantlings were too great, the use of bolts and butt ends or short scarfings was bad. Curiously enough, timber was somewhat akin to reinforced concrete, inasmuch as its strength in a direction perpendicular to stresses was considerably smaller than in the longitudinal direction: it was in fact a heterogeneous material composed of cellulose fibres connected by a weak agglutinant.

Consequently, just as in the case of reinforced concrete, the jointing surfaces of the longitudinal reinforcement must be very long, and the constituting elements must be numerous and of small scantling. At Plougastel, the flanges of the center were constructed with 3 in. by 8 in. battens on edge, on the top of which were nailed two thicknesses of 1½ in. boarding at 45 degrees in both directions (to guard against shear). Nails only were used for the joints, the heaviest being ⅜ in. in diameter, with a length of 14 inches. The ends of consecutive battens (in the longitudinal direction) did not butt against each other: on the contrary, a certain space was provided which, after construction of the center, was filled with cement paste. The center which was used in succession for the three arches was erected on the shore; the two ends having been placed on reinforced concrete pontoons, the center was towed to the site of the first arch to be built and fixed in position. After concreting of the first arch it was removed bodily and brought to the second span, and later on was similarly brought to the third span. Every detail of this operation was properly worked out beforehand, the whole thing went like clockwork, each shifting taking between two and three hours.

SOUTH YORKS. ARCHITECTS' ANNUAL MEETING

The forty-third annual general meeting of the Sheffield, South Yorkshire and District Society of Architects and Surveyors was held at Sheffield University recently.

After the annual report had been read and approved and the statement of accounts presented and adopted, the election of officers and Council resulted as follows:

President, Mr. W. G. Buck, F.R.I.B.A.; vice-president, Mr. J. Lancashire, L.R.I.B.A.; hon. treasurer, Mr. J. R. Wigfull, F.R.I.B.A.; hon. secretary, Mr. H. B. S. Gibbs, A.R.I.B.A.; Council: Messrs. E. M. Gibbs, F.R.I.B.A., W. C. Fenton, F.R.I.B.A., A. F. Watson, F.R.I.B.A., C. B. Flockton, F.R.I.B.A., F. E. Pearce Edwards, F.R.I.B.A., C. M. Hadfield, F.R.I.B.A., J. M. Jenkinson, A.R.I.B.A., J. C. P. Toothill, A.R.I.B.A., S. Welsh, A.R.I.B.A., R. Cawkwell, A.R.I.B.A., J. A. Teather, L.R.I.B.A., W. G. Davies, F.R.I.B.A., H. W. Inott, L.R.I.B.A., C. B. Malan Wilson, E. W. Meredith, L.R.I.B.A., D. B. Jenkinson, A.R.I.B.A., C. F. Moxon, E. H. Walker, F.R.I.B.A., and F. H. Broomhead, A.R.I.B.A.

Mr. P. M. Barnes was elected a student member of the Society, and Messrs. F. L. Fletcher and C. Nicholls were nominated as associate members.

IN PARLIAMENT

STEPS are being taken by the Government to encourage rural housing. In the House of Commons last week Mr. Adamson, Secretary of State for Scotland, moved the second reading of the Housing (Rural Workers) Amendment Bill, the object of which is to extend for a further period of five years the Housing Rural Workers Act, 1926. He said that considerable advantage had been taken of the provisions of the Act, which had been the means of providing improved and healthier housing accommodation for a large number of rural workers.

Much of the work that had been done under the Act had consisted of the introduction of water, baths and w.c.s into houses; the provision of sculleries; the renewal of defective roofs and floors; the adoption of measures to do away with dampness, and the provision of larger windows to permit of better lighting and ventilation. Assistance was not allowed to be given in respect of works of ordinary repair except in so far as these were connected with works of reconstruction and improvement. Financial assistance might be given by the local authorities in accordance with schemes approved by the Central Departments. The assistance might take the form of grants or loans. The amount of grant was limited to two-thirds of the estimated cost of the works of improvement, and was further subject to a maximum of £100 per house.

No assistance was given where the estimated cost of the works to be executed was less than £50 per house, or where the value of the house after improvement exceeded £400. The period of loan or grant might extend over twenty years. In Scotland, in the five years since the Act had been in operation, the average grant had worked out at £86 per house, and in England at £78 per house.

Each year had seen a progressive increase in the number of applications made for grants, and in the number of houses covered. By December, 1930, the figures had risen to 6,960 houses in Scotland and 4,049 in England—a total of just over 11,000. Of the thirty-three county councils in Scotland, thirty-two had had schemes of assistance approved, and the remaining one had decided to adopt a scheme. In England, schemes had been approved from 297 authorities.

The second reading was agreed to.

LAW REPORTS

LONDON BUILDING ACTS

Trotter and Another v. *Louth and Another. King's Bench Division. Before Mr. Justice Horridge*

SEVERAL legal points of general interest were raised by this action, which was brought by Mrs. Dorothy Trotter and the Hon. R. E. Gathorne-Hardy, of Maddox Street, Hanover Square, against Marie Ethel, Baroness Louth, and Sir E. Vincent Evans, for damages for alleged breach of covenant and trespass.

Mr. Croom Johnson, K.C., Mr. R. Fortune and Mr. G. Cameron appeared for the plaintiffs, and Mr. H. du Parcq, K.C., and Mr. Gallop for defendants.

It appeared that Mrs. Trotter is the lessee of the second and third floors of the corner premises, 13A George Street and 39A Maddox Street, of which the defendants, who are trustees, are the lessors. The second floor was used as an art gallery for exhibition purposes and third floor for residential purposes, being sub-let to the second-named plaintiff. The complaint of Mrs. Trotter was that the defendants, in breach of the lessors' covenant for quiet enjoyment, had entered the premises and proceeded to carry out alterations and repairs to the walls and floors. The result of these operations was that the attendance of the public at the galleries was seriously diminished and that the premises were rendered unfit for an art exhibition or for residential purposes. The Hon. Gathorne-Hardy joined Mrs. Trotter in her complaint and said the use of his premises had been materially affected.

By their defence the defendants said they had to comply with a dangerous structure notice under the London Building Acts, 1894 and 1898, and that the acts of which the plaintiffs complained were occasioned in complying with the notice. Defendants set up a counter-claim for £258 odd, being half the cost of complying with the dangerous structure notice, which they alleged Mrs. Trotter agreed to pay.

JUDGMENT

His lordship, in giving judgment for the plaintiffs, said there was no doubt that the defendants, by their workmen, entered into the second and third floors of the premises and that the entry might be a breach of covenant for quiet enjoyment as regarded the second floor occupied by Mrs. Trotter, and a trespass as regarded the third floor which had been let to the Hon. Gathorne-Hardy. The defendants, by their answer to both breach of covenant and trespass, said that they entered to carry out work necessitated by the service upon them

of a dangerous structure notice under the London Building Acts, and that as they were bound to do the work they were under no liability for either the breach or the trespass. Mr. du Parcq had said that, in effect, Mrs. Trotter had consented to the entry to her gallery, but that would be no answer so far as the Hon. Gathorne-Hardy's claim was concerned. His lordship was quite sure that Mrs. Trotter never consented to the entry or waived her right to treat it as a breach of covenant for quiet enjoyment.

Dealing with the point that the defendants claimed that they were protected under the London Building Act, 1894, because the plaintiff was equally liable with them to carry out the repairs, his lordship did not think that on the proceedings taken any liability could have been forced on Mrs. Trotter by the London County Council, which was the authority on whose behalf the notice was served. The notice was dated July 24, 1929, and was served on the following day. It was to deal with the whole building, and the only persons who could do that were the defendants. It was left on the premises of the occupants of the ground floor and, he believed, the first floor, and notice was also given to the defendants' solicitors. The notice was in respect of the structure of the whole premises, and not upon the owner or occupier of a portion of the premises, who could not comply with it. There was no liability created by the notice on the part of the occupiers.

In his lordship's opinion the notice provided no protection at all for the defendants. Section 192 of the London Building Act showed quite conclusively that without that section there would be no power of entry, but the defendants had not availed themselves of that section. Under these circumstances there must be judgment for the plaintiffs for the amount agreed between the parties, viz., £275 for Mrs. Trotter, with costs, and £25 for the Hon. Gathorne-Hardy, with High Court costs. His lordship granted a stay of execution.

ALLEGED BREACH OF COVENANT

Bowes v. *Harris. King's Bench Division. Before Mr. Justice Wright*

This action, which involved a claim for possession of five houses at Rackham Street, Kensington, income profits and damages for alleged breaches of covenant to repair, was brought by Mr. E. W. Bowes, of Clarendon Road, Notting Hill, against the defendant, Mr. C. Harris, of Twyford, Berks.

The leases of the property in dispute ran for ninety-nine years from 1876, and it was alleged that it had become tenement property. A term of the leases was that the exterior should be painted every three years and the interior every seven years. Plaintiff's case was that this had not been done, and it was alleged that owing to lack of fulfilling the covenant the property had suffered considerably, some of the interior woodwork being rotten. Plaintiff alleged that this had diminished the value of his reversion.

For the defendant it was admitted that portions of the interior had not been painted as required, but this was due to trouble in getting tenants out.

His lordship held that there had been breaches by the defendant, and plaintiff was entitled to possession, subject to the defendant doing the necessary repairs by a specified date, paying the taxed costs of the action, including the surveyor's fees and also the ground rent due.

COMPETITIONS OPEN

April 30.—Sending-in day. Hospital for Infectious Diseases, Coventry, for the Coventry Corporation. Assessor: E. Stanley Hall, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

June 1.—Sending-in day. New Council School, to be erected at Blowers, Dudley. (Limited to architects within a radius of 15 miles of Dudley.) Assessor: Herbert T. Buckland, F.R.I.B.A. Conditions from J. Whaley, Director of Education, Education Offices, St. James's Road, Dudley.

June 16.—Sending-in day. (Last day for conditions was February 25.) Offices for the Ingham Infirmary, South Shields. (Limited to architects within the area of the Northern Architectural Association.) Assessor: George Reavell, O.B.E., F.R.I.B.A. Premiums: £250, £100 and £50. Conditions were obtainable from John Potter, Secretary, Ingham Infirmary, South Shields. (Deposit £2 2s.)

June 24.—Sending-in day. King Edward VI. School, Mill Lane and Wilton Road, Southampton, for the Governors of the School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums, £150, £100 and £50. (Deposit, £1 1s.). Full particulars are obtainable from G. A. Waller, Clerk to the Governors, 7 Albion Place, Southampton.

June 26.—Sending-in day. Offices for the City of Leicester Corporation, Charles Street, Leicester. Assessor: E. Berry Webber, A.R.I.B.A. Premiums: £300, £200 and £100. Conditions from A. T. Gooseman, Engineer and Surveyor, Town Hall, Leicester. (Deposit £2 2s.)

June 30.—Sending-in day. (Last day for conditions was April 15.) New Branch Baths, Foleshill, for the Coventry Corporation. Assessor: F. J. Horth, F.R.I.B.A. Premiums: £210, £105 and £52 10s. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions: August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

THE ARCHITECTS' DIARY

WEDNESDAY, APRIL 29

R.I.B.A., 9 Conduit Street, W.1. Exhibition of "The Architecture of Modern Transport." Until May 22. 10 a.m. to 8 p.m. (Saturdays, 10 a.m. to 8 p.m.). **10 a.m.**

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Exhibition of H. Th. Wijdeveld's drawings and designs. Until May 18. **8 p.m.**

Daily Mail IDEAL HOME EXHIBITION, Olympia. Until May 2. **10 a.m. to 10 p.m.**

THURSDAY, APRIL 30

INSTITUTION OF ELECTRICAL ENGINEERS, Savoy Place, Victoria Embankment, W.C.2. Twenty-first Kelvin Lecture. "The Architecture of Solids." By Professor W. L. Bragg, F.R.S. **6 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Yorkshire Branch. At the Metropole Hotel, Leeds. Annual General Meeting, followed by "The Production of Concrete Aggregates." By E. F. Sargeant, A.M.INST.C.E. **7 p.m.**

SOCIETY OF ANTIQUARIES, Burlington House, S.W.1. "The Excavations at Richborough." By J. P. Bushe-Fox, M.A. **8.30 p.m.**

FRIDAY, MAY 1

ROYAL SANITARY INSTITUTE. At the Town Hall, Batley. "Housing, with special reference to the Housing Act, 1930, from the aspect of a Town Councillor." By Councillor Hamilton Crothers, J.P., followed by Councillor H. S. Houldsworth, D.SC., and Thomas Gibson, M.D. **5 p.m.**

SATURDAY, MAY 2

Sunrise 5.33 a.m. Sunset 8.20 p.m.

ROYAL SANITARY INSTITUTE. Meet at the Town Hall, Batley, for tour of housing estate and waterworks. **1.30 p.m.**

WEDNESDAY, MAY 6

R.I.B.A., 9 Conduit Street, W.1. Statutory Examination for the office of District Surveyor. Also May 7 and 8.

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Preservation of the Countryside." By Major-General Sir Fabian Ware, K.C.V.O., K.B.E. Chairman: The Rt. Hon. Earl of Crawford and Balcarres, P.C. **8 p.m.**

THURSDAY, MAY 7

LONDON CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Steel Framing." By J. Stuart Lewis, M.I.STRUCT.E. **7.30 p.m.**

FRIDAY, MAY 8

INSTITUTION OF STRUCTURAL ENGINEERS. South Wales and Monmouthshire Branch. At the Institute of Engineers, Park Place, Cardiff. "The Structural Engineer and His Vocational Training." By F. E. Drury, M.SC.

SATURDAY, MAY 9

Sunrise 5.20 a.m. Sunset 8.31 p.m.

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS. Visit to St. Bartholomew-the-Great, Smithfield, E.C. **2.30 p.m.**

LONDON CENTRAL SCHOOL OF ARTS AND CRAFTS. Visit to Dorman Long and Company's Works, Nine Elms. **2 p.m.**

WEDNESDAY, MAY 13

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Architecture in Concrete on the Pacific Coast." By Major R. A. B. Smith, M.C. **8 p.m.**

THURSDAY, MAY 14

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS. Visit to the Lambeth Bridge Reconstruction. Meet at Contractors' Office, Millbank, S.W. **2.30 p.m.**

INSTITUTION OF ELECTRICAL ENGINEERS, Savoy Place, Victoria Embankment, W.C.2. Discourse on the life and work of Hughes. By Sydney Evershed. 6 p.m. Followed by the annual general meeting. 6.45 p.m. **6 p.m.**

SOCIETY OF ANTIQUARIES, Burlington House, W.1. "The Excavations at Ur." By Leonard Woolley. **8.30 p.m.**

SATURDAY, MAY 16

Sunrise 5.9 a.m. Sunset 8.43 p.m.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. At the Castle, Winchester. Annual General Meeting. **3 p.m.**

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS, 26 Buckingham Gate, S.W.1. Annual Meeting. **7.30 p.m.**

MONDAY, MAY 18

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "The Architectural Association, 1847–1931." By F. R. Yerbury, HON.A.R.I.B.A. **8 p.m.**

WHIT MONDAY, MAY 25

FRIDAY, MAY 29

TOWN PLANNING INSTITUTE, at Caxton Hall, Caxton Street, Westminster, S.W.1. "London As It Ought to Be." By Messrs. Adams, Adshead, Davidge and Lanchester. **6.30 p.m.**

TUESDAY, JUNE 2

INSTITUTE OF LANDSCAPE ARCHITECTS, at the Royal Horticultural Hall, Westminster, S.W.1. "Austrian Baroque Gardens." By G. A. Jellicoe, A.R.I.B.A. **3.30 p.m.**

SATURDAY, JUNE 6

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS, 26 Buckingham Gate, S.W.1. Annual General Meeting and Dinner.

MONDAY, JUNE 22

R.I.B.A., 9 Conduit Street, W.1. "Museum Planning." By Eric Maclagan, HON.A.R.I.B.A. **8 p.m.**

OBITUARY

JOHN LEEMING: 1849–1931

We regret to record the death of Mr. John Leeming, F.R.I.B.A., F.R.S.A., at his home in Ravensbourne Avenue, Bromley, Kent, on April 22, in his eighty-second year.

Mr. Leeming was articled to Mr. C. F. Luke, of Horsfall, and commenced private practice at Halifax in 1882, but later spent most of his professional life in London.

In collaboration with his brother Joseph, he designed the Admiralty and War Offices and many buildings in the provinces.

He was elected to the Fellowship of the R.I.B.A. in 1901.

A "BRAND" FOR MOHAIR FABRICS

The question of seating accommodation and upholstery in houses of entertainment is of vital importance. For many years now upholstery has been almost entirely standardized on the one fabric known either as "mohair plush" or as "mohair velvet." The principal material in this fabric is mohair fibre from the Angora goat, the bulk of which is exported from the Union of South Africa.

Even an expert, however, sometimes finds it difficult to judge of the quality of the material except by very close scrutiny and analysis of the construction of the cloth. The following spinners and manufacturers of mohair, therefore, have determined to provide a quality standard which should be above reproach, and which should be easily recognizable:

Drey, Simpson & Co., Ltd., Stockport.
T. F. Firth and Sons, Ltd., Heckmondwike.
John Foster and Son, Ltd., Queensbury.
The Fur Fabric Co., Ltd., Bradford.
Lister & Co., Ltd., Bradford.
G. H. Norton & Co., Skelmanthorpe.
The Pile Fabric Manufacturing Co. (Bradford), Ltd., Allerton.

With this object in view, these firms have recently formed the British Mohair Association for the express purpose of fixing a definite quality standard to be adhered to by all members. Accordingly, a brand has been evolved and will be placed by the Association on all fabrics conforming to the minimum standard which in future will be known as the "B.M.A. Standard."

Buyers seeing this mark on samples and on deliveries of material are assured that full satisfaction will be given and that the cloth is capable of withstanding the wear and usage to which it will be subjected.

The Association is taking steps through publicity to acquaint the buyers and users of theatre furnishings of the value of the mark to them and what it stands for. The Association, however, is not interested in, and will not undertake, selling. That will, as before, be left to individual manufacturers. No attempt will be made to fix prices, and each manufacturer will produce his own range of colours and designs as before.

An interesting feature of the scheme is that the Bradford Conditioning House—an organization controlled by the Corporation of the City of Bradford for the purpose of analysing and testing fabrics, and of giving information and making research into all textile matters—has agreed to compare any sample of B.M.A. Standard Mohair Velvet submitted to it, and to give a certificate as to whether or not such a sample submitted is in accordance with the formula of quality lodged with the Conditioning House and fixed by the B.M.A.

TRADE NOTES

Ninety-five thousand "Bull Dog" floor clips, supplied by Redalon, Ltd., were used on the Dorchester Hotel, Park Lane, W. (illustrated in the last issue of THE ARCHITECTS' JOURNAL), in order to secure the floor fillets to the fireproof floors beneath. They were used throughout the public rooms (including ballroom, lounge, restaurant, etc.) on the ground floor, and they were also used on the bedroom floors. In this case they were laid under the sound-proof quilting, the ears of the clips being pushed up through the quilting to hold the floor fillets down on top of it. An illustration of the latter method is given on page xxiii of this week's issue.

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In a new booklet just issued the "Prior" Oil Burner, Ltd., give a description and diagrams of their firing system, which is claimed to meet the demand for a simple and reliable plant, capable of application to almost any boiler or furnace designed for solid fuel. It is also said to be suitable for either hand or automatic control, being claimed to be equally efficient in either case. The illustrations included of some of the firm's installations in completed buildings have been selected to show the wide range of application of the burner. A formidable list of installations carried out, and a few of the testimonials received by the firm, are also given.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office. All inquiries concerning inventions, patents and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated readers should apply to the Patent Office, 25 Southampton Buildings, W.C.2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

9539. Hyslop, J. F. Chequer brickwork construction. March 30.

10046. Bauer, B. Reinforcements for ferro-concrete structures. April 2.

10464. Bayliss, P. Building construction. April 9.

10208. Riley, A. Building construction. April 7.

SPECIFICATION PUBLISHED

346056. Parsons, J. Slabs for use in construction of floors, steps, pavements, and the like.

ABSTRACT PUBLISHED

340053. Mottier, A. D. Walls for wooden buildings.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors, specialists and sub-contractors for the buildings illustrated in this issue:

Showrooms for Messrs. W. N. Froy and Sons, No. 107 New Bond Street, W.1 (pages 617–620). General contractor, Wm. Lowe. Sub-contractors: Grierson, Ltd., electrical work and Dulrae panel heating; Geo. Parnall and Sons, Ltd., shop front; Slate Slab Products, Ltd., wall finishes to entrance porch; Merchant Trading Co., Ltd., wall finishes in "Castex" to front basement showrooms; Hollis Bros., Ltd., parquetry flooring; Liotex Trading Co., composition flooring; Paragon Glazing Co., laylight; Osborne & Co., Ltd., general decorations; W. N. Froy and Sons, glass-mosaic flooring, mirrors and glazing, marble work, bathroom installations, wall tiling, and leaded lights; W. N. Froy and Sons, Ascog Ltd., Marshall and Lupton, Ltd., F. H. Pride, and Troughton and Young, Ltd., light fittings; Waring and Gillow, Ltd., curtains; Wilton Royal Carpet Factory Co., Ltd., carpets.

Douglas Haig Memorial Homes, Liverpool (pages 623–625). General contractors, Walter E. Hughes, Ltd., and F. W. Roberts. Sub-contractors: Liverpool Artificial Stone Co., Ltd., stone; Peakes (Liverpool), Ltd., wrought-iron balustrades; Killick and Cochran, water supplies; W. Robson and Sons, Ltd., electric lighting; Williams and Watson, steel windows; Musgraves (Liverpool), Ltd., F. E. Pescod, and Robert Dunlop, sanitary goods; Robert Dunlop, fireplace canopies; M. T. Gray & Co., Ltd., grates; John Wright & Co., gas fires; Rowe Brothers, Ltd., dustbins; W. J. Harries, Ltd., waterproofing; Isaac Braithwaite and Son, Ltd., laundry plant; Ashtead Potters, Ltd., tiles; J. B. White Bros., Portland cement; D. C. Williams, Ltd., Warmsworth Cliff lime; Walter Macfarlane & Co., rainwater heads; Pilkington Bros., Ltd., common bricks and glass; Claxton Brickworks, facing bricks; Twinlock Cavity Supply Co., partition bricks; Merchant Trading Co., Ltd., internal doors; Venesta, Ltd., Plymax doors; Welwyn Stores, Ltd., ironmongery; Blockleys, Ltd., roofing tiles; L. Wyon, memorial panels; Cashmore Art Workers, Ltd., memorial lamp; Hadfields (Merton), Ltd., paints; J. Stubbs and Sons, Ltd., lettering to memorial panel; Marley Bros., Ltd., lanterns to courtyard.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The ACTON Corporation is seeking a grant for a scheme for the erection of new municipal offices, at a cost of £104,000.

The BARKING U.D.C. is to prepare a clearance scheme for the North Street, Holly Square and Tanner Square areas.

Plans passed at BATTERSEA: Building, site of 383–5 Battersea Park Road, for Messrs. H. and L. Measures; alterations, 19 Belle Vue Road, for Messrs. Edwin Evans and Sons; additions, 91 Battersea Park Road, for Mr. R. P. Thomas.

The BERMONDSEY B.C. is to erect a further twenty-two flats and six shops on the Rotherhithe Street area, at a cost of £14,800.

The BERMONDSEY B.C. has prepared a scheme for the erection of forty-nine flats on a site in Fort Road.

The Midland Bank, Ltd., is to extend its premises at 41–3 Tower Bridge Road, BERMONDSEY.

London Electric Railways, Ltd., are acquiring property in High Street for the extension of the CAMDEN TOWN tube railway station.

Mr. A. G. Cresswell is to erect fifty houses and garages in Ridgemount Avenue, COULSDON.

The FULHAM Corporation is to erect eight blocks of tenements on the Swan Brewery site.

The FULHAM B.C. has approved plans submitted by Mr. G. Guy Rogers, for the erection of a building in Fulham Road.

The HACKNEY B.C. has passed plans for the erection of a Salvation Army hall in Lee Street.

The Underground Railway Companies have made an offer of £28,000 to the HAMMERSMITH B.C. for the old depot in Church Lane, for railway extension works.

The premises of Messrs. Dubois, Ltd., at the junction of High Road and Lewis Grove, LEE, are to be reconstructed.

Plans passed at LEWISHAM: Six houses, Harland Road, for Messrs. W. J. Scudamore, Ltd.; two houses, Dacres Road, for Messrs. H. and D. Winn, Ltd.; petrol station, Sydenham Road, for Mr. H. T. Sayer; additions "Plough" public-house, High Street, for Mr. A. R. Mayston; houses, Thornsbeach Road, Catford, for Mr. G. T. Harman; layout of site, between Perry Rise, Forest Hill, Adamsrill, Queenswood and De Frene Roads, for Mr. R. B. Rowell; rebuilding, 116–118 Rushey Green, Catford, for Mr. P. Bartlett.

Plans have been passed for the development of the Tewkesbury Lodge estate, LEWISHAM, from plans prepared by Mr. H. Macintosh, F.R.I.B.A.

The ST. PANCRAS B.C. is to consult Messrs. Ashley and Newman as to whether a proposal for the erection of another story on Una House, at a cost of £7,700, will have any adverse effect on the architectural design or stability of the building.

Mr. D. Melnick has prepared plans for the erection of a hall in Green Lanes, STOKE NEWINGTON, for the Adass Jisroal Synagogue.

SOUTHERN COUNTIES

The BOURNEMOUTH Education Committee is to prepare plans for the erection of a new senior department (boys and girls) at the Stourfield Council school, with accommodation for 320 or 360 pupils and with provision for future extension, as and when required, to accommodate altogether not less than 480 pupils.

The BOURNEMOUTH Education Committee reports that the cost of the erection of the hall, gymnasium, laboratories, etc., at the Bournemouth School for Girls is estimated at £20,000.

The BOURNEMOUTH Education Committee has obtained sanction for a loan for the purchase of a site at Kinson Village, for the erection of an elementary school.

The BOURNEMOUTH Corporation has purchased a site in Cotlands Road for fire brigade purposes.

Plans passed at BOURNEMOUTH: Hotel, Cranleigh Road, for Messrs. Eldridge Pope and Co., Ltd.: additions, motor bus and coach station, The Square, for the Hants and Dorset Motor Services, Ltd.: eleven houses, Winsley Avenue, for Mr. A. Bedford; six houses, Seafield Road, for Mr. J. Jacques; four houses, Belle Vue Road, for Mr. C. B. Philpott; shop and flats, Cranleigh Road, for Mr. A. Williams; nine houses, Knole and Southcote Roads, for Mr. F. W. Davies; alterations, Hotel Metropole, Holdenhurst Road, for Messrs. Levy and Franks.

The BOURNEMOUTH Education Committee has approved plans for the erection on a site at Ensbury Park, of a junior mixed and infants' school to provide accommodation for 400 children.

The BRIGHTON Corporation has appointed Messrs. Clayton and Black as architects for the new hotel to be erected at the Dyke, at an estimated cost of £12,000.

Messrs. Braybons, Ltd., are to erect a hall for Rechabites and fourteen shops on the Bevendean estate, BRIGHTON.

The BRIGHTON Corporation reports that Messrs. Thomas Garrett and Son have been appointed architects in connection with the reconstruction of 195–8 Western Road, for Messrs. Marks and Spencer.

Plans passed at BRIGHTON: Sports pavilion, Falmer Road, Rottingdean, for the Rottingdean Cricket Club; sixty-four houses, Widdicombe Way, Bevendean, for Braybons, Ltd.; church hall, Whitehawk Road, for the Diocesan Church Council; five houses, Garden Avenue, for Mr. E. H. Munnion; extension, 181–5 Western Road, for Messrs. F. W. Woolworth & Co., Ltd.; two houses and eight garages, Hertford Road, for Mr. J. Morley; alterations and additions, St. John's School, Briston Road, for the Managers; alterations, Grand Hotel, King's Road, for the Brighton Grand Hotel, Ltd.; eight houses, Carden and Graham Avenues, for Mr. E. H. Rowe.

The BRIGHTON Corporation General Purposes Committee has considered plans prepared by Mr. Kenneth M. B. Cross, F.R.I.B.A., for the development of the old brewery site in West Street and recommends that Mr. Cross be appointed architect for the purposes of the utilization of the site of the old brewery and other adjoining properties, by the erection of a sea-water swimming bath, a clinic for the treatment of rheumatism, medical baths, indoor bowls pavilion, gymnasium, etc.

Plans passed at NORTHFLEET: Sixteen houses, Southfleet Road, for Mr. Bevan; house, Perry Street, for the Rev. H. S. Hoar.

SOUTH-WESTERN COUNTIES

The Hampshire Education Committee is to acquire a site at BROCKENHURST for the erection of a secondary school.

The HAMPSHIRE Education Committee is to proceed with the provision of the following new schools: Alton senior boys and junior mixed; Farnborough junior mixed; Havant senior mixed; Hardley senior mixed; New Milton senior mixed; New Alresford senior mixed; Bordon mixed; Butlocks Heath mixed; Cove junior mixed; Lymington mixed; Ringwood senior mixed; Romsey senior mixed; and Winchester senior mixed.

Plans passed at PAIGNTON: House, Cecil Avenue, for Mr. F. Binmore; tower, Roman Catholic church, Cecil Road, for the Rev. F. W. Conran: flats over shops, Upper Manor Road, for Mr. R. King; two flats, Grosvenor Road, for Mr. Claude C. Rees; alterations and additions, the Torbay Brick Works, for Messrs. Webber and Stedham; five houses, Oyster Bend, for Coast estates, Ltd.; house, Winsu Avenue, for Mr. R. M. Ely; four houses, Fisher Street, for Messrs. Knapman Bros.

Hampshire Education Committee is to erect a school for 280 pupils at TOTCHFIELD, at an estimated cost of £10,300.

MIDLAND COUNTIES

The BECCLES Corporation is to erect thirty houses in Ellough Road.

The GLOSSOP Education Committee has approved plans for extensions at the West End school, at a cost of £8,700. These plans are to be forwarded to the Board of Education for approval.

The LINCOLN Education Committee is to enlarge the technical college from plans prepared by Mr. W. G. Watkins.

The Board of Management have agreed to extend the Corbett Hospital, STOURBRIDGE, at a cost of £24,000.

NORTHERN COUNTIES

The BILSTON U.D.C. is to erect 144 houses on the Darlaston Road site from plans prepared by Mr. W. G. Lofthouse, A.R.I.B.A.

Plans passed at BIRKENHEAD: Four houses, Park Road, for Mr. F. Johnson; six houses, Devonshire Place, for Mr. W. H. Boulton; six houses, Riviera Drive; motor bus depot, New Chester Road.

The BIRKENHEAD Corporation has sold a site in King's Road Higher Bebington, to the Cheshire Education Committee, for the erection of an elementary school.

The BOLTON Corporation has purchased fifty acres at Breightmet for a housing scheme.

The CHESTER Corporation is to erect 260 houses and eight shops on the Lache estate.

The SHEFFIELD Corporation has approved estimates for the erection of 4,000 houses in the next two years, in addition to those to be erected under rehousing schemes.

The SHEFFIELD Corporation is to lay out a cemetery at Loxley, and erect a chapel, etc., at a cost of £19,000.

The SKIPTON U.D.C. is to erect 156 houses on the Short Bank estate.

The STOCKPORT Corporation is to erect seventy houses on the Hempshaw Lane site and forty houses on the Nangreave Road site.

Plans passed at TYNEMOUTH: Primitive Methodist chapel and school, Hawkey's Lane, for Mr. W. Stockdale, on behalf of the Trustees; six houses, Billy Mill Lane, for Mr. J. S. Hurrell; eighteen houses, Queensway, for Mr. J. R. Wallace; two villas, Kenners Dene, for Mr. A. K. Tasker; additions, "European and United States" Hotel, Railway Terrace, for Messrs. A. Arrol and Sons, Ltd.; alterations, 13 and 14 Burdon Street, Percy Main, for Messrs. J. W. Hanson and Son; house, Preston Avenue, and house, Percy Park, for Mr. J. R. Wallace; additions, "Collingwood Arms" public-house, Chirton, for Newcastle Breweries, Ltd.; house and shop, Ayres Terrace, for Mr. A. K. Tasker.

The WARRINGTON Corporation is requesting the Housing Committee to erect twenty A3 and twelve A2 type houses on land in Reynolds Street, for the purpose of rehousing tenants of insanitary houses.

Plans passed at WARRINGTON: Four houses, St. Mary Street, for Mr. A. Wright; alterations and extensions, 10 Cairo Street, for Mr. Fred Arthur; shop, Town Hill, for Mr. James Bennett; rebuilding Pelican Hotel, Buttermarket Street, for Messrs. Greenall Whitely and Co., Ltd.

WALES

Plans passed at SWANSEA: Workshop, Heathfield Yard, for Messrs. Bennett Bros.; alterations and additions, Northampton Lane, for Mr. C. E. Green; dairy and wash-house, King Edward Road, for Mr. C. Griffiths; bakehouse, Glantawe Street, for Mr. W. J. Cavell; four houses, Pwll Street, for Mr. Wm. John.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_1	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_3	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_3	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W.Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_1	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_1	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_1	Brixham ..	S.W. Counties	1 3	11½
A_1	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_1	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_1	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_1	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_1	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank ..	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_1	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_3	FELIXSTOWE	E. Counties	1 5	1 0½
A_3	Filey ..	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_3	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_1	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_1	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_1	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland ..	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter . . . . . ,,	1 8
Joiner . . . . . ,,	1 8
Machinist . . . . . ,,	1 9
Mason (Banker) . . . . ,,	1 8
,, (Fixer) . . . . ,,	1 9
Plumber . . . . . ,,	1 8
Painter . . . . . ,,	1 7
Paperhanger . . . . ,,	1 8
Glazier . . . . . ,,	1 8
Slater . . . . . ,,	1 8
Scaffolder . . . . . ,,	1 4
Timberman . . . . . ,,	1 4
Navvy . . . . . ,,	1 3
General Labourer . . . . ,,	1 3
Lorryman . . . . . ,,	1 5½
Crane Driver . . . . . ,,	1 7
Watchman . . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . . ,,	2 10 6
Hydrated Lime . . . . ,,	2 16 0
Portland Cement . . . . ,,	2 6 0
Ferro-crete . . . . . ,,	2 13 6
Thames Ballast . . . . per Y.C.	8 9
¾" Crushed Ballast . . . ,,	10 0
Building Sand . . . . . ,,	10 6
Washed Sand . . . . . ,,	11 6
2" Broken Brick . . . . ,,	9 6
¾" ,, ,, ... ,,	12 6
Pan Breeze . . . . . ,,	6 6
Coke Breeze . . . . . ,,	8 9

BRICKLAYER

	£ s. d.
Flettons . . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . . ,,	4 18 6
,, 2nd ,, . . . ,,	4 12 6
Blue Bricks, Pressed . . . ,,	9 18 0
,, Wirecuts . . . ,,	8 16 0
,, Brindles . . . ,,	8 0 0
,, Bullnose . . . ,,	10 8 0
Red Sand-faced Facings . . ,,	7 11 0
Red Rubbers for Arches . . ,,	15 0 0
Multicoloured Facings . . ,,	9 4 0
Luton Facings . . . . ,,	8 16 0
Midhurst White Facings . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . . . ,,	21 10 0
Headers . . . . . ,,	21 0 0
Bullnose . . . . . ,,	28 0 0
Double Stretchers . . . ,,	30 0 0
Double Headers . . . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . . each	2 10	4 4
Taper bends . . . ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . ,,	3 9	5 9
Double ,, . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¼" Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers . . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . . ,,	5	—

MASON

The following d/d F.O.R. at Nine Elms:	s. d.
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . . ,,	4 9
Bath stone . . . . . ,,	2 11
York stone . . . . . ,,	6 9
,, Sawn templates . . . ,,	7 6
,, Paving, 2" . . . . F.S.	1 8
,, ,, 3" . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20"× 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . . as 1" F.S.	9
Deal, Joiner's, . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . ,, ,,	1 1
Deal floorings, ¾" . . . Sq.	1 1 0
,, 1" . . . ,,	1 3 6
,, 1¼" . . . ,,	1 5 6
,, 1½" . . . ,,	1 11 0
,, 1¾" . . . ,,	1 15 0
Deal matchings, ¾" . . ,,	16 0
,, 1" . . ,,	17 6
Rough boarding, ¾" . . ,,	1 6 0
,, 1" . . ,,	18 0
,, 1¼" . . ,,	1 0 0
	1 8 0

Plywood, per ft. sup.

Thickness	¼"			½"			¾"			1"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½"	¾"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket union . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

Per cent.		Per cent.
Gas . . . 62½	Galvanized gas .	50
Water . . . 58½	,, water .	45
Steam . . . 55	,, steam .	40

FITTINGS.

Gas . . . 47½	Galvanized gas . 37½
Water . . . 42½	,, water . 32½
Steam . . . 37½	,, steam . 27½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ¾" . . . ,,	10 0
,, ,, ½" . . . ,,	9 9
,, ,, ⅝" . . . ,,	9 6
,, ,, ¾" . . . ,,	9 0
,, ,, 1" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0

Cast-iron rain-water pipes of ordinary thickness metal	3" F.R. s. d.	4" s. d.
	7	10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	4 0	6 3
Plinth bends, 4½" to 6" . . ,,	4 0	5 6

Half-round rain-water gutters of ordinary thickness metal	F.R. s. d.	s. d.
	5	6
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . . cwt.	21 0
,, drawn pipes . . . . ,,	21 6
,, soil pipe . . . . ,,	24 6
,, scrap . . . . ,,	11 0
Solder, plumbers' . . . . lb.	1 0
,, fine do. . . . ,,	1 4
Copper, sheet . . . . ,,	1 0
,, tubes . . . . ,,	1 4

L.C.C. soil and waste pipes:	3" F.R. £ s. d.	4" £ s. d.	6" £ s. d.
Plain cast . . .	1 0	1 2	2 6
Coated . . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . . each	3 10	4 0	4 9
Bends . . . . ,,	3 9	5 3	10 3
Shoes . . . . ,,	2 10	4 4	9 6
Heads . . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . ,,		1 3
¼" Polished plate, n/e 1 . ,,	1 0 to	1 3
,, ,, 2 . ,,	1 2 ,,	1 7
,, ,, 3 . ,,	1 7 ,,	2 5
,, ,, 4 . ,,	2 1 ,,	2 11
,, ,, 6 . ,,	2 3 ,,	3 2
,, ,, 8 . ,,	2 6 ,,	3 6
,, ,, 12 . ,,	2 9 ,,	3 8
,, ,, 20 . ,,	3 0 ,,	3 11
,, ,, 45 . ,,	3 3 ,,	4 1
,, ,, 65 . ,,	3 7 ,,	4 6
,, ,, 90 . ,,	3 10 ,,	4 9
,, ,, 100 . ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		1 3
,, ,, ,, over 2 . ,,		1 9
,, ,, plate, n/e 1 . ,,		1 6
,, ,, ,, 2 . ,,		3 0
,, ,, ,, 5 . ,,		4 0
,, ,, ,, 7 . ,,		5 0
,, ,, ,, 15 . ,,		6 0
,, ,, ,,over 15 . ,,		7 6
Putty, linseed oil . . lb.		3

PAINTER

	£ s d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 4
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

	£ s. d.
Digging over surface n/e 12" deep and cart away . . . Y.S.	3 6
" to reduce levels n/e 5' 0" deep and cart away . Y.C.	10 0
" to form basement n/e 5' 0" deep and cart away . "	11 0
" " 10' 0" deep and cart away . "	11 6
" " 15' 0" deep and cart away . "	12 0
If in stiff clay . . . . . add "	3 0
If in underpinning . . . . . " "	5 0
Digging, return, fill and ram . . . . . "	5 0
Planking and strutting to sides of excavation . . . F.S.	1 0
" " to pier holes . . . . . "	6
" " to trenches . . . . . "	6
" " extra, only if left in . . . . "	3½
Hardcore, filled in and rammed . . . . . Y.C.	14 0
Portland cement concrete in foundations (6-1) . . . "	1 13 6
" " " (4-2-1) . . . "	1 18 6
" " " underpinning . . . "	2 2 0
Finishing surface of concrete, spade face . . . . . Y.S.	9

DRAINLAYER

		4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
" junctions	"	3 9	4 6
Gullies and gratings	"	17 6	19 9
Cast iron drains, and laying and jointing . . .	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

	£ s. d.
Brickwork, Flettons in lime mortar . . . . . Per Rod	32 0 0
" " in cement . . . . . "	34 0 0
" Stocks in cement . . . . . "	41 10 0
" Blues in cement . . . . . "	62 0 0
Extra only for circular on plan . . . . . "	3 0 0
" backing to masonry . . . . . "	2 0 0
" raising on old walls . . . . . "	3 0 0
" underpinning . . . . . "	10 0 0
Fair Face and pointing internally . . . . . F.S.	3
Extra only for picked stock facings . . . . . "	1 0
" red brick facings . . . . . "	1 6
" blue brick facings . . . . . "	1 9
" glazed brick facings . . . . . "	4 6
Tuck pointing . . . . . "	10
Weather pointing . . . . . "	4
Slate dampcourse . . . . . "	1 0
Vertical dampcourse . . . . . "	1 3

ASPHALTER

	s. d.
½" Horizontal dampcourse . . . . . Y.S.	5 6
½" Vertical dampcourse . . . . . "	7 6
½" paving or flat . . . . . "	5 6
1" paving or flat . . . . . "	6 6
1" × 6" skirting . . . . . F.R.	1 0
Angle fillet . . . . . "	2
Rounded angle . . . . . "	2
Cesspools . . . . . Each	5 0

MASON

	£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete . . . . . F.C.	1 1 6
Bath stone and do, all as last . . . . . "	15 6
Artificial stone and do. . . . . "	16 6
York stone templates, fixed complete . . . . . "	14 0
" thresholds . . . . . "	16 0
" sills . . . . . "	1 3 6

SLATER AND TILER

	£ s. d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10" . . . . . Sqr.	4 5 0
Do., 18" × 9" . . . . . "	4 2 0
Do., 24" × 12" . . . . . "	4 12 0
Westmorland slating, laid with diminished courses . . . "	6 10 0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course . . . . . "	4 0 0
Do., all as last, but of machine-made tiles . . . "	3 11 0
Fixing only, lead soakers . . . . . Doz.	9
Stripping old slating and clearing away . . . . . Sqr.	10 0

CARPENTER AND JOINER

	£ s. d.
Flat boarded centering to concrete floors, including all strutting Sqr.	2 12 0
Shuttering to sides and soffits of beams . . . . . F.S.	1 0
" to stanchions . . . . . "	1 0
" to staircases . . . . . "	2 0
Fir and fixing in wall plates, lintols, etc. . . . . F.C.	5 0
Fir framed in floors . . . . . "	6 9
" " roofs . . . . . "	8 3
" " trusses . . . . . "	9 0
" " partitions . . . . . "	12 0
¼" deal sawn boarding and fixing to joists . . . . Sqr.	1 17 6
1" " " " " . . . . . "	2 1 6
1½" " " " " . . . . . "	2 7 6
2" × 2" fir battening for Countess slating . . . . "	12 6
Do. for 4" gauge tiling . . . . . "	16 0
Stout feather-edged tilting fillet . . . . . F.R.	6
Patent roofing felt, 1 ply . . . . . Y.S.	2 6
" " " 2 " . . . . . "	3 0
" " " 3 " . . . . . "	3 6
Stout herringbone strutting to 9" joists . . . . . F.R.	1 0
1" deal gutter boards and bearers . . . . . F.S.	1 4
1½" " " " " . . . . . "	1 8
2" deal wrought rounded roll . . . . . F.R.	9
1" deal grooved and tongued flooring, laid complete, including cleaning off . . . . . Sqr.	2 15 0
1¼" do. . . . . "	3 4 0
1½" do. . . . . "	3 13 0
1" deal moulded skirting, fixed on, and including grounds plugged to wall . . . . . F.S.	1 10
1¼" do. . . . . "	2 1

CARPENTER AND JOINER—*continued.*

	s. d.
1½" deal moulded sashes of average size . . . . . F.S.	2 3
2" " " " . . . . . "	2 6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅝" parting beads, and with brass-faced axle pulleys, etc., fixed complete . . . "	4 3
2" " " " . . . . . "	4 6
Extra only for moulded horns . . . . . Each	9
1½" deal four-panel square, both sides, door . . . . F.S.	2 6
2" " " " . . . . . "	3 0
1½" " but moulded both sides " . . . . . "	3 0
2" " " " . . . . . "	3 6
4" × 3" deal, rebated and moulded frames . . . . F.R.	1 6
4½" × 3½" " " . . . . . "	2 0
1½" deal tongued and moulded window-board, on and including deal bearers . . . . . F.S.	2 0
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages . . . "	3 0
1½" deal moulded wall strings . . . . . "	2 6
1½" " outer strings . . . . . "	2 9
Ends of treads and risers housed to string . . . . Each	2 0
3" × 2" deal moulded handrail . . . . . F.R.	1 6
1" × 1" deal balusters and housing each end . . . . Each	2 6
1½" × 1½" " " . . . . . "	3 3
3" × 3" deal wrought framed newels . . . . . F.R.	1 6
Extra only for newel caps . . . . . Each	7 6
Do., pendants . . . . . "	7 6

SMITH AND FOUNDER

	£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position . . . . . Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position . . . . . "	1 3 0
Do. stanchions with riveted caps and bases and do. . . "	1 2 0
Mild steel bar reinforcement, ½" and up, bent and fixed complete . "	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g. . . . . F.S.	1 0
Wrot-iron caulked and cambered chimney bars . . . Per cwt.	1 15 0

PLUMBER

	£ s. d.
Milled lead and labour in flats, gutters . . . . . Per cwt.	1 17 6
Do. in flashings . . . . . "	2 0 0
Do. in covering to turrets, etc. . . . . "	2 7 0
Do. in soakers . . . . . "	1 13 0
Labour to welted edge . . . . . F.R.	3½
Open copper nailing . . . . . "	3½
Close " . . . . . "	4½

Lead service pipe and fixing with pipe hooks . . F.R.	½" s. d. 1 2	¾" s. d. 1 7	1" s. d. 2 1	1½" s. d. 2 8	2" s. d. 3 8	4" s. d. —
Do. soil pipe and fixing with cast lead tacks . . . "	—	—	—	—	—	5 9
Extra, only to bends Each	—	—	—	—	2 3	6 6
Do. to stop ends . "	7	9	1 0	1 3	2 0	—
Boiler screws and unions . . . "	3 6	4 0	5 6	8 0	—	—
Lead traps . . . "	—	—	—	7 6	10 6	—
Screw down bib valves . . . "	7 6	10 6	12 6	—	—	—
Do. stop cocks . "	10 0	12 0	16 0	23 6	56 6	—

	£ s. d.
4" cast-iron ½-rd. gutter and fixing . . . . . F.R.	1 3
Extra, only stop ends . . . . . Each	1 0
Do. angles . . . . . "	1 6
Do. outlets . . . . . "	3 0
4" dia. cast-iron rain-water pipe and fixing with ears cast on . F.R.	1 6
Extra, only for shoes . . . . . Each	2 6
Do. for plain heads . . . . . "	5 6

PLASTERER AND TILING

	£ s. d.
Expanded metal lathing, small mesh . . . . . Y.S.	3 9
Do. in n/w to beams, stanchions, etc. . . . . "	5 6
Lathing with sawn laths to ceilings . . . . . "	1 6
½" screeding in Portland cement and sand for tiling, wood block floor, etc. . . . . "	2 6
Do. vertical . . . . . "	2 9
Rough render on walls . . . . . "	2 3
Render, float and set in lime and hair . . . . . "	3 0
Render and set in Sirapite . . . . . "	3 3
Render, backing in cement and sand, and set in Keene's cement . "	4 6
Extra, only if on lathing . . . . . "	9
Keene's cement, angle and arris . . . . . F.R.	8
Arris . . . . . "	3
Rounded angle, small . . . . . "	3
Plain cornices in plaster, including dubbing out, per 1" girth . "	2
1" granolithic pavings . . . . . Y.S.	5 0
1½" " " " . . . . . "	6 0
6" × 6" white glazed wall tiling and fixing on prepared screed . "	1 2 6
9" × 3" " " " " . . . "	1 7 6
Extra, only for small quadrant angle . . . . . F.R.	9

GLAZIER

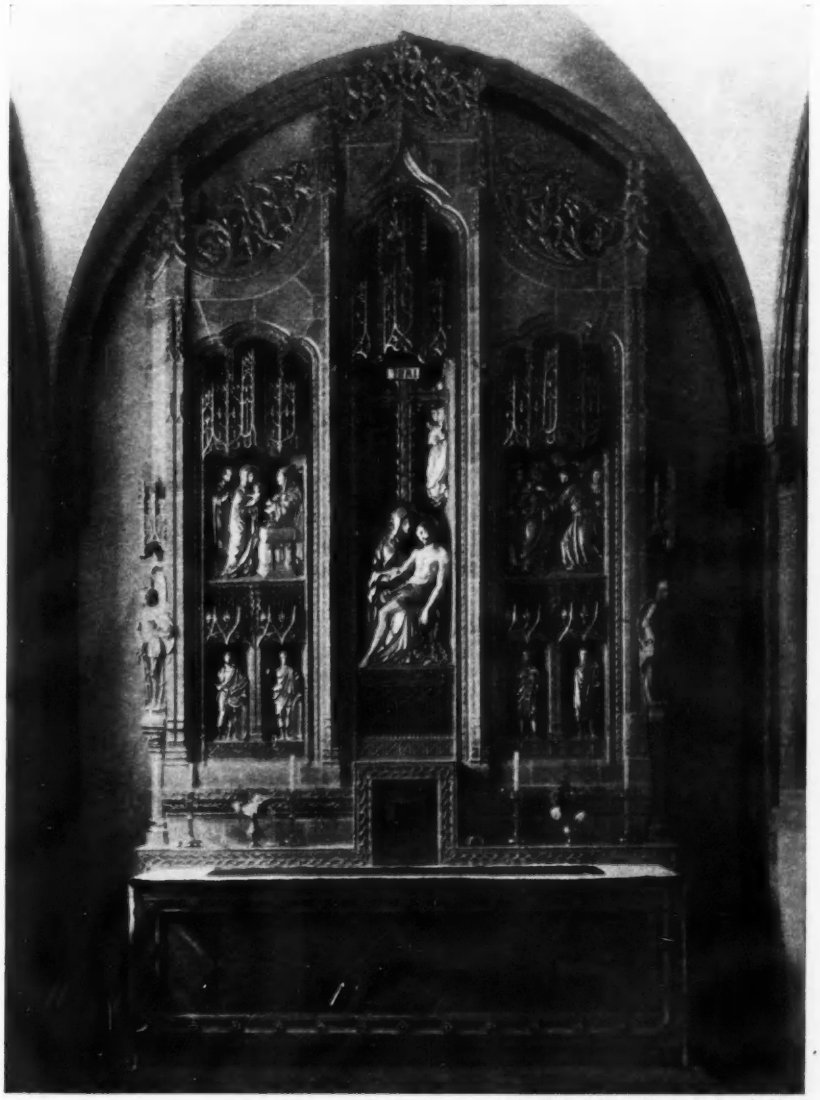
	s. d.
21 oz. sheet glass and glazing with putty . . . . . F.S.	8
26 oz. do. and do. . . . . "	1 0
Arctic glass and glazing with putty . . . . . "	1 2
Cathedral glass and do. . . . . "	1 3
Glazing only, British polished plate . . . . . "	8
Extra, only if in beads . . . . . "	2
Washleather . . . . . F.R.	4

PAINTER

	s. d.
Clearcolle and whiten ceilings . . . . . Y.S.	8
Do. and distemper walls . . . . . "	1 0
Do. with washable distemper . . . . . "	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces . "	3 3
Do. on woodwork . . . . . "	3 6
Do. on steelwork . . . . . "	3 9
Do. and brush grain and twice varnish . . . . . "	5 6
Stain and twice varnish woodwork . . . . . "	1 11
Stain and wax-polish woodwork . . . . . "	4 6
French polishing . . . . . F.S.	1 2
Stripping off old paper . . . . . Piece	2 6
Hanging ordinary paper . . . . . from "	3 9

AN ALTAR AND REREDOS

IN THE WAR MEMORIAL CHAPEL, AMPLEFORTH ABBEY CHURCH



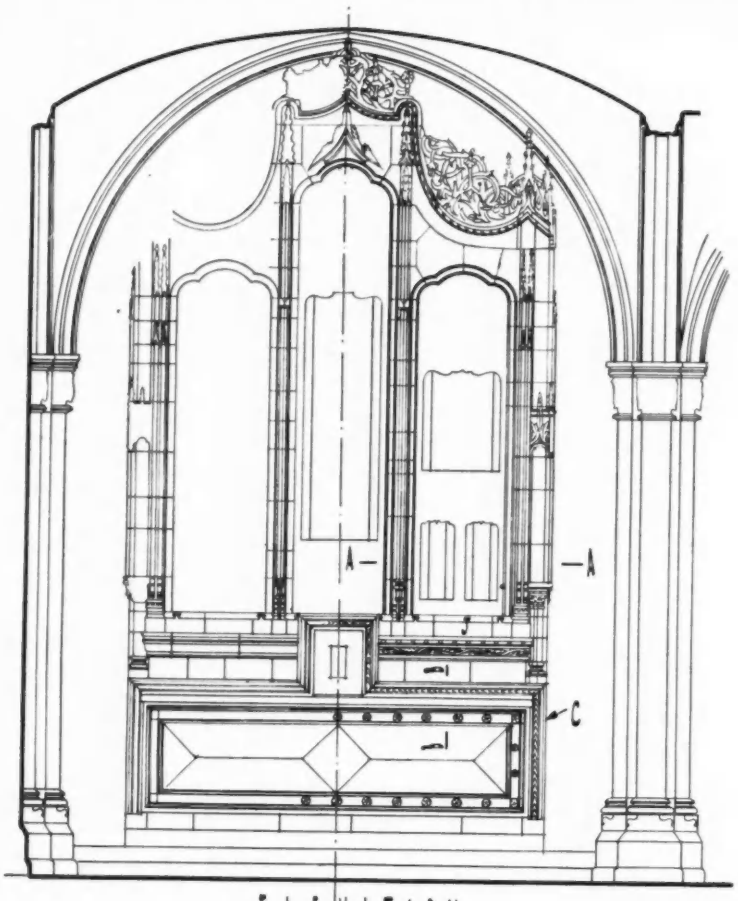
[Sir Giles Gilbert Scott, R.A., Architect

A PHOTOGRAPH TAKEN IN THE CHAPEL

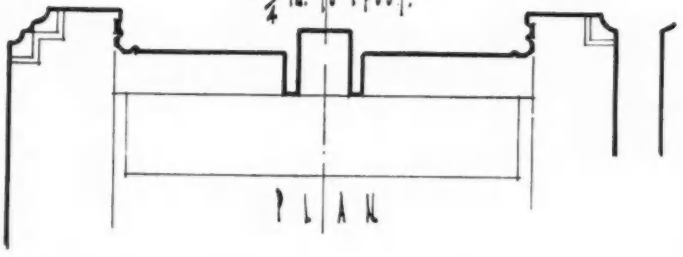
THIS altar and reredos, scale details of which appear overleaf, form the principal feature of the war memorial chapel at Ampleforth Abbey, Yorkshire. The altar is of Hornton stone, the front panel being in brown Hornton and the remainder in the blue variety.

The reredos is an interesting composition in wood and stone. The main framework, including the cresting at the top, is of blue Hornton stone, and the carved panels and the canopy work are of wood, decorated and gilt.

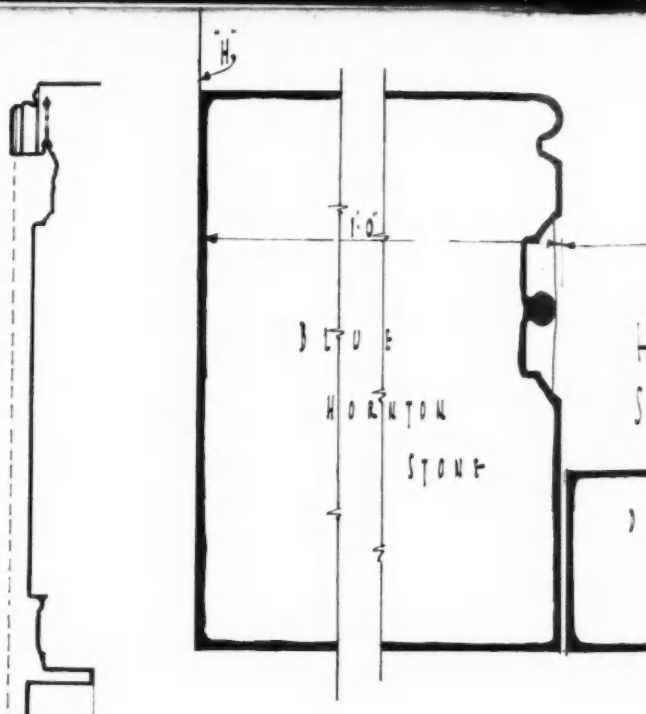
The altar and reredos are erected against a plain plaster background, but the use of Hornton stone prevents any effect of isolation and causes the composition to appear as an integral part of the chapel itself, in which the same stone is used for the piers and arches, etc.



ELEVATION
½ IN. TO 1 FOOT.



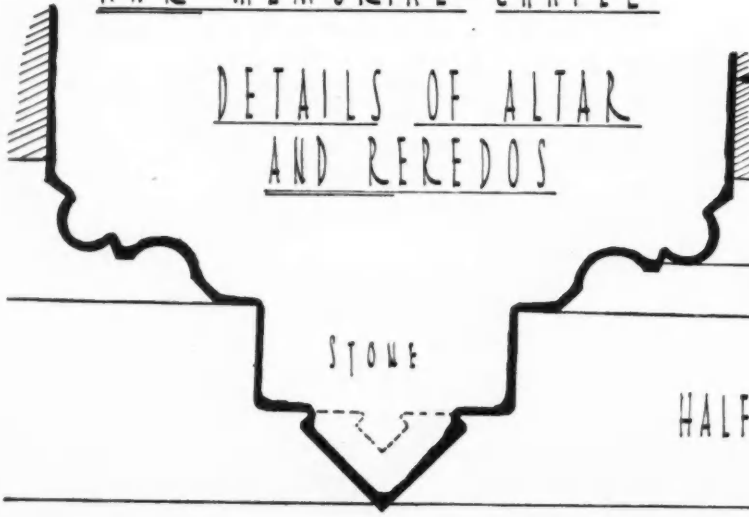
PLAN



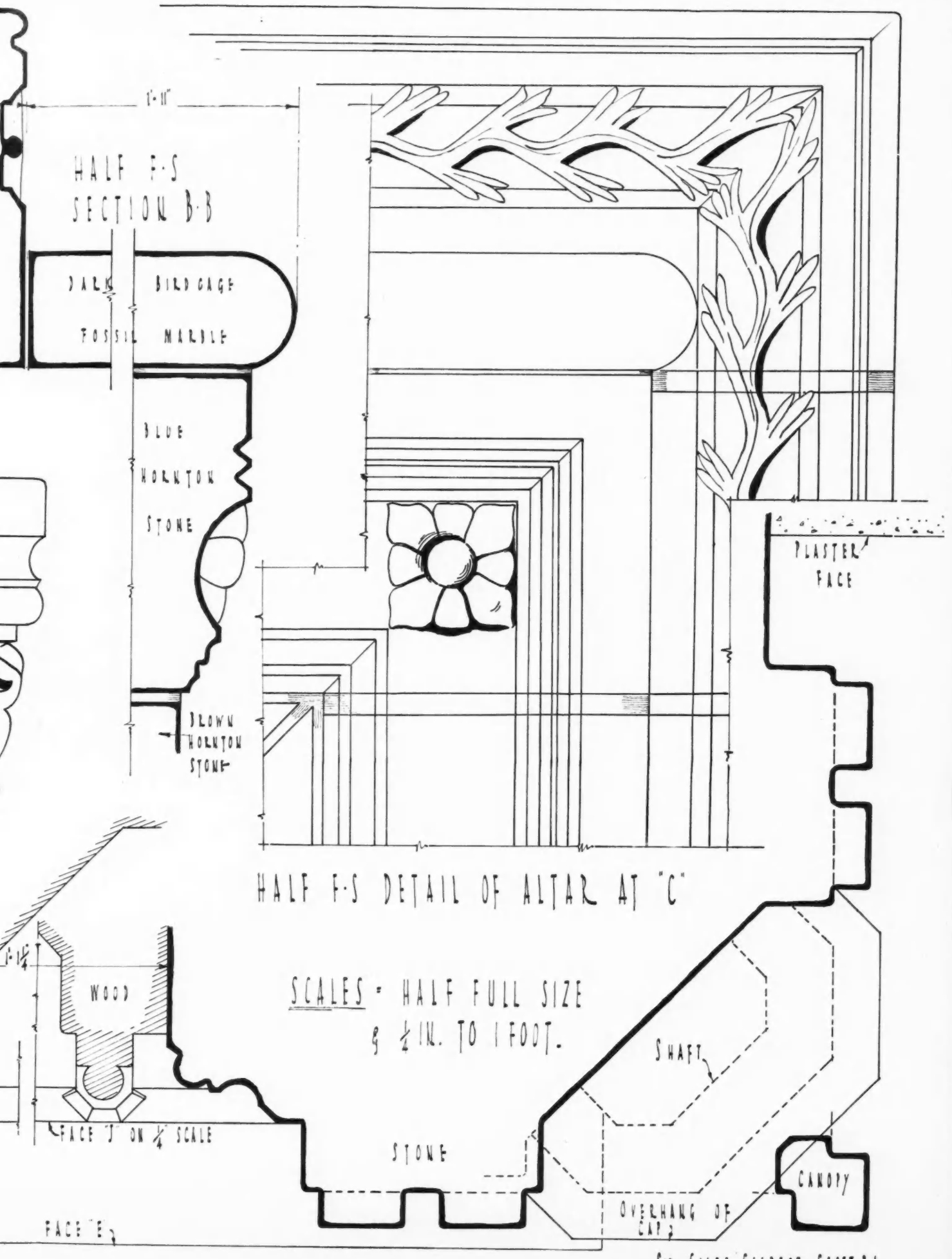


SECTION

AMPLEFORTH ABBEY
NEW CHURCH
WAR MEMORIAL CHAPEL
DETAILS OF ALTAR AND REREDOS



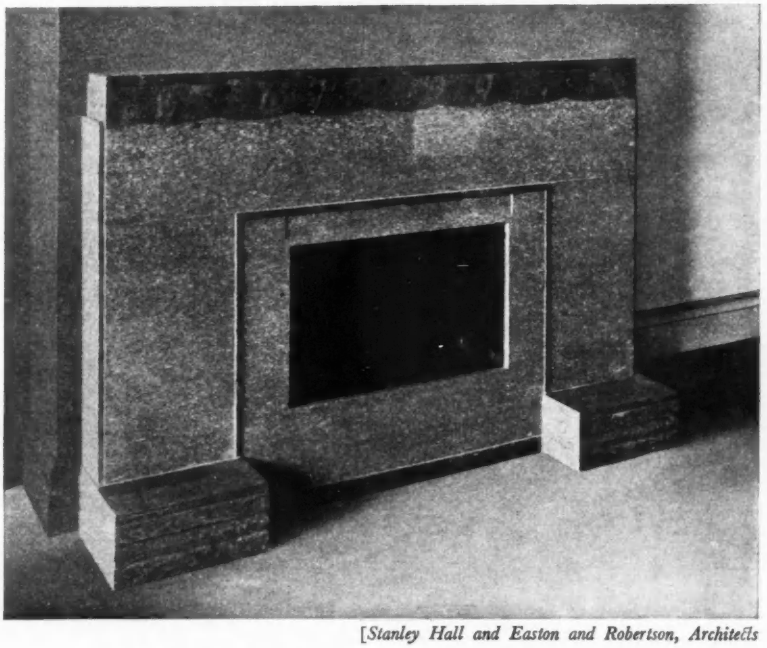
HALF FULL SIZE SECTION A-A



SIR GILES GILBERT SCOTT. R.A
·ARCHITECT·

ELECTRIC-FIRE SURROUND

IN HOPTON WOOD AND SWEDISH GREEN MARBLES



[*Stanley Hall and Easton and Robertson, Architects*

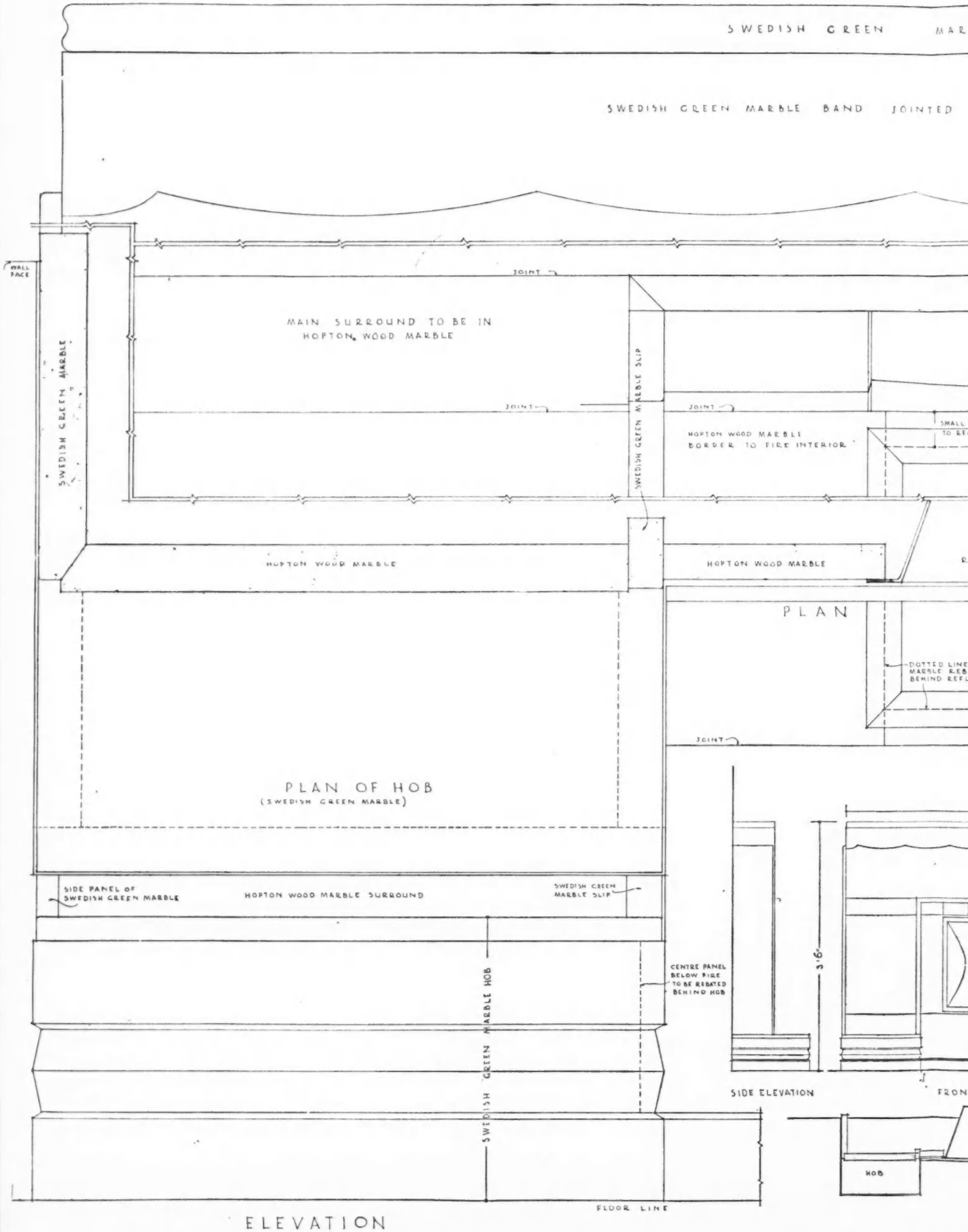
THE SURROUND, BEFORE INSTALLATION OF THE ELECTRIC FIRE

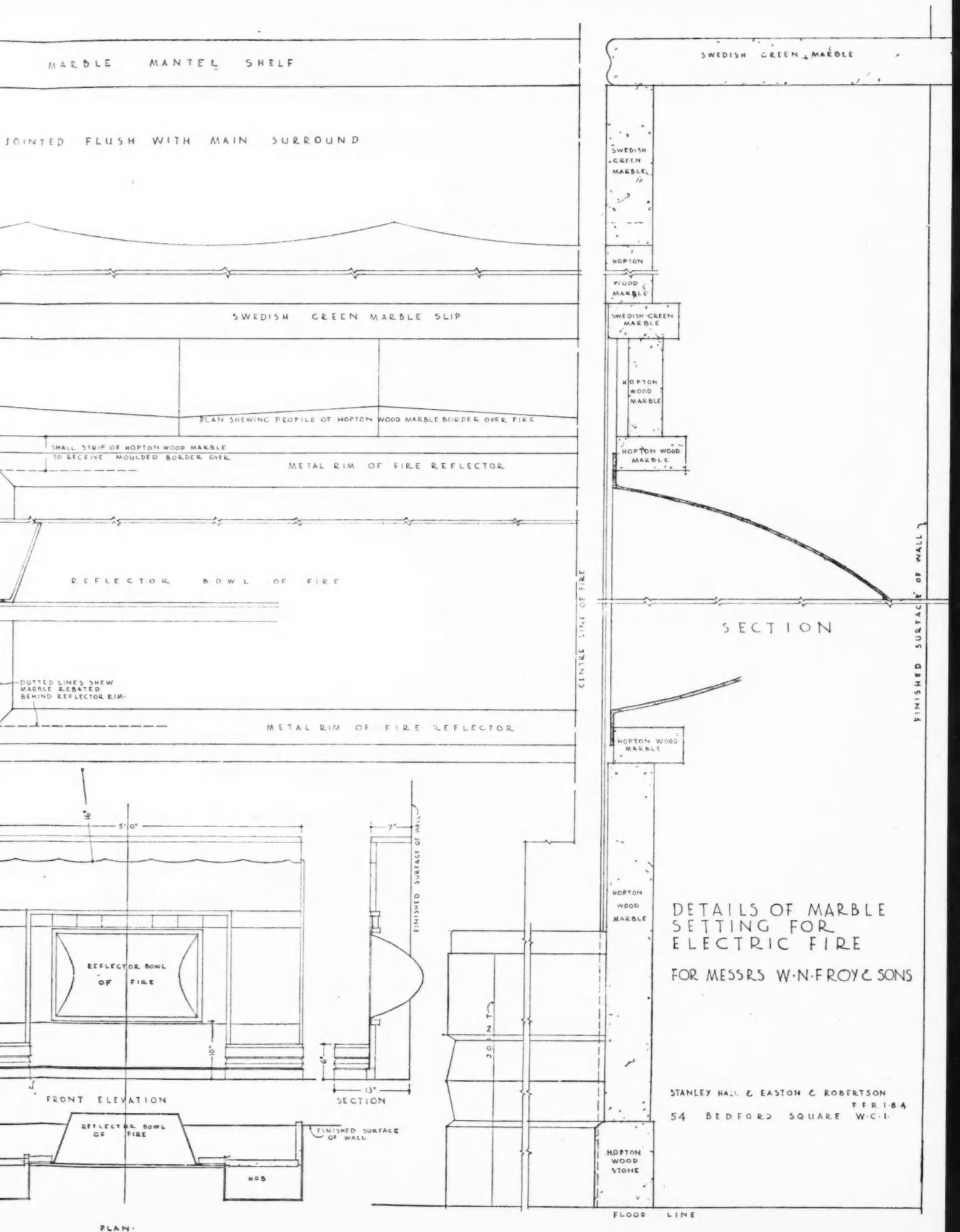
THIS fire setting, recently on exhibition in the new showrooms of Messrs. W. N. Froy and Sons,' Bond Street, W., is now fixed in a house in course of construction at Golders Green, N.W. When the above photograph was taken last week, the electric fire had not been installed.

As will be seen from the detail drawings reproduced overleaf, the main surround is in Hopton Wood marble, and the hobs, the slip around the fireplace opening, and the mantelshelf and its accompanying band are in Swedish green marble. The latter band is jointed flush with the main surround.

The setting has an overall length of 5 ft. and a height of 3 ft. 6 ins. It projects 7 ins. from the finished surface of the wall and each hob—which is 6 ins. high—13 ins.

A view of the fireplace, as it appeared in the showrooms, is seen in the photograph on page 620 of THE ARCHITECTS' JOURNAL this week.


SWEDISH GREEN MAR
SWEDISH GREEN MARBLE BAND JOINTED
WALL FACE
JOINT
MAIN SURROUND TO BE IN HOPTON WOOD MARBLE
SWEDISH GREEN MARBLE
SWEDISH GREEN MARBLE SLIP
JOINT
JOINT
HOPTON WOOD MARBLE BORDER TO FIRE INTERIOR
HOPTON WOOD MARBLE
HOPTON WOOD MARBLE
PLAN
DOTTED LINE MARBLE REB BEHIND REFL
JOINT
PLAN OF HOB (SWEDISH GREEN MARBLE)
SIDE PANEL OF SWEDISH GREEN MARBLE
HOPTON WOOD MARBLE SURROUND
SWEDISH GREEN MARBLE SLIP
CENTRE PANEL BELOW FIRE TO BE REBATED BEHIND HOB
SWEDISH GREEN MARBLE HOB
3'6"
SIDE ELEVATION
FRON
HOB
FLOOR LINE
ELEVATION
1 0 1 2 3 4 5 6 7 8 9 10 INCHES
INS 12 9 6 3 0 1



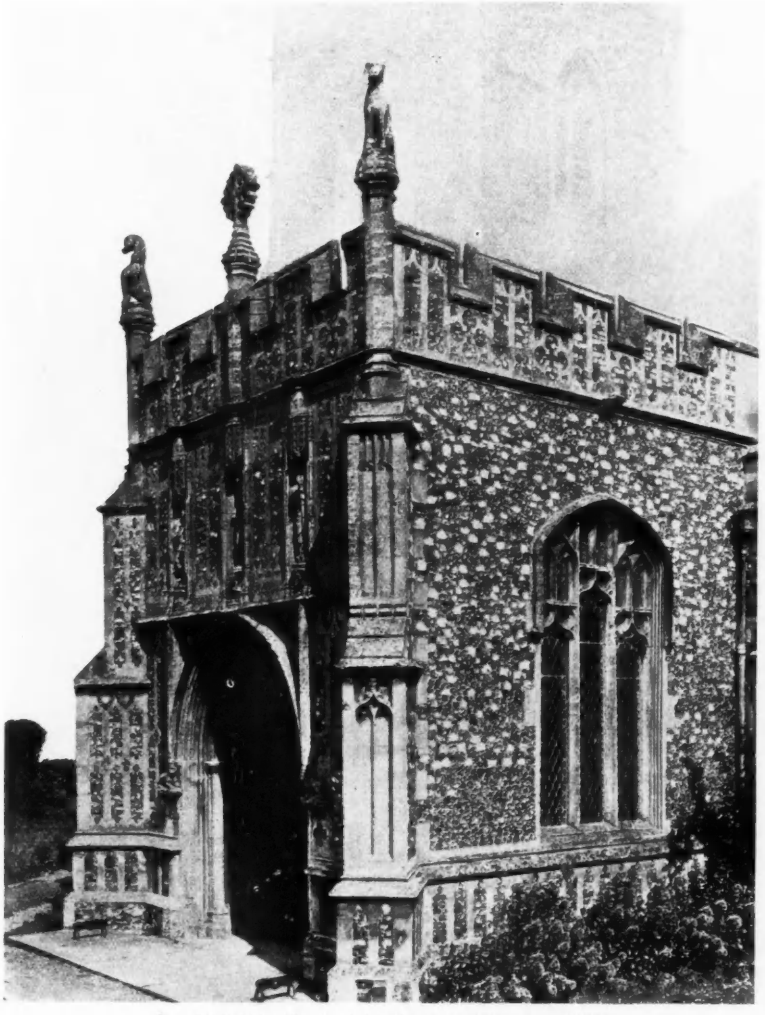
DETAILS OF MARBLE SETTING FOR ELECTRIC FIRE

FOR MESSRS W·N·FROY & SONS

STANLEY HALL & EASTON & ROBERTSON
F F R I B A
54 BEDFORD SQUARE W·C·1·

SELECTED PRECEDENTS:

ESSAYS IN PORCH DESIGN



1 PORCH AT ARDLEIGH CHURCH, ESSEX

FOR a house, some form of doorway or entrance protection from weather is a comfort; for a church, it is a necessity, and the design of church porches has always afforded great opportunities of producing fine effects.

The Tudor brick-builder seized the chance to display his craftsmanship, handsome examples of which are shown from Feering and Rayleigh. That at Feering (figures **2**, **4** *and* **5**) *is the more elaborate, with its stepped corbel-course, its angle buttresses with pinnacle terminals, and its niche over the doorway. The subtle mouldings round and above this niche are as uncommon as they are happily employed. The bricks forming the trefoil arcading have those triangular sinkings found in well-finished brick-cutting. The jambs of the niche and the profile of the dripstone over seem to swell from the wall surface. The pinnacles have been rebuilt at some time, and in the process have lost some of their ornamental detail, but they possess character and dignity produced by the use of unmoulded bricks alone.*

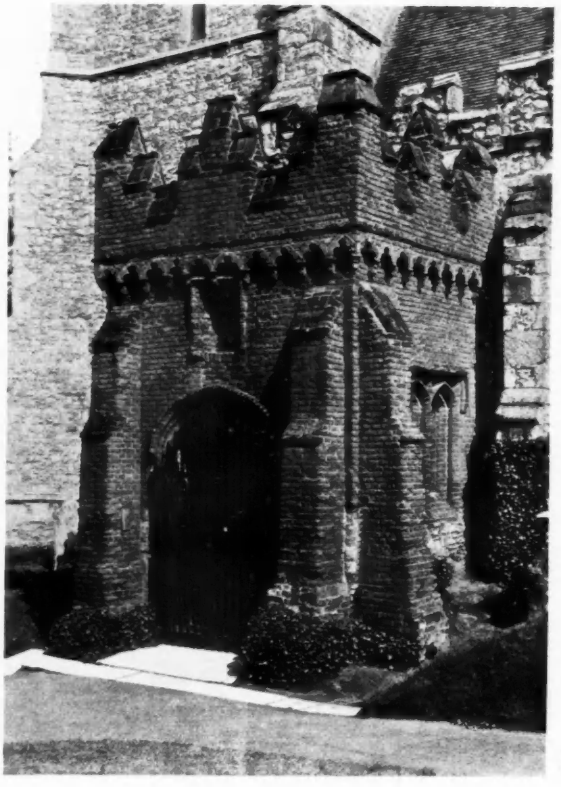
Rayleigh Church porch (figure **3**) *is less ornate, but a better composition. Reference has been made already to the details of its parapet and corbel-table (*THE ARCHITECTS' JOURNAL, *April 15, 1931), which are now seen as a whole.*

The magnificent porch of Ardleigh Church (figure **1**) *is constructed of other materials. The east wall is of knapped flints, bedded in mortar, but the south front and the parapet all round are of that flint panel work for which East Anglia is renowned. The panels are in great variety: cusped with crocketed finials, plain cusping, quatrefoils, and other forms. The carvings are restored, but only the severest critic can object to this, for, seen on a sunny morning in summer, few can fail to be thrilled by this glorious work of art.*

NATHANIEL LLOYD



2



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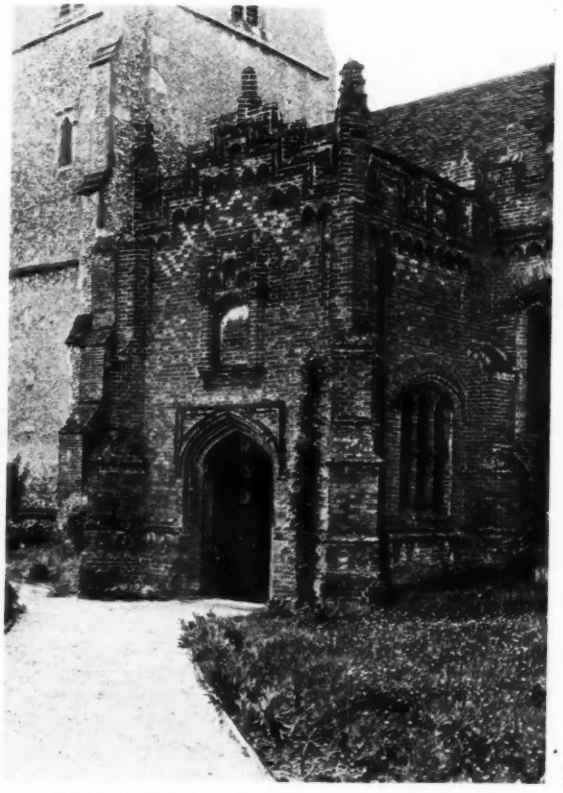
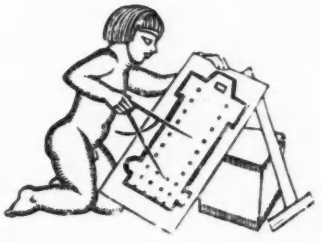
4



5

2 *DETAIL OF PORCH, FEERING*
3 *PORCH AT RAYLEIGH*
4 *GABLE OF PORCH, FEERING*
5 *PORCH AT FEERING*

THE ARCHITECTS' JOURNAL



WEDNESDAY, MAY 6, 1931

FOR THE GENERAL WELFARE

EVERYONE will be aware from these columns, if not from the general Press, that the Architects (Registration) Bill has passed its third reading in the House of Commons, and its second reading in the House of Lords.

That it has not reached thus far without loss is unfortunately true, for it has been attacked from several quarters and would have been rejected by this time if it had not been regarded by a good body of opinion as a Bill for the general welfare, and not the selfish trade union measure which its opponents have attempted to label it.

Though it has passed through the ordeal of Committee, and receives therefrom the tacit consent of the Houses, it is not yet a law, and must suffer the legal prunings and codification of Government lawyers before it makes its final appearance. And it is at this stage that it becomes of vital importance that we should all feel clearly the meaning of this step which trained architects have taken to raise the level of architectural practice, and save it from the degeneration in which a commercial age might otherwise involve it.

An age—such as the eighteenth century—that set a high value upon the services of architects had no need for registration. The question never arose, because the exercise of a recognized taste, coupled with high standards of workmanship, was itself a natural registration of those fitted to be architects. But the eighteenth century was followed by the nineteenth, with its industrial upheaval which saw the breaking down of all the high standards of both workmanship and taste. The fine fire of a high calling was carried through this period by a diminished body, who only in the last thirty years have been able once more to bring their principles of practice and conduct to bear largely upon the mass of the population.

They have only been able to exercise this beneficial influence by years of unremitting labour, the recognition of which by all parties to the Bill has constituted its strongest support. To the successive governors of the R.I.B.A. then must be ascribed the extraordinary advances in architectural education; the opening up of a professional preserve to men of all classes; the institution of a healthy competitive system; the stiffening of all the canons of practice and conduct.

This would have been impossible had not architects taken the initial step towards registration, which was represented by the formation of the R.I.B.A. itself.

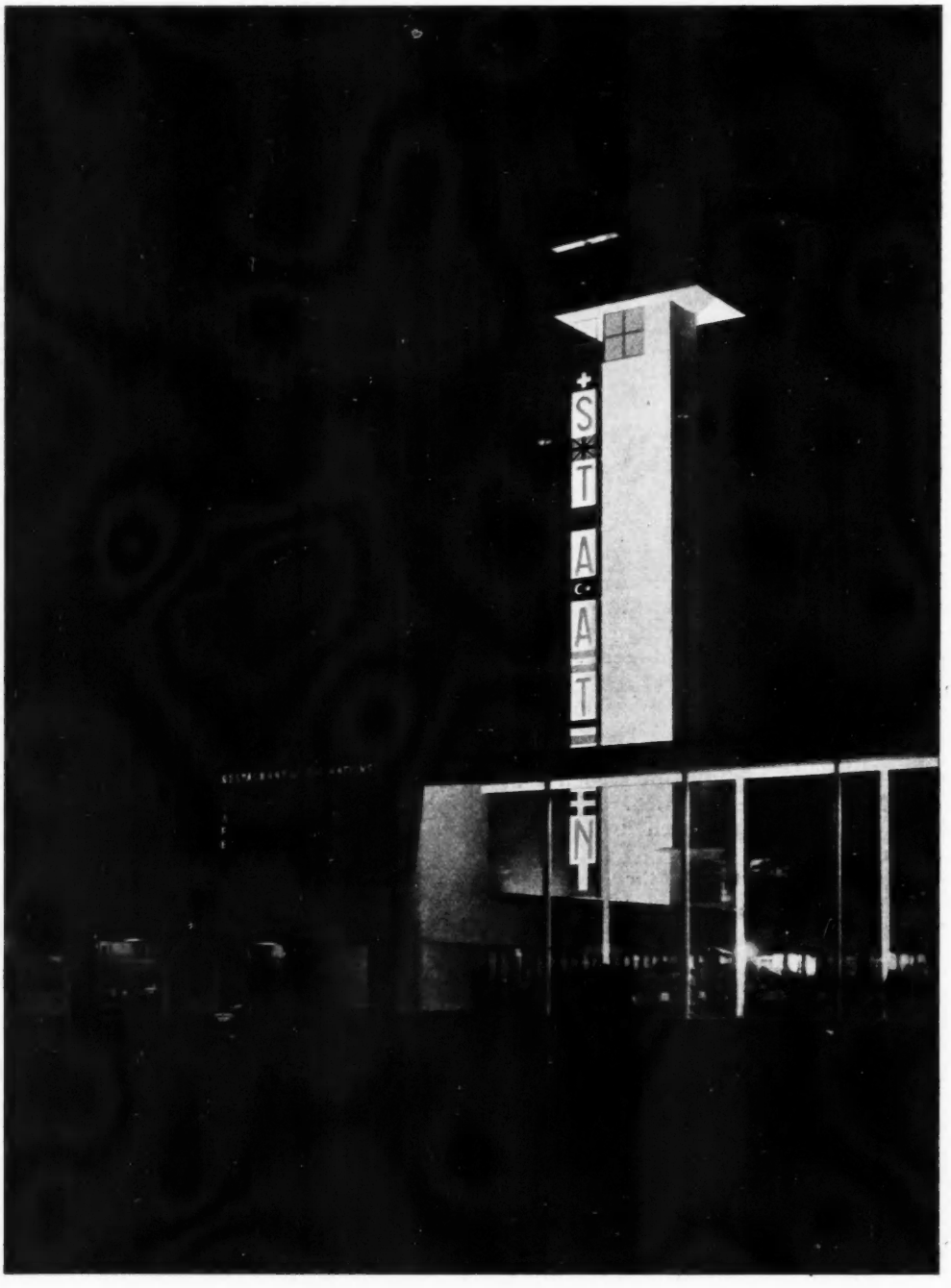
Once formed, this body set itself the enormous task of regulating a difficult art so that its practice by members of the Institute should be a profession and a dedication to high principles of art and conduct. These principles have never ceased to animate and guide it and, to this day, form the real basis upon which we are united in membership of the R.I.B.A.

The extension of these principles over the whole field of architecture is the real object of Architectural Registration, and, related to the great works of education carried out by the R.I.B.A., registration is seen to be the logical growth and dissemination of high principles as opposed to low, and in its every manifestation a protection for the public of whom architecture is the servant.

So, therefore, as the letters R.I.B.A. stand clearly in the public mind as the signature of a highly-trained profession, so we wish the word *architect* to stand. Registration is but the first step. The education and discipline which have brought us honourable standing must follow the act of registration; for the intention is not to limit, but to expand—not to define the minimum requirements of registered architects, but to raise the *general* level of architectural practice.

For this purpose it greatly matters that the standards of examination should be maintained by a body preponderantly architectural, for such body is linked with the system of architectural education which alone has made registration possible.

That the problem of registration has been isolated and wrenched from its context is not the fault of the body from which it originates, and, thought of always in terms of education and high government, it will become the finest instrument for the progress of architecture in England.



FLAGS IN ARCHITECTURE

The illuminated beacon of "The Restaurant of the Nations" at the International Exhibition of Hygiene held at Dresden last summer—a white, stucco-faced concrete tower—has a steel-framed glass buttress on one side of it, which provides a long vertical window for spelling out the word "*Staaten*" (or "Foreign Countries")—to indicate the entrance to the colonnaded section containing the official exhibits of the various Governments represented—with a national flag sandwiched in between each letter.

What would otherwise be a rather monotonous succession of tricolours in alternating horizontal and vertical arrangements is cunningly punctuated by the lonely little white cross of Switzerland lost in the middle of its scarlet ground, the barbaric splendour of the Union Jack, the Islamic symbolism of the Turkish Star and Crescent, and one of the asymmetrically cruciform Scandinavian ensigns.

The tower has a flat projecting top crowned with a wind-pressure vane such as is often mounted on coastguard-stations or the ends of harbour moles. The charmingly intimate little bar and restaurant so effectively advertised by this luminous mast, like the ensemble of semi-permanent exhibition buildings of which they form the focus, were designed by Professor Wilhelm Kreis, of the Düsseldorf Planetarium and "Gesolei" fame.

NEWS & TOPICS

HIGHER BUILDINGS, WIDER STREETS

AN article by an Architectural Correspondent in *The Times* of last week on the vexed subject of higher buildings has thrown us all into a mild confusion. Unnecessarily, perhaps, for the point that is most strongly put forward in the letter is one that has been considered more than once in the history of the controversy. The interesting addition to the discussion rests in the comparative figures which show that office accommodation in the heart of London is by far the dearest in the world. The writer of the article would try to remedy this by allowing an increase of height up to 150ft. as a *quid pro quo* for the setting-back of the building line, so that all new buildings should front on to wide streets.

★

But it is not only the front streets that matter. In the tortured plan of London the rear property that is obscured by great buildings has also to be considered, and it would seem that the case for higher buildings rests more with the replanning of London than upon a basis of financial expediency.

SACRISTY STRATEGY

That best of controversies, the Abbey Sacristy, faded gently out of the limelight a year ago, the victory going by default to the Dean of Westminster, who showed himself a master of strategy. Nothing might be heard of it today were it not that the scheme which is now being carried into execution has necessitated a certain change in the position of the Earl of Mansfield, a Lord Chief Justice of 130 years ago, who weighs over ten tons in white marble. By giving this statue a half turn, room will be given for the screen of a new sacristy in the western aisle of the north transept. And I think we had better leave it at that, and wait.

NOT STONES BUT JEWELS

Mr. G. K. Chesterton, who addressed the annual general meeting of the Council for the Preservation of Rural England, said that when it was a question of preserving the beautiful old villages of England it was not stones that were being preserved but jewels. These villages of England were the crown jewels of England. Once gone they could never be replaced. In America, where he had recently travelled extensively, he had not seen a single village worthy of the name. When there were human settlements they were composed chiefly of tin huts and hoardings. The village inn as we know it did not exist. The English people as a whole do not realize sufficiently the value of their heritage. Certainly they do little at present to preserve it.

★

But the C.P.R.E. and its many affiliated and constituent bodies are gradually influencing public opinion. In the King's Speech at the opening of Parliament this year rural amenities were mentioned for the first time in history. Parliament is preparing a new Bill which will increase the powers of the present Town Planning Act. And the need for such a Bill is great. During the past year the C.P.R.E. has received a substantial grant from the Carnegie Trust, but nevertheless it has many battles to fight, none of which can be won without financial support.

ARCHITECTS AND THEIR WORK

Professor Reilly has just published a very interesting book, *Representative British Architects of the Present Day*, in the introduction to which he makes the suggestion that our great men might publish folios of their work, as did Robert Adam, Sir William Chambers, and others in the eighteenth century. Architects may be familiar with the works of their fellows in a disjointed sort of way through the medium of the Press, but never see the full story of one man's achievement. The general public, ignorant of architecture in a general way, knows nearly nothing of what has been done by Curtis Green, Atkinson, and many another, and chooses its architects by methods that leave room for fatal mistakes. Lutyens alone was well served by the late Sir Lawrence Weaver, and the effect of his houses and his gardens has been widespread, and would be lasting if he were a more imitable and less markedly individualistic designer.

BERLIN'S BUILDING EXHIBITION

The Berlin Building Exhibition, which is to be held from May 9 to August 9, is to be more than usually comprehensive. Housing and town planning are to be given generous floor space, but these will be associated with all the developments in the technique of building which are so largely responsible for modern architecture, especially as it is known in Germany and the Continent generally. The architect Nils van der Rohe is building twenty-six living-rooms, helped by several prominent interior architects. "Colour and form, type and norms (whatever they may be) are the leading ideas. Everything superfluous is to be eliminated," says, rather sweepingly, the advance guide to this forthcoming cultural Mecca.

★

Adjoining the exhibition are to be laid out streets, where varied constructions may be studied; and on these some twenty houses of very varied type will represent the German solution to as many problems of modern design and construction. It will indeed be an exhibition of extraordinary interest, gathering together much that is imperfectly united in our mental conception of the modern city, but which, even without our conscious aid, is always tending towards the crystallization of new forms.

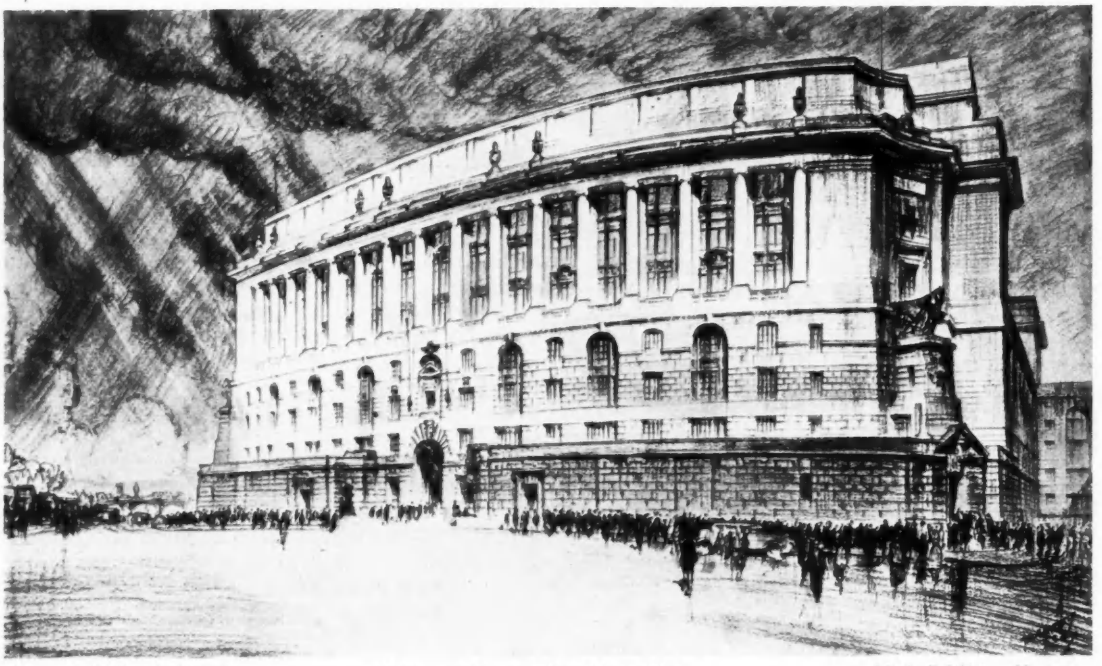
★

The International Federation of Housing and Town Planning have taken great care to see that our own exhibit will do us credit, lest it should be forgotten that we have made a contribution to post-war housing, a great deal of which is of a very high order and of a type eminently fitted for the people it has set out to serve.

CERTIFIED HOMES

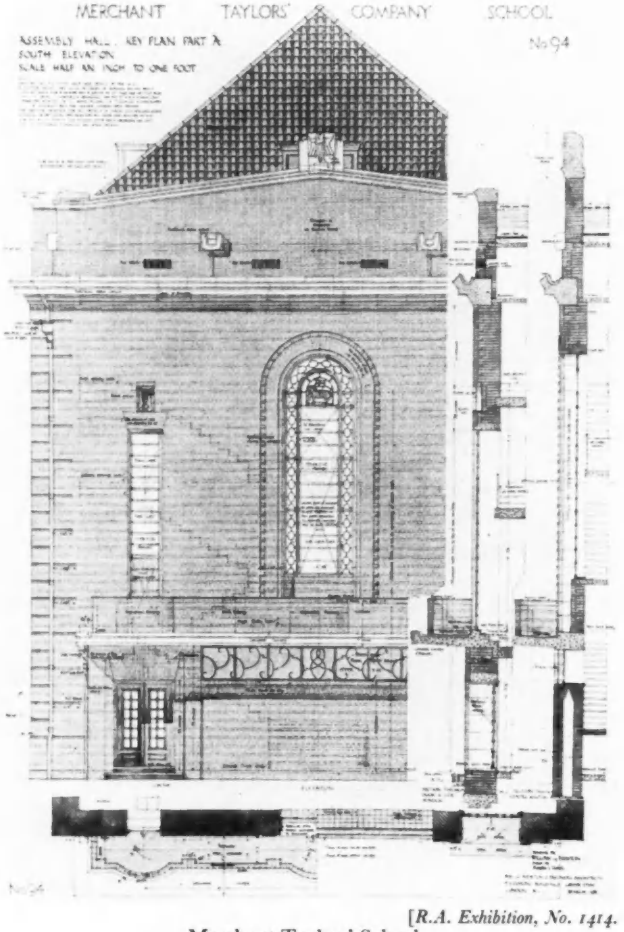
I hear that arrangements are being made in the United States to provide "certified buildings," just as in this country we have "certified milk." The Building and Loans Association are arranging to carry out inspection work, very much on the same lines as that accomplished in London by the district surveyors, so that persons who buy houses with the help of loans may be assured that they are well planned and well built. The Shrieveport Mutual Building Association, which is one of the pioneers in America, have now inspectors at work, supervising all houses, from the time the excavations are made until a building is complete.

ASTRAGAL



Drawn by J. D. M. Harvey.] Unilever House, Blackfriars, E.C. [*R.A. Exhibition, No. 1391.*

By Sir J. J. Burnet, R.A., and Partners.



[*R.A. Exhibition, No. 1414.*

Merchant Taylors' School.

By W. G. Newton and Partners.

AT THE ROYAL

The Architecture

BY E.

IT has been a custom to speak disparagingly of this annual exhibition, but if there are in future to be found as many works of real value as have been given places this year, the Academy threatens to become nearly representative. Nearly, for you must still go to Millbank to look at Steer, Nash, Lamb or Spencer. But the presence of Augustus John, Sickert, Lucien Simon, Paul Gernez, and some others, goes far to reverse the established verdict against the Academy, and one delicious canvas by Irene Wyatt will endear this present exhibition to me for ever.

This hanging committee has indeed brought new life to the august body. Even to the architectural room they have brought some new dignity of arrangement, a certain spaciousness in tiny space.

But is this small room worth it? Is the space allotted to architecture in this exhibition at all commensurate with the representation of architects upon the Academy? Or would one not be stating the simple truth to say that not only is this little cubby-hole of drawings not representative of architecture, but directly damaging to it by association with the ungainly body of current work to which it functions as a sort of appendix ?

The existence of an extensive and prosperous architectural press proves



Dorchester Hotel, Park Lane, W. [*R.A. Exhibition, No. 1402.*

By W. Curtis Green, A.R.A., and Partners.

ACADEMY

Reviewed

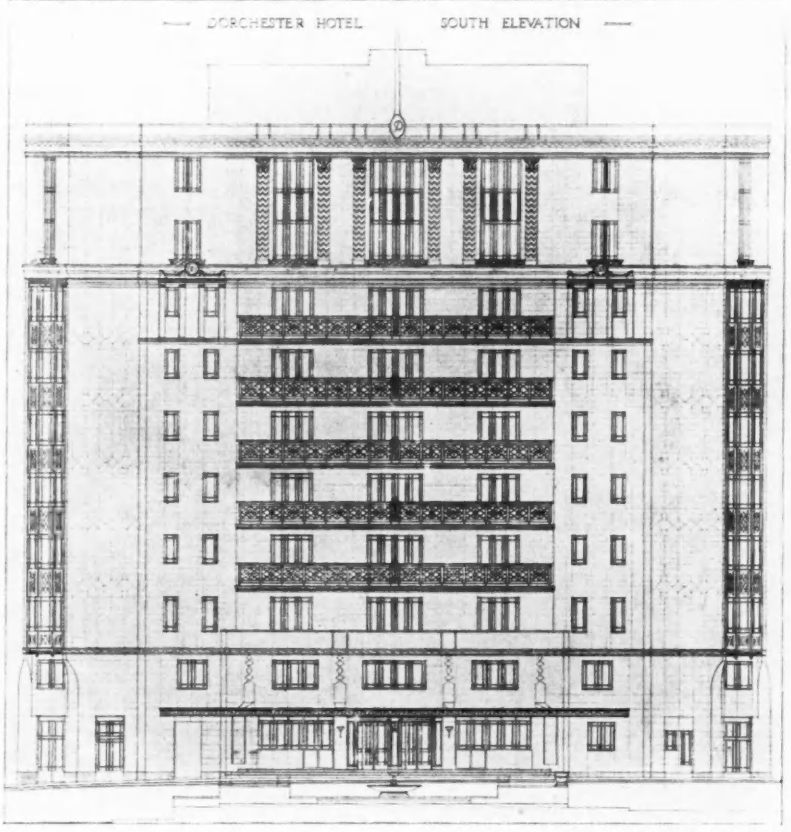
MAXWELL FRY

that architecture is much better appreciated through the medium of photographs and accurate drawings, and that these perspectives and the attempts of the Academy to make them accurate perspectives are but an amateur's presentation of something much greater and more important than can be crammed into four tiny walls.

This being so, I should see no reason to deplore the entire withdrawal of architects from the annual exhibition, and think that we should gain appreciably by the dissociation, being then perhaps in the right mind to discover the most fitting manner in which to present to the public the works of architects of academic rank and other grades of established excellence.

The hanging committee, which has so widened the scope of the Exhibition generally, has given a hint of something besides pure architecture in the models made to show sculpture in relation to architectural settings, and by the inclusion of stained-glass designs.

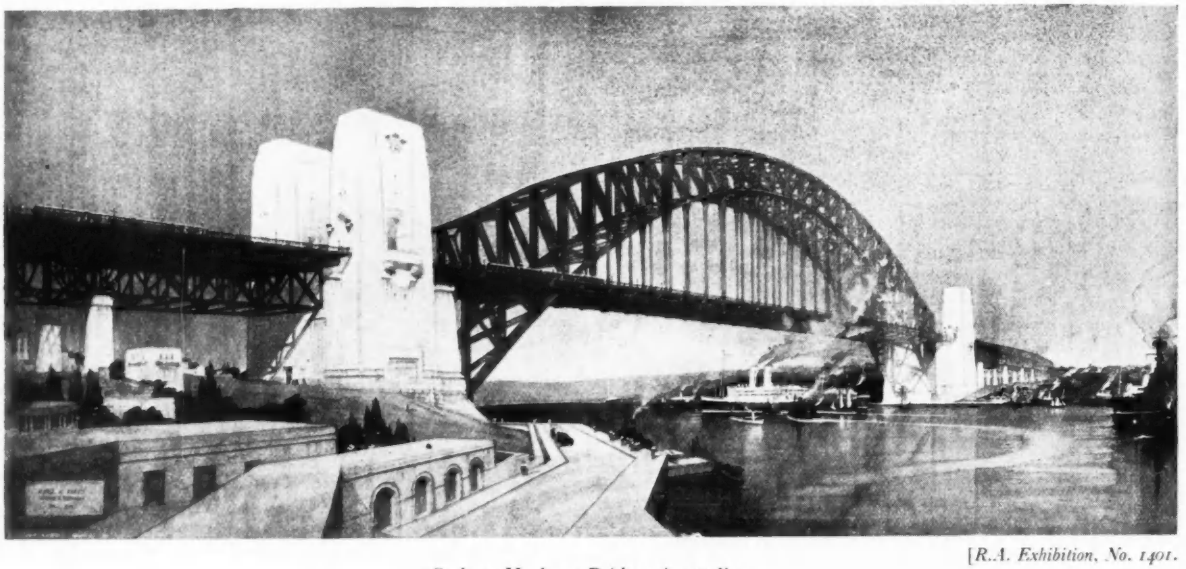
Their attempt to limit the number of highly-coloured perspectives by insisting upon more geometric drawings seems to have failed in its object, since it has produced no fine geometric drawings. There is, it is true, a $\frac{1}{2}$-in. detail of one of the elevations of the Dorchester Hotel, but this is nearly unintelligible to any but trained architects, being in line, and in any case is



[*R.A. Exhibition, No. 1406.*

Dorchester Hotel : South front.

By W. Curtis Green, A.R.A., and Partners.



[*R.A. Exhibition, No. 1401.*

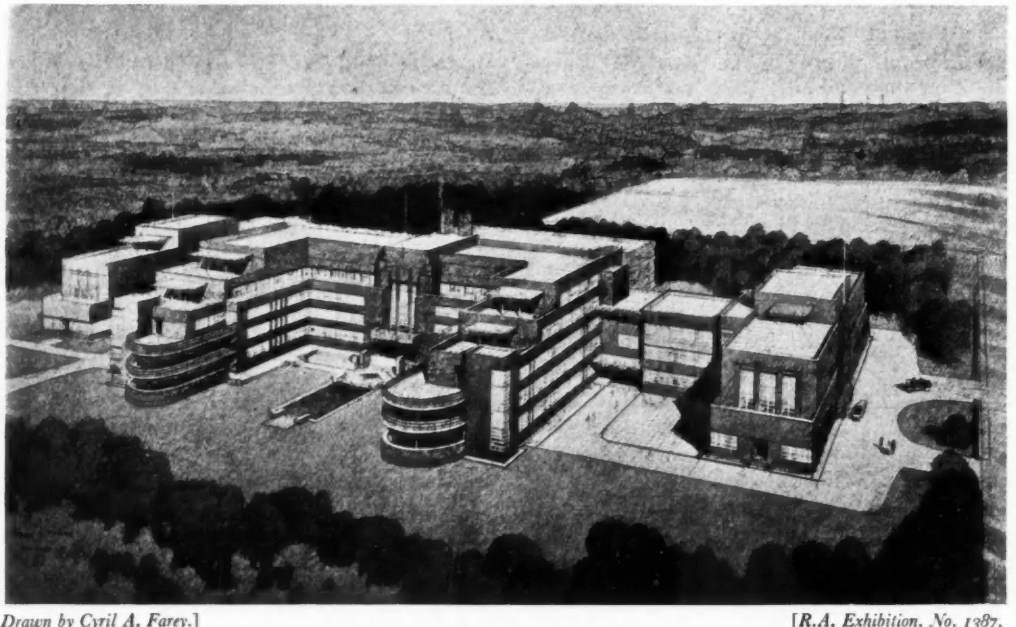
Sydney Harbour Bridge, Australia.
By Sir J. J. Burnet, R.A., and Partners.

accompanied by a coloured perspective of the complete building.

The perspectives, thinned in number by this new academic austerity, are pretty equally divided between Walcot, Farey, J. D. M. Harvey, and the field. Walcot, who first introduced atmospherics into architectural draughtsmanship, illustrates buildings by Curtis Green and Sir Herbert Baker which it would be interesting to see when the clouds have rolled by. Especially cloudy is his drawing of the Bank of England, for clouds of vehicular commotion obscure the clear cut lines of Soane's façade at street level, and the additions above are hardly to be guessed at. Cyril Farey does at least deal in lines, and in his fine drawing of Sydney Harbour Bridge he produces something much nearer the truth. J. D. M. Harvey is most nearly out of the mist, and produces drawings every day more clearly defined and more accurately representative of their subject. His drawings of Mediterranean houses by Oliver Hill are excellent pieces of work.

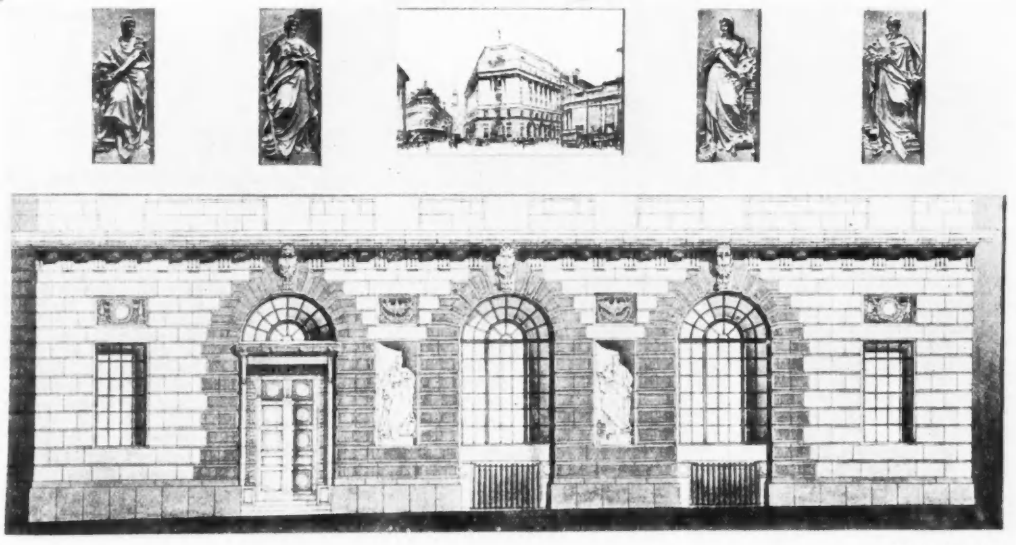
Turning to the buildings themselves, one cannot help but notice the preponderance of cathedrals, deriving from either Sir Edwin Lutyens or Sir Giles Gilbert Scott. Walter Tapper shows dull geometric drawings of the Church of St. Oswald, Deepdale, Preston, and there is a rather dramatic elevation of a cathedral, a sketch design, by Francis X. Velarde.

London street architecture is prominently represented by Unilever House, by Sir John J. Burnet and Partners, which one recognizes as directly descending from the Lloyds Bank building in Cornhill. It will make a very grand bridge-head.



Drawn by Cyril A. Farey.] [*R.A. Exhibition, No. 1387.*

Freemasons' Hospital and Nursing Home, Ravenscourt Park.
By Sir J. J. Burnet, R.A., and Partners.



[*R.A. Exhibition, No. 1407.*

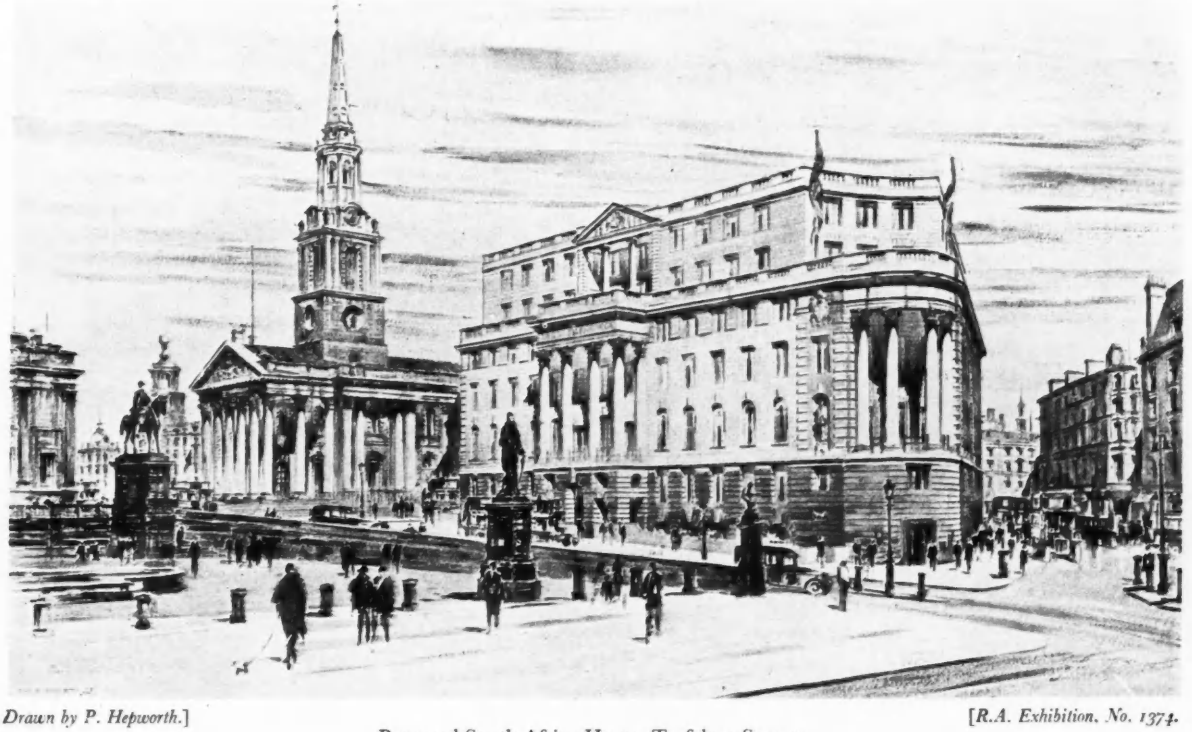
National Provincial Bank, Ltd., Mansion House Street, E.C.
By Sir Edwin Cooper, A.R.A.

Sir Edwin Cooper's National Provincial Bank is of the order which we have learnt to expect from him—imposing, ponderous and grandly modelled.

Sir Herbert Baker shows a drawing of South Africa House, Trafalgar Square, which will go far to transform the dull and classic equilibrium of that open space, for so many years under the casual dominion of Wilkins's National Gallery. It seems nearly a pity that the ground could not be made to slope in another direction so that right might be completely justified.

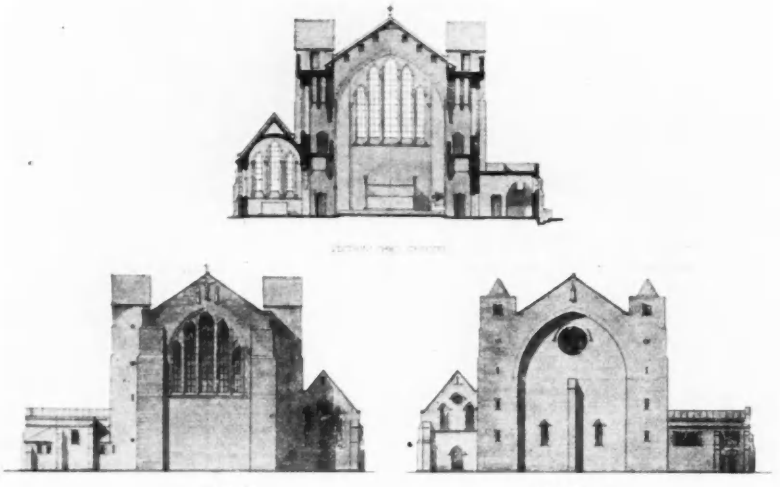
It is hard to know what to say of Dorchester House, so obviously a modern building in the choice of its material, and yet so obviously *sound* for other non-modernistic reasons. Modernism seems to have been responsible for the concave ends, the least desirable feature. But the scale and detail that make it an interesting building owe everything to the architects, who must have laboured under conditions of unusual difficulty.

A large store in the Headrow, Leeds, by Sir Reginald Blomfield, seems to me to be the least good of anything



Drawn by P. Hepworth.] [*R.A. Exhibition, No. 1374.*

Proposed South Africa House, Trafalgar Square.
By Sir Herbert Baker, K.C.I.E., A.R.A.



[*R.A. Exhibition, No. 1341.*

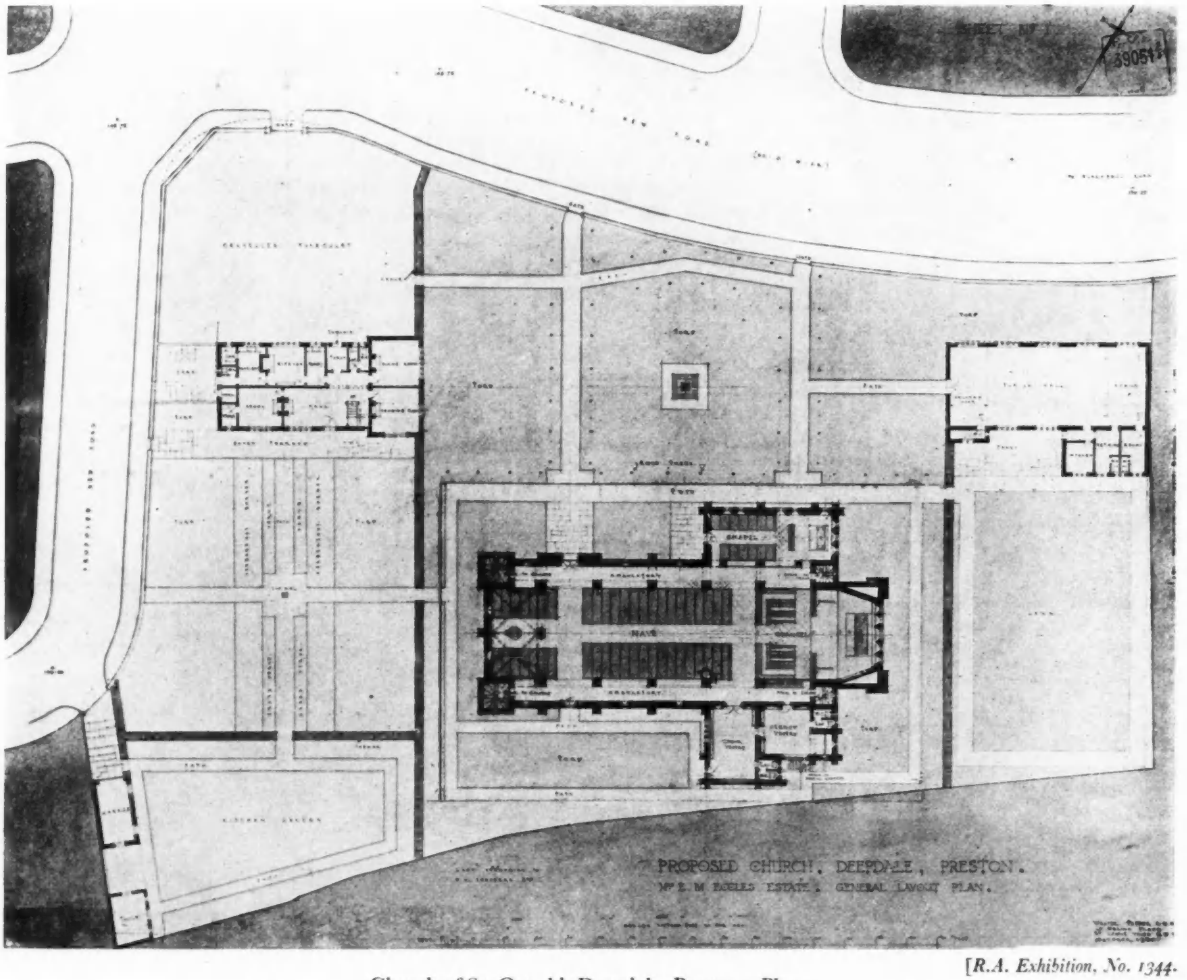
Church of St. Oswald, Deepdale, Preston : Elevations
By Walter Tapper, A.R.A.

he has yet done, and appears here as a strictly elevational drawing that is a coarse and unattractive work of draughtsmanship.

There is some indication of the Office of Works' solid contribution to sound building in several telephone exchanges, all in the familiar vernacular of brick and stone, and all looking like private houses or residential flats for very grand people.

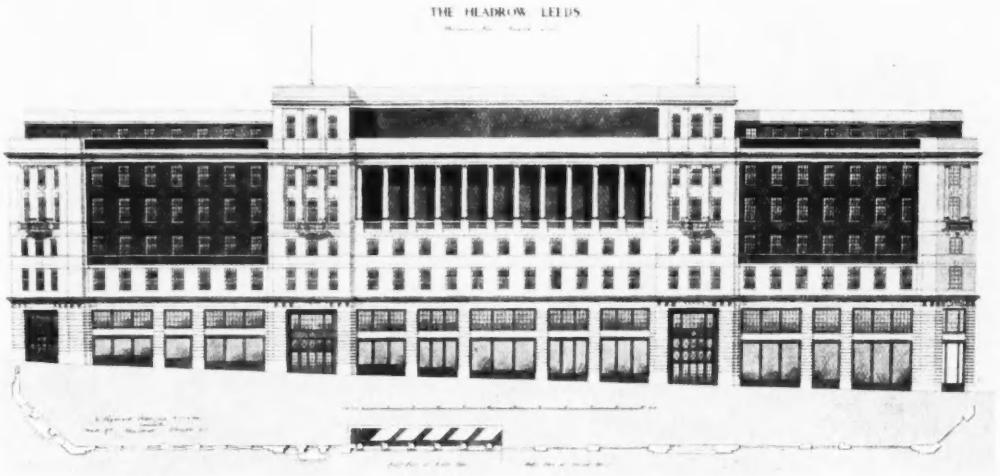
Of schools there are several : a jolly elevational drawing of St. Swithun's School, Winchester, by Mitchell and Bridgwater; good polite Georgian brickwork and all plain sailing, Merchant Taylors' School, by W. G. Newton and Partners, is shown in beautiful drawings, especially the aerial view of the whole scheme—no less attractive for showing the buildings clearly and straightforwardly.

Thomas Worthington and Sons' High School, Bournemouth, is a school building of modern standards with more glass than supporting solids. The



[*R.A. Exhibition, No. 1344.*

Church of St. Oswald, Deepdale, Preston : Plans.
By Walter Tapper, A.R.A.



The Headrow, Leeds: New premises.
By Sir Reginald Blomfield, R.A.
[*R.A. Exhibition, No. 1395.*

drawing shows two wings spread out from a centre, commanding a falling site, in a way that one can well believe would be impressive without loss of the qualities of airiness that go with scientific school planning today.

Then there is the Freemasons' Hospital and Nursing Home at Ravenscourt Park, which Sir John Burnet and Partners have made the subject of a sensible modern treatment: functional in a fairly understandable way, since its functionalism is qualified by a sense of order and rational proportion.

Finally, one must stop to consider the models which show Charles Wheeler's sculpture on the Bank of England and Cable House, Victoria Embankment. Charles Wheeler is in the nature of a find. His work is architectural in a good sense of the word, for in both instances he emerges from situations of some difficulty with great credit to his powers of fine carving and modelling. His doors for the Bank of England are absolutely first-rate.

The R.A. Banquet

The Duke of Gloucester, responding to the toast of "The Queen, the Prince of Wales and the other members of the Royal Family," proposed by Sir William Llewellyn at the Royal Academy Banquet last Saturday, said there was always a tendency to decry modern art; but we must remember that maturity improved other things besides wine, and that we were all at heart *laudatores temporis acti*. The youngest of us were inclined to say that things were not what they were in our day, even if we had just left school or a university. He sometimes wondered if people ever said that the Venus de Milo was a monstrous reproduction of the feminine form or that York Minster was a hideous pile.

The present exhibition, he continued, was selected with unremitting care from a vast number of works sent in from far and near, and was a splendid proof of its broad views and its sympathetic interest in the great variety of styles, while discharging its first duty of maintaining the tradition, thoroughness, and integrity of British art. To remind us of art's foundations in the past, its premises had been the scene of great loan exhibitions of Old Masters from abroad, which had been the wonder and delight of visitors from all over the world. The facilities given



[*R.A. Exhibition, No. 1394.*
Study for Pier, Lambeth Bridge.
Sir Reginald Blomfield, R.A., and G. Topham Forrest, associated architects; Sir George Humphreys, engineer.



Saint Swithun's School, Winchester: Elevation.
By Mitchell and Bridgwater.
[*R.A. Exhibition, No. 1357.*

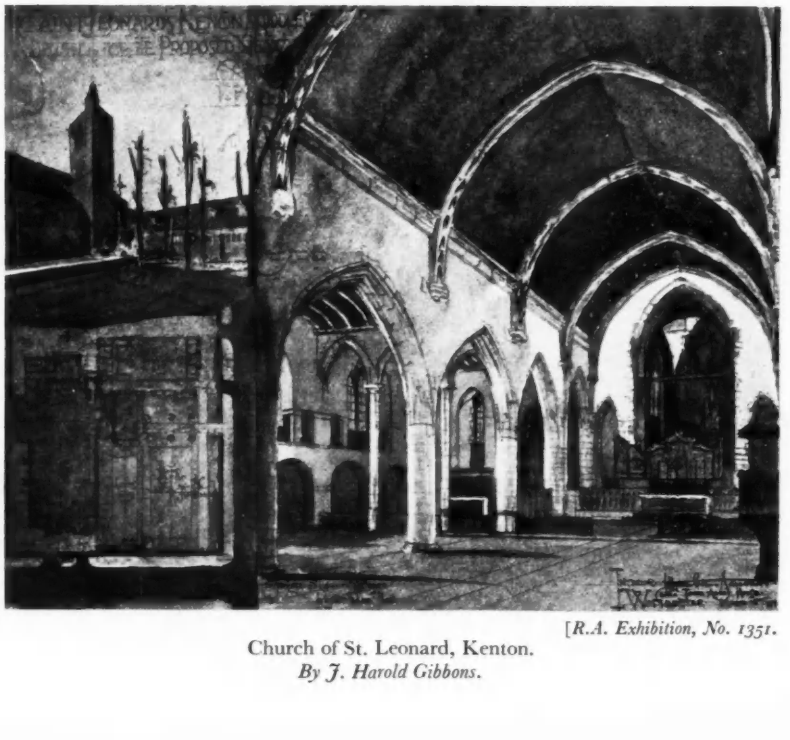


Drawn by J. D. M. Harvey.] [*R.A. Exhibition, No. 1463.*

Bournemouth High School for Girls.
By Thomas Worthington and Sons.

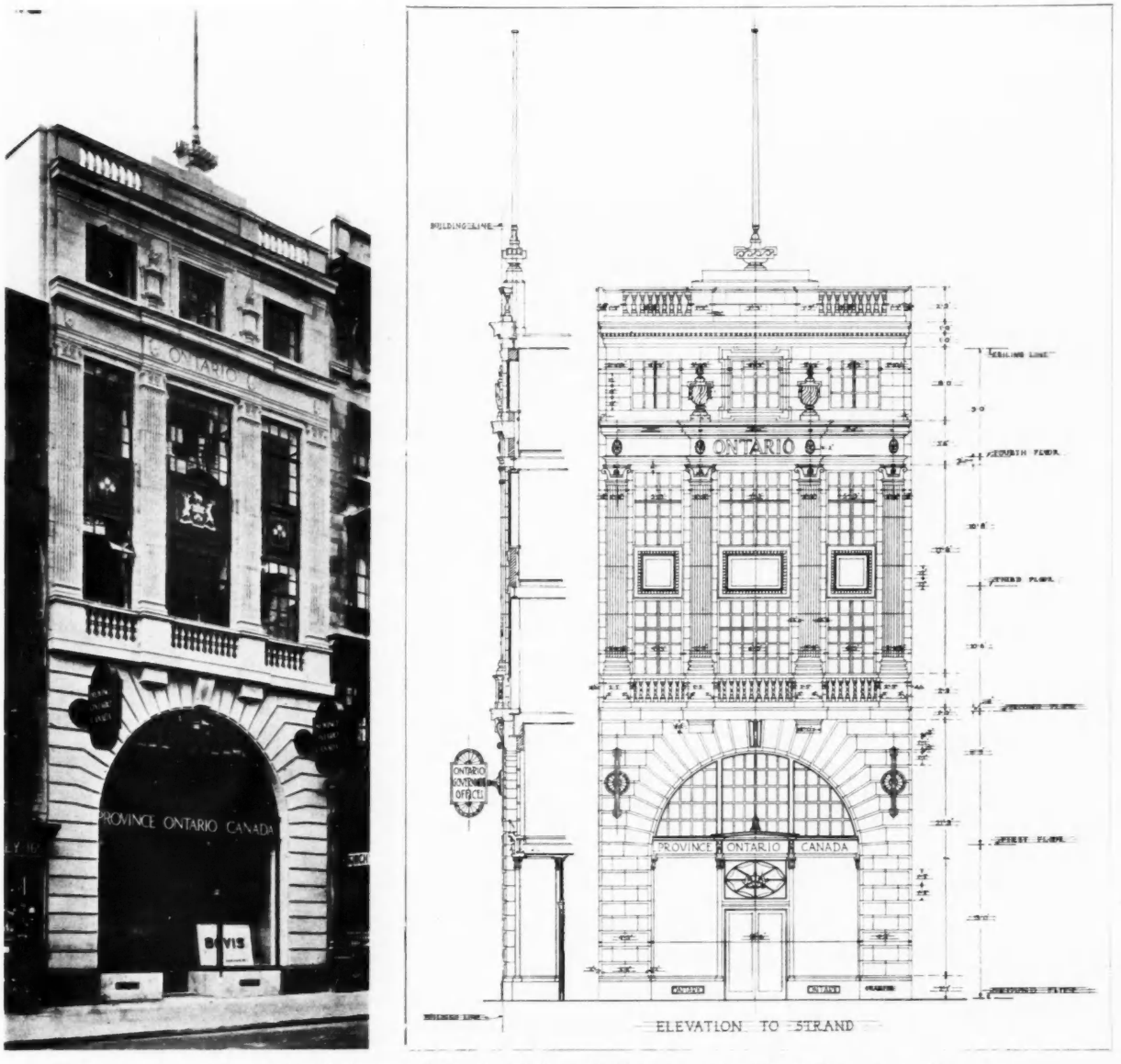
in the galleries for such splendid displays had doubtless made a great contribution to international understanding and good will.

Lord Treowen, proposing "The Royal Academy of Arts," said: In the comparatively short time of 163 years the Royal Academy had created a truly British school of art, characterized by an intense devotion to Nature. It had faithfully held up the mirror to Nature, and it had realized the dictum of Bacon that "the duty of Art is to exalt Nature." In order that Art should never fail in this country, the Royal Academy had maintained a great school for students in every department and branch of Art, presided over by the greatest artists of the day; and no man could relate what members of the Royal Academy had done by organization and by their own generosity to help struggling young students or those who had fallen on evil days. Art, so long as it was directed by such an institution, would never fail.



[*R.A. Exhibition, No. 1351.*

Church of St. Leonard, Kenton.
By J. Harold Gibbons.



A photograph and the architect's elevational drawing of the main front : a composition in Ontario granite and stone.

ONTARIO GOVERNMENT, HEADQUARTERS

163–164 STRAND, LONDON, W.C.

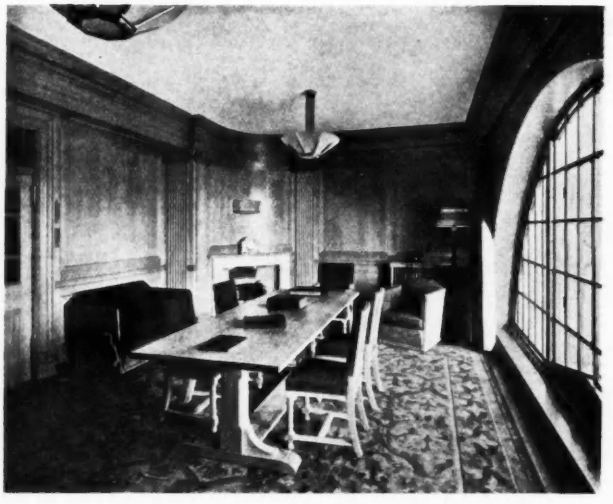
DESIGNED BY SEPTIMUS WARWICK

THE history of the Ontario Government offices in London goes back to the year 1908, when the ground floor and basement of No. 163 Strand were rented. Visitors to London from Ontario, however, expressed the feeling that their Government building ought to be on a much more pretentious scale, and this, and the growing importance of Ontario, which is rich in mineral resources, contributed to the decision to rebuild.

The front elevation of the new building rests on a massive arch two stories in height, rising from two large granite corner stones. Marble is used extensively for interior decoration, as well as for the base of the shop front and the entrance. The grey stone used for the front of the building and the marble were shipped in bulk to the London docks, where they were cut and worked by English labour.

Various woods representative of Ontario's immense forests have been employed. The walls of the reading and reception room and an office on the first floor are entirely panelled with Ontario pine, while, except where Canadian asbestos jointless floors were





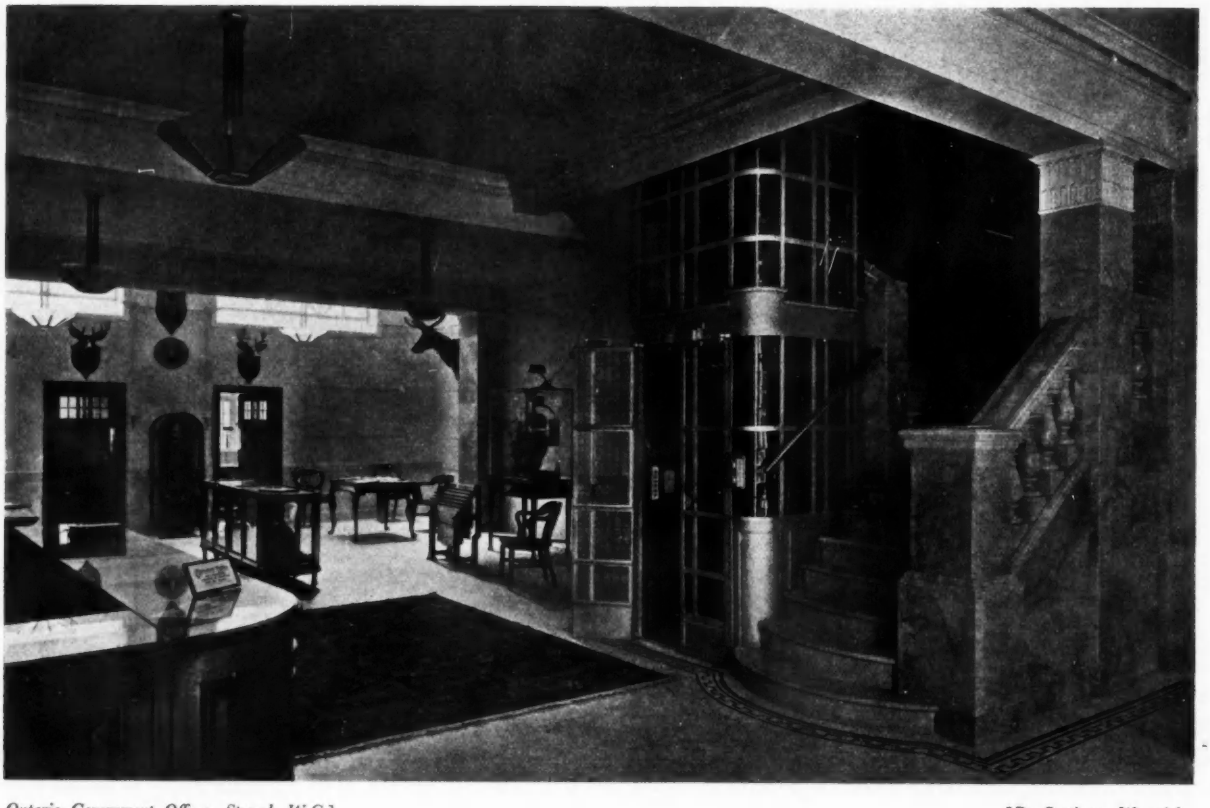
The Agent-General's office ; and the reading and reception room. Both are panelled in Ontario pine and have floors of Ontario birch.

required, the flooring is carried out in Ontario birch. All this wood was sent specially from the northern forests of the province.

Heating is provided for by an automatic oil burner and boiler in the basement, and is under thermostatic control. The supply tanks, situated under the pavement, are able to contain 1,000 gallons of domestic oil. The heating arrangements are concealed behind metal panels flush with the walls.

The main entrance to the building is paved with mosaic. The bronze doors from the street open into an exhibition hall 50 ft. by 30 ft. in area. On the first floor is the reading and reception room, the windows of which occupy the whole crown of the arch.

The Government insisted that the building from first to last should be all-British, constructed of British materials made by British workers. All the fireplaces, clocks, door-handles, finger plates and electric fittings are of nickel from Ontario.



Ontario Government Offices, Strand, W.C.] [*By Septimus Warwick.*

The exhibition hall. In constructing and decorating the building every possible use has been made of the products of Ontario.

LETTERS FROM READERS

The Ideal School Hall

SIR,—May I, though only the architectural and therefore the less important member of the pair of authors of the original article on the above, say a word on behalf of both of us, in answer to the interesting and benevolent strictures of your correspondents, Messrs. A. G. Alexander and F. H. Loweth.

The real trouble, Sir, lies with you: it was you who translated our humble title to give it more journalistic attraction, and called it "The Ideal" School Hall.

Now ideals differ, and to experienced school architects the ideal is naturally what they have for twenty years been struggling to achieve and make the real; so may we call it "a new idea for a school hall," and consider it only as that?

Many modern educationalists feel that though an annual play is a harmless way of showing off school talent to proud parents, it is of very little educational value. To them, acting is a form of expression for every boy—not just for a school team. Acting is to be practised constantly—not just on occasions. The stage is needed constantly—probably nearly every day, for one class or other. Mr. Alexander's only use for it, as "a place for the teaching of dramatic actions," reserves it to the sole use of the headmaster, and his "dramatic actions" are sometimes rehearsed only too often! No, the stage is what matters, the hall is merely there for convenience.

So with the library. The new idea is for every boy or girl to have access to the shelves, to have time to browse among books.

It should be possible for whole classes of pupils to spend periods of work in the library, and get in one another's way as little as possible So the old idea of the single room, with books round the walls, to be read by a few studious pupils at a table in the middle, and to be taken away with permission of the librarian—a circulating library, in fact—has to yield to something in the nature of the monks' common room, the cloister.

The inadequacy of the gallery as a gallery for seeing from, I admit: but it is the gallery, as such, not the stage, that will only be used "once or twice a year for play purposes." No, our stage is for work—and some of the most important work on the new school curriculum.

As for the flat roof, I must plead guilty—Mr. Happold is indifferent, while I have (dare I confess it, in the pages of this most respectable JOURNAL?) a sneaking affection for the school buildings of Germany, and a slight suspicion that the future may introduce new ways even to Mr. Alexander's "present-day school architects fully acquainted with educational progress and possessing expert knowledge of school design."

H. C. HUGHES

The Smoke Problem

SIR,—I was most interested to read in THE ARCHITECTS' JOURNAL for April 22 a letter from A. H. H. on the above subject, and would like to refer to this, and at the same time to take the opportunity of referring to the letter of Mr. Arnold Marsh in your issue for April 1. I have hesitated to ask for further space for the discussion of this matter, but the letter from A. H. H. is, perhaps, proof of the interest taken by some of your readers.

I am interested in A. H. H.'s suggestion that the architect is sometimes apt to leave heating problems to the heating engineer, and at the same time I appreciate his points regarding unsuitable grates. The smokiness or otherwise of a coal fire, and indeed the efficiency of all solid fuel-heating apparatus, depend to a very great extent on how the flue is constructed. These things also, of course, depend upon the suitability of the plant for the purpose in question; yet, however suitable the grate, stove or furnace may be, it depends absolutely on its flue to ensure or to mar proper combustion.

The problems connected with these matters are many and complicated, and I would like to offer the assistance of this Federation to anyone who is interested in questions relating to heating and cooking, whether they involve open fires, slow-combustion stoves, central heating, independent boilers, kitchen ranges, combined stoves, or a combination of all or any of these appliances. I hope that in the near future we shall be inaugurating a good deal of research relating to these problems; but at the present time there is a large amount of information and data available which can be put to good use.

If I may now refer briefly to Mr. Arnold Marsh's letter, especially as the problem is very much wrapped up with the letter of A. H. H., I would say that my Federation is as anxious as the Smoke Abatement Society to lessen the amount of smoke and dirt issuing from domestic chimneys; but there can be no doubt that the proper way to secure this is not necessarily by an endeavour to cease using raw coal and to employ only "smokeless" fuels, but the efficient use of solid fuel, whether coal or coke, and gas and electricity, each for the purpose for which it is best suited.

Bituminous coal can already be burnt efficiently, and with a minimum of smoke, in certain of the latest kitchen ranges and combined stoves. I am confident also that research will, in the near future, indicate that it is possible to burn raw coal almost smokelessly in the open grate. Some of the modern grates come very near to achieving this already. On the other hand, in certain domestic appliances, coke or anthracite give far better results than bituminous coal.

In conclusion, Sir, I would like to thank you for your great courtesy in devoting so much space to this matter, and to say how very pleased my Federation would be to co-operate with those outside the fuel industry to whom these problems are of serious moment.

GEORGE GENTRY
(SECRETARY, THE COAL MERCHANTS' FEDERATION OF GREAT BRITAIN)

Homes To Live In

SIR,—Your leading article, "Homes to live in," in your issue for April 22, gives acute expression to what must have been the feelings of many architects visiting the present exhibition at Olympia.

That particular conception of the "Ideal Home" to which you refer has generally, in past years, been presented by responsible architects. This year, however, there are three houses, out of a total of seven, sponsored entirely by commercial firms. Two are by a company that will supply ". . . a house designed and built to meet . . . own individual ideas . . . all at one inclusive cost. . . ." None of these three houses bears the name of its actual designer. Next year there may be six houses by such firms. The actual presence, lamentable as it is, of these houses gives one less cause for alarm than the fact that they will be assimilated by the public that sees them as examples of authentic domestic architecture. The large public that go annually to see the exhibition houses have been made architect-conscious by those competitions for concrete houses and the like that the promoters of this exhibition held a few years ago. They are probably half aware of the gulf that lies between a properly designed house and the usual commercial proposition.

They have for years seen houses at this exhibition that really were designed by architects. They will never recognize this other seductive thing for what it really is, and, all unknowing, will accept the firm that "specializes in

'architect - designed' houses" and "builds anywhere" as inevitable. One more nail in the coffin of the practising architect. Where, one well may ask, lies his future in that perennial "Village of Ideal Homes"?

There has been no commendation of Mr. Tanner's achievement in introducing uniform stands and lettering throughout this exhibition. This must have been an Herculean task. The improvement is especially noticeable in the old main hall. Even the stands up in the galleries, where they sell trifles, and where the "home-lovers" fight for free soup, were uniform. But why is the first flight of the fine staircase in the new building invariably hidden behind a heap of stands?

R. W. C.

QUESTIONS THAT ARISE

Road Widening

"East Devon" writes: "*The accompanying block plan shows the site of two proposed semi-detached houses at the junction of a narrow road (10 ft. to 15 ft. wide), with a main road 25 ft. wide. The former is a very old one leading to a small farm and a former brickyard (the latter now being a builder's yard), and was a private road until about fourteen years ago, when the U.D.C. acquired some land adjoining the same road and built twelve houses. This road is now the only carriage-way to this housing scheme, and contains the sewers, gas and water mains.*

"*On the block plan is shown a strip reserved for road widening, which has not been sold with the sites, the intention being that it will be used by the owners of the sites until such time as it is required for future widening. Drawings of the houses have been submitted to the U.D.C. for approval, and an intimation has been received by the builder—not 'official,' but by word of mouth—that the surveyor is to advise the Council not to approve of the drawings unless the road widening is first done by the owner and at his expense, although the drawings are stated to be all in order.*

"*Has an U.D.C. any power to make or enforce this decision? No town-planning scheme has been adopted for this district. Road widening has been carried out on a mile or so of main road frontage, where a similar strip of land was reserved by the same vendor and dedicated to the U.D.C. without cost for this purpose, and the fact that the works carried out have cost much more than the estimate has caused the above decision to be arrived at. Can the Council withhold approval of deposited plans to enable them to take steps to adopt any provisions of any Act giving such powers?*"

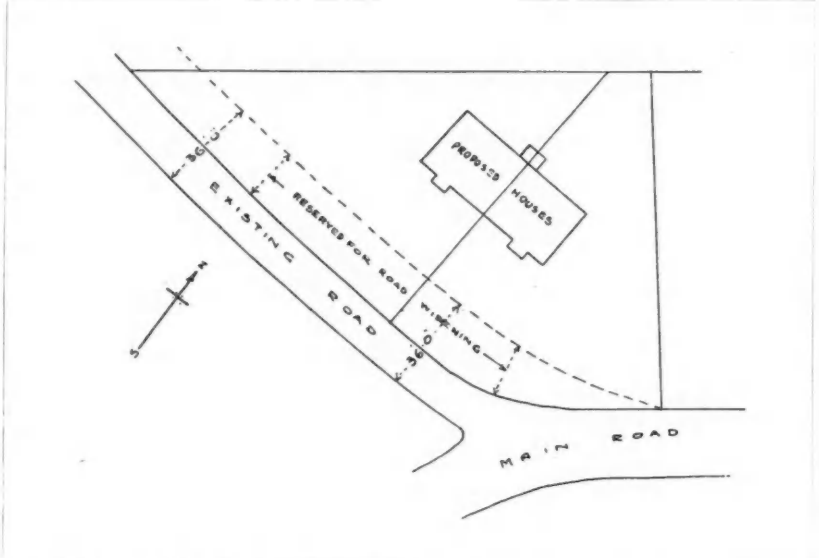
Section 30 of the Public Health Act, 1925, provides that where it appears to a local authority that the whole or any portion of an existing highway will be converted into a new street, as a consequence of building operations which have been, or are likely to be, undertaken in the vicinity, the local authority may by order declare such highway, or such portion thereof as may be specified in the order, to be a new street for the purpose of the application thereto of their bylaws with respect to new streets.

Notice of the intention to make an order must be posted at each end of the street, and appeal against the making of the order may be made to quarter-sessions.

Upon such an order coming into operation, any person who shall commence to erect a new building upon land abutting on or adjoining the highway covered by the order shall be deemed to be laying out a new street within the meaning of the local bylaws.

It would appear, therefore, in the case quoted, that if the local authority have adopted the relevant portion of the Public Health Act, 1925, and have subsequently made an order declaring the portion of the existing street opposite the proposed houses to be a new street, they can insist on the provision of a new street in accordance with the local bylaws.

A local authority would not appear to be entitled to withhold approval of deposited plans, to enable them to take steps to adopt the relevant portion of the Act, or to make an order.



Part plan of site of two proposed semi-detached houses at the junction of a narrow road. (See query on "Road Widening.")

Lead Nails

F. P. K. writes: "*I am told 6-in. lead nails are the means of fixing slates to roofs of breweries, gasworks and chemical works, or where noxious fumes are likely to be met. I cannot find any authority for this, or precisely why 6-in. lead nails. A firm of manufacturers informs me that the nails are dropped through holes in slates and twisted round battens. What is your expert's opinion on this matter?*"

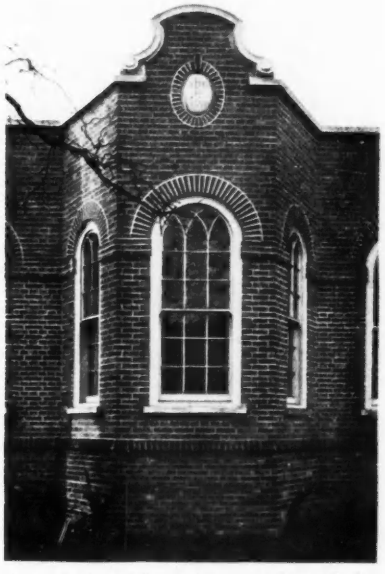
Textbooks state that for roofs of gas and chemical works, or where sulphurous fumes are prevalent, copper or zinc nails must be avoided and heavy lead nails substituted. As lead nails are too soft to be driven, it would be necessary to wrap them round the battens, but for ordinary 2-in. by 1-in. wooden battens a length of $4\frac{1}{2}$ ins. would be ample. I should suppose the 6-in. length referred to is meant for wrapping round angle iron purlins close spaced to serve as slate-fixing between steel trusses without common rafters.

On the other hand, a case was recently reported on by D.S.I.R. where fumes from a pickle factory (acetic acid) had destroyed the lead covering of patent glazing bars. It is well known that oxygen and carbon dioxide in solution will also destroy lead, so that it would be well for your correspondent to be satisfied as to the exact nature of the fumes to be feared, as it is possible that metallurgists can now supply some harder metal with better powers of resistance.

E. G.



A portion of the east front. The end window on the ground floor lights the workers' room; the next two circular-headed windows are to the cookery, and the remainder to the craft room. The window on the first floor lights the living room of the caretaker's residential flat.



A near view of the bay window of the east elevation shown above.

INFANT WELFARE CENTRE, BIRMINGHAM

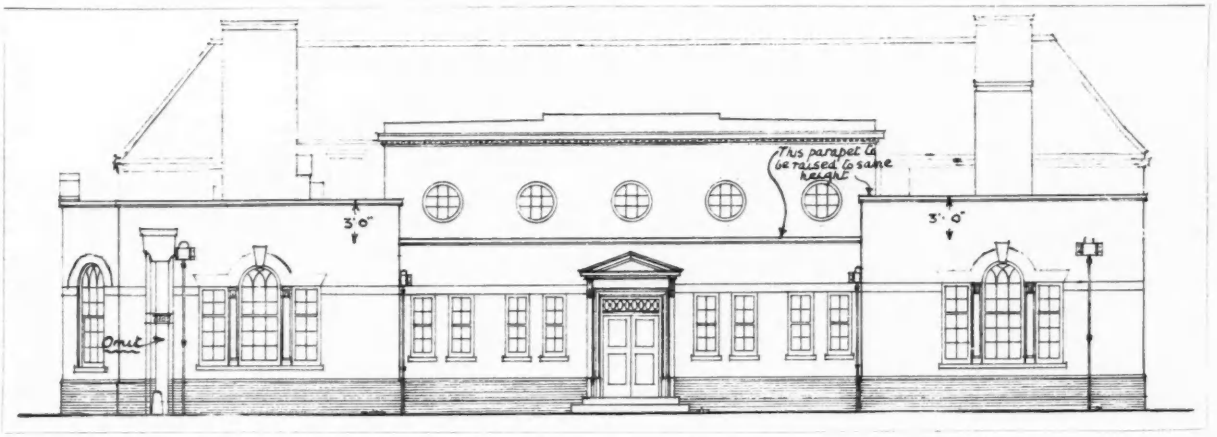
DESIGNED BY
HARVEY AND WICKS

THE erection of this infant welfare centre at Stirchley was due to the generosity of Alderman and Mrs. W. A. Cadbury, who not only provided the necessary funds but took the greatest interest in the planning and furnishing of the various features. The building stands in a densely populated district of Birmingham, the welfare work being carried on under the auspices of the Public Health Committee of the City Council.

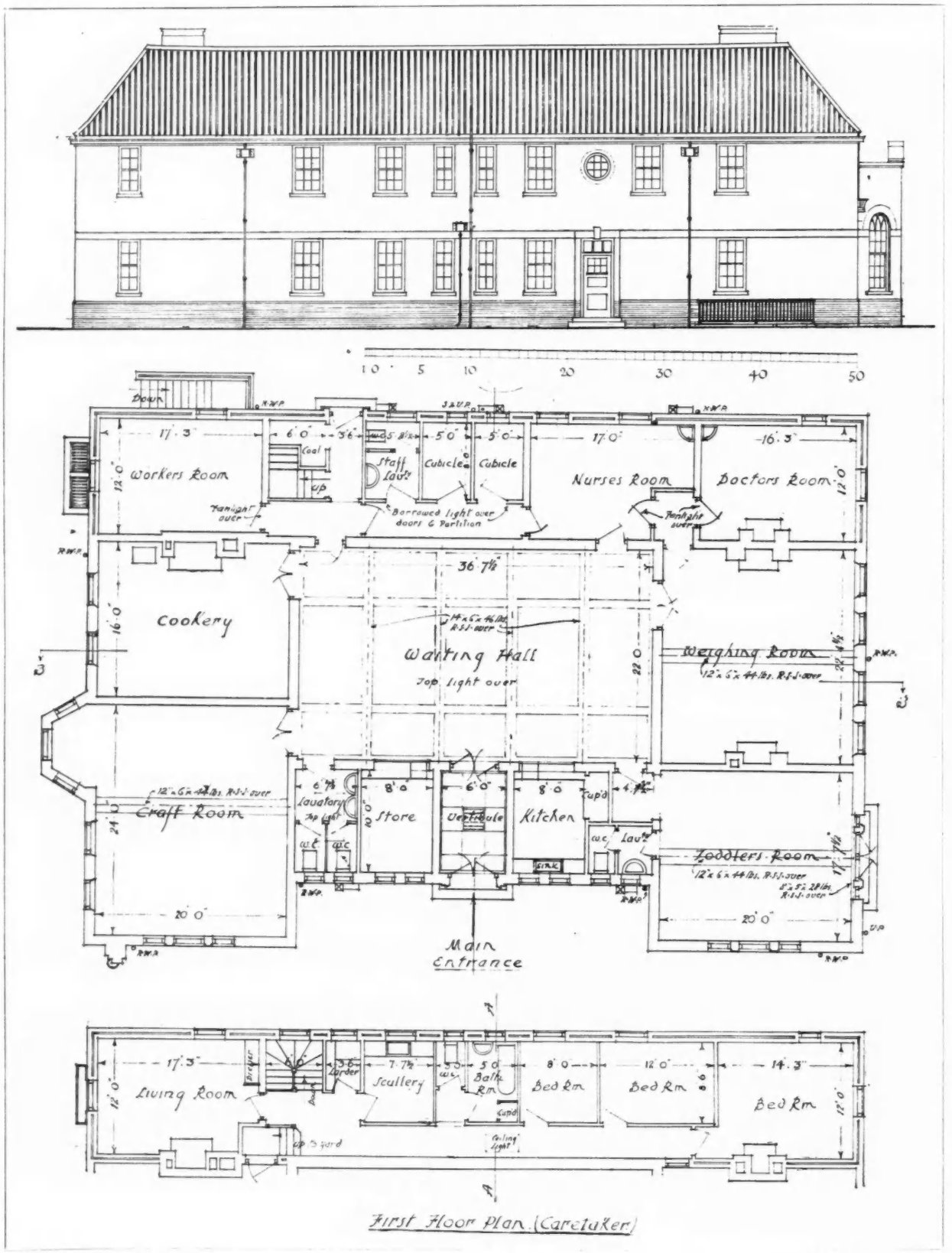
The site has a frontage to Charlotte Road, and is oblong in shape, extending in depth to something like twice its width. Facing Charlotte Street is the east elevation, set well



The entrance doorway in the main, north front. It leads to the waiting hall.



The architects' drawing of the north elevation. As will be seen from the photograph on this page, the main entrance was re-designed after the working drawing had been rendered. In the left wing is the craft room; in the right, the toddlers' room.



Infant Welfare Centre, Birmingham.] [*By Harvey and Wicks.*

South elevation; and ground- and first-floor plans (south is at the top). The caretaker's flat occupies the first floor, and is planned in the rear portion of the building. In the basement beneath the workers' room are the heating chamber and coal and coke stores.

back from the road, from which it is separated by a garden. On the right- and left-hand sides of the site are two private pathways leading respectively to the north front and to the south elevation, and both serving the children's playground at the rear.

The main entrance forms the central feature of the north elevation and leads through a vestibule into the waiting hall, from which easy and direct access is obtained to every part of the welfare centre.

On the east side of the waiting hall, overlooking Charlotte Road, are craft and workers' rooms and the cookery; and on the west are the rooms for the doctors, and toddlers and for weighing. On the south side are the nurses' room and two dressing cubicles.

In planning the building, care was taken to provide a separate corridor, approached from the waiting hall, connecting the doctors', nurses' and workers' rooms and the dressing cubicles. This arrangement ensures the greatest privacy for the staff and allows for intercommunication between these rooms without passing through the waiting hall.

Along the fence at the rear of the building is a shed for the storage of perambulators. The playground is provided with a sand-pit, and other amenities, for the children.



In the waiting hall, looking towards the weighing room, the door to which is seen on the left. The other doors from left to right lead, respectively, to the toddlers' room, kitchen (with tea hatch), vestibule and store.



Infant Welfare Centre, Birmingham.] [*By Harvey and Wicks.*

The craft room, among other features, was added at the suggestion of Alderman and Mrs. W. A. Cadbury, through whose generosity the building has been erected. The bay window on the right overlooks the garden towards Charlotte Road.

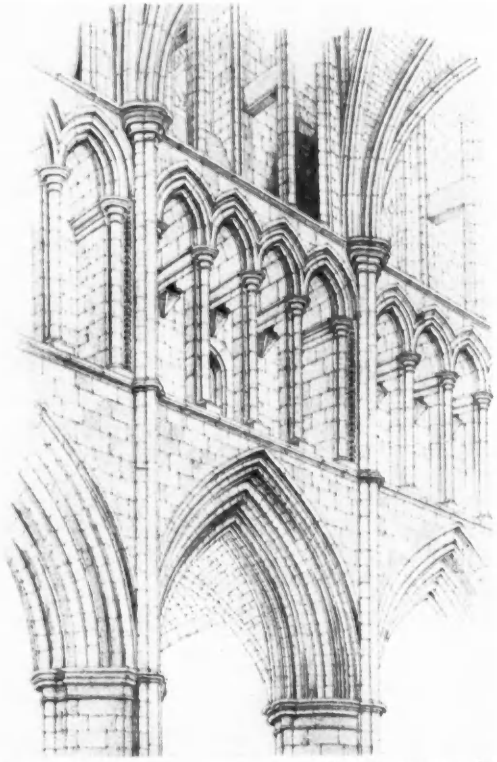
THE SKETCH CLUB

TWENTY-EIGHTH SESSION



Stonehenge, Wiltshire.

By W. E. Wilmshurst. (Pencil: 21″ × 7½″)



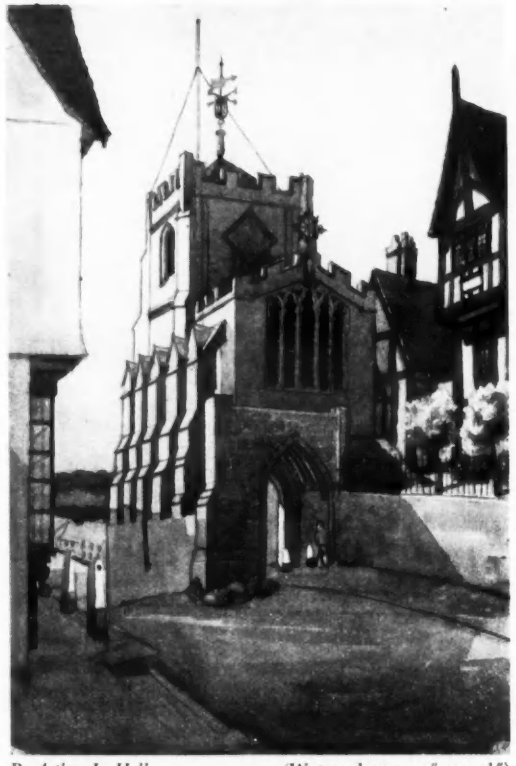
By Frederick Chatterton. (Pencil: 7½″ × 11¼″)

Central Bay, North Side of Choir, Southwark Cathedral.



By Ronald Knight. (Pencil: 8½″ × 9¾″)

Off Billingsgate.



By Arthur L. Hall. (Watercolour: 15″ × 22½″)

Westgate, Warwick.



By R. A. F. Riding.
(Pencil : $8\frac{1}{4}'' \times 11''$)
St. Peter's Church, Walworth, S.E.



By P. M. Stratton.

At Sherborne.

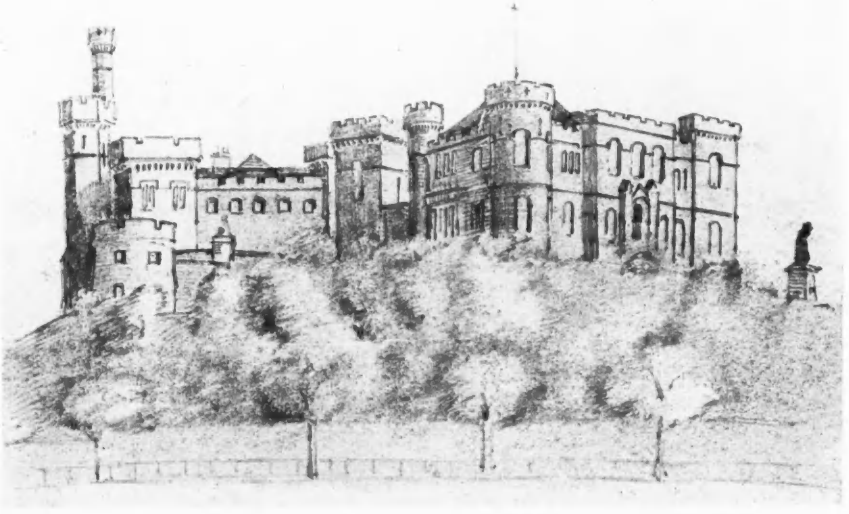


(Pencil : $10'' \times 10''$)

By R. A. F. Riding.
(Pencil : $5\frac{1}{2}'' \times 8\frac{1}{2}''$)
Rue de la Grosse-Horloge, Rouen.



By James E. Rhind.
(Pencil : $9\frac{3}{4}'' \times 5\frac{1}{2}''$)
St. Andrew's Cathedral, Inverness.



By James E. Rhind.
(Pencil : $9\frac{3}{4}'' \times 5\frac{1}{2}''$)
Castle and Flora Macdonald Monument, Inverness.



The main front. The walls are of multicoloured clamp bricks from Horeley, built with a flush mortar joint; and the roof is covered with hand-made sand-faced tiles, with bonnet hips. The steel windows are of the casement type, built into teak frames.

HOUSE IN BISHOP'S AVENUE, FINCHLEY

DESIGNED BY G. ALAN FORTESCUE

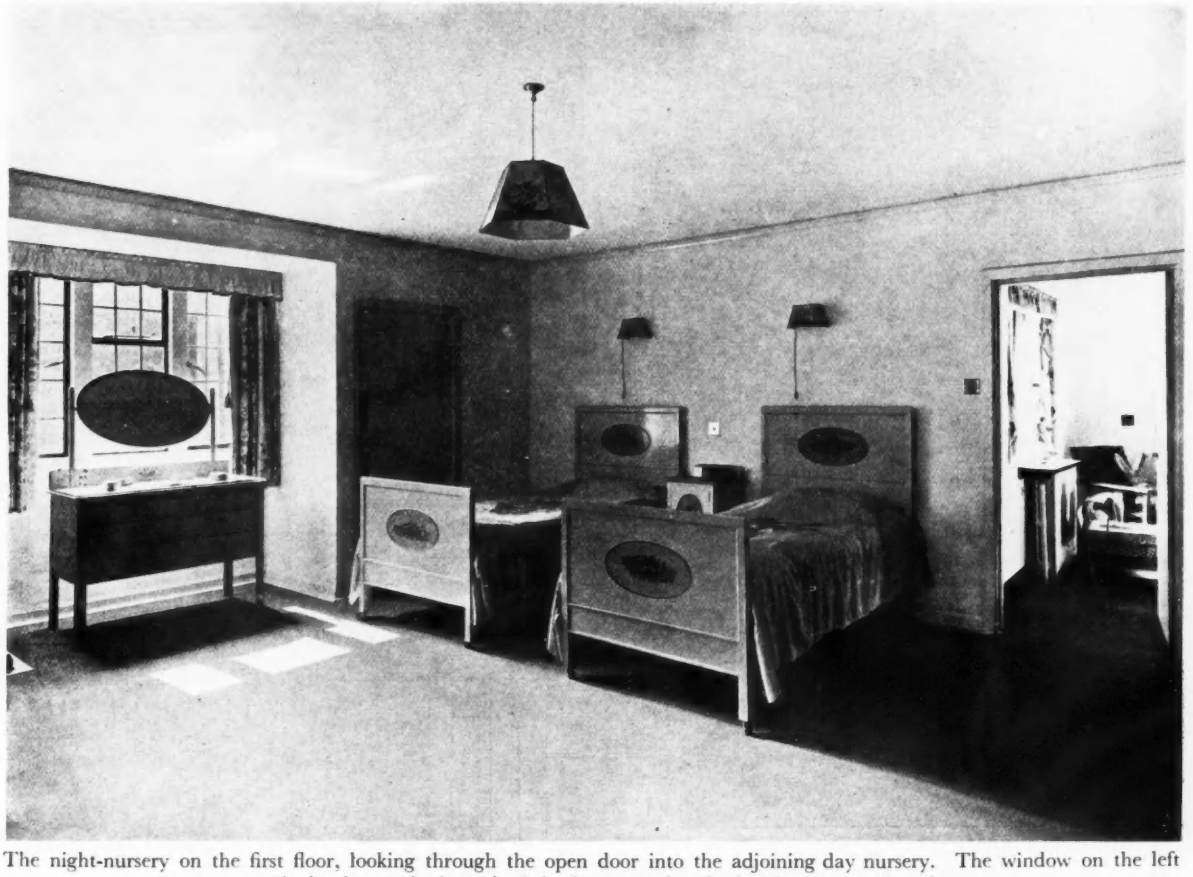
"GREENTREES," Bishop's Avenue, Finchley, is situated on a steep slope rising from the road. In order to avoid deep excavations the architect has planned a long house, with the garden front facing due east.

As will be seen from the plans reproduced on the facing page, the main entrance is situated between two projecting bays, and gives access to a square hall. Interesting features of the planning are the corridors on both floors, planned one above the other, and running practically the whole length of the house. The floors are covered with oak in narrow widths, and the doors are of the flush panel type, painted.

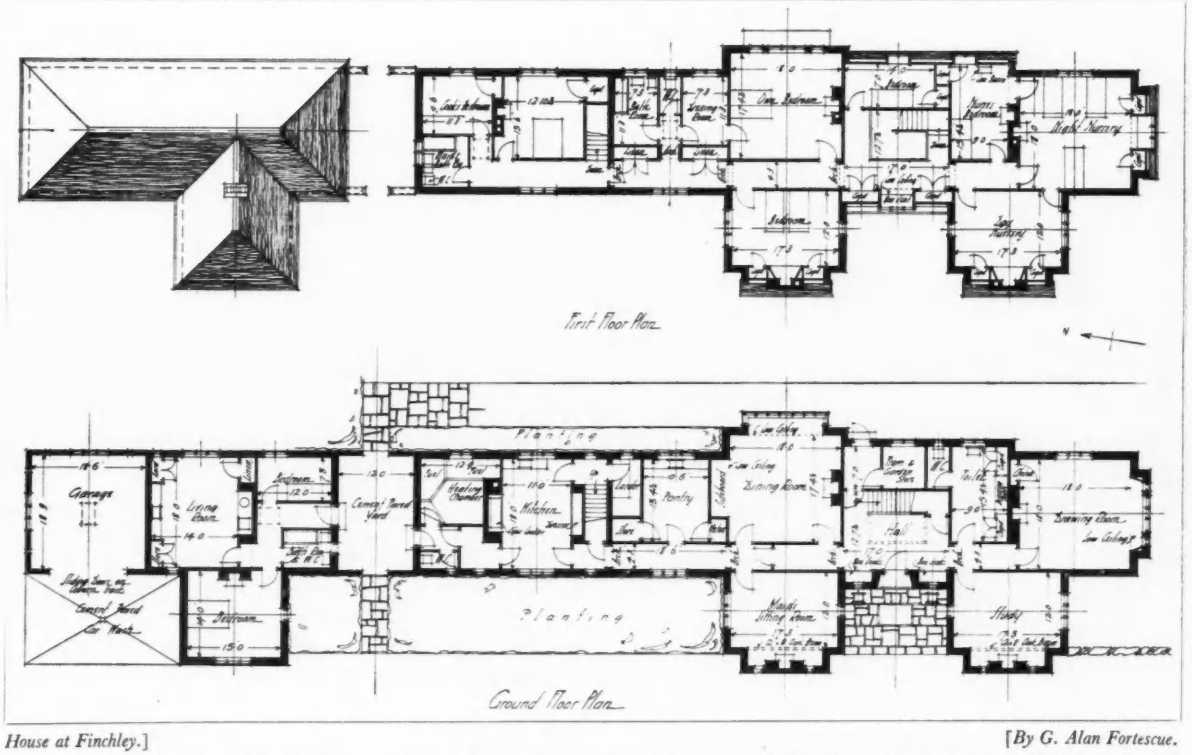
The house is separated from the chauffeur's cottage by a cement-paved yard, enclosed by low brick walls, thus obscuring the cottage and tradesmen's entrances from it. The bungalow is provided with an independent boiler with flow and return pipes running through the adjoining garage for heating purposes.



A general view of the garden front, looking towards the north-west. The garden was formed by cutting into the deep slope of the site and conveying the earth to the front of the house to form a terrace. On the extreme right is the chauffeur's bungalow.

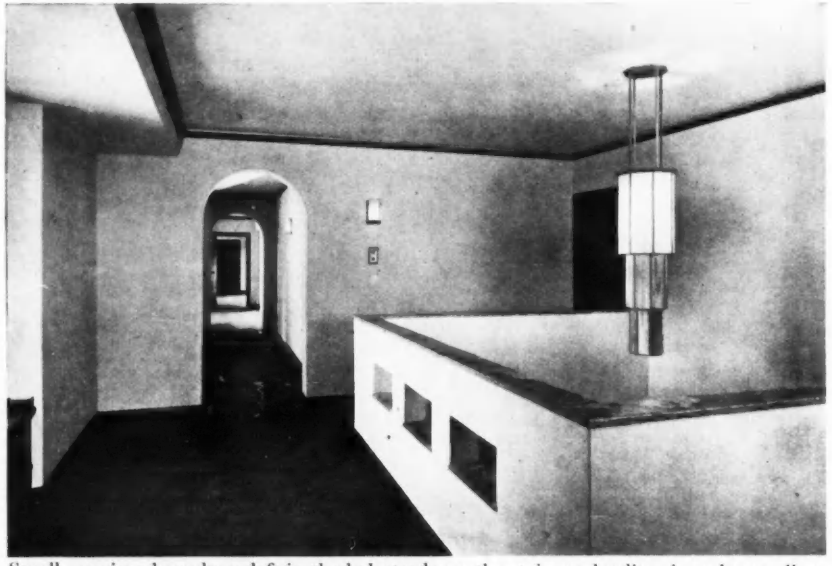


The night-nursery on the first floor, looking through the open door into the adjoining day nursery. The window on the left overlooks the southerly end of the house, and is flanked by two cupboards.



House at Finchley.] [*By G. Alan Fortescue.*

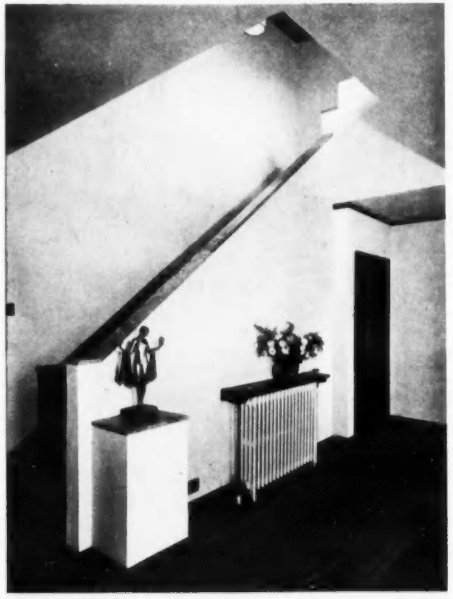
Ground- and first-floor plans. The main entrance is situated between the two projecting bays housing the maids' sitting-room and the study respectively. All the main rooms have been planned to face east.



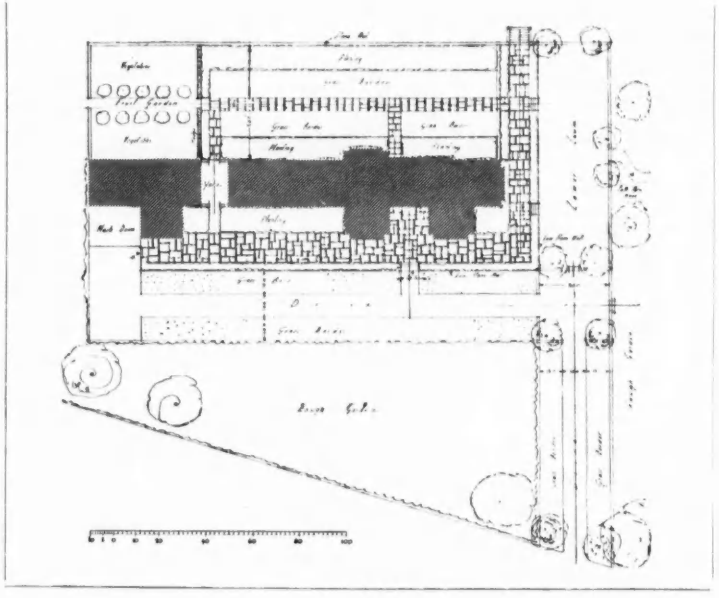
Small openings have been left in the balustrade on the staircase landing in order to allow the sun to penetrate through from the landing window in the recess on the left of the illustration, part of which is here shown.



The toilet room on the ground floor has been laid with rubber flooring, and adjoins the drawing-room. The window shown, as in the rest of the house, is of steel built into a wood frame, with lead glazing.



House at Finchley.]
The staircase wall is built solid with 4-in. breeze, and has a plastered surface.



The layout plan. In order to avoid deep excavations, a long house was planned, with the garden front facing east. The garage is on the left.



[*By G. Alan Fortescue.*
Looking through the entrance hall, towards the corridor leading to the kitchen quarters.

A NEW CHURCH AT PRAGUE

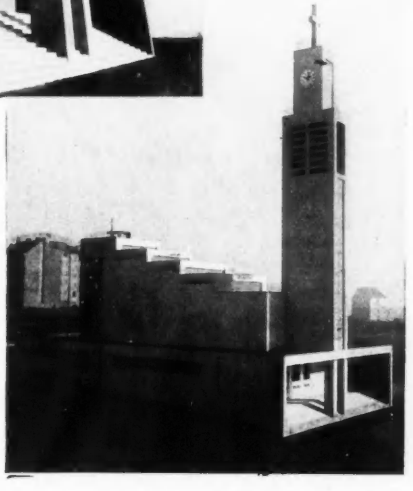
Designed in Concrete

BY

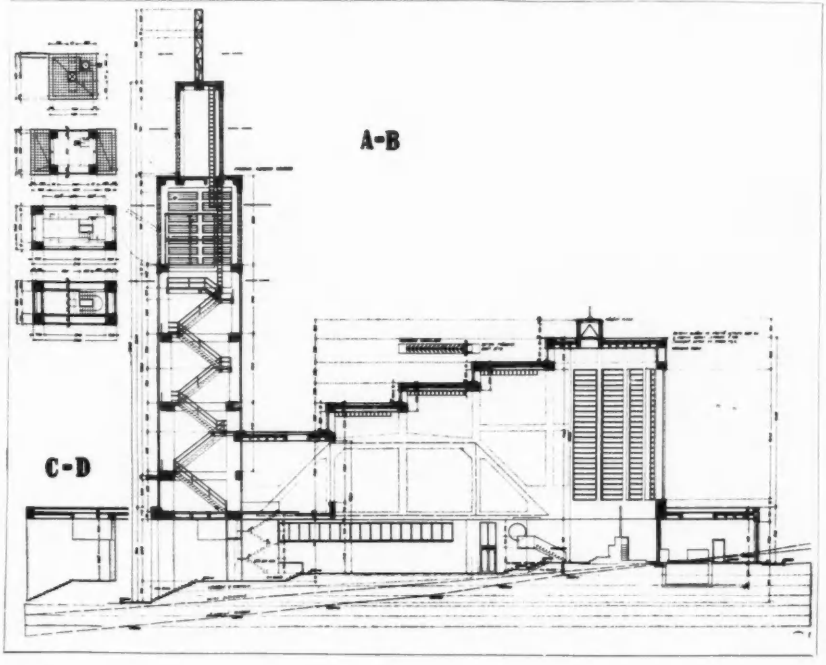
JOSEF GOČAR

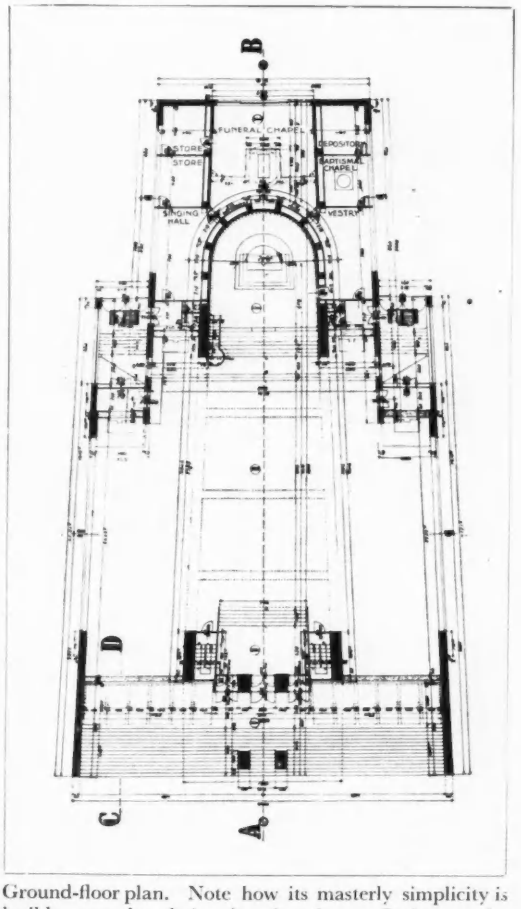


A worm's-eye view of the porch and steeple; and a side view showing the stepped-back roof of the nave.



Longitudinal section. As will be seen from the accompanying photograph of the side elevation, two of the bearing points of the louvred steeple are carried through the wide soffit of the porch and the entrance steps.





Ground-floor plan. Note how its masterly simplicity is legibly reproduced in the elevations. Owing to the sharp rise of the ground, the flat-roofed nave has been stepped up in four gradations.

AMONG the many interesting features of the May issue of *The Architectural Review* are illustrations, some of which are reprinted on this page, of Josef Gočár's Roman Catholic Church in the Vršovice suburb of Prague.

This building, writes Mr. P. Morton Shand, is one of the most outstanding examples of reinforced concrete used logically as such, and affords an interesting contrast with the Raincy and Montmagny churches of the brothers Perret, and Karl Moser's St. Anthony's Church at Basle, built of the same material. Josef Gočár is Professor of Architecture in the Prague Academy, and was responsible for the design of the Czechoslovakian national pavilion in the Paris Exposition des Arts of 1925.

The number also contains Mr. Nathaniel Lloyd's concluding article on "A History of the English House." This work has been appearing in serial form in the *Review* and is the most comprehensive history of the subject yet written.

Mr. John Betjeman contributes an illustrated article on the situation, history and architecture of Sezincote, Moreton-in-Marsh, Gloucestershire.

LITERATURE

ARCHITECTS OF TODAY

TO dare to publish and expect to sell a book about the lives and works of living architects bespeaks a confidence in the public interest in these matters that could hardly have been justified a few years ago.

To architects it is a matter of absorbing interest to know just how their masters reached eminence, and it should be no less interesting to an educated public, only half-schooled in the importance of architecture as an influence upon its environment, to recognize the authority of great architects for what it is worth to such an astute recorder as Professor Reilly.

The very bulk of his architectural writings, carrying him over a wide and generous field, would fit Professor Reilly for the task he has set himself in this volume; but much more than this, his human and personal interpretation of the architectural life of his time make him a Vasari to the present day, a critical recorder of the works, and now the lives, of his fellow-architects.

As he says in his preface, the anonymity of the modern architect is a rather pretentious thing . . . suggesting the solicitor or the stockbroker rather than the creator. And it was not always so. The great folios of their work published by Robert Adam and Sir William Chambers were connected expositions of their contribution to taste, which in these days, and for architects with even greater bodies of fine work to their credit, is to be found scattered in a dozen periodicals over a long period of time. One can think at once of half a dozen men whose collected works, in photographs, drawings and sketches, would become the treasured possessions of a wide circle of admirers. And at what a gain to architecture as a whole !

Profusely illustrated as this present book is, and readable as only Professor Reilly could make it, it would be pleasant to regard it as but the introduction to a revived practice of unveiling the shrouded lives of the great. How stimulating for selected young architects to be allowed to collect and edit the work of the accredited giants of their day ! The practice could be recommended as a salutary antidote to school training, and a means of closing the gap which is supposed by some to separate the older from the younger generations.

E. M. F.

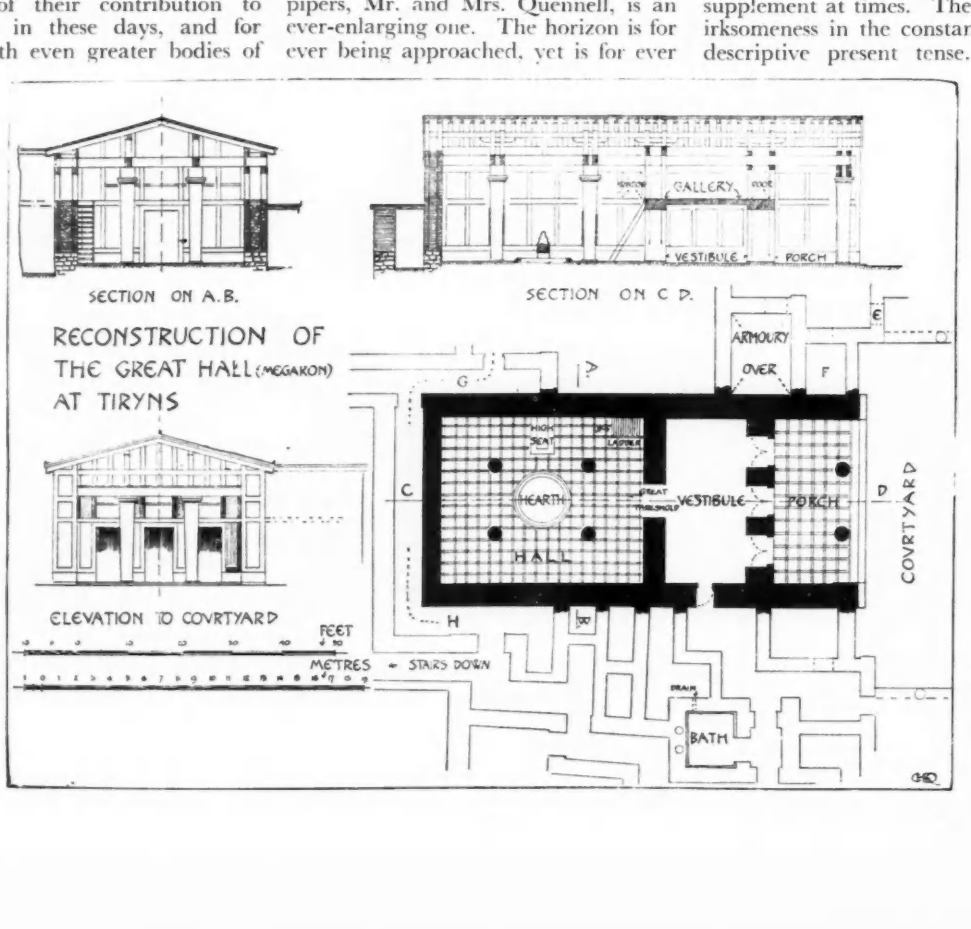
Representative British Architects of the Present Day. By Professor C. H. Reilly, O.B.E., M.A., F.R.I.B.A. London : B. T. Batsford, Ltd. Price 7s. 6d. net.

EVERYDAY LIFE IN HOMERIC GREECE

THE "Everyday Life" habit, once acquired, remains and grows. The field of scholarly-casual rambles in history, art, science and literature on which the younger generation, and their elders too, follow those irresistible pipers, Mr. and Mrs. Quennell, is an ever-enlarging one. The horizon is for ever being approached, yet is for ever receding, leaving fresh hills and valleys, towns and forests to be explored. *Homeric Greece* has the charm of fairyland without all the drawbacks. No need for the most matter-of-fact to hesitate to join the tour on the excuse that it isn't really true. For even if the people and the places, the adventures and the episodes, are "only poetry," they are at any rate from poetry reflecting as faithfully as did Shakespeare's plays the everyday life of real people and places, and their ideas and aspirations.

Moreover, in this book there are the usual vivid, lively sketches and plans which act as the pointing finger of the leader of the ramble to focus the eyes of the eager party upon some particularly entertaining, beautiful or interesting feature of the landscape. The illustrations this time are chiefly taken from Greek vase paintings, though there are also photographs and reconstructions.

The manner of this volume is perhaps rather less satisfactory than its predecessors, since the outlines of the voyage of the Argonauts, and the Iliad and Odyssey stories, are told too briefly to be quite interesting for their movement, yet too fully to be regarded merely as "stills," as modern jargon has it. In the telling, either too much or too little previous acquaintance with the stories is assumed, and for the diligent boy and girl "of public school age" a dictionary may be a necessary supplement at times. There is a slight irksomeness in the constant use of the descriptive present tense. For such



Plan, elevation and sections showing the reconstruction of the Great Hall (Megaron) at Tiryns.

[*From* Everyday Things in Homeric Greece. *By Marjorie and C. H. B. Quennell.*]

long stories even the baldest of narrative past tenses might be a pleasanter method of conveying the cream of the various books.

From chapter iv onwards, however, the road is more straightforward, and actual objects, buildings, pottery, arms and decoration are presented to the ramblers, beginning with the Lion Gate at Mycenæ and the Treasury of Atreus, and proceeding to discussion of Tiryns and the construction of the Megaron in the light of the story of Odysseus and Penelope.

Here and there are typical examples of the characteristic clear thinking and clear drawing which are so well known in these unique books. Such, for instance, are some of the reconstructions of the loom, the lock, and the wooden gates filling the space beneath the great lintel at Mycenæ. But the whole is a trifle disjointed, which is not surprising when the fragmentary and conjectural nature of available material is considered, and while so great a quantity of evidence is constantly being discovered in regard to the complexity and distinctive character of the ancient civilizations with which the book is concerned.

No doubt the volumes designed to follow this will display qualities which this lacks, for a greater coherence and clarity is possible where archaic and classical Greece are concerned than in the dim, half-mythical, half-modern Homeric period. V. M. C.

Everyday Life in Homeric Greece. By Marjorie and C. H. B. Quennell. London: B. T. Batsford, Ltd. Price 5s. net.

Publications Received

Modern Interiors in Colour. By Julius Hoffmann. London: B. T. Batsford, Ltd. Price 38s. net.

Builders' Business Management. By J. H. Bennett. London: Sir Isaac Pitman and Sons, Ltd. Price 10s. 6d. net.

Austria. By J. D. Neweth. London: A. and C. Black, Ltd. Price 7s. 6d. net.

The Furniture Year Book, 1931. London: National Federation of Furniture Trades.

Krankenhausbau in Neuer Zeit. By Heinrich Schmieden. Berlin: Kurt Schmersow.

Brighter Welsh Villages. By T. A. Lloyd. Society for the Preservation of Rural Wales. Price 3d. net.

Electricity for Everybody—Handbook for 1931. By R. Borlase Matthews. London: Electrical Press, Ltd. Price 5s. net.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

The Architects (Registration) Bill

THERE was little discussion in the House of Lords on the second reading of the Architects (Registration) Bill, although Lord Crawford intimated that he would move amendments in Committee. The Bill was read a second time without a division.

Imported Roofing Slates

At question time in the House of Commons Mr. W. Graham, President of the Board of Trade, said that during the years 1927, 1928, 1929 and 1930 the total weight of slates for roofing imported into the United Kingdom amounted to 46,317, 45,131, 47,846 and 44,510 tons respectively, the declared value being £311,682, £297,062, £304,999 and £275,169 respectively.

Guardianship of Monuments

Mr. Lansbury, the First Commissioner of Works, stated that according to the records of the department the guardianship of the following monuments had been declined in the last three years:

Aberdour Castle, Fifeshire; Bardney Abbey, Lincoln; Buckenham, The Hall, Norfolk; Buittle Church, Kirkcudbright; Dunure Castle, Argyll; Dale Abbey, Derbyshire; Ffynnon-Fair (Holy Well) Pen-Rhys, Glamorgan; Kilneuair Church, Argyll; Loughor Castle, Glamorgan; Lymore, Montgomery; Pant-y-Saer Dolmen, Anglesey; Paston Great Barn, Norfolk; Skelbo Castle, Dornoch, Sutherland; Taunton Castle, Somerset; and Woodhenge, Wiltshire.

Floor Area of the new Montagu House

Mr. Lambert asked the First Commissioner of Works what was the total floor space on each floor to be provided in the new building which was proposed to be erected on the Montagu House site, at an estimated cost of £2,355,000.

Mr. Lansbury said that the estimated office floor space—i.e. excluding corridors, lavatories, etc., and basement storage accommodation—which would be provided on each floor in this new building was approximately as follows: Lower ground floor, 69,000 ft. sup.; ground floor, 69,000 ft. sup.; first to eighth floors, each, 71,000 ft. sup.; ninth floor, 35,000 ft. sup.

Rebuilding of the Thames Bridges

Mr. Day asked the Minister of Transport if he was in a position to make any further statement with reference to the rebuilding of the bridges crossing the Thames.

Mr. Morrison said that the L.C.C. had under consideration the report of the Advisory Committee upon Charing Cross Bridge and, pending a decision as to the future of this bridge, had deferred a decision as to the reconstruction of Waterloo Bridge. The County Council were proceeding with the reconstruction of Lambeth and Putney Bridges, and were also engaged on the preparation of plans for the reconstruction of Chelsea Bridge; new bridges were being erected by the responsible authorities at Hampton Court and Chiswick, and preliminary works had commenced for the new bridge at Richmond.

The Provision of Satellite Towns

Mr. Paling informed Captain Crookshank that the Government proposed to appoint, at an early date, a departmental Committee to consider the provision of satellite towns.

Rent Restrictions Act

Mr. Greenwood, in reply to Commander Southby, said that the Committee on the Rent Restrictions Act had not finished its investigations. He certainly hoped, however, to receive its report before the end of the session.

Small Houses for Aged People

Mr. Herriots asked the Minister of Health how many applications had been made by local authorities to build small houses for aged people and the number which had been sanctioned by his department; and what would be the average rent for these houses.

Mr. Greenwood said that twenty-four applications had been made and twenty-two of them, covering 694 dwellings, had been approved. Two recently received applications, covering fifty-two dwellings, were under consideration. Complete information as to cost was not yet available, but the rents should not, on the average, exceed 3s. in agricultural parishes and 3s. 9d. in other areas. He hoped, indeed, that the rents would be less than those figures.

The Channel Tunnel Scheme

Mr. Mander asked the Prime Minister if, in view of the recommendation of the unemployment committee of the International Labour Office with regard to the carrying out of joint public works through the League of Nations, he would reconsider the question of removing the Government veto on the construction of a Channel tunnel.

Mr. MacDonald said the recommendation to which Mr. Mander referred must be read as applying to cases in which the obstacles to practical action could be removed by international action. This was not the case with the Channel Tunnel. He also called Mr. Mander's attention to the very full discussion in regard to the Channel Tunnel which took place last June, in which he drew attention to the fact that the proposed scheme would only provide employment for a very small number of men. Regarding the last part of the question, he said that the discussion on this matter was at that time left to a free vote of the House.

SOCIETIES AND INSTITUTIONS

IMPORTANT FACTORS IN PLANNING

MR. ERNEST BERRY WEBBER, A.R.I.B.A., lecturing to the Sheffield, South Yorkshire and District Society of Architects and Surveyors on "Planning," first dealt with three of the main factors which influenced the plan of a building, namely, aspect, prospect and contours. The varying bylaws of different localities, he explained, also affected a plan substantially.

The lecturer pointed out that site value, the cost of the building, and the revenue which would reasonably be expected to be derived from it, when erected and let off, were important considerations. Careful calculations of the building, to show whether it was a profitable investment, must be made before a body of business men could be expected to find the money for its erection. It was most important to make use of all the area available on the site, and instances were given of competitors in competitions who had spoilt their chances of success by wasting valuable site space when making their designs.

Mr. Webber said that other things to be considered were the methods of construction. In a properly-designed building sections and elevations were largely influenced by construction, and one had to decide whether it was to be a steel-framed building or not, and how the materials used would affect the time of erection. The main services, conduits for lighting, ventilating and water supply, had to be provided for, and had their influence on the design. Last, but not least, was the time factor — delay over the scheduled time meant, in the case of big business premises, very heavy loss of rent, and this, particularly in the case of the colossal office buildings erected in America, was a very serious matter.

It was also important, in the case of many buildings, that they should be capable of being added to later, and the plan and design as a whole should be undertaken with these future developments in mind. A little foresight made such extensions comparatively easy; but if they were not considered when the first block was designed, they often became extremely difficult to plan afterwards.

With regard to school buildings, the lecturer said the central assembly hall with buildings all round was abandoned and had been superseded by the open courtyard with buildings all round and an open veranda on the courtyard side. He did not see why, in the case of hospitals, slides of which were shown, the business of designing these should be in the hands of a few specialists, as he felt confident that the extra amount of specialistic knowledge necessary beyond ordinary knowledge of general planning could be easily acquired by a little study.

MR. HADFIELD ON "ARCHITECTURE"

In delivering a paper entitled "Architecture" to the members of the Sheffield Artcrafts Guild, Mr. Charles Hadfield, F.R.I.B.A., said that architecture was, or should be, the art of the people, and if it was to flourish it must have popular enthusiasm and comprehension behind it. There should be no hidden mystery about it. As the "preserve" of an "intelligentsia," or the bond slave of mere luxury, it was less than nothing. With regard to the great thirteenth-century building era in France, the era of the enfranchisement of the Communes, he said we could read in contemporary records how all that wonderful output of building art was done in a sort of frenzy of popular enthusiasm, the sort of excitement which in these days was reserved for football matches or the mobbing of cinema performers. We could read of crowds harnessing themselves to draw along stone for the masons, so that all should have a share in creating what was to belong to each and all. Today, in the spires of Laon Cathedral, we could see a number of extraordinary life-size realistic figures of oxen peeping out from their lofty perch and looking down on the city beneath, an allusion to the methods used to draw the stone up the great hill on which the building stands, an instance of imagination running riot.

And the people who did those things to provide buildings for the worship of God saw to it at the same time that they got a return for their efforts in their conditional use for secular purposes. Sometimes, as in the case of Laon and its notorious "Feast of Fools," these purposes were often not in accord with our more puritanical instincts of propriety.

Architecture was, he said, an art at once human and democratic, which could not be imposed on any community from above. It must grow out of a universal consciousness and appreciation, because, although the skill and imaginative gifts of the individual (the highly trained "Master Builder") were a "condition precedent" to its creation, this could only be fully achieved by the sympathetic association of many hands and brains. If this were true in the past, it was much more so in the conditions of today: if we failed to realize it, then the art we should get would be that of slaves, not of free men, such for instance as was that of our own mediæval craftsmen. When this aspect of architecture came to be understood by us, it would once more, and he was sure, of itself, become a normal attribute of civilized life, and the energy and resources which we were now expending on propaganda to check the ravages of ignorance would be a source of wonder and pity to those who came after us.

What architects had at the back of their minds in all their debates and declarations, he thought, was the desire that architecture, the art of the people, should be properly and universally understood and appreciated.

AN ARCHITECTS AND BUILDERS' LUNCHEON

Members of the Croydon Chapter of the South-Eastern Society of Architects and the Croydon Master Builders' Federation recently held a joint luncheon at Croydon.

Mr. Hugh Macintosh, F.R.I.B.A., presided.

Major F. W. Rees, L.R.I.B.A., proposing "The Master Builders," said it was good that the architects and master builders should fraternize. They wanted to feel that when the master builder came to the architect he would know that he would get a straight deal.

Mr. E. H. Truett, chairman of the Croydon branch of the Master Builders' Association, responding, said it was his firm's experience that there was a wonderful feeling between the architect and builder.

Mr. A. J. Chapman, proposing "The Architects," welcomed the closer co-operation between the architects and builders that now existed. They agreed, he said, with the architect in endeavouring to eliminate the "bungaloid" growth that was going on up and down the country. They wanted to promote better building and were anxious to see the erection of buildings that future generations would look at with pride and pleasure.

Mr. Macintosh said the architects' object was not so much to make money —that was incidental—but to promote a better feeling between architects and builders, and to aim at the erection of more dignified buildings. The Registration Bill for architects was now before Parliament, and he hoped would soon become law.

SOUTH-EASTERN SOCIETY OF ARCHITECTS' ANNUAL MEETING

Mr. Cecil Burns, moving the adoption of the report and financial statement at the annual meeting of the above Society, held at the R.I.B.A., said it was gratifying to know the Society was now out of debt. Owing to the new R.I.B.A. bylaw altering the definition of non-metropolitan architect as one who had no office or place of residence within a radius of twelve miles of Charing Cross to one outside

an eight-mile radius, a considerable increase in the grant received from the R.I.B.A. had accrued. In addition, a sum of no less than £141 17s. had been privately subscribed by ninety-eight members in order that the indebtedness of the Society to the hon. secretary for the initial expenses of founding the Society might be wiped off.

The following officers were elected for the ensuing year :

President, Mr. A. R. G. Fenning, F.R.I.B.A.; treasurer, Mr. W. H. Bidlake, F.R.I.B.A.; assistant treasurer, Mr. Cecil Burns; secretary, Mr. R. Goulburn Lovell, A.R.I.B.A.; auditor, Major W. H. Robinson, F.R.I.B.A.

ESSEX, CAMBRIDGE AND HERTFORDSHIRE ARCHITECTS' ANNUAL DINNER

Mr. W. Gurney-Benham, proposing the toast of "The R.I.B.A." at the annual dinner of the Essex, Cambridge and Hertfordshire Society of Architects, held at Colchester, said that people were apt to decry modern examples of architecture, in common with many other things. They were told things were not what they used to be. It would be a very dull world if things were always what they used to be. In the ancient town of Colchester were many specimens of architecture, ranging over many centuries, and there was modern architecture too. It might be said the modern did not compare favourably with the ancient. It was quite natural that it should be so, because it was a fact, which applied to all arts, that it was a question of the survival of the fittest. In Colchester were survivals of the past, examples of architecture from Roman times. Every period had its successes and failures, and that applied to architecture as to everything else. The failures, happily, did not survive, but the successes did, and it would be the same, no doubt, with modern architecture.

Mr. H. V. Lanchester, F.R.I.B.A., in reply, referred to the educational work accomplished by the R.I.B.A., which, he said, had strenuously endeavoured to make the path of the young architect harder and harder, and that had made for competence, and had given him a grasp of architectural matters.

Major Gerald Benham, proposing the toast of the Essex, Cambridge and Hertfordshire Society, stated that the Society consisted of 380 members.

Mr. Duncan W. Clarke, A.R.I.B.A., president, in response, said the great qualities that an architect required were imagination, creative power, and vision. The public could not escape the architect's work, which might be a pleasure or otherwise.

LEICESTER ARCHITECTS' ANNUAL MEETING

At the fifty-eighth annual general meeting of the Leicester and Leicestershire Society of Architects held on April 30, Mr. George Nott, F.R.I.B.A., was elected president for the ensuing year, and the following members were elected to serve on the Council :

Messrs. Walter Brand, A.R.I.B.A. (ex-president) ex-officio member; E. T. Allcock, F.R.I.B.A.; Shirley Harrison, A.R.I.B.A.; W. Keay, F.R.I.B.A.; Waller K. Bedingfield, F.R.I.B.A.; C. E. Wilford, A.R.I.B.A.; and E. C. Mount, A.R.I.B.A. Mr. A. F. Bryan, A.R.I.B.A., was re-elected hon. treasurer, and Mr. C. F. McL. Keay, hon. secretary.

TOWN AND COUNTRY PLANNING BILL

Mr. W. A. Macartney, speaking at the annual conference of the Scottish National Housing and Town Planning Committee, said that under the new Town and Country Planning Bill one of the defects of the regional planning schemes was remedied—that was the want of the power to bring in people who could usefully help them. All the local authorities should press for some additional financial assistance if they were to put into operation all the powers given them. Under the Town Planning Acts they required at present to issue far too many notices to all the parties owning properties in the area. It was a waste of money and time, and an inconvenience to everybody concerned to have all these notices.

ROYAL SOCIETY OF BRITISH SCULPTORS

The following have been recently elected associates of the above Society: Messrs. Alfred Southwick and Donald Gilbert.

COMPETITIONS OPEN

June 1.—Sending-in day. New Council School, to be erected at Blowers, Dudley. (Limited to architects within a radius of 15 miles of Dudley.) Assessor : Herbert T. Buckland, F.R.I.B.A. Conditions from J. Whaley, Director of Education, Education Offices, St. James's Road, Dudley.

June 16.—Sending-in day. (Last day for conditions was February 25.) Offices for the Ingham Infirmary, South Shields. (Limited to architects within the area of the Northern Architectural Association.) Assessor : George Reavell, O.B.E., F.R.I.B.A. Premiums : £250, £100 and £50. Conditions were obtainable from John Potter, Secretary, Ingham Infirmary, South Shields. (Deposit £2 2s.)

June 24.—Sending-in day. King Edward VI. School, Mill Lane and Wilton Road, Southampton, for the Governors of the School. Assessor : Sydney Tatchell, F.R.I.B.A. Premiums, £150, £100 and £50. (Deposit, £1 1s.). Full particulars are obtainable from G. A. Waller, Clerk to the Governors, 7 Albion Place, Southampton.

June 26.—Sending-in day. Offices for the City of Leicester Corporation, Charles Street, Leicester. Assessor : E. Berry Webber, A.R.I.B.A. Premiums : £300, £200 and £100. Conditions from A. T. Gooseman, Engineer and Surveyor, Town Hall, Leicester. (Deposit £2 2s.)

June 30.—Sending-in day. (Last day for conditions was April 15.) New Branch Baths, Foleshill, for the Coventry Corporation. Assessor : F. J. Horth, F.R.I.B.A. Premiums : £210, £105 and £52 10s. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

THE ARCHITECTS' DIARY

WEDNESDAY, MAY 6

R.I.B.A., 9 Conduit Street, W.1. Exhibition of "The Architecture of Modern Transport." Until May 22. 10 a.m. to 8 p.m. (Saturdays, 10 a.m. to 5 p.m.). **10 a.m.**

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. First of four lectures on "Valuations: Building Schemes." By W. E. Bull. **5.30 p.m.** Also exhibition of H. Th. Wijdeveld's drawings and designs. Until May 18. **5.30 p.m.**

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Preservation of the Countryside." By the Rt. Hon. Earl of Crawford and Balcarres, P.C. **8 p.m.**

THURSDAY, MAY 7

LONDON CENTRAL SCHOOL OF ARTS AND CRAFTS, Southampton Row, W.C.1. "Steel Framing." By J. Stuart Lewis, M.I.STRUCT.E. **7.30 p.m.**

MARGATE SCHOOL OF ART. Second of twelve illustrated lectures on Beauty in Design. "Principles and Perspectives." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

FRIDAY, MAY 8

INSTITUTION OF STRUCTURAL ENGINEERS. South Wales and Monmouthshire Branch. At the Institute of Engineers, Park Place, Cardiff. "The Structural Engineer and His Vocational Training." By F. E. Drury, M.SC.

SATURDAY, MAY 9

Sunrise 5.20 a.m. Sunset 8.31 p.m.

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS. Visit to St. Bartholomew-the-Great, Smithfield, E.C. **2.30 p.m.**

LONDON CENTRAL SCHOOL OF ARTS AND CRAFTS. Visit to Dorman Long and Company's Works, Nine Elms. **2 p.m.**

TUESDAY, MAY 12

INSTITUTION OF CIVIL ENGINEERS, Great George Street, Westminster, S.W.1. Annual General Meeting of Corporate Members only. **6 p.m.**

WEDNESDAY, MAY 13

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Architecture in Concrete on the Pacific Coast." By Major R. A. B. Smith, M.C. **8 p.m.**

THURSDAY, MAY 14

INSTITUTION OF ELECTRICAL ENGINEERS, Savoy Place, Victoria Embankment, W.C.2. Discourse on the life and work of Hughes. By Sydney Evershed. 6 p.m. Followed by the annual general meeting. 6.45 p.m. **6 p.m.**

SOCIETY OF ANTIQUARIES, Burlington House, W.1. "The Excavations at Ur." By Leonard Woolley. **8.30 p.m.**

MARGATE SCHOOL OF ART. Third of twelve illustrated lectures on Beauty in Design. "Purpose and Mass in Design." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, MAY 16

Sunrise 5.9 a.m. Sunset 8.43 p.m.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. At the Castle, Winchester. Annual General Meeting. **3 p.m.**

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS. Visit to the Lambeth Bridge Reconstruction. Meet at Contractors' Office, Millbank, S.W. **2.30 p.m.**

MONDAY, MAY 18

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "The Architectural Association, 1847–1931." By F. R. Yerbury, HON.A.R.I.B.A. **8 p.m.**

TUESDAY, MAY 19

LONDON SOCIETY. Annual Dinner to be held at the Hotel Victoria, Northumberland Avenue, W.C.2. Chairman : The Earl of Crawford and Balcarres. 7.30 for 7.45 p.m. **7.30 p.m.**

THURSDAY, MAY 21

R.I.B.A. Annual Dinner, to be held in the Hall of Lincoln's Inn.

LONDON SOCIETY. Visit to Ergon House, Horseferry Road, Westminster, S.W.1. **3 p.m.**

MARGATE SCHOOL OF ART. Fourth of twelve illustrated lectures on Beauty in Design. "Beauty in Proportion." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, MAY 23

Sunrise 4.59. Sunset 9.10.

WHIT MONDAY, MAY 25

THURSDAY, MAY 28

LONDON SOCIETY. Visit to Horniman Museum and Gardens, London Road, Forest Hill, S.E. **3 p.m.**

MARGATE SCHOOL OF ART. Fifth of twelve illustrated lectures on Beauty in Design. "Balance and Contrast." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

FRIDAY, MAY 29

TOWN PLANNING INSTITUTE, at Caxton Hall, Caxton Street, Westminster, S.W.1. "London As It Ought to Be." By Messrs. Adams, Adshead, Davidge and Lanchester. **6.30 p.m.**

SATURDAY, MAY 30

Sunrise, 4.51 a.m. Sunset, 9.4 p.m.

LONDON SOCIETY. Visit to the Church of St. John, St. John's Square, Clerkenwell, W.C.1. **2.30 p.m.**

LAW REPORTS

BREACH OF COVENANT

Barnard v. *Parkin. Official Referee's Court. Before Mr. G. A. Scott*

THIS was an action by Mr. Wm. Barnard against the defendant, Mr. Wilfred L. Parkin, for damages for breach of covenant to keep in order the gardens adjoining a property known as Barnacre, Horton, Bucks, leased to the defendant by the plaintiff.

Plaintiff let the house to the defendant in 1927 on a three years' lease, at a rental of £140 a year. There was an acre of gardens, with a stream running through. A tennis court was made, and plaintiff's complaint was that the gardens were not properly looked after and that the tennis court got into a very bad condition. In 1928 the defendant assigned the lease of the property, and plaintiff alleged that the tennis court was irretrievably ruined. Plaintiff was claiming £88 in respect of the tennis court.

Defendant denied that the tennis court was made at his request, and said the plaintiff insisted on having it. Defendant said he did his best to keep the court in order, and did considerable work to the garden. He had paid £10 into Court in satisfaction of plaintiff's claim.

The official referee said, when the tenancy was transferred by the defendant, plaintiff was satisfied by the work defendant did in the garden, and by that agreement the defendant was relieved of his liability for the tennis court. He entered judgment for the defendant with costs.

In case there was an appeal and the Court found that defendant was liable, he assessed damage at £10.

A stay of execution was granted.

POLLUTION DISPUTE

Nicholls v. *Ely Beet Sugar Factory, Ltd. Chancery Division. Before Mr. Justice Farwell*

This was an action by Mr. Chas. T. Nicholls, of Claverton Street, London, S.W., the owner of two fisheries in the River Ouse, in the Isle of Ely and Norfolk, against the Ely Beet Sugar Factory, Ltd., whose factory for the manufacture of beet sugar is at Ely, for an injunction to restrain them from discharging from their factory any injurious matter or liquid so as to pollute the water of the Ouse and prejudicially to affect the fisheries.

The defendants denied the plaintiff's title and the alleged pollution.

His lordship, in his judgment, held that the plaintiff had at all times exercised all the ordinary acts of ownership over the fisheries which the owner of such property should exercise. It was impossible to come to any conclusion other than that the plaintiff at all material times was in possession of the two fisheries. The defendants' factory gave considerable employment, it was true, but it must, however, be encouraged subject to the rights of other people. There was no doubt that the manufacturing season, 1929–30 especially, was disastrous to the fishing, immense numbers of fish being destroyed. In his opinion there was a great discharge into the river of effluent which contained fermenting matter producing acids and poison very dangerous to fish. No serious effort was made to deal with the pollution until 1930, when the defendant company adopted a system of filtration, and reorganized the management of the watering factory. There was no doubt that, during the season 1930–31, conditions were greatly improved, but having regard to all the circumstances it was impossible to say that all risk of future danger could be eliminated. He therefore made a declaration of the plaintiff's right to maintain the action and to require the defendant company to prevent the discharge of noxious effluent into the river, and he gave the plaintiff liberty to apply for an injunction within the next twelve months. He assessed the damages to which the plaintiff was entitled at £200.

He entered judgment accordingly for the plaintiff with costs.

TRADE NOTE

In *The Builder Explains*, the latest folder issued by Messrs. W. H. Sankey and Son, Ltd., an imaginary conversation takes place between a builder and his brother on the subject of the Sankey down-draught preventing pot. Discussing the single-louvre chimney pot the builder says: "You see, there is only one row of louvres round it. This Sankey louvre principle is so extraordinarily efficient that a single row of louvres is quite enough to correct any slight tendency to down-draught in the smaller type of house. If, however, for any reason, severe down-draught were to develop, all I should do would be to take this small pot off and put in its place one of the new improved three-louvre Sankey down-draught preventing pots; but when down-draught is only slight, Sankey's single-louvre chimney pot is quite good enough." "But don't these louvres tend to choke up with soot after a time?" asked the brother. "Not a bit of it. Just you come into my store and have a close-up view of one of the Sankey pots. There! Do you see the clear space between the louvres? Also, the sweep's brush can go clean through the pot and out of the top. If any soot is likely to collect, a twist of the sweep's brush will soon remove it. You see, the openings between the louvres are so wide, and in the big three-louvre new improved Sankey down-draught preventing pots they are specially serrated, which not only helps the up draught, but prevents soot collection."

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:

The Ontario Government Building, 163–164 Strand, W.C.2 (pages 651–652). General contractors, Bovis (1928), Ltd. Sub-contractors: Aston Construction Co., Ltd., structural steel; Wotton and Sons, glass; G. N. Haden and Sons, Ltd., central heating and boilers; Tyler and Freeman, electric wiring; Walter Gilbert, electric light fixtures; Crane-Bennett, Ltd., sanitary fittings; W. and R. Leggott, Ltd., and Birmingham Guild, Ltd., door furniture; Crittall Manufacturing Co., Ltd., casements and window furniture; G. Jackson and Sons, Ltd., decorative plaster; The Birmingham Guild, Ltd., bronze work and bronze signs; Frank Mortimer, Ltd., stonework; Fenning & Co., Ltd., Canadian stone, granite, marble, mosaic and tiling; Waygood-Otis, Ltd., lifts; Synchronome Co., Ltd., clocks.

Infant Welfare Centre, Stirchley (pages 655–657). General contractors, Richard Fenwick, Ltd. Sub-contractors: B. P. Blockley, Ltd., facing bricks; Baxter and Impey, electric lighting; Ashwell and Nesbit, Ltd., heating and hot-water apparatus; Griffin Foundry, Ltd., sanitary goods and grates.

House, The Bishop's Avenue, Finchley (pages 660–662). General contractors, Truett and Steel, Ltd. Sub-contractors: W. T. Lamb and Sons, bricks; E. Parkinson (London), Ltd., tiles; Pilkington Bros., Ltd., glass; H. W. Dutton & Co., Ltd., central heating; Bratt, Colbran & Co., Ltd., stoves, grates and mantels; Engineering Works (Electrical and General), Ltd., electric wiring; Troughton and Young, Ltd., electric light fixtures; Davis, Bennett & Co., Ltd., sanitary fittings; W. and R. Leggott, Ltd., door furniture; Crittall Manufacturing Co., Ltd., casements; Drytone, Ltd., joinery; Horticult, Ltd., shrubs and trees.

In the list of contractors for Messrs. W. N. Froy and Sons' showrooms in Bond Street, W., published in our last issue, the work carried out by the Merchant Trading Co., Ltd., was incorrectly stated. The firm was responsible for the supply of Celotex.

ANNOUNCEMENTS

Mr. H. B. Creswell, F.R.I.B.A., has removed his office to 12 Stratford Place, Oxford Street, W.1.

Messrs. Hutton and Taylor, FF.R.I.B.A., have removed their offices to 5 India Street, Glasgow, C.2. Telephone: Central 4835.

Mr. W. Alan Devereux, A.R.I.B.A., chartered architect, is now in practice at 11 King's Bench Walk, Temple, E.C.4, where he will be pleased to receive trade circulars.

Mr. R. D. Jones, A.R.I.B.A., A.M.T.P.I., has given up his practice at Pwllheli, Abersoch and Portmadoc, in order to take up an appointment as Assistant Town Planner, Northern Rhodesia.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Mr. A. G. Salisbury is to erect buildings at the College of Greyladies, Dartmouth Row, BLACKHEATH.

The CARSHALTON U.D.C. is to erect seventy-eight houses in the district.

The CHELSEA Borough Council has leased land in Manor Street to the Peabody Trust, which is erecting tenements.

The CROYDON Education Committee has selected a site on the Waddon housing estate for the erection of an elementary school.

The CROYDON Corporation is preparing estimates for the re-development of the Old Town area.

The CROYDON Corporation has received sanction to borrow £26,000 for a new chapel and other buildings, and for extending the Mitcham Road cemetery. This amount does not include the cost of providing a crematorium.

The CROYDON Education Committee recommends acquiring a site adjoining the Addington pumping station in Featherbed Lane, for the erection of the proposed open-air school.

Plans passed at CROYDON: Alterations and additions, 8 Chichester Road, for Messrs. Holcombe and Betts; alterations and additions, 83–87 London Road, for Mr. J. M. Colvin; four houses, Birchanger Road, for Messrs. J. Thorman & Co.; 289 houses, Mitcham Road estate, for Mr. H. Macintosh; house, Croham Valley Road, for Mr. G. W. Peachey; twenty-four garages, Davidson Road, for Messrs. J. W. Hall and Son; four houses, Ballards Way, for Messrs. F. S. and A. Woods; three houses, off Haling Park Road, and two houses, Pampisford Road, for Messrs. G. and C. A. Parris; shop, rear of 69 North End, for Messrs. Dowton & Co.; alterations and additions, 11 Bank Buildings, Brighton Road, for Mr. F. M. Burr; alterations and additions, two garages and a store, 80 High Street, for Mr. H. Williams; eleven houses, Firsby Avenue, for Mr. P. Richardson; two bungalows, Orchard Rise, for Messrs. E. B. Hart & Co.; mission, South Park Hill Road, for Mr. W. A. Gardner; alterations and additions, 55 Pollards Hill, for Mr. B. J. McAdam; additions to stores, 99 London Road, for Messrs. Bethell and Swannell.

The HACKNEY B.C. is to proceed with the clearance of the Banister Street area, which comprises 55 occupied dwelling-houses.

Messrs. Lewis Solomon and Son are to erect buildings on the site of 26–28 Paddenswick Road, HAMMERSMITH.

Plans passed at LEWISHAM: Three houses, Bovill Road, for Messrs. Dunsmore Bros.; thirty houses, Cliffview Road, and sixteen houses, Fossil Road, for Messrs. Thomas H. Sawyer and Sons; ten houses, Callender Road, for Mr. H. R. Watt; alterations, "The Railway Signal" public-house, Devonshire Road, for Mr. C. J. Bailey; ten houses, Harland Road, for Messrs. W. J. Scudamore, Ltd.; four houses, Niederwald Road, for Mr. R. B. Rowell; four houses, Thorpewood Road, for Mr. R. Tomei; partially rebuilding "Princess of Wales" public-house, Montpelier Row, for Mr. C. A. Stanham; additions, "The Bell" public-house, for Mr. Nowell Par.

The L.C.C. has decided to proceed with the construction of an open-air swimming bath at LONDON FIELDS.

The Croydon Corporation has prepared plans for the erection of a fire station in Lond Lane, NORWOOD.

The L.C.C. has passed plans, submitted by Messrs. Purchase and Welch, for premises in 44–50 Osnaburgh Street, ST. PANCRAS.

Plans passed at WESTMINSTER: Building (amended plan), 425–427 Strand, and 1 Bedford Street, abutting on Harvey's Buildings, for Messrs. H. O. Ellis and Clarke; building, Buckingham Palace Road, and Elizabeth Street (London Coastal Coaches, Ltd.), for Messrs. Wallis, Gilbert and Partners.

SOUTHERN COUNTIES

Plans passed at BEXHILL: House, St. John's Road, for Mr. C. W. Buss; house, St. James's Avenue, for Mr. A. Radcliffe; bungalow, Normans Bay, for Mr. A. Matheson; bungalow, Pebsham, for Mr. Scott; cottage, Eastwood Road, for Mr. E. Bunce; two houses, Turkey Road, for Mr. J. E. Maynard; warehouse, Springfield Road, for Mr. A. E. Mepham.

Plans passed at FARNHAM: House, Bourne Mills, for Mr. A. Knight; house, Stephendale Road, for Mr. H. R. Cox; alterations, 120–122 East Street, for Farnham Gas and Electricity Co.; additions, 31 The Borough, for Mr. G. F. Drowley; two houses, Broomleaf, for the Broomleaf Development Co.; tea house, Heath End, for Messrs. A. J. and H. P. Colbourne; house, Menin Way, for Mr. E. Stock; three houses, Stickham's Lane, for Mr. E. Parratt; house, Broomleaf, for Mr. D. Bacon; shop alterations, 51 and 52 The Borough, for Messrs. A. J. Figg and Sons; shop, Downing Street, for Messrs. Mardon, Ball & Co.; shelter, Girl Guides' Camp, Lodge Hill, for Messrs. Mills and Sons; alterations, Galloway's, Shortheath, for Messrs. W. German and Son.

Plans passed at HERNE BAY: Additional book store, High Street, for Lloyds Bank, Ltd.; bungalow, Oxenden Park Drive, for Mr. F. G. Kirkman; two houses, Linden Avenue, for Messrs. Goodwin and Russell; house, Linden Avenue, for Mr. A. E. Procter; alterations, Victoria House, William Street, for Messrs. C. J. and A. A. Hogbin; two houses, Spenser Road, for Messrs. J. Howell and Son; alterations, Mortimer Street, for Messrs. Greensted and Son.

The NEWBURY Corporation has asked the borough surveyor to proceed with the preparation of plans and specifications of the proposed Speenhamland junior school.

Plans passed at NEWBURY: House, Cromwell Road, for Mr. T. Chivers; two houses, Westgate Road, for Messrs. Hoskings and Pond; house, Salcombe Road, for Mr. G. L. E. Bear; alterations and additions, 13–14 Northbrook Street, for Messrs. F. W. Woolworth & Co.; alterations and additions to premises in Andover Road, for Dr. G. Leggat; alterations and additions, District Hospital, Andover, for Newbury Hospital Committee; alterations and additions, 26 Bath Road, for Mr. S. G. Wallace; building, West Street, for Messrs. Pass & Co.

EASTERN COUNTIES

The CHELMSFORD Corporation Housing Committee has approved plans for the erection of four parlour-type houses in Corporation Road.

Plans passed at CHELMSFORD: Two houses, Galleywood Road, for Mr. R. H. Currie; house, Galleywood Road, for Mr. W. J. Wade; four houses, Boarded Barns estate, for the Corporation; new office, store, etc., Corporation Works, Hall Street, for the Corporation; additions to bakery, Springfield Road, for Messrs. W. Budd.

MIDLAND COUNTIES

The Derbyshire Education Committee is to enlarge the Swanwick Hall secondary school, ALFRETON.

The BIRMINGHAM Corporation has acquired various sites for the erection of 1,200 houses.

The BIRMINGHAM Education Committee has acquired sites on the Weoley Castle housing estate for the erection of two elementary schools.

The Bourneville Village Trust is proposing to erect a number of houses at BOURNVILLE.

The CANNOCK Education Committee is to erect a junior school at Chadsmoor, at a cost of £6,600.

The COVENTRY Education Committee recommends the erection of a new technical college at the Butts, at an estimated cost of £142,275.

The Derbyshire Education Committee is to extend the DRONFIELD Grammar School.

The LEICESTER Corporation Mental Deficiency Committee recommends proceeding with the erection of an additional block at Leicester Frith Institution, at an estimated cost of £8,745.

The NOTTINGHAM Education Committee is to erect a central school for girls in Gordon Road.

The STAFFORDSHIRE Education Committee has decided to erect the following schools: Quarry Bank senior boys' school, to accommodate 400 children, £15,200; Quarry Bank senior girls' school, to accommodate 400 children, £16,370; and Upper Penn Manor Road senior mixed school, to accommodate 480 children, £24,900.

WESTERN COUNTIES

The LEOMINSTER Corporation is to erect thirty houses in Gateway Lane, at a cost of about £10,000.

The WORCESTER Corporation is to erect 242 houses on the Barnes Hall estate.

NORTHERN COUNTIES

The CHORLEY Corporation Housing Committee has received sanction to borrow £29,542, for the erection of houses on Springs Road estate.

Plans passed at CHORLEY: Two houses, Millfield Road, for Messrs. Jas. Brindle and Sons; two bungalows, Harpers Lane, for Mr. Wm. Hampson; office, Alexandra Street, for Messrs. Jas. Brindle and Sons.

The HASLINGDEN Corporation is to erect twenty houses in Private Lane.

The HYDE Corporation is to erect ninety-two houses on the Peel Street estate.

The LANCASHIRE Education Committee is to enlarge the Whiston central school.

The LIVERPOOL Corporation is to erect twenty-eight houses on the Springwood estate.

The SHIPLEY U.D.C. is seeking sanction to borrow £29,566 for the erection of fifty houses on the Busy Lane site and fifty on the Carr Lane site.

The STRETFORD U.D.C. has obtained the approval of the Unemployment Grants Committee to the scheme for the erection of new council offices as planned by Mr. Bradshaw Gass.

Plans passed at STRETFORD: Twenty-two houses, Cranford Avenue, for Messrs. G. H. Brown and Son; ninety houses, Ayres Road and Gifford Road, for Messrs. Spare and Stevens; extension to joiners' shop, off Park Road, for Messrs. D. Anderson and Son, Ltd.; covered car park, Seymour Grove, for Grove Garage, Ltd.; extensions, Chester Road, for The Stretford Motors.

WALES

The CARDIFF Corporation is to erect 150 houses on the Ely estate.

The Parochial Church Council is to erect a parish hall at LLANDRINDOD WELLS, from plans prepared by the joint architects, Messrs. Alfred and Frank S. Swash.

The LLWCHWR U.D.C. is to construct a reinforced concrete bridge over the River Llan at Felen Wen.

The Monmouthshire Education Committee is to extend the secondary school at RHYMNEY and provide a gymnasium, from plans prepared by Mr. John Bain, F.R.I.B.A.

SCOTLAND

The Queen's Cross Church, ABERDEEN, is to be reconstructed from plans prepared by Mr. G. Wall.

Messrs. Mitchell and Sons have prepared plans for the reconstruction of the Liverpool Insurance Society offices in Union Street, ABERDEEN.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_2	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W.Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank ..	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey ..	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_1	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£	s.	d.
Bricklayer . . . . per hour		1	8
Carpenter . . . . . ,,		1	8
Joiner . . . . . ,,		1	8
Machinist . . . . . ,,		1	9
Mason (Banker) . . . . ,,		1	8
,, (Fixer) . . . . ,,		1	9
Plumber . . . . . ,,		1	8
Painter . . . . . ,,		1	7
Paperhanger . . . . ,,		1	8
Glazier . . . . . ,,		1	8
Slater . . . . . ,,		1	8
Scaffolder . . . . . ,,		1	4
Timberman . . . . . ,,		1	4
Navvy . . . . . ,,		1	3
General Labourer . . . ,,		1	3
Lorryman . . . . . ,,		1	5½
Crane Driver . . . . ,,		1	7
Watchman . . . . per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

	£	s.	d.
Grey Stone Lime . . . per ton	2	8	6
Blue Lias Lime . . . . ,,	2	10	6
Hydrated Lime . . . . ,,	2	16	0
Portland Cement . . . . ,,	2	6	0
Ferro-crete . . . . ,,	2	13	6
Thames Ballast . . . . per Y.C.		8	9
¾" Crushed Ballast . . . ,,		10	0
Building Sand . . . . ,,		10	6
Washed Sand . . . . ,,		11	6
2" Broken Brick . . . ,,		9	6
¾" ,, ,, . . . ,,		12	6
Pan Breeze . . . . ,,		6	6
Coke Breeze . . . . ,,		8	9

BRICKLAYER

	£	s.	d.
Flettons . . . . per M.	3	1	6
Grooved do. . . . ,,	3	3	6
Stocks, 1st Quality . . ,,	4	18	6
,, 2nd ,, . . ,,	4	12	6
Blue Bricks, Pressed . . ,,	9	18	0
,, Wirecuts . . ,,	8	16	0
,, Brindles . . ,,	8	0	0
,, Bullnose . . ,,	10	8	0
Red Sand-faced Facings . ,,	7	11	0
Red Rubbers for Arches . ,,	15	0	0
Multicoloured Facings . ,,	9	4	0
Luton Facings . . . ,,	8	16	0
Midhurst White Facings . ,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:			
Stretchers . . . . ,,	21	10	0
Headers . . . . ,,	21	0	0
Bullnose . . . . ,,	28	0	0
Double Stretchers . . ,,	30	0	0
Double Headers . . ,,	27	0	0
Glazed Second Quality, *Less* . ,,	1	0	0
,, Buffs and Creams, Add . ,,	2	0	0
,, Other Colours ,, . ,,	5	10	0
2" Breeze Partition Blocks . . per Y.S.		1	9
2½" ,, ,, ,, . . ,,		2	0
3" ,, ,, ,, . . ,,		2	3
4" ,, ,, ,, . . ,,		3	0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s.	d.	6" s.	d.
Straight pipes . . per F.R.	1	1	1	6
Bends . . . . each	2	10	4	4
Taper bends . . . ,,	6	3	7	2
Rest bends . . . ,,	5	9	8	9
Single junctions . . ,,	3	9	5	9
Double ,, . . ,,	5	9	8	9
Straight channels . . ,,	2	6	3	2
¼" Channel bends . . ,,	7	8	—	
Channel junctions . . ,,	7	0	12	6
Channel tapers. . . ,,	5	6	7	9
Yard gullies . . . ,,	9	6	11	6
Interceptors . . . ,,	18	6	25	9
Iron drain pipe . . per F.R.	2	3	3	5
Bends . . . . each	6	0	13	0
Inspection bends . . ,,	15	3	24	0
Single junctions . . ,,	9	3	18	0
Double junctions . . ,,	14	0	27	6
Lead wool . . . lb.		6	—	
Gaskin . . . . ,,		5	—	

MASON

The following d/d F.O.R. at Nine Elms:	s.	d.
Portland stone, Whitbed . . . F.C.	4	6
,, ,, Basebed . . . ,,	4	9
Bath stone . . . . . ,,	2	11
York stone . . . . . ,,	6	9
,, Sawn templates . . . ,,	7	6
,, Paving, 2" . . . . F.S.	1	8
,, ,, 3" . . . . ,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£	s.	d.
24" × 12" Duchesses . . per M.	31	0	0
22" × 12" Marchionesses . ,,	28	0	0
20" × 10" Countesses . . ,,	20	5	0
18" × 10" Viscountesses . ,,	17	0	0
18" × 9" Ladies . . . ,,	15	0	0
Westmorland green (random sizes) per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:			
20" × 10" medium grey per 1,000 (actual)	26	0	0
,, green . . ,,	27	15	0
Best machine roofing tiles . . ,,	5	0	0
Best hand-made do. . . . ,,	5	10	0
Hips and valleys . . . each		9½	
,, hand-made . . . ,,		10	
Nails, compo . . . . lb.		4	
,, copper . . . . ,,		2	0

CARPENTER AND JOINER

	£	s.	d.
Good carcassing timber . . F.C.		2	6
Birch . . . . as 1" F.S.			9
Deal, Joiner's, . . . ,, ,,			5
,, ,, 2nds . . ,, ,,			4
Mahogany, Honduras . . ,, ,,	1	3	
,, African . . ,, ,,	1	1	
,, Cuban . . ,, ,,	2	6	
Oak, plain American . . ,, ,,	1	0	
,, Figured ,, . . ,, ,,	1	3	
,, Plain Japanese . . ,, ,,	1	2	
,, Figured ,, . . ,, ,,	1	5	
,, Austrian wainscot . ,, ,,	1	6	
,, English ,, . . ,, ,,	1	11	
Pine, Yellow . . . ,, ,,	1	0	
,, Oregon . . . ,, ,,			4
,, British Columbian . ,, ,,			4
Teak, Moulmein . . ,, ,,	1	3	
,, Burma . . ,, ,,	1	2	
Walnut, American . . ,, ,,	2	3	
,, French . . ,, ,,	2	3	
Whitewood, American . ,, ,,	1	1	
Deal floorings, ¾" . . Sq.	1	1	0
,, 1" . . ,,	1	3	6
,, 1¼" . . ,,	1	5	6
,, 1½" . . ,,	1	11	0
,, 1¾" . . ,,	1	15	0
Deal matchings, ¾" . . ,,		16	0
,, 1" . . ,,		17	6
Rough boarding, ¾" . . ,,		18	0
,, 1" . . ,,	1	6	0
,, 1¼" . . ,,	1	0	9
,, 1½" . . ,,	1	8	9

Plywood, per ft. sup.

Thickness	¼"			½"			¾"			¼"		
Qualities	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½"	¾"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3'–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3'–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket union . . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . . ,,	10	1/1	1/6	2/2	4/3
Tees . . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . . ,,	3½	5	8	1/–	2/–
Backnuts . . . ,,	2	3	5	6	1/1
Iron main cocks . . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:	TUBES. Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . . .	55	,, steam .	40
	FITTINGS.		
Gas . . .	47½	Galvanized gas .	37½
Water . . .	42½	,, water .	32½
Steam . . .	37½	,, steam .	27½

SMITH AND FOUNDER—*continued.*

	s.	d.
Rolled steel joists cut to length . . cwt.	9	6
Mild steel reinforcing rods, ¾" . . . ,,	10	0
,, ,, ⅞" . . . ,,	9	9
,, ,, 1" . . . ,,	9	6
,, ,, 1¼" . . . ,,	9	0
,, ,, 1½" . . . ,,	9	0
,, ,, 1¾" . . . ,,	9	0
,, ,, 2" . . . ,,	9	0

Cast-iron rain-water pipes of ordinary thickness metal .	3" F.R. s.	d.	4" s.	d.
		7		10
Shoes . . . . each	2	3	3	3
Anti-splash shoes . . ,,	5	0	8	6
Boots . . . . ,,	3	3	4	6
Bends . . . . ,,	2	9	4	0
,, with access door . . ,,	—		6	9
Heads . . . . ,,	4	0	5	0
Swan-necks up to 9" offsets . ,,	4	0	6	3
Plinth bends, 4½" to 6" . . ,,	4	0	5	6

	F.R.			
Half-round rain-water gutters of ordinary thickness metal .		5		6
Stop ends . . . . each		6		7
Angles . . . . ,,	1	7	1	11
Obtuse angles . . . ,,	2	0	2	6
Outlets . . . . ,,	1	9	2	3

PLUMBER

	s.	d.
Lead, milled sheet . . . cwt.	21	0
,, drawn pipes . . . ,,	21	6
,, soil pipe . . . ,,	24	6
,, scrap . . . ,,	11	0
Solder, plumbers' . . . lb.	1	0
,, fine do. . . . ,,	1	4
Copper, sheet . . . ,,	1	0
,, tubes . . . ,,	1	4

L.C.C. soil and waste pipes:	3" F.R.		4"		6"	
	s.	d.	s.	d.	s.	d.
Plain cast . . . ,,	1	0	1	2	2	6
Coated . . . ,,	1	1	1	3	2	8
Galvanized . . ,,	2	0	2	6	4	6
Holderbats . . each	3	10	4	0	4	9
Bends . . . ,,	3	9	5	3	10	3
Shoes . . . ,,	2	10	4	4	9	6
Heads . . . ,,	4	8	8	5	12	9

PLASTERER

	£	s.	d.
Lime, chalk . . . per ton	2	8	6
Plaster, coarse . . . ,,	2	10	6
,, fine . . . ,,	5	10	0
Hydrated lime . . . ,,	2	16	0
Sirapite . . . . ,,	3	10	0
Keene's cement . . . ,,	5	10	0
Sand, washed . . . Y.C.		11	6
Hair . . . . lb.			6
Laths, sawn . . . bundle		2	4
,, rent . . . ,,		3	9
Lath nails . . . . lb.			3½

GLAZIER

	s.	d.		s.	d.
Sheet glass, 21 oz. . . F.S.					3½
,, ,, 26 oz. . . ,,					4½
Arctic glass . . . ,,					5
Cathedral glass . . ,,					6
Hartley's rough rolled . ,,					9
Do. wired plate . . ,,				1	3
¼" Polished plate, n/e 1 . ,,	1	0	to	1	3
,, ,, 2 . ,,	1	2	,,	1	7
,, ,, 3 . ,,	1	7	,,	2	5
,, ,, 4 . ,,	2	1	,,	2	11
,, ,, 6 . ,,	2	3	,,	3	2
,, ,, 8 . ,,	2	6	,,	3	6
,, ,, 12 . ,,	2	9	,,	3	8
,, ,, 20 . ,,	3	0	,,	3	11
,, ,, 45 . ,,	3	3	,,	4	1
,, ,, 65 . ,,	3	7	,,	4	6
,, ,, 90 . ,,	3	10	,,	4	9
,, ,, 100 . ,,	4	0	,,	5	0
Vita glass, sheet, n/e 1 . ,,				1	0
,, ,, ,, 2 . ,,				1	3
,, ,, ,, over 2 . ,,				1	9
,, ,, plate, n/e 1 . ,,				1	6
,, ,, ,, 2 . ,,				3	0
,, ,, ,, 5 . ,,				4	0
,, ,, ,, 7 . ,,				5	0
,, ,, ,, 15 . ,,				6	0
,, ,, ,,over 15 . ,,				7	6
Putty, linseed oil . . lb					3

PAINTER

	£	s.	d.
White lead . . . . cwt.	2	8	0
Linseed oil . . . . gall.		3	3
Boiled oil . . . . ,,		4	3
Turpentine . . . . ,,		3	4
Patent knotting . . . ,,		14	0
Distemper, washable . . cwt.	3	0	0
,, ordinary . . ,,	2	5	0
Whitening . . . . ,,		4	0
Size, double . . . firkin		3	0
Copal varnish . . . gall.		13	0
Flat varnish . . . ,,		14	0
Outside varnish . . ,,		16	0
White enamel . . . ,,	1	15	0
Ready-mixed paint . . ,,		13	6
Brunswick black . . ,,		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR	£ s. d.
Digging over surface n/e 12″ deep and cart away . . . Y.S.	3 6
,, to reduce levels n/e 5′ 0″ deep and cart away . Y.C.	10 0
,, to form basement n/e 5′ 0″ deep and cart away . ,,	11 0
,, ,, 10′ 0″ deep and cart away . ,,	11 6
,, ,, 15′ 0″ deep and cart away . ,,	12 0
If in stiff clay . . . . . add ,,	3 0
If in underpinning . . . . . ,, ,,	5 0
Digging, return, fill and ram . . . . . ,,	5 0
Planking and strutting to sides of excavation . . . F.S.	1 0
,, ,, to pier holes . . . . . ,,	6
,, ,, to trenches . . . . . ,,	6
,, ,, extra, only if left in . . . . ,,	3½
Hardcore, filled in and rammed . . . . . Y.C.	14 0
Portland cement concrete in foundations (6-1) . . . ,,	1 13 6
,, ,, ,, (4-2-1) . . . ,,	1 18 6
,, ,, ,, underpinning . . . ,,	2 2 0
Finishing surface of concrete, spade face . . . . Y.S.	9

DRAINLAYER	4″ s. d.	6″ s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately) . . . . . F.R.	1 8	2 6
Extra, only for bends . . . . . Each	2 8	3 9
,, junctions . . . . . ,,	3 9	4 6
Gullies and gratings . . . . . ,,	17 6	19 9
Cast iron drains, and laying and jointing . . . F.R.	5 6	7 0
Extra, only for bends . . . . . Each	12 6	18 6

BRICKLAYER	£ s. d.
Brickwork, Flettons in lime mortar . . . . . Per Rod	32 0 0
,, ,, in cement . . . . . ,,	34 0 0
,, Stocks in cement . . . . . ,,	41 10 0
,, Blues in cement . . . . . ,,	62 0 0
Extra only for circular on plan . . . . . ,,	3 0 0
,, backing to masonry . . . . . ,,	2 0 0
,, raising on old walls . . . . . ,,	3 0 0
,, underpinning . . . . . ,,	10 0 0
Fair Face and pointing internally . . . . . F.S.	3
Extra only for picked stock facings . . . . . ,,	1 0
,, red brick facings . . . . . ,,	1 6
,, blue brick facings . . . . . ,,	1 9
,, glazed brick facings . . . . . ,,	4 6
Tuck pointing . . . . . ,,	10
Weather pointing . . . . . ,,	4
Slate dampcourse . . . . . ,,	1 0
Vertical dampcourse . . . . . ,,	1 3

ASPHALTER	s. d.
½″ Horizontal dampcourse . . . . . Y.S.	5 6
½″ Vertical dampcourse . . . . . ,,	7 6
½″ paving or flat . . . . . ,,	5 6
1″ paving or flat . . . . . ,,	6 6
1″ × 6″ skirting . . . . . F.R.	1 0
Angle fillet . . . . . ,,	2
Rounded angle . . . . . ,,	2
Cesspools . . . . . Each	5 0

MASON	£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete . . . . . F.C.	1 1 6
Bath stone and do, all as last . . . . . ,,	15 6
Artificial stone and do. . . . . ,,	16 6
York stone templates, fixed complete . . . . . ,,	14 0
,, thresholds . . . . . ,,	16 0
,, sills . . . . . ,,	1 3 6

SLATER AND TILER	£ s. d.
Slating, Bangor or equal, laid to a 3″ lap, and fixing with compo nails, 20″ × 10″ . . . . . Sqr.	4 5 0
Do., 18″ × 9″ . . . . . ,,	4 2 0
Do., 24″ × 12″ . . . . . ,,	4 12 0
Westmorland slating, laid with diminished courses . . . ,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4″ gauge, nailed every fourth course . . . . . ,,	4 0 0
Do., all as last, but of machine-made tiles . . . . ,,	3 11 0
Fixing only, lead soakers . . . . . Doz.	9
Stripping old slating and clearing away . . . . . Sqr.	10 0

CARPENTER AND JOINER	£ s. d.
Flat boarded centering to concrete floors, including all strutting Sqr.	2 12 0
Shuttering to sides and soffits of beams . . . . . F.S.	1 0
,, to stanchions . . . . . ,,	1 0
,, to staircases . . . . . ,,	2 0
Fir and fixing in wall plates, lintols, etc. . . . . F.C.	5 0
Fir framed in floors . . . . . ,,	6 9
,, ,, roofs . . . . . ,,	8 3
,, ,, trusses . . . . . ,,	9 0
,, ,, partitions . . . . . ,,	12 0
½″ deal sawn boarding and fixing to joists . . . . Sqr.	1 17 6
1″ ,, ,, ,, ,, ,, ... ,,	2 1 6
1¼″ ,, ,, ,, ,, ,, ... ,,	2 7 6
1½ × 2″ fir battening for Countess slating . . . . ,,	12 6
Do. for 4″ gauge tiling . . . . . ,,	16 0
Stout feather-edged tilting fillet . . . . . F.R.	6
Patent roofing felt, 1 ply . . . . . Y.S.	2 6
,, ,, ,, 2 ,, ... ,,	3 0
,, ,, ,, 3 ,, ... ,,	3 6
Stout herringbone strutting to 9″ joists . . . . F.R.	1 0
1″ deal gutter boards and bearers . . . . . F.S.	1 4
1½″ ,, ,, ,, ,, ... ,,	1 8
2″ deal wrought rounded roll . . . . . F.R.	9
1″ deal grooved and tongued flooring, laid complete, including cleaning off . . . . . Sqr.	2 15 0
1¼″ do. . . . . ,,	3 4 0
1½″ do. . . . . ,,	3 13 0
1″ deal moulded skirting, fixed on, and including grounds plugged to wall . . . . . F.S.	1 10
1¼″ do. . . . . ,,	2 1

CARPENTER AND JOINER—*continued.*	s. d.
1½″ deal moulded sashes of average size . . . . . F.S.	2 3
2″ ,, ,, ,, ,, ... ,,	2 6
1½″ deal-cased frames, double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ½″ parting beads, and with brass-faced axle pulleys, etc., fixed complete . . ,,	4 3
2″ ,, ,, ,, ,, ... ,,	4 6
Extra only for moulded horns . . . . . Each	9
1½″ deal four-panel square, both sides, door . . . . F.S.	2 6
2″ ,, ,, ,, ,, ... ,,	3 0
1½″ ,, but moulded both sides . . . . . ,,	3 0
2″ ,, ,, ,, ,, ... ,,	3 6
4″ × 3″ deal, rebated and moulded frames . . . . F.R.	1 6
4½″ × 3½″ ,, ,, ,, ... ,,	2 0
1½″ deal tongued and moulded window-board, on and including deal bearers . . . . . F.S.	2 0
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages . . ,,	3 0
1¼″ deal moulded wall strings . . . . . ,,	2 6
1½″ ,, outer strings . . . . . ,,	2 9
Ends of treads and risers housed to string . . . . Each	2 0
3″ × 2″ deal moulded handrail . . . . . F.R.	1 6
1″ × 1″ deal balusters and housing each end . . . . Each	2 6
1½″ × 1½″ ,, ,, ... ,,	3 3
3″ × 3″ deal wrought framed newels . . . . . F.R.	1 6
Extra only for newel caps . . . . . Each	7 6
Do., pendants . . . . . ,,	7 6

SMITH AND FOUNDER	£ s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position . . . . . Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position . . . . . ,,	1 3 0
Do. stanchions with riveted caps and bases and do. . . . ,,	1 2 0
Mild steel bar reinforcement, ½″ and up, bent and fixed complete . ,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g. . . . . F.S.	1 0
Wrot-iron caulked and cambered chimney bars . . . Per cwt.	1 15 0

PLUMBER	£ s. d.
Milled lead and labour in flats, gutters . . . . . Per cwt.	1 17 6
Do. in flashings . . . . . ,,	2 0 0
Do. in covering to turrets, etc. . . . . ,,	2 7 0
Do. in soakers . . . . . ,,	1 13 0
Labour to welted edge . . . . . F.R.	3½
Open copper nailing . . . . . ,,	3½
Close ,, ... ,,	4½

Lead service pipe and fixing with pipe hooks . . . F.R.	½″ s. d. 1 2	¾″ s. d. 1 7	1″ s. d. 2 1	1¼″ s. d. 2 8	2″ s. d. 3 8	4″ s. d. —
Do. soil pipe and fixing with cast lead tacks . . ,,	—	—	—	—	—	5 9
Extra, only to bends Each	—	—	—	—	2 3	6 6
Do. to stop ends . ,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions . . . ,,	3 6	4 0	5 6	8 0	—	—
Lead traps . . ,,	—	—	—	7 6	10 6	—
Screw down bib valves . . ,,	7 6	10 6	12 6	—	—	—
Do. stop cocks . ,,	10 0	12 0	16 0	23 6	56 6	—

	£ s. d.
4″ cast-iron ½-rd. gutter and fixing . . . . . F.R.	1 3
Extra, only stop ends . . . . . Each	1 0
Do. angles . . . . . ,,	1 6
Do. outlets . . . . . ,,	3 0
4″ dia. cast-iron rain-water pipe and fixing with ears cast on . F.R.	1 6
Extra, only for shoes . . . . . Each	2 6
Do. for plain heads . . . . . ,,	5 6

PLASTERER AND TILING	£ s. d.
Expanded metal lathing, small mesh . . . . . Y.S.	3 9
Do. in n/w to beams, stanchions, etc. . . . . ,,	5 6
Lathing with sawn laths to ceilings . . . . . ,,	1 6
½″ screeding in Portland cement and sand for tiling, wood block floor, etc. . . . . ,,	2 6
Do. vertical . . . . . ,,	2 9
Rough render on walls . . . . . ,,	2 3
Render, float and set in lime and hair . . . . . ,,	3 0
Render and set in Sirapite . . . . . ,,	3 3
Render, backing in cement and sand, and set in Keene's cement . ,,	4 6
Extra, only if on lathing . . . . . ,,	9
Keene's cement, angle and arris . . . . . F.R.	8
Arris . . . . . ,,	3
Rounded angle, small . . . . . ,,	3
Plain cornices in plaster, including dubbing out, per 1″ girth . ,,	2
1″ granolithic pavings . . . . . Y.S.	5 0
1½″ ,, ,, ,, ... ,,	6 0
6″ × 6″ white glazed wall tiling and fixing on prepared screed . ,,	1 2 6
9″ × 3″ ,, ,, ,, . . . ,,	1 7 6
Extra, only for small quadrant angle . . . . . F.R.	9

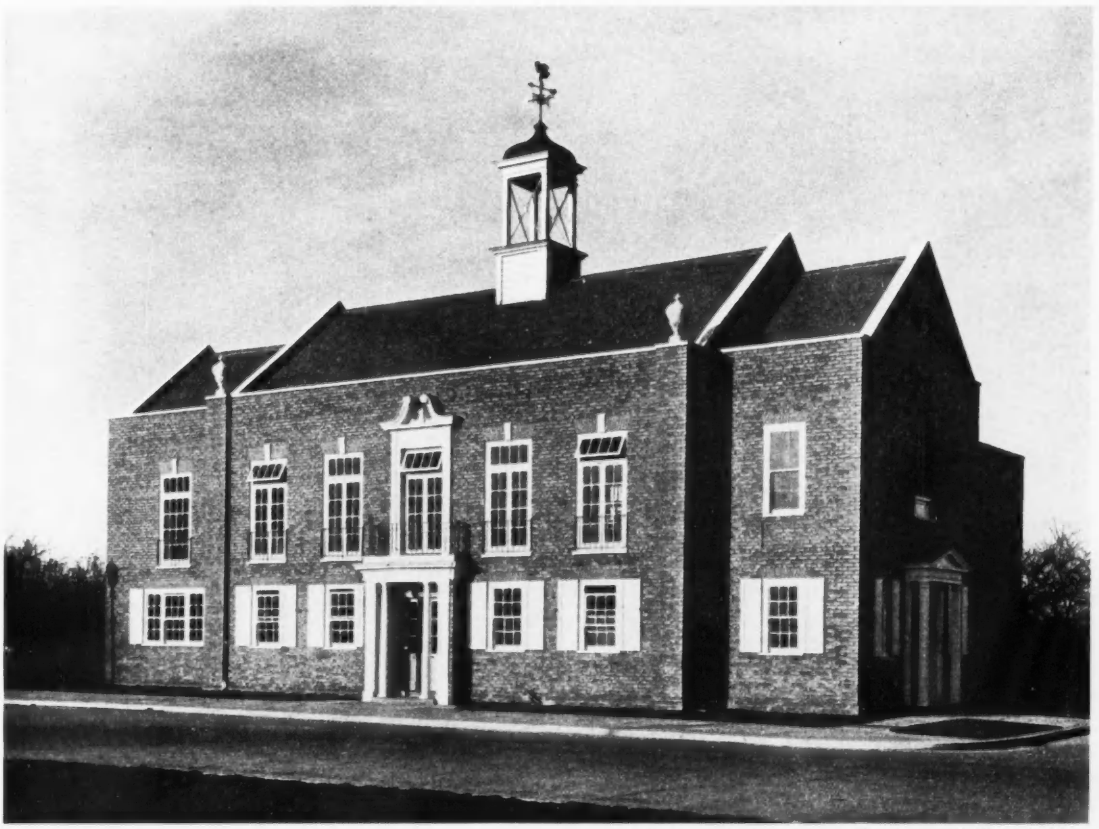
GLAZIER	s. d.
21 oz. sheet glass and glazing with putty . . . . . F.S.	8
26 oz. do. and do. . . . . ,,	1 0
Arctic glass and glazing with putty . . . . . ,,	1 2
Cathedral glass and do. . . . . ,,	1 3
Glazing only, British polished plate . . . . . ,,	8
Extra, only if in beads . . . . . ,,	2
Washleather . . . . . F.R.	4

PAINTER	s. d.
Clearcolle and whiten ceilings . . . . . Y.S.	8
Do. and distemper walls . . . . . ,,	1 0
Do. with washable distemper . . . . . ,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces . ,,	3 3
Do. on woodwork . . . . . ,,	3 6
Do. on steelwork . . . . . ,,	3 0
Do. and brush grain and twice varnish . . . . . ,,	5 6
Stain and twice varnish woodwork . . . . . ,,	1 11
Stain and wax-polish woodwork . . . . . ,,	4 6
French polishing . . . . . F.S.	1 2
Stripping off old paper . . . . . Piece	2 6
Hanging ordinary paper . . . . . from ,,	3 0

SCALE DRAWINGS

STONE URNS ON KEMSLEY VILLAGE HALL, KENT

DETAILS OF MAIN FRONT, GUISBOROUGH WORKHOUSE, YORKS.



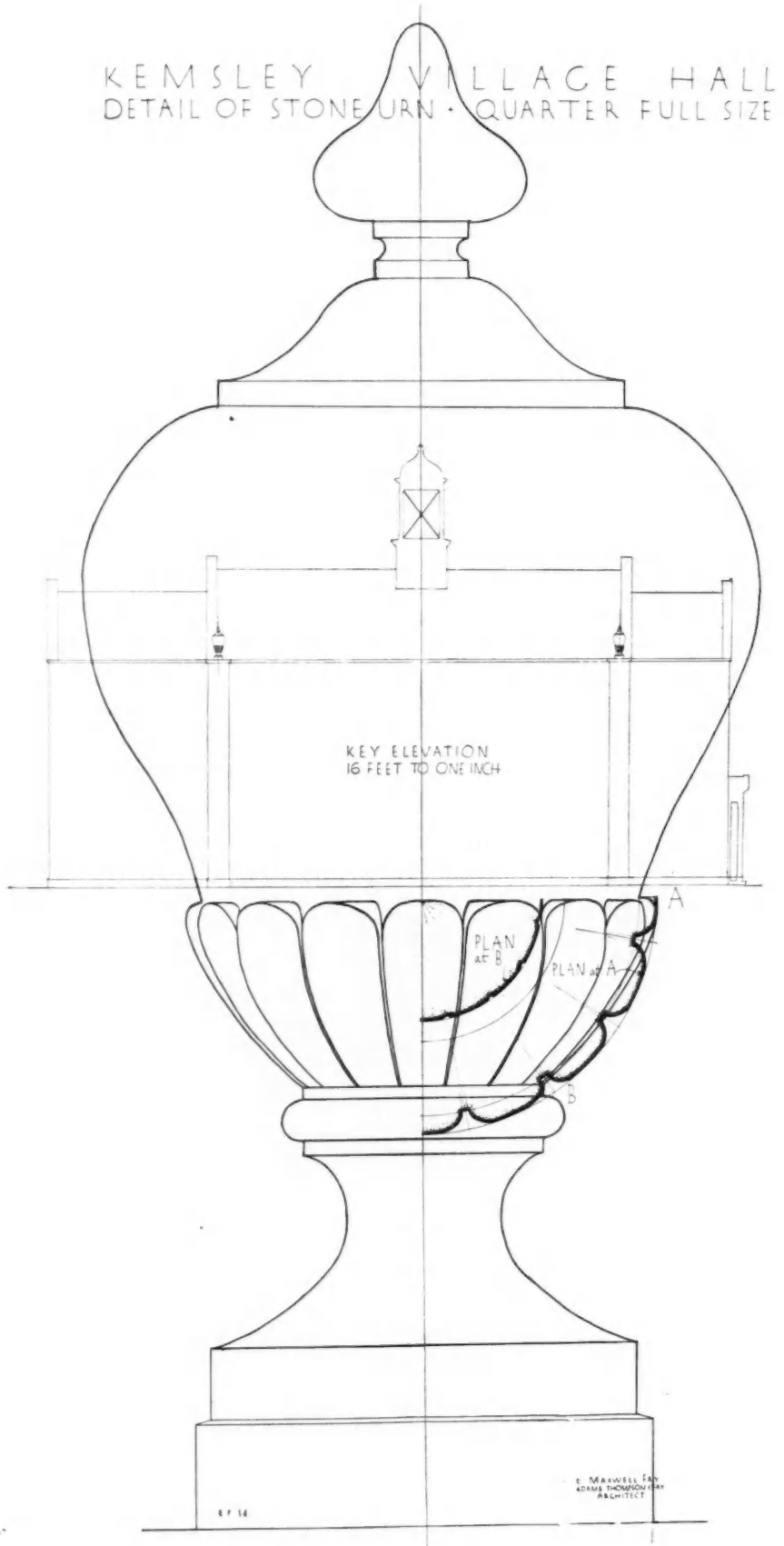
[*E. Maxwell Fry (Adams, Thompson and Fry), Architect*

KEMSLEY VILLAGE HALL, SHOWING STONE URNS ON PRINCIPAL FRONT

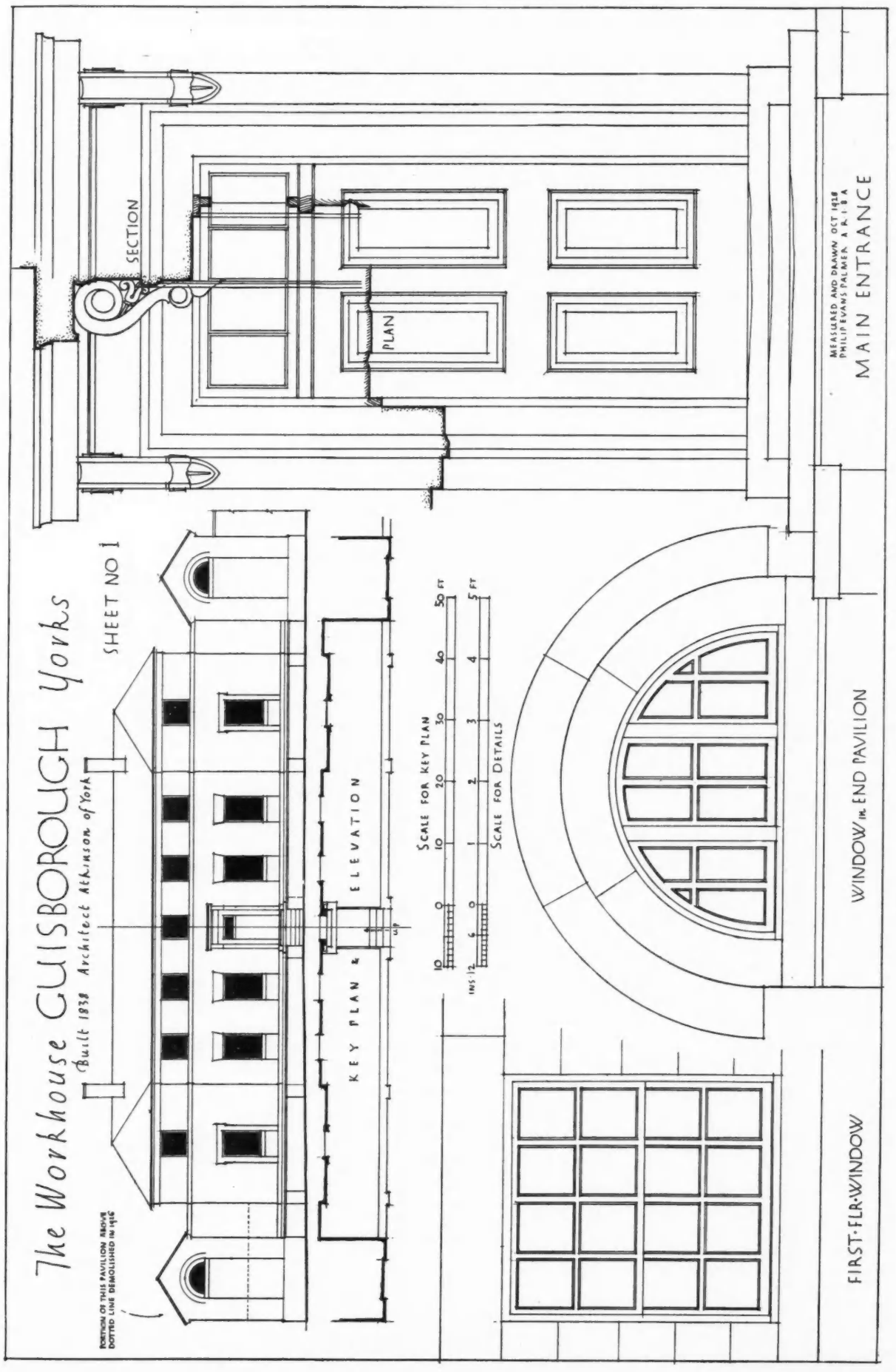
A DECORATIVE urn might seem too simple a member of any composition to need very much designing, especially as historical precedent offers a choice from among but three or four widely employed types. But the older examples are usually, by reason of their exposed positions, weathered right away from their original shapes and sit for the most part merely as shapeless lumps, showing to us where a pot once was.

In adopting a "court-house" type of building for his village hall, and moreover, by finishing the ends of his main roof with a flat gable and parapet, Mr. Maxwell Fry was inevitably led into the necessity of marking the ends of the parapet of his main building in the traditional manner. He put urns there of such delicacy of design and harmony of scale that it has been thought fit to include the bare detail of one of them in this series.

The photograph reproduced above and the outline inset in the illustration overleaf show the relation these urns bear to the general composition.



For photograph see previous page.]



[For photograph see following page.



THE MAIN FAÇADE OF THE WORKHOUSE, GUISBOROUGH, YORKSHIRE

A CLEAN and robust composition expressing in an admirable manner the local stone of which it is built, the Guisborough Workhouse, a measured drawing of which appears on the previous page, cost a mere £2,629 when it was erected in 1838 from the designs of the architect Atkinson of York.

Note the Greek influence in the detailing generally, and especially in the bold treatment of the trusses and cornice to the entrance door. It will be seen that, contrary to Cocker, the risers of the steps leading from the pavement level to the ground floor decrease steadily and evenly from nine inches to four.

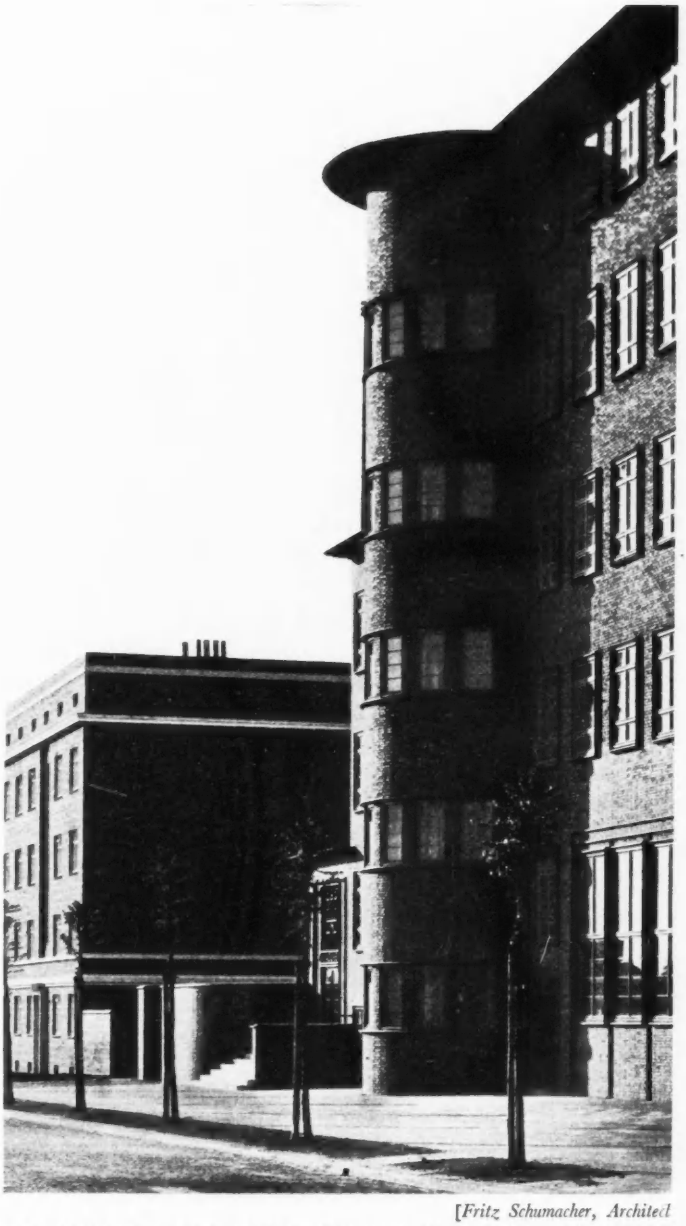
These nineteenth-century Yorkshire architects were not afraid of surface modelling. The string which forms a continuous sill under the first-floor windows has a projection from the wall face of 6 ins., while the plinth of the building, while only some 10½ ins. high, has a normal projection of 3½ ins., increased to 7 ins. under the ground-floor windows.

The pedimented wings were originally in place at both ends of the main front, but a few years ago that on the left was discovered to be in a bad state of repair, and was unfortunately and most ruthlessly pulled down, with considerable loss to the formal balance of the façade.

The rainwater from the low-pitched, stone-hipped, slated roofs is carried away in copper gutters and down pipes, the delightful cool green of this metal forming a pleasant line of colour above the shadow cast by the eaves.

ENTRANCE and WINDOWS

TO AN ELEMENTARY SCHOOL, LANGENFORT, GERMANY



[*Fritz Schumacher, Architect*

THE SEMICIRCULAR WINDOW FEATURE AND ENTRANCE

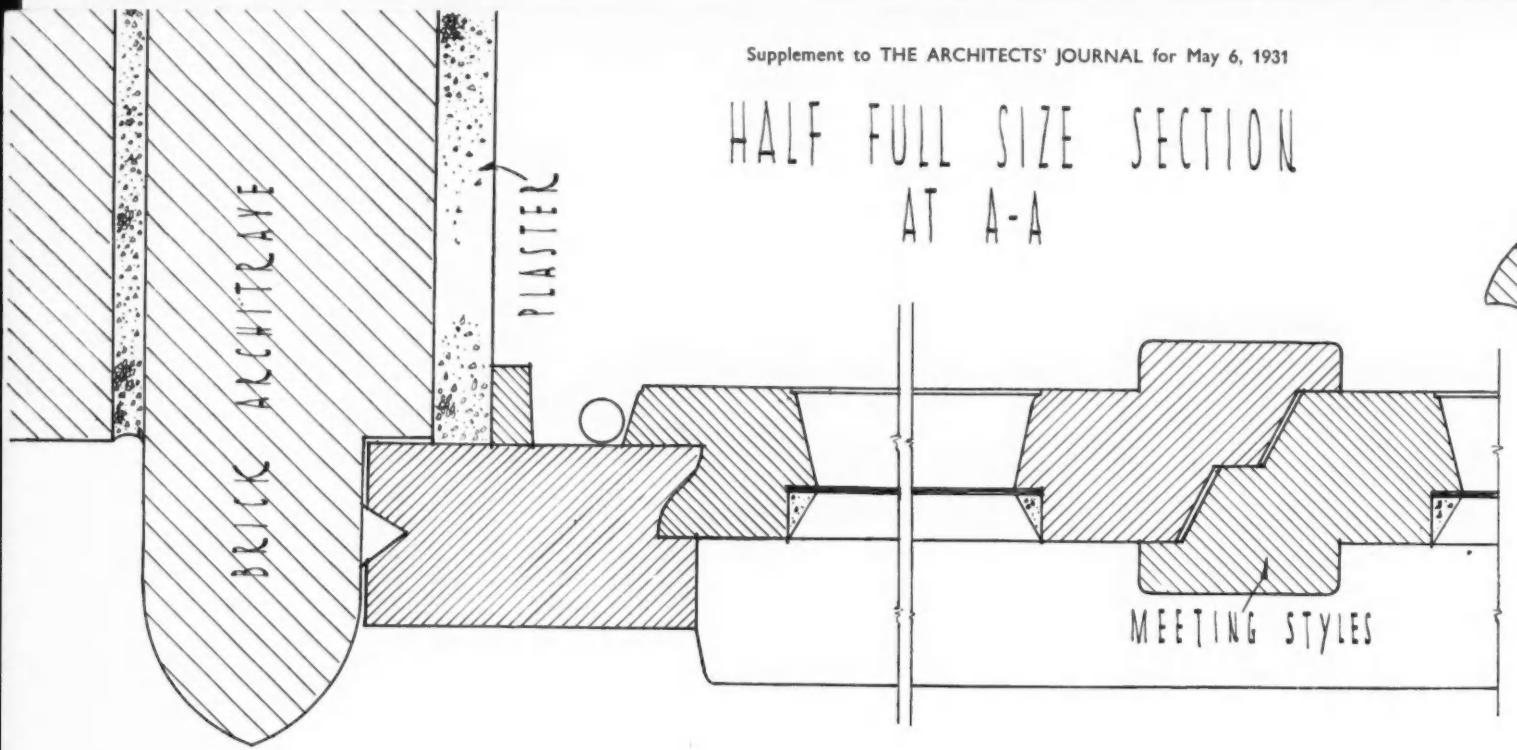
A VERY considerable number of large municipal schools, representing several widely divergent types of scholastic buildings, have been erected by the State of Hamburg since the war, from the designs of its chief architect, Dr. Fritz Schumacher. These have all been constructed of brick, the traditional building material of the Hansa Towns. Besides being relatively cheap, the local Lüneburg brick has a hard and very beautiful purple-russet texture; and Hamburg bricklayers are still famous for being the most skilled in Germany.

Though necessarily differing in plan and elevations, every one of Dr. Schumacher's schools represents the same rational and orderly simplification of traditional North German forms. The flat roofs are the logical outcome of modern structural methods.

In the Langenfort School, the boys' entrance of which is illustrated above, two prominent semicircular bays, with their widely overhanging roof-cornices, give formal emphasis to the division of the building into boys' and girls' sections. The only decorative details are the entrances. The fenestration is particularly pleasing and surely handled.

Supplement to THE ARCHITECTS' JOURNAL for May 6, 1931

HALF FULL SIZE SECTION AT A-A



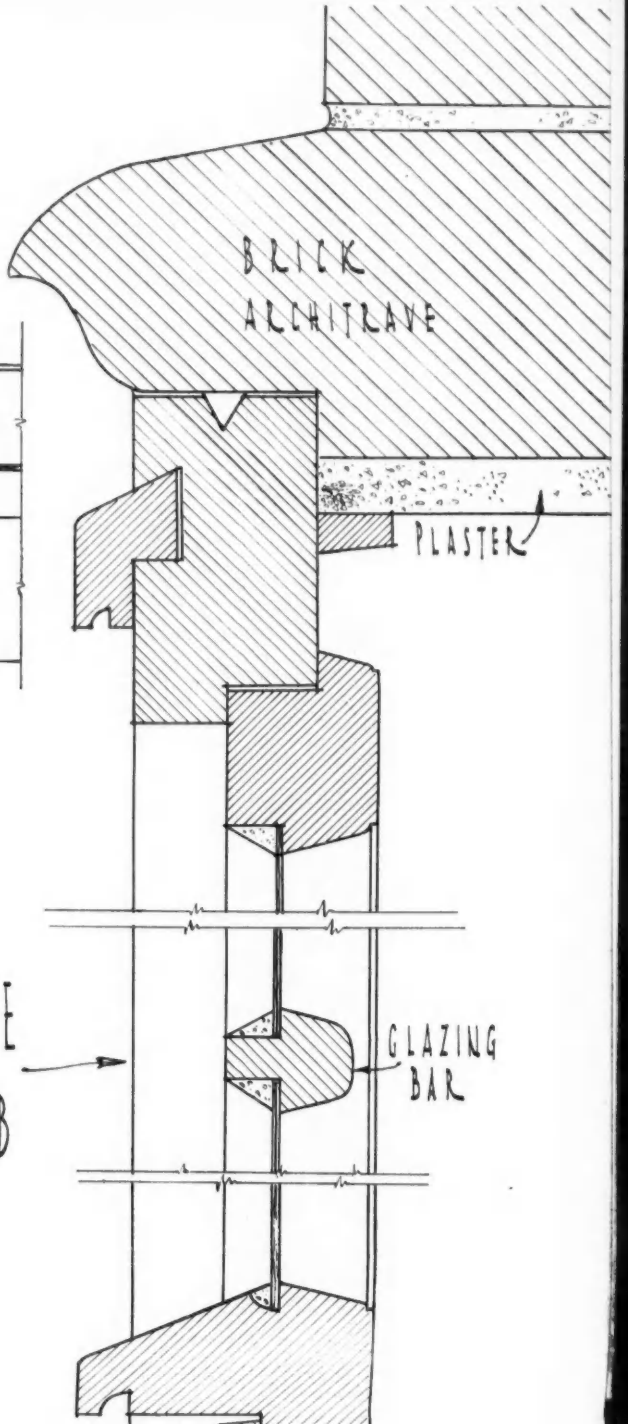
LANGENFORT - GERMANY

ELEMENTARY SCHOOL -

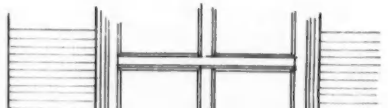
DETAILS OF BOYS ENTRANCE & WINDOWS

SCALES = ¼ IN. TO 1 FOOT & HALF FULL SIZE -

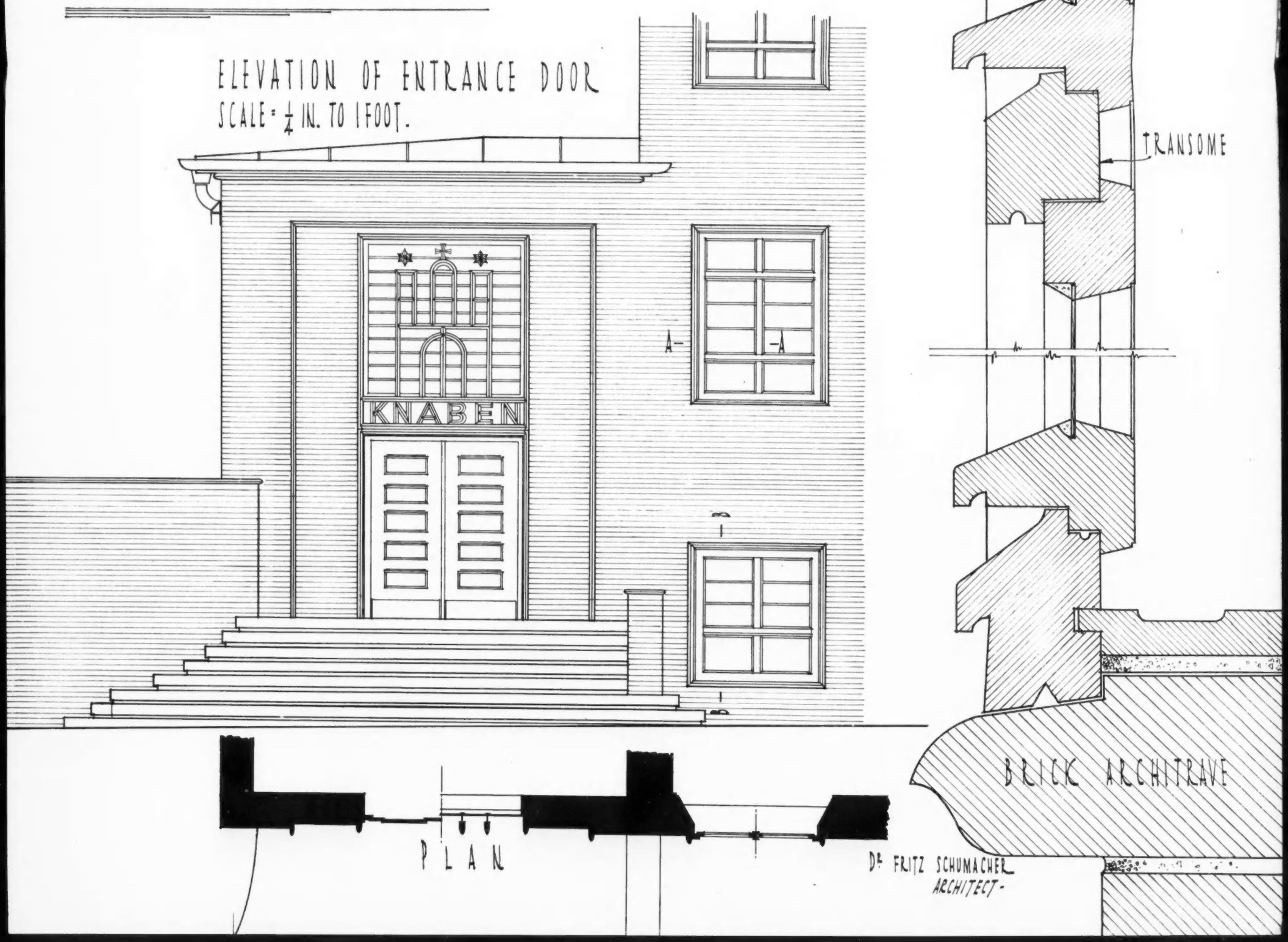
HALF FULL SIZE SECTION AT B-B



ELEVATION OF ENTRANCE DOOR



ELEVATION OF ENTRANCE DOOR
SCALE = ¼ IN. TO 1 FOOT.



PLAN

Dr FRITZ SCHUMACHER
ARCHITECT-

SELECTED PRECEDENTS:

ESSAYS IN PRACTICAL BRICK TRACERY



1 *DETAILS OF THE WEST WINDOW, LAYER MARNEY CHURCH, ESSEX*

ALTHOUGH sixteenth-century brick tracery in England falls far short of the delicate and elaborate work carried out in brick in Eastern Germany, it has character and beauty worthy of study.

The first feature one notices is that only bricks of normal dimensions were used—no special blocks or large units. At the intersections of mullions and transom in the church window at Tolleshunt Major (figure 2), a brick-on-end is used in the mullion, so as to leave bearings for the bricks of the transom. At Layer Marney Church (figures 1 and 3), two bricks-on-end are used at this point, each being cut to form a member of the transom, and this is a more workmanlike job, for two internal angles are formed on each brick.

Considerable ingenuity is shown also in cutting the bricks at the springing of the arches and particularly where this springing is from a mullion. Here, again, the Layer Marney window testifies to the superior ability of its craftsman, who has a thin perpend at the springing. When he reaches the interlaced tracery at the top of the window the units are necessarily small, but there is no muddled patchwork—every piece is accurately cut and built in. Where the piercing is not complete but the triangular spaces are only sinkings or panels, opportunity has been seized to form the little dividing mullion from the bricks of the panel filling and so to secure strength.

After this window, the simple one at Chignal Smealy Church (figure 5) seems commonplace, yet its sound, direct construction is beyond criticism.

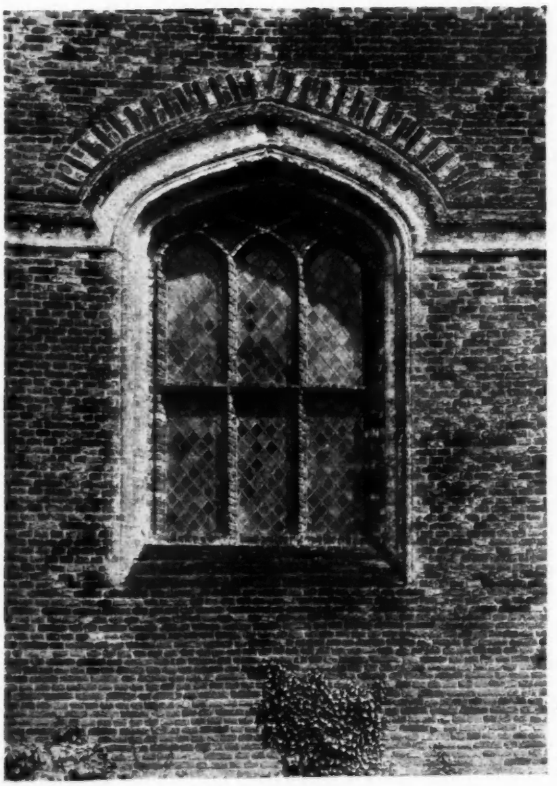
The windows at Feering Church (figure 4) are midway between the two in their interest to us.

In all, the general effect produced is admirable and provides suggestion and inspiration. There are still many bricklayers capable of producing equally good work, with a little guidance and encouragement. A waterproofing solution mixed with the mortar is necessary to prevent rain driving through the brickwork of such windows. A porous mortar invites penetration.

NATHANIEL LLOYD



2



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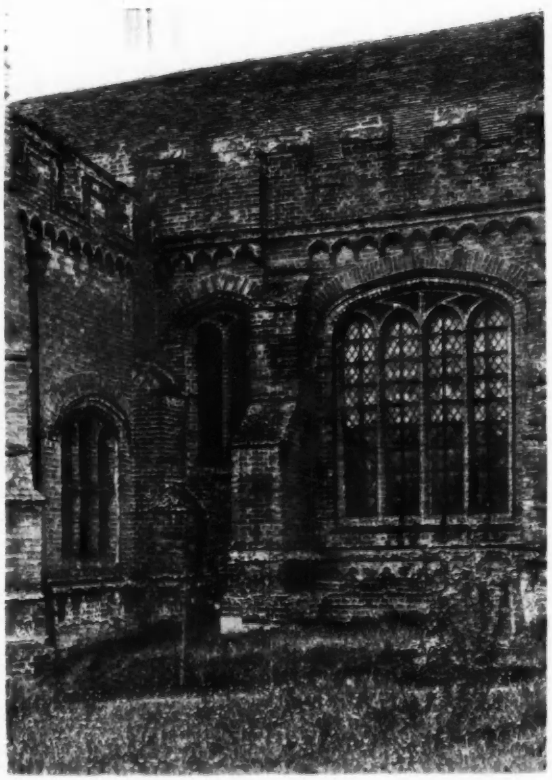

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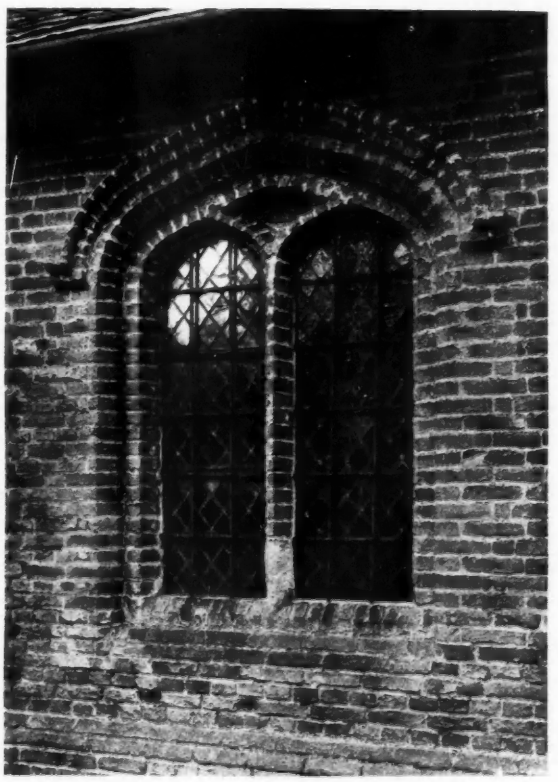
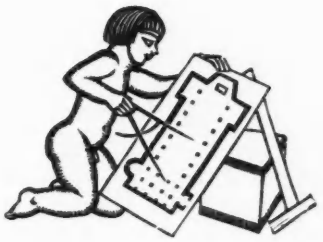


5

2 *TOLLESHUNT MAJOR, WEST WINDOW*
4 *FEERING CHURCH, SOUTH WALL*

3 *LAYER MARNEY, WEST WINDOW* (*See* 1)
5 *CHIGNAL SMEALY CHURCH WINDOW*

THE ARCHITECTS' JOURNAL



WEDNESDAY, MAY 13, 1931

WELFARE IN THE FACTORY

"I speak not now of laws and regulations to abridge but to enlarge man's freedom"

—LORD SHAFTESBURY, SPEAKING IN THE HOUSE OF COMMONS, FEBRUARY 28, 1843

IT is said of Lord Leverhulme that he never considered the building of Port Sunlight as an act of philanthropy, but as sound business. And the many large industrial concerns that have since laid out their model factories and villages have been amply rewarded for their expenditure. A healthy and contented workman is of at least as much value as an efficient machine, and it is a shortsighted policy that is willing to renew obsolete plant without improving the working conditions of the operative. But one has only to become acquainted with the history of factory legislation during the last hundred years to discover how long employers of labour in England were in coming to this obvious conclusion.

The conditions of labour in the early days of the industrial revolution, disclosed in the Parliamentary debates preceding the first of Lord Shaftesbury's Factory Acts, are a terrible indictment of uncontrolled greed and national apathy, which only gave way with the utmost reluctance before the unceasing efforts of this champion of the industrial worker. Even among the better type of factory owners, ignorance and a natural acquiescence in the standards of the age prolonged abuses. The mill of the Quaker philanthropist, Jacob Bright, a model exception in 1830, would have been condemned as unhygienic by a twentieth-century factory inspector—so far, happily, have we travelled during the last hundred years.

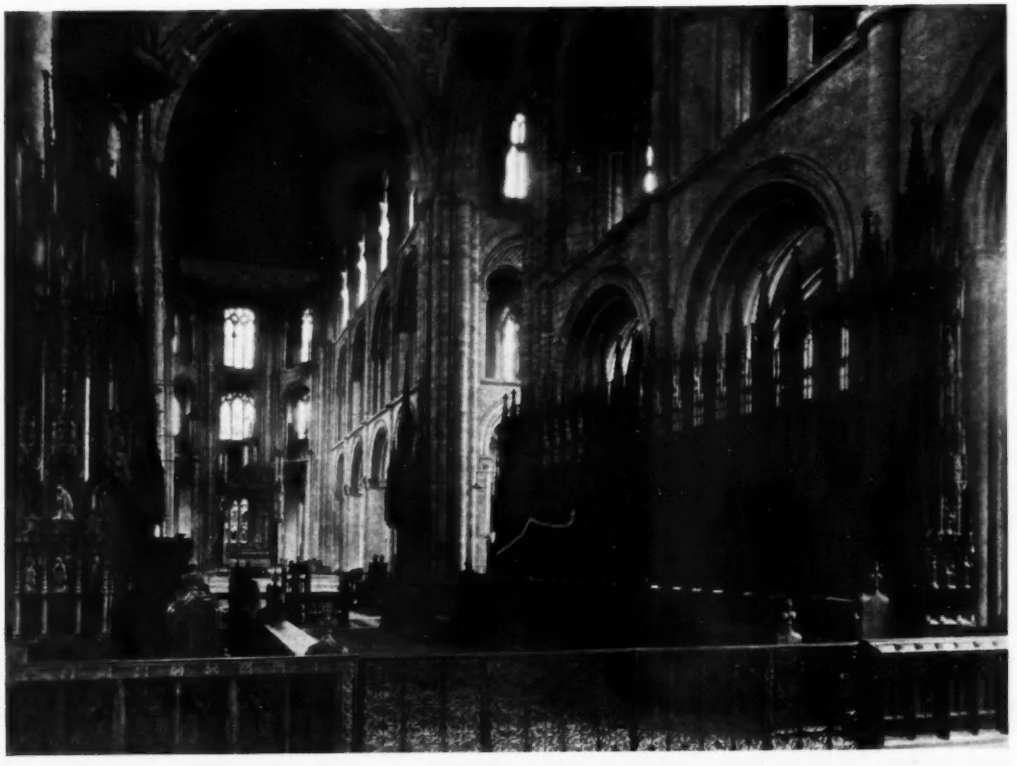
No one can read today the array of factory regulations in force in this country without being struck by the superior working conditions enjoyed by the British industrial worker as compared with those of the majority of his Continental comrades. "Like a factory" is no longer a synonym for ugliness, for since architects began to consider the possibilities latent in a group of factory buildings, some very fine layouts have resulted, and the employment of steel and concrete construction has not only added to the hygienic conditions by increasing light and air, but has also produced some fine, stark, well-proportioned designs.

Internally, the restrictions imposed by the regulations, especially the constant cleaning and redecoration, present a problem to the architect and force him to consider the most economical materials and methods to be used in carrying out the requirements of the inspector. The discovery that loss of efficiency is due in part to noise has brought the question of sound absorption and acoustics into prominence. Like every other branch of architecture, factory design is becoming a specialized study. A modern factory, with its escape stairs, sanitary accommodation, segregation of the sexes, each with its rest and welfare rooms, heating and ventilation, and in some cases special methods of disposing of noxious fumes, naturally costs far more per head of the staff to build than the old nineteenth-century mill, where the worker usually was only so much factory fodder to be used, broken, and cast aside.

Up to the present time coal has been the chief generator of power for industrial purposes, but when the national scheme of electrical distribution has been completed the operative will enjoy the benefit of working in a clean factory under a sky purged of the foul smoke which has for years shut out the health-giving sunlight from our large industrial areas.

The more factory conditions are humanized the more trade will benefit, and probably no regulations more directly affect the well-being of the workman than those governing safety devices on dangerous machinery. These have almost wiped out the high casualty rate that took such an appalling toll of life and limb in the middle years of the last century. In 1929 there were over 5,000,000 persons employed in factories in this country, and accidents from all causes were slightly more than 3 per cent. per annum. It is a fine record, of which both factory owners and reformers may well be proud.

The National "Safety First" Association's activities, including "Safety Week," which began last Monday, have done much to bring about this achievement. But their primary concern is with methods of operation of the plant in being. The preceding act of design, however, fixes the conditions within which it can be operated with safety and welfare. Accordingly, it is to afford architects information of the latest factory practice that the first of a series of articles on the subject is published in this issue.





ONE WAY AND ANOTHER: A CATHEDRAL IN TWO LIGHTS

These photographic studies of the choir of Peterborough Cathedral, taken by day and night respectively, show to what degree the conditions of daylight may be simulated by modern methods of concealed and flood lighting. On the whole, the camera records so little difference that the windows alone supply the clue to identification. And in some ecclesiastical buildings experiments have even been made in illuminating them by artificial light through the windows.

NEWS & TOPICS

THE WORK OF SIR WILLIAM ROTHENSTEIN

IT is only right, after the publication of the first part of his memoirs, which created so much interest, that Sir William Rothenstein should afford the public an opportunity of viewing some of his work. The exhibition now open at the Goupil Gallery comprises seventy-four oil paintings, gouaches and drawings executed by him during the last thirty-seven years. An exhibition such as this is no small achievement for a man who is not yet sixty. Those who visit it will realize the remarkable consistency Sir William has shown in his work ever since the date of his earliest exhibit—a coloured chalk drawing of Mr. H. B. Brabazon. After looking at the portraits that adorn the walls, one does not need to consult the catalogue. Among the well-known men faithfully depicted with the sure strokes of genius are Sir Herbert Samuel, Geoffrey Scott, Rudyard Kipling and Walter de la Mare.

*

Among his paintings I liked most "The Farm Cart," reproduced overleaf, and "Oakridge Farm: Autumn Evening," both post-war efforts. The latter is a delightful representation of farm buildings with the surrounding countryside glowing with russet tones that gradually fade away into the distance. His latest work on view is a self-portrait rendered during the early part of this year. On leaving the exhibition one is forced to the conclusion that in the Principal of the Royal Academy School of Art we have one who is a true disciple of the creed, "Art for Art's sake."

THE GOVERNMENT AND COAL TREATMENT

The problems and issues involved in the scientific treatment of coal are many-sided—too many-sided for the layman to grasp readily. Nevertheless, he may be mildly stimulated by the statement made on behalf of the Minister of Mines this month, concerning the Government's policy on the question and the expressed desire to help. As a matter of fact, beyond work of the nature which has already been conducted by the Fuel Research Board (Department of Scientific and Industrial Research), there is little that the Government as such can do to help at the moment.

*

It will, of course, be a move in the right direction if the Government encourages the use of smokeless fuel by its own departments, and also by local authorities. Before, however, smokeless fuel can become really popular, supplies must be adequate and prices must show at least some advantage over bituminous coal. Otherwise, it will be extremely difficult to popularize the use of smokeless fuel. This brings us straight to the real heart of the question from the user's standpoint—can smokeless fuel prove itself economical and satisfactory in respect to comfort? There are grounds for believing that ultimately it will, when some of the associated problems have been solved.

THE QUESTION OF PRICE

It must be borne in mind that the treatment of coal by carbonization processes that produce smokeless fuels suitable for domestic and similar uses, yields only about 70 per cent. of the original coal as solid fuel. The other products, gas and tar oils chiefly, must therefore have a compensating value, or the solid fuel is obviously too costly. At the present time, the prices which can be obtained for the crude tar oils are at a very low level, and they have to face the competition of petroleum fuel oils. The Minister of Mines considers that the main hope for a better return lies in improving the method of treating these tar oils for the production of motor spirit and Diesel-engine fuel oils, and it is proposed to extend to a small industrial scale the laboratory work already done on the hydrogenation, cracking and refining of tar oils.

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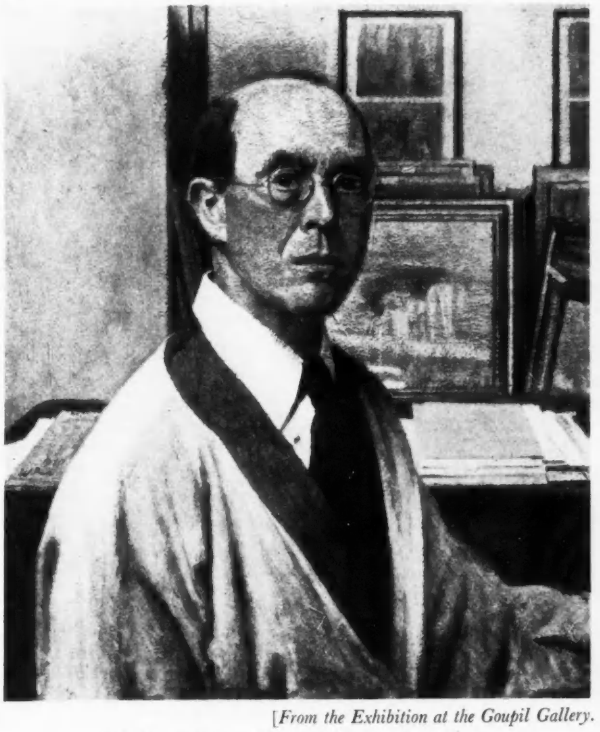
This is highly commendable, and the proposed expenditure of £33,500 on the necessary plant, with an additional annual cost of £8,000, can be considered as an excellent



[*From the Exhibition at the Goupil Gallery.*

A Self-portrait. By Sir William Rothenstein.

investment, if it brings a cheap supply of smokeless fuel nearer. The raising of the economic value of the by-products (if one may use the term) of smokeless fuel is the first essential in making possible the adoption of this highly desirable fuel for domestic and general purposes.

THE FUEL THE PUBLIC NEEDS

It is well to remember that the mere fact of a fuel being smokeless is not an overpowering recommendation to the average user. The public is not yet trained by experience to discriminate between various smokeless fuels (actually cokes) as it is between different types of coal, and one bad sample condemns the lot. The Fuel Research Board has already given a lead to producers in its experiments on the effect of ash content. These showed the bad effect of increased ash content on the rate of radiation, and also indicated that the detrimental effect of ash is more noticeable in grates of the well type than in bar grates.

*

In short, however desirable may be the quality of smokelessness, the public must not be expected to sacrifice

its demands for the other features of an acceptable fuel, particularly if there is no price inducement offered. The whole question is one of economics, for though the qualities of convenience and comfort will always find a buyer, the voluntary sacrifice of these without compensation of some sort is too much to demand. The fireside is too much the centre of the Englishman's home for it to be interfered with safely; but give him a comfortable and convenient fuel and he will buy it.

WHAT WILL THE LAND TAX BRING ?

Mr. Snowden's Land Tax is going to give many of us cause for considerable alarm; not because it is a socialistic measure whose object is an exchange of property, but because the taxation of land cuts many ways, some of which may be destructive of the whole spirit upon which town planning legislation is founded. The idea of innocent freeholders, living in their homes, having to pay out more taxes in order that speculators may suffer is a picture that I, for one, can hardly relish. But when one learns that such things as sports grounds, woodlands and beauty spots not in the hands of local authorities may have to pay for the privilege of existence, one may expect to see



[*From the Exhibition at the Goupil Gallery.*

The Farm Cart. By Sir William Rothenstein.

their steady disappearance, if not into public ownership, then into the hands of speculators and ribbon developers intent upon seeing that they shall be covered, as to the penny-in-the-pound, by quickly realizable profits.

★

We are told that the tax will force more land into the market. So, probably, it will. What for ? It seems to me that there exists a considerable divergence between the ideals of Government-impelled town-planning and the necessities which drive a Chancellor to find money wherever it may lie. The two must needs approach each other before this new tax can prove itself anything but a means of raising money at the expense of more than our pockets.

ORIGINAL DRAWINGS FOR ST. GEORGE'S HALL, LIVERPOOL

The Liverpool Libraries Committee have just had the good fortune to acquire a complete set of drawings which show St. George's Hall as it might have been. The early history of that great building is very interesting. Between 1836 and 1840 a competition was held for a concert hall design, which the young Elwes won. The Corporation also required an Assize Courts, and that competition Elwes won also, though he was then about one-and-twenty. Better than this was the foresight of the Corporation and the generosity of the then city architect, for between them they made it possible for Elwes to combine the functions of the separate designs in the noble building which stands today, the finest civic building in England if not in the world.

★

These newly-discovered drawings number thirty-seven, and may well be Elwes's designs for the separate buildings, for they are obviously by an architect of the highest qualifications, who in his memorandum claims that such a building would be " without parallel in England."

LIVERPOOL SCHOOL'S NEW QUARTERS

Jumping to present-day Liverpool one may record the achievement of an ambition which the war and other circumstances have long held in suspense. Years ago Lord Leverhulme, to whom, as much as to anybody, the Liverpool School of Architecture owes its foundation, gave £25,000 towards the erection of a building to house the activities of the School. Since then, in gradually expanding but always unworthy quarters, the School has gone on from strength to strength until today with 200 students it is to move into premises in Abercrombie Square, the spiritual home of the University.

OVERCROWDING ON A PADDINGTON ESTATE

The Ecclesiastical Commissioners' Annual Report makes a point of answering the charges brought against it by what is described as an " unofficial survey " of overcrowding on their London Bishopric Paddington Estate. The Clarendon Street area which was surveyed is, says the report, only partly owned by the Commissioners and this part is held by the Canal Company on a 2,000 years' lease on conditions that give the ground landlords no right of interference.

★

The Commissioners do not deny the existence of overcrowding on other portions of their estate; they assert that they are powerless to intervene, but that the local authority has powers which can be used to mitigate the overcrowding. Finally, they state that there is no connection between overcrowding and the growth of the Commissioners' revenue, and that they are prepared and willing to cooperate with the Paddington Borough Council in improving housing conditions in the borough.

HOUSES FOR THE AGRICULTURAL POPULATION

Turning from the towns to the country, one is glad to see that the Ministry of Health is determined to get a move on with the provision of houses for the agricultural population. There is an urgent demand for 100,000 houses to let at rents that agricultural labourers can afford to pay, and very little is being done to make up the deficit. The circular which has been issued by the Minister calls for action through the various channels which have been already provided for the purpose of stimulating rural housing. Especially is it addressed to the counties, which are, of course, given very wide powers to help smaller and poorer authorities with grants of money, etc. The Minister, on his part, knowing that money is at the root of the delay, is to issue model plans and elevations of rural cottages which can be built for the least possible outlay consistent with good building and fit sanitary conditions.

ASTRAGAL

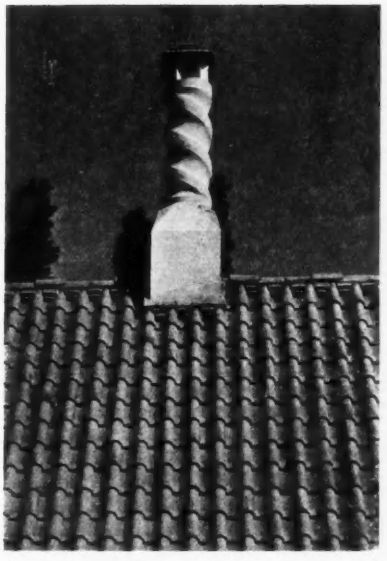


A general exterior view. There is a sheet of water to the left and the wing at this end is a boat-house. In the centre are cow stalls; behind the cart shed, to the right, is the dairy.

A MODEL FARM ON DUTCH LINES

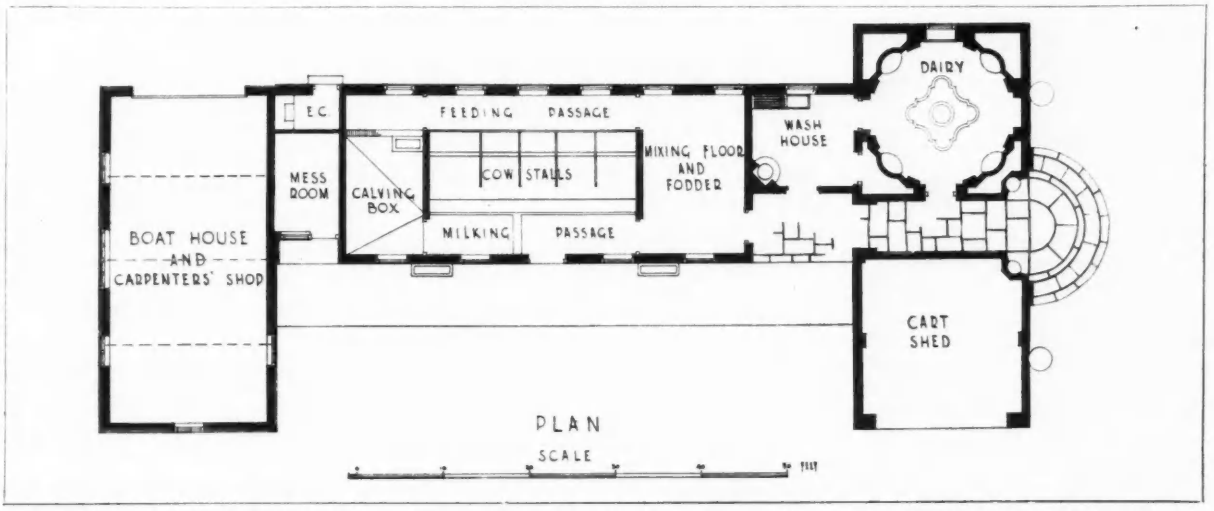
DESIGNED BY MAXWELL AYRTON

IT may be a comparatively easy and amusing pastime to produce in the twentieth century an academic paper design for a miniature model dairy reminiscent of the unpractical playful fancy of the eighteenth-century "rural" phase. On the other hand, to design a modern set of farm buildings with due regard for practical working and local bylaws is a serious undertaking. To accomplish the combination of practice with fancy in due relation to an English farm setting is a line that, as readers of our last New Year issue will recall, Mr. Maxwell Ayrton has taken with conspicuous success. In the model farm buildings at Hackbridge, built for Mr. M. T. Mallinson, D.L., J.P., the hand of the architect is evident in the lightness of touch and the sureness in the handling of modern materials with originality yet with a substantial, stabilizing substructure of tradition.



A near view of the washhouse chimney and pantiled roof. Ventilation is secured by the disposition of the ridge tiles.

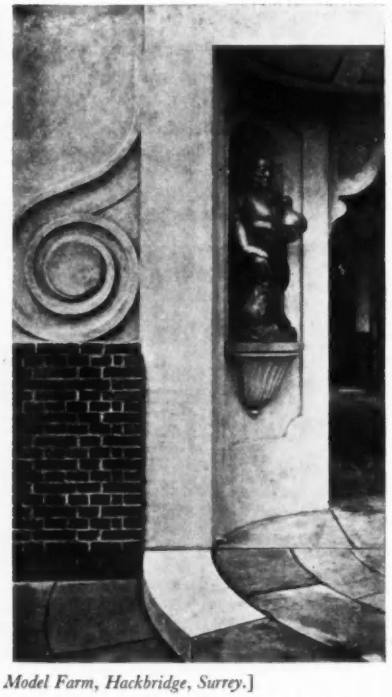
"The Grange," Hackbridge, Surrey, is in a particularly beautiful situation, with the scenic amenities of a river and a lake. A boat-house with elm weather-boarding forms part of the scheme for the block of buildings, and is balanced at the other end by a cart-shed with a louvred gable. Set back between these two projecting blocks is the range containing stalls for five cows. These are arranged centrally between feeding passage and milking passage, and are flanked on one side by a calving box and on the other by a space for fodder and food mixing. The extremity nearer the boathouse is a small mess-room, and at the opposite corresponding end is one of the entrances to the washhouse, fitted with a thermostatic electric boiler, and



The buildings in plan. Stalls for five cows are provided, scientifically laid out, with separate feeding and milking passages. Towards one end is a mess-room, and towards the other a washhouse intervening between cowhouse and dairy proper.



The main entrance end of the farm buildings. The door within, on the right, is to the dairy. The dado is of black bricks from Holland; there are rain-water troughs of concrete and the gutters, downpipes, etc., are of wood.





Model Farm, Hackbridge, Surrey.] Alternative views of one of the pair of figures flanking the entrance illustrated opposite—[*By Maxwell Ayrton.*

communicating with the dairy itself. The principal entrance, which is the main external feature, is at the end. It is here that the Dutch manner in which the building is conceived is most evident. The bold but well-proportioned and graceful curves of the plasterwork—produced by hand on the job, and therefore the more vigorous and vibrant — and the charming coloured wooden figures in the niches above the sweep of the shallow circular steps combine to produce an impression of characteristic Dutch efficiency, comfort and reasonable elegance.

Yet nothing is out of keeping with an English landscape in the pleasant simplicity of the pantiled roof, beneath which perfectly straightforward windows punctuate walls finished in white cement. Nor indeed is the dado of glazed black bricks inappropriate, although the bricks are from Holland, and their use in this country is a novelty. The rain-water troughs are moulded and cast concrete, and the eaves, gutters and downpipes are of wood. Ventilation within the cow-house is arranged unobtrusively by means of the ridge tiles.

Further mention must be made of the cheery workaday figures, with the —and its fellow. Both were carved in mahogany by Mrs. Polly Hill-Clarke, and painted.



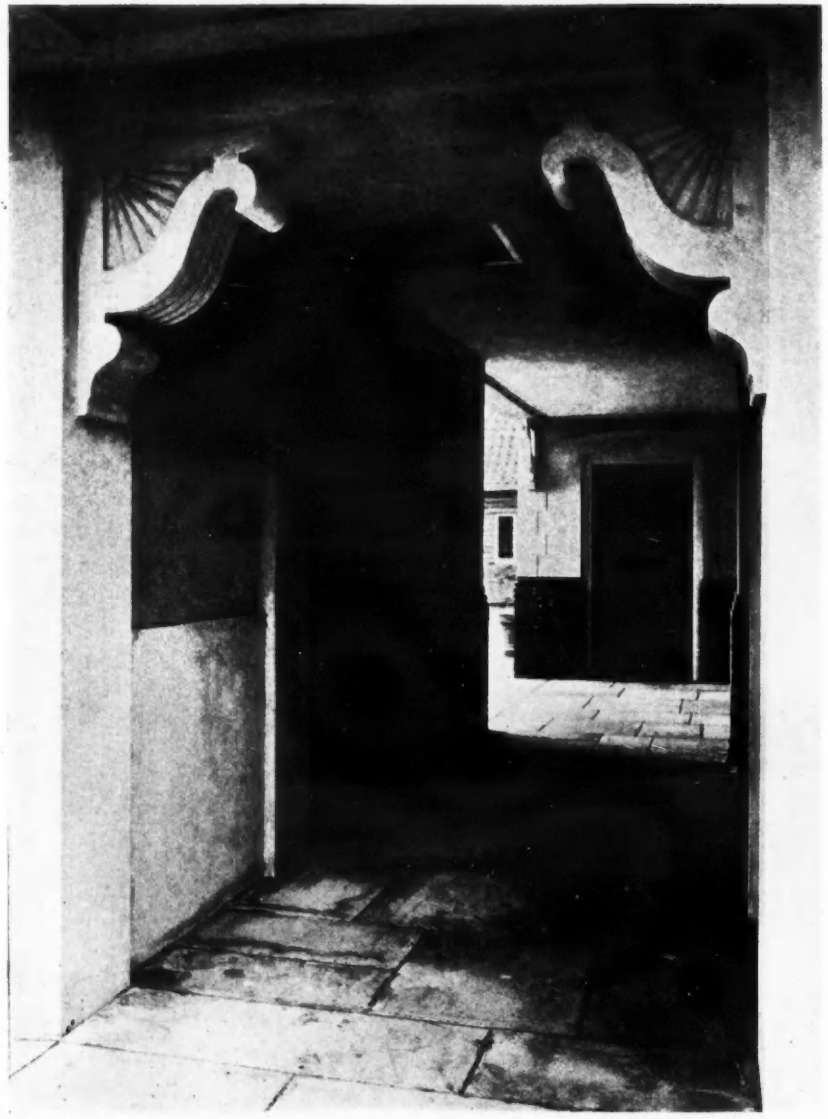
Model Farm, Hackbridge, Surrey.] [*By Maxwell Ayrton.*

This formal view of the main entrance gives the strongest aspect of the Dutch feeling which pervades the design, a feeling attributable not only to its general outlines but to the decorative features in which the carved figures, so richly expressive of smiling plenty, play a significant part. The plaster decoration was fashioned by hand on the job. The walls are finished in white cement.

becoming touch of fantasy, that preside over the entrance. They were carved out of mahogany by Mrs. Polly Hill-Clarke, and afterwards painted. These figures and the half-glimpse of the sunlit water-trough in the front, as one enters by the paved covered way in shadow, strongly suggest the Dutch tradition.

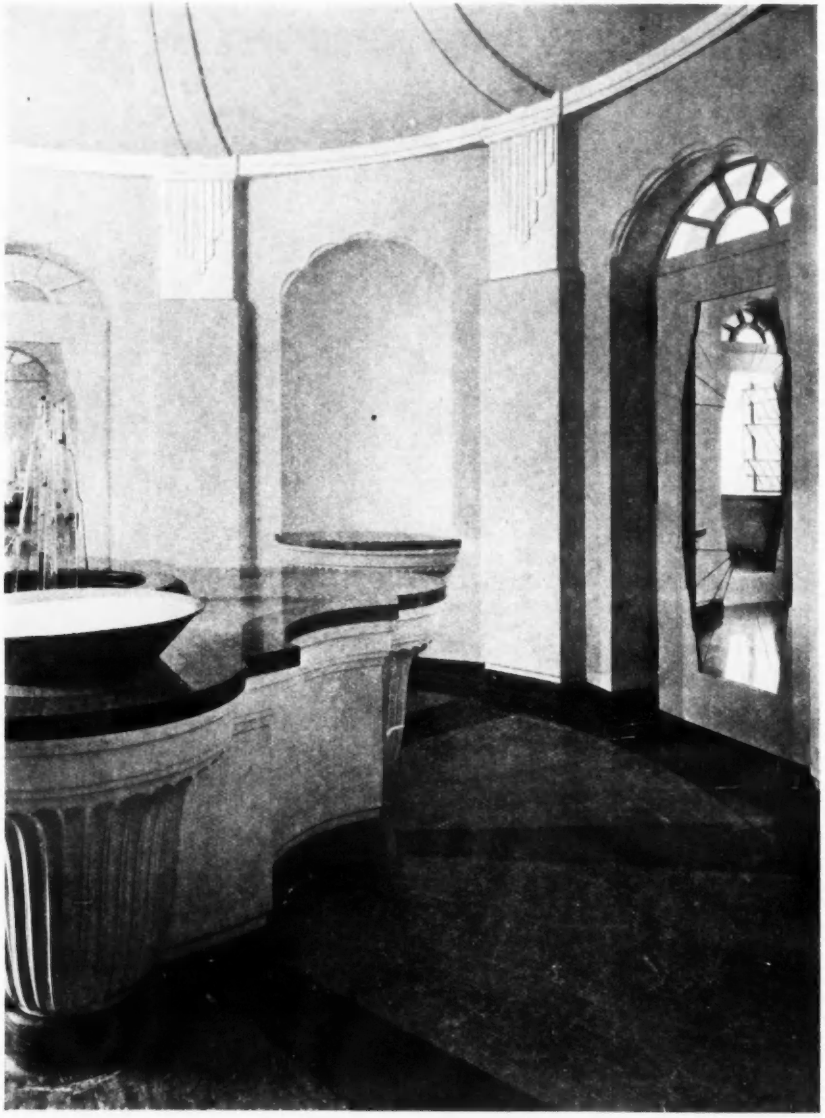
The interior of the dairy (which is described in detail in one of the supplements to this issue) shows an interesting handling of concrete, marble, plaster and glass.

V. M. C



Model Farm, Hackbridge, Surrey.]

The vista presented on entering the main doorway. The door opposite is to the milking passage; access to the dairy is by another door opening off the covered way on the right. To the left a glimpse is caught of one of the cast stone water troughs that stand in front of the building.



[*By Maxwell Ayrton.*

A view in the dairy itself, showing its octagonal shape, with the fountain counter in a central position. There are four niches, and the four doors (and dummies) between are finished with mirrors, setting off the plashing fountain. For another view and drawings, see supplement to this issue.

WHEN DESIGNING A FACTORY:

i: Health Requirements

By MISS HILDA MARTINDALE, O.B.E., *H.M. Deputy Chief Inspector of Factories.*

This is Safety Week (May 11–16), devised by the National "Safety First" Association to draw attention to means of avoiding accidents in factories. It will not be questioned that factory design has an important bearing on safeguarding the workers. Factories are sometimes planned without sufficient regard to the requirements of the Factory Acts and to the nature of the work to be carried on, with the result that, after the building has been completed, alterations have to be made at considerable expense. The object of this series of articles is to give architects authoritative information on practical points which should be borne in mind when designing factory premises.

THE present intention is, first, to make clear the legal requirements under the Factory and Workshop Acts which may affect the construction of industrial buildings, and, secondly, to give an account of other means of improving their structural conditions, adopted by some of the more progressive occupiers of factories in this country, although not legally required.

The information falls, naturally, under the main headings of health, safety and welfare, and this first article deals with points of factory design directed towards ensuring healthy conditions. As it is impossible to deal in detail with the specific legal requirements to which reference is made, a short bibliography is given at the end of each article, which may be found useful to architects. Further, a visit to the Home Office Industrial Museum, Horseferry Road, Westminster, S.W.1, will be found by architects to be of considerable interest, as here they will see a permanent exhibition of methods, arrangements and appliances for promoting health, safety and welfare among workers in manufacturing industries.

The requirements of the Factory Acts, which deal specially with health, fall under the following headings :

Cubic Space. The Factory and Workshop Act, 1901, requires that in every room in a factory or workshop there must be at least 250 cubic feet of air space for each person employed, and the Factories Bills, which have been introduced by successive Governments but have not, as yet, passed into law, propose to set up a new minimum standard of 400 cubic feet. Generally speaking, in factories where there is much machinery or plant, no difficulty will be experienced with regard to this, but in those processes which require no plant—as, for example, sewing or hand cigarette-making, etc.—the relation between the number to be employed and the air space should be carefully gone into so as to be certain that each worker will have the specified allowance.

Cleanliness. The law requires that every factory or workshop shall be kept in a cleanly condition. This involves that the walls and ceilings shall be kept clean as well as the floors, stairways and windows. So far as the walls and ceilings are concerned, a definite standard is laid down. One of three courses must be adopted :

1 : All the inside walls and ceilings must be lime-washed once at least within every fourteen months, or

2 : All the inside walls and ceilings must be painted with oil or varnish once at least in seven years (and if this is done they must be washed with hot water and soap once at least within every fourteen months), or

3 : All the inside walls and ceilings must be painted with at least two coats of washable water-paint, or re-painted with at least one coat of paint once in every three years, and be washed as above.

This standard applies to all factories except those exempted by Special Order of the Secretary of State; but for bakehouses a higher standard is laid down.

It is obvious that the existence of these legal requirements entails much more frequent re-decoration and cleaning than is customary in most other buildings, and it is important, therefore, to bear in mind in planning an interior of a factory that elaboration of design, or difficulty of access, will add very much to the cost and inconvenience involved by the frequent cleaning. In this connection it should be mentioned that tops of rooms which are not less than 20 ft. from the floor are exempt from these requirements, but they have to be kept in cleanly condition. Exemption from the necessity of painting or limewashing is also given in respect of glazed bricks, tiles, marble or certain other washable substances, provided that they are washed down with soap and water once in every fourteen months.

In order to ensure cleanliness of floors and stairways, the question of the best type of flooring needs attention. Factory floors have to be cleaned much more often than those in most buildings; hence it is desirable that they should be constructed of some smooth and impervious material which can easily be brushed and scrubbed, and which will stand rough usage and contact with the various materials that may be used in the manufacturing processes concerned.

Drainage of Floor. In connection with wet processes, the law requires that in every factory where any process is carried on which renders the floor liable to be wet to such an extent that the water is capable of being removed by drainage, adequate means must be provided for draining off the water. This requirement can be carried out by properly sloped floors, sufficient gulleys to remove the wet, and floors made of such impervious material as corrugated tiles, concrete, etc.

Ventilation. The law requires that in every room in a factory sufficient means of ventilation shall be provided and sufficient ventilation maintained. Specific standards are not at present laid down for the great majority of factory industries, but it is generally recognized that the means of ventilation should be sufficient to prevent overheating and excessive humidity so far as practicable. In recent years, much time has been devoted to experiments on the subject of the atmospheric conditions in workrooms, and there has been a considerable advance in the science of ventilation. In particular, the importance of securing movement in the air throughout the workroom has become more and more realized.

The atmosphere of many factories is affected by the materials used and the processes carried on. Definitely harmful materials and processes are the subject of special legislation, but even where the odours in a factory are harmless, they may be unpleasant. In general, more frequent changing of the air is necessary in a factory than in other occupied buildings. It has been suggested that six changes of air per hour should be regarded as a minimum in ordinary cases in which no fumes are given off by manufacturing processes and unduly high temperatures do not prevail.

Natural ventilation, where it can be effectively used, has many advantages. It is, of course, the cheapest method, and is the most pleasant to the senses, creating a greater sense of freshness than artificial systems of ventilation. This is particularly noticeable in summer, when it can be given full scope if an ample area of inlet and outlet opening is provided. New factory buildings are even now sometimes constructed with arrangements for natural ventilation on

too meagre a scale. Natural ventilation, unfortunately, is dependent upon the weather to a great extent and is productive of draughts, which are objected to in colder weather. In these circumstances, the persons employed near the windows close them, so restricting the ventilation unduly, little regard being paid to the feelings or comfort of the workpeople in the centre of the room.

Natural ventilation cannot, therefore, always be relied upon to provide the necessary air movement, particularly in the central parts of large rooms. Accordingly, it may be advisable, and even necessary, to use fans to extract the air at points suitably chosen in relation to the inlets. Successful ventilation schemes planned on these lines have been introduced into a number of modern factories. The air enters through low hoppered windows fitted, to avoid draught, with glazed gusset plates at the sides, or through swing windows above. In addition, Tobin ventilating tubes are provided at intervals along the side walls; these tubes, which are fitted with heaters, admit air when, owing to the weather, the windows are closed. The air is exhausted through large trunks in the centre of the room, having separate air "flues" connected respectively to a fan and a louvred outlet in the roof. Natural or mechanical ventilation can therefore be used as desired.

The plenum system is mostly used in large factories. Any desired number of air changes can be arranged for by providing a plant of the required capacity. In some cases it is desirable to use extraction fans in addition to the plenum system.

Special legal requirements apply where processes are carried on by which dust, gas or vapour, or other impurity, is generated and inhaled by the workers to an injurious extent. The Factory inspectors are empowered to order that a fan or other mechanical means, of proper construction, be provided to prevent such inhalation. The almost universal method of dealing with such harmful products is to provide a dust or fume-removal plant which is, in fact, a ventilating system. Where, in a new factory, processes giving rise to harmful dust, gas or vapour, are to be carried on, the fact that such plants must be provided should be borne in mind by architects when considering the general layout of the building.

Temperature. The law requires that a reasonable temperature should be secured and maintained in rooms where people are employed. With a few exceptions, neither maximum nor minimum temperatures have been imposed by regulation. It may be generally agreed that a temperature of between 60° F. and 65° F. is desirable for sedentary work. This temperature should be secured without the sacrifice of ventilation, which is the method unfortunately resorted to where heating arrangements are inadequate. Heating plants, and the accommodation provided for them, should, therefore, receive special attention when the factory is being planned.

The section of the Act dealing with temperature also requires that the means of heating adopted should not interfere with the purity of the air in any room in which any persons are employed. This means, in effect, that the products of combustion, where some form of fuel is used, must be taken outside the factory, as is almost invariably done in the case of coal stoves and fires. If gas-heated radiators are made use of, the type provided with flues should be adopted.

Most factories are heated either by convection, high or low pressure steam, or hot water, circulating in pipes, or by pre-heating the air as in plenum systems. The temperature of heating surfaces should be kept as low as possible. The panel system of heating is at present little used in factories. Experience of this system and of underfloor heating, however, suggests that these systems will find scope in the future in the heating of some classes of factories.

The requirement that a reasonable temperature should be maintained not only involves that a cold room should be heated sufficiently, but that in rooms which are unduly hot because of the processes carried on, steps shall be taken to reduce excessive temperatures as far as practicable. Each heat-producing process must, of course, be considered separately. It may be



Three types of washing appliances in the Home Office Industrial Museum, Horseferry Road, Westminster, S.W.1, a permanent exhibition of aids to health, safety and welfare among workers, that architects will find of great interest and value.



Ranges of glazed earthenware washing troughs, with containers for liquid soap, and a bath cubicle, in a modern factory lavatory.



A basin with hot and cold water fitted in a workroom (in this case a weaving shed) so as to be easily accessible to workers.

possible to reduce the temperature by providing localized exhaust ventilation, as is frequently done in the case of rooms where there are heated calenders, or the heat-producing plant may be covered with insulating material, or screened so that it does not unduly increase the temperature in other parts of the room. In certain cases special plenum systems should be installed, capable of blowing large quantities of cold air into the rooms at the working positions, as is successfully done in some glass and other factories where operatives have to stand close to furnaces.

Sanitary Accommodation. Both the Factory Act and Public Health Acts require the provision of suitable and sufficient sanitary accommodation for workers employed in factories and workshops. For the purposes of the Factory Act, the Secretary of State has laid down by Order the following standard of sanitary accommodation. It must be :

a : Sufficient as to number of conveniences, namely, not less than one for every twenty-five females, and one for every twenty-five males. (If there are more than 100 males, and sufficient urinal accommodation is also provided, there need only be one for every twenty-five up to the first 100, and one for every forty after.)

b : Accessible to the persons employed.

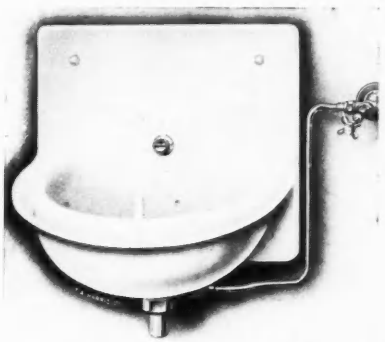
c : Separated from workrooms by the open air or by an intervening ventilated space.

d : Sufficiently ventilated.

e : Sufficiently lighted.

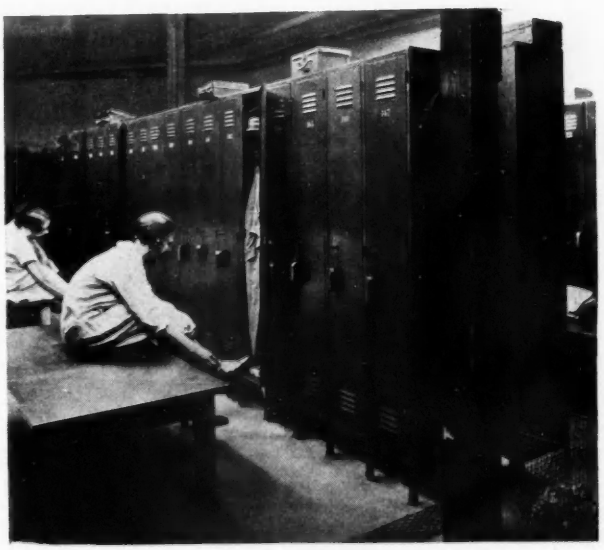
f : Under cover.

g : Provided with partitions, and (in

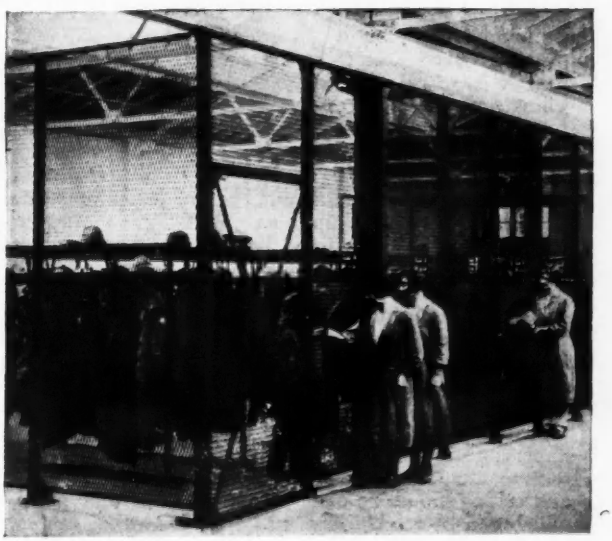


By courtesy of T. A. Harris, Ltd.

A jet drinking fountain, so designed, with the source in a position where it is quite out of reach of the mouth, that the water cannot be contaminated by the user.



Steel cabinet hanging lockers afford one means of storing workers' outdoor clothes under lock and key.

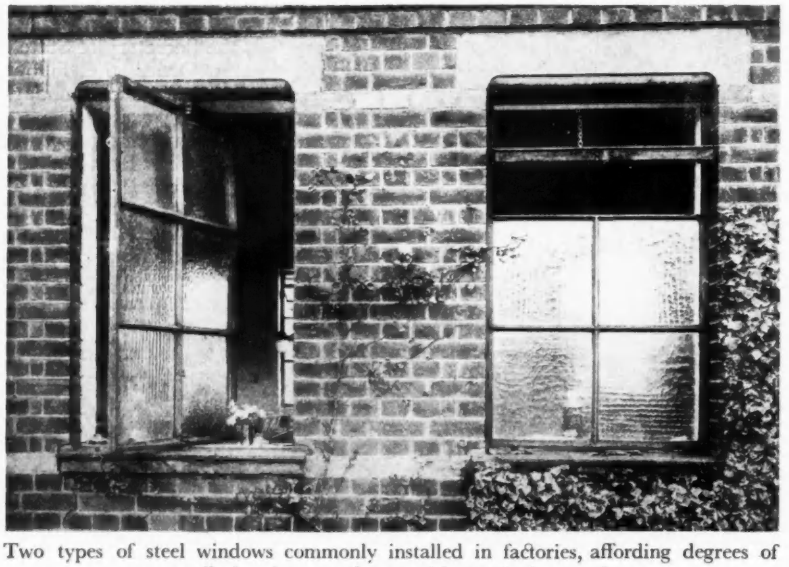


Workers claiming their garments in exchange for checks from an alternative cage type of cloakroom.

the case of conveniences for females) proper doors and fastenings.

h : Provided with separate approaches for men's and women's conveniences ; and with proper screening of the interior, so as to be invisible from places where persons of the other sex have to pass.

Sanitary accommodation should preferably be connected with lavatories and cloakrooms, but in large factories it is essential to provide, in addition, sanitary conveniences throughout the works in situations conveniently accessible to the workers. As each convenience should have direct connection with the outside air by means of windows to ensure light and air, they should be built on an outer wall. If adjacent to a workroom, they should not communicate with the room except through an intervening ventilated space, and if



Two types of steel windows commonly installed in factories, affording degrees of ventilation in accordance with particular needs.

communicating with a cloakroom or lavatory, they should be separated from it by partitions reaching to the ceiling, and the cloakroom or lavatory should have separate and ample means of ventilation.

Where there is a range of sanitary conveniences, the partitions between them should be carried up to a suitable height; a small space may, however, be left between the bottom of the partitions and the floor level, to allow for the thorough flushing of the floors.

Each convenience should be provided with a door at least 6½ ft. high, which should have an inside fastening to ensure privacy. The floors of the conveniences should be made of smooth impervious material and be drained so as to allow for flushing, and the walls and ceiling should be made of material which can be readily cleaned.

Each convenience should be adequately lighted both by day and after dark.

Each convenience should have an individual flush which can be either automatic, pedal- or hand-operated, and the pan should be of the individual bowl type, with a water seal, and should preferably be made of white earthenware. Each closet should be provided with a seat which can be frequently cleaned without injury to its surface. Each separate apartment should be at least 30 ins. in width, and the distances from front of seat to door should be not less than 30 ins.

Separate sanitary conveniences must, of course, be provided for men and women. It is preferable that they should be in different parts of the premises, but if this is impossible, the approaches to the conveniences should be separate. Where conveniences are situated in a yard or an open space, they should be so screened that the interior is not visible when the door is open.

Lighting. So far, the provision of sufficient and suitable lighting has not, except in one or two cases, been a requirement of the law. More and more attention, however, is being given to this matter by progressive employers.

The first requisite of good lighting is that it should be adequate, but, in addition to this, it must be suitable for the purpose for which it is required. The factors which contribute to a good system may be summarized as follows :—

i : Adequacy. The adequacy of illumination at any point in a room obviously depends on whether or not any work is being actually carried on at that point, and the nature of that work. For most workrooms, therefore, it is necessary to consider the amount of illumination that may be regarded as adequate (*a*) for affording safe access from one part to another, and (*b*) for efficient carrying on of work.

ii : Suitability, comprising :—

a : Constancy and uniformity. A reasonable degree of constancy and uniformity of illumination over the necessary area of work must be ensured.

b : Prevention of glare. The placing or shading of light sources so that the light from them does not fall directly on the eyes of an operative when engaged on his work, or when looking horizontally across the workroom.

c : Avoidance of shadow. The arrangement of light-sources so as to avoid the casting of extraneous shadows.

Daylight illumination presents certain special problems of its own, if the fullest possible advantage is to be taken of it. Briefly, these may be summarized as follows :—

1 : The windows should be as spacious as possible, and should be extended right up to the ceiling, since light from the upper part of the window is far the most effective.

2 : Windows should be kept clear and free from obstructions inside the room.

3 : The walls and ceilings should be clean and light in colour so as to act as efficient reflecting surfaces.

4 : Unless the aspect of the windows is north, or nearly north, window blinds or other means should be provided to exclude, when necessary, direct sunlight from the room.

Places coming under regulations. The requirements and recommendations outlined above are of general application, but the Secretary of State has power to make regulations for dangerous and unhealthy industries, and care should be taken, before designing a factory, to ascertain whether any such codes apply, so that any requirements affecting design may be borne in mind. In the case of cotton cloth factories, there are special regulations, which should be carefully studied; plans cannot be approved by a local authority unless they are accompanied by a certificate from the Superintending Inspector of Factories that the building would not fail to comply with the regulations.

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Welfare Pamphlet No. 7 : Lighting in Factories and Workshops.
Descriptive Account and Catalogue of the Home Office Industrial Museum.

The above are obtainable from H.M. Stationery Office, Adastral House, Kingsway, W.C.2, either direct or through any bookseller.

A MODERN LONDON OFFICE BUILDING

DESIGNED BY H. COURTNEY CONSTANTINE AND AUSTIN VERNON



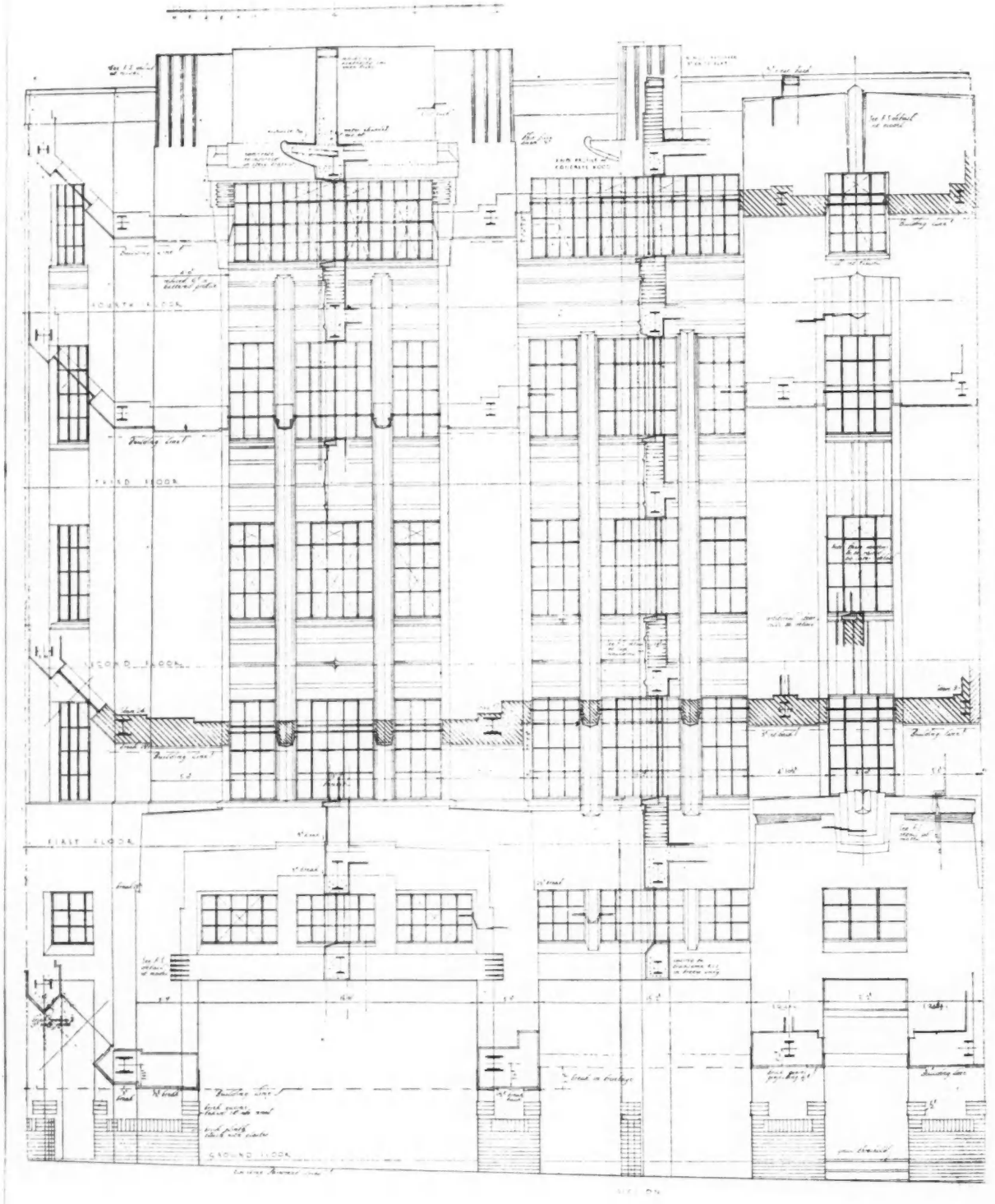
A general view, showing the main frontage to Cleveland Street, with a return to Tottenham Street, on the right; one of the three entrances is on this corner.

THE design and construction of modern office premises in London has become almost a speciality, calling, as it does, for the combination of a dignified elevation with a plan embodying all the requirements of the present-day business man and satisfying all the many requirements of several Acts of Parliament. Above all, the building must be constructed at a minimum cost to enable the employer to be sure of a proper return on outlay.

Such buildings must be provided with reliable, fast, electric passenger-lifts and be heated to at least 65° F.; be provided with sanitary accommodation to satisfy the requirements of the Factory Acts, and with ample and adequate means of escape in case of panic or fire; and lastly be absolutely fireproof in construction so as to keep down the insurance charges. Some consideration must also be given to making each separate floor as burglar-proof as circumstances permit.

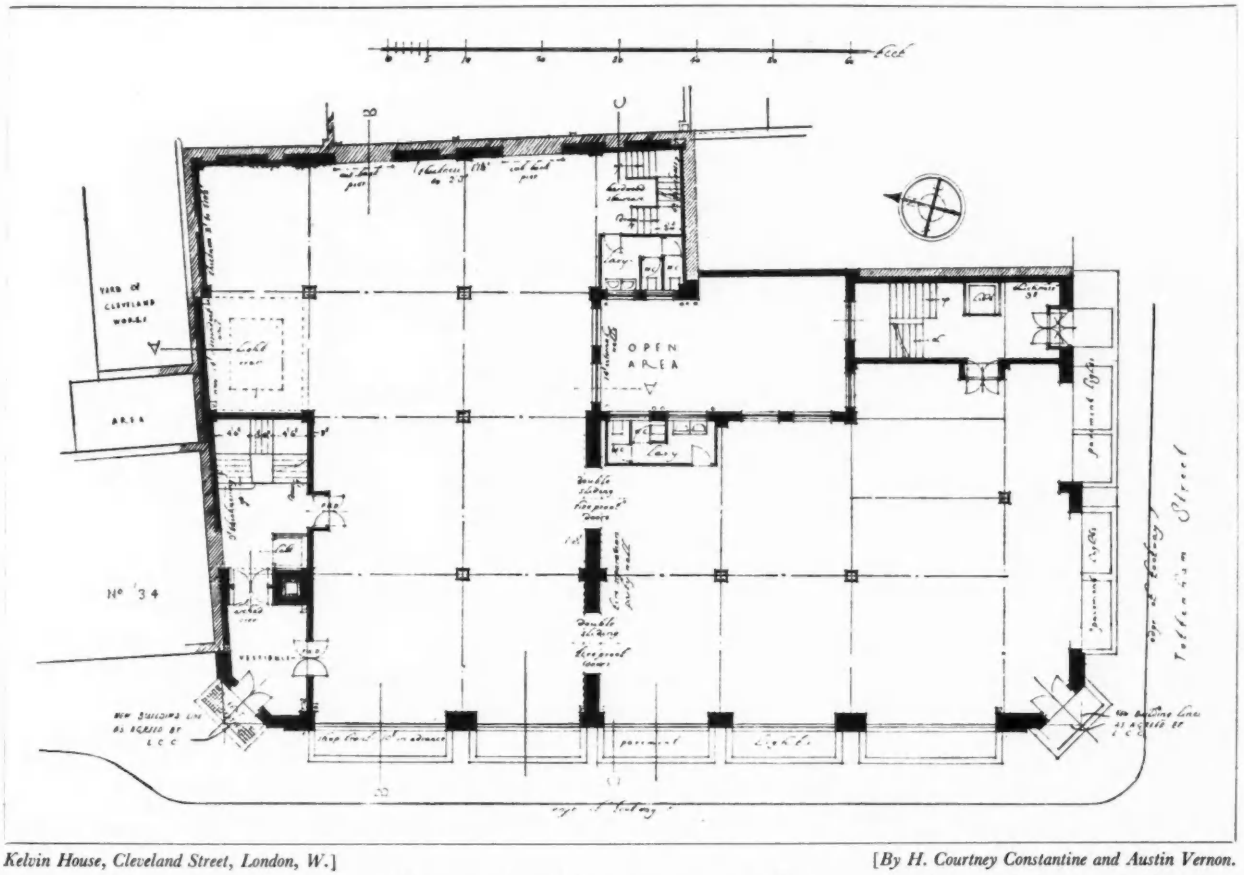
In Kelvin House, Cleveland Street, Tottenham Court Road, the total cubic capacity is such as to necessitate it being divided by a cross wall to satisfy the Building Act, but fireproof doors are arranged so that the whole floor may be used by one firm, or the doors closed and each half occupied separately.

The structure is entirely fireproof in every detail and arranged to satisfy the requirements of the most exacting tenants. There is provided the maximum of light, with the largest open floor-space possible, and this can be subdivided if required to form offices or stockrooms. An accelerated low-pressure hot water system provides excellent heating throughout all floors, and the lavatory basins are supplied



Kelvin House, Cleveland Street, London, W.] [*By H. Courtney Constantine and Austin Vernon.*

A reduction of the architects' half-inch scale working drawing of the return frontage to Tottenham Street, showing the constructional details in elevation and in vertical and horizontal sections. The building provides ground and four upper floors adapted for office uses. The drawing should be compared with the photograph appearing on the preceding page.



Kelvin House, Cleveland Street, London, W.] [*By H. Courtney Constantine and Austin Vernon.*

The ground-floor plan. The site is roughly rectangular, with one corner encroached upon, and has a main frontage to Cleveland Street which runs parallel with Tottenham Court Road. There are three entrances, and as many stairways, distributed conveniently for the service of each floor area. Approximately fifty per cent. of the windows are designed to open.

with running hot and cold water. All joinery work is in oak and the window sashes in steel, with approximately fifty per cent. to open. The elevations are finished in white cement rendering, left with a rough surface from the wood float, and the metal-work of the sashes is painted deep red. The plinth is in hard Southwater bricks.

LETTERS FROM READERS

The Ideal School Hall

SIR,—In asking for space to thank Mr. H. C. Hughes for explaining one or two points on the above in his letter in your issue for May 6, and also to thank Mr. F. H. Loweth for his letter supporting my arguments, I do so with a feeling of your willing consent, if only from a sense of retribution.

It was, perhaps, Messrs. F. C. Happold and H. C. Hughes's apparent claim to finality in school-hall design that first roused me to point out the error of their ways, whereas the exposition of a new idea would have been allowed the kindly light and freedom usually conceded to experimental design.

Our differences of opinion regarding the comparative uses of component parts still, of course, remain; but we are probably all striving to reach the same end—the ideal—along different routes, and will, no doubt, arrive together, if ever.

A. G. ALEXANDER

Dorchester Hotel

SIR,—May I be allowed to express my appreciation of Dorchester Hotel? It is, I think, the only modernist building I have seen which, while owing little or nothing to tradition in its outward aspect, yet contrives to appear gracious and friendly. It has none of the brutal, logical "take-it-or-leave-it" aspect with which we are familiar in modernist buildings. It represents a definite æsthetic conception.

Consider the treatment of the angle bays, always a most difficult problem in design. We all are too familiar with the usual modernist solution where the angle windows give the appearance of a structure in which some predatory rat has gnawed away the corner, and yet, with diabolical ingenuity, has enabled the structure to survive the process. But here at Dorchester Hotel these angle windows are entirely æsthetically satisfactory in relieving the severity of the façades with a note of gaiety.

Moreover, the whole exterior appears as an expression of the interior. There are no large windows crossed by staircases, and no ponderous and unnecessary columns to obscure the light from the windows.

The bathrooms are grouped together and projected to form part of the composition as a stop to the balconies. We are also thankful to see the whole of the walling in one material capable, one may hope, of competing with London smoke. If there is any doubt as to the desirability of the curved frontage, one has only to look at the south front and observe the pattern of the shadows there cast by an afternoon sun, to recognize its beauty.

Dorchester Hotel is indeed what we have all been hoping for—a really satisfactory expression of the modern spirit in building.

M. H. BAILLIE SCOTT

Thatchboard

SIR,—We have seen the correspondence on the above subject in THE ARCHITECTS' JOURNAL for April 29, page 622, and the reply which your expert has given seems to us to represent the facts perfectly clearly. We should, however, like to make the following additional remarks.

In your expert's reply, he mentions, quite correctly, that thatchboard when damp is liable to give off an unpleasant odour, which disappears after the material has dried out. It has not, perhaps, been made sufficiently clear, however, that, when precautions are taken to avoid the thatchboard becoming damp, there is then no question of any odour.

We particularly wish to state that the mere addition of wet plaster to thatchboard does not produce a damping effect. Your correspondent quite correctly says that it requires a pressure of water to force the damp into the material, and when this happens it is very necessary to see that it is allowed to dry out before it is sealed up in any way.

When used as vertical shuttering to concrete walls, we have found by experience that there is no tendency for moisture to enter the thatchboard. In a concrete house recently completed near Welwyn, and in other cases, it was found that the internal shuttering of thatchboard had the effect of making the whole house exceptionally dry, although the concreting was completed in the winter months, and in the ordinary way a great deal of sweating and condensation was to be expected.

A. G. BIRCH
(FOR HEAT AND SOUND INSULATION, LTD.)

LAND VALUATION SCHEME

Mr. Snowden's Proposals

[BY OUR SPECIAL PARLIAMENTARY REPRESENTATIVE]

ALTHOUGH Mr. Snowden's land-tax proposals were severely criticized by the House of Commons, the resolution relating to them was carried by a majority of 59.

Outline of Scheme

Mr. Snowden, in outlining the scheme, said that the first step towards the taxation of land values was to value the site. This they proposed to do, and, when the valuation was complete, to impose a tax at one penny in the pound on the ascertained capital value. There would be from 10,000,000 to 12,000,000 hereditaments to be valued, and a large staff would have to be engaged. Some of them would have to be trained, and they would not be able to begin work until about next October. But the revenue from the taxation of land values was not by any means the only advantage the Government hoped to get. There was a more important effect. It would cheapen and throw land open for use, and those advantages would begin to accrue as soon as the Bill became law. It was not proposed that the tax should apply to agricultural land so long as it had no higher value than its value for agricultural purposes. But where such land had a higher value than the cultivatable value it would be subject to tax, but only on the excess of the value over its agricultural value. In short, purely agricultural value land would be exempt from the new charge. That applied to allotments and market gardens in so far as they might have a ripening or ripened building value.

It was proposed that the valuation should be made, as from August 1 next, of all the land of the country not specifically exempt from taxation. The value so ascertained would remain in force for five years, a re-valuation to take place as from August 1, 1936, and so on at intervals of five years. Speaking broadly, the land value, as it was proposed to be defined in the Bill, would be represented by the price which a purchaser would pay for a piece of land at the date to which the valuation was directed, if, first, the existing buildings and works, with certain exceptions, were not there, and, secondly, all other pieces of land were in their existing condition with all buildings and improvements thereon.

Method of Valuation

On this basis the piece of land to be valued would, he considered, be substantially in the state in which land did, in fact, form the subject of purchase and sale in the market. What was contemplated in the Bill was a piece of land in the state in which it was so frequently found to be offered for sale in the ordinary way—namely, as a vacant plot, unbuilt on, ready for use for building or for agricultural purposes in rural areas, or as a plot for building or some other industrial purpose in urban areas. The valuation would, he hoped, form the basis for the purchase of land for public purposes, and also, before long, form the basis for the transference of local rating from houses, buildings and improvements, to site values. The cost of the valuation was estimated at between £1,000,000 and £1,500,000. Land exempted from taxation would include the sites of churches and other buildings used for public worship, churchyards and burial grounds, land owned by the National Trust, land owned by local authorities, sites of hospitals and almshouses, and land owned by railways and other public utility concerns working under statutory limitations and where the land could not be alienated for other purposes. It was also proposed to exempt any individual taxpayer whose tax would not exceed 10s. a year—a sum equal to the capital value of £120.

Criticism of the Scheme

Sir Austen Chamberlain, criticising the scheme, said Mr. Snowden wanted to encourage the development of land. He warned them against drawing conclusions from their experiences when the tax was imposed by Mr. Lloyd George. Some of those results they were still experiencing and they ought to be wary before they tried experiments of the same kind again.

The "Scientific Application of the Tax"

Sir E. Hilton Young said in the past there had been a grievance on the part of the community that it had not been able to obtain for public purposes the land required at fair prices. But since this question was last discussed in the House other measures had been passed which, to a large extent, had remedied that grievance. It had always seemed to him that there were many cases in which there might be a special value attached to land possessed by a private individual due to community action, which was therefore an appropriate subject of taxation for the community. But that was subject to two absolute conditions. When, in such a case, they taxed somebody enjoying the value created by the work of the community, they must be sure they were taxing the right person. This scheme did nothing of the sort. Suppose he bought for £10,000 a freehold site in London. He would get that for about a 4 per cent. investment. In that £10,000 there might be an unearned increment of value, but he would not enjoy that increment. Somebody was enjoying it who had gone off with it and had put his money in Consols. When, therefore, they taxed the buyer of the site, they were taxing somebody who was not enjoying the unearned increment. There was only one way of scientific application of this tax, and that was to fix a date and tax only future sales in which there was future increment. Any other form of tax, such as that which was proposed today, made complete nonsense of the whole theory.

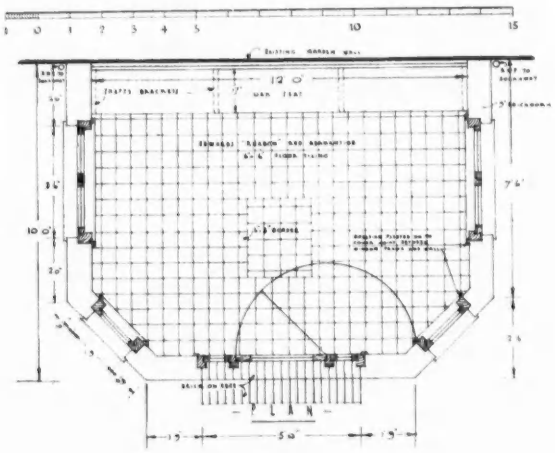
The resolution, however, was carried without difficulty.

PIGEONSFORD" LLANGRANOG. (CARDIGANSHIRE).

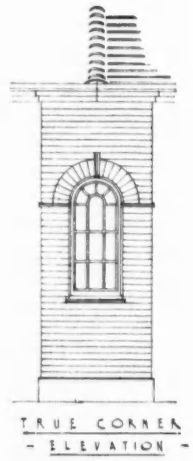
DESIGN FOR SUMMER HOUSE.

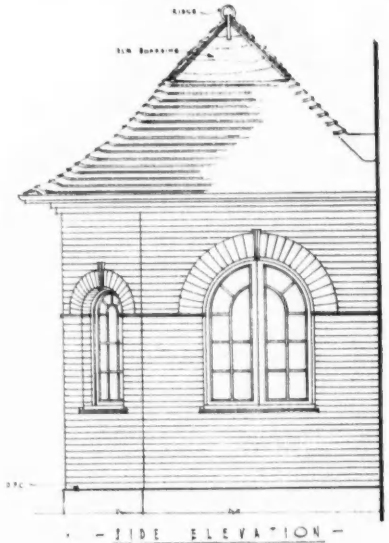
FOR

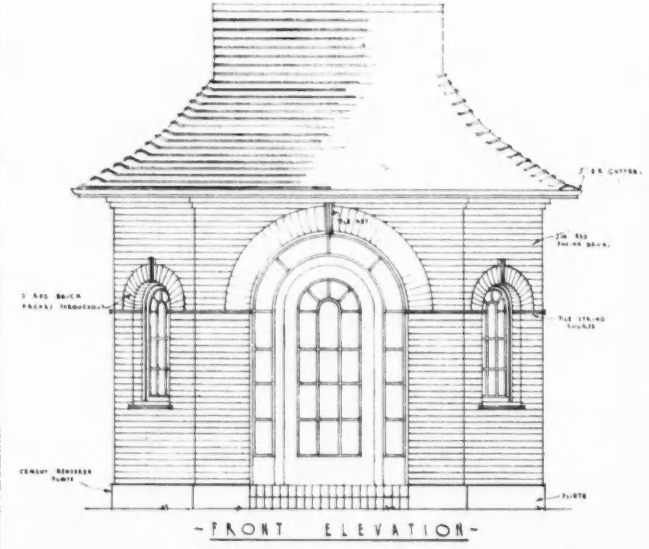
D OWEN EVANS ESQ.



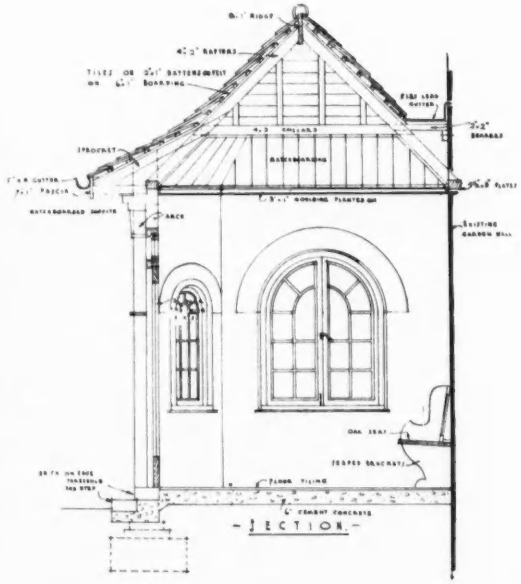
This little summer-house is built against a very old brick-faced garden wall. The bricks used are Ruabon $2\frac{1}{4}$-in. pressed red facings, with white joints. The roof is covered with sand-faced hand-made tiles, and has rough elm boarding in the small gable tops of the hipped ends. The floor is in red adamantine tiles, and the seat, against the existing garden wall, in oak. All woodwork is finished in white, with gutter and downpipes in olive green. The walled garden is on the side of a hill facing south, and the summer-house is placed at the head of the central path.



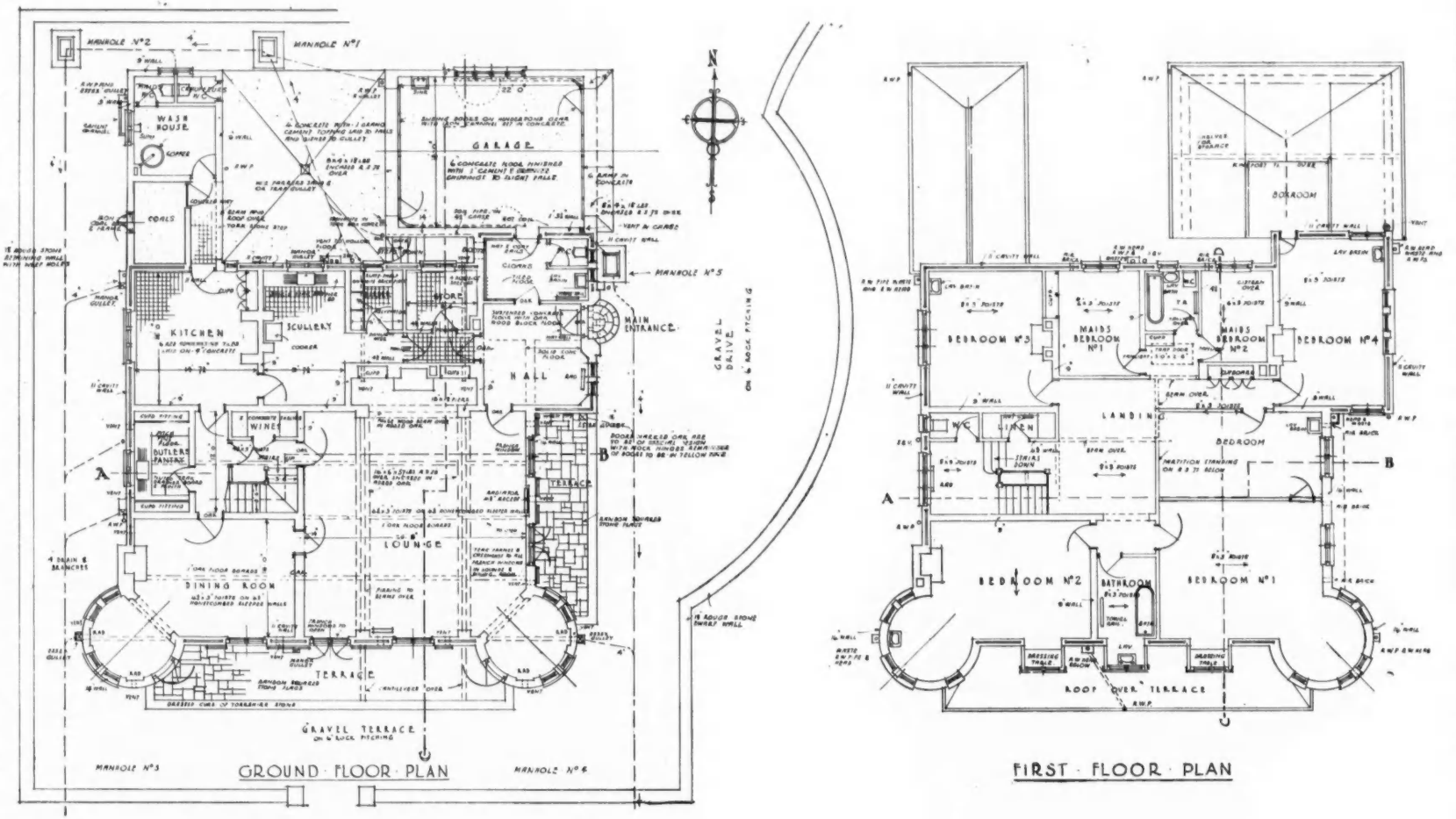








Working drawings and a photograph of a new summer-house designed for an old walled garden at Llangranog, Cardiganshire, Wales, by A. P. Lloyd.



House at Caldy, Cheshire.] [*By Gilbert Fraser.*

Ground- and first-floor plans. The lounge, the principal room in the house, is lighted by five pairs of French casement windows opening on to the south terrace. The latter is placed between two circular turrets, and is sheltered by the overhanging eaves of the roof above. The garage is embodied in the plan, within easy approach from both house and service quarters. It is provided with two sets of sliding doors, so that the washing of cars may be carried out in the house yard, screened from the entrance approach,

HOUSE IN CHESHIRE

DESIGNED BY GILBERT FRASER

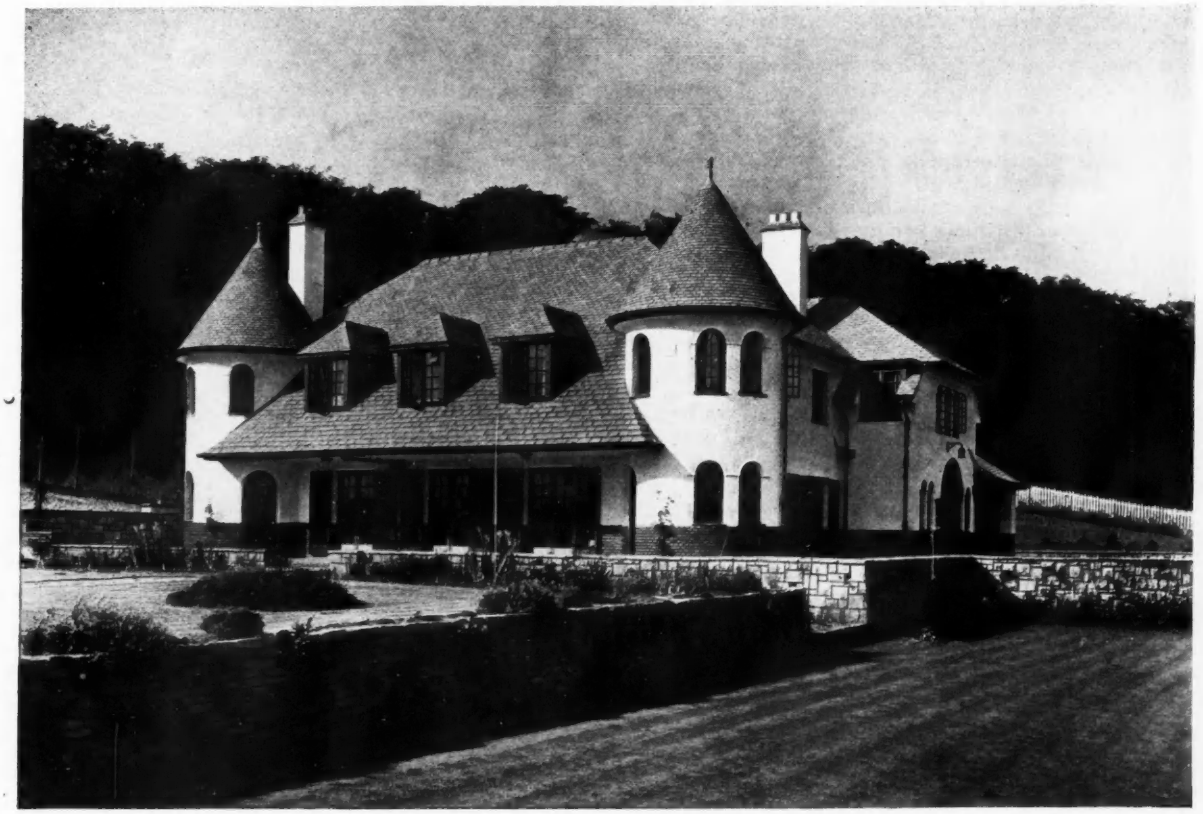


The terrace, showing the deep overhanging roof, providing protection and shelter to the approaches from the lounge. The paving is of Lancashire flags laid in random courses, and the terrace walls are of local Storeton stone. The windows, of teak, are of casement type, and have louvred shutters.

"OROVALES," Caldy, Cheshire, stands on a sloping site, protected from the north by a belt of heavy trees, with an open view to the south overlooking the estuary of the River Dee. The front entrance is situated in the east elevation, and is approached by circular stone steps from the lawn, an indication of which can be seen in the photograph reproduced below. A pool garden is arranged in the centre of the terrace, with stone-paved pathways to the small formal garden.



Looking across the lounge towards the sitting recess, which has been provided in order to give that extra comfort and seclusion required in a room of such large dimensions. The recess has an oak false beam, with side pilasters and rustic brick inset. The door on the left leads to the staircase hall.



A general view of the terrace front from the south-east. On the right can be seen the main entrance. The house is constructed of brick and roughcast, with 16-in. cavity walls, and the roof is covered with Westmorland green slates. The garden and terrace walls are built of local stone. The tone and colour of the materials used are in keeping with the surrounding countryside.

THE SPECIFICATION WRITER

Rural Cottage Specifications: Type v. Fen Lands

BY EDWIN GUNN

INHABITANTS of the flat black fen and silt lands, where keen east winds are common and roof water is the chief or only means of water supply, show a preference for sash windows, cottages with one external door, and slated hip roofs with level gutters of ample size and a single downspout. On black fen land, raft foundations are usual, and this practice dictates a balanced rectangular plan without excrescences, and an avoidance of openings near angles.

SPECIFICATION

WALLS.—External walls to be 11¼-in. cavity walls, built off the surface of the concrete raft, each skin having double slate and cement dampcourse, the outer one being at a height of 6 ins. above ground, and the inner one course lower. Usual precautions are to be taken to preserve the cavity clear of mortar droppings, and, in addition, temporary rake-holes are to be left at angles opposite each cavity, by which the bottom of cavity is to be effectually cleared of mortar accumulations, from time to time and at completion, when (after inspection) the apertures are to be built up.

Form string course at first-floor cill level with one course brick-on-edge and double course flat Yorkshire tiles, each projecting ¾ in., except in openings, where tiles are to be tilted up and given additional projection to serve as cills.

Build in the sashes with inner linings bearing against draught check formed by building reveal in inner skin so that width across opening is 1½ ins. less than that across between external reveals.

Form protecting porch as shown with 9-in. brick sides, built off the raft projection and oversailing in ¾-in. steps, as shown, and cover with cast concrete slab in continuation of door lintel, weathered from 6 ins. next wall to 4 ins. on front edge.

The brickwork is to stand six months to dry out, and at expiration of that term is to be twice coated with hot tar and pitch up to ground-floor cill level, and above twice coated with lime-resistant paint, including string course and edges and soffit of porch roof, but not chimney above roof.

ROOF.—Cover the roof with third quality grey-blue Welsh slates, 16 ins. × 8 ins. each slate, centre-nailed with two yellow composition slating nails to 1½ in. × ¾ in. sawn fir battens to 6½-in. gauge and neatly cut to hips with any necessary slate-and-half slates required for bonding. Eaves to be doubled with proper under-eave course and to have 4 in. × 1 in. wrot fascia as tilter and 9 in. × ¾ in. wrot. soffit.

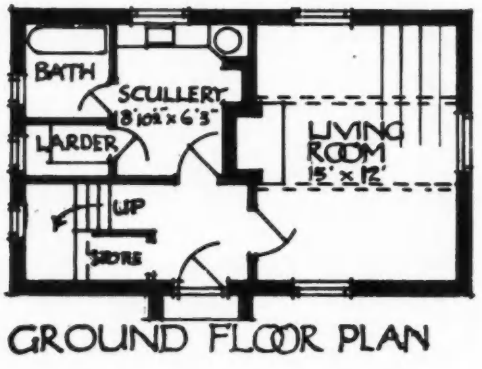
Ridge and hips to be covered with blue Staffordshire half-round ridging, bedded in haired mortar and pointed in cement and with stub-end hiphook of 2 in. × ¼ in. wrought iron, screwed to hip rafter with stout brass screws to each hip.

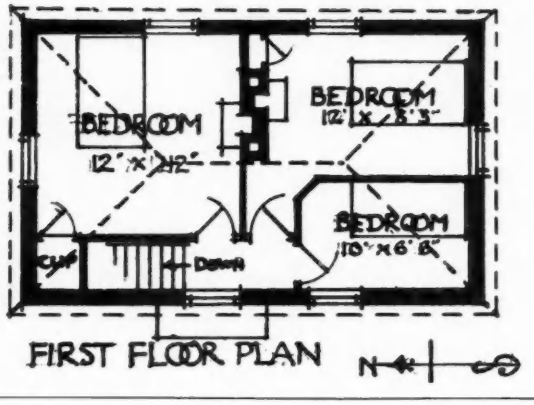
Gutters to be 6 ins. deep, section half-round cast iron, carefully levelled and fixed with two pressed steel brackets to each 6-ft. length. Down pipe to be 3 ins., fixed to stand out 1 in. from face of wall, with pipe washers behind pipe-ears and jointed in red lead between lengths. Connect foot to upturned knuckle bend as drain to underground cistern.

WINDOWS.—Ground-floor windows to be double-hung lifting sashes, 5 ft. 3 ins. high and 3 ft. 4½ ins. wide, over boxed frames and sashed in squares as shown, and first-floor windows similar sashes but 4 ft. 6 ins. high by 3 ft. over frames. They are to have 1¾-in. ovolo moulded sashes, 3 in. × 6 in. oak cills, weathered, throated, sunk and twice grooved for external and internal cill, 1-in. casing, 1½-in. head and pulley stiles, ½-in. backlining, ⅜-in. parting slip, 1-in. stop beads, 2 ins. deep on cills; mitre ¾-in. quadrant beads round

Drawings to illustrate the accompanying Rural Cottage Specification, prepared by Edwin Gunn, for fen lands, "where keen east winds are common and roof water is the chief or only means of water supply."







narrow reveals externally after fixing, bedding same in cold plastic bitumen on brickwork so as to seal joint.

Three small casement windows on north front to be each sashed in four squares of similar dimensions to first-floor sash glazing.

EXTERNAL DOOR to be 2-in. three-panel ovolo-moulded, hung with three pressed steel butts to 4 in. × 3 in. rounded and rebated fir frame, and oak threshold standing up 1¾ ins. above internal floor level to pass mat.

PAINTING.—Gutter and down pipe to have two coats of standard grey bituminous paint; fascia and soffit, windows, and frames, three coats of good lead and oil paint, finished broken white; door to be finished strong bright tint on white.

ON COMMITTEES

Some Maxims for the Younger Architect

BY JOHN COLERIDGE

In choice of Committees, for ripening businesse, it is better to choose indifferent persons, than to make an Indifferency, by putting in those, that are strong, on both sides.—BACON.

O WISE Bacon! How much more swiftly would our businesse ripen if those who form committees would follow his advice!

We architects have a great knowledge of committees; sometimes on them, more often under them. Large committees, middle-sized committees, and small committees, consisting of man and wife only—always are we dealing with them.

The most tiresome of all is the invisible committee where a man takes advice separately from all his friends. This committee cannot be addressed, and cannot have resolutions put to it; it never agrees; it comes to no conclusion. It is merely a nuisance.

It is curious that a man, having chosen an architect whom he may be presumed to trust, should ask advice from all his friends who know nothing about building. But men often do it; women, never. I believe this is because women are sure that they know exactly what they want when they start to build. They have more time to think it out, and they either trust their architect or change him. They do not weigh pros and cons. They consider the pros only, and you have to supply the cons. They know most completely what they want, and you are judged by the degree in which you manage to provide it. If they were able to grasp the elements of statics and mechanics they would be most delightful to work for, but, too often, they desire the impossible.

Man, by himself, seldom really knows what he wants and, if an Englishman, falls back on his national failing—a committee in some form or other. He can decide nothing without the counting of heads, and from this dreadful habit comes great tribulation for those who have to do anything for him. The natural result is really not government by the majority, but government by the strongest man, who carries his purpose, as a rule, against their better judgment.

When you attend a committee meeting it is best to say as little as possible until you have found out who this man is, and then get him on your side if you can. This ought to be easy, as he has probably got you the job himself. The strong position of the architect, if he does not talk too much and give himself away, is that he is the chosen expert. All committees love experts.

Governing bodies of schools and colleges come under the head of large committees, generally too large to deal with building successfully. One for which I have worked used to have me in to explain my plans, and then send me to wait in the smoking room while they discussed them. I generally went to sleep, having nothing else to do and nothing to read, and they had a nasty habit of suddenly sending for me and putting the most dreadful posers to me, roused from placid slumber and without the slightest guide to the trend of the discussion. However, these great bodies generally appoint building sub-committees with whom it is fairly easy to come to a conclusion.

When dealing with large committees, I believe the best way is to say as little as possible and as firmly as possible. An expert is expected to be confident that he is right. I lost a very large and wonderful building once by agreeing when I ought to have utterly refused to agree to a suggestion. I was younger and more modest then.

The most difficult of all the large committees are Church committees or Parochial Church councils. I am dealing now with one in a newly-founded parish, and the members are delightful, for they joined with the idea of building themselves a church, and are determined to do it; they have not been in existence long enough for feuds to develop. But let the architect tread warily in an old-established parish, where part of the council are on it to back the Vicar up and part are on it to put the Vicar down. There he becomes a bone of contention to be fought for. Let him avoid hospitality, even though meetings finish at 8 p.m., and he is hungry and thirsty. It is better to get into his car and drive out of speaking distance and hearing distance before he regales himself.

His unhappy lot will be letters that he must answer and, in extreme cases, extended visits at his office from members of the council on both sides. Out of it all, if he listens much and says little, he ought to be able, as the only person not committed to one of two rival policies, to work out a policy of his own that will either combine both oppositions to a sufficient degree to get what he wants done, or will produce an alternative idea at the next meeting that cuts right across both their lines of thought, and is so unexpected that he can get it passed by shock tactics.

Factions will, as a rule, agree to anything that has not been suggested by the other side. Their powers of resistance, being wholly absorbed in combating their rivals, are unequal to an attack by a new idea, even though the new idea may really be that of their opponents presented as a different formula. This line of tactics is to be recommended even when you have discovered who is the strong man. It makes everybody happy, for the strong man believes he has forced his view on the rest of the Committee, if you can make him think you have suggested what he wanted. But to do it and keep sane you must have a sense of humour, which must never appear. The more like an owl you look the better.

The smallest committee is composed of man and wife, and if you are at all observant you ought to be able to find out quickly which is the predominant partner. The lady in one such committee said to their architect, talking of her husband's study, "This is his own room, he must have it exactly as he likes it." Said the husband, looking forlornly out of the window: "I've forgotten how to want it."

I've had another lady member in tears because her husband would allow her no say in the arrangement of the nursery. I resigned that job, as I thought the husband a brute.

The great thing about the family committee is that the battle is generally fought out not in the architect's presence—he is merely presented by the winner with the verdict. If he wishes to do so, and is clever, he can sometimes find out what the loser thinks about it all, and if he can work into his scheme some of the loser's wishes, and make them appear as necessary to his plans, he will be blessed by both instead of only one and, what is more useful, be publicly praised by both.

The art of working for committees is a difficult one, for the architect has to impress the whole of the members with his sense and pleasantness, especially

the losers, who will otherwise do him great harm. You will never convince them that they are wrong, but you may convince them that if left to yourself you would have done more or less what they wished.

One curious fact about committees is that they are often ready to do some quite dishonest act, as a body, that any member would scorn to do as an individual. This is well known to us and quite unaccountable, but it has to be watched and fought against in all the spirit of friendly loyalty.

QUESTIONS THAT ARISE

Artesian Well

B. B. writes: "*At a country house the water supply is obtained from an artesian well sunk on the site, and proved to be of a very hard nature; a lime and soda softening plant had to be installed and has now been in use about two years. The makers maintain that the water, as it leaves the plant, is quite satisfactory. Following is a copy of their analysis:*

Hardness	6½
Phenolpthalein	3·75
Total Alkalinity	6·5
Iron	No trace
Appearance	Excellent

The above is an excellent result and cannot be improved upon for domestic purposes.

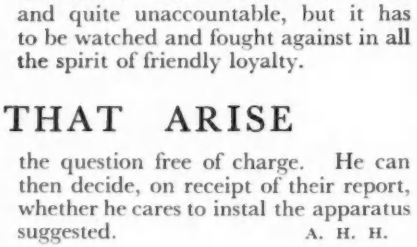
"*Our client has several times complained that the water when drawn in volume (say half a bathful), shows a slight yellowish tinge. We may add that the service pipes are of copper. The problem is to get rid of the slight colour in the water.*"

The coloration of the water in question probably arises from the presence of a trace of humic matter, quite harmless and minute in quantity. The lime and soda water-softening treatment would not remove this, as it is too fine to precipitate and the quantity per gallon almost infinitesimally small. Such coloration is frequently experienced in waters which have come into contact with bog and peat areas, and though in some cases the coloration is quite dark brown, the water is not affected for drinking or other purposes. In some districts of Yorkshire water with a distinct coloration from this cause is used in textile manufacturing, probably the best tribute to its harmlessness that could be cited.

In your correspondent's case it would appear that the coloration is very slight, for it should be remembered that very few waters appear clear when viewed in bulk, particularly against the surface of a white bath. The merest trace, such as would not be perceptible in a glass tumbler, becomes intensified in the bulk. If, however, it is desired to remove this coloration, the only practicable way is to pass the water through a bed of activated charcoal, which would clarify it. I advise your correspondent to send a sample (say one gallon) of the coloured water to United Water Softeners, Ltd., Aldwych House, Kingsway, W.C.2, who supply a suitable filtering apparatus of this nature, and who will advise him on the question free of charge. He can then decide, on receipt of their report, whether he cares to instal the apparatus suggested. A. H. H.

Right of Light

"*I should be glad if your expert could give me advice on the following right of light problem. The accompanying sketch indicates three properties in the main street of a town. The Corporation have on hand a*



street-widening scheme for setting back the properties A, B and C to the new building line shown by the dotted lines. My clients, who are owners of property B and whose business is cutlery goods, silver-plated goods and travelling cases, with shop and showrooms on the ground floor and showrooms on the first and second floors, have at the present moment windows on the north and south, i.e. the left and right, sides respectively of the property. The light to the window on the north side is at present obtained by reason of the open yard belonging to property A as shown in the sketch. The windows of the south side obtain their light from a passage belonging to property C on the south side. The ancient rights of all these windows are admitted.

"*The necessary rebuilding of property A on the north side will mean the complete bricking up of my client's windows on this side, while the rebuilding of property C on the south side will mean a diminution of the amount of light available to these windows as now enjoyed. Can you give me a basis to work on as to the amount of compensation due to my client from both the owners of properties A and C?*"

I have formed the opinion, although I can find no authority in support thereof, that there is no compensation payable by either A or C. I arrive at this view because B has a right for compensation against the local authority, and in my view the compensation to which he is entitled is an amount to compensate him for the loss he has sustained.

Assuming that the local authority had acquired under compulsory powers the whole of B's land, and had demolished the buildings erected thereon, compensation for the whole of B's loss would have to be paid by the local authority; the fact that they had acquired part of B's land, whereby the remainder of the property is affected, reduces the amount of compensation, but nevertheless does not shift the burden of liability on to the adjoining occupiers.

This question is one of considerable importance, and it might be more satisfactory to the parties if they consulted their own solicitors and took the opinion of leading counsel; but in my view, for reasons which I have before mentioned, I am unable to say that compensation can be lawfully claimed from either A or C. E. F. I.

Efflorescence on Brickwork

"Perplexed" writes: "*I should be pleased to know your expert's opinion as to the cause of white efflorescence occurring on new brickwork, summarized as follows: 1: What is the cause; has the composition of the mortar anything to do with it? 2: Can it be cured? 3: Is it any detriment to the work except for looks? 4: Will it eventually disappear? 5: Do some classes of brick cause this more than others? The case in mind is a new building, completed about eighteen months ago, of 14-in. brickwork, faced on the outside with North Staffordshire sand-faced stocks. This white efflorescence still comes out on the face of the work after wet weather.*"

A good deal of attention has been given to this matter lately, since it is much more prevalent since the common use of Portland cement mortar. The annual reports of the Building Research Station for 1928 and 1929 might be consulted, also an article by F. Cooling in *The British Clayworker*, 1930, entitled "Contributions to the Study of Florescences." As to the separate questions asked, the following are my opinions:

1: The cause is usually interaction between free lime in the mortar and sulphur compounds in the bricks, in the presence of moisture from salts deposited by the evaporating moisture on the face of brickwork.

2: It is preventable, but for practicable purposes not curable.

3: Commonly it has no detrimental effect other than bad appearance, but in some cases the crystals have been known to destroy the structure of the bricks, which are practically reduced to powder.

4: In ordinary cases the efflorescence grows less with time, though an exceptional saturation followed by hot sun is liable to cause recurrence.

5: Bright red sand-faced bricks seem to be affected in the most unsightly manner, but some of the wire-cut dense bricks suffer most from crumbling. E. G.

LITERATURE

SLIDE RULE CALCULATIONS

YEARS ago, the question of slide rule calculations troubled and bothered me. Men who already had a slide rule could never find time to teach the uninitiated who did not possess one. Later, I found that it needed rather more time and more thought than I had at first imagined, and that a book upon the subject would be a great advantage.

Here, at last, is the long-wished-for book on *Slide Rule Calculations* from the pen of Mr. H. O. Cooper. As the author points out in the preface, "Very little understanding of mathematics on the part of the reader has been assumed, since many who have only the most elementary knowledge will find in the slide rule a quick and simple means for solving problems that in the ordinary way would be quite beyond their capacity."

Chapter i begins with common logarithms, with the note that "The slide rule is based on common logarithms, and its scales are tables of common logarithms arranged in such a manner that, while the calculations are worked by logarithmic methods, only natural numbers are considered throughout—there is no necessity to change from natural numbers to logarithms and vice versa." This is brought home to the reader in the chapter on the "Slide Rule Scales," where the mechanical nature of the instrument with its "body, the slide, and the cursor," are described, and their theory is put forward by means of a diagram and a picture of a standard slide rule. A series of exercises easily teaches the reader to be proficient in the art of finding numbers; a glance at the picture of the slide rule shows him how the alternative units and tens are managed.

In the chapter on "Multiplication and Division," a method for finding the product of two simple numbers is given; which, if you want to work it out, the picture of the slide rule proves sufficient, and the multiplication by proportional masses comes good. A series of examples tells us how to set about the more complicated affairs of normal practice.

In "Squares and Square Roots" an interesting fact is brought to light, that the upper scale A is so spaced that it contains the squares of the lower scale D beneath.

"Reversed Slide Methods" is a chapter in which speedy methods are set out. Here the reader is warned that it "should only be studied after the contents of the foregoing chapters have been thoroughly mastered."

The scale for reading logarithms, trigonometrical functions, and log-log scales bring the reader to applications, where things like gear-wheels, peripheral speed, and timber are dealt with. Here a list of exact inches in decimals and inches to the nearest quarter shows how near, or how far, the results may be from the actual truth.

An appendix, showing special slide rules, and a short index complete the book, which should be enough to make many readers buy a slide rule and study its ways at first hand.

WILLIAM HARVEY

Slide Rule Calculations. By H. O. Cooper. Oxford University Press. London: Humphrey Milford. Price 7s. 6d. net.

THE ART OF ANGLIAN NORTHUMBRIA

THIS book by Professor Baldwin Brown is the first part of the sixth volume in the series on *The Arts in Early England*, and will be welcomed by those who delight in the beautiful and the curious, and by those to whom the "detection" of the date and provenance of a work of art or a fragmentary object of archæological significance, appeals as surely as detective fiction appeals to other minds.

The previous volumes covered certain phases of early art history in this country and examined examples in detail. The present part completes the detailed study of the outstanding treasures of "the great period of the art of Anglian Northumbria," by a close examination of four interesting and significant objects in various materials.

The original binding of the Stonyhurst manuscript of the Fourth Gospel shows the skill of the early worker in leather. The inscription on the oaken slab known as the portable altar of St. Cuthbert, and the lettering and decoration on the silver plate which covered it, present an intricate problem in what might be called detective archæology. An almost equally nebulous past enwraps the whalebone box known as the Franks casket, but its runic inscriptions and the vigorous figure reliefs, with their quasi-architectural setting are still clear-cut and very little damaged. Of this casket the author writes: "There is really nothing of the kind in the period we are dealing with that reveals a northern craftsman so alert in his mind and so determined to get the utmost that he can get out of his work. . . . Of course, he has not the exquisite precision of the Athenian designer—and, indeed, his material and technique would not have admitted it—but he has just the same delight in the presentation of figures in action so as to tell a story as is evinced in the Greek vase painting."

In the realms of stone the Hackness Cross is discussed, and its probable connection with some conventual establishment. Its twig-runes may have been a cypher known only to the members of the community, but its decorative detail is clear in its simple suitability. To these varied but related objects is added the beautiful Tassilo cup, included in the volume owing to recent theories claiming for this Bavarian masterpiece of the eighth-century metalworker's craft a close connection with Anglo-Saxon art.

The book is definitely a scientific archæological study and does not set out to claim popular attention. There is, nevertheless, a fascination in its pages of careful analysis of evidence, and in the admirable illustrations. It is a timely reminder, in these days of somewhat uninspired imported decorative detail, that there are hints to be gathered from "home products." V.M.C.

The Arts in Early England. By G. Baldwin Brown, M.A., LL.D., F.B.A. Volume VI., Part I. Completion of the Study of the Monuments of the Great Period of the Art of Anglian Northumbria. London: John Murray. Price 15s. net.



[*From* The Arts in Early England.
Head of Figure of Christ on the western face of Hackness Cross.

D

MODERN INTERIORS IN COLOUR

THIS book is a collection of one hundred designs in colour for modern interiors by German architects, mostly followers of Gropius and the Dessauer Bauhaus, preluded by a short preface on "Light and Colour in the Modern Home."

In this preface the essentials of modern interior decoration are characterized as brightness, a tendency towards simplicity, the use of horizontal rather than vertical lines and the avoidance of ornament.

In fact, however, the illustrations do not always accord any too closely with these self-chosen canons of taste. In general the horizontal rather than the vertical is in evidence—witness a workroom by R. Spaeth, the most interesting designer of those represented, several interiors by H. Stierhof and a beautiful sleeping-balcony by R. Stotz—but an over-emphasis of this point gives rather an institutional aspect of the interiors, as for example the hall by H. Becher of Etherfeld.

The halls are almost uniformly good, particularly in the treatment of the staircase. An almost ecclesiastical design by W. Erb and L. Bauer makes effective use of the delicate traceries of wrought ironwork, in marked contrast to a hall by E. Fahrenkamp which uses banisters of stainless steel. A staircase hall by H. Sticht of Bremen is satisfying and direct in treatment.

Another striking point is in the treatment of the ceilings, which in almost every case have been designed to be an integral part of the decoration. An interesting gadget, but not likely to be used much in this country, is a sort of peripatetic chandelier suspended from a large turntable in the centre of the ceiling, the idea being that it can be swung from fireplace and lounge chairs to writing-desk, to bookcase, etc., as occasion demands. The design is by H. Hartl of Essen, and the whole carrying out is a little Krupp and cumbrous. A more practical and pleasing idea is the leather panelling in the studio by H. Vöth of Vienna.

Most of the bedrooms appear to have been designed with an eye to effect rather than comfort. In one case the bed is surmounted by a tapestry representing Eve and the Serpent with the inscription "Temptation."

The tendency towards simplicity and the avoidance of unnecessary ornament is an ideal with which everybody nowadays will be in sympathy, but in many of these interiors these excellent precepts have not been put into practice. A hall by F. Gebhard would be simplified and improved by the removal of the ornate brickwork over the fireplace; a workroom by E. J. Margold would get on the nerves of an oyster, and several other designs suffer from unnecessary and meaningless detail.

The majority of the illustrations are, however, very good, and the book, if taken with reserve, interesting and instructive. A certain feeling of scrappiness and angularity spoil many of the designs, which do not concede enough to everyday comfort, but many, particularly those designed for men as studios or workrooms, are comfortable, original and beautiful. L. F. E.

Modern Interiors in Colour. Stuttgart: Julius Hoffman. Price 38s. net.

LETTERING

WE are informed in a prefatory note to this volume that the object of writing is to be read, but that the manner varies with the occasion. The book is an admirable analysis of the variety of such adjustment of means with end, the former, in the writer's opinion, creating or modifying the latter, his premiss being that "no theoretical assertions are applicable without attention to tools, materials and practices which have provided human eyes with the necessary elements of a code."

In dealing with the structure of lettering itself, we find him resolving certain elements of form into "permanent organic necessities." These involve the very nature of the letter itself, and exist independent of the particular tool or technique, viz., the stroke or, as in writing, the flowing movement. Variations in style, however, derive from considerations of material and practical necessities such as suitability to stone-cutting, wood-carving, engraving, printing, etc.

In chapter ii. is an interesting account of the evolution of writing, which revolves around the use of the pen itself, dating from the invention of the Roman edged tool of the third century B.C., which produced their beautiful characters, to that of modern times, which developed the pointed metal pen for the sake of speed, and whose ultimate achievement is the copy-book handwriting of today.

Various tools tabulated are the edged, the reed, the quill, and the later metal pen. We find, however, the standard of legibility, irrespective of material, is maintained by constant deference to that set and preserved by the "classic" pen of the Romans.

We are provided with an interesting historical survey of Greek, Egyptian, Arabic, Gothic and Italian methods. Innovations we discover hinge generally upon some compromise between the round and the angular form.

Modern conventions date from the period of the Renaissance, which rejected all angular developments and possibly gave encouragement to fantastic and individual device in calligraphic design. More modern developments resultant from the necessity for speed would cut out all such exploitation of fancy, though with the increasing use of the typewriter for common service it is to be wondered if the art of writing will not be regarded as a specialized form of handicraft, and return again to something of its original attempt for beauty as well as use. In relation to lettering on stones, we find this process technically defined as "marks upon a surface" and evolved by a form of "glorified scratching." Raised lettering only came into existence during the Christian period, probably evolving, the writer tells us, from ideas of casting as used with the coinage. It is interesting to note that raised inscriptions were regarded merely as luxuries until the Middle Ages, when craftsmanship for its own sake took precedence. Later, economy and common sense dictated the return to the inscribed inscription.

Subsequent chapters provide us with deviations from traditional standards of beauty and legibility which are exhaustively examined. The writer laments the recent vulgarized editions of an industrial age, where for the purposes of advertisement and competition the paramount object is to compel attention and promote singularity.

Book production is dealt with, and the art of embellishing, though this latter is to be dealt with more extensively in an anticipated volume of the same edition.

Altogether, this is a welcome addition to the New Art Series, covering a wide field of information, while the illustrations, well placed and chosen, aptly illustrate the text and add to the general interest. G. E. R.

Lettering. By Graily Hewitt, B.A., LL.B. London: Seeley, Service & Co., Ltd. Price 15s. net.

Publications Received

The Northumberland and Newcastle Society's Annual Report for 1930.

The Prevention of Pattern Staining of Plasters. By D. G. R. Bonnell, M.SC., PH.D., and L. W. Burridge. Building Research Bulletin No. 10. London: H.M. Stationery Office. Price 4d. net.

Artwork. A Quarterly edited by Professor Randolph Schwabe. London: J. M. Dent and Sons, Ltd. Price 2s. 6d. net.

Monumental Architecture. By Morand. London: Tiranti & Co. Price 30s. net.

Edifices de Rome Moderne. By Letarouilly. London: John Tiranti & Co. Price 15s. net.

A History of Everyday Things in England. By Marjorie and C. H. B. Quennell. London: Batsford, Ltd. Price 8s. 6d. net.

OBITUARY

EDWARD J. PARTRIDGE : 1869–1931

EDWARD JOHN PARTRIDGE, F.R.I.B.A., F.S.I., F.I.ARB., architect and surveyor, practised his profession for many years at Richmond, Surrey. Some of his chief works include chemical factories and motor engineering, printing and dye works, branch banks for Messrs. Barclays and the National Provincial Bank, many residences and business premises, restaurants, shops and offices. Recently, in collaboration with his partner, Mr. T. Llewellyn Daniel, A.R.I.B.A., he was engaged on the Stirling Chemical Works, Stratford; Eclipse Glass Works, Clapton; milk distributing depots and dairies for Messrs. Hornby and Clarke, and numerous private and business premises in London and the provinces.

The late Mr. Partridge was architect and surveyor to the Richmond Board of Guardians, Richmond Vestry and the Earl of Dysart's Surrey estates, and was for thirty years surveyor to the Richmond Assessment Committee.

In 1890 he passed the intermediate examination of the Chartered Surveyors' Institution, winning the Driver prize, and four years later he passed the final, winning the Penfold gold medal and Crawter prize, and was transferred to a Fellowship.

In 1906 Mr. Partridge joined the Society of Architects, and after long service on the Council he was elected president in 1923 and in 1924, and received the gold medal for services rendered. He was for many years local hon. secretary, and examiner in surveying and kindred subjects for the Society's membership examination. It was during his last year of office as president that the agreement for the amalgamation of the Society with the R.I.B.A. was completed, and he was one of the signatories. Mr. Partridge was transferred to Fellowship of the R.I.B.A. in 1925, and was a member of the Registration and Science Standing Committees. He was also a Fellow of the Institute of Arbitrators.

Like most busy professional men, Mr. Partridge found time for other activities, and was a very active Freemason. He was a founder of the Society of Architect's Lodge and Chapter, in both of which he had passed the chair and was in office at the time of his death, and he also was actively connected with the Richmond Lodge and Chapter and had attained to London rank. The state of his health for some time past had caused his intimate friends great concern, and it is probable that if he had thought more for himself and less for others he might have looked forward to a period of relaxation and renewed health ; but that was not his way.

He died on May 2, aged sixty-two, after a long and painful illness borne with characteristic fortitude, and was buried in Richmond cemetery on May 6, in the presence of representatives of the institutions which he had served so well.

His work will be carried on by others, but there is no one who will take his place in the affections of his fellow-men.

To his widow this little tribute is offered by one who knew him well and valued his friendship. C. M. B.

ROBERT B. BENTLEY : 1860–1931

We regret to record the death, at the age of seventy-one, of Mr. Robert Bentley, L.R.I.B.A., of Whitehaven.

Mr. Bentley was educated at Huddersfield College, and was later articled to Mr. William Henman, F.R.I.B.A. (R.I.B.A. gold medallist), of Stockton-on-Tees, afterwards going for experience to Mr. C. Henman, F.R.I.B.A., of London.

He then returned to Whitehaven as chief assistant to the late Mr. J. S. Moffat, M.S.A., but afterwards went to Sydney, Australia, where he built the Grosvenor Hotel, a convent, and various other buildings. When Mr. Moffat died in 1908, Mr. Bentley took over the practice, and in 1925 his son, Mr. C. M. Bentley, F.R.I.B.A., joined him as junior partner.

HENRY C. M. HIRST, 1860-1931

The death has occurred of Mr. Henry Cecil Montague Hirst, retired Fellow of the R.I.B.A., at the age of seventy-one years, at Bristol, after a long illness.

He was the eldest son of the late Mr. John Henry Hirst, F.R.I.B.A., to whom he was articled, and succeeded his father as surveyor to the Bristol and West of England Building Society.

He was made an Associate of the R.I.B.A. in 1886, elected to the Fellowship in 1928, and retired from practice the same year.

SOCIETIES AND INSTITUTIONS

LAND VALUATION

MR. SYDNEY A. SMITH, in a paper on "Valuations of the Assets of Public Companies," read before a meeting of the Chartered Surveyors' Institution on Monday last, said, in dealing with company valuations, cases often occurred in which no materials for direct comparison were available. Novel ventures in industry were often exploited by joint stock enterprise. In such cases the actual or estimated cost of the buildings and structures and the value of the site would naturally be accorded more importance than in most valuations. Where buildings had been erected during periods of high costs or in situations which required excessive foundations, the cost of the demolition might need careful scrutiny. In most cases, he continued, the valuer would estimate a rental for land and buildings and find the capital value by the use of a multiplier or years' purchase. The rental might be based on an estimate of a price per unit of area or capacity according to the position and character, and the multiplier for capitalization would vary according to the current market conditions influenced by factors of supply and demand.

LONDON BUILDING ACTS

The L.C.C. has appointed an Advisory Committee to consider and report to the Council as to any necessary amendments of the London Building Act, 1930.

Definite proposals for the amendment of the Act will be welcomed by the Advisory Committee. Such proposals, which must be in writing, should be accompanied by sufficient explanations, and be addressed to Montagu H. Cox, Clerk of the Council, County Hall, Westminster Bridge, S.E.1, by the dates set out below :

Parts of Act.	Latest date for submission of suggestions.
Parts I to IV	May 31, 1931.
Parts V and VI and 1st, 2nd and 3rd Schedules	June 30, 1931.
Parts VII to IX ..	July 31, 1931.
Parts X to XIII ..	September 30, 1931.
Parts XIV to XVII and 4th and 5th Schedules	October 31, 1931.

NEW PRESIDENT OF THE I.I.B.D.

At the annual meeting of the Incorporated Institute of British Decorators, Mr. Henry G. Dowling, F.R.S.A., was elected president for the ensuing year, in succession to Mr. C. A. Hindley. Mr. Dowling, who is well known in the world of decoration, is the youngest man to occupy this office.

COMPETITION NEWS

The following architects have been invited to submit competitive designs for the new town hall and municipal offices to be erected in Walworth Road, S.E., for the Southwark Borough Council. The assessor is Mr. Louis de Soissons, F.R.I.B.A. Messrs. :

Adshead and Ramsey, FF.R.I.B.A.
C. Cowles-Voysey, F.R.I.B.A.
Elcock and Sutcliffe, FF.R.I.B.A.
E. Berry Webber, A.R.I.B.A.
Yates, Cook and Darbyshire.

LAW REPORTS

RIGHT TO BUILD ON A GARDEN

Lock v. *Convent of Notre Dame. Chancery Division. Before Lord Russell of Killowen*

THIS was an action by Mr. Herbert Lock, of Tollington Park, Hornsey, seeking, as against the defendant convent, an injunction to restrain them from erecting a building upon land which he alleged he had the right to use as a garden.

Mr. Levy, for the plaintiff, said his case was that plaintiff was the statutory tenant of No. 57 Tollington Park and the garden. The convent occupied premises adjoining at No. 55, and plaintiff alleged that in November, 1930, the defendants, by their builders, entered on his garden, by knocking down the fence, and demolished his fruit trees and growing crops and commenced excavations for a building. When plaintiff complained to the Mother Superior, she desired to compensate him. Later he obtained an interlocutory order against the defendants, stopping the building.

Defendants pleaded that they now held the lease of the premises, and that the plaintiff only had a revocable licence for the use of the garden. That had now been terminated. In the alternative, they pleaded that, if the plaintiff had suffered any damages, he could now be compensated.

Plaintiff gave evidence in support of his case.

Evidence was given on behalf of the defendants that, when they bought the property, they never heard that the plaintiff was the tenant of the garden. The convent desired to erect a recreation room for the schools on a portion of the garden, and defendants always understood that the owner had given them a licence to do so.

His lordship, after hearing the arguments of counsel, pointed out that the defendants held a long lease of the plaintiff's house and garden, and had the consent of the owner to erect a building on a part of the garden. To his mind, that was inconsistent with the submissions made on behalf of the plaintiff that he was the tenant of the garden. Under those circumstances, he thought the plaintiff had failed to prove his case, and he entered judgment for the defendants with costs.

ONEROUS COVENANTS

Jeffries v. *Payne. Chancery Division. Before Lord Tomlin*

This action had reference to the sale of tea-rooms and the lease of the premises. The plaintiff, Mrs. M. Jeffries, of Big Wood Tea House, Northway, Hampstead Garden Suburb, sued Miss D. G. Payne, of Leith Road, Epsom, for specific performance of an agreement to purchase tea rooms and the lease of the premises.

It appeared that the premises were held on a lease for four years with a right of renewal for a further seventeen years, the lessors being the Hampstead Garden Suburb Trust, Ltd. The rent started at £150, rising to £275 in the fourth year.

Plaintiff's case was that an agreement was arrived at under which the defendant agreed to purchase the goodwill, lease, fittings, etc., of the tea house for £550, paying a deposit of £55. The defendant, plaintiff complained, had refused to complete her contract.

Mr. Gabraithe, K.C., for the defendant, said his client had no knowledge of the lease until after the alleged agreement had been signed, or that it contained unusual provisions and unusual and onerous covenants. His client set up a counterclaim for the return of her deposit. Counsel's submission was that there had been no sufficient disclosure here.

His lordship dismissed the action with costs and gave judgment for the defendant on the counterclaim. His lordship came to the conclusion that at the time the defendant signed the agreement, which she should never have been asked to sign at all under the circumstances, she had not been told of matters in relation to the lease, which it was essential she should know if there was any intention of forcing the property upon her.

FACTORY CONTRACT APPEAL DISMISSED

Robson and Perrin and Another v. *Webster and Another. King's Bench Divisional Court. Before Justices Talbot and Finlay*

This was an appeal by Messrs. Robson and Perrin (sued as a firm), estate agents and auctioneers, King William Street, London, and Mr. Geo. E. Clare, an architect, College Road, Harrow, who were the defendants in a reference against the decision on May 29, 1930, by Sir Francis Newbolt, K.C., official referee, in favour of the plaintiffs, Mr. Philip Reginald Webster and Mr. William Weddell (trading as Weddell Bros.), advertisement contractors, Sussex Road, Holloway. N.

Appellants' case was that there was no evidence upon which the official referee could have found against them.

Mr. Van Den Berg was for appellants, and Mr. Schiller, K.C., and Mr. P. Pitt were for respondents.

The claim before the official referee was for damages for alleged negligence and breach of duty as architects, and damages for breach of contract.

Weddell Bros. are advertising contractors, and Robson and Perrin are surveyors, valuers, auctioneers and estate agents, and Mr. Clare is an architect. Weddell Bros. arranged with Robson and Perrin to negotiate for the purchase of a piece of land in Elthorne Road, Holloway, and to advise them upon the erection of a new factory. The latter prepared plans and specifications and bills of quantities for the purpose of estimates, and selected contractors, who were the Cellular Construction Co., Ltd., of Westminster, for the erection of the new factory on the site. It was alleged that this company was unable to carry out the contract. It had been represented that this firm was experienced in that class of work, and was the English branch of the Monnoyer Construction Co., of Belgium. It was alleged that the work did not comply with the requirements of the London Building Act, 1894, and the L.C.C. General Powers Act, 1925, and the building regulations of the L.C.C. with respect to reinforced concrete.

It was further contended that the factory was built with bad and deficient work, and the materials were not in accordance with those specified. In October, 1927, part of the factory collapsed, and this was alleged to have been through the faulty method of construction and the materials used.

The appellants denied that they were guilty of negligence, but admitted that a portion of the roof of the factory collapsed and fell through the floors, but denied that such collapse was occasioned by their negligence. The appellants said that a collapse would not have occurred had a clerk of the works been appointed, as advised by them.

Further, it was alleged that the respondents were verbally advised to employ a clerk of the works, but that they had declined to do so. The appellants admitted that the contractors were discharged from the contract. The appellants further admitted that they advised plaintiffs that they would complete the factory by direct labour, but were prevented from doing so. The appellants had counter-claimed for work done and materials supplied, and money paid in connection with the new factory.

JUDGMENT

Giving judgment, Mr. Justice Talbot said that the contention of the plaintiffs was that the head of the business of Robson and Perrin was not a qualified architect, and that Mr. Clare, whom he engaged, had not experience nor technical knowledge of the construction to be adopted in this class of building,

and was forced to rely upon the Cellular Company, whose work he was employed to supervise. It was urged that when an architect wished to delegate some part of his duties and liabilities to another, he must bring the facts to the notice of his employers. It was clear that the building in important respects did not comply with the regulations of the L.C.C., that the cement was not as represented by the specification. There was evidence that there had been bad material and bad design. This inadequate supervision fully accounted for the disaster which occurred. The evidence of an eye-witness of the collapse supported plaintiff's case. The collapse was not through the act of a workman.

It was plain that defendants had recommended the Cellular Co. without making proper inquiries. It was urged by appellants that there had been an agreement between themselves and the respondents that the work should be continued, after the collapse, by direct labour, but that such agreement had been repudiated. The legal position was that the defendants were entitled to go on with the work until the plaintiffs stopped them, and plaintiffs were bound to give credit for any work which had been done as a set-off to reduce any claim for damages against defendants. The defendants were not entitled to anything for an insufficiency of notice. The learned referee had justly held that plaintiffs had sufficient cause to turn the defendants out. The Court was satisfied that there was no expressed agreement between the parties, and that plaintiffs refused to enter into one. The measure of damage was the price at which a sound building could have been erected on the site, and the cost of clearing away the material which could not be used after the collapse.

The appeal was dismissed with costs.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL by permission of the Controller of H.M. Stationery Office. All inquiries concerning inventions, patents and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated, readers should apply to the Patent Office, 25 Southampton Buildings, W.C.2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

10776. Hutcheson, W. J. F. Reinforcement connected with reinforced concrete buildings, etc. April 13.

10822. Bemis Industries, Inc., and Brookes, N. E. Building construction. April 13.

10949. Coombs, W. T. Portable and collapsible structures. April 14.

11385. Brown, A. S. Roof construction. April 17.

11535. Trumpy, E. Concrete building systems. April 18.

11720. Clement, E. Building slabs. April 20.

11734. Ferguson, J. H. Method of constructing bridges, etc., in concrete. April 21.

11827. Bennetts, J. H. Clamping device for use in building construction, etc. April 21.

11964. Irwin, D. L., and Plummer, H. L. Roofings, partitions, etc. April 22.

SPECIFICATIONS PUBLISHED

346409. Bauer, B. Steel skeleton for reinforced concrete structures.

346490. Thompson, M. H. Wall construction.

COMPETITIONS OPEN

June 1.—Sending-in day. New Council School, to be erected at Blowers, Dudley. (Limited to architects within a radius of 15 miles of Dudley.) Assessor: Herbert T. Buckland, F.R.I.B.A. Conditions from J. Whaley, Director of Education, Education Offices, St. James's Road, Dudley.

June 16.—Sending-in day. (Last day for conditions was February 25.) Offices for the Ingham Infirmary, South Shields. (Limited to architects within the area of the Northern Architectural Association.) Assessor: George Reavell, O.B.E., F.R.I.B.A. Premiums: £250, £100 and £50. Conditions were obtainable from John Potter, Secretary, Ingham Infirmary, South Shields. (Deposit £2 2s.)

June 24.—Sending-in day. King Edward VI. School, Mill Lane and Wilton Road, Southampton, for the Governors of the School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums, £150, £100 and £50. (Deposit, £1 1s.). Full particulars are obtainable from G. A. Waller, Clerk to the Governors, 7 Albion Place, Southampton.

June 26.—Sending-in day. Offices for the City of Leicester Corporation, Charles Street, Leicester. Assessor: E. Berry Webber, A.R.I.B.A. Premiums: £300, £200 and £100. Conditions from A. T. Gooseman, Engineer and Surveyor, Town Hall, Leicester. (Deposit £2 2s.)

June 30.—Sending-in day. (Last day for conditions was April 15.) New Branch Baths, Foleshill, for the Coventry Corporation. Assessor: F. J. Horth, F.R.I.B.A. Premiums: £210, £105 and £52 10s. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

September 21.—Sending-in day. (Last day for conditions: June 10.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £500, £400, £300 and £200. Conditions from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

March 31, 1932.—Sending-in day. Last day for questions: August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

THE ARCHITECTS' DIARY

WEDNESDAY, MAY 13

R.I.B.A., 9 Conduit Street, W.1. Exhibition of "The Architecture of Modern Transport." Until May 22. 10 a.m. to 8 p.m. (Saturdays, 10 a.m. to 8 p.m.). **10 a.m.**

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. Exhibition of H. Th. Wijdeveld's drawings and designs. Until May 18.

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "Architecture in Concrete on the Pacific Coast." By Major R. A. B. Smith, M.C. Chairman: Alfred C. Bossom, F.R.I.B.A. **8 p.m.**

THURSDAY, MAY 14

ARCHITECTS' BENEVOLENT SOCIETY. Annual General Meeting to be held at 9 Conduit Street, W.1. **5 p.m.**

INSTITUTION OF ELECTRICAL ENGINEERS, Savoy Place, Victoria Embankment, W.C.2. Discourse on the life and work of Hughes. By Sydney Evershed. 6 p.m. Followed by the annual general meeting. 6.45 p.m. **6 p.m.**

SOCIETY OF ANTIQUARIES, Burlington House, W.1. "The Excavations at Ur." By Leonard Woolley. **8.30 p.m.**

MARGATE SCHOOL OF ART. Third of twelve illustrated lectures on Beauty in Design. "Purpose and Mass in Design." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

FRIDAY, MAY 15

SOCIETY FOR THE PROTECTION OF ANCIENT BUILDINGS. Annual General Meeting to be held at the Carpenters' Hall, Throgmorton Avenue, E.C. An address will be given by D. S. MacColl, HON. A.R.I.B.A. Tea 4 p.m. **4.30 p.m.**

SATURDAY, MAY 16

Sunrise 5.9 a.m. Sunset 8.43 p.m.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. At the Castle, Winchester. Annual General Meeting. **3 p.m.**

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS. Visit to the Lambeth Bridge Reconstruction. Meet at Contractors' Office, Millbank, S.W. **2.30 p.m.**

MONDAY, MAY 18

ARCHITECTURAL ASSOCIATION, 34 Bedford Square, W.C.1. "The Architectural Association, 1847–1931." By F. R. Yerbury, HON.A.R.I.B.A. **8 p.m.**

TUESDAY, MAY 19

LONDON SOCIETY. Annual Dinner to be held at the Hotel Victoria, Northumberland Avenue, W.C.2. Chairman: The Earl of Crawford and Balcarres. 7.30 for 7.45 p.m. **7.30 p.m.**

THURSDAY, MAY 21

R.I.B.A. Annual Dinner, to be held in the Hall of Lincoln's Inn. **7.15** for **7.45 p.m.**

LONDON SOCIETY. Visit to Ergon House, Horseferry Road, Westminster, S.W.1. **3 p.m.**

MARGATE SCHOOL OF ART. Fourth of twelve illustrated lectures on Beauty in Design. "Beauty in Proportion." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, MAY 23

Sunrise 4.59 a.m. Sunset 9.10 p.m.

WHIT MONDAY, MAY 25

THURSDAY, MAY 28

LONDON SOCIETY. Visit to Horniman Museum and Gardens, London Road, Forest Hill, S.E. **3 p.m.**

MARGATE SCHOOL OF ART. Fifth of twelve illustrated lectures on Beauty in Design. "Balance and Contrast." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

FRIDAY, MAY 29

TOWN PLANNING INSTITUTE, at Caxton Hall, Caxton Street, Westminster, S.W.1. "London As It Ought to Be." By Messrs. Adams, Adshead, Davidge and Lanchester. **6.30 p.m.**

SATURDAY, MAY 30

Sunrise, 4.51 a.m. Sunset, 9.4 p.m.

LONDON SOCIETY. Visit to the Church of St. John, St. John's Square, Clerkenwell, W.C.1. **2.30 p.m.**

TUESDAY, JUNE 2

INSTITUTE OF LANDSCAPE ARCHITECTS, at the Royal Horticultural Hall, Westminster, S.W.1. "Austrian Baroque Gardens." By G. A. Jellicoe, A.R.I.B.A. **3.30 p.m.**

THURSDAY, JUNE 4

MARGATE SCHOOL OF ART. Sixth of twelve illustrated lectures on Beauty in Design. "British Architects' Efforts." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JUNE 6

Sunrise 4.46 a.m. Sunset 9.10 p.m.

THURSDAY, JUNE 11

MARGATE SCHOOL OF ART. Seventh of twelve illustrated lectures on Beauty in Design. "Interior Designs." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JUNE 13

Sunrise, 4.42 a.m. Sunset, 9.15 p.m.

WEDNESDAY, JUNE 17

R.I.B.A. British Architects' Conference, Dublin. Until Saturday, June 20.

TRADE NOTES

Encouraged by the support of a large number of architects, the Monomark Company is undertaking an intensive campaign among manufacturers and merchants with a view to the extension of the identification of British-made building materials and fittings by means of monomarks. The general adoption of this means of marking should be a great advantage to the architectural profession, particularly in the direction of enabling those who are charged with the work of extension, alteration and replacements to buildings, to obtain fittings to match with certainty and without delay or trouble. To get in touch with the maker of monomarked goods, all the architect has to do is to copy the monomark appearing on the article on to an envelope, add "London, W.C.1," and post in the ordinary way. By special arrangement with the General Post Office this is delivered unopened, via Monomark House, to the maker of the goods. A monomark quoted in the specification will enable the sub-contractor to obtain exactly the goods specified without trouble and without delay. Already a very large amount of British-made building fitments and materials, such as roofing and other tiles, bricks, glazed sanitary ware, sanitary pipes, metal and brass ware, paint, wallpaper, etc., are being marked with monomarks, and the movement is now spreading to the advantage of all concerned. A brochure has been specially prepared, fully explaining the advantage to the architect of the monomarking of building goods, and architects can test the system by writing for a free copy to BCM/MONO, which is the monomark of the Monomark concern.

*

In a new catalogue of Fosalsil partition blocks, just issued, Messrs. Moler Products, Ltd., the manufacturers, point out that it is one thing to be aware of the existing need for the efficient insulation of buildings, but quite another matter to fulfil all the requirements satisfactorily. The architect, they state, requires a material which conforms to the following conditions: "It must be impervious to the passage of heat and cold, it should possess a vacuum-flask quality of keeping the warm room warm and the cool room cool, irrespective of outside temperature. It must reduce noise to a minimum, it must be inexpensive to justify its use on a commercial scale, while it must possess a high mechanical strength. These requirements, exacting as they are, do not complete the virtues necessary for the ideal building material. Lightness and ease of handling are no less important than that the material should be proof against fire, vermin, corrosion, damp and condensation. Nor does that complete the list. It still has to be capable of being nailed, sawn, cut and shaped with ease, whilst affording a secure hold for screws or plaster and decorative work. In these days of high-speed work the advantage of being able to commence decorating operations twenty-four hours after plastering is of the utmost importance to contractors." The firm claim, and state that they have proved in thousands of buildings covering every town in England, that Fosalsil partition blocks meet every one of these requirements in full. The catalogue contains much scientific data concerning the fireproof and other qualities of the material.

*

The Duke of York paid a visit, on Wednesday last, to the engineering works of Messrs. G. A. Harvey & Co. (London), Ltd. This firm was one of the pioneers in the Industrial Welfare Movement, which has no more enthusiastic supporter than His Royal Highness. As President of the Industrial Welfare Society, his constant endeavour has been not only to extend and develop welfare activities, but to see for himself these schemes in actual operation. The Harvey works cover an area of about twenty-five acres, and regularly employ nearly 2,000 workers. The Duke of York inspected most of the shops, which total nearly three-quarters of a mile in length, and was keenly interested in the various operations in progress. During his tour His Royal Highness inspected the ambulance station, the works canteen and recreation hall, and the Harvey sports ground.

*

There is much food for thought in a pamphlet issued by the British Steelwork Association, entitled *The Steel Age*. For example, it is stated that 1 ton of steel requires $3\frac{1}{2}$ tons of coal in the course of its manufacture and involves the transport of 7 tons of raw materials. Work given to the steel industry, it is pointed out, automatically provides employment in the ore mines, limestone quarries, coal mines, coke ovens, and in the transport and engineering industries.

*

Messrs. Holophane Limited recently held a municipal conference at their London offices. Over sixty persons attended. The programme followed the firm's usual procedure of addresses given by experts in various branches of lighting, together with illustrations by means of lantern slides, and was as follows: Welcoming address, by Mr. H. Hepworth Thompson; Recent Developments in Illumination, by Mr. J. S. Dow (Illum. Eng. Society); Holophane Sales Policy, by Mr. W. T. Dean; Manufacture of Holophane Glass, by Dr. S. English; Holophane Developments, by Mr. E. Stroud; Adjourn for lunch to St. Ermins Hotel; Colour Lighting Demonstration, by Mr. R. Gillespie Williams; Practical Applications of Holophane, by Mr. L. M. Tye; Tea and Discussion, followed by inspection of laboratory; Dinner at Criterion Restaurant.

*

Following is a list of the trophies won by the private fire brigade of Messrs. Smith, Major and Stevens, Ltd.: The "Faire" Challenge Trophy. For Championship of all England. Four-Man Drill. Consisting of the fixing of stand pipe and running out three lengths of hose with breeching piece and two branch pipes. Winning time, $15\frac{2}{5}$ seconds. "Trenery" Hose Cart. Four-Man Drill. The fitted cart itself is used in this drill. Three lengths of hose are run out from the stand pipe, after a 50 yards run with the cart to the hydrant. Winning time, $21\frac{4}{5}$ seconds, which is a record. Smith, Major and Stevens, Ltd., Cabinet. Five-Man Drill. Consisting of running out four lengths of hose from a breeching piece fixed to stand pipe (two lengths on each delivery). Complete with branch pipes. Winning time, $20\frac{1}{5}$ seconds. At the tournament at which these trophies were competed for, forty-two amateur private fire brigades attended from all over the Midlands.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:

Model Farm, Hackbridge (pages 679–682, and supplement). General contractor, E. H. Smith. Sub-contractors: Roberts, Adlard & Co., black Dutch bricks and tiles; Young & Co., patent flooring and farm fittings; Tyler and Freeman, electric wiring; Henry Hope and Sons, Ltd.; Plastering, Ltd., plaster and decorative plaster; John Stubbs and Sons, marble; Osler and Faraday, Ltd., glass fountain; Mrs. Polly Hill-Clarke carved the mahogany painted figures.

Kelvin House, Cleveland Street, Tottenham Court Road, W.1 (pages 687–689). General contractors, W. J. Mitchell and Son. Sub-contractors: Diespeker & Co., Ltd., hollow tile floors; Archibald D. Dawnay and Sons, Ltd., constructional engineering; John Boulting and Sons, heating and hot-water installations; Duncan Watson & Co., electrical work; Dreadnought Fireproof Doors (1930) Ltd., fireproof doors; Leeds Fireclay Co., Ltd., sanitary fittings; British Magnesite Flooring Co., Ltd., jointless floors; Express Lift Co., Ltd., passenger lifts; Fredk. Braby & Co., Ltd., steel sashes.

The two photographs of Peterborough Cathedral, page 676, are reproduced by courtesy of "Ediswan" who were responsible for the artificial lighting.

ANNOUNCEMENTS

In the caption beneath the photograph of Unilever House, Blackfriars, E.C., on page 644 of the last issue of the JOURNAL, the authorship of the design should have been attributed to Sir John Burnet and Partners, Architects, Mr. J. Lomax Simpson, Consultant Architect.

Mr. Eric Hayman, M.A., architect, has removed his office to No. 6 Pump Court, Temple, E.C.4. Telephone: Central 1400.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The Brentford and Chiswick U.D.C. is acquiring three acres of land in Church Walk, BRENTFORD, for a housing scheme.

The Middlesex C.C. has prepared plans for extending the nurses' home at the CLARE HALL sanatorium, at a cost of £11,725.

Plans passed at COULSDON: House, Red Down Road, for Mr. W. J. Ellis; four houses, Byron Avenue, for Messrs. Chester and Hopkins; two houses, Waverley Avenue, for Messrs. E. O'Sullivan, Ltd.; thirty-two houses Ridgemount Avenue, for Mr. A. G. Gresswell; two houses, Marlpit Lane, for Messrs. Chester and Hopkins; presbytery, St. Aidans, Portnalls Road, for Rev. Father McFadden; two houses, Fairdene Road, for Mr. Walter Cottage; four houses, Marlpit Lane, for Mr. H. C. Doddrell; two houses, Byron Avenue, for Messrs. Chester and Hopkins.

The London Co-operative Society is erecting new premises in Gunnersbury Avenue, EALING.

The Middlesex C.C. is acquiring land at ISLEWORTH, for the erection of a nurses' home for the Brentford institution.

Plans passed at PURLEY: House, Hartley Old Road, for Mr. S. J. Garton; swimming bath and pavilion, Commonweal Lodge, Woodcote Lane, for the Misses Bourne and Bray; new road, off St. James Road, for Mr. F. T. Brown; fifty houses, Glenn Avenue, for Mr. F. W. Thomas; eighteen houses, Lodge Lane, for the Old Lodge Estate, Ltd.; house, Woodcrest Road, for Mr. B. F. Oldham.

Plans passed at SANDERSTEAD: House, Upper Selsdon Road, for Mr. S. H. Palmer; house, Purley Bury Close, for Messrs. W. J. Frewing and Sons, Ltd.; four houses, Brantwood Road, for Mr. F. H. Willcocks; four houses, Sanderstead Court Road, for Messrs. Nutter and Hollas.

Plans passed at SELSDON: Extension to shop, 9 Selsdon Village, for Mr. P. M. King; nine houses, York Road, for Messrs. James and Woodworth; new road, off Farleigh Road, for Mr. S. T. Hipwell.

The Provincial Theatre Corporation is to convert the Elephant and Castle theatre, SOUTHWARK, into a cinema.

The TEDDINGTON U.D.C. is seeking sanction for a loan of £44,500 for the erection of municipal offices and a fire station.

The WANDSWORTH B.C. has approved a revised layout on an estate at Garrett Lane, for the erection of three blocks of flats.

The WANDSWORTH B.C. has passed plans, prepared by Mr. R. Mountford Pigott, for the erection on the Magdalen Park estate of 130 houses, 200 flats and 156 three-roomed maisonnettes.

SOUTHERN COUNTIES

The BOURNEMOUTH Education Committee is seeking sanction to borrow £12,650 for the erection of a new school in Hill View Road.

Plans passed at EASTBOURNE: Four houses, Dillingburgh Road, for Mr. A. J. Fellows; two houses, Victoria Drive, for Messrs. Clarke and Worsfield; three houses, Glynde Avenue, and house, Baldwin Avenue, for Mr. A. Ford; house, Baldwin Avenue, for Messrs. G. Tanner and Sons; house, Willingdon Road, for Mr. C. Barber.

SOUTH-WESTERN COUNTIES

Plans passed at CHELTENHAM: Bakery, Hewlett Road, for Mr. J. Brunner; garages, off Naunton Lane, for Mr. T. W. Smith; alterations, Garricks Head, Baker Street, for Messrs. Flowers and Sons.

The TORQUAY Education Committee is to provide a new elementary school at Ellacombe to accommodate about 320 children.

The TORQUAY Education Committee is to purchase a site in Quinta Road from the Cary estate, for the erection of a senior mixed school for 320 children.

Plans passed at TORQUAY: Bank premises, Union Street, for the National Provincial Bank Ltd.; house, Chatto Road, for Mr. J. Colmer; conversion of 16 and 17 Fleet Street, for Messrs. the Regent Fur House; two houses, Pine View Gardens, Warberry Vale, for Mr. F. Radford; alterations and additions, Matlock Mews, St. Luke's Road, for Mr. Holman; six bungalows, Coombe Lane, St. Marychurch, for Mr. S. England; house, Mead Road, Livermead, for Mrs. M. I. Yeo; bungalow, Jack's Lane, Barton, for Mr. S. Westlake; alterations and additions, Devon Dene, Wheatridge Lane, for Mr. Shelley; house, Oxlea Road, for Mr. H. Proctor; bungalow, Westhill Road, for Mr. J. T. Sture; three houses, Boundary Road, Chelston, for Messrs. C. J. Donovan and Sons; two houses, Isaac's Hill, Barton, for Mr. J. R. Stubbs; five houses, Homestead Road, for Messrs. J. Lloyd and Son; house, Millbrook Park, for Mr. E. Riggs; shops, rear of 23 and 25 Union Street, for Messrs. Drury and Chaffe; eight houses, Marcombe Road, Chelston, for Messrs. E. Riggs.

MIDLAND COUNTIES

The BIRMINGHAM Education Committee is to extend the Central Technical and Commercial College, at a cost of £12,700.

The BIRMINGHAM Education Committee has selected two sites on the Kettlehouse Farm estate, for the erection of elementary schools.

The BIRMINGHAM Education Committee has acquired a site in Heneage Street, for the erection of a nursery school.

The BIRMINGHAM Education Committee is to erect a residential open-air school at Blackwell, at a cost of £27,400.

The BIRMINGHAM Education Committee has scheduled further schools for structural improvements, at a cost of £31,800.

The BIRMINGHAM Education Committee is to purchase a site in Hobmoor Road, for the erection of an elementary school.

The BIRMINGHAM Corporation has sold to the Birmingham Diocesan Trustees a site at the junction of Caversham and Peckham Roads for the erection of a church.

The Bethel Evangelistic Society has purchased land in Ward End Road, BIRMINGHAM, for the erection of a church.

The DUDLEY Housing Committee has approved the layout plan of 190 houses proposed to be erected between the Wren's Nest and the bypass road.

Plans passed at DUDLEY: House, Stourbridge Road, Holly Hall, for Mr. A. Perry; house, Saltwells Road, Netherton, for Mr. Wm. Wright; three houses, Tansley Hill Road, for Messrs. Roberts Bros.; warehouse, Halesowen Road, Netherton, for the Dudley Iron and Steel Co.; house, Bell Road, Netherton, for Mr. J. Golding; extension to sub-station, Oakeywell Street for the Shropshire, Worcestershire and Staffordshire Electric Power Co.; house, Oakham Road, for Mr. Geo. Field.

The STOKE-ON-TRENT Education Committee has acquired a site in Wellesley Street, Shelton, for the erection of an elementary school.

The Ministry of Health has approved the scheme of the STOKE-ON-TRENT Corporation, for extensions at the maternity hospital.

Plans passed at STOKE-ON-TRENT: House, The Avenue, Harpfields, for Mr. J. Brough; four houses, Bedford Street, Basford, for Mr. B. James; four houses, High Lane, Chell, for Mr. C. Kearton; two houses, Trentham Road, Blurton, for Mr. F. Foreman; ten houses, Victoria Place, Penkhull, for Messrs. Holloway & Co.; two bungalows, Stone Road, Lightwood, for Mr. H. J. Keeling; house, Ford Green, Norton, for Mr. L. Gidman; six houses, off Werrington Road, Bucknall, for Mr. F. J. Williams; eight houses, Poplar Grove, for Messrs. Holloway and Co.; fourteen houses, High Street, Sandyford, for Mr. C. Sutton; two houses, Mellor Street, Packmoor, for Mr. G. Collins; two houses, Leonard Road, for Mr. J. Hoskins; six houses, Werrington Road, for Mr. F. J. Williams; alterations to four shops, London Road, Trent Vale, for Messrs. Ball and Robinson; four houses, Bedford Street, Basford, for Mr. B. James; skating rink, Pinnox Street, for Mr. J. Slater; eight houses, Drubbery Lane, for Mr. E. W. Haynes.

The WALSALL Corporation is to purchase land in Hospital Street for housing purposes.

NORTHERN COUNTIES

The BOLTON Education Committee has received sanction to borrow £42,300 for the erection of a school in Whitecroft Road.

Plans passed at BOLTON: Dairy, Horrocks Hill Farm, for Mr. S. L. McPherson; two houses, Eastgrove Avenue, for Messrs. A. H. Price and Groves; four houses, off Seymour Road, for Mr. W. E. Yates; extension to office and garage, Fletcher Street, for Messrs. Stones and Hutchinson; two houses, Boot Lane, for Mr. J. H. Sharples; four houses, Smethurst Lane, for Mr. Richard Fletcher; two houses, Kingswood Avenue, for Mr. A. S. Woods; five shops, Deansgate and Oxford Street, for Messrs. J. Gerrard and Sons; two houses, off Green Lane, for Messrs. E. and S. Street, Ltd.

The Lancashire Education Committee is to erect three new elementary schools at DENTON.

The HULL Education Committee recommends the erection of the new school in Endyke Lane, by direct labour, at a cost of £14,958 17s.

The Ministry of Health has sanctioned the proposal of the HULL Corporation to erect 750 houses on the Endyke estate.

Messrs. Whinney, Son and Austen Hall, architects, are to erect premises for the Midland Bank, Ltd., at Kirkgate, LEEDS.

The MANCHESTER Corporation has approved the layout for the erection of the 1,000 houses on the Wythenshawe estate.

The MANCHESTER Corporation is to acquire land at Blackley for the erection of 438 houses, at a cost of £208,000.

The MANCHESTER Corporation is to acquire land and erect 550 houses at Boggart Hole, Clough, at a cost of £260,500.

The MANCHESTER Education Committee is to erect an elementary school at Collyhurst, at an estimated cost of £17,000.

The PRESTWICH U.D.C. is to erect fifty-six houses on the Polefield estate.

Plans passed at SHEFFIELD: House, Abbey Crescent, for Mr. J. G. Castel; house, shop and four garages, Hutcliffe Wood Road, for Messrs. A. J. Mackenzie, Ltd.; house, Chorley Road, for Mr. E. M. Holmes; two houses, Milden Road, for Mr. P. H. Slater; two houses and three shops, Whinmoor Road, for Mr. G. H. Batte; bungalow, Hutcliffe Wood Road, for Messrs. Clarke and Son; house, Chorley Drive, for Mr. J. W. Sivil; two houses, Whirlow Grove, for Mr. C. G. Robinson, two houses, Walesworth Road, for Mr. D. Hurrell; six houses, Norwood Road, for Mr. J. C. Mason; house, Herries Road, for Mr. G. Hall; house, Chorley Road, for Mr. Kershaw; two houses, Prince of Wales Road, for the Corporation Estates Committee; house, Millhouses Lane, for Mr. G. Hardcastle; house, Muskoka Avenue, for Mr. J. Mort; house, Abbey Crescent, for Mr. J. V. Auckland; house, Brooklands Avenue, for Mr. G. M. Taylor; two houses, Marlcliffe Road for Mr. B. F. Glossop.

The YORK Corporation has obtained sanction to borrow £52,000 for the erection of 134 houses on the Heworth Grange estate.

WALES

The Court of Governors of ABERYSTWYTH College has passed sketch plans, prepared by Mr. H. V. Lanchester, F.R.I.B.A., for the new buildings, estimated to cost £500,000.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_2	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W.Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Bursiem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank ..	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester ..	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_1	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey ..	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone ..	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_1	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_1	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Wellingborough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£	s.	d.
Bricklayer . . . . per hour		1	8
Carpenter . . . . ,,		1	8
Joiner . . . . ,,		1	8
Machinist . . . . ,,		1	9
Mason (Banker) . . . ,,		1	8
,, (Fixer) . . . ,,		1	9
Plumber . . . . ,,		1	8
Painter . . . . ,,		1	7
Paperhanger . . . ,,		1	8
Glazier . . . . ,,		1	8
Slater . . . . ,,		1	8
Scaffolder . . . . ,,		1	4
Timberman . . . . ,,		1	4
Navvy . . . . ,,		1	3
General Labourer . . . ,,		1	3
Lorryman . . . . ,,		1	5½
Crane Driver . . . . ,,		1	7
Watchman . . . . per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

	£	s.	d.
Grey Stone Lime . . . per ton	2	8	6
Blue Lias Lime . . . ,,	2	10	0
Hydrated Lime . . . ,,	2	16	0
Portland Cement . . . ,,	2	6	0
Ferro-crete . . . ,,	2	13	6
Thames Ballast . . . per Y.C.		8	9
¾" Crushed Ballast . . ,,		10	0
Building Sand . . . ,,		10	6
Washed Sand . . . ,,		11	6
2" Broken Brick . . ,,		9	6
¾" ,, ,, . . ,,		12	6
Pan Breeze . . . ,,		6	6
Coke Breeze . . . ,,		8	9

BRICKLAYER

	£	s.	d.
Flettons . . . . per M.	3	1	6
Grooved do. . . . ,,	3	3	6
Stocks, 1st Quality . . ,,	4	18	6
,, 2nd ,, . . ,,	4	12	6
Blue Bricks, Pressed . . ,,	9	18	0
,, Wirecuts . . ,,	8	16	0
,, Brindles . . ,,	8	0	0
,, Bullnose . . ,,	10	8	0
Red Sand-faced Facings . . ,,	7	11	0
Red Rubbers for Arches . ,,	15	0	0
Multicoloured Facings . . ,,	9	4	0
Luton Facings . . . ,,	8	16	0
Michurst White Facings . . ,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:			
Stretchers . . . ,,	21	10	0
Headers . . . ,,	21	0	0
Bullnose . . . ,,	28	0	0
Double Stretchers . . ,,	30	0	0
Double Headers . . ,,	27	0	0
Glazed Second Quality, *Less* . ,,	1	0	0
,, Buffs and Creams, Add . ,,	2	0	0
,, Other Colours . . ,,	5	10	0
2" Breeze Partition Blocks . . per Y.S.		1	9
2½" ,, ,, ,, . . ,,		2	0
3" ,, ,, ,, . . ,,		2	3
4" ,, ,, ,, . . ,,		3	0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s.	d.	6" s.	d.
Straight pipes . . per F.R.	1	1	1	6
Bends . . . each	2	10	4	4
Taper bends . . ,,	6	3	7	2
Rest bends . . ,,	5	9	8	9
Single junctions . . ,,	3	9	5	9
Double ,, . . ,,	5	9	8	9
Straight channels . . ,,	2	6	3	2
¾" Channel bends . . ,,	7	8	—	
Channel junctions . . ,,	7	0	12	6
Channel tapers . . ,,	5	6	7	9
Yard gullies . . ,,	9	6	11	6
Interceptors . . ,,	18	6	25	9
Iron drain pipe . . per F.R.	2	3	3	5
Bends . . . each	6	0	13	0
Inspection bends . . ,,	15	3	24	0
Single junctions . . ,,	9	3	18	0
Double junctions . . ,,	14	0	27	6
Lead wool . . . lb.		6	—	
Gaskin . . . ,,		5	—	

MASON

The following d/d F.O.R. at Nine Elms:	s.	d.
Portland stone, Whitbed . . . F.C.	4	6
,, ,, Basebed . . . ,,	4	9
Bath stone . . . . ,,	2	11
York stone . . . . ,,	6	9
,, Sawn templates . . . ,,	7	6
,, Paving, 2" . . . . F.S.	1	8
,, ,, 3" . . . . ,,	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£	s.	d.
24" × 12" Duchesses . . per M.	31	0	0
22" × 12" Marchionesses . ,,	28	0	0
20" × 10" Countesses . . ,,	20	5	0
18" × 10" Viscountesses . ,,	17	0	0
18" × 9" Ladies . . . ,,	15	0	0
Westmorland green (random sizes) per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:			
20" × 10" medium grey per 1,000 (actual)	26	0	0
,, green . . ,,	27	15	0
Best machine roofing tiles . . ,,	5	0	0
Best hand-made do. . . . ,,	5	10	0
Hips and valleys . . . each		9½	
,, hand-made . . . ,,		10	
Nails, compo . . . . lb.		4	
,, copper . . . . ,,		2	0

CARPENTER AND JOINER

	£	s.	d.
Good carcassing timber . . F.C.		2	6
Birch . . . as 1" F.S.			9
Deal, Joiner's, . . . ,, ,,			5
,, ,, 2nds . . ,, ,,			4
Mahogany, Honduras . . ,, ,,		1	3
,, African . . ,, ,,		1	1
,, Cuban . . ,, ,,		2	6
Oak, plain American . . ,, ,,		1	0
,, Figured ,, . . ,, ,,		1	3
,, Plain Japanese . . ,, ,,		1	2
,, Figured ,, . . ,, ,,		1	5
,, Austrian wainscot . . ,, ,,		1	6
,, English ,, . . ,, ,,		1	11
Pine, Yellow . . . ,, ,,		1	0
,, Oregon . . . ,, ,,			4
,, British Columbian . . ,, ,,			4
Teak, Moulmein . . . ,, ,,		1	3
,, Burma . . . ,, ,,		1	2
Walnut, American . . . ,, ,,		2	3
,, French . . . ,, ,,		2	3
Whitewood, American . . ,, ,,		1	1
Deal floorings, ¾" . . . Sq.	1	1	0
,, 1" . . . ,,	1	3	6
,, 1¼" . . . ,,	1	5	6
,, 1½" . . . ,,	1	11	0
,, 1¾" . . . ,,	1	15	0
Deal matchings, ¾" . . . ,,		16	0
,, 1" . . . ,,		17	6
,, 1¼" . . . ,,	1	6	0
Rough boarding, ¾" . . . ,,		18	0
,, 1" . . . ,,	1	0	0
,, 1¼" . . . ,,	1	8	0

Plywood, per ft. sup.

Thickness	¼"			½"			¾"			1"		
Qualities	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	½"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket union . . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . .	45	,, steam .	40

FITTINGS.

Gas . . .	47½	Galvanized gas .	37½
Water . . .	42½	,, water .	32½
Steam . . .	37½	,, steam .	27½

SMITH AND FOUNDER—*continued.*

	s.	d.
Rolled steel joists cut to length . . cwt.	9	6
Mild steel reinforcing rods, ¾" . . ,,	10	0
,, ,, ⅞" . . ,,	9	9
,, ,, 1" . . ,,	9	6
,, ,, 1⅛" . . ,,	9	0
,, ,, 1¼" . . ,,	9	0
,, ,, 1" . . ,,	9	0
,, ,, 1¼" . . ,,	9	0
,, ,, 1½" . . ,,	9	0

Cast-iron rain-water pipes of	3" s.	d.	4" s.	d.
ordinary thickness metal . F.R.	7			10
Shoes . . . . each	2	3	3	3
Anti-splash shoes . . ,,	5	0	8	6
Boots . . . . ,,	3	3	4	6
Bends . . . . ,,	2	9	4	0
,, with access door . . ,,	—		6	9
Heads . . . . ,,	4	0	5	0
Swan-necks up to 9" offsets . ,,	4	0	6	3
Plinth bends, 4½" to 6" . ,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal . F.R.	5			6
Stop ends . . . . each	6			7
Angles . . . . ,,	1	7	1	11
Obtuse angles . . . ,,	2	0	2	6
Outlets . . . . ,,	1	9	2	3

PLUMBER

	s.	d.
Lead, milled sheet . . . cwt.	21	0
,, drawn pipes . . . ,,	21	6
,, soil pipe . . . ,,	24	6
,, scrap . . . ,,	11	0
Solder, plumbers' . . . lb.	1	0
,, fine do. . . . ,,	1	4
Copper, sheet . . . ,,	1	0
,, tubes . . . ,,	1	4

L.C.C. soil and waste pipes:	3"		4"		6"	
Plain cast . . F.R.	1	0	1	2	2	6
Coated . . . ,,	1	1	1	3	2	8
Galvanized . . ,,	2	0	2	6	4	6
Holderbats . . each	3	10	4	0	4	9
Bends . . . ,,	3	9	5	3	10	3
Shoes . . . ,,	2	10	4	4	9	6
Heads . . . ,,	4	8	8	5	12	9

PLASTERER

	£	s.	d.
Lime, chalk . . . per ton	2	8	6
Plaster, coarse . . . ,,	2	10	6
,, fine . . . ,,	5	10	0
Hydrated lime . . . ,,	2	16	0
Sirapite . . . ,,	3	10	0
Keene's cement . . . ,,	5	10	0
Sand, washed . . . Y.C.		11	6
Hair . . . lb.			6
Laths, sawn . . . bundle		2	4
,, rent . . . ,,		3	9
Lath nails . . . lb.			3½

GLAZIER

	s.	d.	s.	d.
Sheet glass, 21 oz. . . F.S.				3½
,, ,, 26 oz. . . ,,				4½
Arctic glass . . . ,,				5
Cathedral glass . . . ,,				6
Hartley's rough rolled . ,,				9
Do. wired plate . . . ,,			1	3
¼" Polished plate, n/e 1 . ,,	1	0 to	1	3
,, ,, 2 . ,,	1	2 ,,	1	7
,, ,, 3 . ,,	1	7 ,,	2	5
,, ,, 4 . ,,	2	1 ,,	2	11
,, ,, 6 . ,,	2	3 ,,	3	2
,, ,, 8 . ,,	2	6 ,,	3	6
,, ,, 12 . ,,	2	9 ,,	3	8
,, ,, 20 . ,,	3	0 ,,	3	11
,, ,, 45 . ,,	3	3 ,,	4	1
,, ,, 65 . ,,	3	7 ,,	4	6
,, ,, 90 . ,,	3	10 ,,	4	9
,, ,, 100 . ,,	4	0 ,,	5	0
Vita glass, sheet, n/e 1 . ,,			1	0
,, ,, 2 . ,,			1	3
,, ,, over 2 . ,,			1	9
,, ,, plate, n/e 1 . ,,			1	6
,, ,, 2 . ,,			3	0
,, ,, 5 . ,,			4	0
,, ,, 7 . ,,			5	0
,, ,, 15 . ,,			6	0
,, ,, over 15 . ,,			7	6
Putty, linseed oil . . lb.				3

PAINTER

	£	s.	d.
White lead . . . . cwt.	2	8	0
Linseed oil . . . . gall.		3	3
Boiled oil . . . . ,,		4	3
Turpentine . . . . ,,		3	4
Patent knotting . . . ,,		14	0
Distemper, washable . . cwt.	3	0	0
,, ordinary . . ,,	2	5	0
Whitening . . . . ,,		4	0
Size, double . . . firkin		3	0
Copal varnish . . . gall.		13	0
Flat varnish . . . ,,		14	0
Outside varnish . . . ,,		16	0
White enamel . . . ,,	1	15	0
Ready-mixed paint . . ,,		13	6
Brunswick black . . . ,,		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12" deep and cart away	Y.S.	3 6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10 0
" to form basement n/e 5' 0" deep and cart away	"	11 0
" " 10' 0" deep and cart away	"	11 6
" " 15' 0" deep and cart away	"	12 0
If in stiff clay	add "	3 0
If in underpinning	" "	5 0
Digging, return, fill and ram	"	5 0
Planking and strutting to sides of excavation	F.S.	1 0
" " to pier holes	"	6
" " to trenches	"	6
" " extra, only if left in	"	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	"	1 13 6
" " " (4-2-1)	"	1 18 6
" " " underpinning	"	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
" junctions	"	3 9	4 6
Gullies and gratings	"	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
" " in cement	"	34 0 0
" Stocks in cement	"	41 10 0
" Blues in cement	"	62 0 0
Extra only for circular on plan	"	3 0 0
" backing to masonry	"	2 0 0
" raising on old walls	"	3 0 0
" underpinning	"	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	"	1 0
" red brick facings	"	1 6
" blue brick facings	"	1 9
" glazed brick facings	"	4 6
Tuck pointing	"	10
Weather pointing	"	4
Slate dampcourse	"	1 0
Vertical dampcourse	"	1 3

ASPHALTER

		s. d.
½" Horizontal dampcourse	Y.S.	5 6
½" Vertical dampcourse	"	7 6
½" paving or flat	"	5 6
1" paving or flat	"	6 6
1" × 6" skirting	F.R.	1 0
Angle fillet	"	2
Rounded angle	"	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do, all as last	"	15 6
Artificial stone and do.	"	16 6
York stone templates, fixed complete	"	14 0
" thresholds	"	16 0
" sills	"	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4 5 0
Do., 18" × 9"	"	4 2 0
Do., 24" × 12"	"	4 12 0
Westmorland slating, laid with diminished courses	"	6 10 0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4 0 0
Do., all as last, but of machine-made tiles	"	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
" to stanchions	"	1 0
" to staircases	"	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	"	6 9
" " roofs	"	8 3
" " trusses	"	9 0
" " partitions	"	12 0
½" deal sawn boarding and fixing to joists	Sqr.	1 17 6
1" " " " "	"	2 1 6
1½" " " " "	"	2 7 6
2" × 2" fir battening for Countess slating	"	12 6
Do. for 4" gauge tiling	"	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
" " " 2 "	"	3 0
" " " 3 "	"	3 6
Stout herringbone strutting to 9" joists	F.R.	1 0
1" deal gutter boards and bearers	F.S.	1 4
1½" " " " "	"	1 8
2" deal wrought rounded roll	F.R.	9
1" deal grooved and tongued flooring, laid complete, including & cleaning off	Sqr.	2 15 0
1¼" do.	"	3 4 0
1½" do.	"	3 13 0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1¼" do.	"	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1¼" deal moulded sashes of average size	F.S.	2 3
2" " " "	"	2 6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅝" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4 3
2" " " "	"	4 6
Extra only for moulded horns	Each	9
1½" deal four-panel square, both sides, door	F.S.	2 6
2" " " "	"	3 0
1½" " but moulded both sides	"	3 0
2" " " "	"	3 6
4" × 3" deal, rebated and moulded frames	F.R.	1 6
4½" × 3½" " "	"	2 0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3 0
1½" deal moulded wall strings	"	2 6
1½" " outer strings	"	2 9
Ends of treads and risers housed to string	Each	2 0
3" × 2" deal moulded handrail	F.R.	1 6
1" × 1" deal balusters and housing each end	Each	2 6
1½" × 1½" " "	"	3 3
3" × 3" deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	"	7 6

SMITH AND FOUNDER

		s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3 0
Do. stanchions with riveted caps and bases and do.	"	1 2 0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 17 6
Do. in flashings	"	2 0 0
Do. in covering to turrets, etc.	"	2 7 0
Do. in soakers	"	1 13 0
Labour to welted edge	F.R.	3½
Open copper nailing	"	3½
Close "	"	4½

Lead service pipe and fixing with pipe hooks	½" s. d.	¾" s. d.	1" s. d.	1¼" s. d.	2" s. d.	4" s. d.
F.R.	1 2	1 7	2 1	2 8	3 8	—
Do. soil pipe and fixing with cast lead tacks "	—	—	—	—	—	5 9
Extra, only to bends Each	—	—	—	2 3	6 6	
Do. to stop ends "	7	9	1 0	1 3	2 0	—
Boiler screws and unions "	3 6	4 0	5 6	8 0	—	—
Lead traps "	—	—	—	7 6	10 6	—
Screw down bib valves "	7 6	10 6	12 6	—	—	—
Do. stop cocks "	10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1 1
Extra, only stop ends	Each	1 0
Do. angles	"	1 6
Do. outlets	"	3 0
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	"	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	"	5 6
Lathing with sawn laths to ceilings	"	1 6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"	2 6
Do. vertical	"	2 9
Rough render on walls	"	2 3
Render, float and set in lime and hair	"	3 0
Render and set in Sirapite	"	3 3
Render, backing in cement and sand, and set in Keene's cement	"	4 6
Extra, only if on lathing	"	9
Keene's cement, angle and arris	F.R.	8
Arris	"	3
Rounded angle, small	"	3
Plain cornices in plaster, including dubbing out, per 1" girth	"	2
1" granolithic pavings	Y.S.	5 0
1½" "	"	6 0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1 2 6
9" × 3" " "	"	1 7 6
Extra, only for small quadrant angle	F.R.	9

GLAZIER

		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	"	1 0
Arctic glass and glazing with putty	"	1 2
Cathedral glass and do.	"	1 3
Glazing only, British polished plate	"	8
Extra, only if in beads	"	2
Washleather	F.R.	4

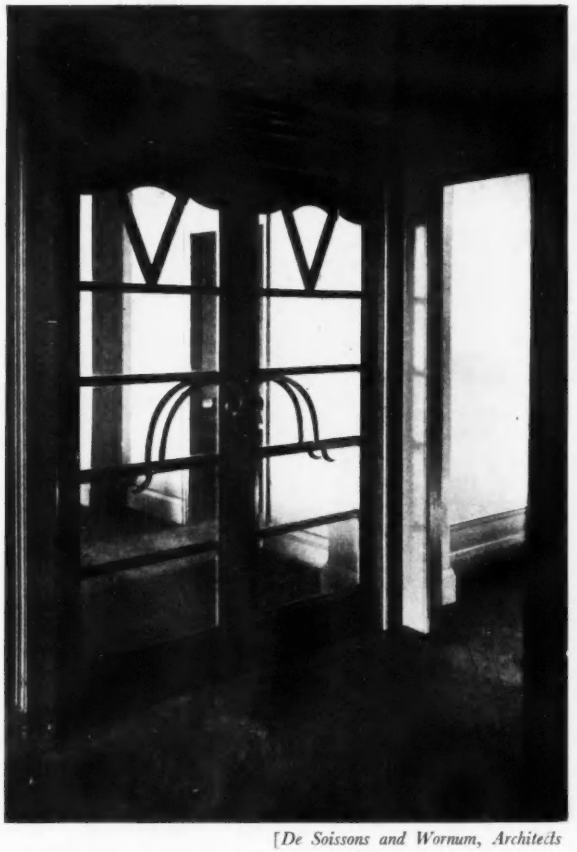
PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	"	1 0
Do. with washable distemper	"	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3 3
Do. on woodwork	"	3 6
Do. on steelwork	"	3 0
Do. and brush grain and twice varnish	"	5 6
Stain and twice varnish woodwork	"	1 11
Stain and wax-polish woodwork	"	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper	from "	3 0

PATTERNS AND PANELS OF PLYWOOD

PHOTOGRAPHS AND DETAIL DRAWINGS OF WALLS AND DOORS AT VINTRY HOUSE, LONDON





[De Soissons and Wornum, Architects

SINGLE AND DOUBLE DOORS TO A LOBBY ON THE SEVENTH FLOOR

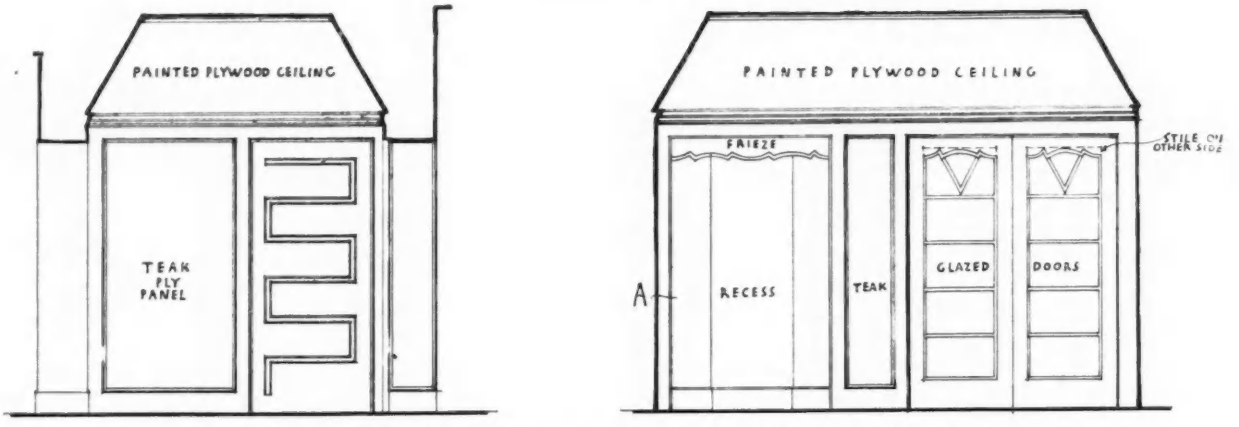
IN decorating the rooms on the seventh floor of Vintry House for Messrs. Venesta, Ltd., the architects have made every possible use of the materials supplied by their clients, and have suggested in the design and treatment some of their many decorative possibilities.

In the example of which photographs appear above and a scale detail drawing overleaf (left) the wall surfaces have been kept flat and simple in character, in order better to display the qualities of particular varieties of plywood veneers which have been selected to cover them. The original shape of this room (in which the architects for the decoration had no part) suggested a treatment of the ceiling which has not been ignored.

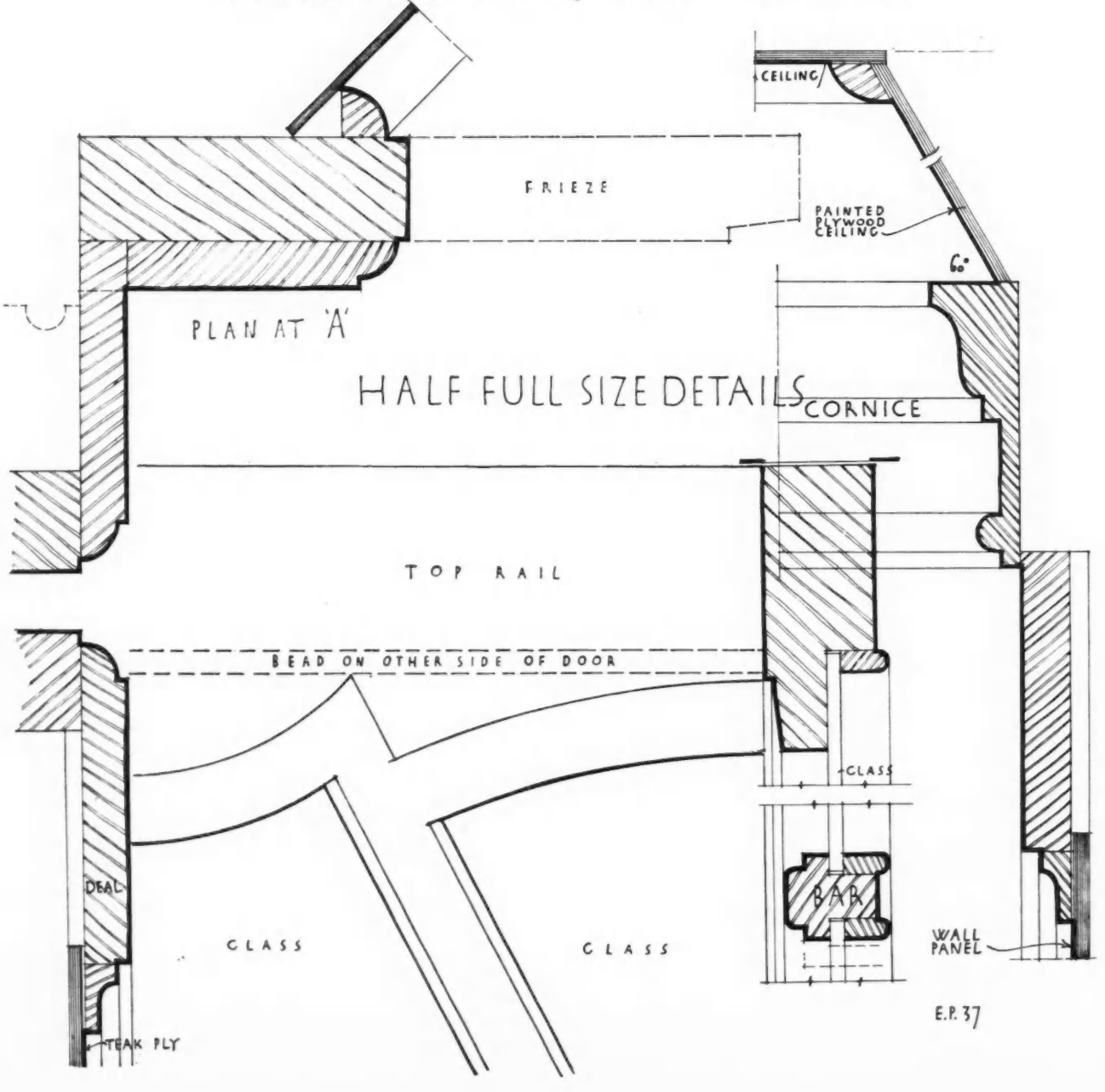
The other scale detail overleaf (right) shows a door in another room, similarly treated in that playful mood which the material not only makes easy but condones. In this instance the patterns have been achieved by the planting of painted deal mouldings on to the plywood surfaces of door and wall. The effect is interesting without in any way detracting from the quietness and dignity expected in office surroundings.

VINTRY HOUSE LONDON E.C.4
DECORATION OF ROOM ON 7th FLOOR

DE SOISSONS & WORNUM
ARCHITECTS



ELEVATIONS ONE QUARTER INCH SCALE

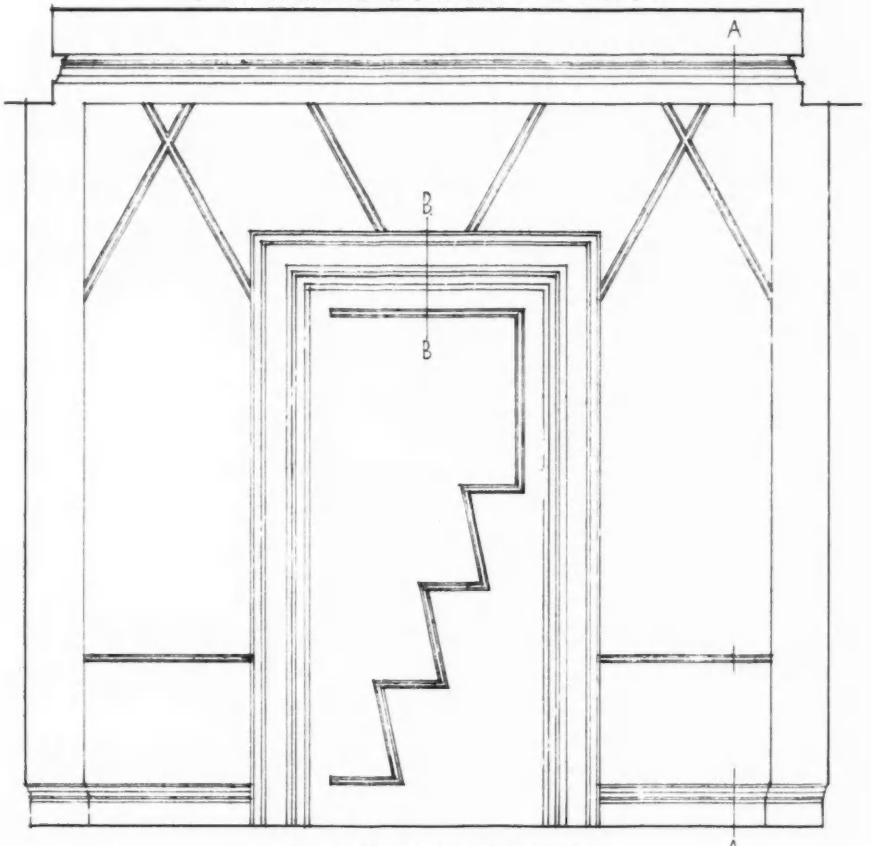


E.P. 37

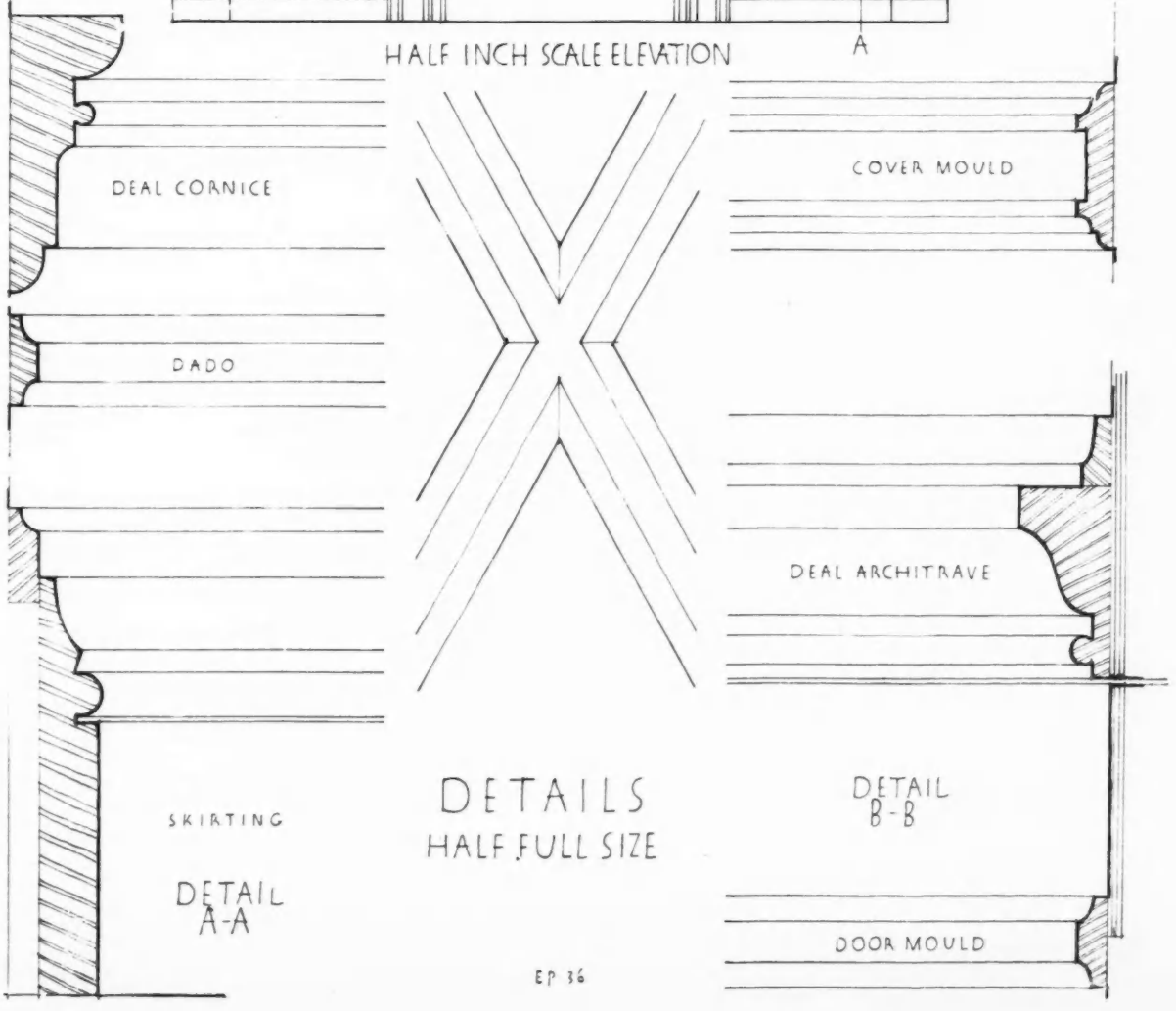
VINTRY HOUSE SOUTHWARK BRIDGE

DOORWAY · ROOM 27

DE SOISSONS & WORNUM ARCHITECTS



HALF INCH SCALE ELEVATION



DETAILS
HALF FULL SIZE

EP 36

A MODEL FARM DAIRY

DETAILS OF A MODERN SURREY INTERIOR IN THE DUTCH MANNER



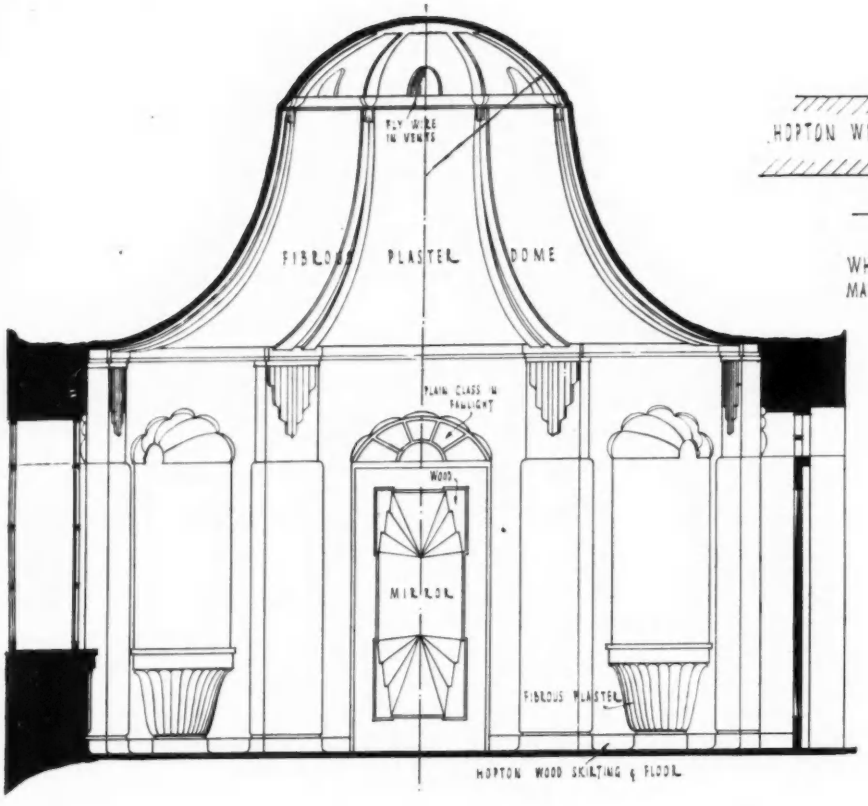
[*Maxwell Ayrton, Architect*

THE OCTAGONAL INTERIOR, WITH FOUNTAIN COUNTER

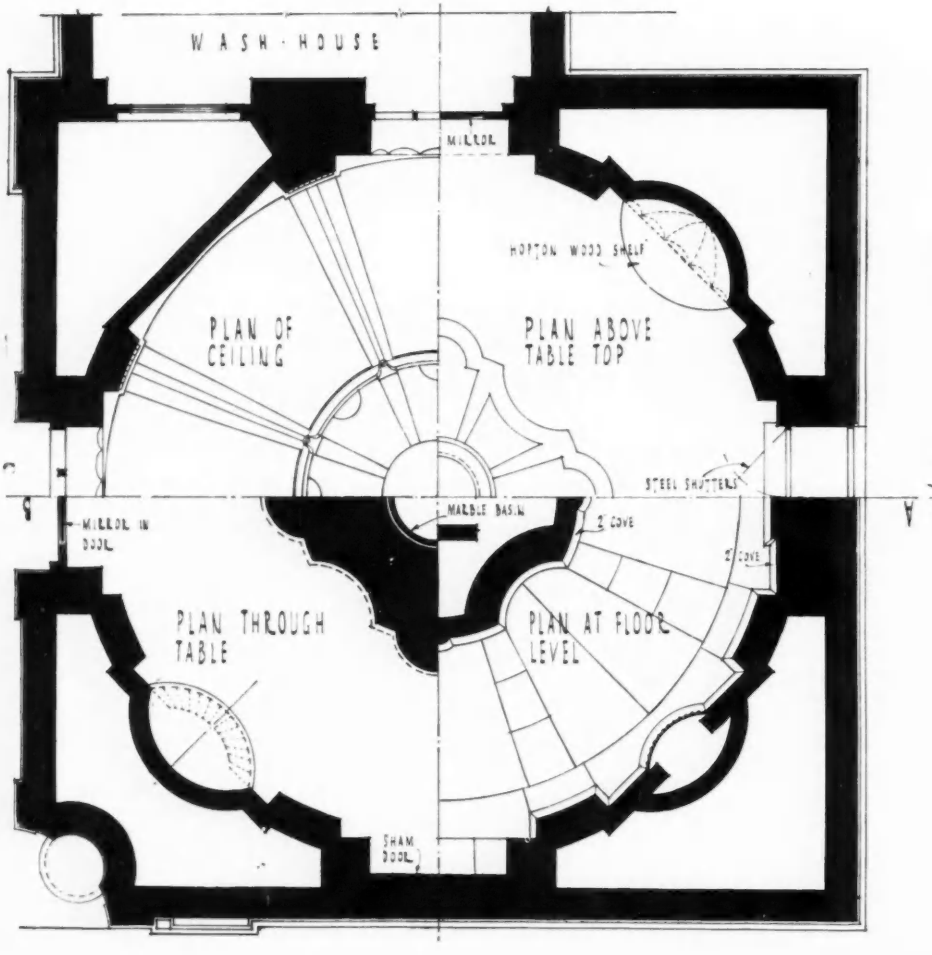
THE principal feature of the small model farm buildings at Hackbridge, illustrated and discussed on pages 679-682 of this issue, is the octagonal interior of the dairy, of which a photograph appears above and a detailed drawing overleaf. Both in general conception and in detail this dairy illustrates particularly well the ingenious utilization of modern methods and materials for so ancient a semi-domestic purpose.

Black Belgian marble is used for the basin, wherein a miniature fountain spouts, falling to all appearances upon a clear block of ice, which is in reality a cleverly designed assemblage of sheets of ½-in. polished plate glass, whose blue glints support the cool illusion. Upon the fountain a spot light can play from the centre of the white dome, and the fairy-tale touch that gives such charm to this practical and utilitarian farm building is enhanced by the mirrors multiplying the central fountain.

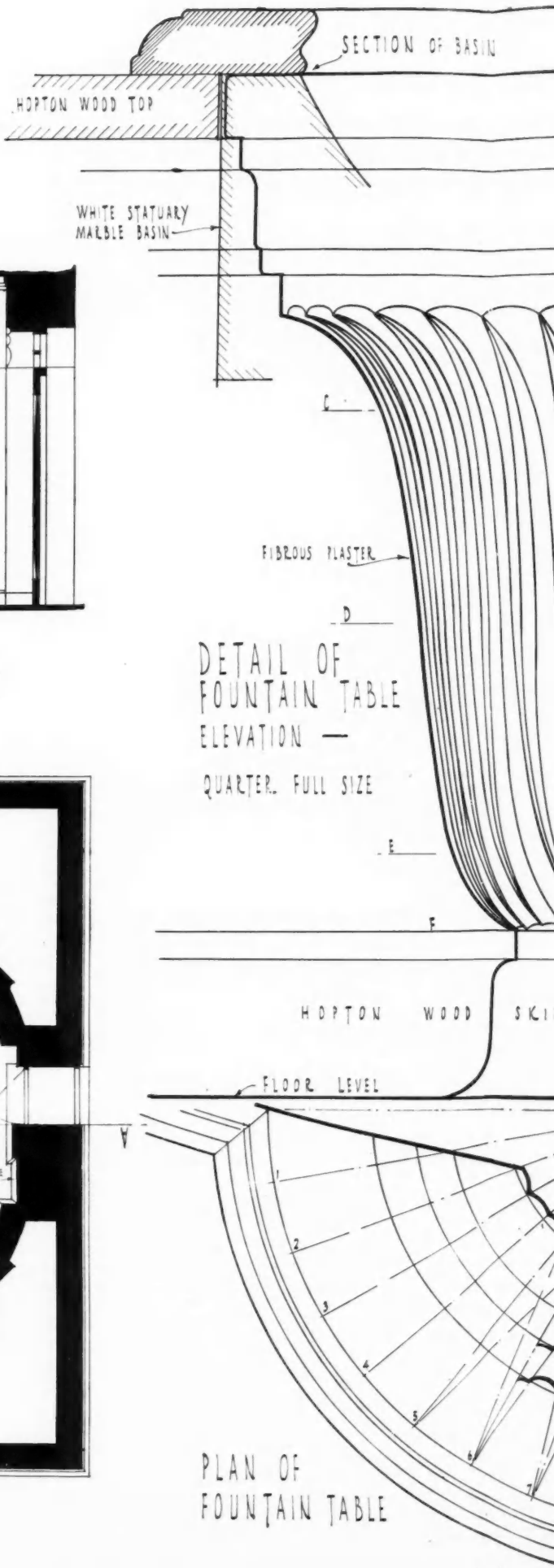
No colour note is at present introduced, though eventually some pale tinting of the plaster may be considered. In the meantime there is a pleasant and efficient effect in the black and grey of the Hopton Wood stone flooring and skirtings and table tops, and the white of plastered walls, varied by the play of light and shade in the niches and on the fluted plaster work below the shelves and table.



ELEVATION A-B [4 FEET TO 1 IN.]

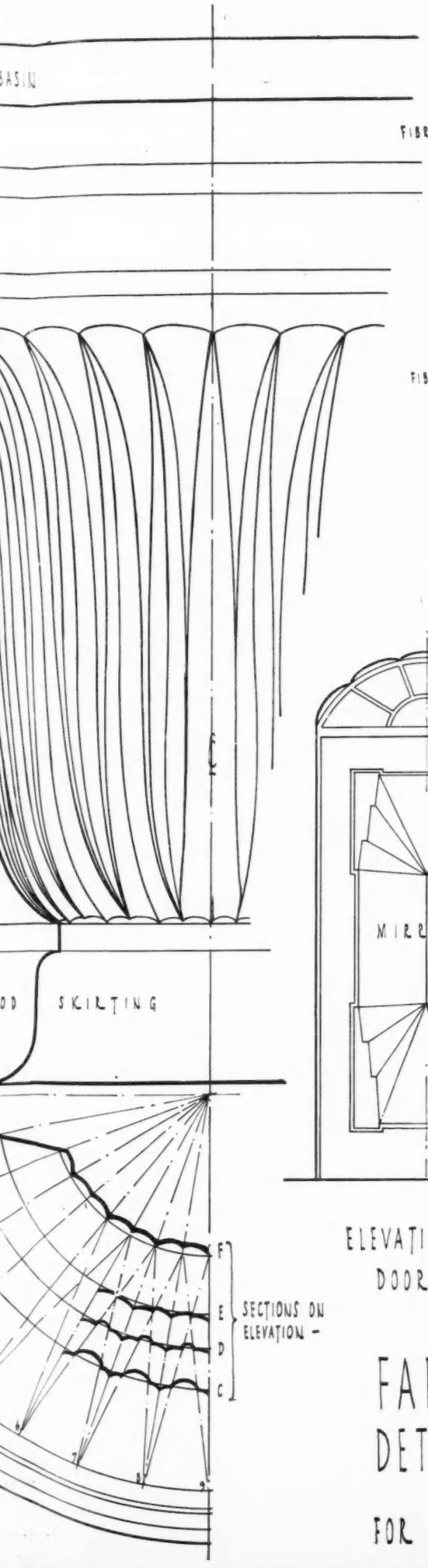


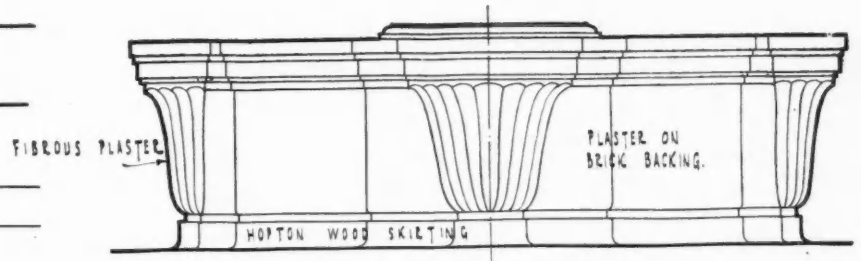
QUARTER PLANS [4 FEET TO 1 IN.]



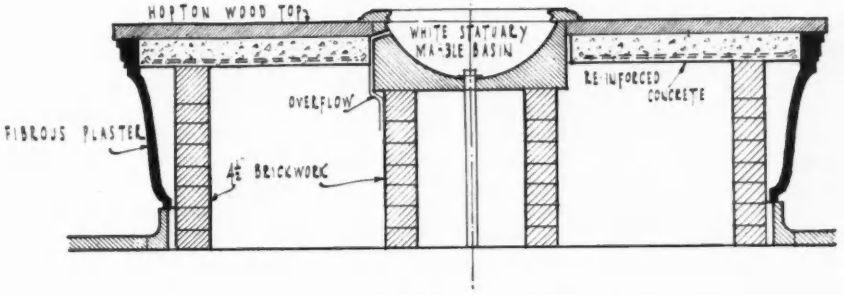
DETAIL OF FOUNTAIN TABLE ELEVATION — QUARTER FULL SIZE

PLAN OF FOUNTAIN TABLE



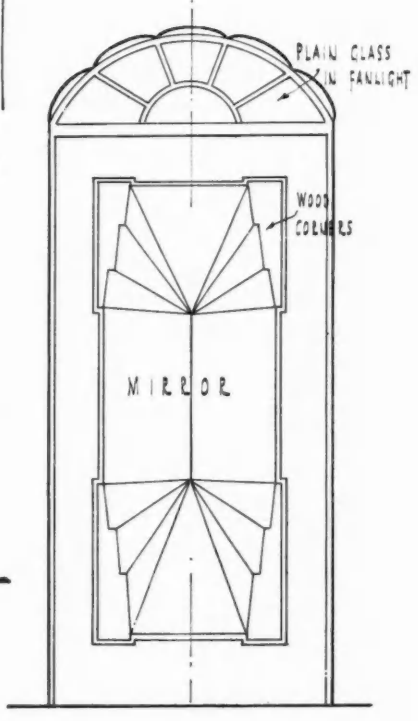


ELEVATION OF TABLE

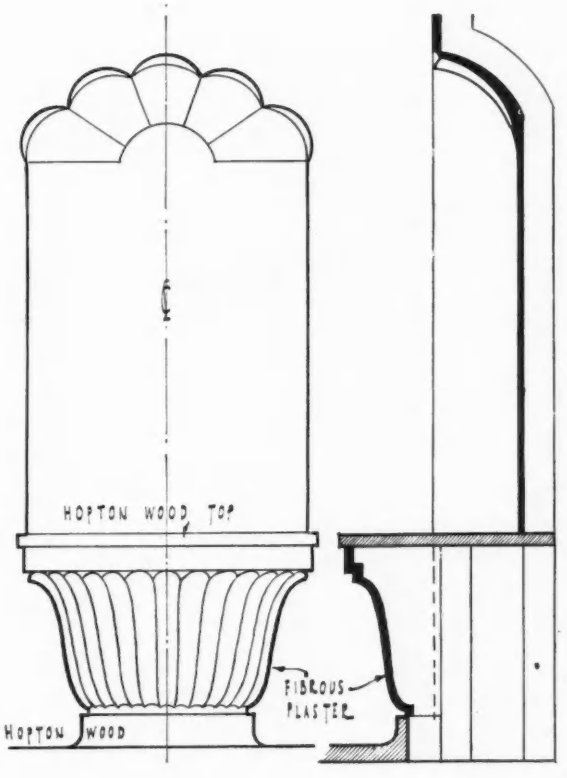


SECTION OF TABLE

HALF INCH DETAIL -



ELEVATION OF DOORS



ELEVATION & SECTION OF NICHE

HALF INCH DETAILS

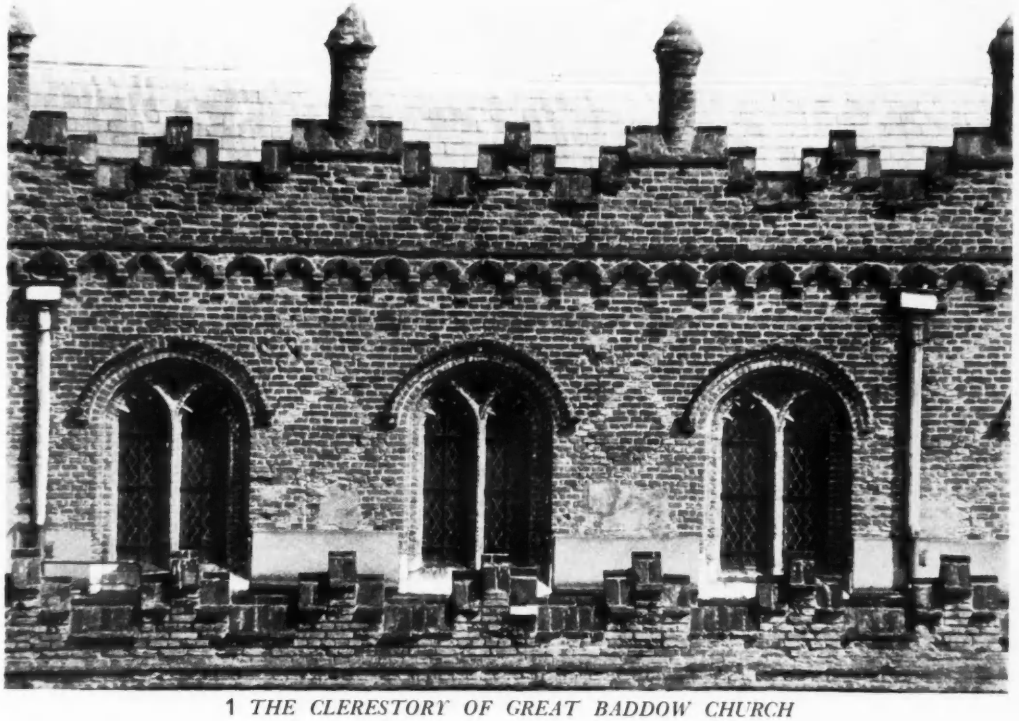
FARM AT HACKBRIDGE.
DETAILS OF DAIRY.

FOR M.T. MALLISON ESQ.

MAXWELL AYRTON. F.R.I.B.A
ARCHITECT.

SELECTED PRECEDENTS:

"TRICKS OF THE TRADE"



1 *THE CLERESTORY OF GREAT BADDOW CHURCH*

PERHAPS no trade shows such variety and ingenuity of devices as that of the Bricklayer, whose vocation comes next to that of the Plumber as the favourite butt in the comic papers and of professional comedians on the music-hall stage, none of whom may be capable of appreciating his work. Possibly one of these scoffers may read these lines. If so, will he take an early opportunity of examining an early-sixteenth-century brick building? Take the illustration of the clerestory and parapets of Great Baddow Church (figure 1). Its picturesqueness will appeal to everyone, as also will the texture of the surfaces and the varied colouring of the mellow brickwork. Everyone can see these things, but few stay to inquire how they have been produced: so, at the risk of being charged with repetition or of being too elementary, we shall do a little dissection.

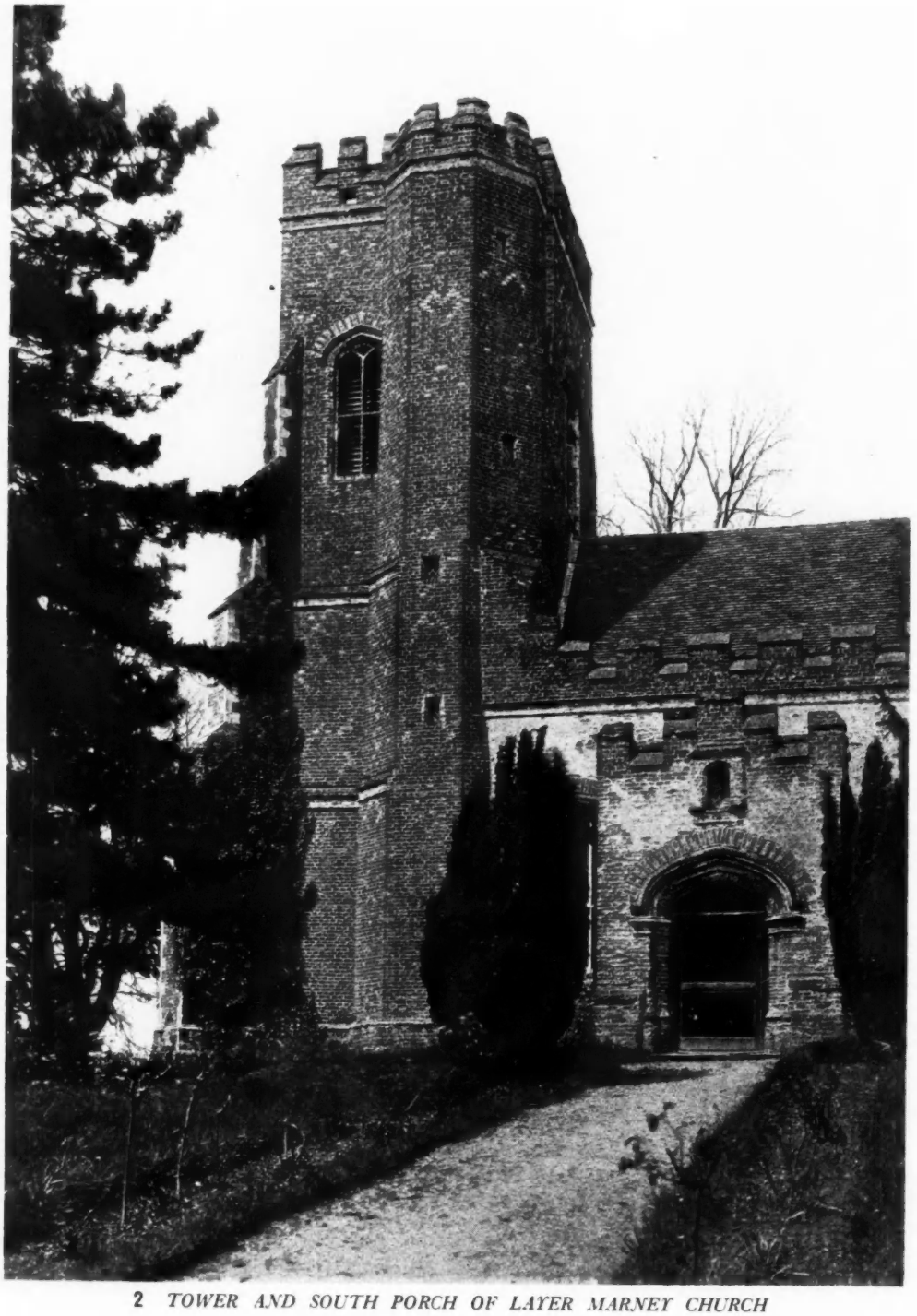
The illustration shows a wall pierced by three Perpendicular windows, having mullions and cusped-pointed-heads and a projecting label or drip course over each arch. Below is the parapet of the aisle wall, and above a corbel-course of cusped arcading, the arches of which spring from moulded brick corbels. Above this, again, is a crenellated or battlemented parapet, having at regular intervals brick finials with moulded and weathered caps. Of what are all these charming forms composed? They are constructed only of roughly-made bricks, each measuring about 9 × 4¼ × 2 ins., and of a few yards of mortar.

The cusps are cut from the same 9 × 4¼ × 2-in. bricks as are provided for the rest of the work, and the setting out of these arches and cutting of the bricks to cusps required some thought before a tool was used. Similarly, the corbel-table arcading is formed from two cut bricks to each arch, and the corbels from which these spring are each suitably moulded to its purpose. The weathering of the battlemented parapet is comparatively straightforward, but the cutting of bricks to form the circular shafts of the finials and the building of these so that they rise properly from the sloped coping of the merlons called for considerable skill. Finally, each brick of the caps had to be cut on three sides.

The illustration of the tower and south porch of Layer Marney Church (figure 2) is another instance of masterly handling of brick. Of conventional methods, that of introducing a little diaper work may be pointed out. Diapers are used less on this tower than on others in Essex, but the established practice of not completing any pattern has been followed. The effect of precise completion may be seen on many modern buildings, particularly those of fifty or sixty years ago. It is hard, mechanical and unpleasing.

On the other hand, a truly resourceful method is that shown in the treatment of the aisle parapet where it reaches the tower. Ordinarily, it would be carried up to and be stopped by the tower, but here it is finished as a buttress, with weathered slope. This is a substantial and satisfactory finish, although the buttress is not a genuine constructional one, but stands over the window below.

NATHANIEL LLOYD



2 *TOWER AND SOUTH PORCH OF LAYER MARNEY CHURCH*

THE ARCHITECTS' JOURNAL



WEDNESDAY, MAY 20, 1931

A TRUE LEAGUE OF NATIONS

THE thirteenth International Housing and Town Planning Congress, which is to be held in Berlin from June 1 to 5, will regale on the views of more than twenty representative authorities from different parts of the world—including America and the Dutch East Indies—and learn of the latest experiences of a dozen different nations. Such polyglot effusiveness may be oppressive to contemplate; but the International Congress is a true League of Nations. Within it there is no rivalry or self-seeking to poison sincerity; no circumlocution of diplomacy to awaken distrust. Each nation gives of its best in a common purpose to further the well-being of humanity. The dispersion of technical information by which every country learns from the experiments, successes and failures of every other is, perhaps, not the most important work done by the International Congress. The Congress is a rallying-point for the conscience of the civilized world; it keeps all thoughtful men in mind of the importance of the particular problems with which it deals and of the disasters which threaten the neglect of them.

Although even in Shakespeare's day the approaches to the south side of London's river were completely blocked by the coaches and chairs of theatre-goers, the traffic problem is for us essentially a new one. It is a problem to which every nation, and every town, has to find a separate answer; and one which is complicated for all nations by the advent of aircraft, the resources of which are no longer visionary, or even speculative, but a practical issue.

Let us remember that it is scarcely more than twenty years ago that *The Daily Mail* offered a prize of £10,000 to anyone who first flew, by any number of separate hops, from London to Manchester; yet the congress delegates and adherents who may visit the Central Aerodrome at Berlin will see planes departing and arriving all day long, by time-table, for and to all parts of Europe; and who can say that in another short twenty years the traffic problem may not be a very different problem, and in fifty an entirely new one ?

The morning papers tell us of a building 1,250 feet high, just erected in New York, which has still to be completed with mooring mast, and of the demonstration of an " air taxi " service between London and Dublin which, within a business day, allows the hirer 2½ hours between the two journeys, while the autogyro which will descend vertically, in safety, independently of engine power, points to the near approach of the " air taxi " for short distances in populous places.

The abolition of slums is not a new problem; but the solution of that problem is a newer task with us than in Germany and Holland. Holland, for instance, has three colleges which qualify those who seek municipal service; and that service is largely concerned with housing and the elimination of slums. The Dutch discovered long ago, as we have discovered, that to re-house the slum-dweller is but to create new slums; and that the reformation of the slum-dweller is the real problem of slum-abolition. The method employed is for the municipal authorities to inform themselves exactly of the antecedents, condition and character of each and every dweller in condemned districts. In Amsterdam this work is undertaken by thirty highly-trained and experienced women inspectors, none of them under forty, who gain the confidence and friendship of those they would serve, by the power of that sympathy and philanthropic purpose which has been the impulse to their vocation and which is inculcated in the training colleges.

There is no coercion beyond that implied in the condemnation of the house. Those slum-dwellers who are deemed fit are given new homes; those who are unfit and refuse help to better things are, perforce, left to fend for themselves; those who are unfit but desire to raise themselves are encouraged to rent houses in certain segregated dwelling layouts which are gated like a college, and where, living in perfect freedom, they submit to rules of cleanliness and neighbourly conduct and to supervision which takes the form of help and advice and is sought as such. Social gatherings, work parties, and lectures help the end in view—which is that in one, two or three years, each family will in turn have proved itself redeemed to good citizenship. Our friends on the other side of the German Ocean have much to teach us.



THE HOLY SEPULCHRE MAUSOLEUM, NEAR HAYWARD, CALIFORNIA, U.S.A.

On the west coast of the United States of America architects have been forced to use concrete *in situ* for their buildings as being the most suitable in a country liable to suffer from earthquakes. As Major R. A. B. Smith pointed out in a paper on "Architecture in Concrete," read before the Royal Society of Arts last week (see page 733 of this issue), reinforced concrete was used at first as it was in England in factory construction.

The architects of California, however, determined to obtain the most artistic results possible, and set their minds to that end with considerable success, as will be seen from the Mausoleum illustrated above.

NEWS & TOPICS



Herr Harbers, the German architect and town-planner, who was the chief guest of honour at the nineteenth dinner of the Architecture Club, held on Tuesday of last week, and reported on pages 718–719 of this issue. While the principles of modern form seem to be becoming established, Herr Harbers regards it as essential that there must be a regular raising of the whole standard of formal design, not only in the dimensions of streets but also in single houses; not so much in the direction of numerous art creations as in the attainment of a high level of culture which could form the basis for future planning and architectural development.

THE ENGLISH HOUSE

WHILE the critics are busy decrying the backwardness of all things appertaining to architecture, it was gratifying to listen to Herr Harbers, the chief guest of honour at the Architecture Club's dinner last week, pointing out that it was English common sense which first recognized the importance of practical housing. He went on to remind us of our comparatively low head of population per house in London, compared with figures of large Continental cities. Our system of building a separate house for each family would, he thought, continue to hold its own, both from hygienic and economic considerations. Such words from a man who is one of the foremost town planners in Germany—he was partly responsible for the layout of modern Munich—is praise indeed.

*

Herr Harbers, by the way, who is, I understand, but thirty-four years of age, has had an interesting career. In 1923 he passed his State Examination for Government Architect with distinction, and in the following year acted as Assessor at the Ministry of the Interior in the Department of the Chief Building Authority for Upper Bavaria. He was managing architect for the 1925 German Trade Exhibition in Munich, the buildings for which were mainly erected from his designs. From 1926 he was engaged in collaboration upon the general town planning of Greater Munich and upon special municipal building work for the Town Extension Section of the Chief Municipal Building Department of the City. In addition to his municipal duties, Herr Harbers has been editing, since 1926, one of the principal German technical journals, *Der Baumeister*. Last year he published a book on *The Small House : its Construction and Erection*.

"TRICKS OF THE TRADE"

Every trade has its tricks, said Mr. Nathaniel Lloyd, upon whom I happened to call while he was preparing the material for Selected Precedents in this issue. By this I mean those little contrivances by which the craftsman adapts himself to his materials and the happy devices by which he overcomes difficulties as they arise, and often turns them to such good use as to produce effects more interesting and charming than the work would have possessed had the difficulties not occurred. The word "tricks" also includes many ways of doing work which are usually employed but which are not the obvious methods. The practice of observing these in buildings, once cultivated, is one of absorbing interest and of high educational value. Both methods may be seen in new buildings as well as in old ones, but the latter are by far the more instructive.

*

Let the gentleman who sits down and writes derisively about "Brickies" imagine his plight if set to produce something comparable with this clerestory (i.e. that of Great Baddow Church) from a heap of bricks and another heap of mortar; his tools being limited to a trowel, a brick-axe (for which, in 1931, he may be allowed to substitute a scutch), a rough chisel, a hammer and a piece of sharp sandstone. With these two heaps of material and the tools enumerated all the mouldings are to be cut or rubbed, including the mouldings of the window arches, jambs, mullions and the cusped heads. Such craftsmanship has not died out (he affirmed). There are plenty of bricklayers daily at work who are capable (under direction, as the sixteenth-century bricklayer was directed) of manipulating similar bricks in the same fashion.

SPANISH TOMORROWS

The political changes in Spain are likely to give modernist architecture a spurt in that country. The financial mess needs to be cleaned up, an operation which may take three or four years, and then the housing problem, which is pretty difficult all over the country, must begin its solution. The cheapest satisfactory building material is reinforced concrete in most districts. Large blocks of flats will be the result for the Spaniard, who will not object, since for centuries he has been a flat-dweller. But these will not be extreme in expression (except in Catalonia, where most extremes meet). For one thing, there is not the economic pressure by mass producers, big business men and collectivists which is largely responsible for the elephantine buildings of Germany, Austria and Holland, and has by mere size flattened out the classic orders. The Spaniard is for individuality and nationalism. He prefers character to an impersonal beauty.

MAÑANA AND ALL THAT

Is it certain, then, that the Spaniard will be modernist at all ? I think so : a radical change of political and social ideas is greedy of expressing itself, and takes over any new mode of art it can lay hands on for the sake of newness, and to make its mark. Moreover, royalism is associated with the classic tradition, whilst the new republics of Russia and Germany are modernist. But is

not the Spaniard too lazy to change his style or, indeed, to build at all ? If you think that, you must stay in an hotel which is being altered and experience the great awakening at dawn by the clink-clink of bricklayers' trowels on bricks—a refutation of Mañana and all that.

THE DEARTH OF DESIGN IN ENGLISH ELECTRIC FITTINGS

I was recently shown a catalogue of electric light fittings of Continental manufacture. They were modern, which is to say that they had nothing in them of period design, but were straightforward models in the materials best suited to electric illumination—metal and glass. Expensive pendant and ceiling fittings were included, but what warmed my heart were the smaller fittings, the wall brackets, small pendants, bulkhead and ceiling lights—all



Past and Present : Ballyteighe Castle, Co. Wexford, a twelfth-century erection, a portion of which has been converted into a modern dwelling. The present occupier, states a correspondent, has a name of Norman origin.

the small fittings for which we are not prepared to pay very much, but which, as architects, we know to be extremely important items in the furnishing of any interior whatsoever. This catalogue I mean to show to one of the largest manufacturers in London, and if I have any luck with him I will communicate my good fortune.

COMPARATIVE HOUSING COSTS

Manchester, where the cheapest house costs about £500, recently instituted an inquiry into the costs of housing in Liverpool, Birmingham and Nottingham, where similar houses cost £365, £349 and £365 respectively. The committee's findings form a very interesting comment upon the state which the science of small house building has reached. Apart from the fact that the Manchester cheap house is larger than the others, the avenue of greatest reduction seems to be in closer and cleverer planning. Further than this, it was seen that small reductions, such as the substitution of flat arches on iron angles for segmental arches, tiles for slates, etc., amounted to a considerable sum in the aggregate. The letting of large contracts was realized to make for a very large saving, because speed can be attained by large firms who can order in bulk, maintain accurate transport, and spread the risks of unequal factors over a big contract, where small firms must sacrifice essential efficiency in order to compete.

*

Further reductions could be made if houses could be built in longer blocks. But there is a very strong objection to this type of development among working-class people, which few authorities have felt bold enough to combat. There are now, however, enough examples of long blocks to make one feel that the prejudice may be weakened. The reintroduction of the terrace house in the form of quadrangle planning would bring a new flexibility to housing, and relate it more closely to the urban life it so largely serves.

HIGH BUILDINGS AND OTHER ISSUES

Sir Frank Baines's letter to *The Times* last week raises others than his main issue of increased height in new buildings. In some senses it may be a good thing that London should mark time at the eighty-foot limit, for the question of increased height is not a straight question of eighty feet or more. The present regulations fulfilled everywhere to their maximum would result in a greater cubical capacity than obtains in the lower part of Manhattan, and, naturally, a denser congestion and less light and air than obtain in New York now. On the London street plan congestion appears at very moderate heights, and eighty feet can be quite terrifying in the parts of the City that scream loudest for higher buildings.

*

Sir Frank seemed to me to be on firmer ground when he referred to the possibilities of regenerating districts lying near the present business centres, and of these the south bank of the Thames is the most obvious case in point. Rather than pull down the best on the north bank in order to satisfy new needs, it would be more economical to lay out the south—even at great expense—to organize it for swift intercommunication and rapid regular development. There, on larger sites, higher building could be allowed, though this building need never exceed the volumetric capacity of the existing regulations.

AN ASCENSION DAY ANECDOTE

Last Thursday, being Ascension Day, I was duly stopped by a policeman on my progress to see the restoration work in Gray's Inn, and had to remember the number of a friend's office quarters before I was allowed to " proceed " thither and return by the same way as in I went. All this fuss was merely a reminder, a legal reminder, to the thoughtless public, that the Inns of Court are private Inns in which we are allowed to walk and take our ease by invitation of the Benchers.

*

Returning thanks to my host, I " proceeded " everywhere but the express " thither " indicated by the policeman, and saw for my trouble a deal of scaffolding and workmen, but had no clear impression of what went forward. Actually, I believe, the south side of Gray's Inn Square will be made to look as it did in Elizabethan days. Stucco and imitation battlements are to give place to the good old brick and simple mouldings, all of which work is something we have never before looked for in Sir Edwin Cooper, who is architect for the restoration.

ASTRAGAL

The Editor has much pleasure in announcing the commencement, in next week's issue, of a new serial by Karshish (H. B. Creswell). This purports to be the fictitious autobiography of one Bernard Whistlow, F.R.I.B.A., who, at the end of a long and industrious life, looks back at various episodes in his career and sketches the men and incidents which he has encountered.

RECONSTRUCTION IN QUEEN ANNE'S GATE

FROM DESIGNS BY SYDNEY TATCHELL (TATCHELL AND WILSON)



The new entrance doorway : this replaces the former uninteresting porch to No. 3. The arms in the carving above, by George Alexander, R.B.S., are those of the Cubitt family, and symbolize their connection with Messrs. Holland & Hannen and Cubitts for more than a century.

MUCH is said and written of the vandalism usually accompanying a change of user in any of the older districts in London. Queen Anne's Gate, however, might well be taken as an object-lesson and a complete answer to the argument that a change of user entails the destruction of tradition. For, although in many cases the buildings there have ceased to be used for residential purposes, it is evident that they are capable of being turned into efficient modern offices without in any way losing the time-honoured aspects of this hitherto unspoilt part of older London.

Such a change has recently been carried out at Nos. 1 and 3 Queen Anne's Gate. The problem here was to remodel these two entirely independent houses to form a comprehensive block of offices to accommodate the administrative departments of Messrs. Holland & Hannen and Cubitts, Ltd., a firm that since the days of Thomas Cubitt at the start of the last century has been established in Gray's Inn Road, where their workshops still remain.

Externally, the alterations consisted chiefly in lining up the main cornices and strings and bringing the windows, which were of varying height, into some measure of balance. Sash bars were introduced and tuck pointing had to be resorted to in order to pull the somewhat long façade together.

The uninteresting doorway and porch to No. 3 was removed and a new



This exterior view of the street frontage shows the aspect after remodelling two independent houses to form a block of administrative offices. The doorway is new; and the cornices, strings and windows have been lined up. Sash bars have been introduced and tuck pointing has been used to give unity to the long façade.



Nos. 1 and 3 Queen Anne's Gate, S.W.] [*Sydney Tatchell : architect for reconstruction.*

The entrance lobby is carried out in pitch pine. Below the clock is a bronze memorial tablet commemorating the names of members of the firm who fell in the great war.

doorway in character with Queen Anne's Gate introduced. The arms over the door are those of the Cubitt family, and symbolize the association of the house of Cubitt with this firm, whose reputation stands for the highest traditions of building.

Very extensive "improvements" during later Victorian times had altogether robbed the interiors of interest, and as the alteration of the varying window heights called very strongly for an entire rearrangement of the floors, the opportunity was also taken to provide a number of large open spaces in accordance with modern office requirements.

Competition Result

Following is the result of the competition for the proposed Hospital for Infectious Diseases, for the Coventry Corporation. Mr. E. Stanley Hall, F.R.I.B.A., was the assessor :

First premium (£300). Stanley Atkinson, 101 Windsor House, Wenlock Road, London, N.1.

Second premium (£200). Paine and Hobday, 2 Millbank House, Wood Street, London, S.W.1.

Third premium (£100). Harvey and Wicks, 5 Bennett's Hill, Birmingham.

Fourth Place (no premium), Gibson and Gordon, 2 Devonshire Terrace, London, W.1.



A general view of the building which houses, under one roof, not only the Town Hall, but Council offices and the Public Library. The walls are of 2-in. multicoloured Essex bricks, with stone dressings. The roof is covered with local pantiles. This main front faces Station Road.

CLACTON TOWN HALL AND PUBLIC LIBRARY

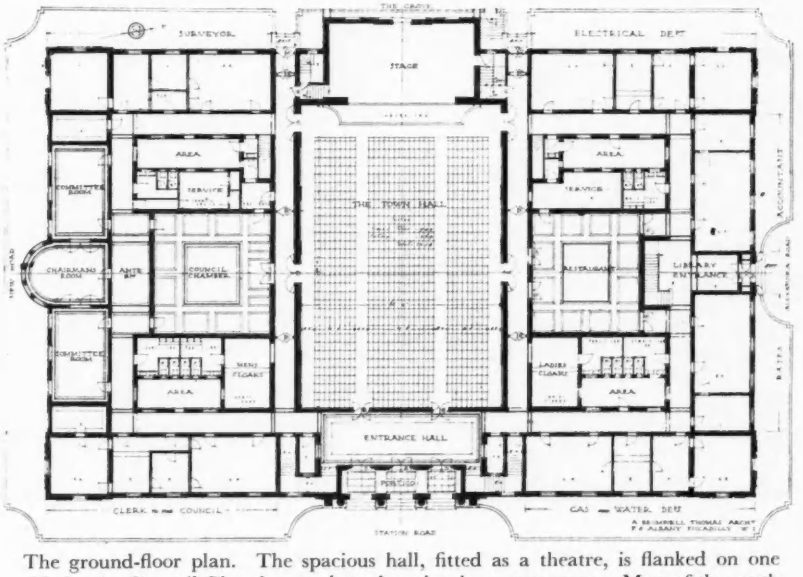
DESIGNED BY SIR BRUMWELL THOMAS

WHEN first the proposal for a town hall for Clacton-on-Sea, Essex, came up for discussion, the importance of acquiring an ample site was not overlooked. In 1926 a rectangular acre, lying between Station Road and the Grove, was earmarked for the purpose, and was formed into a public square by the cutting of a new road, completing the boundaries already defined by existing roads on three sides.

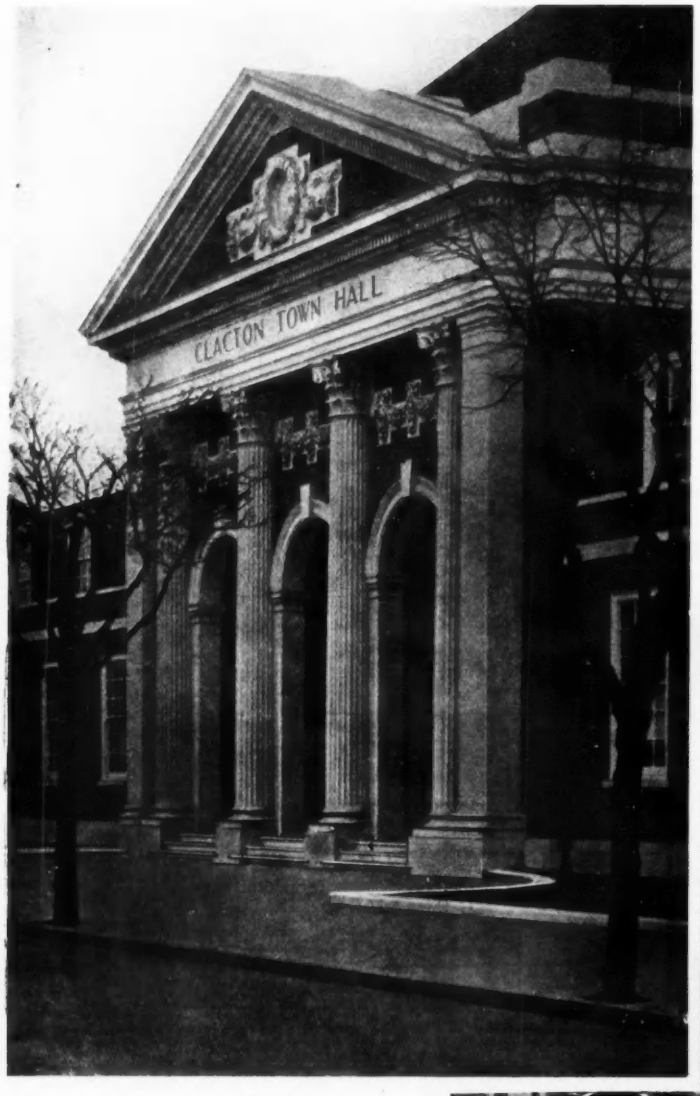
The rapid growth of Clacton had, indeed, enjoined foresight. In 1891, when first powers of local self-government were obtained, the population was but 3,500. Eight years later it had more than doubled, while in 1921, when the site, originally of one-and-a-third acres in Station Road, was acquired, it stood at 17,000. And the subsequent increase has been marked.

Early plans were for two separate blocks, but eventually it was decided to concentrate, under the one roof, town hall, Council offices and the public library. The new building, begun in 1929, measures 212 ft. by 135 ft., and gives, on the ground level, accommodation for six of the Council's departments, besides the hall proper, a suite of committee rooms and the Council chamber; only the public library, health department and caretaker's flat are placed on the first floor.

The hall occupies the centre of the layout: it is 115 ft. long, 60 ft. wide and 40 ft. high, affording seats for 950 persons, with 260 more in the gallery. It has been designed



The ground-floor plan. The spacious hall, fitted as a theatre, is flanked on one side by the Council Chamber, and on the other by a restaurant. Most of the south end is devoted to the committee suite, yet room has been found on this floor for no fewer than six of the Council's departments.



The main entrance has three doorways, set in a range of Corinthian columns, with a stone pediment above.

expressly to give every facility for theatrical purposes, and has a stage fully equipped with modern lighting and scenery services and with dressing rooms below the stage. Adjacent is a square restaurant, with kitchens, etc., balanced, on the plan, by the Council chamber. The salient feature of the south front—the committee suite consisting of the chairman's room, with a deep bay window, communicating with committee rooms on either hand—is divided therefrom by the ante-room. A glance at the plan reproduced on page 715 will show the symmetry and convenience of the scheme.

The library gives a reading space of 100 ft. by 18 ft. on the first floor of the opposite, or north, frontage of the building. It is designed for working on the open-access system; and adjoining are a small reference library, librarian's room and workroom.

The exterior façades conform to the Essex traditions, being of brick and stone, with roofs of local pantiles. Multicoloured 2-in. Essex bricks have been selected and arranged with care to form an effective background for the Corinthian entrance portico and the stone dressings generally employed.

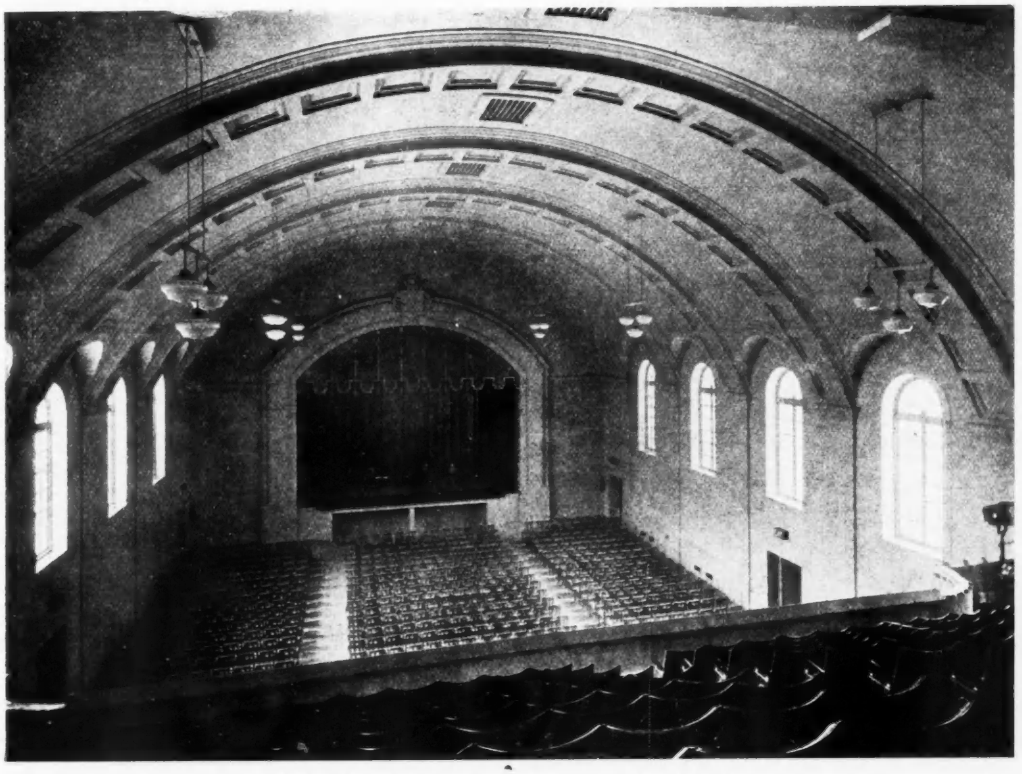
Three sets of double doors within this portico lead into a spacious entrance vestibule, with a coffered barrel ceiling, and two pairs of doors immediately opposite open into the auditorium of the hall. On either side of the vestibule branches off the system of corridors which, describing an internal rectangle within the area of the building, linked by two more, isolating the hall, provides easy circulation throughout.

The chairman's room and the committee rooms on either side of it are connected by double doors, and can

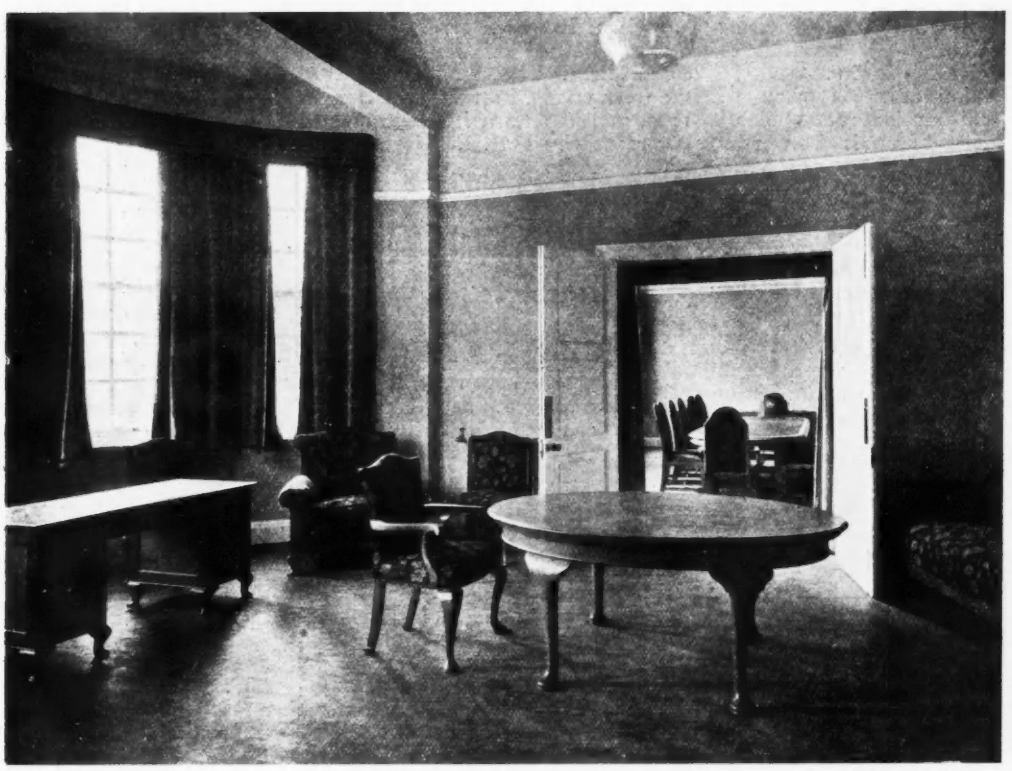


Clacton Town Hall, Essex. [*By Sir Brumwell Thomas.*

The main entrance vestibule, looking along the corridor, which plays an important part in the rectangular plan (see previous page). The doors on the right are to the portico; those on the left to the Town Hall proper.



The interior of the Town Hall itself, looking towards the stage, which is fully equipped, as to scene-setting facilities and modern lighting, for theatrical purposes, and has dressing rooms beneath. There are 950 seats on the floor and 260 in the gallery.



Clacton Town Hall, Essex.] [*By Sir Brumwell Thomas.*

The chairman's room in the Committee Suite. The third of the rooms forming a section well adapted for ceremonial occasions lies opposite to that here seen through the folding doors. Together their dimensions are 70 ft. by 17 ft., not including the semi-circular bay.



Clacton Town Hall, Essex. [*By Sir Brumwell Thomas.*

The Council Chamber, looking towards the chairman's rostrum and chair. The room is square in shape, with 35-ft. sides, and is lit from above and by windows in the upper walls.

thus be thrown into a suite some 70 ft. long, pleasantly adapted to occasions of civic hospitality.

The disposition of the cloakrooms, lavatories and service rooms about four small internal areas is also worthy of study.

Provision has been made for future extensions to the building, upwards, in case of need. The foundation-stone of the work was laid towards the close of 1929, and the town hall was opened last month by H.R.H. Prince Arthur of Connaught.

THE ARCHITECTURE CLUB

Dinner "to meet Herr Harbers"

THE nineteenth dinner of the Architecture Club was held at the Savoy Hotel on Tuesday of last week. The chief guest of honour was Herr Guido Harbers, of Germany. Mr. R. Holland-Martin, C.B., HON.A.R.I.B.A. (president), presided over a company of about one hundred members and guests.

Aim of the Club's Dinners

After the loyal toast had been proposed, the president said it was the aim of the club to arrange their dinners in order to coincide with the visit of a distinguished person from abroad. Herr Harbers had done much good work in town planning and laying out beautiful cities in Germany, especially that of Munich.

Modern Tendencies in German Building

Herr Harbers began by saying he would like to give a brief summary of the modern tendencies in German building, both as regards style and planning. He would first give some particulars of development already attained and then an account of prospects for the future.

The first impulse to discard decorative form, which, towards the end of the nineteenth century, had been carried to excess in interior decoration, domestic utensils, furniture, and in the design of houses, originated in Anglo-Saxon cultured circles. This excessive decoration had already destroyed the last great German cultural epoch, namely, the age of the Biedermeier style. English commonsense first recognized the importance of health and, also, the necessity for an underlying *Geist* as a foundation of cultural development. Above all, England had been a pioneer in the field of practical building, and one might point to the comparatively low head of population per house in London compared with the figures of large Continental cities.

Separate House for each Family

Taking the form of the dwelling-house as his starting-point, he said, on the one hand, England, today, as in the past, nearly always built a separate house to accommodate each family. This system had existed everywhere for centuries, abroad as well as in England, and had held its own both from the point of view of hygiene and as an economic unit. On the other hand, Central Europe had adopted the flat system or tenement barracks. Public enterprise, after the war, had effected a great improvement in this respect. Large square blocks which provided a disagreeable aspect to the rear and on the sides were now avoided; similarly, buildings which had only a northern aspect. A new science of planning had grown up which had, without doubt, brought the small and cheap tenement dwelling into greater respect both from a social and from an æsthetic standpoint. In addition to these blocks of flats with many stories, single small houses had, in a large number of cases, been grouped together in terraces. The small detached house unfortunately had hitherto been adopted only in country districts and small towns. There were, however, good examples of slightly larger detached houses which catered for a rather different public. Vienna, following the example of Stuttgart in 1927, was now producing a large number of this type.

Champion of the New Movement

It would be convenient at this point, he continued, to mention the name of the architect, Adolf Loos, as one of the first clear thinkers and champions of the new movement in German building. As long ago as 1898 he was pointing out to the public that the hygiene of Germany was as that of the middle ages compared with that of England at that time. Loos described the "Otto Wagner Room," exhibited in the Vienna Exhibition of 1898, as unpractical because it expressed the individuality of the architect himself rather than that of the purchaser and future occupant. Loos went on to say: "It is completely impossible for anything to be beautiful if it is unpractical," thus practically restating the view of Alberti in the cinquecento, who said: "An object of art which is

so complete that one cannot take away any part or add to it without disadvantage is, therefore, beautiful." Loos in his essays, written between the years 1897 and 1900, which had been collected under the title of *Unheard Talks*, had really defined the aims of the subsequently created Werkbund. In these essays he showed that design should be extended to everything in general use.

Rapid Industrial Expansion

The rapid industrial expansion which took place in the first ten years of the Werkbund's existence largely assisted the transfer of objects from the workshop to the mass-production factory. In other words, from individual to standardized work. In the meantime, the leadership of the Werkbund was transferred to a Stuttgart manufacturer, Herr Bruckmann, who was still president of the society.

From the time of its foundation until the year 1914, the Werkbund's chief success was in freeing things of utility from the unpractical overburdening of form and, at the same time, the combination of utility with the artistic handling of material. This movement had gradually developed so as to include furniture of living-rooms and of offices —and even to such things as the design of type-letters and photography. Thus a link between the studio and the factory had in reality been forged much more easily than in the imagination of some influential authors.

Solution of Social Problems

The second achievement might be described, he said, as the solution of social problems by a revolution in ground-planning, the dispositions of houses and settlements. One should add that the method of dealing with the subject by means of certain catchwords and attractive phrases, as was sometimes the practice on the Continent, although a little roundabout, had not been without its success—the *Wohnmaschine*, that was to say, a house which functioned like a machine, seemed to us today to be a romantic analogy with mechanical terms, and it was not, perhaps, an altogether appropriate battle-cry, since the works of the greatest modern architects showed that success had more often been achieved by appreciation of form than by mere deference to utilitarianism. Nevertheless, those mechanical doctrines had served a good purpose in forcing the unquestioned acceptance of hygienic demands for air, light and sun, and this had been verified in the settlements of Magdeburg, Frankfurt, Stuttgart, Munich, Berlin, and other towns. This new tendency, however, had led, quite apart from the actual quality of a building, to a certain over-emphasis of functional purpose. The fact was that more than one force was at work in the development of modern architecture. On the one hand we saw evolution, on the other revolution: on the one hand, further development, and on the other, new beginnings; the methods of South Germany running parallel with the methods of the north; here more attention to harmony and proportion; there, more to construction and to the dictates of some particular programme. So, within the whole movement, these two poles reacted upon each other. Some neighbouring States had managed to adjust existing methods to new requirements for the time being without loss of quality.

The principles of modern form seemed to be becoming established. But, as a result of a crisis in the housing problem for people of moderate means, it appeared that a new task was presenting itself. Here a deeper and quieter study of matters in detail was necessary. When one noticed the general aspect of our cities today, one saw very little of our present aim fulfilled. At best, this or that single building or garden city appeared prominent, but the whole, as an ordered unity of the many aspects of social life (the detached small house being, of course, an important part of this whole scheme) was not yet reached. Here the organizing and technically detailed work of the town-planner was justified in bringing, and was, indeed, in duty bound to bring, improvement according to Werkbund aims. A regular raising of the whole standard of formal design, not only in the dimensions of streets but also in single houses, must take place, not so much in the direction of numerous art creations (here we had become more moderate) as in the attainment of a high level of culture which could form the basis for future architectural development.

Definition of the Word "Expert"

Herr E. H. Rütter, of the German Embassy, said he was sandwiched between two speeches, both of a scientific nature. One by Herr Harbers and the other to follow by Dr. Raymond Unwin. He was not an expert in architecture, but nevertheless he thought an expert could be defined as a man who knew more and more about less and less! He also remarked that Germany looked upon England as leaders in slum clearances and garden cities. England, after all, first invented the garden city.

Debt We Owe to German Town Planning

Dr. Raymond Unwin, F.R.I.B.A., said it was plain to us that we should never be able to express the debt we owed to German town-planners. Long before we had ever gone through the swaddling clothes of town-planning, Germany had passed through several of its styles. Many of their experiments, however, need not be tried here. We should, however, welcome these new styles, whether as architecture or town-planning, because we must remember there was a permanence in architecture and town-planning that demanded certain restrictions in experimentation. It was very difficult to get rid of our mistakes.

We might cover up a poster that no longer pleased, but we must remember that a building lasted for a hundred years and a town-planning scheme for five hundred years. These remarks were simply cautionary. We did not want to discourage serious attempts to work out new systems. On the contrary, we wanted new styles and he sympathized with the words of Mr. H. G. Wells: "Pull down London and rebuild it." He would be sorry, nevertheless, if this came about.

Continuing, Dr. Unwin said there were three matters now before Parliament which were of great interest to town planners. One, the Town and Country Planning Bill, which was going to give for the first time power to town-plan built-up areas. Two, the system of transport, and three, the taxation of land values. He hoped that the land taxation would not deprive us of some of our open spaces.

The Architecture Club Exhibition

Mr. H. Austen Hall, speaking of the Architecture Club Exhibition now open at the Mansard Galleries, said it included work of all kinds, so that comparisons might be freely indulged between the newer and the older schools of thought. What it did not afford was opportunities for comparisons between good and bad work, for there was no bad work in the show.

Mr. J. C. Squire said he hoped that the next exhibition would comprise photographs of good and bad work along the various arterial roads, in order to illustrate the remarkably ugly buildings which were going up.

Among those present were the following:

Mr. and Mrs. Darcy Braddell; Mr. and Mrs. Cyril Carter; Mr. and Mrs. S. Chermayeff; Mr. and Mrs. Elder Duncan; Mr. and Mrs. Joseph Emberton; Mr. and Mrs. Fleetwood-Hesketh; Sir Francis and Lady Goodenough; Mr. and Mrs. MacAllister; Mr. and Mrs. G. L. Pepler; Mr. and Mrs. Oswald Milne; Mr. and Mrs. Howard Robertson; Sir Robert and Lady Witt; Mr. and Mrs. F. R. Yerbury; and Messrs. Wells Coates, E. G. Culpin, Arthur J. Davis, Mansfield D. Forbes, Ambrose Heal, Basil Ionides, Raymond McGrath, A. Trystan Edwards, and A. Gibbons-Grinling.

WHEN DESIGNING A FACTORY:

ii. Safety Requirements



By MISS HILDA MARTINDALE, O.B.E., *H.M. Deputy Chief Inspector of Factories.*

The central ground floor aisle of the Home Office Industrial Museum, Horseferry Road, Westminster, showing many types of safety guards fitted to belting, pulleys, and revolving parts of factory machinery. Other views appear on the facing page.

THE previous article dealt with practical points in factory design having a particular bearing on health; the present one will deal with some having a particular bearing on safety.

Safe Construction. The law requires that any place used as a factory or workshop, or as part of a factory or workshop, must be in such a condition that any manufacturing process or handicraft carried on therein can be so carried on without danger to health or to life or limb. If it is not in such a condition, a Court of Summary Jurisdiction may, on complaint by an inspector, prohibit the use of that place for the purpose of that process or handicraft until such work has been executed as in the opinion of the Court is necessary to remove the danger. This legal requirement should be borne in mind when architects are called in to advise their clients in regard to suitable premises for factory purposes.

Fire Escapes. The Factory Act lays it down that every factory and workshop in which more than forty persons are employed must be provided with such means of escape in case of fire as the Local Authority considers can be reasonably required, and must hold a certificate to that effect. In addition, local bylaws may incorporate special requirements as to the means of escape, irrespective of the number of persons employed. These points should therefore be inquired into before the building of a works is commenced.

In providing for the escape of the workers, the following two essentials should be borne in mind:

1: that the number of exits is adequate and their situation suitable;

2: that the layout of the works and the disposition of the furniture, fittings and plant is such as not to impede rapid egress for all the occupants.

Accordingly, in a building in which workrooms are on several floors, an enclosed staircase, constructed of fire-retarding material, adjacent to an external wall and adequately lighted by natural or artificial means, and in addition an external iron staircase, should be provided. These stairways should be placed so as to afford access, as direct and unimpeded as practicable, from every part of the works to the ground floor of the building, or to the public thoroughfare or other open space on the outside of the building.

The outside staircase should on no account pass in front of unprotected windows or wall openings, as flames may emerge and thus render the means of escape nugatory. The outer edges of the steps and landings should be protected with close balustrading.

In a ground-floor factory great care should be exercised to ensure that there are sufficient exits at different points, so that it would be impossible for workers to be trapped in any one part.

Doors. In every new factory and workshop the Factory Act requires that the doors of each room in which more than ten persons are employed shall, except in the case of sliding doors, be constructed so as to open outwards; and in every factory, while any person is employed in it, the doors must not fasten in such a manner that they cannot be easily opened from inside. In order to facilitate escape, it is desirable that communicating doors of rooms should be hung to swing both ways. No door should be so fastened that it cannot be opened readily. It is also an advantage for doors to be glazed at sight level with wired glass. Where sliding doors are fitted, it is desirable to have outward-opening wicket doors for emergency use.

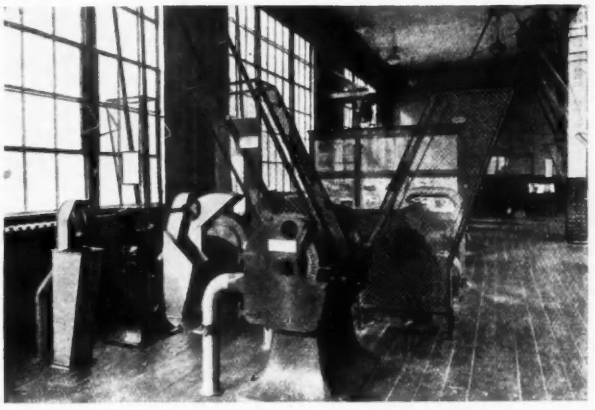
Places where Inflammable and Explosive Substances are Used. Owing to the increase in the use of inflammable and explosive materials, the danger of fire becomes more and more serious. Factories in which celluloid and cinema films are made or used are under special codes of regulations affecting construction, and reference should be made to them.

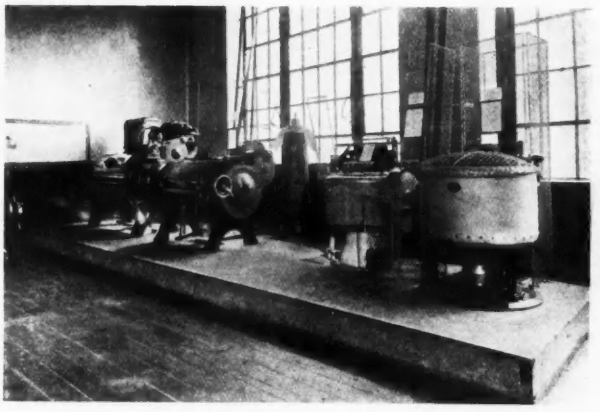
The rapidly growing use of cellulose solutions instead of varnish and polish for wood and metal work—particularly in motor-car and cabinet-making works—is yet another factor which entails special consideration in planning buildings, in view of the highly inflammable and explosive nature of the liquids or their vapours. These matters are dealt with in a Home Office memorandum on the subject.

It should also be remembered that there is the possibility of severe explosions through the ignition of a dust cloud by a naked light or spark in a factory where carbonaceous dust is produced, or even some kinds of metallic (e.g. aluminium) dust. There are various precautions to be taken in cases of this kind, and a Home Office memorandum on the subject is about to be issued. One point which architects should bear in mind is the possibility of having a section of the roof and the upper part of the walls relatively weak so that the force of an explosion may take a predetermined course and thus mitigate damage.

Fire Protection. The pressure and volume of the water supply necessary for fire protection in factories should be borne in mind in order to avoid the all too prevalent error of installing hydrants, drenchers and sprinkler installations on entirely inadequate water mains. Many factories have installed the automatic sprinkler and this is, without doubt, the greatest safeguard against fire that can be provided.

Hoists. Hoists have been the cause of so many serious accidents that the greatest care should be exercised in





Views of types of safety guards to grinding and to laundry machinery on exhibition at the Home Office Museum.

their construction. The existing law requires simply that every hoist must be securely fenced, but this provision has been greatly amplified in the Factories Bill, and the precautions needed have been dealt with in a Home Office safety pamphlet. Every hoist-way or lift-way should, unless it is completely enclosed, be efficiently protected by a substantial enclosure, capable of preventing any person from falling down the way, or coming into contact with any moving part of the hoist or lift, to a height of at least 6½ feet at the bottom and at landings inside the building; and at every opening giving access to the hoist a door or gate should be provided, not less than 6 feet high. The position of the well is important from the point of view of fire, as it may act as a chimney. It should therefore be constructed adjacent to an external wall and the doors should be of fire-retarding material.

Mill-gearing. Although it is not proposed to deal in detail, in these articles, with the fencing of dangerous machinery, architects should bear in mind that the law requires that every part of the mill-gearing must either be securely fenced or be in such position, or of such construction, as to be equally safe to every person employed or working in the factory, as it would be if it were securely fenced. If the carrying out of this requirement were planned while the factory was in course of construction, and plenty of space left for such fencing and the rooms made sufficiently lofty, considerable expense would be saved to employers later. Architects would be well advised to study the fencing of mill-gearing as shown at the Home Office Industrial Museum, Horseferry Road, Westminster.

Placing of Machinery. It is advisable to arrange for all heavy machinery to be installed on the ground floor of a factory in order to secure safety and lessen vibration. The machinery should not be crowded together, but ample space should be left round each machine and there should be wide gangways. In some factories white lines are drawn on the floors indicating the gangways, and no articles of any kind are allowed to be placed in the space between such lines. As far as possible, the machines, especially the dangerous parts of them, should be placed near the light.

Floors. The use of non-slip flooring, of which there are many kinds on the market, is recommended especially in the close vicinity of machinery.

Stairways. The staircases in factories should be of adequate width, with a rail each side and with non-slip treads, as accidents are likely to occur when a number of workers rush out of a building at meal-times. The flights of stairs should not be too long and should be well lit.

Cleaning of Windows. In the past, insufficient attention has been given by architects to the dangers arising from the cleaning of windows. In some factories, however, swing windows have been installed, the outsides of which can be cleaned from the insides. In other works a rail has been fixed on the top of the exterior of the building for carrying a cradle for this purpose.

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Manufacture of Cinematograph Film: S.R. and O. 1928, No. 82.

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Memorandum (No. 826) *on the Manufacture, Use and Storage of Cellulose Solutions.*

Safety Pamphlet No. 1: Transmission Machinery: Fencing and other Safety Precautions.

Safety Pamphlet No. 2: Protection of Hoists.

Safety Pamphlet No. 11: Laundry Machinery: Fencing and other Safety Precautions.

Safety Pamphlet No. 13: Fire Protection in Factories.

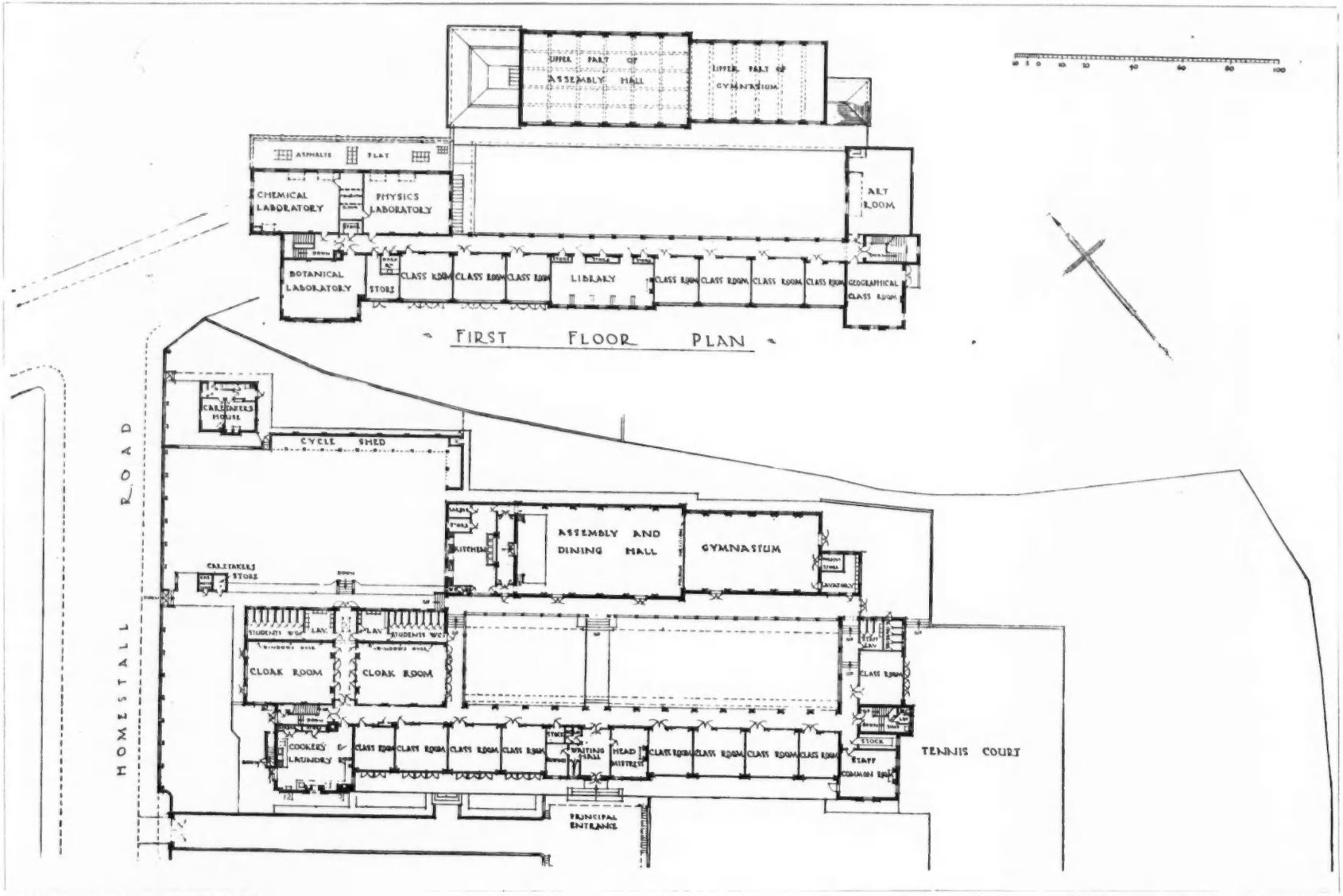
Descriptive Account of the Home Office Industrial Museum.

The above are obtainable from H.M. Stationery Office, Adastral House, Kingsway, W.C.2, either direct or through any bookseller. A Memorandum on Dust Explosions in Factories is also about to be issued.



[*By courtesy of Leyland Motors, Ltd.*

White lines of order and safety in a modern lorry-erecting shop. Nothing whatever is allowed to be deposited within the gangways thus defined.



L.C.C. Open-Air School, Honor Oak, S.E.] [*G. Topham Forrest, Architect to the Council.*

Ground-floor plan, showing disposition on the site; and first-floor plan. This is the first secondary school to be built by the London County Council on open-air lines. The classrooms are constructed with French windows, which enable the sides facing south-west to be thrown open; the opposite sides have windows and glazed doors facing a quadrangle. Access communication is by covered verandas in place of corridors. There is accommodation for 450 girls. The grounds have been developed as playing fields and gardens.



A general view of the school buildings, showing the principal entrance, with, to the right, the tennis courts. The school is to be opened tomorrow (May 21) by the President of the Board of Education.

A NEW L.C.C. OPEN-AIR SCHOOL FOR GIRLS

G. TOPHAM FORREST, *Architect to the Council.*

HONOR OAK School, London, S.E., is mainly two stories in height, with the hall, gymnasium and kitchen in a separate one-story block. The majority of the classrooms overlook the playing-fields, and those on the ground floor open on to a paved terrace, bordered with flower-beds.

There are seventeen classrooms, which give accommodation for 450 girls. In addition, there are an assembly and dining hall, with kitchen, larders, etc.; a gymnasium, three laboratories, a cookery and laundry room, a library, an art room, and rooms for the staff, etc.

The classrooms, hall and gymnasium are entered from open verandas instead of from the usual closed corridors. The southern side of the classrooms consists of glazed folding doors on the ground floor and wide-opening casement windows on the first floor. On the veranda side the classrooms have a pair of glazed folding doors and wide-opening casement windows on ground and first floors. Both sides of the classrooms can therefore be largely thrown open to the air. When, during inclement weather, it may be necessary to keep the folding doors and the casement windows closed, ventilation can be obtained by opening the hopper sashes in the lower portion of the framing and the centre-hung sashes above the doors and casement windows. The verandas are continued round the quadrangle, and afford covered access to all parts of the building on the ground floor.

In the library is placed part of the memorial to the late Miss Mabel Knight, for many years head mistress of the school, when it was known as the County Secondary School, Peckham, and was situated in Peckham Road. This consists of a stone fireplace, surrounded with oak panelling and having bookshelves on either side. Over the fireplace is a sculptured panel in stone, designed and carved by Miss Julian Allan. The other part of the memorial consists of a garden in the school grounds.

The elevations of the school are designed in a free interpretation of the Late Georgian period, faced with multi-coloured bricks and Portland stone. The roofs are covered with sand-faced tiles. A hockey field, grass tennis courts, hard courts for tennis, and a net ball pitch are provided near the school building.

The school has been designed and the work carried out under the direction of Mr. G. Topham Forrest, Architect to the London County Council.



In the quadrangle. The end block contains cloak rooms and lavatories, that on the right, the assembly and dining hall, and, nearer the camera, the gymnasium. To the left are classrooms on two floors.

LETTERS FROM READERS

Michael Faraday

SIR,—During the next few months the world will hear much of Michael Faraday, that greatest of experimental philosophers. Of all his discoveries, none has had more consequence than that which he made in 1831—a hundred years ago. It was then that he found the true relation between magnetism and electricity. On this relation and on others, which he discovered in a few following years of intense thought and labour, have been founded all those applications of electricity which form the muscles and nerves of our modern life.

In a recent broadcast Sir William Bragg referred particularly to Faraday's discovery in August, 1831, of the principles of electro-magnetic induction. Since this most striking of all his discoveries has led to the development of the electrical industries of every kind, electrical engineers of all countries are joining in centenary celebrations, of which the principal is to be held in London in September next. The most public feature will be the fourteen days' exhibition which is to be held in the Albert Hall, beginning on September 23. It is to be arranged conjointly by the Royal Institution, where Faraday lived and worked, and by the Institution of Electrical Engineers, the latter body generously supplying the necessary funds.

In architecture, in particular, he has opened up a whole new world of possibilities in regard to the decoration and illumination of buildings; and I cannot help feeling that architects will appreciate the reminder that it is to him they owe the amenities of which they avail themselves as a matter of course today. C. W. H.



Pump at Bishop's Stortford.

Comparative Cast Iron Pumps

SIR,—The accompanying photograph shows the cast iron pump at Bishop's Stortford, which appears to be early nineteenth century. The design is bold and masculine, and admirably free from "pretty bits." The designer has made use of traditional classical motifs, with a complete absence of servility to academic standards, which is happily expressed in a medium which must still have been comparatively novel at the time of its manufacture. A. H. GARDNER

[We should like to draw our correspondent's attention to the similarity in the design of the pump he mentions with that at Raymond Buildings, W.C., a photograph of which we republish herewith from the Selected Precedents series on "Cast Iron and its Future—iii" which appeared in THE JOURNAL for March 25 last. It will be noted that the only additional feature of the pump at Bishop's Stortford is the spiked cap at the top of the barrel.]

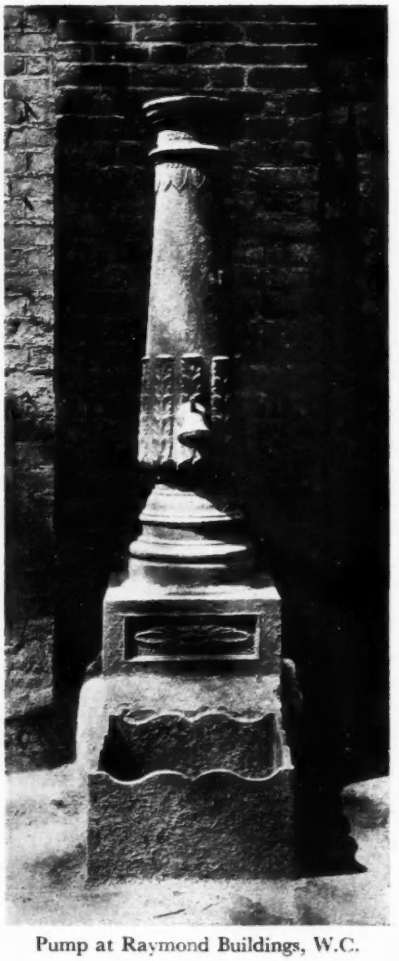
Write More Letters!

SIR,—I feel that I shall be voicing the general opinion of a large number of your readers when I say that not the least interesting part of your valuable paper is the section devoted to letters from readers. I have noticed with considerable pleasure, during the last few months, that numerous, interesting and longer letters are being received from your readers. I am encouraged by the fact to write to you, urging that more and more architects should express to you their views on important points that arise, and recount their experiences, difficulties, and triumphs.

To quote from my own personal experience, there have been numberless occasions on which, whilst reading your paper or talking with other architects, I have said to myself, "This is a point on which I really must write to THE JOURNAL, but I have never actually done so before, either because something has driven it out of my mind, or more probably because my natural diffidence to rush into print has caused me to forget the whole matter. Many of these unborn letters, however, would, I feel certain, have been of much interest to your readers.

I have nothing but praise for your excellent JOURNAL, which seems to me to fulfil admirably all the functions of a professional paper. If I have any criticism to make it is that in my view it does not act sufficiently as a platform for the publication and discussion of professional opinions, except in so far as it crystallizes the views of many in its various articles. I feel that it would gain greatly in human interest if more individual opinions and points of view were given expression, and it is with the object of encouraging this that I am writing this letter.

If, in doing so, you feel that I am infringing on editorial functions and making suggestions that might more gracefully have come from yourself, I trust that you will forgive my presumption. "PSITTACUS"



Pump at Raymond Buildings, W.C.

A SUMMER HOME AT BRAUNTON, NORTH DEVON

DESIGNED BY ORPHOOT, WHITING AND BRYCE



The main front, facing north. The house stands close to the road and is built of Wellington bricks, plastered; the roof is covered with Dutch interlocking silvery-grey pantiles. A glimpse of the garage can be seen on the left of the photograph.

THIS house at Wrafton End, Braunton, North Devon, stands on a broad terrace of low stone walls and has sunk and formal gardens to the south-west. These terrace walls are of a highly stratified local stone, ideal for garden purposes in that it splits readily into flat thick pieces, which the builder (also the quarry owner) knows very well how to handle.

The main requirements in the design were a simple four-square type of building with as much window space to the south and west as possible; also a covered loggia and sleeping balcony. These, along with the fact that the north side of the house was set close to the road, led to the main lines of the design—largely open to the south, east and west, and with relatively few windows to the north.

The entrance is in a half-hexagonal projection on the north front, which also contains the staircase. The hall runs directly from this projection right through the house to the loggia, so that on entering, after passing the porch door, one has a pleasant glimpse through the arches of the loggia to the country beyond.

The interior is almost as simple in treatment as the exterior. The principal rooms are floored with Canadian oak, and the remainder with red wood. The floors of the porch, vestibule and balcony are of dull red quarry tiles. The walls and ceilings are all plain plaster, either with no cornices or with very simple coves, and mostly treated in simple distempers. Erected as a labour-saving summer home, gas fires are installed in all rooms, except in the living-room, which has a large brick hearth and fire opening, and in the hall, where a stove is installed.

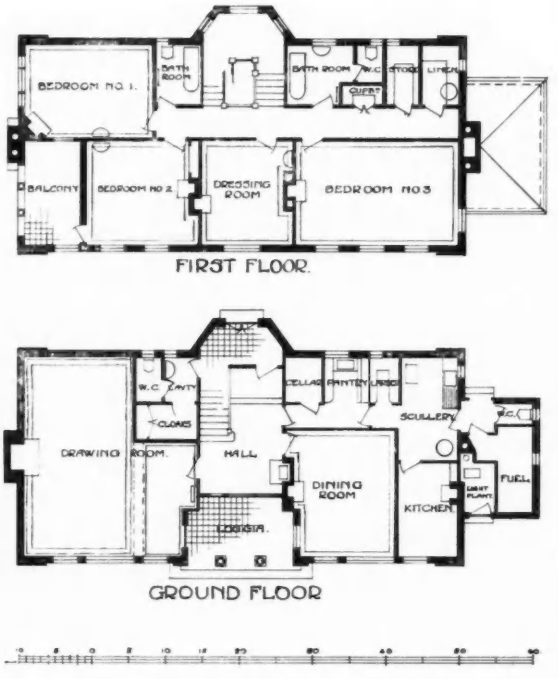
The garage is in a separate building to the east of the house.



The drawing room, the principal room in the house, occupies practically the whole of the space to the right of the entrance hall. It is floored with Canadian oak; the walls and ceilings are of plain plaster, distempered.



The west elevation, looking along the main front, towards the garage. On the right is seen the sleeping balcony, also illustrated below.



Ground- and first-floor plans. The entrance and staircase are situated in a half hexagonal projection on the north front.



House at Braunton, North Devon.] [*By Orphoot, Whiting and Bryce.*

A general view of the south elevation. The walls are of bricks, plastered and tinted to match the Bath stone columns of the covered loggia and sleeping balcony, the only exception being the upper parts of the chimney-stacks. These are built in dull red brick, in accordance with local tradition.

THE ARCHITECTS (REGISTRATION) BILL

[BY OUR SPECIAL PARLIAMENTARY REPRESENTATIVE]

THE Committee stage of the Architects (Registration) Bill was taken in the House of Lords on May 14.

In the first place an amendment was made to Clause 3 (which provides for the maintenance of a Register of Architects) to make a holder of a certificate who refused to surrender it on the demand of the Council liable to a penalty not exceeding £20.

Lord Ponsonby, as representing the Government, then moved the insertion of a new clause dealing with the Board of Architecture and the Admission Committee. As the Bill stood when it reached the House of Lords, he said, it appeared to state that the Admission Committee was to cease after it had performed its first duties, but the intention obviously was that this Committee was to be a permanent body, and the words which he had moved made that clear.

The amendment was agreed to.

The House then considered Clause 5, which provides for registration without examination. Lord Ponsonby pointed out that in this new clause the proviso that recognition of examinations once accorded by the Council should not be withdrawn without the approval of the Privy Council was omitted.

Lord Crawford expressed complete agreement with the new clause, which he described as a masterpiece of compression; and it was agreed to.

The same process of compression and substitution was then applied to Clauses 7, 8 and 10, which deal with disciplinary measures, inquiries and notification of suspension, etc.

The new clause, with certain small verbal changes, was approved by the House after Lord Ponsonby had pointed out the various ways in which the three clauses which now disappeared were ambiguous and unworkable.

Clause 9 was then omitted from the Bill and was replaced by a clause in the following terms :

"Where the Council cause the name of any person to be removed from the Register, they shall forthwith cause written notice of the removal to be served on that person, and where, in connection with the removal, the Council have determined that the person in question shall, during any period, be disqualified for registration, the determination of the Council shall be specified in the said notice."

Clause 11 (appeal against Register or removal of name from Register) was then deleted from the Bill, and the following inserted in its place :

"Any person aggrieved by the removal of his name from the Register, or by a determination of the Council that he be disqualified for registration during any period, may, within three months from the date on which notice of the removal or determination was served on him, appeal to the High Court or Court of Session against the removal or determination, and on any such appeal the Court may give such directions in the matter as they think proper, and the order of the Court shall be final."

Clause 15, which empowers the Council to make regulations from time to time, was altered so that it will cover (*a*) prescription of fees, and (*b*) of information to be furnished to the Admission Committees, (*c*) provision for delegation to committees, (*d*) regulation of meetings, (*e*) filling of casual vacancies.

The following new clause was inserted after Clause 15 :

"At least half the total amount of the fees received in each calendar year by the Council under this Act shall be devoted, in such manner and on such conditions as the Council may determine, to the provision of scholarships and maintenance grants for the assistance of students in architecture whose means appear to the Council to be insufficient to enable them to pursue their studies."

The following new Schedule prescribing the constitution of the Council was then moved by Lord Ponsonby :

"1. Subject to the provisions of this Schedule, the Council shall be composed of the following persons, that is to say :

(i) one member appointed by the Council of the Royal Institute of British Architects in respect of every five hundred architect members of that Institute, being fellows, associates or licentiates thereof;

(ii) one member appointed by the Council of the Incorporated Association of Architects and Surveyors in respect of every five hundred architect members of that Association, being fellows, associates or licentiates thereof;

(iii) one member appointed by the Council of the Faculty of Architects and Surveyors in respect of every five hundred architect members of that Faculty;

(iv) one member appointed by the Council of the Architectural Association (London) in respect of every five hundred architect members of that Association, not being student members;

(v) one member appointed by the Council of the Association of Architects, Surveyors and Technical Assistants in respect of every five hundred architect members of that Association;

(vi) one member appointed jointly by the councils or other governing bodies of the provincial associations of the bodies mentioned in the foregoing sub-paragraphs, in respect of every five hundred persons who are architect members of one or more of those associations but are not architect members of any of the bodies so mentioned;

(vii) one member (being a registered person) elected in the prescribed manner in respect of every five hundred registered persons, not being architect members of any of the bodies referred to in the foregoing provisions of this Schedule;

(viii) one member appointed by the Council of the Ulster Society of Architects (Incorporated);

(ix) five members appointed as follows :

One by the President of the Board of Education.
One by the Minister of Health.
One by the Commissioner of Works.
One by the Department of Health for Scotland.
One by the Governor of Northern Ireland.

2. The Council of each of the following bodies shall be entitled to appoint as a member of the Council one person, not being a registered person :

The Chartered Surveyors' Institution.
The Institution of Structural Engineers.
The Institution of Municipal and County Engineers.
The Society of Engineers.
The Institute of Builders.
The National Federation of Building Trades Employers.
The National Federation of Building Trades Operatives.

3. For the purpose of computing the number of persons in respect of whom members of the Council are to be appointed :

(*a*) any fraction of five hundred shall be reckoned as five hundred; and

(*b*) regard shall be had only to persons ordinarily resident in the United Kingdom; and

(*c*) in relation to any of the bodies referred to in sub-paragraphs (i) to (vi) of the said paragraph, any person being an honorary, corresponding or retired member of that body shall be deemed not to be a member thereof.

4. (1) For the purpose of the first constitution of the Council, the Secretary of State shall appoint a committee consisting of nine members, of whom six shall be persons who appear to the Secretary of State to represent the bodies referred to in sub-paragraphs (i) to (vi) of paragraph 1 of this Schedule, and three shall be persons who have been appointed as members of the Council by the Secretary of State under proviso (*a*) to that paragraph, and it shall be the duty of that committee to determine for the said purpose, in accordance with this Schedule, the number of persons in respect of whom members of the Council are to be appointed under each of the said sub-paragraphs, and to summon the first meeting of the Council.

(2) The Council or other governing body of each of the bodies referred to in the said sub-paragraphs shall furnish to the said committee such information as the committee may reasonably require for the purpose of performing their duties.

(3) Any determination of the said committee under the foregoing provisions of this paragraph shall be final and conclusive and not subject to review in any court.

(4) The quorum of the said committee shall be such number as may be determined by the committee.

(5) Without prejudice to the provisions of section thirty-seven of the Interpretation Act, 1889, the functions of the said committee shall be exercisable as from the passing of this Act.

5. Where, by virtue of the provisions of paragraph 1 of this Schedule, any of the bodies referred to in sub-paragraphs (i) to (vi) of that paragraph is on any occasion required to appoint two or more persons as members of the Council, those persons shall be appointed by that body simultaneously.

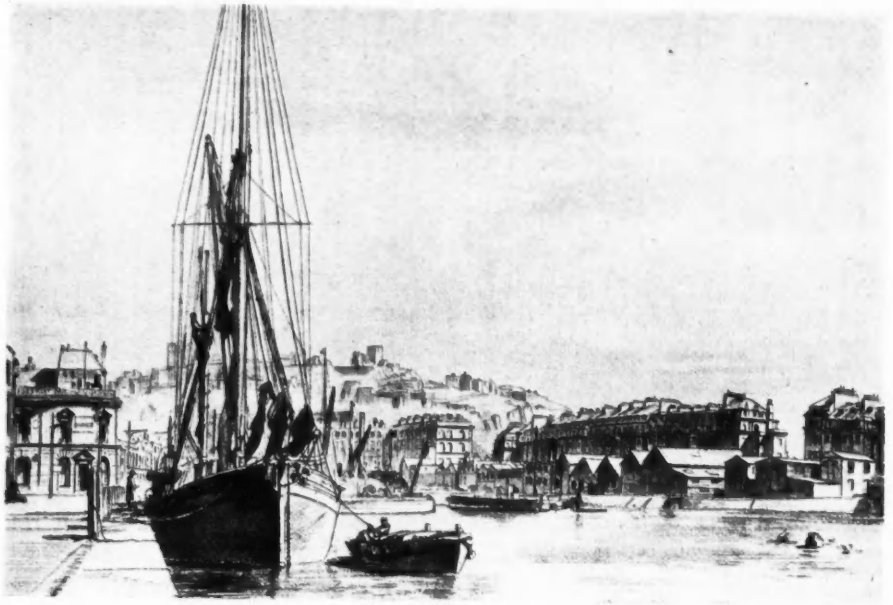
6. Every member of the Council shall hold office until the expiration of one year from the date of his appointment or election, as the case may be, so however that a member may at any time resign his office, and a member ceasing to hold office shall be eligible for subsequent appointment or election."

The last alteration made was to fix the membership of the Admission Committee at twelve and not more than eighteen, and to delete the words which made the clause ambiguous and might be read as empowering the Council to alter its character by making additional appointments.



[In the collection of Mr. Francis Berry.

Moustiers-Ste.-Marie.



Dover : " The Southern Belle."



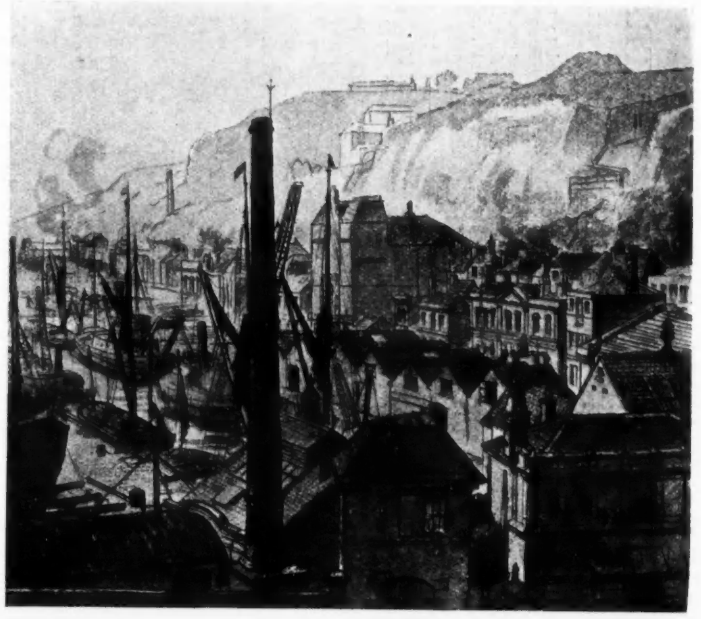
Rook's Nest, Lambourn.

THE SKETCH CLUB

TWENTY-NINTH SESSION

Being Drawings by Professor Randolph Schwabe

(*Now on exhibition at the Batsford Gallery*).

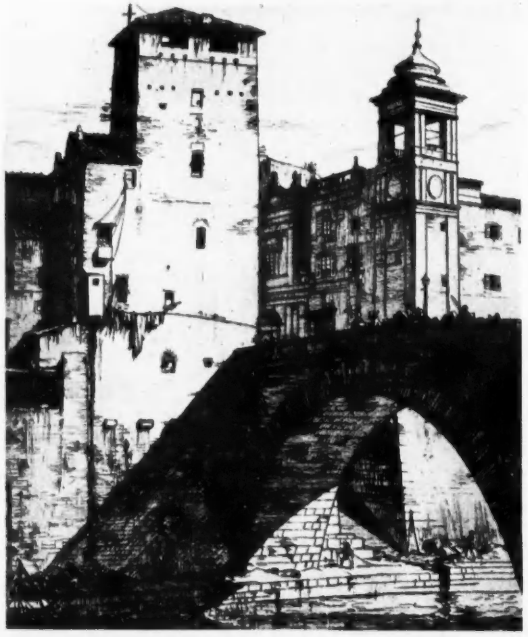


Dover : the Basin from above.

FOR the present session a selection has been

analytical studies in *The Burlington Magazine* and in

Grape



Ponte Fabricio, Rome.

FOR the present session a selection has been made from among the more architectural of some forty or more subjects by Randolph Schwabe, now on exhibition at 15 North Audley Street, W. It is the first collection of his work to be shown since his appointment as the new Professor at the Slade School, where he himself studied in earlier years.

The examples chosen, excluding, as they do, portraits and life studies, yet, in themselves, bear testimony to versatility and fastidious taste, the attributes expected in the work of a critic who holds high rank in the literary medium : many of our readers will be familiar with his historical and analytical studies in *The Burlington Magazine* and in the quarterly, *Artwork*, of which periodical he is editor.

The appeal of these drawings, water-colours, and one particularly successful etching, is so direct, the handling so suave and certain, that they are best left to speak for themselves. It may, however, be remarked that such of them as are in colour suffer comparatively little by reproduction in black and white. The range of tones employed is quiet rather than rich. Professor Schwabe gives us the form; in his hints of colour he is content to supply the mere spark that shall kindle a train in the imagination of the sensitive spectator.

H. F.

Grape Lane, Whitby.





Shiplake Rise.



Week Green Farm.

LITERATURE

MODERN HOSPITALS

HERR SCHMIEDEN's book on *Modern Hospitals* is a striking tribute to the amount of hospital building in Germany since the war. The necessity for economical construction, which is common to all European countries as a result of the war, has led to a new type of design; on the other hand, the rapid strides made by medical science have called for greater elaboration in certain directions, so that the result is buildings of a highly technical character, carried out in most cases with structural economy.

The flat roofs and marked horizontality which are features of German architecture of the present day are particularly suitable to hospital buildings, and there are many very successful examples of this style illustrated in this book.

The State Hospital at Freiberg is a very good instance, and the continuous balconies and wide horizontal-type windows are practical and effective. The first building illustrated is the fine State Hospital at Mannheim, beautifully located on the bank of the Neckar. This is almost the only example of the symmetrically planned "pavilion-type" building with cross-ventilated wards and with sanitary towers and balconies at the end.

A study of the plans of most of the buildings illustrated will show that the favourite arrangement now is to place the patients in wards containing eight, six or four beds, with windows one side only, and ventilation across the corridor. This may be said to be the "corridor type" of plan, and though it certainly results in greater variety and flexibility of planning, has the rather serious defect that the patients are crowded together much more closely than would be allowed in this country. In order to make up for this, there is a generous provision of balconies and "liege-halle" in many of the plans, and no doubt the patients spend much of their time during the day out of the wards.

One of the most attractive hospitals, architecturally, is that at Gelsenkirchen-Buer, where the patients' block, with continuous narrow balconies and windows opening to floor level, is placed on the south side, with the administration block centrally on the north side and the nurses' home and staff building flanking the approach to the entrance.

Among the most successful buildings illustrated are the small infection blocks, particularly the one at Regensburg. The plan of this hospital is very interesting, and the details of the patients' rooms, with lavatories and wardrobes, are most completely worked out.

Another interesting example of the flat-roofed type of building is the surgical block at Nürnberg. Here, the patients' rooms are placed on both sides of the corridor, and the plan is reminiscent of American examples, but the architectural style is typical modern German, and the windows are of the casement type, with horizontal bars (sash windows seem to be the exception in Germany).

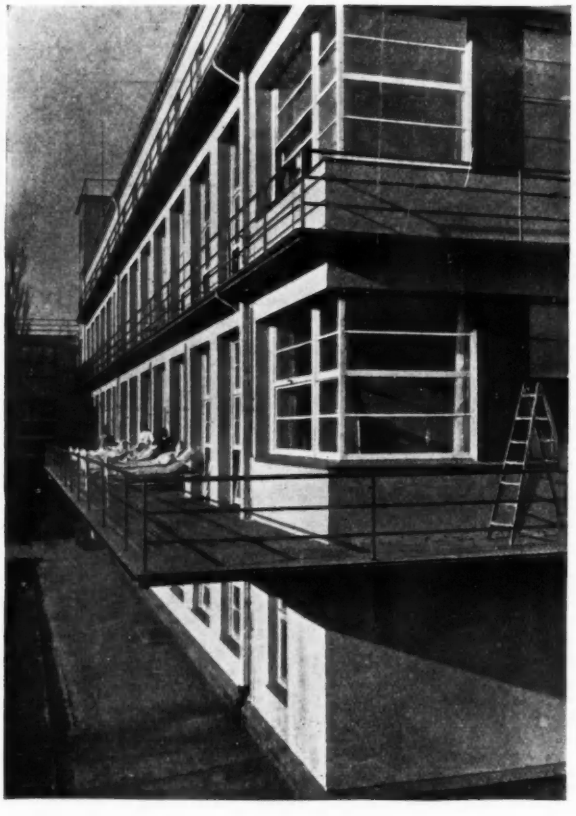
The Children's Hospital at Sassendorf shows how effective the arrangement of simple masses of brickwork can be made in a hospital building. The overhanging balconies with solid brick balustrades are very bold, and the shelter which is combined with the staircase on the flat roof is very effective.

At the beginning of the book there are several special articles full of interesting information, and the one on sterilizing rooms is particularly interesting.

The arrangement of the sterilizers in the operating blocks of German hospitals is nowadays very carefully thought out, and the built-in sterilizing apparatus (where the piping is hidden from view though accessible) is usual.

The Electrical Department of the University Hospital at Frankfurt is specially worthy of study, and the plans show very complete arrangements for all varieties of electrical treatment (see pages 183-187), possibly the best in the world at the moment. L. P.

Krankenhausbau in neuer Zeit. By Heinrich Schmieden. Berlin: Brücke-Verlag Kurt Schmersow.

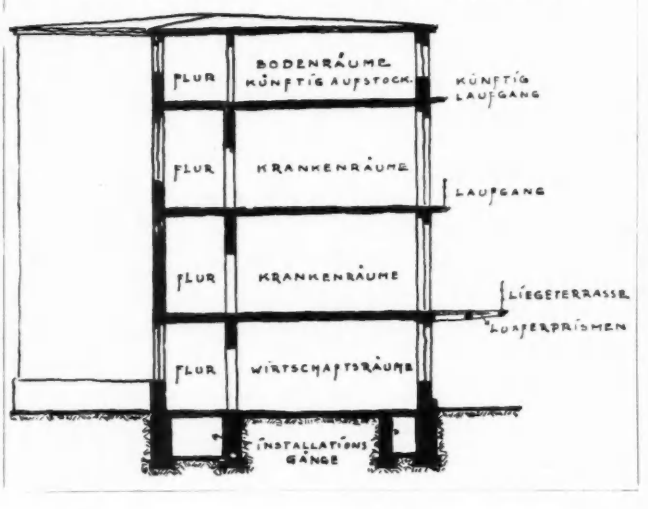


A photograph and section of the surgical department of the State Hospital at Freiberg, showing the continuous balconies and horizontal window treatment. Dr. Salzmann, architect.

[*From* Krankenhausbau in neuer Zeit.

AUTOMOBILE ASSOCIATION HANDBOOK

"A WATERPROOF sheet is provided (at a charge of 1s.), and members are advised to avail themselves of this facility during damp or misty weather." Thus the Handbook of that





[*From* Krankenhausbau in neuer Zeit.

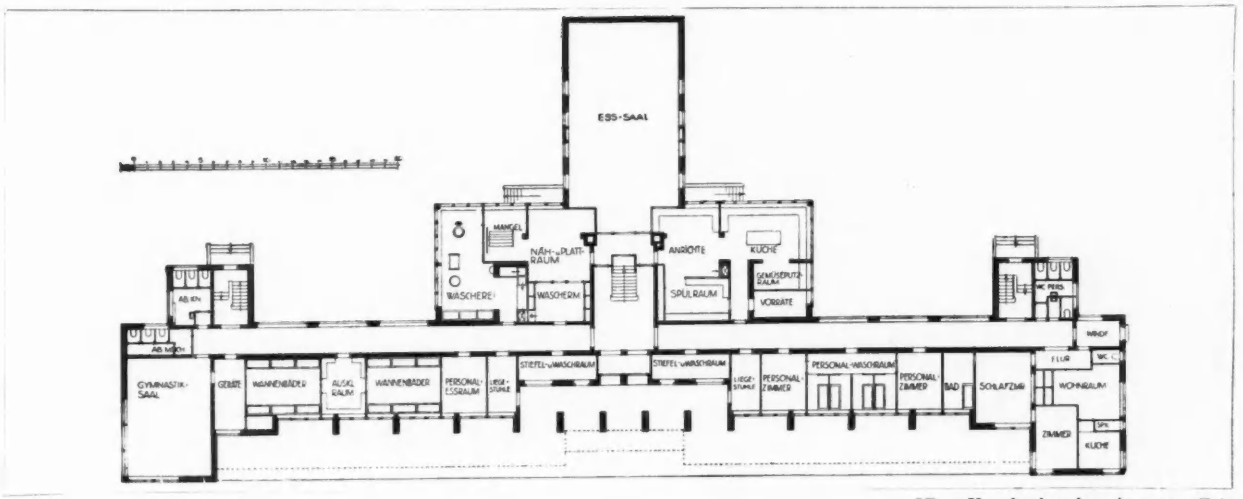
This view of the main front of the Children's Hospital at Sassendorf, Germany, designed by C. G. Bensel and J. Kamps, shows how effective simple masses of brickwork can be made in a hospital building.

other A.A.—the Automobile Association—whose 400,000 members must include large numbers of architects. I light on this sentence, which I commend to all, from personal experience, in relation to the passage of cars through the Severn Tunnel, in the section "Ferries," to show how extensive and peculiarly suited to the needs of motorists is the information herein placed at their disposal.

Although the new Handbook has 600 pages, its dimensions have been kept down to $7\frac{3}{4}$ ins. by $4\frac{3}{8}$ ins. by $\frac{3}{4}$ in. Even so, the weight of the edition, of nearly half a million copies, exceeded 175 tons.

Particulars are given of 2,383 hotels and 3,145 repairers holding the full appointment of the A.A. (pages 103–583). Hotel information includes, for the first time, hotels where hot and cold running water is provided in bedrooms and those where the charge for a bedroom includes a bath. That these should be, in the present year of grace, so few and far between as inspection reveals them to be, is striking evidence of the backwardness of this country.

Full details are given of the services to which members are entitled from the A.A. road patrols (pages 21–29), and departments, including legal, touring, engineering, aviation, parliamentary, insurance, etc. To assist



[*From* Krankenhausbau in neuer Zeit.

Ground-floor plan of the Children's Hospital at Sassenfort, Germany, designed by C. G. Bensel and J. Kamps. The dotted lines indicate the overhanging balconies running along the main front, seen in the photograph reproduced above.

D

members when on the road, a service map of England, Wales and Scotland is included (at the end of the handbook) showing the location of A.A. offices, roads patrolled by the A.A, A.A. telephone boxes, distances, ferries, and towns which contain A.A. appointed hotels and garages. The legal section has been omitted. Completely revised to cover all the changes in motor law incorporated in the new Road Traffic Act, it will be available, separately, when published, to all members free upon application.

The A.A. Handbook, 1931–32. London: The Automobile Association.

REINFORCED CONCRETE ROADS

PLAIN and reinforced concrete roads and road foundations are now being made to such an extent that a book devoted entirely to the subject has now been justified. The idea of using concrete for road work is not a new one, but the enormous amount of investigation carried out in recent years has produced such a wealth of information that the practising engineer finds it difficult, if not impossible, to keep abreast of all the developments. To collect and present this information in compact form has been the aim of Mr. J. Singleton-Green in *Reinforced Concrete Roads*.

The author in his foreword points out that to some people the section dealing with concrete might appear somewhat lengthy. As there is not, to Mr. Singleton-Green's knowledge, a book dealing with the making of good concrete, published in this country, embodying satisfactorily the results of recent researches, the opportunity has been taken of making this section so complete that it will be of use to anyone dealing with concrete structures other than roads. This accounts for a few passages which have been included, but do not necessarily apply to road work.

This book should be of interest to both the architect and engineer, because it is a means by which the success and dependability of concrete can be determined. K.

Reinforced Concrete Roads. By J. Singleton-Green. London: Contractors' Records, Ltd. Price 21s. net.

QUESTIONS THAT ARISE

Advertisement Hoardings

T. H. J. writes: "*I understand that a local authority has powers under the adoption of the Advertisements Regulation Act, 1907, and the amending Act, 1925, to prohibit the erection of disfiguring hoardings and in certain cases to order the removal of existing hoardings. I understand, however, that these powers are to a certain extent discretionary. I am also uncertain as to what extent they would apply to advertisement hoardings of long standing, in the case of a local authority which has only recently adopted the enactments. Can your expert enlighten me on these two points?*"

County and borough councils, and the councils of urban districts with a population of over 10,000, have power to make bylaws under the Advertisements Regulation Acts, 1907 and 1925, to prevent the display of disfiguring advertisements in certain situations by compelling their removal.

The local authority has it in its discretion to make, or not to make, bylaws; but in fact every English county council but one, every Welsh county council but four, and a large number of borough and urban district councils, have actually made them.

Where bylaws have been made, their enforcement is a duty; but it is in practice very difficult to compel a reluctant authority to act. Recently, however, councils have been increasingly energetic in enforcing the regulations.

Any member of the public who is offended by the breach of a bylaw is entitled to enforce it by lodging a complaint before the local magistrate, on filling in the necessary forms at the police court.

Bylaws in any particular area do not apply for five years to any advertisements which were already in existence when the bylaws were made; after the expiration of the five years, those advertisements can be dealt with as if they were new. In most counties, the five years' grace expires in 1931 or 1932. SCAPA

English or Foreign Glass

H. C. writes: "*What tests may be employed in order to ascertain that glass supplied on a job is British and not foreign? I have been told that British glass, when ground to a powder, will become plastic when mixed with water, and that foreign glass will not. Is this correct?*"

There is, unfortunately, no simple test which will distinguish foreign glass from British, but a chemical analysis will, with most types of the material, enable the source of manufacture to be ascertained. The suggestion that any glass "when ground to a powder will become plastic when mixed with water" is fantastic and absolutely out of the question.

So far as clear glass is concerned, it is so difficult as to be almost impossible, in the majority of cases, to be sure of its nationality without an analysis. Figured and textured glasses, however, can often be identified, since the designs are, in most cases, the specialities of one manufacturer only in this country, although foreign manufacturers have, in certain cases, produced rather mediocre imitations.

The architect who wishes to be sure of obtaining British glass should specify the manufacturer's name as well as that of the glass. If he should, later, be in any doubt as to whether British glass has been supplied, the expert eye will nearly always be able to distinguish, by minute characteristics, whether the glass is manufactured by his firm or by a foreigner. M. L. A.

Ventilation of Cavity Walls

R. H. writes: "*I should be glad of your expert's opinion regarding the ventilation of cavity walls by building in air gratings at the top and bottom of the external thickness of the walling. Personally, I have never favoured cavity walling, but in a present commission my client has stipulated this type of construction.*"

I consider that in ventilating the cavity by the continual movement of air between the two thicknesses of walling one of the objects of hollow-wall construction—heat insulation—is rendered valueless, and I cannot see any benefit to be gained by the ventilation of this space, which only tends to bring the outside temperature to within 4½ ins. of the inner wall face. However, I consider it advisable to leave a number of open vertical joints in the brickwork at the base of the walling to assist in the dispersal of moisture, which accumulates in the cavity.

I cannot understand why your correspondent is prejudiced against this type of construction. For dwelling-houses the hollow wall seems to me to be a distinct improvement, if properly constructed, upon 9-in. solid walling, both as regards the exclusion of dampness and the improvement of heat-insulating qualities.

The cost is small compared with the value, for, taking an average, the extra cost over solid 9-in. walling for houses of ordinary construction costing £1,500 is approximately £20. W. A. D.

Fixing Stair Carpet

H. S. writes: "*I am constructing a block of flats with concrete stairs and landings which are to be carpeted, and I should be glad if you would let me know the best method of fixing the carpet to the cement renderings.*"

The best method of fixing stair carpet on concrete is to plug the concrete and run stair eyes in lead.

For landings and half-landings I fix lead plugs at approximately 9-in. centres and nail to the lead with carpet nails. Alternatively brass sockets run in lead can be used, and the carpet fastened with 1⅛-in. nails, the socket being slightly less in diameter than the nail. T. P. B.

SOCIETIES AND INSTITUTIONS

R.I.B.A. ELECTION OF MEMBERS

AT a recent meeting of the Council of the R.I.B.A. the following were elected members:

As Honorary Associate (1)

Holland-Martin, Robert M.

As Honorary Corresponding Member (1)

Pope, John R.

As Fellows (12)

Ackroyd, S. W.
Bennett, J.
Beverley, S.
Cannell, J.
Dod, H. A.
Hobbiss, H. W.
Lewis, G. S.
Mackenzie, A. F.
Procter, J. C.
Seward, H. T.
Stewart, W. F. T.
Underdown, A.

As Associates (9)

Bond, G. H.
Cuthbertson, D.
Fisk, G. M.
Haddon, D. S.
Linfield, G. R.
McLean, C. R.
McRae, D. G. W.
Narwekar, S. J.
Nicolls, G. F.

As Licentiates (49)

Anderson, A. F. B.
Beckett, H. A.
Beer, E. V.
Berry, E. T.
Biscomb, W. E.
Blount, E. H. A.
Brown, C. R.
Burton, D. J. M.
Chapman, A. L.
Clark, W. H.
Collins, C. R. T.
Cowper, S. A.
Cripps, L. J. R.
Dixon, B. E.
Etchells, F.
Farmer, E.
Folkes, H. E.
Forster, D. A.
Freeman, J. T. S.
Froud, D. C. M.
Gomm, W. J.
Gray, E. J.
Gregory, P. B.
Hayward, W. H.
Hicks, J. S. D.
Holt, A. W.
Howard, S.
Hunter, P. B.
Ionides, B.
Leslie, J. S.
Lomax, P. H.
McGregor, A. S.
McLaughlin, C. V.
McLean, Major G. G.
Meldrum, R.
Platt, E. P.
Richardson, E.
Roberts, G. C.
Robson, F. C.
Shackleton, W.
Stayner, W. C.
Taylor, J.
Turner, H. G.
Waddington, F.
Wallis, C. H.
Webster, H.
Willett, C. H. A.
Wright, J. S.
Yates, L.

ARCHITECTURE IN CONCRETE

A paper on "Architecture in Concrete" was read by Major R. A. B. Smith, M.C., at the Royal Society of Arts, on Wednesday last. Mr. Alfred C. Bossom, F.R.I.B.A., presided.

Mr. Smith said: to appreciate the possibilities of *in situ* concrete in architecture it was advisable to study the results obtained on the West Coast of the United States, where circumstances were such that architects had been forced to use this material as being the most suitable in a country liable to suffer from earthquakes.

In the first instance, reinforced concrete was employed purely and simply because it gave a rigid structure which could suffer severe shock without destruction. Originally, it was used entirely as it was in England in our factory construction, but the architects of California, realizing that this was the only material suitable to their purpose, determined to obtain the most artistic results possible, and set their minds to that end with considerable success. They had been daring in some of their work, but the general advance was obvious and on correct and very satisfactory lines.

Much attention had been devoted to the shuttering and the varying effects which could be obtained by modifications in this part of the construction work. A brief description of the methods of shuttering adopted formed a suitable starting point for a description of the latest practice in concrete architecture on the Pacific Coast of the United States.

The shuttering for architectural concrete did not differ materially in general design from that used for structural concrete, except that it was employed with or without special lining materials which had relation to the resultant surface.

It was necessary, in the first place, to provide a rigid frame to hold the shuttering boards and linings in position. This frame was usually most economically formed by employing stout timber.

For plain surfaces, where no markings were to be visible, the forms or shuttering would obviously have to be lined with some material which would eliminate any joint lines. To this end patent forms of wall boarding, three-ply wood, or a board of fibrous composition were used in the States. For moulded or ornamental surfaces, timber patterns or plaster casts were introduced.

To overcome the necessity of a lining on plain surfaces, the shuttering itself could be adapted to procure features; this was done by designing the shuttering to ensure certain lines and effects. This work was carried out by using finished boarding of the desired sizes and lengths with the inner surface specially prepared. In some cases, the joint was adapted and accentuated to form a fin on the finished concrete by means of a V cut or chamfer.

Showing the "pour line"

Another point which had to be considered in the design was the height of the lift of concrete poured into the shuttering, as the resulting "pour or joint line" was almost bound to show, and such a line could be worked into the design in various ways.

The University of California, which had recently been completed, was a very fine and typical example of concrete construction. (A photograph is reproduced on this page.) Here the architect, Mr. George W. Kelham, was given a comparatively free range; the only instruction given was that he should produce a beautiful and dignified building which would have a suitable influence on the students who would be called upon to occupy it; in other words, a design was required that would promote in the students a refinement and a sense of beauty which an ugly building could not possibly engender. The whole work, including the columns and all the decorative portions, was poured as it proceeded.

In this case the standard width of 4 ins. was kept for all horizontal boarding which was in contact with concrete surfaces that would be exposed to the weather. When this boarding was stripped no effort was made to remove any roughness at the joints; in fact, it would have been a pity to do so, as, although these were a little noticeable at close quarters, yet at a distance they undoubtedly enhanced the textural effect obtained by careful consideration of the nature and position of the form-work. All the ornamental concrete work was poured integrally with the body of the concrete



A general view of the Life Science Building, University of California, designed by George W. Kelham.

and in special moulds. These moulds were known in the United States as "waste" moulds, and were constructed of plaster or composition after the full-sized models of the ornamental work had been approved by the architect. The surfaces of these moulds, wherever they were to come in contact with the concrete, were carefully treated with paraffin wax. If plaster was used, the face that would come in contact with the concrete was treated with a non-staining material ¼-in. thick, the necessary allowance having been made in the mould for this additional thickness. The wax was removed from the concrete with steam jets after the forms had been taken away, and at the same time any oil left on the face of the concrete from timber forms was removed.

Shuttering of the Building

Referring to the shuttering of the building, all horizontal edges of the 4-in. boarding were chamfered ¼ in. back from the edge and $\frac{1}{16}$-in. deep at the edge. Where vertical shuttering was used, as for jambs, mullions, reveals, etc., if the contact surfaces were less than 18 ins. wide a single board was used; if more than 18 ins. and less than 36 ins. two boards of equal width were used; if more than 36 ins. and less than 54 ins. three boards of equal width were used, and so on. Two-inch timber or compressed wood suitably backed was the general practice; the latter was probably more expensive, but with it one produced a surface which was remarkably free from defects of any description.

Details of General Design

Regarding the details of general design, the lecturer explained that particular care was given in the specification to the joints in the forms, and some of the best results were obtained when all vertical contact boarding was built with the wrot side flush against the concrete and all the other contact boarding was built with the rough side next the concrete. The exterior vertical boarding should be built with the vertical joints plumb, and the horizontal boarding joints set to a level checked by an instrument, and there should be no change of level in any of the horizontal lines. All vertical and all horizontal joints should be continuous in line.

"Preservation of the Dead"

The American nation took a greater interest in the preservation of the dead than did we in this country. Really beautiful buildings were constructed as mausoleums, and large sums were paid for space in them. In one which was inspected all the space had been bought by people for their own future occupation.

In the majority of designs for mausoleums (see frontispiece to this issue) care was taken to use no vertical boarding on any off-set levels or breaks in the surface that were horizontally boarded. No intermediate horizontal stoppage of the concrete pouring was allowed; except in long walls the vertical joints of horizontal boardings were made at corners or quoins only. In the case of long walls, vertical joints were not over one board high and usually staggered at least 2 ft. All horizontal slab forms were cambered ⅜-in. for spans exceeding 10 ft., and 1-in. chamfers were formed on the corners of interior columns, beams and girders, unless these were specified to be plastered.

ARCHITECTURE AND "ORDER"

Mr. T. Alwyn Lloyd, F.R.I.B.A., addressing the Publicity Club of Cardiff on "Architecture and Order," said he had coupled the word "order" with "architecture" because it had an all-important bearing on the subject today.

Merely to erect good buildings, isolated examples of architecture, did not take one far enough. There must be order behind it all—there must in fact be city planning. Just as a building unit had to be planned—its functions considered, its size, accommodation, design and detail—so the city which was to provide the site for the buildings required to be properly planned and not allowed to grow anyhow. Unhappily, this haphazard growth had been the almost universal experience in this country. Except for portions of London, Edinburgh, Bath, a few new industrial towns, and Cathays Park, Cardiff, the centres of cities resulted from the incoherent growth of smaller towns, which in turn had usually grown from ill-planned villages. In the suburbs there had been some improvement during recent years.

Town planning schemes, he continued, limited though they had been and often poor in result, were in operation in many places and, consequently, the suburbs would be better planned than the centres of towns. Great catastrophes sometimes presented unique opportunities for town-planning. There was the chance which occurred in the seventeenth century after the Fire of London for rebuilding the metropolis on a definite plan prepared by Sir Christopher Wren, but the English love of compromise and muddle won the day, and Sir Christopher's plan was scrapped in favour of the usual method of letting things take their chance. The City of London which we saw today was the result of that missed opportunity, plus the expenditure of enormous sums of money on essential improvements which had had to be carried out in the last 100 years. The San Francisco earthquake was another such occasion, but wiser counsels then prevailed, and this had also happened in a few similar cases.

The importance of good architecture in relation to commercial and industrial buildings could not, he said, be over-emphasized. If we wanted to give a good impression, an idea that there was something solid and reliable in the concern, we could not do it in a better, more effective, way than by placing that business or that industry in a well-designed building. The waste of time and money, the inefficiency, to say nothing of the crippling of vision and the æsthetic damage, resulting from badly planned and ugly buildings were appalling. In America and some European lands this was realized much more than in our own country. We were content to muddle along and put up with conditions which in other countries would be considered intolerable. He hoped his audience would agree with him when he said that for a city, an industry or a firm, the publicity of well-placed and planned and designed buildings was the best form which this often abused word could take.

THE PANEL SYSTEM

Mr. C. H. Strange, F.R.I.B.A., in an address at a meeting of the Tunbridge Wells Rotary Club, referred to the panel system of architects to give gratuitous advice and assistance to local authorities on architectural matters, which came into existence with the passing of the Housing (Rural Workers) Act of 1928.

He said that although panels were set up covering all parts of the country, that Housing Act had not been much used. Hitherto the law had required most exacting conditions as to plan, construction, sanitation, and other things, but had left the building owner free to offend the æsthetic sense of the community to the limit of his ignorance and vanity.

He had found from his own experience with the local authorities at East Grinstead that the plans submitted fell roughly into three classes. There were those drawn by the amateur, without any scale or ability to express what he wanted. He generally used ordinary ink, ruled his lines with a round ruler and got hopelessly at sea in trying to represent foundations and chimneys, etc. Then there were builders' clerks, auctioneers, and other self-styled "architects" who might produce an intelligible drawing but exhibited the most ghastly lack of knowledge as to planning, the design of the elevation and the choice of materials. Thirdly, they had the work of trained architects, but, unfortunately, they did not form 10 per cent. of the whole.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office. All inquiries concerning inventions, patents and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated, readers should apply to the Patent Office, 25 Southampton Buildings, W.C.2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

12792. Reid, P. S. Reinforcement for concrete, etc., constructions. April 30.

13034. Greenhalgh, R., and Warland, E. G. Building, etc., construction. May 2.

SPECIFICATIONS PUBLISHED

347105. Commin, F. J., and Wright, A. H. J. Composite sheets or tiles for building purposes.

347216. Lyne, R. J. Method and means of determining and fixing the position and dimensions of buildings, with special reference to monolithic concrete construction.

LAW REPORT

LIABILITY FOR SUBSIDENCE

Knox and Dyke, Ltd., v. Holborn Borough Council. King's Bench Division. Before Mr. Justice MacKinnon

THIS was an action by John Knox and Dyke, Ltd., builders, of Cavendish Place, against the Holborn Borough Council, claiming damages on the ground of breach of contract.

Plaintiffs alleged that the defendants, in making a connection by means of a tunnel between an interception chamber constructed in front of a block of flats in Woburn Place and Coram Street (which they, the plaintiffs, were building) and the main sewer between the road, executed the work in such a way as to cause a subsidence beneath the vaults and the cellars, where the interception chamber was constructed. The cost of the repair of the damage was, according to plaintiffs, nearly £1,400, and it was in connection with this that the claim was made. The work of making the connection was done by the Council under a form of contract, which was not sealed by the Council.

The contention of defendants was that plaintiffs had failed to prove negligence. The Council's legal duty was not to omit doing what any reasonable man would do. They asserted that, when the surveyor decided to tunnel instead of trench, he was guided by those considerations which ordinarily regulated the conduct of a reasonable man. Defendants also pleaded the "Public Authorities Protection Act, 1898."

Sir Boyd Merriman, K.C., and Mr. L. Thorpe were for plaintiffs, and Mr. Macaskie, K.C., and Mr. Ralph Glen were for defendants.

The witnesses called included: Mr. Harold G. Dyke, joint managing director of the plaintiff company; Mr. Bertram L. Hurst, civil engineer; Mr. Norman S. Williams, chief engineer to the plaintiffs; Mr. J. E. Parr, Holborn Borough Surveyor; and Sir Geo. W. Humphreys, K.B.E., civil engineer and member of the Institute of Civil Engineers.

Giving judgment for defendants with costs, his lordship said that on the evidence he was not satisfied that there had been any departure from the exercising of reasonable care and skill by defendants by reason of their failure to use "needles" or "shoring up," or to make exploratory excavations. He hoped in future that the legal requirements of sealing contracts needing this observance would be strictly complied with.

COMPETITIONS OPEN

June 1.—Sending-in day. New Council School, to be erected at Blowers, Dudley. (Limited to architects within a radius of 15 miles of Dudley.) Assessor: Herbert T. Buckland, F.R.I.B.A. Conditions from J. Whaley, Director of Education, Education Offices, St. James's Road, Dudley.

June 16.—Sending-in day. (Last day for conditions was February 25.) Offices for the Ingham Infirmary, South Shields. (Limited to architects within the area of the Northern Architectural Association.) Assessor: George Reavell, O.B.E., F.R.I.B.A. Premiums: £250, £100 and £50. Conditions were obtainable from John Potter, Secretary, Ingham Infirmary, South Shields. (Deposit £2 2s.)

June 24.—Sending-in day. King Edward VI. School, Mill Lane and Wilton Road, Southampton, for the Governors of the School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums, £150, £100 and £50. (Deposit, £1 1s.). Full particulars are obtainable from G. A. Waller, Clerk to the Governors, 7 Albion Place, Southampton.

June 26.—Sending-in day. Offices for the City of Leicester Corporation, Charles Street, Leicester. Assessor: E. Berry Webber, A.R.I.B.A. Premiums: £300, £200 and £100. Conditions from A. T. Gooseman, Engineer and Surveyor, Town Hall, Leicester. (Deposit £2 2s.)

June 30.—Sending-in day. (Last day for conditions was April 15.) New Branch Baths, Foleshill, for the Coventry Corporation. Assessor: F. J. Horth, F.R.I.B.A. Premiums: £210, £105 and £52 10s. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

September 21.—Sending-in day. (Last day for conditions: June 10.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £500, £400, £300 and £200. Conditions from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

March 31, 1932.—Sending-in day. Last day for questions: August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

THE ARCHITECTS' DIARY

WEDNESDAY, MAY 20

R.I.B.A., 9 Conduit Street, W.1. Exhibition of "The Architecture of Modern Transport." Until May 22. 10 a.m. to 8 p.m. **10 a.m.**

THURSDAY, MAY 21

R.I.B.A. Annual Dinner, to be held in the Hall of Lincoln's Inn. **7.15** for **7.45 p.m.**

LONDON SOCIETY. Visit to Ergon House, Horseferry Road, Westminster, S.W.1. **3 p.m.**

MARGATE SCHOOL OF ART. Fourth of twelve illustrated lectures on Beauty in Design. "Beauty in Proportion." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

BRITISH CONFEDERATION OF ARTS. At the Royal Society of Arts, John Street, Adelphi, W.C.2. "The Educational and Artistic Film." By Messrs. G. T. Hankin, R. S. Lambert and Ivor Montague. Chairman: Dr. Cloudesley Brereton. **5 p.m.**

SATURDAY, MAY 23

Sunrise 4.59 a.m. Sunset 9.10 p.m.

WHIT MONDAY, MAY 25

THURSDAY, MAY 28

LONDON SOCIETY. Visit to Horniman Museum and Gardens, London Road, Forest Hill, S.E. **3 p.m.**

MARGATE SCHOOL OF ART. Fifth of twelve illustrated lectures on Beauty in Design. "Balance and Contrast." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

FRIDAY, MAY 29

TOWN PLANNING INSTITUTE. At Caxton Hall, Caxton Street, Westminster, S.W.1. "London As It Ought to Be." By Messrs. Adams, Adshead, Davidge and Lanchester. **6.30 p.m.**

SATURDAY, MAY 30

Sunrise. 4.51 a.m. Sunset, 9.4 p.m.

LONDON SOCIETY. Visit to the Church of St. John, St. John's Square, Clerkenwell, W.C.1. **2.30 p.m.**

MONDAY, JUNE 1

INTERNATIONAL HOUSING AND TOWN PLANNING CONFERENCE, Berlin. Until June 5, with six added days for tours and visits. Fourteen papers will be presented on "The Abolition of the Slums" and twenty-one on "Traffic Problem in Relation to Town and Regional Planning." British Delegates: Messrs. Frank Hunt, C.V.O., and G. L. Pepler, F.S.I.

TUESDAY, JUNE 2

INSTITUTE OF LANDSCAPE ARCHITECTS. At the Royal Horticultural Hall, Westminster, S.W.1. "Austrian Baroque Gardens." By G. A. Jellicoe, A.R.I.B.A. **3.30 p.m.**

THURSDAY, JUNE 4

MARGATE SCHOOL OF ART. Sixth of twelve illustrated lectures on Beauty in Design. "British Architects' Efforts." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JUNE 6

Sunrise 4.46 a.m. Sunset 9.10 p.m.

THURSDAY, JUNE 11

MARGATE SCHOOL OF ART. Seventh of twelve illustrated lectures on Beauty in Design. "Interior Designs." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JUNE 13

Sunrise, 4.42 a.m. Sunset, 9.15 p.m.

WEDNESDAY, JUNE 17

R.I.B.A. British Architects' Conference, Dublin. Until Saturday, June 20.

THURSDAY, JUNE 18

MARGATE SCHOOL OF ART. Eighth of twelve illustrated lectures on Beauty in Design. "Cottages." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JUNE 20

Sunrise, 4.42 a.m. Sunset, 9.19 p.m.

MONDAY, JUNE 22

R.I.B.A., 9 Conduit Street, W.1. "Museum Planning." By Eric Maclagan, HON.A.R.I.B.A. **8 p.m.**

SATURDAY, JUNE 27

Sunrise, 4.45 a.m. Sunset, 9.20 p.m.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. Joint excursion with the South-Eastern Society of Architects, Chichester.

TUESDAY, JUNE 30

LONDON SOCIETY, Lancaster House, St. James', S.W.1. River Trip. Tickets obtainable from the Secretary.

THURSDAY, JULY 2

MARGATE SCHOOL OF ART. Tenth of twelve lectures on Beauty in Design. "Town Planning." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JULY 4

Sunrise 4.47 a.m. Sunset 9.19 p.m.

ROYAL SANITARY INSTITUTE. Forty-second Congress to be held at Glasgow. Until July 11. Papers to be read will include the following: "Architecture and Engineering"; "Hospitals—Planning and Construction"; "Discharge of Sewage into Sea"; "Housing"; "Slum Clearances"; and "Single-Pipe Drainage."

TRADE NOTES

In an article, "What Architects consider as advantageous in Glazed Terra Cotta or Faience," published in a booklet, *The Architect and Faience*, Messrs. Shaws Glazed Brick Co., Ltd., state that "the plasticity of glazed terra cotta or faience in manufacture permits of a fluency of expression to an extent impossible to other materials, and also enables duplications to be made at a very low cost. Such qualities in enriched work are obviously of great value. For decoration for vestibules, staircase linings, corridors or other internal work, glazed terra cotta or faience is a most ornamental and permanent medium. The almost unlimited palette gives the warmth of colour that is indispensable to interior work, and, as all that is necessary to keep the faience clean is an occasional rub down with a damp cloth, the necessity of repainting and its attendant expense and inconvenience is obviated." In the booklet are photographs and an impressive list of buildings in the construction of which the materials have been used.

The firm have reprinted in booklet form an interesting and instructive paper on terra cotta and faience, its origin, use, manufacture, advantages and disabilities, by Mr. A. G. Shaw. In this paper, read before the Fylde District Society of Architects, Mr. Shaw pointed out that it was only of late years that the immense antiquity of the material had become appreciably known. Introduced in the Middle Ages by Italian workmen to England, it was thought to be a new product, hence its name, but later researches of the archæologists have revealed that, after Adam dug and Eve span, they both made terra cotta figures for their infant children to gaze at and admire, if not to play with. In Egypt, wherever the spade of the excavator had revealed human work, it had uncovered pottery glazes, terra cotta, or faience.

Most of the difficulties in producing faience for building construction, said Mr. Shaw, were under control. The resultant product was a building material with an impervious face, standing the weather; fireproof, because it already had been fired to a higher temperature than was required to destroy any other materials in a building in which it and they might be used. Any surface dirt should be capable of being cleaned by soft water and the original appearance restored. As it was made from plastic material, facility of decoration, low cost of repeat prices, cutting for steel construction or combination with reinforced concrete were possible. By recessing the joints, either by ornament or rustication, these might be hidden to a large degree, whilst the slight irregularity of size and shape that might still exist in comparison with chiselled stone could often be aided by design.

Its colour effects, he said, were surely of service for city commercial buildings, and its great advantage for the display of flood lighting, he thought, needed no mention from him. Unlike stone, however, the more faience was exposed to the weather the cleaner and fresher was its face. He often wondered if the treatment of the material had yet reached its most effective style, but that was the province of the designer.

In America, terra cotta was more used for the larger buildings than any other single decorative facing material. It was used not because of its cheapness, because there it was often dearer than stone, and whatever might be the opinion of the artist, that of the man in the street was often favourable to American taste in architecture, and a nine months' sojourn in America, he said, compelled him to add his quota to the number.

*

The latest printed list of names of electrical installation contractors entered on the roll of the National Register of Electrical Installation Contractors furnishes interesting evidence of the steady growth of the register since its inception, and of the wide geographical area over which its activities are spread. Although the figure has since been increased, the total number of contractors on the register on December 1 last was 1,428. Registered contractors are now to be found in no fewer than 367 cities and towns in Great Britain, the Irish Free State, and Northern Ireland. England and Wales lead with 330 "registered contractor towns," Scotland has registered contractors in twenty-seven towns, the Irish Free State in five, Northern Ireland in two, the Isle of Man in one, the Channel Islands in two.

*

The Stanton Ironworks Company, Ltd., near Nottingham, have received instructions from Mr. J. Ferguson Bell, M.INST.C.E., the general manager and engineer of the Derby Gas Light and Coke Company, to supply a new cast-iron main. It will be sixteen miles long and consist of 12-in. and 15-in. diameter De Lavaud spun iron pipes, fitted at each length with Stanton-Wilson flexible joints. The main will connect up the Belper Gas Works with coke ovens at Clay Cross and Blackwell and be used for transmitting coke-oven gas from batteries of coke ovens situated at these two points. Flexible joints are being used in connection with cast-iron pipes to protect the main against possible subsidence of the ground, and against vibration resulting from road traffic.

*

The firm of Welin-Higgins Co., Ltd., of Coventry, has been purchased by Messrs. Rexine, Ltd. All business for "Fabrikoid," "Tontine" and "Venture" is now handled by Messrs. Rexine, Ltd., from Grosvenor Road, Coventry.

*

Messrs. G. and T. Earle, Ltd., of Hull, have issued a leaflet entitled *Keys for Cement or Plaster Rendering*. It is stated that Retardo No. 1, when painted on shuttering before the concrete has been placed, retards the setting of the concrete on the face so that it can be brushed off, leaving an ideal key for cement or plaster rendering.

*

Messrs. Permanent Art Floors (London), Ltd., have opened a sales office at 504 Abbey House, Westminster. Telephone No. Vic. 4196.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Clacton Town Hall (pages 715–718). General contractors, E. D. Winn & Co., Ltd. Sub-contractors : J. Jeffreys & Co., Ltd., heating and ventilation; Diespeker & Co., Ltd., constructional floors; Empire Stone Co., Ltd., stonework and carving; Fleming Bros., constructional steelwork; Roberts, Adlard & Co., roof tiling; Fenning & Co., Ltd., marble and terrazzo; Davison and Barrod, electrical installation; Shanks & Co., Ltd., sanitary fittings; Gilbert Seale & Co., decorative plaster work; Stevens and Adams, Ltd., wood flooring; Francis Morton & Co., spring dance floor; Mather and Platt, fire appliances; John Tann & Co., strong-room doors; Frank Burkitt, Ltd., safety curtain and stage equipment; Skellorn Edwards & Co., stage curtains and carpets; Strand Electric and Engineering Co., Ltd., stage-lighting equipment; Meadows & Co., decorative painting; Crittall & Co., metal casements; Yannedis & Co., locks, etc.; Clacton Joinery Co. and Armstrong, Ltd., furniture, official departments; Sankey Sheldon, Ltd., metal furniture; Bath Cabinet Makers, furniture in the Council suite; G. Pixton & Co., Ltd., gallery seats; Army and Navy Stores, Public Hall chairs; Mann & Co., mats and blinds.

Honor Oak School (pages 722–723). General contractors, C. P. Roberts & Co., Ltd. Sub-contractors : Natural Rock Asphalte Co., dampcourses and asphalt; Henry C. Parker & Co., hand made multi-red rustic facing bricks; C. W. Courtenay, stone; Brookes, Ltd., artificial stone; E. Wood & Co., structural steel; Williams, Smith and Evans, tiles; J. Newton and Sons, Ltd., glass; Acme Flooring and Paving Co. (1904), Ltd., wood-block flooring; W. B. Simpson and Sons, Ltd., and G. Woolliscroft and Son, Ltd., tiling.

House at Braunton, N. Devon (pages 725–726). General contractor, F. Thorne. Sub-contractors : Martin Croote and Son, painting and decorating; Bath and Portland Stone Firms, stone; J. and W. Henderson, Tegelen (Dutch) interlocking silver-grey pantiles; Hollis Bros., oak flooring; Cosy Stove Co., stoves; Aerogen Co., Ltd., cooking and heating grates, gas fixtures and gasfitting; Stephens and Brain, electric wiring; Rowe Brothers, sanitary fittings; Electrolux, Ltd., refrigerators; Henry Hope and Sons, casements.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The Office of Works is to erect a postal sorting office in Conference Road, ABBEY WOOD.

The Royal Arsenal Co-operative Society, Ltd., is to erect thirty-five houses on the Bostall estate, ABBEY WOOD.

The Herts Education Committee has purchased a large site for the erection of an elementary school at Underhill, BARNET.

The L.C.C. is to enlarge the county secondary school, BERMONDSEY, at a cost of £19,000.

The BETHNAL GREEN B.C. is acquiring a site in Conway Yard for the erection of tenements.

Messrs. Coleridge, Jennings and Soimenow are to erect eighty-six houses on the Kidbroke Park estate, BLACKHEATH.

Messrs. J. W. Heath and Sons are to build thirty houses in Amyruth Road, BROCKLEY.

The CAMBERWELL B.C. has purchased land for the extension of the municipal offices in Peckham Road.

The L.C.C. has passed plans, submitted by Mr. William J. Brise, for the development of the Grove Park estate, CAMBERWELL.

The Surrey Education Committee is to obtain a site in the CHEAM and SUTTON district for the erection of a secondary school for girls.

The Governors of the CHELSEA Polytechnic are to extend their premises at a cost of £10,000 for buildings and £2,500 for equipment.

The Herts Education Committee is to erect a school for 576 children at Cat Hill, EAST BARNET, at a cost of £24,000.

The L.C.C. is to proceed with the ELEPHANT AND CASTLE improvement scheme, at a cost of £1,950,000.

Plans passed at ELTHAM: Eighteen houses, Footscray Road, for Messrs. Sykes and Pomfret; three shops and flats, High Street, for Messrs. Foster and Foster; four houses, Green Lane, for Mr. W. E. Wright; twenty-four houses, Southwood Road, for Mr. William J. Brise.

Plans passed at ILFORD: Three shops, Fencepiece Road, for Messrs. Haines and Warwick, Ltd.; alterations to shop, 116 Aldborough Road, for Mr. J. E. Challen; lock-up garages, Reigate Road, for Mr. E. Meredith; seven houses, Middleton Gardens, for Mr. J. Aldridge; twenty-one houses, Crownfield Avenue, for Mr. J. W. Lohden; thirty-nine houses, Hickman Road, for Mr. W. M. Edwards; three garages, Fairlop Motor Works, High Street, for Mr. F. J. Macey; Baptist chapel and Sunday school, Cleveland Road, for Mr. F. G. Founch; fifteen houses, Mayesford Road, and eighteen houses, Vista Drive, for Messrs. P. G. Ashton and Son; warehouse, Havelock Street, for Mr. R. H. Howes; four houses, Lowin Gardens, Hastings Avenue, five houses, Hamilton Avenue, and two houses, Redbridge Lane, for Mr. W. M. Edwards; seven shops, Eastern Avenue, for Mr. H. Shaw; thirty-three houses, Roxy Avenue, for Mr. F. Stimpson; two houses, Glendale Avenue, for Mr. W. Crampin; thirty-two houses, Park View Gardens, for Mr. J. Aldridge; Sunday school, U.M. Church, The Drive, for Messrs. G. Baines and Son; fourteen houses, Danehurst Gardens, for Mr. T. J. Blake.

Messrs. Morris Estates, Ltd., of Dorland House, 14 Regent Street, S.W.1, are to erect shops and flats in Kensington High Street, Phillimore Mews and Argyll Road, KENSINGTON. Messrs. Trehearne and Norman, Preston & Co., of Windsor House, 83 Kingsway, W.C.2, are the architects.

The Governors of Morley College, Westminster Bridge, LAMBETH, S.E., have acquired premises for the extension of the college.

The LEWISHAM B.C. has approved plans for the erection of a maternity home at Catford Hill, at an estimated cost of £26,000 for the building and £5,000 for equipment.

Plans passed at LEWISHAM: House and factory, Meadowcourt Road, for Mr. H. R. Adams; shops, Downham Way, for Mr. A. Durbin; church hall, Downham Way, for Messrs. Murrell and Pigott; eleven houses, Grove Park Road, for Messrs. W. R. Hindmarsh & Co.; thirteen houses, Thornsbeach Road, for Mr. G. T. Harman.

The L.C.C. is to reconstruct the Credon Road elementary school, NORTH CAMBERWELL, at an estimated cost of £36,500.

The L.C.C. has sanctioned the scheme of the POPLAR B.C. for the erection of tenements with 460 rooms in West Ferry Road, at a cost of £122,000.

Plans passed at STREATHAM: Church building, Streatham Vale and Churchmore Road, for Mr. T. F. W. Grant; shop premises and flats, Streatham Hill and Telford Avenue, for Mr. Frederick J. Harrington; five houses, Woodfield Avenue, for Mr. E. W. Wallis.

The Wandsworth B.C. has approved plans submitted by Messrs. T. Eloms and Son, Ltd., for the erection of a cinema on a site in Upper Tooting Road, abutting on Lessingham Avenue and Derinton Road, TOOTING.

Plans passed at WANDSWORTH: Three houses, Hoadly Road, Streatham, for Mr. A. Soden; building, St. Agnes Lodge, St. Mary's Convent, Tooting Bec Gardens, Streatham, for Mr. P. H. Raw; church hall, Alston Road, Tooting, for Messrs. Stone and Palmer; four houses, Brodrick Road, Springfield, for Messrs. Fawcett & Co., Ltd.; twelve houses, Valleyfield Road, for Mr. E. N. O. Kidney; shop and billiard rooms, 103–105 Streatham High Road, for Mr. H. Wilson.

Plans passed at WATFORD: House, Gammons Lane, for Mr. C. W. Tomlin; bank and shops, Chalk Hill, for Mr. James Rodwell; fourteen houses, Gade Avenue, for Mr. James Goss; four houses, Cross Road, for Mr. T. Howard; two houses, Dellfield Estate, for Watford Ideal Homes, Ltd.; two houses, Woodland Drive, for Miss C. Artiss; four shops, High Street, for Mr. C. L. Fox; two houses, Kelmscott Close, for Mrs. E. S. Simmonds; two houses, Orchard Drive, for Mr. E. W. Puddifoot; six houses, Wilcot Avenue, for Messrs. Grover and Higgs.

EASTERN COUNTIES

The COLCHESTER Corporation is to erect 100 houses on the Ipswich-Harwich Roads site.

The COLCHESTER Education Committee is to erect a nursery school in the Barrack Street area.

The COLCHESTER Corporation has sold a site at Hythe to the Central Electricity Board for the erection of a sub-station.

Plans passed at COLCHESTER: Four houses, Mersea Road, for Mr. W. J. Jefford; house, Ipswich Road, for Messrs. H. G. Pryke and Son; house, Gladwin Road, for Messrs. F. Hutton and Son; house, Lexden Road, for Mr. R. Woodhouse Beales; four houses, Ipswich Road, for Messrs. H. G. Pryke and Son; house, Harwich Road, for Mr. H. Everitt; house, Harwich Road, for Mr. C. H. Green; store, rear of premises, Kendall Road, for Mr. R. Fisher; house, Butt Road, for Mr. W. S. Williams; nurses' home, Essex County Hospital, for Messrs. Duncan Clark and Beckett.

The FELIXSTOWE U.D.C. is to consider a scheme, suggested by Mr. J. A. Sherman, of Ipswich, for the provision of a pavilion, concert hall and band shelter, at a total cost of £58,000.

The Herts Education Committee is to erect a school at Newtown, HATFIELD, at a cost of £21,250.

The HERTS C.C. has voted £188,425 in connection with the erection of an institution to provide accommodation for about 600 mental defectives, together with administrative block, to be known as the Cell Barnes Colony, situated at Hill End. Mr. J. M. Sheppard, F.R.I.B.A., is the architect.

SOUTHERN COUNTIES

The EASTBOURNE Education Committee is to proceed with the erection of an open-air school on the Victoria Drive estate.

Plans passed at HASTINGS: Five houses, Moscow Road, St. Leonards, for Messrs. Jeffery and Bowcock; eight houses, Bexhill Road, St. Leonards, for Mr. H. H. Ford; two houses, Linton Road, for Messrs. Jeffery and Bowcock; six houses, Battle Road, St. Leonards, for Messrs. Brazil and Frost; house, Filsham Road, St. Leonards, for The Universal Housing Co.; house, Saxon Road, and house, Red Lake, Ore, for Mr. J. Hunt; house, Adelaide Road, for Mr. Stanley Willis.

The PORTSMOUTH Corporation has decided to erect flats on the York Place cleared area.

Plans passed at PORTSMOUTH: Eleven houses, Tangier Road, for Mr. J. McDermott; seventeen houses, Tangier Road, for Mr. H. E. Collins; conversion into flats, 33 South Parade, for Messrs. Henry Jones and Son; additions, 15 Merton Road, for Rev. T. T. Griffiths; additions to school, Victoria Road, for Portsmouth Education Committee; twelve houses, Merrivale Road, for Messrs. Brown and Fuller; shop, house and garage, Havant Road, Cosham, for Mr. G. Fulljames; sixteen houses, off Tangier Road, for Messrs. William Bros.

The Hampshire Education Committee is to erect a new junior school at TITCHFIELD, at a cost of £10,300.

MIDLAND COUNTIES

The COVENTRY Corporation is to erect 470 houses on the Hen Lane estate.

The EAST RETFORD Education Committee is to erect an elementary school for about 480 children at Retford.

The MARKET HARBOROUGH U.D.C. is acquiring a site of six acres of land for housing purposes.

NORTHERN COUNTIES

The ILKESTON Corporation is acquiring approximately eleven acres of land known as Wheatley's Fields, for housing purposes.

Plans passed at ILKESTON: House, St. Andrew's Drive, for Messrs. Bright and Thoms; house, Oakwell Crescent, for Mr. L. Ashley; two houses, Northfield Avenue, for Messrs. Briggs Bros.; house, St. Andrew's Drive, for Mr. D. L. Callinan; house, Oakwell Crescent, for Mr. F. A. Purchase; house, Oakwell Drive, for Mr. H. H. Turner; house, Church Street, for Mr. Jesse Smith.

Plans passed at MORECAMBE: Two houses, Bare Lane, for Mr. H. Hillman; house, Mount Avenue, for Mr. Mitton; two houses, Bare Lane, for Mr. H. Priestley; two houses, Yealand Avenue, for Mr. J. Woolfenden; two houses, Lancaster Road, for Mr. P. Holmes; two houses, Penrith Avenue, for Messrs. Dixon and Barwick; bungalow, Crime Well Lane, for Mr. J. W. Marsden; two houses, Twemlow Parade, for Mr. J. H. Atkinson; two houses, Twemlow Parade, for Messrs. Swithenbank and Ladell; house, Upper Marine Parade, for Mr. F. Obank; house, Longlands Crescent, for Mr. R. Webster.

The SHEFFIELD Corporation Estates Committee has received sanction to borrow £66,866 for the erection of houses and extensions of gas mains on the Greenhill Estate.

The Ministry of Health is to hold an inquiry into the proposal of the SUNDERLAND Corporation to erect swimming baths, at a cost of £31,500.

The YORK Corporation has asked the Parks Committee to prepare a scheme for the construction of a swimming bath, paddling pool and slipper baths in the Leeman Road district.

Plans passed at YORK: House, Westminster Road, for Messrs. R. J. Pulleyn and Sons; two houses, Horse Shoe, Dringhouses, for Mr. W. J. Simpson; house, Tadcaster Road, Dringhouses, for Mr. F. Harris; two houses, Copmanthorpe, for Mr. G. W. Storey; four houses, Galtres Grove, Shipton Road, for Clifton Estates, Ltd.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_2	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W.Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_1	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_1	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_1	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_1	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank ..	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EAST-BOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey ..	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_1	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_1	Kettering ..	Mid. Counties	1 5½	1 1½
A_1	Kidderminster	Mid. Counties	1 5½	1 1½
B_1	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_1	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Welling-borough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolver-hampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£	s.	d.
Bricklayer	per hour		1	8
Carpenter	"		1	8
Joiner	"		1	8
Machinist	"		1	9
Mason (Banker)	"		1	8
" (Fixer)	"		1	9
Plumber	"		1	8
Painter	"		1	7
Paperhanger	"		1	8
Glazier	"		1	8
Slater	"		1	8
Scaffolder	"		1	4
Timberman	"		1	4
Navvy	"		1	3
General Labourer	"		1	3
Lorryman	"		1	5½
Crane Driver	"		1	7
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	8	6
Blue Lias Lime	"	2	10	6
Hydrated Lime	"	2	16	0
Portland Cement	"	2	6	0
Rapid Hardening Cement	"	2	13	6
Thames Ballast	per Y.C.		8	9
¾" Crushed Ballast	"		10	0
Building Sand	"		10	6
Washed Sand	"		11	6
2" Broken Brick	"		9	6
¾" " "	"		12	6
Pan Breeze	"		6	6
Coke Breeze	"		8	9

BRICKLAYER

		£	s.	d.
Flettons	per M.	3	1	6
Grooved do.	"	3	3	6
Stocks, 1st Quality	"	4	18	6
" 2nd "	"	4	12	6
Blue Bricks, Pressed	"	9	18	0
" Wirecuts	"	8	16	0
" Brindles	"	8	0	0
" Bullnose	"	10	8	0
Red Sand-faced Facings	"	7	11	0
Red Rubbers for Arches	"	15	0	0
Multicoloured Facings	"	9	4	0
Luton Facings	"	8	16	0
Midhurst White Facings	"	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:				
Stretchers	"	21	10	0
Headers	"	21	0	0
Bullnose	"	28	0	0
Double Stretchers	"	30	0	0
Double Headers	"	27	0	0
Glazed Second Quality, *Less*	"	1	0	0
" Buffs and Creams, Add	"	2	0	0
" Other Colours "	"	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	9
2½" " " "	"		2	0
3" " " "	"		2	3
4" " " "	"		3	0

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

		4" s.	d.	6" s.	d.
Straight pipes	per F.R.	1	1	1	6
Bends	each	2	10	4	4
Taper bends	"	6	3	7	2
Rest bends	"	5	9	8	9
Single junctions	"	3	9	5	9
Double "	"	5	9	8	9
Straight channels	"	2	6	3	2
¾" Channel bends	"	7	8	—	
Channel junctions	"	7	0	12	6
Channel tapers	"	5	6	7	9
Yard gullies	"	9	6	11	6
Interceptors	"	18	6	25	9
Iron drain pipe	per F.R.	2	3	3	5
Bends	each	6	0	13	0
Inspection bends	"	15	3	24	0
Single junctions	"	9	3	18	0
Double junctions	"	14	0	27	6
Lead wool	lb.		6	—	
Gaskin	"		5	—	

MASON

The following d/d F.O.R. at Nine Elms:		s.	d.
Portland stone, Whitbed	F.C.	4	6
" " Basebed	"	4	9
Bath stone	"	2	11
York stone	"	6	9
" Sawn templates	"	7	6
" Paving, 2"	F.S.	1	8
" " 3"	"	2	6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£	s.	d.
24" × 12" Duchesses	per M.	31	0	0
22" × 12" Marchionesses	"	28	0	0
20" × 10" Countesses	"	20	5	0
18" × 10" Viscountesses	"	17	0	0
18" × 9" Ladies	"	15	0	0
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20"× 10" medium grey	per 1,000 (actual)	26	0	0
" green	"	27	15	0
Best machine roofing tiles	"	5	0	0
Best hand-made do.	"	5	10	0
Hips and valleys	each			9½
" hand-made	"			10
Nails, compo	lb.			4
" copper	"		2	0

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	6
Birch	as 1" F.S.			9
Deal, Joiner's,	" "			5
" " 2nds	" "			4
Mahogany, Honduras	" "		1	3
" African	" "		1	1
" Cuban	" "		2	6
Oak, plain American	" "		1	0
" Figured "	" "		1	3
" Plain Japanese	" "		1	2
" Figured "	" "		1	5
" Austrian wainscot	" "		1	6
" English "	" "		1	11
Pine, Yellow	" "		1	0
" Oregon	" "			4
" British Columbian	" "			4
Teak, Moulmein	" "		1	3
" Burma	" "		1	2
Walnut, American	" "		2	3
" French	" "		2	3
Whitewood, American	" "		1	1

Deal floorings:

	Sq.	£	s.	d.
¾"	"	1	1	0
¾"	"	1	3	6
1"	"	1	5	6
1¼"	"	1	11	0
1½"	"	1	15	0
Deal matchings, ¾"	"		16	0
1"	"		17	6
1¼"	"	1	6	0
Rough boarding, ¾"	"		18	0
1"	"	1	0	0
1½"	"	1	8	0

Plywood, per ft. sup.

Thickness	¼"			⅜"			½"			¾"		
Qualities	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	⅜"	½"	¾"	1"	1¼"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10		
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9		
" 3"–11½" long "	7	9	1/3	1/8	3/–		
Long screws, 12"–23½" long "	11	1/3	2/2	2/10	5/3		
" " 3"–11½" long "	8	10	1/5	1/11	3/6		
Bends "	8	11	1/7½	2/7½	5/2		
Springs not socketed "	5	7	1/1½	1/11½	3/11		
Socket union "	2/–	3/–	5/6	6/9	10/–		
Elbows, square "	10	1/1	1/6	2/2	4/3		
Tees "	1/–	1/3	1/10	2/6	5/1		
Crosses "	2/2	2/9	4/1	5/6	10/6		
Plain sockets and nipples "	3	4	6	8	1/3		
Diminished sockets "	4	6	9	1/–	2/–		
Flanges "	9	1/–	1/4	1/9	2/9		
Caps "	3½	5	8	1/–	2/–		
Backnuts "	2	3	5	6	1/1		
Iron main cocks "	1/6	2/3	4/2	5/4	11/6		
" " with brass plugs "	—	4/–	7/6	10/–	21/–		

Discounts:

TUBES.	Per cent.		Per cent.
Gas	62½	Galvanized gas	50
Water	58½	" water	45
Steam	55	" steam	40

FITTINGS.	Per cent.		Per cent.
Gas	47½	Galvanized gas	37½
Water	42½	" water	32½
Steam	37½	" steam	27½

SMITH AND FOUNDER—*continued.*

		s.	d.
Rolled steel joists cut to length	cwt.	9	6
Mild steel reinforcing rods, ⅜"	"	10	0
" " ½"	"	9	9
" " ⅝"	"	9	6
" " ¾"	"	9	0
" " ⅞"	"	9	0
" " 1"	"	9	0
" " 1¼"	"	9	0
" " 1½"	"	9	0

		3" s.	d.	4" s.	d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.	7		10	
Shoes	each	2	3	3	3
Anti-splash shoes	"	5	0	8	6
Boots	"	1	3	4	6
Bends	"	2	9	4	0
" with access door	"	—		6	9
Heads	"	4	0	5	0
Swan-necks up to 9" offsets	"	4	0	6	3
Plinth bends, 4½" to 6"	"	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal	F.R.	5		6	
Stop ends	each	6		7	
Angles	"	1	7	1	11
Obtuse angles	"	2	0	2	6
Outlets	"	1	9	2	3

PLUMBER

		s.	d.
Lead, milled sheet	cwt.	21	0
" drawn pipes	"	21	6
" soil pipe	"	24	6
" scrap	"	11	0
Solder, plumbers'	lb.	1	0
" fine do.	"	1	4
Copper, sheet	"	1	0
" tubes	"	1	4

L.C.C. soil and waste pipes:		3"		4"		6"	
Plain cast	F.R.	1	0	1	2	2	6
Coated	"	1	1	1	3	2	8
Galvanized	"	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	"	3	9	5	3	10	3
Shoes	"	2	10	4	4	9	6
Heads	"	4	8	8	5	12	9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	8	6
Plaster, coarse	"	2	10	6
" fine	"	5	10	0
Hydrated lime	"	2	16	0
Sirapite	"	3	10	0
Keene's cement	"	5	10	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
" rent	"		3	9
Lath nails	lb.			3½

GLAZIER

		s.	d.		s.	d.
Sheet glass, 21 oz.	F.S.					3½
" " 26 oz.	"					4½
Arctic glass	"					5
Cathedral glass	"					6
Hartley's rough rolled	"					9
Do. wired plate	"				1	3
¼" Polished plate, n/e 1	"	1	0	to 1	3	
" " 2	"	1	2	" 1	7	
" " 3	"	1	7	" 2	5	
" " 4	"	2	1	" 2	11	
" " 6	"	2	3	" 3	2	
" " 8	"	2	6	" 3	6	
" " 12	"	2	9	" 3	8	
" " 20	"	3	0	" 3	11	
" " 45	"	3	3	" 4	1	
" " 65	"	3	7	" 4	6	
" " 90	"	3	10	" 4	9	
" " 100	"	4	0	" 5	0	
Vita glass, sheet, n/e 1	"				1	0
" " " 2	"				1	3
" " " over 2	"				1	9
" " plate, n/e 1	"				1	6
" " " 2	"				3	0
" " " 5	"				4	0
" " " 7	"				5	0
" " " 15	"				6	0
" " " over 15	"				7	6
Putty, linseed oil	lb.					3

PAINTER

		£	s	d.
White lead	cwt.	2	8	0
Linseed oil	gall.		3	3
Boiled oil	"		4	3
Turpentine	"		3	4
Patent knotting	"		14	0
Distemper, washable	cwt.	3	0	0
" ordinary	"	2	5	0
Whitening	"		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	"		14	0
Outside varnish	"		16	0
White enamel	"	1	15	0
Ready-mixed paint	"		13	6
Brunswick black	"		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12" deep and cart away	Y.S.	3 6
,, to reduce levels n/e 5' 0" deep and cart away	Y.C.	10 0
,, to form basement n/e 5' 0" deep and cart away	,,	11 0
,, ,, 10' 0" deep and cart away	,,	11 6
,, ,, 15' 0" deep and cart away	,,	12 0
If in stiff clay	add ,,	3 0
If in underpinning	,, ,,	5 0
Digging, return, fill and ram	,,	5 6
Planking and strutting to sides of excavation	F.S.	1 0
,, ,, to pier holes	,,	6
,, ,, to trenches	,,	6
,, ,, extra, only if left in	,,	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	,,	1 13 6
,, ,, ,, (4-2-1)	,,	1 18 6
,, ,, ,, underpinning	,,	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
,, junctions	,,	3 9	4 6
Gullies and gratings	,,	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
,, ,, in cement	,,	34 0 0
,, Stocks in cement	,,	41 10 0
,, Blues in cement	,,	62 0 0
Extra only for circular on plan	,,	3 0 0
,, backing to masonry	,,	2 0 0
,, raising on old walls	,,	3 0 0
,, underpinning	,,	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	,,	1 0
,, red brick facings	,,	1 6
,, blue brick facings	,,	1 9
,, glazed brick facings	,,	4 6
Tuck pointing	,,	10
Weather pointing	,,	4
Slate dampcourse	,,	1 0
Vertical dampcourse	,,	1 3

ASPHALTER

		s. d.
½" Horizontal dampcourse	Y.S.	5 6
½" Vertical dampcourse	,,	7 6
½" paving or flat	,,	5 6
1" paving or flat	,,	6 6
1" × 6" skirting	F.R.	1 0
Angle fillet	,,	2
Rounded angle	,,	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do, all as last	,,	15 6
Artificial stone and do.	,,	16 6
York stone templates, fixed complete	,,	14 0
,, thresholds	,,	16 0
,, sills	,,	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4 5 0
Do., 18" × 9"	,,	4 2 0
Do., 24" × 12"	,,	4 12 0
Westmorland slating, laid with diminished courses	,,	6 10 0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	,,	4 0 0
Do., all as last, but of machine-made tiles	,,	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 0
Shuttering to sides and soffits of beams	F.S.	1 0
,, to stanchions	,,	1 0
,, to staircases	,,	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	,,	6 9
,, ,, roofs	,,	8 3
,, ,, trusses	,,	9 0
,, ,, partitions	,,	12 0
½" deal sawn boarding and fixing to joists	Sqr.	1 17 6
1" ,, ,, ,, ,,	,,	2 1 6
1½" ,, ,, ,, ,,	,,	2 7 6
4" × 2" fir battening for Countess slating	,,	12 6
Do. for 4" gauge tiling	,,	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
,, ,, ,, 2 ,,	,,	3 6
,, ,, ,, 3 ,,	,,	3 6
Stout herringbone strutting to 9" joists	F.R.	1 0
1" deal gutter boards and bearers	F.S.	1 4
1½" ,, ,, ,, ,,	,,	1 8
2" deal wrought rounded roll	F.R.	9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
1¼" do.	,,	3 4 0
1½" do.	,,	3 13 0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1¼" do.	,,	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½" deal moulded sashes of average size	F.S.	2 3
2" ,, ,, ,, ,,	,,	2 9
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1½" pulley stiles, 1¼" heads, 1" inside and outside linings, ¾" parting beads, and with brass-faced axle pulleys, etc., fixed complete	,,	4 3
2" ,, ,, ,, ,,	,,	4 6
Extra only for moulded horns	Each	3
1½" deal four-panel square, both sides, door	F.S.	2 6
2" ,, ,, ,, ,,	,,	3 0
1½" ,, but moulded both sides	,,	3 0
2" ,, ,, ,, ,,	,,	3 6
4" × 3" deal, rebated and moulded frames	F.R.	1 6
4½" × 3½" ,, ,, ,,	,,	2 0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	3 0
1½" deal moulded wall strings	,,	2 6
1½" ,, outer strings	,,	2 9
Ends of treads and risers housed to string	Each	2 0
3" × 2" deal moulded handrail	F.R.	1 6
1" × 1" deal balusters and housing each end	Each	2 6
1½" × 1½" ,, ,, ,,	,,	3 3
3" × 3" deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	,,	7 6

SMITH AND FOUNDER

		s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position	,,	1 3 0
Do. stanchions with riveted caps and bases and do.	,,	1 2 0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	,,	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 17 6
Do. in flashings	,,	2 0 0
Do. in covering to turrets, etc.	,,	2 7 0
Do. in soakers	,,	1 13 0
Labour to welted edge	F.R.	3½
Open copper nailing	,,	3½
Close ,,	,,	4½

		½" s. d.	¾" s. d.	1" s. d.	1¼" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 2	1 7	2 1	2 8	3 8	—
Do. soil pipe and fixing with cast lead tacks	,,	—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	,,	7	9	1 0	1 3	2 0	—
Boiler screws and unions	,,	3 6	4 0	5 6	8 0	—	—
Lead traps	,,	—	—	—	7 6	10 6	—
Screw down bib valves	,,	7 6	10 6	12 6	—	—	—
Do. stop cocks	,,	10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	,,	1 6
Do. outlets	,,	3 0
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	3 6
Do. for plain heads	,,	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n w to beams, stanchions, etc.	,,	5 6
Lathing with sawn laths to ceilings	,,	1 6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	,,	2 6
Do. vertical	,,	2 9
Rough render on walls	,,	2 3
Render, float and set in lime and hair	,,	3 0
Render and set in Sirapite	,,	3 3
Render, backing in cement and sand, and set in Keene's cement	,,	4 6
Extra, only if on lathing	,,	9
Keene's cement, angle and arris	F.R.	8
Arris	,,	3
Rounded angle, small	,,	3
Plain cornices in plaster, including dubbing out, per 1" girth	,,	2
1" granolithic pavings	Y.S.	5 0
1½" ,, ,, ,,	,,	6 9
6" × 6" white glazed wall tiling and fixing on prepared screed	,,	1 2 6
9" × 3" ,, ,, ,,	,,	1 7 6
Extra, only for small quadrant angle	F.R.	9

GLAZIER

		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	,,	1 0
Arctic glass and glazing with putty	,,	1 2
Cathedral glass and do.	,,	1 3
Glazing only, British polished plate	,,	8
Extra, only if in beads	,,	2
Washleather	F.R.	4

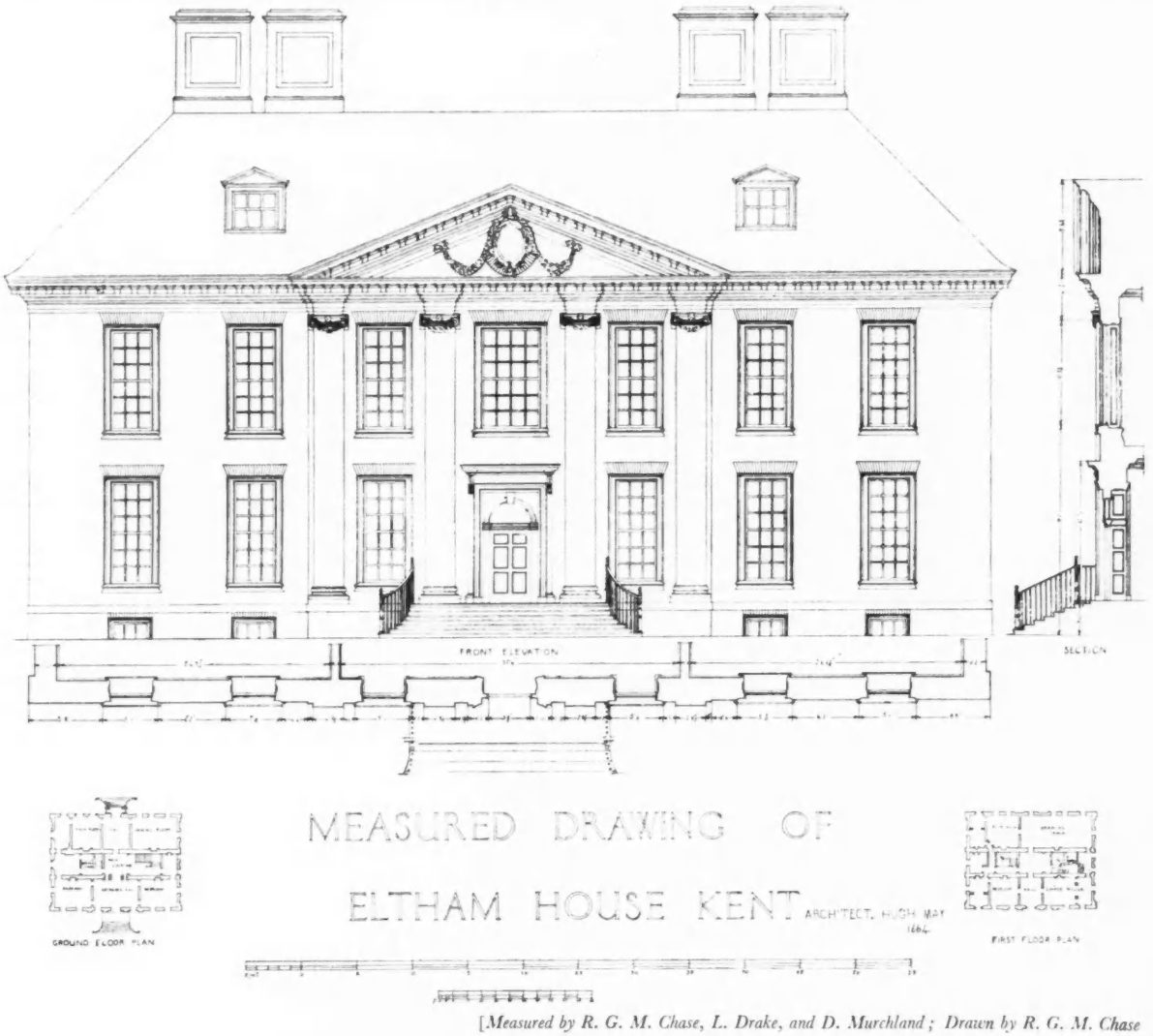
PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	,,	1 0
Do. with washable distemper	,,	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	,,	3 3
Do. on woodwork	,,	3 6
Do. on steelwork	,,	3 0
Do. and brush grain and twice varnish	,,	5 6
Stain and twice varnish woodwork	,,	1 11
Stain and wax-polish woodwork	,,	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper	from ,,	3 0

TWO MEASURED DRAWINGS

ELTHAM HOUSE, KENT

HUGH MAY, ARCHITECT



[*Measured by R. G. M. Chase, L. Drake, and D. Murchland; Drawn by R. G. M. Chase*

THE NORTH OR FRONT ELEVATION

ELTHAM HOUSE, of which the front elevation is drawn above, and an interior, overleaf, is believed to have been erected by an architect named Hugh May, about the year 1661. Outside, the house remains exactly as it was then, with the exception of the porch on the south side. The materials are sand-faced bricks of a beautifully mellowed red, and wood for the Ionic pilasters. The entablature and surround to the front door are also of panelled wood.

The building is covered with a roof of grey slate, which gives a more domestic appearance to the house than would have been obtained with the more formal balustrade.

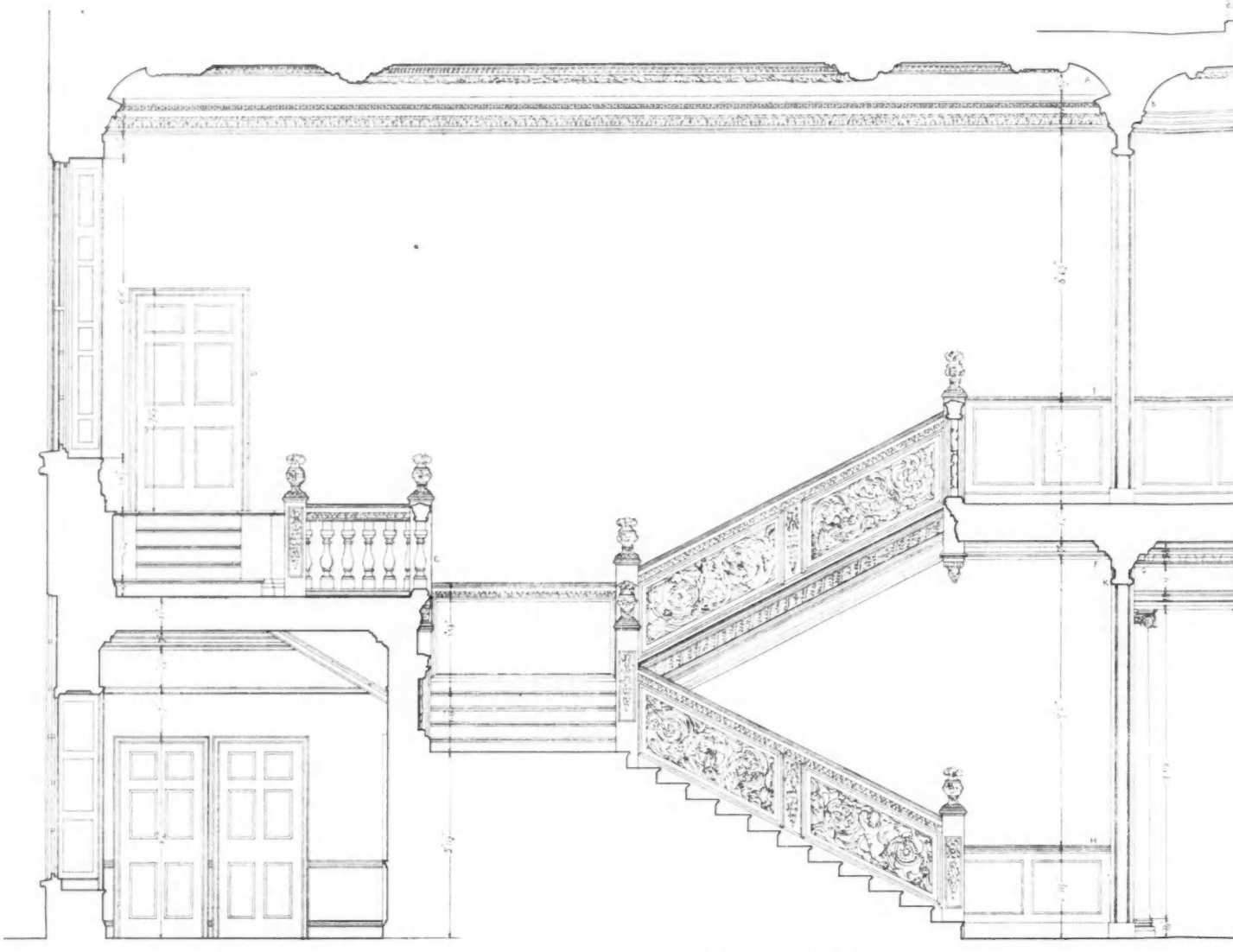
The three centre openings, enclosed by the well-proportioned Ionic pilasters, with their pediment, light the outer vestibule, on each side of which are two of the main rooms.

The other or south elevation looks across the valley, over a part of the estate, where two lines of trees still exist, climbing up the further hill and providing a magnificent vista. The four great chimney-stacks placed on the four corners of the roof at the junction of ridge and verge add very considerably to the general effect. The windows on all elevations are plainly moulded sash windows, set about a half-inch from the external wall face, in the manner of the period. Their early nature is well evidenced by the thick stiles and thin head.

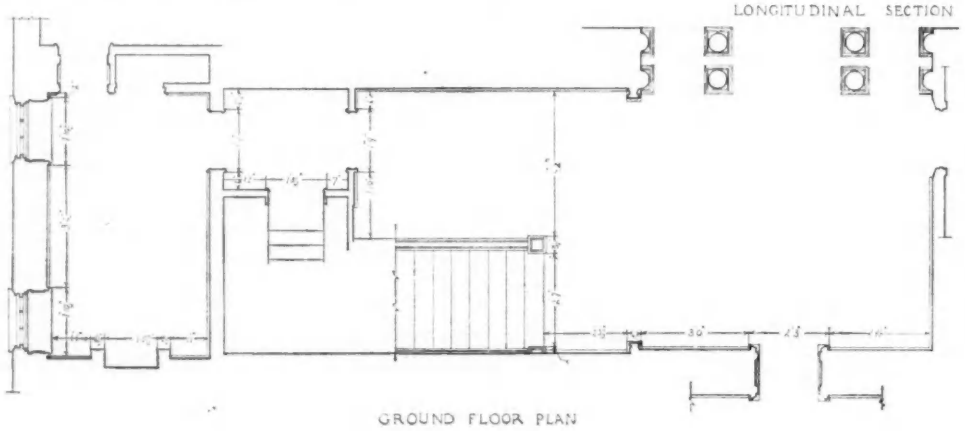
Within, there is a fine entrance hall, and a panelled and carved staircase, the character of which is indicated in the drawings.

MEASURED DRAWINGS OF ELTHAM HOU

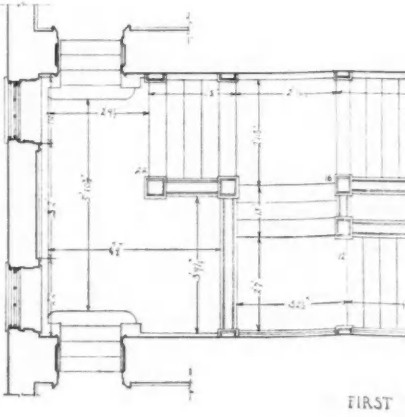
ENTRANCE HALL AND STAIRCASE.



LONGITUDINAL SECTION



GROUND FLOOR PLAN

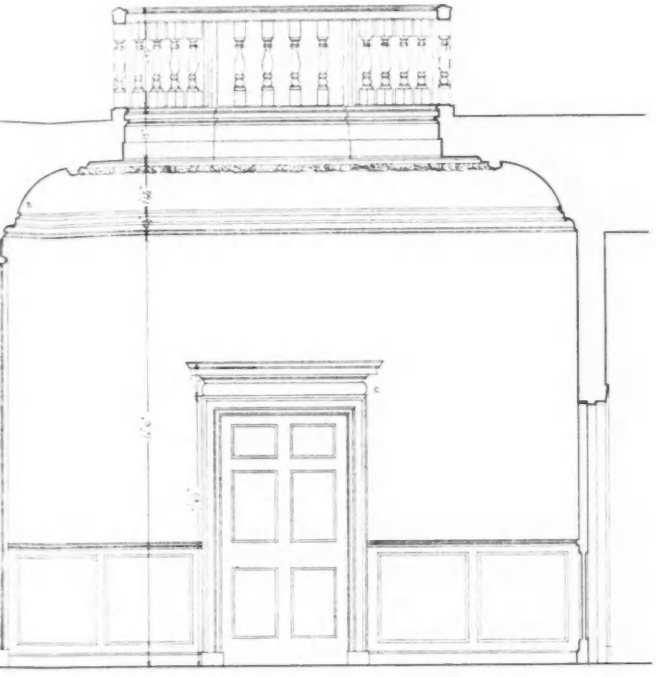


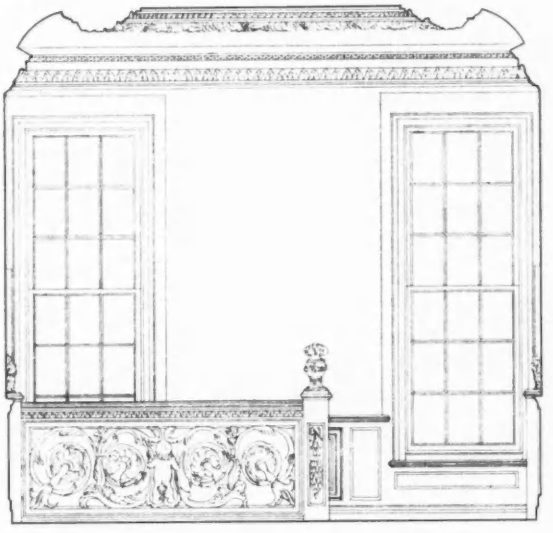
FIRST

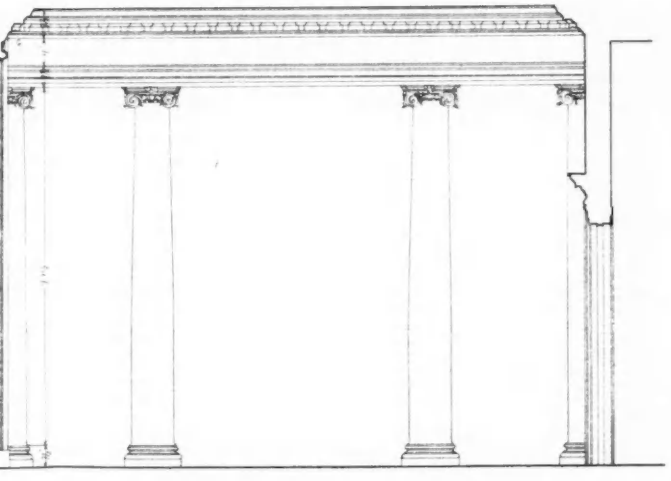
HOUSE, KENT.

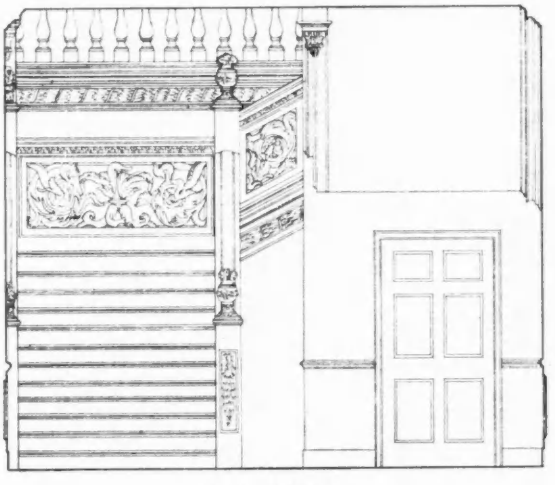
SCALES



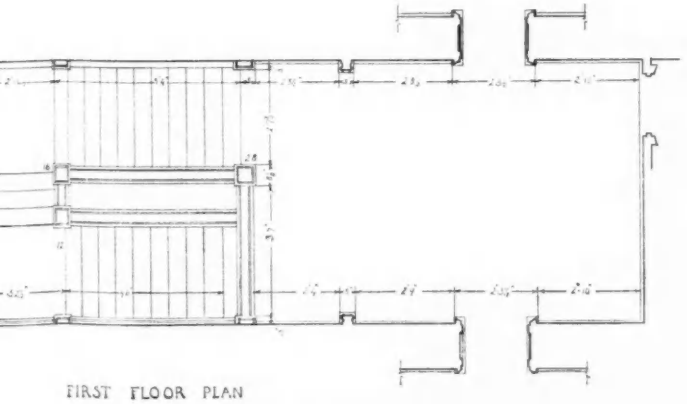




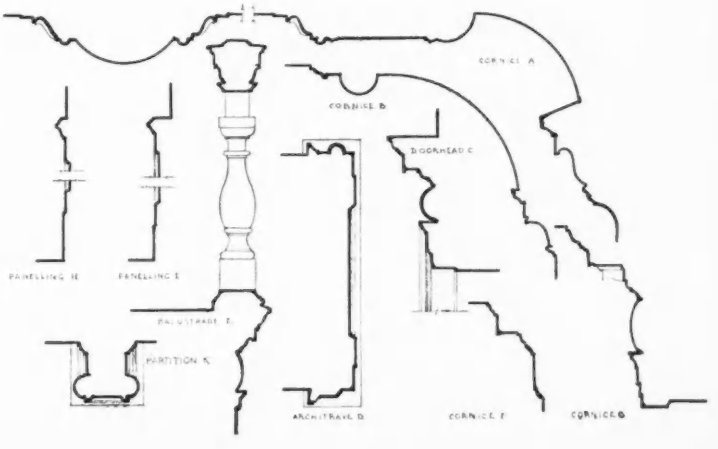




CROSS SECTION

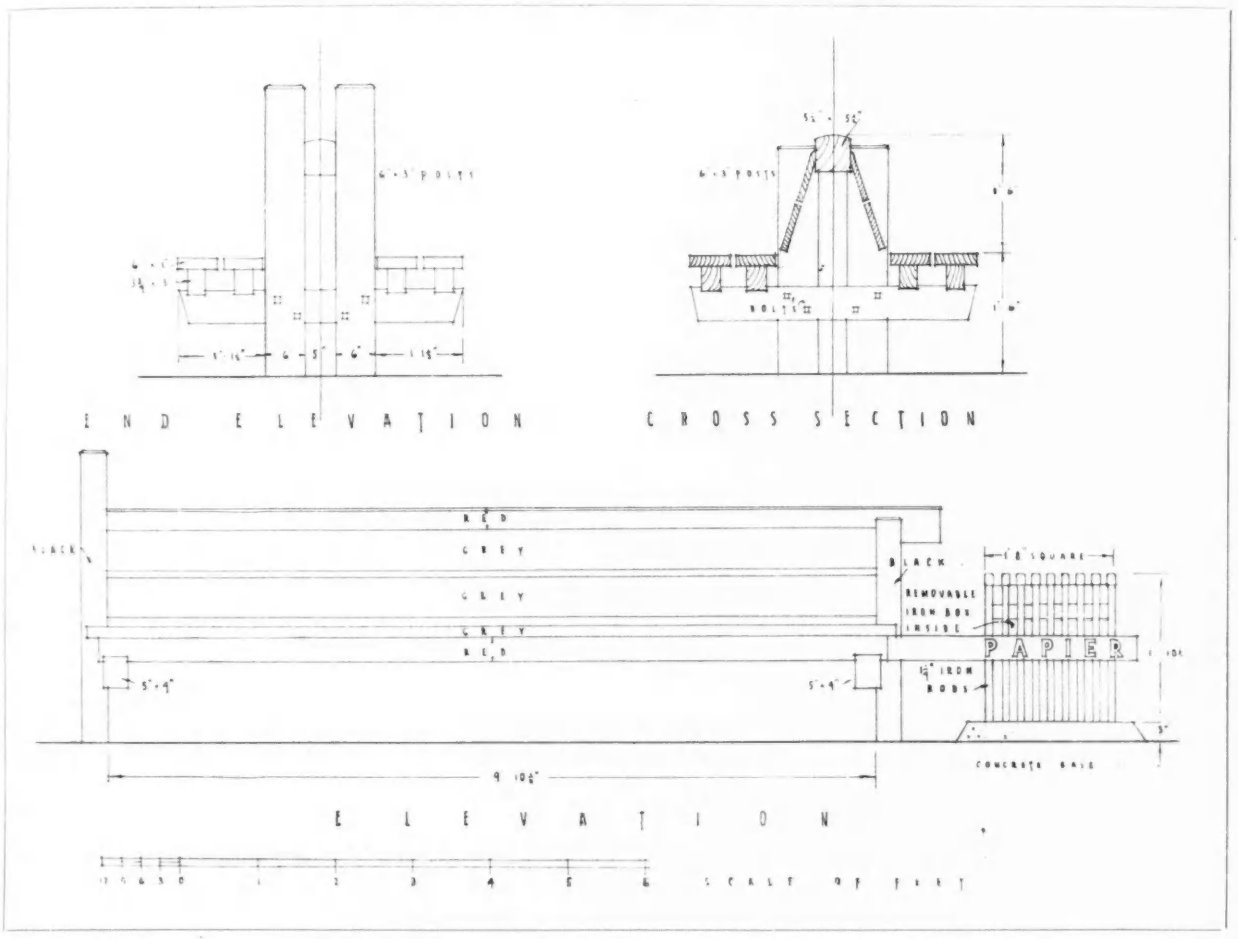


FIRST FLOOR PLAN



THREE MODERN DETAILS FROM ABROAD

MEASURED AND DRAWN BY FREDERICK GIBBERD



SEAT IN A PUBLIC SQUARE, THE HAGUE, HOLLAND

ABOVE and on the two pages overleaf are given working scale details of a public seat, a kiosk and a doorway, noted in The Hague and in Antwerp.

The public seat at The Hague is constructed entirely in wood, and the wastepaper basket, which is in iron, is cleverly linked up with it.

The colour scheme is vermilion, dove-grey and black. The design is robust and simple—a great contrast with the "ornamental" designs in iron and wood too familiar to English eyes.

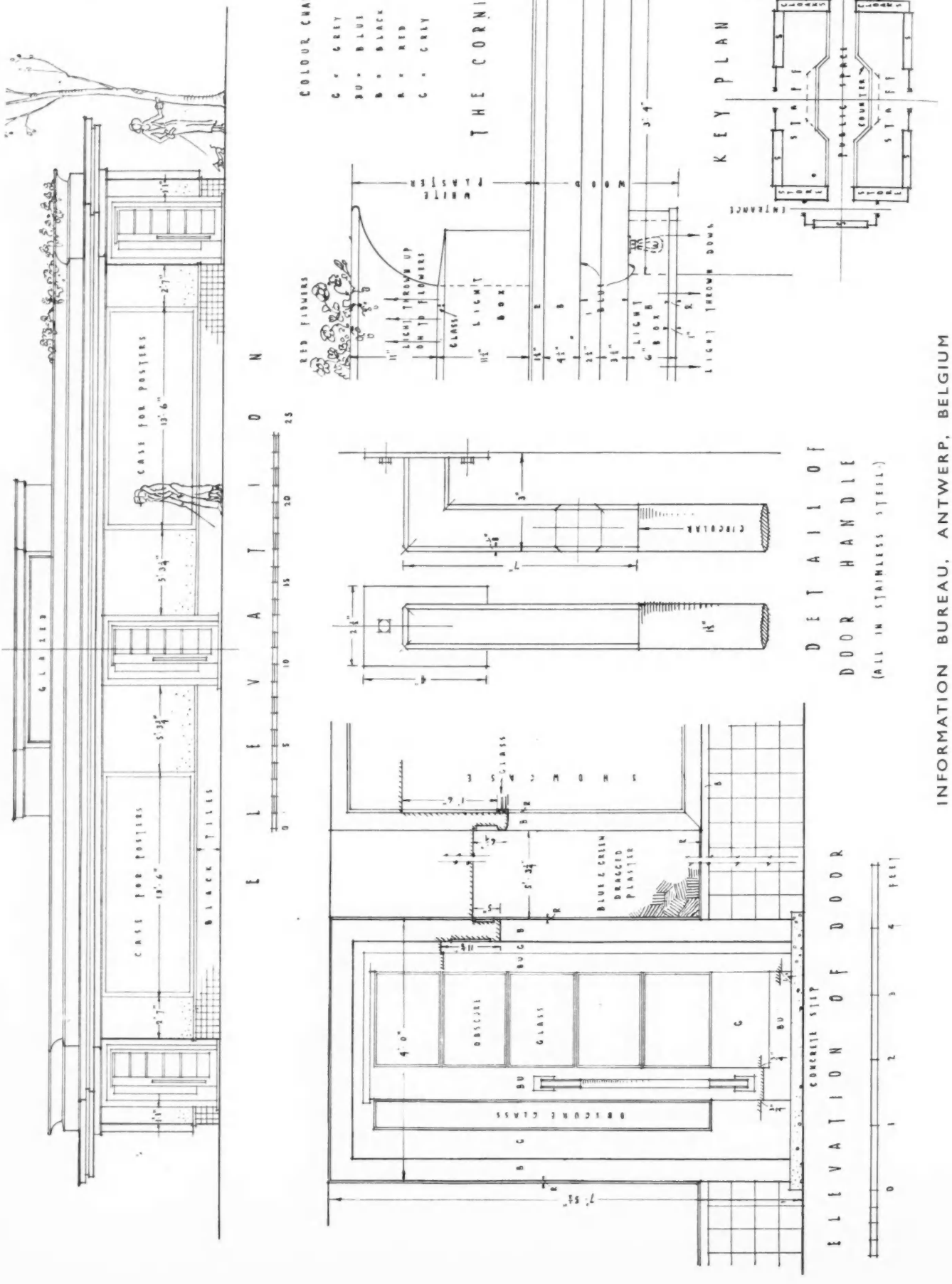
The information bureau at Antwerp is situated next to the station, so that a visitor to the city can immediately obtain information about hotels, etc. It is constructed of wood and plaster on a concrete raft.

The doors provide the points of interest, and are of wood glazed with obscure glass; the stainless steel handles are simple and bold. The eaves have a large projection to give shelter from rain.

The colour scheme, which is indicated on the drawing, is good, and the building is well flood-lit at night.

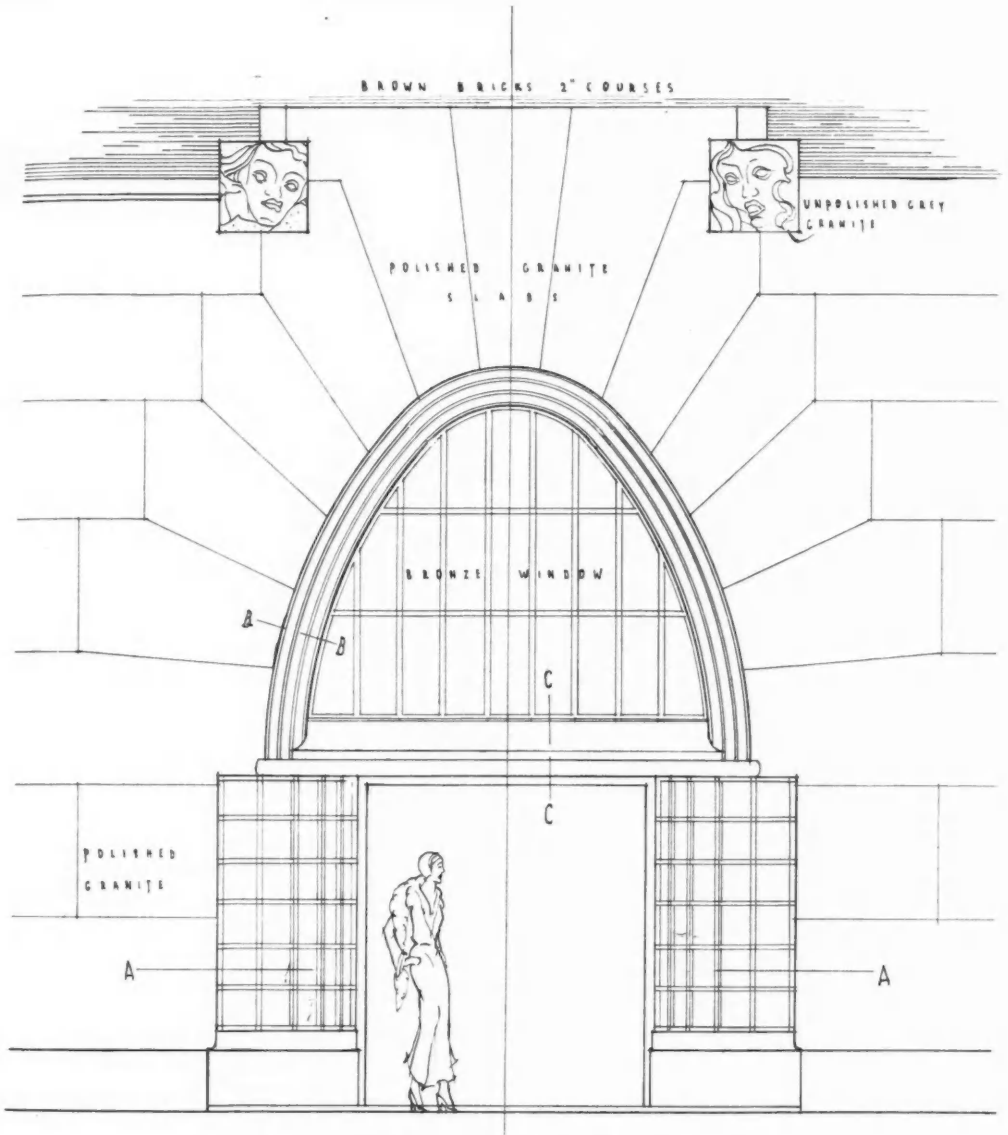
The charm of the design of the door to an office block, at The Hague, lies in its excellent shapes. The wall surface up to the first floor is a veneer of polished, mottled grey-brown granite; the jointing is very thin, and the material is treated frankly as slab construction. Above the first floor the external face is in 1½-in. rough brown bricks, which contrast well with the lightly-polished surface below.

The doors and window are in bronze, and the architrave to the latter is interesting. The heads in rough grey granite are good examples of direct carving.

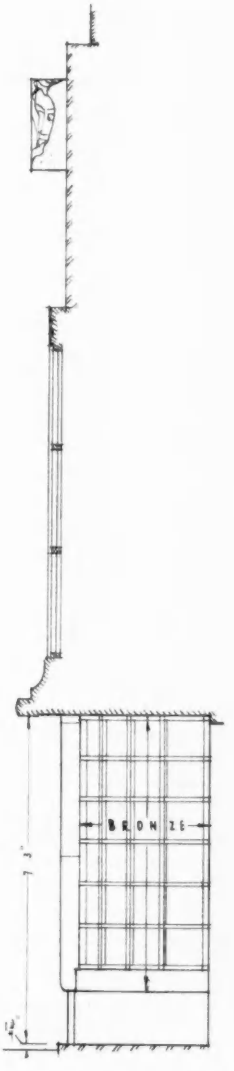


INFORMATION BUREAU, ANTWERP, BELGIUM

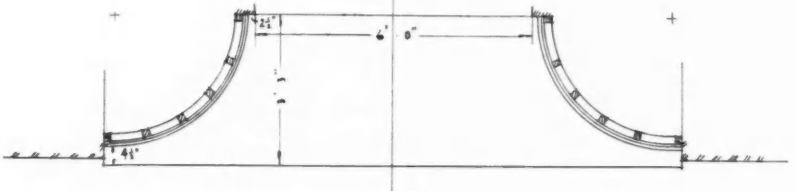
INFORMATION BUREAU, ANTWERP, BELGIUM



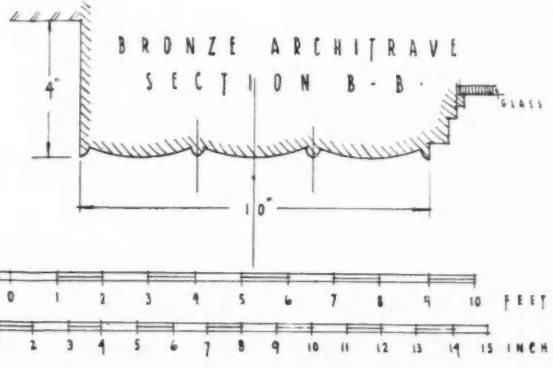
E L E V A T I O N

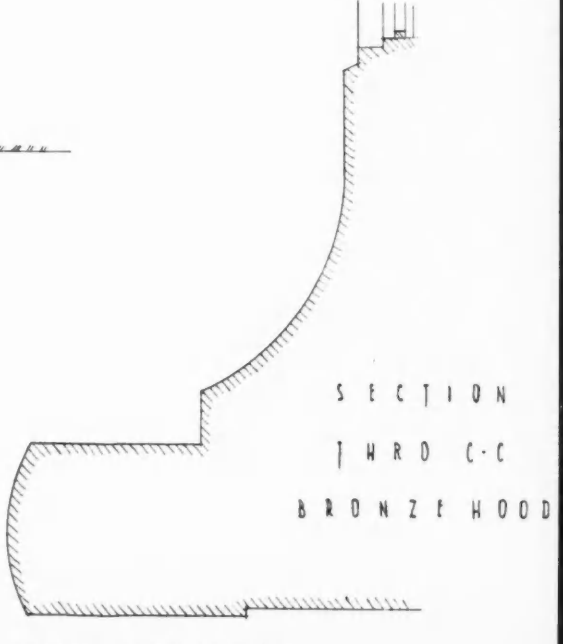


S E C T I O N



P L A N
THROUGH A-A

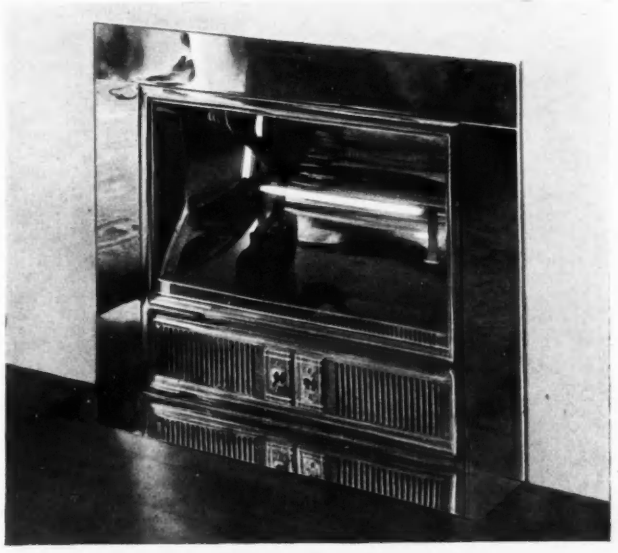




S E C T I O N
T H R O C-C
B R O N Z E H O O D

DOOR TO A BLOCK OF OFFICES, THE HAGUE, HOLLAND

SELECTED PRECEDENTS:
DESIGNING FOR THE NEW ENERGY



1



2

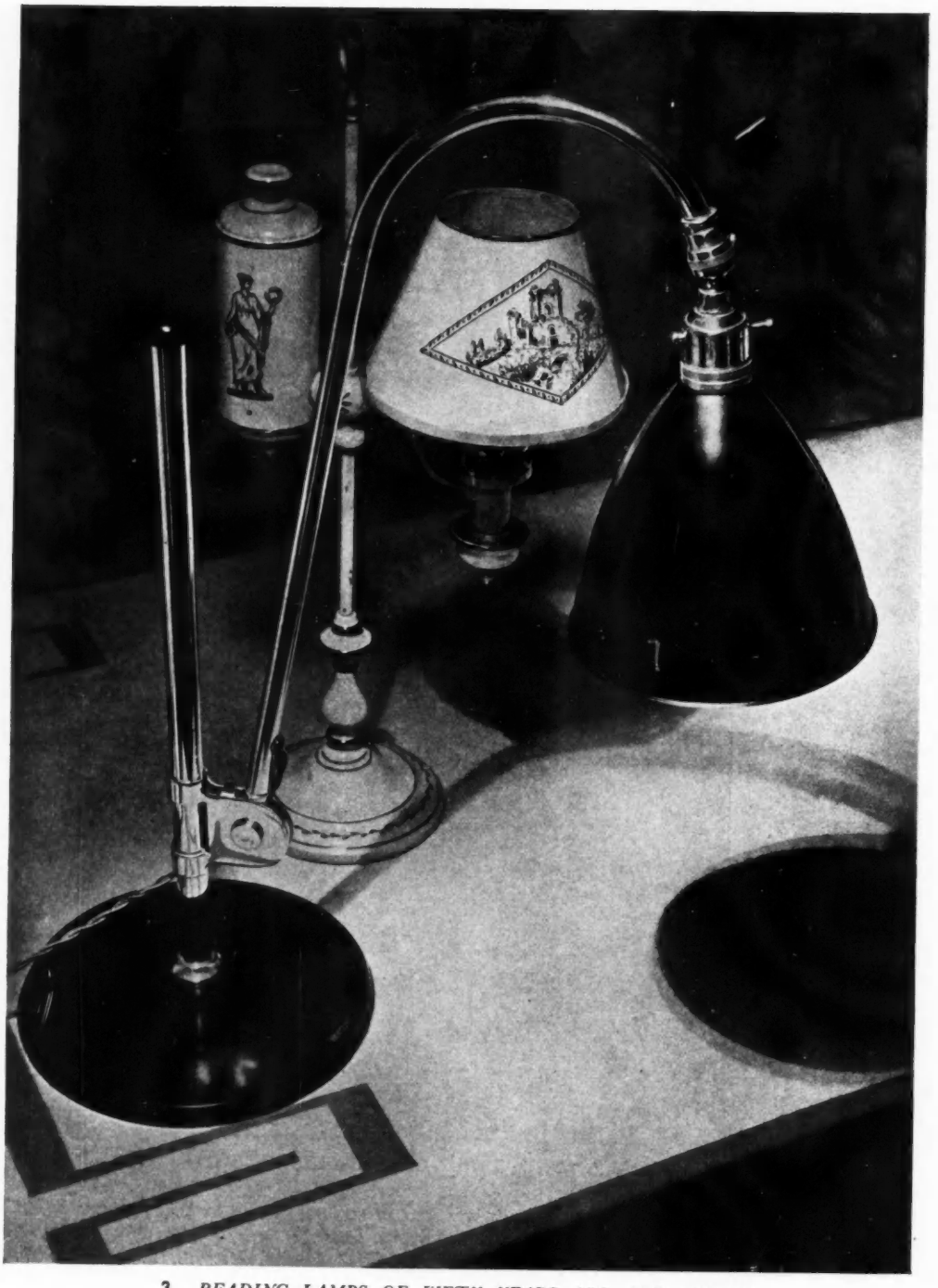
1 *and* **2.** *TWO TYPES OF ELECTRIC FIRES*

THE essential characteristics of mass-production design are often discussed today, but in this country are seldom found in actual building. Yet modern conditions of manufacture clearly demand designs for fittings and building equipment that can be produced easily in large quantities. The difficulty for the manufacturer is to be prepared with designs that will harmonize with the general trend of taste among his public.

Amongst the many designs of electric fires available in this country today, there are few that can in any way be described as typical mass-production designs of a genuinely modern kind. Two prominent examples of such designs are illustrated above.

Figure **1** *is a well-known type in which the heating element takes the form of a rod fixed into a parabolical reflector of high efficiency. The pattern, figure* **2**, *emits, through its well-proportioned row of copper slats, a more diffused heat, derived from a battery of lamps.*

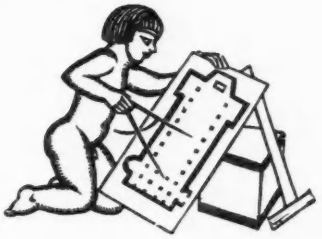
Figure **3**, *overleaf, represents what may well prove to be one of the most interesting events of the year in the British electrical industry. Though the design bears a close resemblance to one produced by a well-known Dresden firm, it is remarkable in that it is a really modern desk lamp designed for production in large quantities in England and at a startlingly low price. Between this lamp and the painted-tin oil reading-lamp of half a century ago, which stand side by side in the illustration, one could put thousands upon thousands of examples of misapplied ingenuity nullifying the effects of modern science and invention. The later example is an omen to some degree of the inevitable triumph of the modern movement.*



3

3. *READING LAMPS OF FIFTY YEARS AGO AND TODAY*

THE ARCHITECTS' JOURNAL



WEDNESDAY, MAY 27, 1931

"INCLUDE EVERYTHING REQUISITE"

THE story of the famous architect of the Gothic revival who specified " one spire as per sketch in margin " is probably apocryphal, but specification documents are too frequently written in ambiguous language interlarded with glib phrases. Contractors recognize these clichés, which have long since lost all meaning, if indeed they ever had any, and ignore them as they deserve. They can never be enforced, and in the courts lawyers and expert witnesses indulge in many bouts of verbal fencing with such sentences as " the materials and workmanship to be of the best "; " make good where necessary "; " include everything requisite to render the work complete," etc. Yet it is with this unsubstantial foam of words that some architects seek to safeguard their clients' interests and their own reputations.

The function of a good specification is to elucidate the working drawings and describe to the contractor the exact method of doing work that cannot be deduced otherwise. It is also a guide to the quantity surveyor in preparing his bills, and any architect who allows his specification to be written for him by the quantity surveyor has abdicated half his rights. A specification is not primarily a " safety-first " document, but the underlying tenor of too many of them is a determination to shift the responsibility for error of design or mensuration on to the shoulders of the contractor.

Ambiguity of language is one of the most fruitful causes of bad blood, and in no part of a job is it likely to cause more friction than over the quality of the timber. If a standard specification of this material, such as already exists for cement and steel, could be agreed upon, it would go far towards smoothing the progress of the work. In America, as described in " The Specification Writer " in this issue, constructional timbers have been graded into four classes—Selects, Clears, Merchantable, and Common—and the defects allowed in each class set out minutely in a standard specification, so that a contractor, reading the class of timber required, knows precisely the quality that he can deliver.

The specification should never be cluttered up with verbiage in the attempt to describe in detail items such as the profiles of mouldings and cornices that can be far more clearly shown on the drawings. The phrase " as will be detailed later " is absurd, as a contractor is quite unable to estimate for any work so described without being an expert thought-reader.

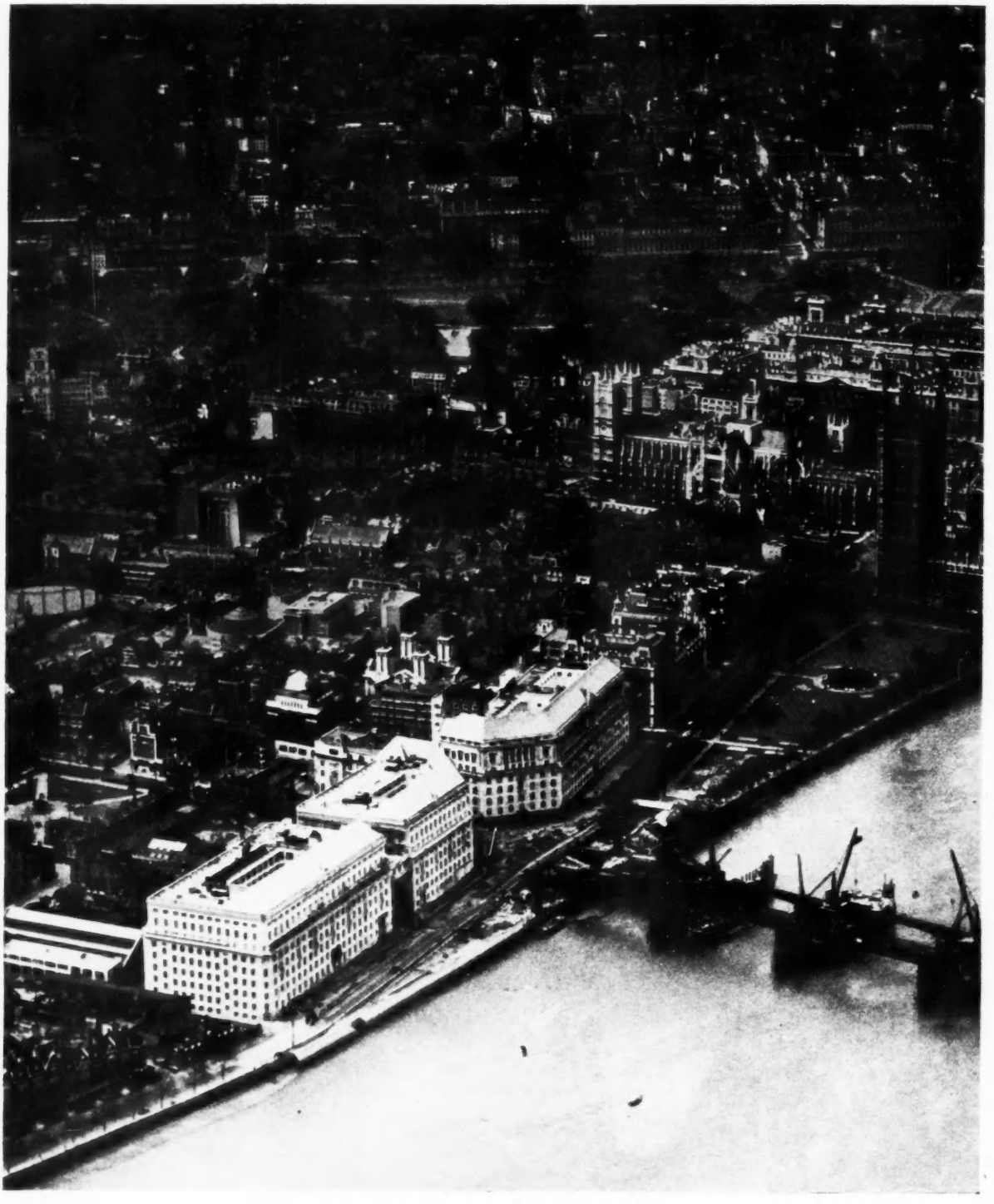
Another peck of trouble may be avoided by a careful " masonry " specification. Ashlar work and bonders should be shown on drawings with the beds figured, and the vague statement that the " ashlar is to be bonded to brick backing in an approved manner " avoided. On the other hand, the exact difference between work left for the carver and that to be done by the contractor must be clearly defined, as today a great deal can be executed by machinery and sculptors will charge for the unnecessary cutting of boasted stonework.

Plastering clauses, too, are often foggily written. There are so many patent plasters on the market, a number of them excellent, that the architect must specify exactly what he wants—and, what is more, be able to recognize the material specified when he sees it. The specification of paint is a further item over which there is no excuse for ambiguity, either in description of materials or methods of application.

There are today hundreds of proprietary articles and methods in existence, and the architect cannot know them all, but if he specifies clearly what he does know, he is in a position to discuss with the contractor as man to man any of the latter's suggestions. A frank " I don't know it " never forfeits respect, but the humbug of a pretended omniscience is soon revealed.

In writing a specification, general clauses should be avoided as far as possible. Too frequently they proclaim a careless or lazy mind. Such a clause as " no snapped headers will be allowed," followed on the next page by " the 11-in. hollow walls to be in Flemish bond," will give the general foreman a very shrewd impression of the type of architect with whom he will have to deal.

" Hard writing makes easy reading " is a truism, and a specification should be as painstaking a literary effort in this country as it is in America. For an educated man to express his wishes clearly in simple English ought not to be laborious, provided that he has in his mind a clear idea to express. There lies the secret; and the specification writer's golden rule might be said to be : Know what you want to write, and write only what you know.



THE NEW WESTMINSTER FROM THE AIR

Prominent in the foreground of this aerial view is the new Thames House, at Millbank, now rapidly approaching completion. Facing the opening between it and Imperial Chemical House, just behind, begin the works for the new Lambeth Bridge, the preliminary staging for which rests on four pontoons moored in the river. In the distance, on the extreme left of the photograph, is seen the tower of the Underground Building, and, reading towards the right, well-known landmarks are the dome of the Central Hall, Westminster Abbey and the Victoria Tower of the House of Lords.

NEWS & TOPICS



Sir Leslie Scott, P.C., K.C., who proposed the toast, "The Beauty of England," at the annual dinner of the R.I.B.A., held in the Hall of Lincoln's Inn, on Thursday last.



Mr. J. Hubert Worthington, O.B.E., F.R.I.B.A., the new President of the Manchester Society of Architects, who presided at their annual meeting (see page 767).

THE R.I.B.A. LONDON ARCHITECTURAL MEDAL, 1930

I LEARN that the jury entrusted by the R.I.B.A. with the award of the London Architectural Medal have announced their decision for the year 1930. After careful examination of drawings and photographs of all the buildings which were nominated for the honour, the jury have given their award in favour of the Westminster Bank, Threadneedle Street, E.C., designed by Messrs. Mewès and Davis. The Medal this year is awarded to the architect who has designed a building of merit completed within the County of London during the three years ending December 31, 1930.

THE REGISTRATION BILL

The Architects (Registration) Bill is, in all probability, now in the form in which it will receive the Royal Assent. It is unlikely that the Commons will disagree with the Lords' amendments, which, although numerous, were largely of a re-drafting and consolidating character. The Bill has had a long and chequered passage, and at one time it seemed as if the wholesale concessions, made by the promoters to those who regarded anything connected with the R.I.B.A. as anathema, had been in vain. Fortunately, wiser counsels prevailed, and the registration of architects will soon be an accomplished fact. But the Bill in its final form differs so completely from that introduced last autumn as to be almost unrecognizable.

THE R.I.B.A.'S ANNUAL DINNER

Picking up the menu at the R.I.B.A.'s annual dinner, held in the Hall of Lincoln's Inn on Thursday last, I was delighted to note that the chief toast of the evening was to be "The Beauty of England," proposed by Sir Leslie Scott, K.C. What possibilities, I thought, such a speech held. Sir Leslie said that this was the first occasion where this toast had been given at a public banquet. He thought that our English landscape represented a combination of nature with the handiwork of man which was curiously satisfying in its loveliness. Castle and manor-house, church and cottage, market town and village, he continued, enriched the landscape with a perfection of design and colour, in mass and in detail, not to be found in any other country. Our architecture would have been beautiful in any scenery; indeed, if the scenery had been monotonous, he suspected that the essential charm of our domestic architecture would have been more realized.

★

Referring to the Town and Country Planning Bill, Sir Leslie said that a large part of the success or failure of the Bill was bound up with the attitude of local authorities to the architectural profession. The nation must use its architects. Many of us were realizing for the first time, perhaps, through seeing so much bad building around us, what an ever-present influence architecture held upon us all. We could forget it when we were indoors, enjoying the shelter and warmth some architect—too often forgotten—had created for us. But we could not take a walk in any town, or in any countryside anywhere near a town, without architecture causing us pleasure or pain every day of our lives in an intimate fashion of which no other art was capable.

THE FOUNDATION OF THE A.A.

A résumé of the history of the Architectural Association since the year 1842 was given by Mr. F. R. Yerbury at a meeting of the A.A. on Monday of last week. A large audience thoroughly enjoyed the secretary's reminiscences of the early days of the school, with which he has been intimately connected during the last thirty years. He explained that the A.A. really began in 1842, although the usual date assigned was 1847. Actually, it came into being as the British Association of Architectural Draughtsmen. The idea behind the foundation of this organization was to foster the architectural education of the younger architects—in effect, a sort of trade union. The scheme was mooted by a man named Jayne. The first president of the A.A. was Mr. Robert Kerr, and the first secretary Mr. Jayne himself, who had been the secretary of the B.A.A.D. The officers for the ensuing year are :

President, Mr. A. B. Knapp-Fisher, F.R.I.B.A.; vice-presidents, Mr. C. H. James, F.R.I.B.A., and the Hon. H. A. Pakington, A.R.I.B.A.; hon. treasurer, Mr. C. Lovett Gill, F.R.I.B.A.; hon. secretary, Mr. L. H. Bucknell, F.R.I.B.A.; hon. librarian, Mr. W. M. Keesey, A.R.I.B.A.; hon. editor, *A.A. Journal*, Mr. G. R. Dawbarn, M.A., F.R.I.B.A.; past-president, Mr. G. Grey Wornum, F.R.I.B.A. Ordinary members of the Council : Messrs. H. Chalton Bradshaw, F.R.I.B.A.; C. Cowles-Voysey, F.R.I.B.A.; J. Murray Easton, F.R.I.B.A.; Charles H. Holden, F.R.I.B.A.; R. E. Enthoven, A.R.I.B.A.; A. W. Kenyon, F.R.I.B.A.; J. R. Leathart, F.R.I.B.A.; Lionel G. Pearson, F.R.I.B.A.; E. Berry Webber, A.R.I.B.A.; and C. D. St. Leger, A.R.I.B.A.

FUTURE OF THE FOUNDLING HOSPITAL

As I write these words the last chances of saving the Foundling Hospital site for an open space are slipping away. The Children's Hospital seems to have made the strongest claim to the land, but the large sum required could not be found, and the L.C.C. being unable to step in, it falls now to the local borough councils to make the last desperate effort. These failing, the site will be

developed as densely as the law allows, and London will lose an open space for ever. Lord Rothermere will lose the heavy option he took on the property, and his generosity will have been of little avail.

*

One course still remains open to us if we sufficiently value even smaller parcels of open space. The site is to be developed by running two parallel streets north and south, and one street at the north end of the site, connecting Brunswick and Mecklenburgh Squares. As shown on the agents' plan, no open space is allowed for. What I would suggest is that either smaller open gardens be purchased at each end (the one that would face Lamb's Conduit Street being especially valuable); or that enough land be purchased to form an open garden or square inside the development. Conversely, the entire purchase might be made with such a plan in view, so that the loss might be made a good deal less onerous if, in course of time, there would be any appreciable loss at all.

SANE PROGNOSTICATION

The Town Planning Institute gave itself up to prophecy at its last meeting, and, contrary to popular expectation, indulged an audience with sane and un-utopian prognostication. Mr. Thomas Adam's London of forty years hence was no wild dream of mechanical progress, for he believes in neither social utopias nor mechanical efficiencies. It is to a system of decentralization that he looks for the regeneration of London: not pulling down the wealth of fine and historic buildings in the centre to rebuild it on a new plan, but diluting the congestion there by the re-creation of new centres of commerce and industry in regions that are now spread out in chaotic waste.



A glimpse of the London Group of Haig Homes at Morden, Surrey, to be opened by the Prince of Wales on Friday next, May 29. The architects are G. G. Wornum and L. de Soissons. The first portion of the scheme provides for 123 homes, all of which have been completed. Part of the estate has been leased to the Housing Association for Officers' Families, for the erection of sixty-eight houses and flats, leaving ample space for about sixty more homes, in addition to the proposed Institute building.

*

Thus, while he can imagine few changes along the northern bank of the river, he sees the south bank transformed through the agency of a great scheme of redevelopment of which a new Charing Cross, electrified and underground, would form the essential nucleus.

*

His ideas relating to the height of buildings are so interesting that it may be hoped he will develop them further, for with as severe an insistence upon uniform street architecture he would allow of greater heights over a portion of the building plot—and all this with a reduction of the cubical capacity at present allowed by the London Building Act. His aim, clearly, is to avoid the sheer mass of 80-ft. high building which, as we all know, closes darkly in upon even our wide thoroughfares. If this can be avoided with economy, it will be interesting to learn just how.

THE OLD ORDER DIES——

"'Tis a changing world we live in, is it not? In Montgomery they are going to pull down the ancient and picturesque black and white mansion, Lymore." (I quote the agents.) In London we are putting up blocks of working-class dwellings which, with every year passed, become more consciously architectural. A bad thing for us if we were about the work of destruction only. Bad thing enough to destroy anything old and beautiful; which bears the patina of time to remind us that building must be good and lasting. (Some account of Lymore, by the way, appeared in the JOURNAL for November 20 and 27, 1929.) But let us take heart of grace to see what we can do in another, and surely not less worthy, sphere; for what we build for the poor of London is most essentially the work of our time, and, gathered together, will not do us discredit.

*

I am prompted to these remarks by the recent opening of a block of flats in Devonshire Road, Hackney, the architect being Mr. Ian B. M. Hamilton. These flats were erected by the Bethnal Green and East London Housing Association, Ltd., which is a voluntary association of a type which is multiplying itself in London and in England generally. There is no better indication of the realization for the need of action in the matter of slum clearance than the existence of such active bodies as these.

ANTI-SCRAP

At the annual general meeting of the Society for the Protection of Ancient Buildings, Lord Esher, who was in the chair, announced that last September the Society had received an anonymous donation of £20,000. A full committee had been called to discuss how best this money could be used. It had been decided to invest it in old buildings which might otherwise be destroyed and to endeavour to convert them, without spoiling them, into paying concerns. A special subsidiary company had been formed to deal with this, but it would in no way affect the regular work of the Society

ASTRAGAL



The main entrance front. The elevations are built of hand-made red facing bricks, with Portland stone dressings, and the roof is covered with green slates. The site is situated practically in the centre of Hendon, and is consequently easily reached from every part of the district. It is also large enough, as will be seen from the plans reproduced below, for the building to have light and air on all four sides.

HENDON CENTRAL LIBRARY

DESIGNED BY T. M. WILSON

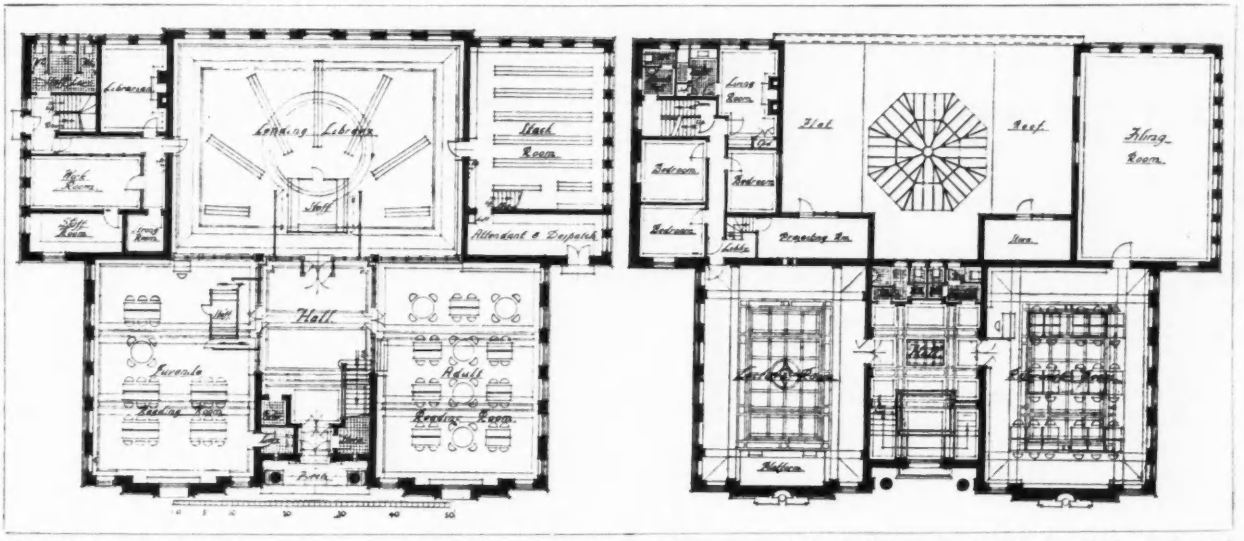
THE first step towards the provision of a public library in Hendon was taken in 1914, when the Urban District Council promoted a competition for designs for a library and a swimming bath. This competition was won by Mr. T. M. Wilson, F.R.I.B.A., the architect for the present building, but the project, like a great many others throughout the country, had to be abandoned owing to the war. During the period which elapsed before the commencement of the present scheme, Hendon more than doubled its population, with the result that new designs were prepared—this time for a library building only, and on more ambitious lines.

In the new building, which stands on the same site as that proposed in 1914, the simplicity of arrangement achieved by the architect readily reflects itself in the provision for supervision by the staff. An outstanding case in point is provided on the ground floor. Here the entrance hall is placed approximately in the centre of the building, and gives direct access to the lending library and to the adults' and the juveniles' reading rooms. This has enabled the staff enclosure in the lending library to be planned, not only to give supervision to all parts of that room, but to make it possible from this one position to see into both the adults' and the juveniles' reading rooms, thus providing a central point of observation.

This is a typical instance of the care with which the building has been designed. As may be judged from the accompanying illustrations and captions, infinite pains have been taken with even the smallest detail. The library fittings and furniture were designed by the architect, in consultation with Mr. J. E. Walker, the chief librarian.

The official opening ceremony was performed by the Rt. Hon. the Earl of Elgin and Kincardine, C.M.G., LL.D.

Having regard to the wide extent and the rapid development of the district, the Council have under consideration the provision of branch libraries at points not less than 1½ miles distant from the central library or from each other.



Plans of the ground and first floors. The lending library occupies the largest room in the building, the shelving here being estimated to accommodate about 17,000 books. Adjoining it, on the right, is a stock room, capable of housing 28,000 volumes.



The main entrance ; and a view in the lending library. A. H. Wilkinson executed the stone carving on the main front. The lending library room is fitted with wall and floor bookcases, the latter radiating from the staff

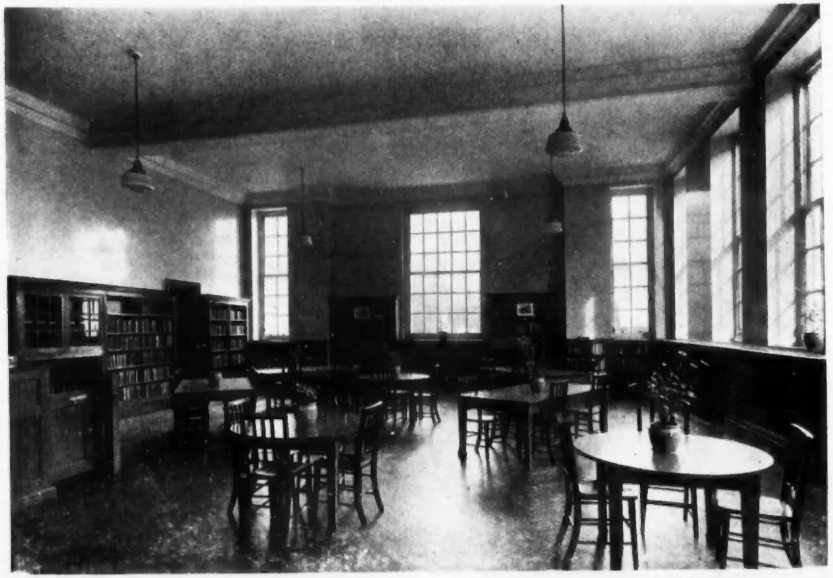


enclosure. Special features include the strip lighting for the bookcases and the sloping of the three lower shelves in each bookcase to enable the titles of books to be read without stooping. Hendon is thought to be the first public library in the country to be so equipped.

stooping. Hendon is thought to be the first public library in the country to be so equipped.



In the reference library are shelves for 4,000 volumes and double-sided tables with chairs for thirty-two persons. Lighting is obtained from side windows and a large top light.



In the juveniles' reading-room are low tables and chairs for forty readers, and a recess fitted with a lavatory basin. Two thousand volumes are accommodated on the shelving.



Hendon Central Library, N.W.]

The hall, looking towards the main entrance. On the left and right respectively are the doors to the adults' and juveniles' reading rooms; behind the camera is the lending library.

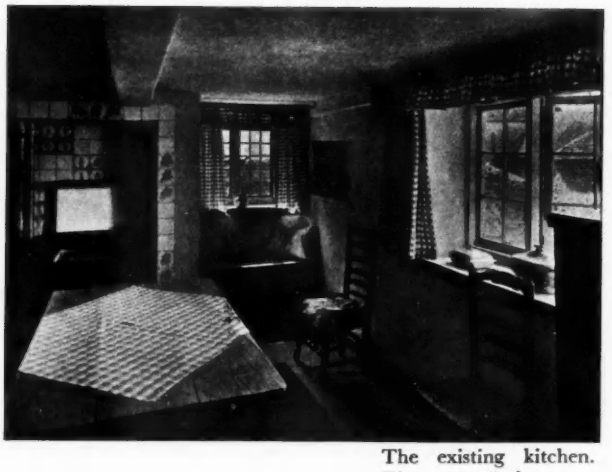


[*By T. M. Wilson.*

The first-floor landing. The interior of the building generally is treated with plaster walls and ceilings painted a light colour; the woodwork and the furniture are of oak.



A photograph showing how the chauffeur's cottage has been joined to the farmhouse by means of an archway.



The existing kitchen. The near windows are also seen on the extreme right of the adjoining illustration.

ADDITIONS AT A SUSSEX FARM

DESIGNED BY JOHN D. CLARKE (CLARKE AND WORSFIELD)

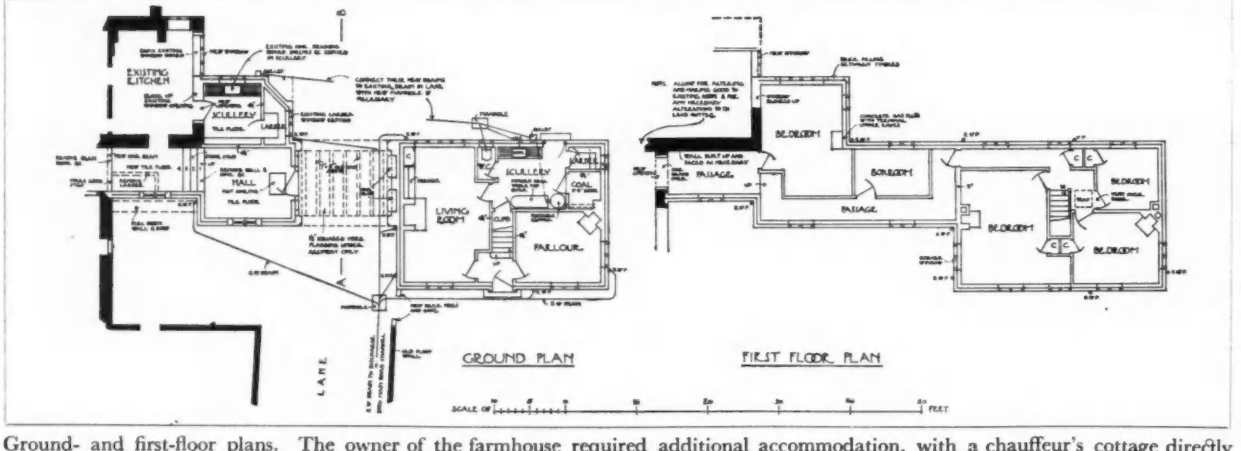
DANN'S Farmhouse, which stands a little way back from the main road between Eastbourne and Lewes, just on the outskirts of the village of Willingdon, is a typical old house of the Downs country. It is built of flint, rubble, brick and anything that came handy. It has been altered a good many times, the first additions being made in 1688, when someone bearing the initials E. M. thoughtfully let a little stone into the north gable, bearing witness of his charming work.

The work shown in the accompanying illustrations indicates the latest alterations, carried out by the architect, Mr. John D. Clarke. The owner required some additional accommodation, and a chauffeur's cottage was needed, directly connected with the house. How this has been done can be seen from the plans reproduced below.

The new work has been carried out in materials in character with the old work. Local bricklayers were found who still knew how to handle flints and to build them with a generous amount of coarse mortar.



The chauffeur's cottage. The external walls are hollow, built of flints, backed up with 3-in. brick on edge; the materials are bonded together with galvanized wall ties. The inner brick walls are 4½ ins. thick.



Ground- and first-floor plans. The owner of the farmhouse required additional accommodation, with a chauffeur's cottage directly connected to the house. This has been done by joining the cottage to the house with a stone archway. This archway now serves as a porch to the main entrance to the house, the original entrance (not shown on plan) now being used as a garden door.

Bernard Whistlow, F.R.I.B.A.: An Autobiography: i

I AM ARTICLED

BY KARSHISH
(H. B. CRESWELL)

The author feels he ought to warn those readers of this fictitious autobiography who, not content with eating the pudding offered them must make a meal of the plate as well by trying to fit caps, that they will have a thankless task and be likely to get a severe indigestion of the whole business in the perpetual torment of finding that, for all their trouble, they have not made the caps fit after all. When a cap is to be fitted the author will fit it himself, for all to see and admire; when it is not to be fitted he will take an unholy delight in making it impossible for anyone to do so.

IT was a year or two ago that my old friend, Philip Garston, asked me to dine with him at a well-known London restaurant. The date coincided with the birthday which is—for arithmetical reasons—regarded as memorable in a man's life; but I had no idea Garston was aware of the significance of the day until I kept the appointment and was shown into a private room, where I found fourteen brother architects and other friends waiting to greet me. I did not know that I possessed so many well-wishers, and, in reply to the usual congratulatory and mawkish speeches which overfeeding and sub-intoxication induce on those occasions, I could only say that I did not know what I had done to deserve such a celebration; whereupon Garston immediately called out: "We don't know either, old boy; but whatever it is, you've been doing it a dam' long time now, remember."

It is a fact that my work has not been conspicuous, either in bulk or in achievement, and I can lay no claim to literary skill; but I have, certainly, now been earning my living for a very long time, and my partial retirement finds me with the need for an outlet for activity of mind which is at times irksome, and has led me to amuse myself by jotting down these reminiscences of a naked encounter with life in which I have had to make my own way. Whether any eye but mine will ever read these pages, or any discreet editor will ever purge them for the press, is—as my young friend, Christian Barman, is fond of saying—"in the lap of the gods."

I made a bad start, for I was educated as a day scholar at Yaw, of which place my father was for forty-three years rector; and I attribute many of the disabilities that have handicapped me in life to never having gone to a boarding school, and to a home life which rallied to a harmonium in the dining-room. When I left school I could not say "bo" to a goose, for my father had never allowed any of his children to say "bo" to anything until my four brothers at different times earned that right for themselves by saying "bo" to *him*—poor man! I was the good boy of the family, who always accepted my father's guidance, obeyed his wishes and assimilated his opinions; and—on the paradoxical principle which I have observed usually to operate in human relations—he held me in low esteem and felt baulked and dissatisfied because I excelled in precisely that filial dutifulness he had insisted on.

The reason my father made me an architect was, I believe, that I was the weed of the family. This weediness was due to a severe attack of double pneumonia when I was a fast-growing boy, and to an adhesion of the pleura which caused me to emerge from the ordeal with a pronounced list to starboard—an obsequious, ingratiating condescension to the right that would have made my fortune had I been called to the state of shopwalker. I lost this extreme graciousness of bearing—at perhaps some disadvantage to my career—as I grew to full manhood, so that scarcely anyone but my tailor was aware of it; but when I was approaching eighteen my father was so oppressed with my shortcomings that he decided there was nothing for it but to make an architect of me.

Behold me then, six weeks short of my eighteenth birthday, when my father carried me up to London to deliver me like a sack of coals as a pupil at the office of Mr. Graham Barstairs, of 2 Thalmer's Court, Westminster! I was indifferently educated; extraordinarily inexperienced and limited in mind and in sympathies; shy, reserved, and subservient, and lacking in all cultivation except the untutored use of a light tenor voice, with which I strove to emulate the calf-like bleat of the *vox humana* stop of the family harmonium. I was 6 ft. ¾ in. in height as I stood, or a trifle more on the curve, weighed 9 stone 2¼ lb. out of my clothes, measured 33 ins. round the chest, 34½ round what my tailor tactfully calls "the lower chest," and bashfully yielded 35½ to the tape in the dimension that comes next below. I mention these matters because the fact that I entered on the life with considerable disadvantages must not be forgotten. I had, however, a sound constitution, a high vitality which the early recapture of a manly physique speedily enthroned, my disabilities of character were of environment and not innate, and my limited perceptions were due to an unawakened mind and not to a dull one.

My earliest impression of my career as an architect—and it is a peculiarly vivid one—is of the May morning in 1885 when my father took me from the Ladbroke Hotel across Bayswater Road—where buses thumped and jangled, and rubber-tyred hansoms sped along with tinkling warning bells—to Westminster "to see," as he put it, "whether Mr. Barstairs likes you or not." This question, as I was painfully aware, caused him to take stock of me: he weighed me in his balances as I walked in shy docility like a lamp-post beside him, and found me wanting. He grew increasingly impatient at my shortcomings as we approached Queen Anne's Gate, and his plunging, bull-like stride lengthened. At forty-nine he was a robust broad-shouldered man who had not forgotten that he had been a noted hurdler in his day.

"Why do you lag, my boy? Robustness! Vigour! Exuberance! Step out as I do! Why don't you walk abreast?"

I lagged partly because the idea of walking even one inch in *front* of my father was an unthinkable presumption; but chiefly by coercion of my dress, which was that in which I attended church at Yaw, and which consisted in a starched linen "dress" shirt, a starched stick-up collar, 2½ ins. high, and the inevitable top hat. I also wore a black tailed morning coat, and trousering of heavy cloth which strapped me tightly round. It was a warm day; my father walked as if on a wager to John o' Groats; I was melting under the armoured encasement of my shirt, the garotting, neck-stretching rigidity of my collar and the mystic sweat-engendering provisions of my top hat. Above all, the toughness of the resistance my fashionable tailor had opposed to flexibility of the thighs, where I seemed to be confined by surgical bandages, so greatly discouraged the dancing buoyancy my parent required of me, that my efforts must have resembled the hind-leg

progression of a very old tom-cat. This garb was my daily garb for many years: top-hatted, tight-trousered, collar-bound and tail-coated, I fought my way into the galleries of theatres and climbed about amid the dust and mortar-droppings of Barstairs' "jobs," and I would as soon, then, have gone abroad without a top hat and its concomitants as without a collar, now.

Graham Barstairs' office was at 2 Thalmer's Court—a delightful backwater near Emmanuel Hospital and, like it, long ago demolished. Thalmer's Court was a little smaller than Craig's Court, Whitehall, and was a fine setting for an architect's practice—though it was only after my taste had been awakened that I learnt to love it. The Court was enclosed by Early Georgian houses, of which I am reminded whenever I pass through Church Row, Hampstead. There was a plane tree with a seat built round it—removed in my own time because it became a loitering place for the destitute—and the Court was paved with cobbles, surrounded and crossed by flagged footways, and there was space for vehicles to enter and to circulate. No. 2 had steps over the area like the other houses and, like them, a characteristic pilaster-and-architrave surround and pediment; but no two of these were identical in different houses, and that which welcomed us to Barstairs' door was more elaborated than the others, and may today be seen by the curious at the Victoria and Albert Museum, where it was placed when the beautiful old Court, fragrant with memories it dispersed like a perfume, was torn down

When my father pulled the bell, a gong startlingly sounded on the back of the door, which at once fell open before us, and we walked into a small hall, where a clerk, in his shirt sleeves, with the cuffs folded back and the bottom of his waistcoat turned up to display the lining densely stained with ink spots, immediately appeared from a side door and directed us to go to the first floor. There we entered an office, once the back drawing-room, and were received by a clerk who, being informed of our names, went through the folding doors that separated the office from the adjoining front room, and immediately returned to usher us into the presence of Mr. Graham Barstairs.

I well remember this first meeting with my old master and friend, whom I was to see almost daily during seven long years, and in whose professional life I was increasingly to bear a part. The fine room, with its three windows on to the Court, was lined with the heavy bolection-moulded and bevelled panels of its date, painted white, and was simply furnished with a pedestal writing-table in the middle of the floor, a drawing bench that ran the whole length of the window wall, a few fine eighteenth-century chairs, and a glazed bookcase. "Grig"—as we called him in the office, though I never heard him so named by others—turned from his drawing board to greet us—tall, elegant, neatly dressed and charming, with his pleasant smile and the grey hair which is so becoming to youthfulness, and his clear, fresh complexion. He wore no beard or moustache, which was unusual in those days, but was clean-shaven except for closely-trimmed side whiskers which ended in a straight line below the ears. The easy, unruffled bearing of a man who had not a care in the world, which I came to know so well, was borne in upon me on that first encounter with him. My father had previously interviewed him, arrangements had been formulated in writing, and the occasion for our visit was advertised with unnecessary baldness when, after we were seated and various trivial courtesies had been exchanged, my father said:

"Well, Mr. Barstairs, this is the young hopeful," and he blinked in a nervous way he had and, if he did not actually colour up, he gave me as vivid a sense of his embarrassment at owning me for a son as if he had, in fact, done so. The person he addressed turned his quiet, glowing, dark-grey eyes upon me and smiled. I was rehabilitated.

I can sympathize with my father, for a circumstance occurred which, though it rankles for its shock to my self-esteem, shows me that his sensitiveness was excusable. The conversation had decayed to pointless interchanges by which "Grig" disguised that he wanted us to go and my father that he wanted to get away, and I fell to staring at the drawings hung about the walls and, in my absorption, began gnawing and pulling with my teeth at the fingers of my left-hand glove—which, by my father's directions, I had put on as a symbol of good breeding before we entered the house—when suddenly, as he talked, his arm made a great, blind sideways sweep, and his hand caught mine and forced it down upon my knee. I was humiliated at being thus presented to my future master as a tailed and trousered imbecile who had yet not outgrown the need for the discipline of the nursery; but such was "Grig's" innate kindness of heart, understanding sympathy and charm of manner, that he entirely restored my complacency in the brief encouraging words he spoke when, a few minutes later, we rose to say good-bye, and I left the house with a first glow of the happiness and enthusiasm with which this delightful man imbued all who associated with him.

NEXT WEEK—II: REMINISCENCES OF PUPILAGE

THE ARCHITECTS (REGISTRATION) BILL

[BY OUR SPECIAL PARLIAMENTARY REPRESENTATIVE]

A FEW minor amendments were made during the report stage of the Architects (Registration) Bill in the House of Lords, although most of them were of a drafting nature.

To the second schedule, which deals with the constitution of the Board of Architectural Education, Lord Ponsonby moved an amendment to make the representation of the Schools of Architecture as follows:

One person nominated by the governing body of each of the following schools of architecture:

- The Liverpool School of Architecture, University of Liverpool.
- The Bartlett School of Architecture, University of London.
- The School of Architecture, Victoria University, Manchester.
- The Architectural Association School of Architecture, London.
- The Glasgow School of Architecture.
- The School of Architecture, Edinburgh College of Art.
- The School of Architecture, Robert Gordon's Colleges, Aberdeen.
- The School of Architecture, Leeds College of Art.
- The Welsh School of Architecture, Technical College, Cardiff.
- The Birmingham School of Architecture.

Four persons nominated jointly by the governing bodies of the following schools of architecture:

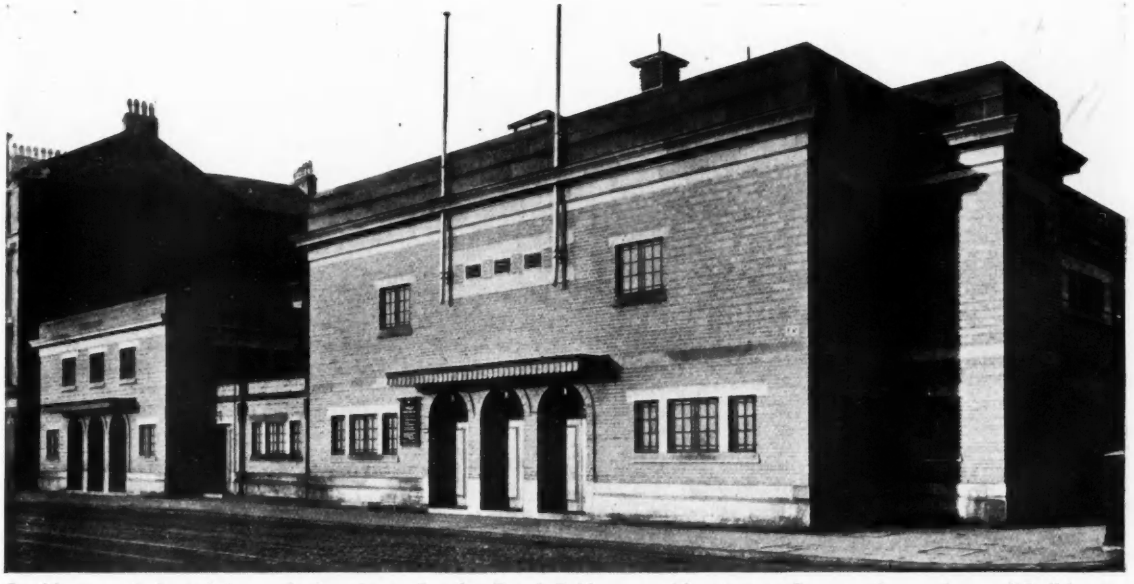
- The Department of Architecture, University of Sheffield.
- The Cambridge University School of Architecture.
- The School of Architecture, Armstrong College, Newcastle-on-Tyne.
- The School of Architecture, Royal West of England Academy, Bristol.
- The Department of Architecture, Northern Polytechnic, London.
- The School of Architecture, Leicester College of Arts and Crafts.
- The School of Architecture, Municipal School of Arts and Crafts, Southend-on-Sea.
- The Nottingham School of Architecture.
- The School of Architecture, the Polytechnic, Regent Street, London.

Lord Ponsonby explained that the object of the amendment was to define more precisely the schools of architecture to be represented.

The amendment was agreed to.

Lord Ponsonby moved to add to the Schedule an amendment transferring from the R.I.B.A. to a number of architectural schools the power to represent the new schools of architecture. The question whether any particular school merited particular representation was left to the discretion of the Board. The effect of the proviso was that the maximum number of members to be appointed should be fixed by the Council, and could be varied from time to time if necessary.

The amendment was agreed to, and the report stage concluded.



In this general view of the south elevation to London Road, Bridgeton, with return to Summer Street, the small hall is seen on the left and the larger one on the right. Details of the entrance and other doors appear in a supplement to this issue.

PUBLIC HALLS AT GLASGOW

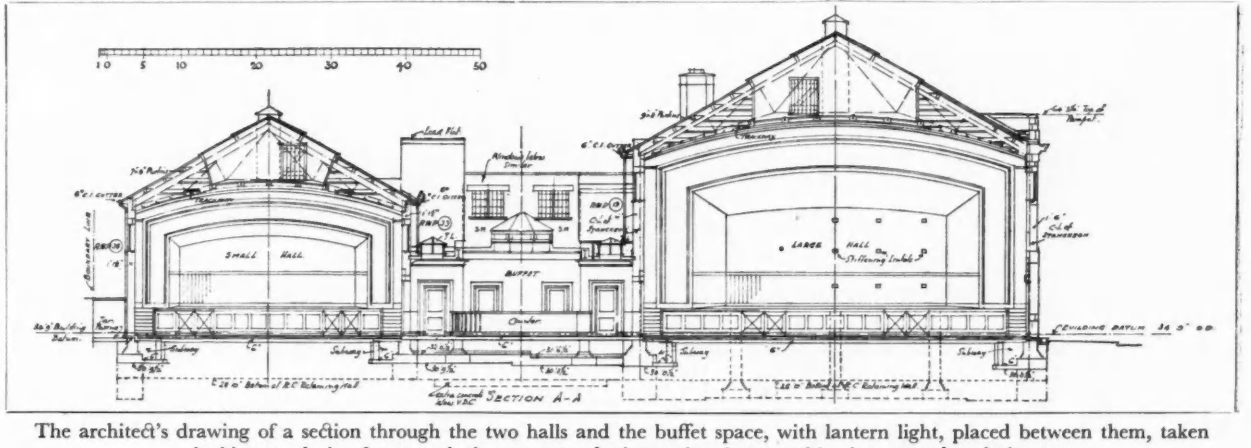
DESIGNED BY

C. COWLES-VOYSEY

BRIDGETON Halls were erected for the Corporation of Glasgow as the result of a competition. The main accommodation consists of a large hall to seat about 825 persons and a smaller hall to seat about 325; each hall has its direct entrance from the street, an ample stage, and is of multi-purpose type, with a floor suitable for dancing. The large hall has, in addition, a gallery and provision for cinematograph entertainments. The halls are on the same floor level, and between them are placed cloakrooms and lavatories, a large buffet, kitchens, etc., and three artists' rooms, so constructed that they can be thrown into one for additional assembly purposes. On the first floor over the small hall foyer are placed two committee rooms, the larger of which seats some fifty persons. The construction and finish are of simple and durable materials to meet the heavy and constant use expected for the building. The walls are of red facing bricks, with stone dressings, oak external doors and metal windows; the pitched roofs are of slate, and the flat roofs of asphalt on reinforced concrete. Floors and staircases are of reinforced concrete throughout, finished with maple boards on crossed battens for the dancing floors, with wood blocks in the artists' rooms and with tiles in passages, lavatories, etc. The internal walls are finished in plaster, with painted wood dadoes in the halls and buffet, and panels of canvas-covered quilting as required for acoustic purposes in the halls.

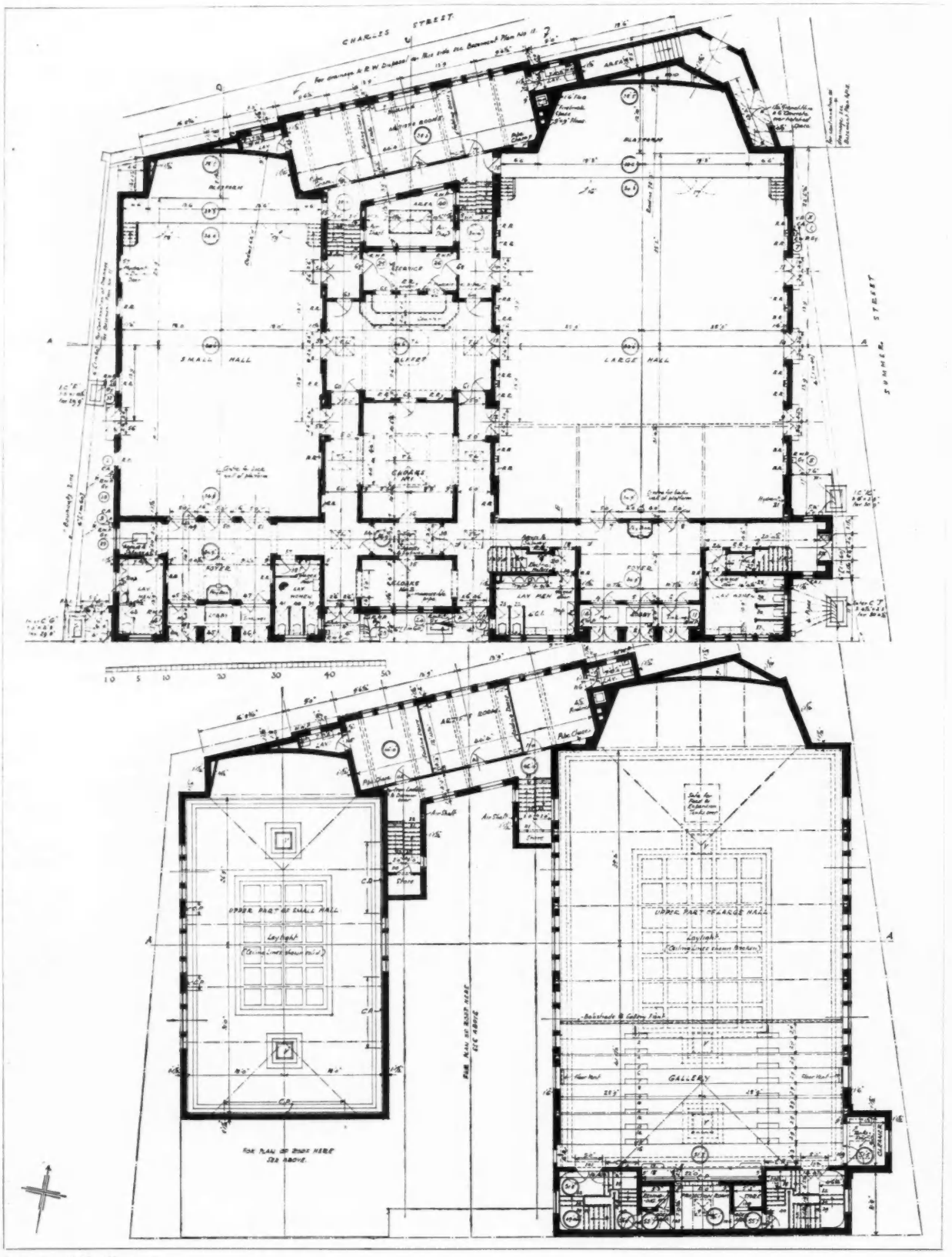


Looking from just inside the doors of the small hall across the buffet space and the large hall beyond it.



The architect's drawing of a section through the two halls and the buffet space, with lantern light, placed between them, taken looking north, i.e. from much the same standpoint as the photographic view reproduced above.

C

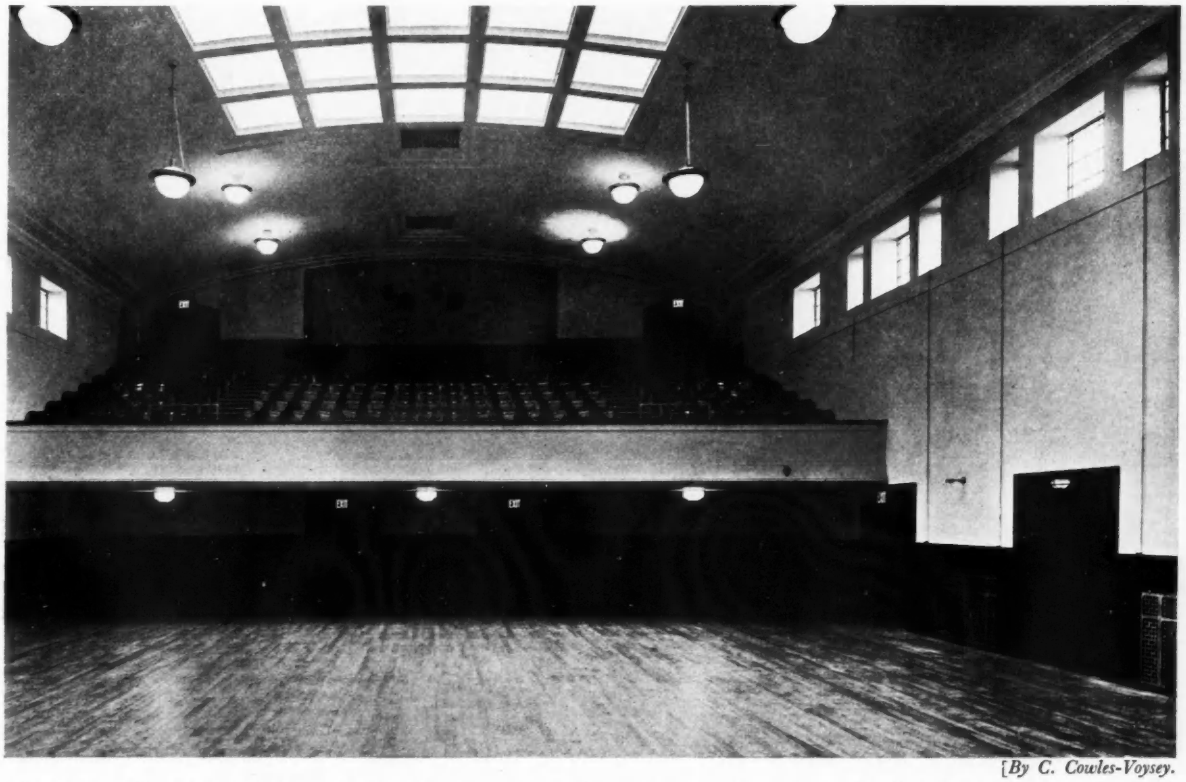


Bridgeton Halls, Glasgow.]

The ground- and first-floor plans exhibit the compact, self-contained character of the two halls; only the cloak and refreshment services and the artists' rooms are shared. The last can be thrown into one, for small social gatherings.



The small hall, which has seating for 325 persons. As will be seen, there is an ample stage for music or theatricals; and the floor is laid with maple for dancing purposes.



[By C. Cowles-Voysey.

The large hall, seating 825 people, including the gallery shown, has a stage and dancing floor similar to that illustrated above; moreover, in this auditorium films can be shown.

LETTERS FROM READERS

The Enterprising Builder

SIR,—The problem of using new and superficially unpromising but undeniably cheap building materials is being tackled today by the speculative builder, and with such conspicuous unsuccess that every word of praise men have written in the past concerning England's beauty will in our own lifetime be rendered meaningless unless the builder experiences a change not of heart but of head. This change could be wrought in three ways :

1 : He could be educated to a condition of æsthetic sensibility. Not impossible, but it would take time—three or four generations, possibly.

2 : He could be edited by local authorities, who should entrust such editing to an architect, and that architect should be given full powers of the blue pencil, powers, too, of scrappage and smashage (to borrow the phrasing of *1066 and All That*).

3 : He could be given a comprehensive copybook of designs for every kind of house and allowed to imitate good work as he initiated it throughout the eighteenth century.

The second remedy is the most hopeful. It could also be adopted now. Most of the new unsightly building that has been put up since the war would have been vastly improved in appearance if a competent architect had recast the designs and indicated an intelligent use of the new materials at his command.

The new patent materials are here, hundreds of them, and when people who feel outraged by a bungalow can spare a moment from cursing the speculative builder, they curse the new materials, labelling as bad what is, nine times out of ten, badly used by men who have lost the sense of responsible craftsmanship.

The consequences are visible all over England, and are far more distressing than any muddled garishness that a petrol station has to show or any pin-prick irritation provoked by a misplaced poster hoarding. The arty and crafty mutter in vain. No protest from the precious can arrest the change that is coming over the domestic architecture of rural England. Writers and publicists may thunder their warnings, but there is no organized attempt to change the character of the speculative builder. He remains a happy-go-lucky experimentalist. Happy, because the English people are uncritical of the things they see and are prepared to live in; lucky, because he does not have to shoulder the responsibilities nor labour under the disabilities, moral and financial, of the architect.

He can shove any new thing on to any old house without searching his heart for æsthetic justification or searing his eyes with the result.

In some localities a sense of fitness about the use of cheap materials is apparent. Certain parts of Dorset are fortunate in the present generation of builders. Corrugated iron, that is sometimes denounced by those who dream of thatch and all its " quaint " (and crawling) associations, can be comely when it is used with discretion. In the long main street of a Dorset village, where the stone building tradition of the West Country is as marked as it is in the Cotswolds, and the very thought of corrugated iron is disruptive of any picture of " old-world " serenity, this material has been used for re-roofing stone cottages with straightforward honesty. It isn't pretending to be anything but corrugated iron, and it has been most carefully adjusted to the needs of the cottages it shelters. It has, of course, been used for barns and farm buildings extensively in various parts of the country, but its use on the roofs of cottages and small houses, with some form of insulating material beneath it, is at least worth an experiment. This particular Dorsetshire experiment has been successful, and it represents a marriage not of incompatible materials but of opposite characters, stone and iron. Such marriages can be agreeable. The stone will outlast the iron, but it will be cheap to keep the stone shell going with another cheap roof. It is the architectural application of the principle of the " spare part."

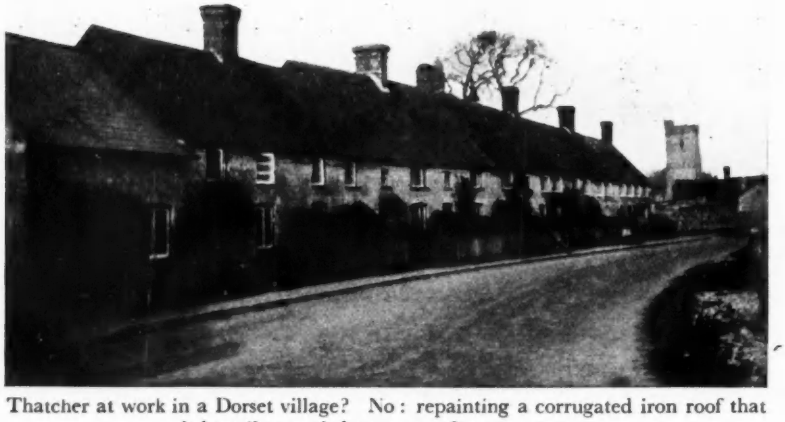
The builder accepts that principle—it pays. With his client it passes. But because he can occasionally apply this principle to the repair of existing buildings, and use intelligently a new material in the process, it does not give him either the power or the desire to design new buildings for the new materials.

Whenever an architect designs a building and specifies the use of any of the many patent materials the jerry builder mishandles, those materials immediately acquire an entirely different character. When the building is finished, whether it is a summer-house, a garage or a row of cottages, we are able to see in a new light the possibilities of industry's contribution to the form, colour and texture of contemporary architecture.

The architect designs with a sense of civic and æsthetic responsibility. The builder designs in the counting-house.

All designs produced in this atmosphere of inefficient economy could be improved if local authorities took steps to censor and reshape them by employing the educated skill of an intelligent architect.

The devastation of England will never be checked by cursing the new materials and the men who use them with such murderous stupidity. There is a type of mind that thinks the road to hell is paved with new inventions, and that all patent advertised materials are necessarily vulgar and hideous. Vulgarity and ugliness are generally produced not by the materials used in building, but by the way in which they are used; and the cure for that ill, and for the rash on England's face, has been indicated. It could be started now. JOHN GLOAG



Thatcher at work in a Dorset village? No : repainting a corrugated iron roof that is happily married to a row of stone cottages.

[Owing to pressure on our space this week, several letters are unavoidably held over.—ED. A.J.]





[*By courtesy of Chiswick Polish Co.*

Two views of a modern works canteen expressly designed for alternative use as an entertainment hall. The stage is equipped with lighting and other facilities for dramatic and musical performances.

WHEN DESIGNING A FACTORY:

iii. General Welfare Considerations

BY MISS HILDA MARTINDALE, O.B.E., *H.M. Deputy Chief Inspector of Factories.*

THE two preceding articles having set forth in some detail practical points affecting health and safety in factory design, it remains to consider general welfare measures. In various classes of factories in which the conditions and circumstances of employment or the nature of the processes carried on are such as to require special provision for the welfare of the workers, Welfare Orders are in force regarding, for example, messrooms, drinking water, accommodation for clothing, washing facilities and ambulance rooms. Some of these facilities are also required, either by the Factory Act or by regulations in various dangerous and unhealthy industries. Before designing a factory an architect should, therefore, ascertain whether the industry for which the premises are to be used is one to which provisions of this kind apply, so that at the outset the necessary arrangements can be planned.

Apart, however, from these legal requirements applying to specified industries, it is now the general practice to make arrangements for the welfare of the workers in any large factory. Welfare provisions of general application are likely to be included in future factory legislation, and, whatever the industry, the question of welfare should on no account be overlooked in planning the works. The following are some of the matters likely to concern architects.

Mess Rooms. The essentials of a mess room are that a suitable and pleasant place, with room for sufficient tables and seats, should be set apart for the purpose and suitably furnished with adequate means of cooking and heating food and boiling water. The number of persons to be provided for is an important point to be determined. It should be remembered that, if the mess room is attractive and well managed, the proportion of workers using it is likely to grow as time goes on. It is obviously false economy to provide a mess room which, in a short time, will be found too small and will have to be extended. In connection with the building the following matters should be borne in mind:—

The mess room or canteen should be in as accessible a position as possible, and care should be taken to see that there is proper provision for cooking and washing-up.

The room should be light and airy, warm in cold weather and pleasant in appearance, but a simple and inexpensive design may well be adopted.

The entrances should be placed so as to avoid congestion between the dining-room and kitchen hatches, and should be provided with lobbies to prevent draughts. If it is desired to divide the room into separate parts, this is best done by means of wooden screens on ball-bearing castors, as the room can then be quickly divided in any way desired.

The floor of the kitchen should be of non-slipping bricks or tiles, whilst the floor of the dining-room should be of wood, polished, with rubber matting on the gangways, or of wood covered with linoleum, or of composition; the first is strongly recommended.

Ventilation is very important, and plenty of windows should be provided; casement windows with a fanlight above, falling inwards, all made to open, are satisfactory.

Heating must be adequate, and the temperature should, in most cases, approximate to that of the workrooms. If the heating is not provided from the source which supplies the factory, a boiler can be placed in a cellar to give both warmth to the dining-room and hot water to the sinks.

Lighting must be good, both natural and artificial, the latter being for use on dull days and also to enable the room to be used in the evenings, if desired, for one purpose or another.

Store rooms should be placed on the north side and should be large enough to hold about one month's supply of goods such as tea, sugar, rice, jam, etc., also all cleaning materials, crockery and linen, as these should be bought wholesale and issued daily or weekly.

A cool, airy larder for storing food brought by the workers is desirable, and adequate facilities for washing-up should, of course, be provided, care being taken that the sink is large and sufficiently high, so that the person washing-up need not stoop over it, and that it is well lighted. The service counter, which will usually separate the kitchen from the mess room, needs special attention. There will be congestion and delay if the counter is too short or inconveniently placed, so that the workers cannot file past quickly and regularly, and a barrier or barriers should be placed in front of the hatchways to direct the flow of workers.

Drinking Water. An Order has been issued by the Home Office which requires that in all factories or workshops in which more than twenty-five persons are employed, the occupier shall provide and maintain at suitable

points, conveniently accessible to the workers, an adequate supply of wholesome drinking water. It is desirable, of course, to arrange the supply so that the water is not liable either in the cistern or in the pipes to become tepid through heat from the works, and the taps should not be in the open air or other positions where the workers will be exposed to cold or wet when they go for water.

Suitable facilities for drinking are afforded by the upward fountain jet. By this plan the need for a drinking vessel is avoided, since the worker drinks directly from the jet. The jet, however, should come from the side of the fountain, while the waste pipe should be at the bottom of it, as this prevents the water becoming contaminated if the workers spit it out.

Accommodation for Clothing. In industries where some or all of the workers, on arrival at the factory, have to change their clothing, some place is required in which they can keep their ordinary clothes during work hours and their working clothes after work is done. There are very many different ways of providing this accommodation, ranging from the specially-fitted cloakroom or changing room provided in big factories, or factories where some dangerous process is carried on, to an arrangement of metal lockers, or racks with hooks or hangers which can be placed on the floor or by means of pulleys and ropes pulled up to the ceiling or, at the end of the scale, individual pegs. Whatever the system adopted, the essential points to secure are: (1) that each worker shall feel, where the accommodation is not under his or her own eye, quite assured as to the safety of his or her clothing and its separation from the clothing of other workers; (2) that the accommodation shall be perfectly clean and ventilated; (3) that means of drying the clothing, if wet, shall be provided; (4) that the workers shall not be delayed in getting their clothing when work is over. In a large factory the position most generally convenient for the cloakroom for either sex is between the workers' entrance and the workrooms, and it should be so placed that the workers can pass through it, entering by a door at one end and leaving by a door at the other end, after having changed into working clothes.

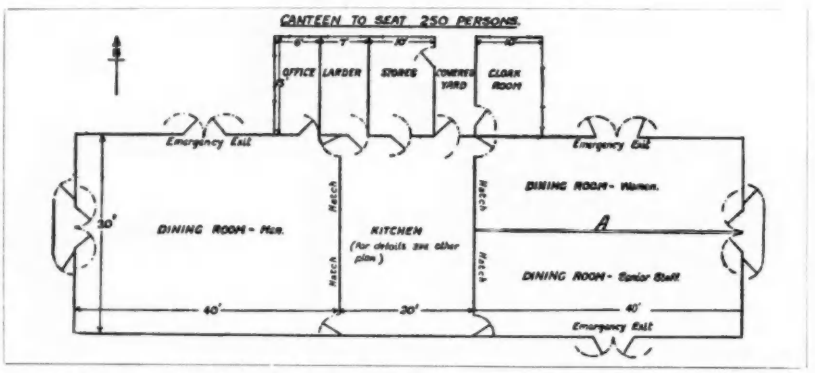
Washing Facilities. In a number of industries where Special Regulations or a Welfare Order are in force, and also in trades where lead, arsenic or other poisonous substance is used, suitable washing conveniences must be provided for the workers. In order to ensure that their use is a success, care should be taken that the details of the construction and equipment in the first instance are simple, easy to clean, strong enough to stand hard use and sufficient to enable the workers to wash within a few minutes; the fewer loose articles, which can be lost or removed, the better. Hot as well as cold water is necessary, and where basins are provided they should be large and each should have its own waste pipe. The alternative to basins is a washing trough, which can be circular or oblong in shape, the former taking up less floor space. Waste pipes should be trapped, or preferably disconnected and discharged over an open channel, and they should be wide enough to be conveniently cleaned, and without sharp bends and angles, otherwise they may get blocked and broken.

The floors of lavatories should be impervious to water and smooth and properly sloped so as to drain off spilt water, and unless the basins are in the centre of the room, the walls to a height of 4 or 5 ft. should also be impervious. The best arrangement is a dado of white or pale-tinted glazed bricks or tiles, which can be regularly washed down. It is advisable to have some of the washing facilities combined with the cloakroom accommodation, but at the same time in large works it should be the custom to have a few properly-fitted basins or troughs at various points throughout the works, so that workers can wash at frequent intervals without it affecting appreciably their piece-work wages. In some works where it is important that workers should keep their fingers very clean for certain processes, e.g. chocolate dipping, small fitted basins have been placed at frequent intervals round the walls of the room for this purpose.

In white lead works and certain other trades in which poisonous substances are used, the occupiers are required to provide baths. They have also been provided by individual occupiers in other factories for many years, and in hot and dusty trades especially they are much appreciated by the workers. Shower and douche baths usually find favour with men, while women prefer the ordinary plunge baths. Baths should be placed in compartments so arranged as to secure privacy. The floor space should be not less than 3 ft. wide by 4 ft. deep for shower baths, and 5 ft. by 6 ft. for plunge baths. The partitions should be not less than 6 ft. high and there should be a space between the bottom of the partitions and the floor to allow of thorough flushing. Where shower and douche baths are provided, part of the compartment may be screened or partitioned off for undressing and dressing purposes. The bath buildings and fittings should be so constructed as to facilitate cleanliness and, therefore, corners, ledges and rough surfaces should be avoided. The walls and partitions should have smooth surfaces which can be easily washed down; enamelled tiles and bricks or enamelled metal are suitable for this purpose. Foot-baths are provided in some factories for those whose work entails much walking or standing in yards or open ground in dust and dirt.

Ambulance Room. The provision of an ambulance room is required under certain regulations and orders in works where a large number of persons are employed, and is, of course, desirable in the case of any large works where injuries which cannot be treated at the first-aid box are at all frequent. The accommodation necessary for the ambulance room will depend upon the number of persons it is required to serve. The minimum limit is 100 sq. ft., which is obviously the smallest compatible with sufficient working space.

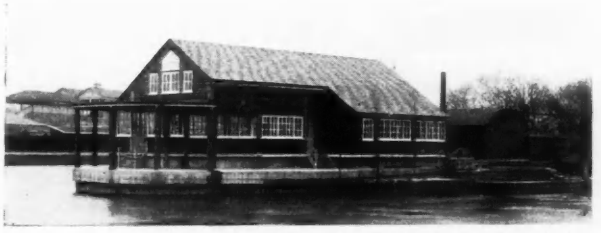
A central position, easily accessible to all parts of the works should, if possible, be selected. It should be on the ground floor, with an easy approach, so that stretcher cases can be easily taken in and out.



Layout for a canteen for a factory of medium size, employing male and female staff, suggested by the Institute of Industrial Welfare Workers, and published in a Home Office booklet, obtainable from H.M. Stationery Office.



[*By courtesy of British Thomson-Houston Co.*



[*By courtesy of Hampton Launch Works.*

Exterior views of works canteens specially designed for an extensive electrical works and for a riverside launch works of medium size respectively. The former has top and side lighting; the latter, side windows only.

The situation should be a quiet one and outside the workrooms, so that good natural lighting and ventilation may be obtained. The position as regards drainage, water supply, gas and electric mains should also be considered as having a bearing on the initial cost of providing the room.

The need of space for any additional accommodation that may be found necessary should also be borne in mind.

The building should be substantial. The interior walls should be lined with impervious material, preferably glazed tiles or bricks or Parian cement, finished with washable enamel. A hard impervious floor of terrazzo or similar material is recommended. Good results are obtained by india-rubber tiling, which has the advantage of being capable of being laid over a wooden floor. All corners should be rounded and all woodwork finished with washable enamel. The object of this construction is to permit of the whole room being thoroughly flushed out with water.

Though roof lighting is valuable, particularly where other buildings closely abut on the ambulance room, good lighting can often be obtained by taking the windows right up to the ceiling.

Ventilation and warming of the ambulance room require special consideration. The tendency of injured persons to faint is increased by a stuffy atmosphere, so that good ventilation must be secured, either by natural means, or, if this is insufficient, a fan or fans should be installed. All accidents are attended by a certain degree of shock, to counteract which a patient must be kept warm. The ambulance room, therefore, should be always kept at a reasonable temperature, viz., 60–65° F. This can be done conveniently by means of a hot-water radiator, or by panel heating, which can, if necessary, be supplemented during occupation by an electric radiator.

When the sanitary conveniences are not sufficiently near the ambulance room, a special water-closet is required. This should be built outside the ambulance room with an intervening ventilated lobby.

Adjoining the ambulance room it is well in large factories to have a recovery room for the use of workers taken ill whilst at work. This should be situated in a quiet place provided with shaded lighting, and have restful coloured walls.

Labour Saving. The application of labour-saving principles to industry, although not required by legal enactment, is an important means of reducing the risk of accident and injury to health, as well as increasing output and lessening the cost of production. Injuries through strains or falls while lifting or carrying heavy weights, etc., are eliminated and time and energy are saved.

The application of labour-saving principles to industry is not confined to the use of particular labour-saving or labour-aiding devices and appliances, but extends to the layout of the factory and arrangement of the work. A considerable development has taken place during recent years in this direction, partly as a result of reorganization and partly as a result of increasing mass production, and many modern factories afford excellent examples of successful planning to minimize the amount of handling of both raw and finished materials. In designing a factory, therefore, it is well to arrange that the raw material be brought to the side of the factory where the first operations in the manufacture are carried out. The processes should be carried on in rooms or spaces arranged so as to follow the sequence of the manufacture, and the finished product should be discharged at the other end of the factory, from which it can be taken away by lorries, rail, etc.

While the introduction of labour-saving methods on the complete scale is easier in the case of new factories,



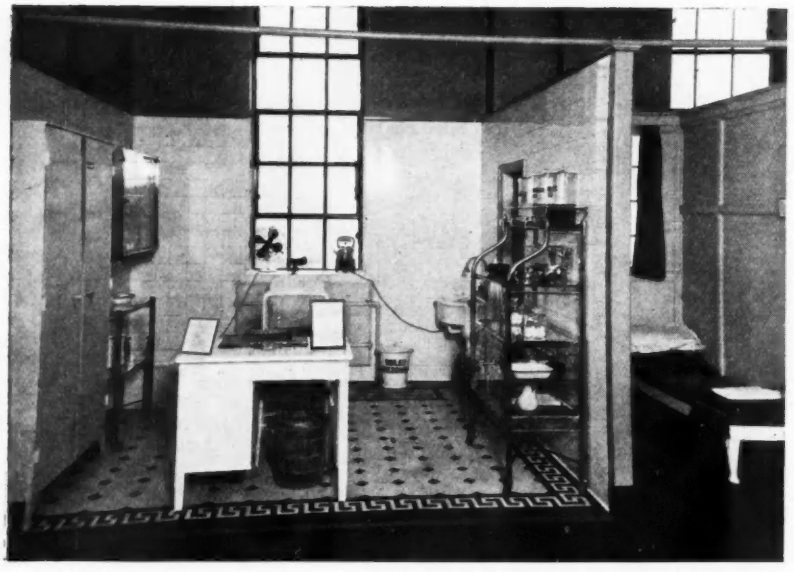
[*By courtesy of Bryant and May, Ltd.*

A well-lit kitchen in a modern canteen in a large match factory, showing the hot plates, etc.; with service counter on the right.



[*By courtesy of John I. Thornycroft and Co.*

A smaller type of works canteen. The kitchen occupies the rear part, being divided from the table space by a counter and screen.



A specimen ambulance room for a factory, in the Home Office Industrial Museum, Horseferry Road, Westminster, S.W., showing, on the right, a recovery room.

they are also being increasingly adopted in older factories, and accordingly the elimination of all unnecessary work should be made the subject of careful study. Some of the principal types of labour-saving devices found in use are as follows: Pulley blocks (especially geared and self-sustaining types), overhead runways, self-landing and delivering hoists, electric trolley or mono-rail hoists, electric and petrol-electric runabout cranes, electric trucks, ropeways and telphers, conveyors, gravity roller runways and shutes, stacking machines, jack trucks and hand elevators. Architects should always bear this matter in mind with a view to installing some such device when the factory is being built.

Noise Insulation. It is only within quite recent times that attention has begun to be given to the effects of noise on the health and efficiency of the worker, and by consequence on the quality and quantity of his work. It is now generally believed that constant exposure to excessive noise causes discomfort and fatigue which have an injurious physical effect. Scientific research into the subject is being pursued, and various methods are being tried in industrial and business premises for reducing noise.

Sound waves in a room or other enclosed space are reflected from the walls and ceilings, so that a person in the room receives from any source of noise in the room both direct and reflected sound waves. It follows that if the greater part of the reflected waves can be absorbed, a considerable reduction in the volume of noise is obtained.

The ceilings and walls of rooms can now be lined with various kinds of padding, one of which is made of special seaweed from Nova Scotia, stitched inside an envelope of brown paper, the padding afterwards being covered with stretched canvas which can be coloured if desired. In this way some of the sound waves can be absorbed and the room rendered far more comfortable to work in. Although so far the reduction of noise is not a matter dealt with by legal enactment, it is a subject to which undoubtedly more attention should be given.

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Scheme of Factory Canteen for 250 Workers.
Descriptive Account and Catalogue of the Home Office Industrial Museum.

The above are obtainable from H.M. Stationery Office, Adastral House, Kingsway, W.C.2, either direct or through any bookseller.

[*Concluded.*]

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Variation of Town Planning Schemes

MR. EDE asked the Minister of Health how many applications to vary a town-planning scheme had been received by his department during each of the last three years for which statistics were available; how many such applications had been wholly refused; how many had been granted; and how many had been granted but with modifications.

Mr. Greenwood said that the number of applications for his approval to vary town-planning schemes during the last three years ending on March 31 was two each year. He disapproved one, and approved two without modifications, and three with modifications on matters of drafting.

Slum Clearance

Mr. C. Williams asked the Minister of Health whether he was satisfied with the progress made by slum clearance schemes or whether he was considering methods of speeding up these schemes.

Mr. Greenwood said that seventy authorities had declared 205 clearance areas, containing some 7,500 houses and a population of approximately 39,000. It was much too soon definitely to express either satisfaction or dissatisfaction with the progress made.

Prices of Building Materials

Mr. Simon asked the Minister of Health whether he was aware that the report of the Inter-Departmental Committee on the Prices of Building Materials for the period ended March, 1931, showed that the prices of bricks in Leeds and Birmingham had not decreased since 1924 in spite of the general fall in prices; and whether he could now state what action he proposed to take to ensure the lowest practicable prices of building materials.

Mr. Greenwood replied in the affirmative. He understood, however, that in Birmingham the price of bricks had since fallen by 5s. per 1,000. As regarded the second part of the question, he had asked the Inter-Departmental Committee on the Prices of Building Materials to undertake an inquiry into the present position.

Door and Window Frames

Mr. Walker asked the Minister of Health whether, in view of the fact that over £1,000,000 worth of foreign door and window frames were imported in each of the last three years, he would now reconsider the previous decision and take steps to institute some system of bulk-tendering for British steel door and window frames for use in local authorities' housing schemes.

Mr. Greenwood said he was aware of the facts referred to, but was still unconvinced that any such arrangements as Mr. Walker had in mind would be practicable.

Housing Progress in Three Counties

Mr. Sorensen asked the number of houses proposed to be built by district councils in Middlesex, Kent, and Essex during the next five years.

Mr. Greenwood said that so far as regarded urban authorities with over 20,000 population who had submitted programmes to him in pursuance of section 25 of the Housing Act, 1930, the numbers were: 7,427, 5,029 and 4,184 for the counties, respectively.

THE SPECIFICATION WRITER

Empire Timbers: Their Uses and Beauties

THE average annual value of timber imported into the United Kingdom is £40,000,000 sterling, and of this sum only about £4,000,000 is expended on wood grown within the Empire. Therefore £36,000,000 represents the value of foreign timber importation.

The proximity of forests in Scandinavia and Russia (Sweden alone provides over 10 per cent. of the world's demands) renders the shipping of softwoods from the Baltic economically cheaper than corresponding timber from farther overseas. With regard to the more ornamental woods and timbers for heavier constructional work, however, the architect must be prepared to accept a proportion of the blame for the neglect of our Empire productions.

The Empire Marketing Board and the Imperial Economic Committee have taken up the question of Empire timbers with the hope of inducing a greater number of people to make use of them, and the Imperial Institute and some architectural schools, with the aid of the Forest Products Research Laboratory at Princes Risborough, are now able to exhibit samples from all quarters of the globe. Probably India House and Australia House were eye-openers to many who saw the variety of panelling and flooring woods which these countries alone could export.

Model Specifications.—The old easy-going specification in which the architect loosely specifies all his timbers to be "the best" requires a drastic revision, and in future a closer choice and more detailed description will be needed. It has for some time been felt that a definite scheme which assigns timber having certain defects to certain classes should be universally adopted, for it is a well-known fact that in certain timbers sapwood is not held to be a defect, as it does not affect the strength. It may be less durable than heartwood, and therefore in small scantlings is definitely harmful when present in more than a certain proportion, especially for exterior work. Attempts to define this proportion and also the admissibility of knots have led to an effort being made in America to draft more accurately worded specifications.

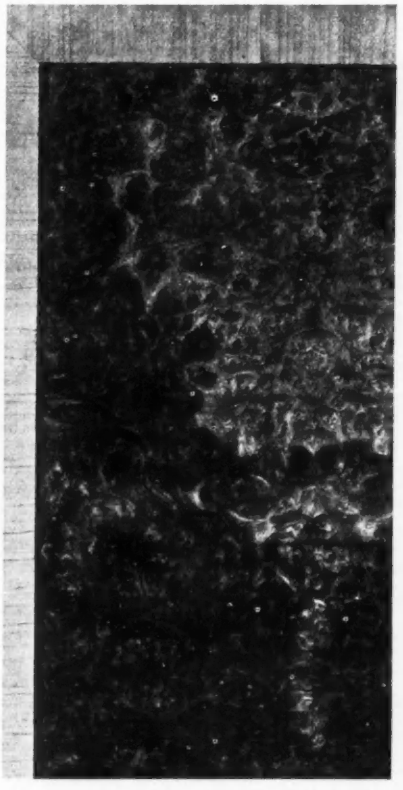
Two of these specifications have been drawn up by the Transcontinental Railway Companies and the Isthmian Canal Commission respectively; another, relating especially to Douglas Fir, has been printed in the Canadian Forestry Bulletins, but has not yet been approved by the American Society for Testing Materials. A fourth specification, which was adopted by the West Coast Lumber Manufacturers' Association in 1911, gives such a clear definition of the various grades as to be worth quoting. The four classes of timber are known as "Clears," "Selects," "Merchantable," "Common":—

Clears *shall be sound lumber, well sawed, one side and two edges free from knots and other defects impairing its use for the probable purpose intended. Will allow in dimensions larger than 6-in. by 10-in. pitch pockets when not extending through the piece; light coloured sap on corners not exceeding 3 ins. on face and edge; knots 2 ins. and less in diameter, according to size of piece, when on one face and one-half of each corresponding edge, leaving one face and upper half of each edge clear.*

Merchantable *shall be strong, sound lumber, well sawed, free from shakes, large, loose or rotten knots, and defects that materially impair its strength, well manufactured, and suitable for good, substantial constructional purposes. Will allow slight variations in sawing, sound knots, pitch pockets, and sap on corners, one-third the width and one-half the thickness or its equivalent. Defects in all cases to be considered in connection with the size of the piece and its general quality. In timber 10 ins. by 10 ins. and over sap shall not be considered a defect. Discoloration through exposure to elements other than black sap shall not be deemed a defect excluding the timber from this grade, if otherwise conforming to merchantable grade.*

Selects *shall be sound, strong lumber well sawed. Will allow in sizes over 6 ins. knots not to exceed 2 ins. in diameter varying according to the size of the piece; sap on one corner not to exceed 2 ins. on both face and edge; pitch pockets not to exceed 6 ins. in length. Defects in all cases to be considered in connection with the size of the piece and its general quality.*

Common.—*This grade shall consist of lumber having knots, sap, and other defects which exclude it from grading as merchantable, but of a quality suitable for rough kinds of work.*

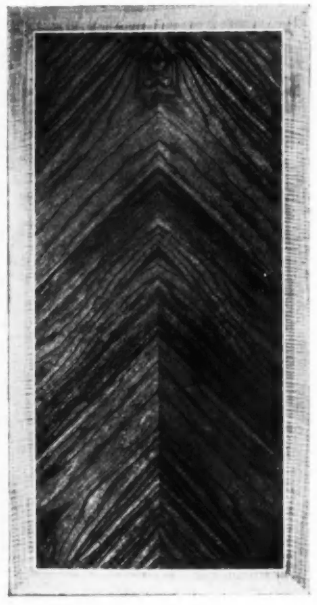


Portion of a decorative panel of English elm burr, cross-banded with English cypress, with purple and green linings.

Although these were drawn up for Canadian softwoods they can be adapted to apply to fir or pine from any country that may be employed in building carpentry, and are thus generally useful, since there is little probability of any Empire timber, except that from Eastern or Western Canada and British Columbia, being able to compete with European supplies in this country. Transport is the crucial factor, for if the cost of shipping a quantity of timber from the West Coast of America *via* the Panama Canal is £5, an equal quantity can be sent from the Baltic for 36s., and to this must be added the time taken, which allows the Baltic boat to make three trips to the Canadian's one. Australian woods are largely imported into South Africa, a comparatively treeless country, but their use in England, except for the harder varieties, is precluded by the prohibitive freight. The possibility of a world shortage must not, however, be overlooked; Scandinavia is conserving her forests, Russia is probably overcutting, and it has been estimated that the wasteful methods of Canadian lumbering, coupled with the disastrous forest fires, which annually destroy three times as much timber as is cut, will cause serious shortage of supplies in ten years. It only requires a comparatively slight stringency to raise the prices and render a number of Empire softwoods not at present used in England commercially profitable to import.

Structural Woods.—Empire woods for structural purposes most common in this country are: from Canada, Douglas Fir, Western Hemlock, Canadian Red Pine; Teak from Burma and Borneo; Jarrah and Karri from Australia; and Iroko from Africa.

Douglas Fir, also known as British Columbia Fir and Oregon Pine (names which are thought frequently to represent three different woods), is by far the



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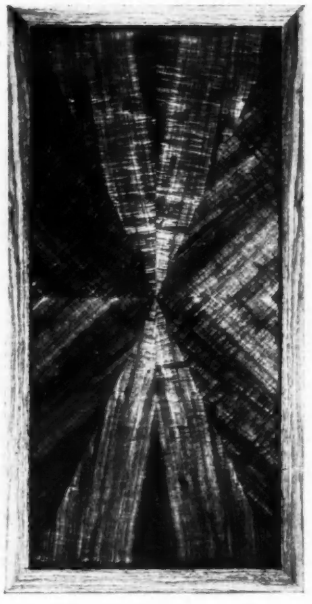

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Panels of Empire timbers: (1) Figured Indian silver greywood, cross-banded with Australian mountain ash; (2) figured Australian walnut, with a surround of the same wood; (3) figured Australian blackwood, with a surround of Indian silver greywood.

most common in building work, and is used in carcassing and joinery generally. It is often only distinguishable from similar wood from the U.S.A. by the brand marks.

Western Hemlock, which should not be confused with the Hemlock from Eastern Canada, is a very durable wood in conditions of continuous wet or dry, but, being free from resin, is liable to fungus growth in atmospheres that are both wet and dry by turns. It can be used for internal work generally, and being non-resinous, can be worked to a fine finish, and takes paint well. Red Pine is very like the coarse-grained redwoods of Scandinavia, and is excellent for masts or spars of long lengths. The Burma Teak is well known, but the Borneo variety is also a very strong durable wood for heavy constructional work, and can be obtained in logs up to 50 feet long. There are two varieties of Borneo Teak, Mirabeau and Selangan, and although these are marketed as Nos. 1 and 2 Borneo Teak, they are not of the same botanical species.

Jarrah and Karri are both close textured hardwoods, difficult to work and extremely hard. Iroko from West Africa is a species of wood which sometimes goes by the name of African Teak or Oak; easy to work, it is especially suitable for fire-resisting construction.

Heavy Carpentry.—Douglas Fir may also be used for dock work and piling; other timbers specially suitable for marine piling are Greenheart from British Guiana, Burma Pyinkado, and Australian Turpentine, as they are scarcely attacked by sea organisms. Purpleheart, another Guiana wood, is a great shock absorber, and has been successfully used for mill beds and similar purposes.

Flooring.—All the woods already mentioned, with the exception of Western Hemlock and the Guiana woods, are good flooring material, and to this list should be added English Oak or Elm, Gurjun and Kokko from India, the former best in blocks and the latter in 2-in. battens.

Tasmanian Oak is a good wood, if well seasoned, up to $1\frac{1}{4}$ ins. in thickness (to make certain it is cut on the quarter), while New Zealand Kauri cannot be excelled for a floor with very heavy wear like a ballroom or a skating rink. Matai from New Zealand is almost as close grained as Yew and is an excellent flooring wood. Maple is too well known to need description, but Australian Silky Oak is a good parquet flooring wood not yet sufficiently popular, and Western Red Cedar, used in Canada for roofing shingles, is a useful wood for fencing, telegraph posts, or in places liable to dry rot, as the cedar oil is inimical to fungus growths.

Decorative Joinery.—When we come to consider joinery and high-class decorative work such as panelling, the choice of Empire timbers becomes at once much enlarged.

For panelling, both in solid and veneer, the Indian woods are equal to any in richness of tone and variety of figure, and are perhaps less well known than others. Kokko cut in veneer is a very handsome wood with a strong black marking which, when used in large-sized panels, is most striking. Laurel wood is similar to Italian walnut, but harder, and is becoming popular as a substitute for it. While both these woods may be seen at their best in India House, Laurel wood was also used effectively at the London County Hall and in other important London buildings. Silver Greywood is really the heartwood of White Chuglam, and at present only limited supplies are available. It has a handsome brownish-grey figure and natural tone, and is equally effective in solid as a material for high-class office furniture or cut in veneer for panelling. Being practically unaffected by heat, it is a very sound wood for situations which might easily prove trying to other varieties. The outer wood of Chuglam is very similar to inferior figured oak and, being cheaper and three times as plentiful as Silver Greywood, is a very useful cabinet wood for shop-window panelling. At India House the lavatories and less important doors are of this wood, which has stood very satisfactorily, as it is durable and not given to twisting.

The Padauks, both Andaman and Burmese, are easily recognized by their distinctive crimson flush, which in the raw state is unpleasant. This colour will darken naturally when exposed to sunlight, and can also be bleached by a light-ray treatment. Both are suitable for counter-tops if sharp edges to the mouldings are avoided. At the Bank of England, and in Martin's Bank in Lombard Street, the counter-tops of Padauk are much superior in appearance to the old mahogany, although in the old Banking Hall of the latter the Cuban mahogany counter was reputed to be one of the finest specimens of that wood in London.



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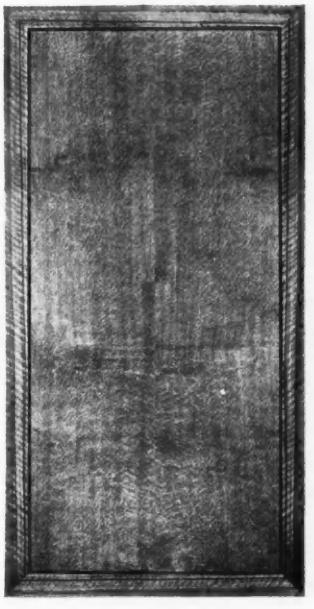

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Panels of Empire timbers : (4) Figured Australian mountain ash; (5) Nigerian walnut; (6) Australian silky oak, with a surround of Australian figured walnut. The linings shown in some of these panels are in black.

Burma Padauk is the richer-coloured wood, but supplies are limited; on the other hand, large quantities of the Andaman Island variety are available.

Two Indian woods of the teak type not too well known are Pyinma and Eng. The former, a reddish-brown wood, is a good substitute for American walnut, and if carefully selected can be cut into veneer for cheaper panelling. The latter is an excellent substitute for teak, if teak is too expensive, but the architect should be wary as this wood has been palmed off as the genuine article at teak prices. It is unsuitable for exterior work, or in positions where it is exposed to changes of weather. New Zealand White Pine and Australian Hoop Pine are both good substitutes for American Whitewood, the latter being free from the greenish tone sometimes noticeable in the American variety.

As a substitute for Cuban mahogany it would be hard to better Thitka from Burma, which takes a high polish and can be used in any position where the Cuban wood is suitable. The Nigerian Sapele mahogany, which is already well known on the Continent and has been largely imported into Hamburg, can be used in any situation requiring a good wood of this type. Sapele used to have a bad name for ring-shakes, but tests carried out at the Imperial Institute have demonstrated that, with careful cutting, this defect can be entirely overcome, and the wood deserves a fair trial as an Empire product.

Other Nigerian woods, such as Afara and Ekhimi, are at present too dear to be put on the market commercially, but a rise in general prices would make them a practical proposition, and architects should not forget these interesting African timbers.

Of all the decorative Australian woods Blackbean is easily first, with its beautiful figure and natural dark-walnut colour. It can be carved with more safety than the Indian woods, which all have a tendency to brittleness, and when cut on the quarter Blackbean has an extraordinarily ornamental effect, as may be seen at Australia House in the doors made of this material.

Queensland Walnut is another substitute for American walnut and far more handsome, the long dark and light grain giving a striking effect when polished, and, although reputed to be difficult to saw, this objection vanishes when the wood is on the bench. It may seem trivial to mention these prejudices of the joiners, but it is the constant reiteration of such ideas that has been responsible for getting certain woods an undeserved bad name, and it is obviously not in the interests of importers of foreign woods to dispel the myth. Architects are nervous folk, and many a patriotic attempt to specify Empire wood has been stampeded by the horrible hints of the contractor with large stores of foreign timber in his yards.

It is true that through inexperience and lack of co-operation between importer and producer some of the earlier consignments of certain Empire woods proved unsatisfactory in our climate. These difficulties have now been overcome, but the architect would be well-advised to deal with firms of standing (and there are many of them) who will see that the wood supplied is seasoned for the use for which it is required. Crabwood is another substitute for medium-quality foreign mahogany, and is a wood that takes a high polish and finish.

No general specification will cover these ornamental woods, and the architect must make himself intimately acquainted with the variety he proposes to use, note its defects and good qualities, and specify accordingly. This is today not a difficult task as a *Descriptive List of Some Empire Timbers* is published by the Imperial Institute, giving all information that can be needed in a specification, together with the recommendations of the Imperial Institute Advisory Committee on Timber.

The following list, which is not by any means exhaustive, sets out in tabular form the most common uses of such Empire woods as are likely to be of interest to the architect :—

General Carpentry.—Douglas Fir, Sitka Spruce, Western Hemlock, Borneo and Burma Teak, Iroko, or African Teak, Kauri Pine.

Flooring.—Douglas Fir, Canadian Red Pine, Gurjun, Kokko, Kauri (hard wear), Jarrah, Karri, Tasmanian Oak, Teak, Silky Oak (parquet), English Oak and Elm.

General Joinery and Special Uses.—Douglas Fir, Western Hemlock, Sitka Spruce, Western Yellow Pine (second-class work only), Englemann Spruce (light joinery), Eng (interior work only), Borneo Teak (stairs), Iroko (fire-proof construction), British Guiana Greenheart (heavy work), White Chuglam, Pyinma, New Zealand White Pine,

Kauri (draining boards), Purpleheart, Western Red Cedar (cupboards).

High-class Work and Panelling.—Silver Greywood, Kokko, Laurel wood, Anderman and Borneo Padauk (counter-tops), Thitka (drawer linings), Sapele Mahogany, Blackbean, Queensland Walnut, Silky Oak, Blackwood and Myrtle, Crabwood Indian White Mahogany (backs and sides of drawers).

Very Heavy Work.—Purpleheart (mill beds), Greenheart (marine piling), Western Red Cedar (posts), Douglas Fir, Australian Turpentine (dockwork and piling). LL. E. WILLIAMS

[Illustrations by courtesy of Jas. Latham, Ltd.]

MECHANICAL AND PHYSICAL PROPERTIES OF TIMBER.

(Table prepared by the Forest Products Research Laboratory.)

Species.	Locality.	Moisture. Per cent.	Specific gravity based on wt. oven dry and wol. at test.	Maximum crushing strength lb./sq. in.	Static bending.	
					Equiv. fibre stress at max. load lb./sq. in.	Modulus of elasticity (apparent) 1,000 lb./sq. in.
Kauri Pine ..	New Zealand	11·3	·524	5,760	12,110	1,838
Greenheart ..	British Guiana	Green	·80	9,910	18,240	2,792
		Air-dried	—	—	—	—
Borneo Teak ..	North Borneo	16	·91	8,420	19,340	2,802
Burma Teak ..	Burma ..	14·1	·568	8,350	14,465	1,830
Iroko	Gold Coast, Nigeria	13·5	·545	8,180	14,990	1,744
Douglas Fir ..	British Columbia	11·0	·48	7,510	14,000	2,140
Western Hemlock	British Columbia	12·0	·44	6,620	11,100	1,750
White Pine ..	Eastern Canada	10·0	·35	5,410	9,800	1,260
Red Pine	Eastern Canada	12·0	·45	6,860	12,800	1,700
Scandinavian Pine	Imported ..	13·4	·452	6,360	11,580	1,852
American Longleaf	Louisiana / Mississippi	9·2	·66	10,880	16,700	2,200
American Shortleaf	Louisiana ..	11·0	·54	8,660	13,900	1,970

LITERATURE

EMPIRE FORESTRY TIMBER

THE Empire Forestry Association was established by royal charter in 1921, with the objects, among others, of fostering public interest in forestry and of circulating information relating to the commercial utilization of forest products.

The largest section of the present handbook is devoted to lists of the names of those engaged officially throughout the Empire in the practice or study of forestry. The editor's comments on the statistical tables prepared for the Third Empire Forestry Conference in 1928 have as great an interest for the general reader as for the forestry specialist. Those who advocate an Imperial Zollverein will not welcome the fact that Canada exports 86 per cent. of her soft woods to the U.S.A., and that Great Britain imports 92 per cent. of similar wood from Northern Europe. But propinquity is a hard economic factor, and although Canada contains 94 per cent. of the pine woods of the Empire, the Atlantic is wider than the North Sea. At present all the British timber-growing countries, with the exception of India, are consuming annually more wood than they grow, but plans are being introduced to regulate this living on capital before a shortage of supplies arises.

The several appendices are mostly concerned with the standard methods of testing timber, and the final section of the book comprises a list of trade names of Empire woods—a needful table when so common a tree as the "pinus silvestris" is described commercially in no fewer than sixteen different ways.

The book is issued free to members, but the very reasonable price should ensure anyone interested in forestry being able to obtain a copy.

LL. E. W.

The Empire Forestry Handbook, 1931. Edited by Fraser Story. London: The Empire Forestry Association. Price 3s. 6d. net.

RESEARCH AND INDUSTRY

A STUDY of this report shows clearly what important contributions research work is making to the progress of our various industries and how essential such work is to the recovery of industrial prosperity. Equally obvious is the vast amount of useful work still waiting to be done and the necessity of closer co-operation and support from industrial associations and individual concerns. It is also interesting to note the definite move being made by what are termed the development sections to stimulate the application by industries of the results already obtained. This is as important a phase of the work as the actual research itself.

The researches directed by the department include, in addition to the wide range of work conducted by the National Physical Laboratory, fuels, foods, geological survey, building, forest products, metallurgy, water pollution, chemical matters, radio, illumination, atmospheric pollution, transport of compressed gases, fabrics, lubrication and other subjects. Many of them have direct professional interest for architects, while others, such as fuel research, have positive if indirect association.

The useful work of the Building Research Station continues, and among the special features it may be noted that the programme of its Steel Structures Research Committee involves the study of existing regulations for buildings and bridges in Great Britain and abroad and the collection of details of present methods of design, investigations into external loads, strains on existing buildings, stress analysis, strength of materials and the like. The commendable proposal is made to prepare a report reviewing present methods and regulations for the design of steel-framed buildings and setting out rules based on up-to-date technical knowledge.

In the matter of architectural acoustics a close co-ordination between the building research station at Watford and the work at Teddington is being effected by means of a joint committee. The Forest Products Research Board is giving special attention to the investigation and testing of Empire timbers, in addition to its other work, with the double object of developing the timber resources of the Empire and of encouraging the use of Empire timbers in Great Britain. Not the least interesting of this Board's work is the study of decay by fungi and insects, particularly the "death-watch" beetle, and methods of preservation and elimination of infection, which show promise of usefulness.

An investigation of importance which has been begun by the Water Pollution Research, relates to the corrosive action on iron mains and the plumbo-solvency of certain waters. These represent only a few features of the wide range of work undertaken by the department, by which the country's industries and through them the individual taxpayer

supporting the work, are steadily if not always consciously benefiting.

Mention should also be made of the work of various research associations which are in receipt of grants from the Department. Brief reports on their operations are given and indicate valuable contributions to industrial knowledge. For example, the Research Association of British Paint, Colour and Varnish Manufacturers includes in its work tests on the weathering properties of paints and varnishes, and the standardization of a method of measuring the gloss of painted or varnished surfaces. Corresponding researches on refractories, electrical products, food, and numerous other materials, by the Associations concerned, are also reported.

A. H. H.

Department of Scientific and Industrial Research. Report for the year 1929–30. London: H.M. Stationery Office. Price 3s. 6d. net.

A TOUR OF AUSTRIA

THIS book is a pleasant and interesting account of a desultory sort of tour through the real Austria, the diminished and impoverished remnant of the once great Austrian Empire. Outside Vienna and the Tyrol, Austria is, considering its beauty, history and accessibility, surprisingly little known, and Mr. Newth has some very interesting chapters on such little-known spots as the Ötztal, the lakes of the Salzkammergut, Carinthia and Styria. Further, the people are merry and open-hearted, welcoming, in spite of Goldsmith's gibe at "the rude Carinthian boor," the casual stranger.

Vienna, Salzburg, Innsbrück, Linz and the other beautiful baroque towns of the country are described with feeling and sympathy, and a chapter on the history of the old Empire and its successor, the new Republic, is well written and far more impartial than many such accounts. Mr. Newth can regret the passing of "Biedermayer" Vienna, without being unsympathetic to the succession States. The somewhat tragic history of this new and faction-torn republic is well summed up in the episode of the ancient Benedictine monastery of Kremsmünster, which, founded by Duke Tassilo of Bavaria in A.D. 777, has been forced to sell its ancient tapestries to the Metropolitan Museum of Art, New York.

Altogether, a book to be read by the prospective traveller to Austria with pleasure and interest. Not a guide-book, it can hold no place in the rucksack of the hardened traveller, but before going it gives a good idea of where to go and what to see, and, after returning, a pleasant reminiscence of things seen and places visited.

L. F. E.

Austria. By J. D. Newth. London: A. and C. Black, Ltd. Price 7s. 6d. net.

IN THAT CONTINGENCY

The following abstracts of inquiries represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may, in the course of time, indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for application to all similar problems. [Crown Copyright Reserved.]

Anchoring Facings to Stanchions

AN architect writes inviting criticism of a method he proposes to use for anchoring stone facings to reinforced concrete stanchions. A patent system of anchorage is to be used, and the architect contemplates embedding a galvanized steel bar in the concrete and using brass anchors in the stone beds, with a view to decreasing the danger of corrosion.

Theoretically, brass associated with galvanized steel may promote cathodic action and so accelerate the corrosion of the steel; but, in the presence of an alkaline solution produced by mortar, cement or calcareous stone, it is possible that a protective film would form on the metal. Nevertheless, it is worth while avoiding the possibility of electrolytic action by using galvanized steel throughout, or, alternatively, brass throughout.

For the highest degree of permanence the use of bronze would be desirable.

Failure of Plaster Ceiling

An architect wishes to know whether the chemical analysis of a sample of plaster from a ceiling which has fallen would furnish a clue to the composition of the plaster and to the cause of the failure.

He states that the rendering is supposed to be composed of gypsum plaster gauged with lime, sand and hair, and the finishing coat of neat gypsum plaster gauged with lime.

From a superficial examination of the sample submitted, the undercoat appears to be rather soft and weak for a lime-gauged gypsum plaster, and contains little hair. The rendering has apparently been applied to a cement screed or concrete backing, which had keys provided by the use of a "drag." From qualitative tests it is evident that a gypsum plaster, gauged with lime, has been used in the original mix.

A number of failures of this type have been examined, and it has been found that chemical analysis seldom indicates the cause of the failure. At best, such an analysis will only give a rough guide as to the proportions of the mix, but it does not provide any data as to the quality and condition of the materials originally used.

In practical plastering, three factors are of the utmost importance, namely, the cleanliness of the base to which the plaster is to be applied (which may be interpreted as freedom from dust and loose particles), the phenomenon known to the trade as "suction," and the provision of an adequate key to the backing. It is of course impossible, with a lapse of time, to tell whether sufficient regard has originally been paid to cleanliness.

"Suction" is the term used to denote the rate at which moisture will be drawn by the base from the plaster. It is controlled by wetting the base to a degree depending on its nature. Many failures examined by the Building Research Station have been shown to be attributable to lack of judgment in controlling the "suction" factor. Although occasionally failures may be due to an excess of water, the cause is more often an insufficiency of water in the base. This deficiency is particularly dangerous when modern gypsum plasters are employed, as it is essential that these should retain enough moisture to enable the action of setting to develop fully.

The use of a steel drag is a common method of providing keys in a cement screed or concrete base, but such drags are of little value. Undercut keys, however, would lessen the probability of failure and, in the event of poor adhesion between the plaster and the base, these keys would ensure sufficient strength to prevent the falling of the plaster. Undercut keys may, for example, be obtained by placing specially designed rubber strips on the shuttering of the base for removal when the shuttering is taken down, leaving a suitable recess in the base into which the plaster may be forced.

Penetration of Walls by Driving Rain

A builder wishes to know how to overcome the difficulties of keeping out driving rain which penetrates through the walls of a recently erected office building. The building has a plan measurement of approximately 200 ft. by 30 ft., and is of two stories, ground and upper floors; the walls are built of common building bricks, rendered externally with Portland cement and finished in white cement; the inner surfaces are rendered with Portland cement

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and finished with plaster. The concrete floor and roof are of a patented hollow-tile construction, and the roof is finished with mastic asphalt. All loads from floor and roof are carried by solid brick piers forming part of the outer walls.

The trouble arises principally on the upper floor: the outside rendering shows cracks, and corresponding cracks are visible inside; the presence of the latter, it is feared, denote that the brickwork is also cracked. No serious leakages or cracks are apparent on the ground floor.

There appear to be three separate effects which are operative in this building: (*a*) Structural cracking of the brickwork due to thermal expansions of the roof system; (*b*) Cracking of the cement rendering developing from crazing in the white cement finish; (*c*) Cracking and looseness of areas of the rendering, probably due to the presence of a certain amount of magnesium sulphate from the bricks.

Discussing these factors in more detail:

(*a*) So far as can be ascertained, no provision has been made in the way of expansion joints to accommodate thermal movements of the roof slab. The asphalt covering, although in excellent condition, presents a black surface which readily absorbs solar heat. It is well within the bounds of possibility that, on a hot summer day, a temperature of the order of 90°–100° Fahr. may be attained in the roof concrete and steel. It is probable that the temperature may be lowered to 30°–40° Fahr. in cold weather in winter. Thus a roof slab would be liable to a temperature range of at least 50° Fahr., and possibly even greater. On a length of about 200 ft. the difference in length between summer and winter conditions is likely to be of the order of $\frac{3}{4}$ in., and although the supporting brickwork may expand to some extent with the roof slab, it is obvious that a considerable differential movement is to be expected. The fact that the structural cracking is greatest at both ends of the building is a strong confirmation that thermal movements are the prime cause.

(*b*) The tendency of cement renderings to develop "crazing" is widely recognized. The development of "crazing" into larger cracks has been accentuated by the structural movements already discussed, and for this reason the cracking is more pronounced at the ends of the buildings, and generally just below the level of the roof slab.

(*c*) The development of cracks and hollow areas in cement renderings, due to the presence of magnesium sulphate in bricks, has been discussed in an article by Mr. F. L. Brady, of this Station, in *Nature*, 1930, 126 (3183) 684. The presence of certain hollow areas in the parapet rendering, which on removal have been found to show a whitish mushy material on the surface of the bricks, suggests that, in places at any rate, this action has been proceeding.

The remedial measures to be adopted in a case of this sort present certain difficulties. The thermal expansion of the roof, due to solar radiation, may be considerably reduced by applying a white reflecting colourwash to the asphalt surface. The value of a treatment of this kind is referred to in the *Annual Report of the Building Research Board for the Year 1928*. (H.M. Stationery Office, price 3s. 6d. net.) Records are there given of the temperature of an asphalt slab, 1 in. thick, laid on a concrete slab, 4 ins. thick, in the open air. On a day when the maximum shade temperature was 74° Fahr., the maximum temperatures of this panel and one similarly exposed, but treated with white distemper, were found to be:

	Unpainted.	White Painted.
Upper surface ..	98° F.	69° F.
Lower surface ..	92° F.	68° F.

The highest recorded temperature of the surface was 104° Fahr., on a day when the maximum shade temperature was 78° Fahr.

The question of structural stability of the cracked ends of the building is a matter which does not fall within the scope of the work of this Station, and, if any apprehensions are felt, it is suggested that the services of a consultant engineer should then be sought.

So far as the cracking of the rendering is concerned, it is considered that there is the likelihood that it may become more extensive. If this should prove to be the case, any immediate surface treatment is likely to fail, and it is recommended that an inspection should be made in the autumn to ascertain its condition after exposure to summer weather.

As a temporary measure, a surface application of a waterproofer of the stone-paint or bituminous type to the cracked areas at the ends of the building may be found efficacious.

SOCIETIES AND INSTITUTIONS

ARCHITECTS' BENEVOLENT SOCIETY

THE annual meeting of the donors and subscribers of the above Society was held at the R.I.B.A., on May 14. Sir Banister Fletcher, P.R.I.B.A., occupied the chair.

Sir Banister, moving the adoption of the annual report, said they were the only Society which existed solely for the relief of distress in the architectural profession, but it was not generally realized that the relief they gave was too often inadequate.

Their grants, from the number of applications they had received, and the money they had to dispose of, were small, too small in most cases to meet the needs of the applicant, who had to apply to other societies for further assistance. This was not right. There was enough money in the architectural profession to ensure that every one of those who had given their days to the service of architecture might spend the evening of their lives, if not in comfort, at least in freedom from want. But the money was unevenly distributed, and here they had the whole reason for the existence of the Benevolent Society.

They wanted to transfer some of the surplus from the pockets of those who had prospered in the service of their art, and apply it to cover the needs of those who had been less fortunate, and who, without the assistance of the Society, would be at a loss how to live.

The most effective way of obtaining increased support for the Society was by means of personal canvassing, and it was to be hoped that every member who had its interest at heart would give it publicity among his friends and acquaintances and try, by personal persuasion, to increase its roll of members. They distributed £2,511 in grants last year and £693 in pensions, a total of £3,204, and their subscriptions amounted to £1,289 only.

When it was explained that they depended on subscriptions for most of their income, it would be seen that they had spent more than they could afford, and a big effort must be made this year to recover their lost ground.

The following were elected officers for the ensuing year:—

President: Sir Banister Fletcher, P.R.I.B.A. Vice-Presidents: Messrs. Walter Tapper, F.R.I.B.A., and H. S. E. Vanderpant. Honorary treasurer: Mr. Maurice E. Webb, F.R.I.B.A. Honorary secretary: Sir Charles Nicholson, Bart., F.R.I.B.A. Ordinary members: Messrs. H. Austen Hall, F.R.I.B.A., L. G. Pearson, F.R.I.B.A., W. Curtis Green, F.R.I.B.A., E. C. P. Monson, F.R.I.B.A., E. P. Warren, F.R.I.B.A., F. R. Hiorns, F.R.I.B.A., W. Henry White, F.R.I.B.A., Charles Woodward, F.R.I.B.A., L. S. Sullivan, F.R.I.B.A., C. E. Elcock, F.R.I.B.A., S. Phillips Dales, F.R.I.B.A., R. Dircks, HON. A.R.I.B.A., Francis Jones, F.R.I.B.A. (representing the Manchester Society), C. M. Hadfield, F.R.I.B.A. (representing the Sheffield Society), E. Stanley Hall, F.R.I.B.A. (representing the Architectural Association), Arthur Crow (representing the London Society), E. Hadden Parkes (representing the Mount Pleasant Artists' Rest Home), and the President of the Hampshire Society. Messrs. C. H. Brodie and Osborn C. Hills were re-elected honorary auditors.

The annual report stated that one-hundred-and-three applicants had been assisted with grants during the past year, as compared with eighty-five in 1929. Forty of these were architects and architects' assistants, thirty-nine

were widows and twenty-four orphans. Fourteen pensioners had also been helped, the ten pensions which the Society's bylaws allowed being supplemented by the three annuities which were founded by the late Thomas Dinwiddy, and the Henry L. Florence annuity founded in 1925 by Mr. H. S. E. Vanderpant, vice-president. The Council had also had the pleasure of distributing the sum of £60 received from the Surveyors' Club Charitable Fund through Mr. Arthur Blomfield, to give to architects especially deserving of consideration and help. Five architects were chosen who from old age or ill-health were in the opinion of the Council peculiarly fitted to be the recipients of the Surveyors' Club's generosity.

MANCHESTER SOCIETY OF ARCHITECTS

The annual general meeting of the Manchester Society of Architects was held on May 14. The retiring president, Mr. Theo. J. Halliday, F.R.I.B.A., vacated his office, which was filled by Mr. J. Hubert Worthington, O.B.E., F.R.I.B.A.

In the Council's report for the session 1930–31 it was stated that the Council had again made a contribution of £50 to the Maintenance Scholarship Fund of the R.I.B.A., which was founded by the Institute to enable promising students to avail themselves of the opportunities of architectural education which would otherwise be closed to them; the Council had also increased its subscriptions to the Architects' Benevolent Society this year to £21.

The Council had adopted the scheme for co-operation with speculative builders by the formation of a panel of architects to prepare plans for their work, in the hope that an improvement might be effected in suburban houses erected by private builders. This scheme had been initiated in Staffordshire by Mr. Reginald Longden, F.R.I.B.A., and the North Staffordshire Society of Architects, and before settling its scheme in detail the committee was awaiting the result of the experience of the Staffordshire Society.

The Council of the R.I.B.A. had accepted the invitation of the Society to hold the R.I.B.A. Conference of 1932 in Manchester.

There are now 394 members in the Society, comprising 108 Fellows, 150 Associates, and 136 students.

The prizes for Students' Competitions had been awarded as follows :

Senior Design Prize : 1st (£10 10s.), Mr. H. Elder, Salford Royal Technical Institute; 2nd (£4 4s.), Mr. Hubert Bennett, Manchester University School of Architecture; highly commended, Mr. D. E. E. Gibson, Manchester University School of Architecture.

Junior Design Prize : The prize of £4 4s. was divided between the following : Miss W. N. McGowan and Messrs. H. O. Wragge and H. Taylor, all of Manchester University School of Architecture.

WEST YORKSHIRE SOCIETY OF ARCHITECTS

The Council of the above Society offer a prize of ten guineas for the best "Pictorial Map" of the Society's area.

Applications for conditions and instructions should be forwarded to the Secretary, 62 Woodhouse Lane, Leeds, accompanied by a fee of 2s. 6d. to cover the cost of a ¼-in. scale map showing the Society's boundary, not later than June 3, 1931.

Designs are to be sent in not later than October 1, 1931.

COMPETITIONS OPEN

June 1.—Sending-in day. New Council School, to be erected at Blowers, Dudley. (Limited to architects within a radius of 15 miles of Dudley.) Assessor : Herbert T. Buckland, F.R.I.B.A. Conditions from J. Whaley, Director of Education, Education Offices, St. James's Road, Dudley.

June 16.—Sending-in day. (Last day for conditions was February 25.) Offices for the Ingham Infirmary, South Shields. (Limited to architects within the area of the Northern Architectural Association.) Assessor : George Reavell, O.B.E., F.R.I.B.A. Premiums : £250, £100 and £50. Conditions were obtainable from John Potter, Secretary, Ingham Infirmary, South Shields. (Deposit £2 2s.)

June 24.—Sending-in day. King Edward VI. School, Mill Lane and Wilton Road, Southampton, for the Governors of the School. Assessor : Sydney Tatchell, F.R.I.B.A. Premiums, £150, £100 and £50. (Deposit, £1 1s.). Full particulars are obtainable from G. A. Waller, Clerk to the Governors, 7 Albion Place, Southampton.

June 26.—Sending-in day. Offices for the City of Leicester Corporation, Charles Street, Leicester. Assessor : E. Berry Webber, A.R.I.B.A. Premiums : £300, £200 and £100. Conditions from A. T. Gooseman, Engineer and Surveyor, Town Hall, Leicester. (Deposit £2 2s.)

June 30.—Sending-in day. (Last day for conditions was April 15.) New Branch Baths, Foleshill, for the Coventry Corporation. Assessor : F. J. Horth, F.R.I.B.A. Premiums : £210, £105 and £52 10s. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

September 21.—Sending-in day. (Last day for conditions : June 10.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor : Percy Thomas, O.B.E., F.R.I.B.A. Premiums : £500, £400, £300 and £200. Conditions from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

October 1.—Sending-in Day. Last day for conditions : June 3. Pictorial Map of the Area of the West Yorkshire Society of Architects. Premium, 10 guineas. Particulars obtainable from the Secretary, 62 Woodhouse Lane, Leeds. Fee, 2s. 6d. (See note under Societies and Institutions, above.)

March 31, 1932.—Sending-in day. Last day for questions : August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors : Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium : £500; also a further amount of £750 will be awarded to other designs according to merit.

THE ARCHITECTS' DIARY

THURSDAY, MAY 28

LONDON SOCIETY. Visit to Horniman Museum and Gardens, London Road, Forest Hill, S.E. **3 p.m.**

MARGATE SCHOOL OF ART. Fifth of twelve illustrated lectures on Beauty in Design. "Balance and Contrast." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, MAY 30

Sunrise, 4.51 a.m. Sunset, 9.4 p.m.

LONDON SOCIETY. Visit to the Church of St. John, St. John's Square, Clerkenwell, W.C.1. **2.30 p.m.**

MONDAY, JUNE 1

INTERNATIONAL HOUSING AND TOWN PLANNING CONFERENCE, Berlin. Until June 5, with six added days for tours and visits. Fourteen papers will be presented on "The Abolition of the Slums" and twenty-one on "The Traffic Problem in Relation to Town and Regional Planning." British Delegates : Messrs. Frank Hunt, C.V.O., and G. L. Pepler, F.S.I.

TUESDAY, JUNE 2

INSTITUTE OF LANDSCAPE ARCHITECTS. At the Royal Horticultural Hall, Westminster, S.W.1. "Austrian Baroque Gardens." By G. A. Jellicoe, A.R.I.B.A. **3.30 p.m.**

INSTITUTION OF GAS ENGINEERS. Sixty-eighth annual meeting and first International Gas Conference of the Institution, to be held at the Institution of Civil Engineers, Great George Street, Westminster, S.W.1. Until June 5.

WEDNESDAY, JUNE 3

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. First of five lectures on the Art of Making and Using Concrete : "Types of Cement and their Peculiarities." By Dr. R. E. Stradling, HON. A.R.I.B.A., A.M.INST.C.E. Illustrated by lantern slides and experimental demonstrations. **6 p.m.**

THURSDAY, JUNE 4

MARGATE SCHOOL OF ART. Sixth of twelve illustrated lectures on Beauty in Design. "British Architects' Efforts." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JUNE 6

Sunrise 4.46 a.m. Sunset 9.10 p.m.

WEDNESDAY, JUNE 10

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Second of five lectures on the Art of Making and Using Concrete : "The Raw Materials of Concrete and their Field Testing." By H. A. Holt, A.I.STRUCT.E. Demonstrations will be given. **6 p.m.**

THURSDAY, JUNE 11

MARGATE SCHOOL OF ART. Seventh of twelve illustrated lectures on Beauty in Design. "Interior Designs." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JUNE 13

Sunrise, 4.42 a.m. Sunset, 9.15 p.m.

WEDNESDAY, JUNE 17

R.I.B.A. British Architects' Conference, Dublin. Until Saturday, June 20.

INSTITUTION OF STRUCTURAL ENGINEERS. Demonstration of the Making and Using of Concrete, by H. A. Holt, A.I. STRUCT. E. To be given at the L.C.C. School of Building, Ferndale Road, Brixton, S.W. 2.30 to 5.30 p.m., and 6.30 to 9.30 p.m. **2.30 p.m.**

THURSDAY, JUNE 18

MARGATE SCHOOL OF ART. Eighth of twelve illustrated lectures on Beauty in Design. "Cottages." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JUNE 20

Sunrise, 4.42 a.m. Sunset, 9.19 p.m.

MONDAY, JUNE 22

R.I.B.A., 9 Conduit Street, W.1. "Museum Planning." By Eric Maclagan, HON.A.R.I.B.A. **8 p.m.**

WEDNESDAY, JUNE 24

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Third of five lectures on the Art of Making and Using Concrete : "The Properties of Concrete, with special reference to handling on the Job." By Dr. R. E. Stradling, HON. A.R.I.B.A.

SATURDAY, JUNE 27

Sunrise, 4.45 a.m. Sunset, 9.20 p.m.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. Joint excursion with the South-Eastern Society of Architects, Chichester.

TUESDAY, JUNE 30

LONDON SOCIETY, Lancaster House, St. James', S.W.1. River Trip. Tickets obtainable from the Secretary.

WEDNESDAY, JULY 1

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Demonstration of "The Art of Making and Using Concrete, with special reference to handling on the Job." By H. A. Holt, A.I. STRUCT. E. At the L.C.C. School of Building, Ferndale Road, Brixton, S.W. 2.30 to 5.30 p.m. Followed by a lecture on "The Effect of Misplacing Reinforcements." By Ewart S. Andrews, A.I. STRUCT. E. At the Institution's headquarters. 6.30 to 9.30 p.m. **2.30 p.m.**

LAW REPORT

LONDON BUILDING ACT: POINT OF CONSTRUCTION

London County Council v. *Stilgoe. King's Bench Divisional Court. Before the Lord Chief Justice and Justices Avory and Humphreys*

THIS case raised a point under the London Building Act, 1894, and the subsequent amending Act, as to who was liable to pay the expenses incurred where, in the case of a dangerous structure, the London County Council had done the work.

The matter came before the Court on an appeal in a case stated by Mr. Dummett, one of the metropolitan police magistrates. The London County Council appealed against a decision in favour of the respondents, Messrs. Stilgoe.

Mr. Eve, for the Council, stated that the case raised an issue of some importance to the Council. In this case an order had been obtained by the Council from the magistrate where the owner-occupier had not paid the expenses incurred. The point raised in the case was a curious one, and was not exactly covered by authority. The magistrate found in effect that the Council could not recover as against the freeholder, but must proceed against the occupier in the first instance.

Mr. Eve said if the decision were right the Council and other public bodies of London would find themselves in the position of being liable to pay in regard to the expenses incurred of dangerous and neglected buildings, because of the probable inability of the occupier to pay. The matter thus became one of much importance to the Council, who took the view that they should have the right to sue the owner rather than the occupier. The case under review concerned an overhead arch connecting two buildings in Charing Cross Road, underneath which ran a public highway. It was a dangerous structure, and three parties were interested in the property, viz., freeholders, lessees and sub-lessees. In the Court below a demand was made upon the freeholder, and it was then that the point arose as to the liability in the first instance, it being pointed out that the Council should have proceeded against the occupiers or lessees before seeking redress against the freeholder.

Counsel submitted that the magistrate was wrong in his construction of the law.

He contended that it was clear that the Council had the power under the Act to proceed against the owner or lessee, but if they so desired they had the additional right of proceeding against the occupier also. Under these circumstances he asked that the appeal should be allowed.

Mr. Maddocks, for the respondents, supported the learned magistrate's decision, and contended that under the Act the first person to be proceeded against was the occupier, who had his remedy against the lessees and freeholders.

After long legal arguments, the Court reserved its judgment.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Hendon Central Library (pages 747-749). General contractors, S. E. Moss and Sons. Sub-contractors : Collier and Son, facing bricks; United Stone Firms, Ltd., Portland stone; Aston Construction Co., Ltd., and Edward Wood & Co., Ltd., constructional steelwork; Lawford & Co., asphalt; G. N. Haden and Sons, Ltd., heating and h.w. work; H. H. Martyn & Co., Ltd., fibrous plaster; Crittall Manufacturing Co., Ltd., metal windows; Roneo, Ltd., steel shelving; Acme Flooring and Paving Co. (1904), Ltd., hardwood floors; J. R. Pearson, Ltd., dome light and wrought-iron work; Luxfer Co., Ltd., lay-lights; G. E. Taylor & Co., electric wiring; Van Straaten & Co., wall tiling; Carter (London) & Co., Ltd., floor tiling and main staircase; George Jennings, Ltd., sanitary fittings; A. H. Wilkinson, carving; The Synchronome Co., Ltd., clocks; G. Johnson, Ltd., book lift; Yannedis & Co., ironmongery; Cashmore Art Works, lead rain-water heads; Libraco, Ltd., library fittings and shelves; B. Cohen and Son, Ltd., tables, chairs, etc.; Joseph Avery & Co., blinds; Ewart and Son, Ltd., copper roofing.

Additions to Dann's Farm House, Willingdon, Sussex (page 750). General contractors : A. W. King and Sons. Sub-contractors : S. and E. Collier, bricks; —. Jones, stonemason, stone; Crittall Manufacturing Co., Ltd., casements.

Bridgeton Halls, Glasgow (pages 753-755). General contractor, James MacConnachie. Sub-contractors : Jackson, Brown & Co., excavation, foundations and dampcourses, bricklaying and mason work; Limmer and Trinidad Lake Asphalte Co., Ltd., asphalt; Jackson, Brown & Co., reinforced concrete; Ruabon, bricks; Redpath, Brown & Co., Ltd., structural steel; W. Graydon & Co., slates; James Pattison, patent glazing; Matthew Braid and Sons, wood-block patent flooring, carpentry and joinery; G. N. Haden and Sons, Ltd., central heating and ventilation; John Paterson & Co., Ltd., gas fixtures, gasfitting, and plumbing; T. B. and J. A. Mathison, Ltd., electric wiring and mantels; Osler and Faraday, Ltd., electric light fixtures; Shanks & Co., Ltd., sanitary fittings; Henry Hope and Sons, Ltd., casements; James Gibbons, window furniture; George Rome & Co., Ltd., plaster; John Youden and Sons, Ltd., tiling; Charles Marshall, painting; May Construction Co., Ltd., acoustic work.

TRADE NOTES

A souvenir booklet has been produced in colour by Messrs. Waygood-Otis, Ltd., to mark the opening of the new Dorchester Hotel, in Park Lane, W. Photographs of passenger and other lifts installed in the new hotel by the company are included with a very readable article on "Changing London." The passenger lifts have a speed of 400 feet per minute, and are automatically stopped exactly at floor-level by means of a patent micro-drive. The lifts are fitted with illuminated call indicators, controlled by call pushes on each landing, have signal lights above the entrances to show passengers which lift is answering the call, and are specially designed for safe, silent, speedy operation. In addition, there are lifts—whole batteries of them—to convey food from the kitchens to every part of the hotel; lifts for the conveyance of luggage, and capable of raising loads of from 1,000 lb. to 2,500 lb. at speeds up to 250 feet of travel per minute; passenger lifts for the use of the staff; and goods lifts which are raised and lowered by means of vertical screws, thus obviating the necessity for overhead wheels. The complete installation numbers no fewer than twenty-four lifts of the most modern design and construction, the entire equipment being supplied and installed by Waygood-Otis, Ltd.

*

Messrs. Holophane, Ltd., have secured two important street lighting contracts, one for Valparaiso, and one for Durban.

*

Part of the seven thousand square yards of rubber flooring in the new liner *Empress of Britain* was laid by the Macinlop Company. Among the advantages claimed for rubber-laid decks are elasticity to the flexing movements of the ship, resistance to atmospheric conditions and immunity to the effects of sea water.

*

A remarkably long service from a rubber valve is reported from a Manchester engineering works. The valve, supplied by Macinlop, was 11 ins. diameter, $\frac{9}{16}$ in. bore and $\frac{3}{4}$ in. thick, and was fitted to an air pump. Instead of the usual four to six months, this valve lasted eighteen months, and was only removed because the bore hole had become elongated.

*

Some years ago the Leeds Fireclay Co., Ltd., moved from the Strand to showrooms at 2 Cavendish Place, W.1 (just off Oxford Circus). Now, to meet the increased demand for their goods and to give even better service, the London depot of the firm has been moved from King's Cross to the L. M. and S. Goods Station, King's Road, St. Pancras, N.W.1. Telephone : North 2085.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The L.C.C. is to erect seventeen shops on the BARKING section of the Becontree estate, at a cost of £31,000.

The L.C.C. has prepared plans for the erection of 105 tenements on the BOW brewery site, at a cost of £66,000.

The Greenwich B.C. has purchased a site in Victoria Road, CHARLTON, for the erection of houses.

The CITY OF LONDON Corporation recommends the erection of a new dormitory block at the Freeman's schools, at an estimated cost of £10,000.

Plans passed at CROYDON : Fifteen garages, Pollards Hill, for Mr. H. Macintosh; house, Croham Valley Road, and house, Farley Road, for Mr. G. W. Peachey ; house, Coningsby Road, for Messrs. Morgan Baines and Clark; house, Ballards Way, for Mr. H. Sheffield ; two houses, Woodside Road, for Messrs. Wylie and Berlyn; house, Shirley Road, for Mr. W. A. Cronk; three houses, Hythe Road, for Messrs. Bond and Son; house, Manor Way, for Mr. A. A. Whyatt; house, Culmington Road, for Mr. W. M. Amos; house, Kynaston Road, for Mr. J. R. R. Oddy; house, Woodmere Avenue, for Messrs. F. H. Ayling, Ltd.; twenty-six houses, Ross Road, for Mr. P. Richardson; workshop, offices and showroom, Thornton Road, for Messrs. C. H. Gibson, Ltd.; house, Kingsdown Avenue, for Messrs. Morgan Baines and Clark; house, Stafford Road, for Messrs. Smith & Co.; two houses, Cromer Road, for Messrs. Steel and Howes.

Plans passed at FULHAM : Buildings, Townmead Road, for Mr. G. Spragge on behalf of Shell-Mex, Ltd.; additional building, 2 Haldane Road, for Mr. A. E. Batzer; buildings, All Saints' School, High Street, for Messrs. White and Johnson; buildings, 42 Vereker Road, for Mr. Wm. Doddington.

The L.C.C. is to erect a trade school for girls in Cassland Road, HACKNEY, at an estimated cost of £31,650.

The Lambeth B.C. is to erect a block of sixteen tenements in Denmark Road, HERNE HILL.

The L.C.C. and the City of London Corporation are to widen HOUNDSDITCH, at a cost of £80,000.

The Essex Education Committee has approved plans for extensions at Harold Court School, ROMFORD, at a cost of £17,000.

The ST. PANCRAS B.C. proposes to erect a small block of eighteen tenements on the courtyard of Somers Town Dwellings.

The ST. PANCRAS B.C. is to acquire a site in Kentish Town for the erection of fifty-four tenements, at a cost of £40,000.

The SHOREDITCH B.C. has acquired property in Pitfield Street for the extension of Hoxton baths.

The SOUTHWARK B.C. is to acquire the Orphans' Home, Austral Street, for a housing scheme.

The L.C.C. has approved the scheme of the Governors of the North-Western Polytechnic, St. Pancras, to provide a sports ground and erect pavilions at STANMORE, at a cost of £22,000.

The WATFORD Corporation proposes to commence next month the erection of swimming and slipper baths in Hempstead Road, at a cost of 33,000.

SOUTHERN COUNTIES

Plans passed at BEXHILL : House, Cranston Avenue, for Mr. A. Curran; house, Meads Road, for Messrs. Strange and Sons; house, Meads Road, for Mr. J. Hunt; two houses, Cooden Drive, for Messrs. Tubbs and Messer; house, De La Warr Road, for Mr. E. Bunce; ten houses, Eastwood Road, for Mr. J. E. Maynard; six bungalows, Chestnut Walk, for Mr. G. E. Matthews; bungalow, Chestnut Walk, for the Rev. T. W. Pritchard; additions to house, Chestnut Walk, for Major Greaves.

Plans passed at DARTFORD : Two houses, Knole Road, for Mr. W. S. Willcocks; six houses, Cranford Road, for Mr. G. W. Chancellor; extension of store, London Paper Mills, for the London Paper Mills Co., Ltd.; four houses, Brent Lane, for Mr. J. Ellard; ten houses, Dewlands Estate, for Mr. L. Fuller; shop, Dartford Road, for Mr. W. J. Brise.

A block of twenty-four flats is to be built at The Cliff, EASTBOURNE.

The Hampshire Education Committee has voted £23,000 for the erection of a new senior Council school at TOTTON.

The Hampshire C.C. has obtained sanction to borrow £7,700 for the erection of a police station and petty sessional court at WHITEHILL.

The WORTHING Corporation is to commence the first section of the new municipal office scheme at an estimated cost of £100,000.

SOUTH-WESTERN COUNTIES

The BRISTOL Education Committee has obtained a site on the Southmead housing estate for the erection of an elementary school.

Plans passed at PLYMOUTH : Two houses, Segrave Road, for Mr. H. L. Pile; house, Vapron Road, for Mr. A. S. Parker; two flats and seven garages, Marlborough Road, for Mr. C. F. Hocking; house, Torr Lane, for Mr. J. O. Butler; eight houses, Stuart Road, for Mr. G. W. Smith; two houses, Green Park Avenue, for Mr. H. Holmes; four houses, Efford Lane, for the Great Western Housing Society; two houses, Brandeth Road, for Mr. G. Lazarus; two houses, Cranmere Avenue, for Mr. M. Oliver; new club premises, Barne Road, for St. Budeaux Working Men's Club; two houses, Egg Buckland Road, for Mr. W. Surman.

EASTERN COUNTIES

The Essex Education Committee has adopted revised plans for extensions at BRAINTREE intermediate school, at a cost of £5,500.

The Essex Education Committee has approved plans for the erection of a science block at King Edward School, CHELMSFORD, at a cost of £7,000.

The Essex Education Committee has passed plans for the erection of a junior school in Markhams Chase, LAINDON, at a cost of £16,000.

Plans passed at LOWESTOFT : House, Blackheath Road, for Mrs. Spooner; post office, High Street, for Miss S. J. E. Cooper; house and shop, Blackheath Road, for Mr. H. Foreman; four houses, Victoria Road, for Mr. A. E. Ingles.

The Essex Education Committee is to enlarge the Silver End school, RIVERHALL, at a cost of £5,000.

The Hertfordshire Education Committee is to proceed with the erection of schools for 350 pupils in the Bushey Mill Lane district, for 350 pupils in the Leavesden Green district, and for 350 pupils in the Eastbury Road area, WATFORD.

The WHITCHURCH U.D.C. has decided to purchase a site in Station Road, for the erection of forty-eight houses.

MIDLAND COUNTIES

The BEDFORD Corporation recommends the acquisition of a site of 116 acres of land near London Road for the erection of 200 houses.

Plans passed at BEDFORD : Alterations, 6 Mill Street, for Mr. W. E. G. Hull; house, London Road, for Messrs. E. H. C. Inskip and Son; four houses and shop, Elstow Road, for Mr. A. E. Pryer; two houses, Beresford Road, for Mr. G. W. Glass; six houses, Miller Road, for Mr. J. B. Saunderson.

The BILSTON U.D.C. is to erect thirty houses on the Council estates from plans prepared by Mr. W. G. Lofthouse.

The BIRMINGHAM Corporation is to erect seven shops and houses on the Hollies Hall and the Birches Green estates.

The MARKET HARBOROUGH U.D.C. recommends the purchase of a site in The Square for the erection of new municipal offices.

The OXFORD Corporation has acquired about fifteen acres of land in Marston Road, for educational purposes.

Plans passed at OXFORD : Two houses, Highfield Avenue, Headington, for Mr. G. Cobbett; thirty-three houses, Banbury Road, for Mr. A. J. Colbourne; house, Highfield Avenue, Headington, for Mr. L. R. Bestley; house, Stephen Road, Headington, for Mr. H. Fitchett; new wards and nurses' hostel, Old Road, Headington, for the Wingfield Hospital; two houses, Highfield Avenue, for Messrs. Pontin & Co.; house, Abberbury Road, for Messrs. Benfield and Loxley; house, Five Mile Drive, for Mr. C. A. Cameron-Brown; layout, Summertown housing estate, for Mr. Colbourne.

The SUTTON-IN-ASHFIELD U.D.C. is to erect seventy-six houses on the Station Road site.

The Notts. Education Committee has acquired a site in Loughborough Road, WEST BRIDGFORD, for the erection of a secondary school.

NORTHERN COUNTIES

The BARROW Corporation is to prepare plans for the erection of a new town hall.

Plans passed at BIRKENHEAD : Reconstruction of workshop and office building, Price Street; nine houses, Price Street, adjoining St. Anne's Place; extensions to sawmill, Livingstone Street and Brook Street.

The BIRKENHEAD Education Committee is acquiring land in St. Paul's Road, for the purposes of a nursery school.

The BIRKENHEAD Education Committee has purchased a site on the Woodchurch Estate, for the erection of an open-air school.

The BOLTON Corporation is to erect twenty houses in Higher Swan Lane, thirty houses in Cameron Street, three houses in Crumpsall Street and thirty houses on Hall-i'-th'-Wood housing site.

The Cheshire Education Committee is to erect a primary school for 400 pupils in Queen's Road, CHEADLE HULME.

The DURHAM County Council has passed plans of the proposed admission hospital, which is to provide accommodation for fifty male and fifty female patients. The estimated cost of the building is £36,000, and of the furniture £5,000.

The Cheshire Education Committee has acquired a site at HIGHER BEBINGTON for the erection of an elementary school.

The HULL Corporation has approved plans by Messrs. Gelder and Kitchen, architects, for the erection of shops in the new street approaching the Bridge.

The LIVERPOOL Education Committee is to erect an elementary school for senior boys at Grandison Road, Clubmoor, Liverpool, and a secondary school for boys at Wavertree.

The WAKEFIELD Corporation is to erect twenty houses on the Lupset Estate, and ninety houses in the New Street area.

Plans passed at WAKEFIELD : Shop, Sycamore Street, for Messrs. Massie and Holdsworth; two houses, Horbury Road, for Mr. G. A. Nicholson; two houses, Thornes Road, for Messrs. W. NcMab and J. W. Tapster; house, Chevet Lane, for Messrs. Dobson and Gighall; two houses, Thornes Road, for Mr. J. W. Tapster; two houses, Horbury Road, for Messrs. Dobson and Gighall.

The WARRINGTON Education Committee is to erect an elementary school at Latchford for 960 scholars.

The WARRINGTON Corporation has received sanction to borrow £8,196 for the erection of twenty-four additional houses on the Westy Lane site.

MISCELLANEOUS

The Monmouthshire Education Committee is to erect a secondary school at BASSALEG, near Newport.

The SHANKLIN U.D.C. is seeking sanction for a loan of £14,000, for the reconstruction of the town hall.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0½
B_2	Aylesbury ..	S. Counties	1 3	11½
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11½
	Birkenhead	N.W. Counties	*1 8½	1 3½
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11½
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth	S. Counties	1 5	1 0½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11½
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0½
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11½
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Bursiem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11½
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11½
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11½
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank ..	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0½
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A_2	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11½
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11½
A_2	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0½
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1½
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0½
A_2	Filey ..	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11½
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole ..	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5	1 0½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11½
A_2	Hatfield ..	S. Counties	1 5	1 0½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0½
B_2	Isle of Wight	S. Counties	1 3	11½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1½
A_1	Kidderminster	Mid. Counties	1 5½	1 1½
B_2	King's Lynn	E. Counties	1 3½	11½
A	LANCASTER	N.W. Counties	1 6½	1 2
A_1	Leamington	Mid. Counties	1 5½	1 1½
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3½
A_2	Llandudno	N.W. Counties	1 5	1 0½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe	N.W. Counties	1 6½	1 2
A_1	NANTWICH	N.W. Counties	1 5½	1 1½
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1½
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0½
A_2	Oldham ..	N.W. Counties	1 5½	1 1½
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0½
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11½
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5	1 0½
A_2	Solihull ..	Mid. Counties	1 5½	1 1½
A_2	South'pton	S. Counties	1 5	1 0½
A_2	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0½
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1½
A_2	Welling-borough	Mid. Counties	1 5½	1 1½
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1½
A_2	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0½
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11½
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter . . . . ,,	1 8
Joiner . . . . ,,	1 8
Machinist . . . . ,,	1 9
Mason (Banker) . . . . ,,	1 8
,, (Fixer) . . . . ,,	1 9
Plumber . . . . ,,	1 8
Painter . . . . ,,	1 7
Paperhanger . . . . ,,	1 8
Glazier . . . . ,,	1 8
Slater . . . . ,,	1 8
Scaffolder . . . . ,,	1 4
Timberman . . . . ,,	1 4
Navvy . . . . ,,	1 3
General Labourer . . . . ,,	1 3
Lorryman . . . . ,,	1 5½
Crane Driver . . . . ,,	1 7
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . . ,,	2 10 6
Hydrated Lime . . . . ,,	2 16 0
Portland Cement . . . . ,,	2 6 0
Rapid Hardening Cement . . ,,	2 13 6
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . . ,,	10 0
Building Sand . . . . ,,	10 6
Washed Sand . . . . ,,	11 6
2" Broken Brick . . . ,,	9 6
¾" ,, ,, . . . ,,	12 6
Pan Breeze . . . . ,,	6 6
Coke Breeze . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . . per F.R.	1 1	1 6
Bends . . . . each	2 10	4 4
Taper bends . . . . ,,	6 3	7 2
Rest bends . . . . ,,	5 9	8 9
Single junctions . . . ,,	3 9	5 9
Double ,, . . . ,,	5 9	8 9
Straight channels . . . ,,	2 6	3 2
¼ Channel bends . . . ,,	7 8	—
Channel junctions . . . ,,	7 0	12 6
Channel tapers. . . . ,,	5 6	7 9
Yard gullies . . . . ,,	9 6	11 6
Interceptors . . . . ,,	18 6	25 9
Iron drain pipe . . . per F.R.	2 3	3 5
Bends . . . . each	6 0	13 0
Inspection bends . . . ,,	15 3	24 0
Single junctions . . . ,,	9 3	18 0
Double junctions . . . ,,	14 0	27 6
Lead wool . . . . lb.	6	—
Gaskin . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . . ,,	4 18 6
,, 2nd ,, . . . ,,	4 12 6
Blue Bricks, Pressed . . . ,,	9 18 0
,, Wirecuts . . . ,,	8 16 0
,, Brindles . . . ,,	8 0 0
,, Bullnose . . . ,,	10 8 0
Red Sand-faced Facings . . ,,	7 11 0
Red Rubbers for Arches . . ,,	15 0 0
Multicoloured Facings . . ,,	9 4 0
Luton Facings . . . . ,,	8 16 0
Midhurst White Facings . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . . ,,	21 10 0
Headers . . . . ,,	21 0 0
Bullnose . . . . ,,	28 0 0
Double Stretchers . . . ,,	30 0 0
Double Headers . . . ,,	27 0 0
Glazed Second Quality, *Less* . . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

MASON

The following d/d F.O.R. at Nine Elms:	s. d.
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . . ,,	4 9
Bath stone . . . . ,,	2 11
York stone . . . . ,,	6 9
,, Sawn templates . . . ,,	7 6
,, Paving, 2" . . . . F.S.	1 8
,, ,, 3" . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20"× 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . . each	9½
,, hand-made . . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d
Good carcassing timber . . . F.C.	2 6
Birch . . . . as 1" F.S.	9
Deal, Joiner's, ... ,, ,,	3
,, ,, 2nds . . . ,, ,,	4
Mahogany, Honduras . . . ,, ,,	1 3
,, African . . . ,, ,,	1 1
,, Cuban . . . ,, ,,	2 6
Oak, plain American . . . ,, ,,	1 0
,, Figured ,, . . . ,, ,,	1 3
,, Plain Japanese . . . ,, ,,	1 2
,, Figured ,, . . . ,, ,,	1 5
,, Austrian wainscot . . ,, ,,	1 6
,, English ,, . . . ,, ,,	1 11
Pine, Yellow . . . . ,, ,,	1 0
,, Oregon . . . . ,, ,,	4
,, British Columbian . . ,, ,,	4
Teak, Moulmein . . . . ,, ,,	1 3
,, Burma . . . . ,, ,,	1 2
Walnut, American . . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . . ,, ,,	1 1
Deal floorings, ¾" . . . . Sq.	1 1 0
,, 1" . . . . ,,	1 3 6
,, 1¼" . . . . ,,	1 5 6
,, 1½" . . . . ,,	1 11 0
,, 1¾" . . . . ,,	1 15 0
Deal matchings, ¾" . . . ,,	16 0
,, 1" . . . . ,,	17 6
,, 1¼" . . . . ,,	1 6 0
Rough boarding, ¾" . . . ,,	18 0
,, 1" . . . . ,,	1 0 0
,, 1¼" . . . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	⅜"	½"	⅝"	¾"
Qualities	AA. A. B.	AA. A. B.	AA. A. B.	AA. A. B.
	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch .	4 3 2	5 4 3	7½ 6 4½	8½ 7 6
Alder .	3½ 3 2	5 4 3	6½ 5½ 4½	8 7 6
Gaboon Mahogany	4 3 3	6½ 5½ 4½	9½ 7½ –	1/0½ 10 –
Figured Oak 1 side	8½ 7 –	10 8 –	11½ – –	1/6 – –
Plain Oak 1 side	6½ 6 –	7½ 7 –	9½ – –	1/0 – –
Oregon Pine	5 4 –	5½ 5 –	6 – –	– – –

	d.
Scotch glue . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½"	¾"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket union . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . .	55	,, steam .	40

FITTINGS.

Gas . . .	47½	Galvanized gas .	37½
Water . . .	42½	,, water .	32½
Steam . . .	37½	,, steam .	27½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ¾" . . . ,,	10 0
,, ,, ⅞" . . . ,,	9 9
,, ,, 1" . . . ,,	9 6
,, ,, 1⅛" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0
,, ,, 1¾" . . . ,,	9 0
,, ,, 2" . . . ,,	9 0

Cast-iron rain-water pipes of ordinary thickness metal .	3" F.R. s. d.	4" s. d.
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6

Half-round rain-water gutters of ordinary thickness metal .	F.R. s. d.	s. d.
Stop ends . . . . each	6	7
Angles . . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	21 0
,, drawn pipes . . . ,,	21 6
,, soil pipe . . . ,,	24 6
,, scrap . . . ,,	11 0
Solder, plumbers' . . . lb.	1 0
,, fine do. . . . ,,	1 4
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3" F.R. s. d.	4" s. d.	6" s. d.
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . ,,		1 3
¼" Polished plate, n/e 1 . ,,	1 0 to	1 3
,, ,, 2 . ,,	1 2 ,,	1 7
,, ,, 3 . ,,	1 7 ,,	2 5
,, ,, 4 . ,,	2 1 ,,	2 11
,, ,, 6 . ,,	2 3 ,,	3 2
,, ,, 8 . ,,	2 6 ,,	3 6
,, ,, 12 . ,,	2 9 ,,	3 8
,, ,, 20 . ,,	3 0 ,,	3 11
,, ,, 45 . ,,	3 3 ,,	4 1
,, ,, 65 . ,,	3 7 ,,	4 6
,, ,, 90 . ,,	3 10 ,,	4 9
,, ,, 100 . ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 . ,,		1 0
,, ,, 2 . ,,		1 3
,, ,, over 2 . ,,		1 9
,, ,, plate, n/e 1 . ,,		1 6
,, ,, 2 . ,,		3 0
,, ,, 5 . ,,		4 0
,, ,, 7 . ,,		5 0
,, ,, 15 . ,,		6 0
,, ,, over 15 . ,,		7 6
Putty, linseed oil . . lb.		3

PAINTER

	£ s. d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 4
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR		£	s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.		3	6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.		10	0
" to form basement n/e 5' 0" deep and cart away	"		11	0
" " 10' 0" deep and cart away	"		11	6
" " 15' 0" deep and cart away	"		12	0
If in stiff clay	add "		3	0
If in underpinning	" "		5	0
Digging, return, fill and ram	"		5	0
Planking and strutting to sides of excavation	F.S.		1	0
" " to pier holes	"			6
" " to trenches	"			6
" " extra, only if left in	"			3½
Hardcore, filled in and rammed	Y.C.		14	0
Portland cement concrete in foundations (6-1)	"	1	13	6
" " " (4-2-1)	"	1	18	6
" " " underpinning	"	2	2	0
Finishing surface of concrete, spade face	Y.S.			9

DRAINLAYER		4" s.	d.	6" s.	d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	8	2	6
Extra, only for bends	Each	2	8	3	9
" junctions	"	3	9	4	6
Gullies and gratings	"	17	6	19	9
Cast iron drains, and laying and jointing	F.R.	5	6	7	0
Extra, for bends	Each	12	6	18	6

BRICKLAYER		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	32	0	0
" " in cement	"	34	0	0
" Stocks in cement	"	41	10	0
" Blues in cement	"	62	0	0
Extra only for circular on plan	"	3	0	0
" backing to masonry	"	2	0	0
" raising on old walls	"	3	0	0
" underpinning	"	10	0	0
Fair Face and pointing internally	F.S.			3
Extra only for picked stock facings	"		1	0
" red brick facings	"		1	6
" blue brick facings	"		1	9
" glazed brick facings	"		4	6
Tuck pointing	"			10
Weather pointing	"			4
Slate dampcourse	"		1	0
Vertical dampcourse	"		1	3

ASPHALTER		s.	d.
½" Horizontal dampcourse	Y.S.		5	6
½" Vertical dampcourse	"		7	6
½" paving or flat	"		5	6
1" paving or flat	"		6	6
1" × 6" skirting	F.R.		1	0
Angle fillet	"			2
Rounded angle	"			2
Cesspools	Each		5	0

MASON		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1	1	6
Bath stone and do, all as last	"		15	6
Artificial stone and do.	"		16	6
York stone templates, fixed complete	"		14	0
" thresholds	"		16	0
" sills	"	1	3	6

SLATER AND TILER		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4	5	0
Do., 18" × 9"	"	4	2	0
Do., 24" × 12"	"	4	12	0
Westmorland slating, laid with diminished courses	"	6	10	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4	0	0
Do., all as last, but of machine-made tiles	"	3	11	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	12	0
Shuttering to sides and soffits of beams	F.S.		1	0
" to stanchions	"		1	0
" to staircases	"		2	0
Fir and fixing in wall plates, lintols, etc.	F.C.		5	0
Fir framed in floors	"		6	9
" " roofs	"		8	3
" " trusses	"		9	0
" " partitions	"		12	0
½" deal sawn boarding and fixing to joists	Sqr.	1	17	6
1" " " " "	"	2	1	6
1½" " " " "	"	2	7	6
⅞" × 2" fir battening for Countess slating	"		12	6
Do. for 4" gauge tiling	"		16	0
Stout feather-edged tilting fillet	F.R.			6
Patent roofing felt, 1 ply	Y.S.		2	9
" " " 2 "	"		3	0
" " " 3 "	"		3	6
Stout herringbone strutting to 9" joists	F.R.		1	0
1" deal gutter boards and bearers	F.S.		1	4
1½" " " " "	"		1	8
2" deal wrought rounded roll	F.R.			9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	15	0
1¼" do.	"	3	4	0
1½" do.	"	3	13	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	10
1¼" do.	"		2	1

CARPENTER AND JOINER—*continued*.		s.	d.
1½" deal moulded sashes of average size	F.S.	2	3
2" " " "	"	2	6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ¾" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4	3
2" " " "	"	4	6
Extra only for moulded horns	Each		9
1¼" deal four-panel square, both sides, door	F.S.	2	6
2" " " "	"	3	0
1½" " but moulded both sides	"	3	0
2" " " "	"	3	6
4" × 3" deal, rebated and moulded frames	F.R.	1	6
4½" × 3½" " " "	"	2	0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2	0
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3	0
1½" deal moulded wall strings	"	2	6
1½" " outer strings	"	2	9
Ends of treads and risers housed to string	Each	2	0
3" × 2" deal moulded handrail	F.R.	1	6
1" × 1" deal balusters and housing each end	Each	2	6
1½" × 1½" " " "	"	3	3
3" × 3" deal wrought framed newels	F.R.	1	6
Extra only for newel caps	Each	7	6
Do., pendants	"	7	6

SMITH AND FOUNDER		s.	d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17	0
Riveted plate or compound girders, and hoisting and fixing in position	"	1	3	0
Do. stanchions with riveted caps and bases and do.	"	1	2	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1	0	0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.		1	0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	15	0

PLUMBER		£	s.	d.
Milled lead and labour in flats, gutters	Per cwt.	1	17	6
Do. in flashings	"	2	0	0
Do. in covering to turrets, etc.	"	2	7	0
Do. in soakers	"	1	13	0
Labour to welted edge	F.R.			3½
Open copper nailing	"			3½
Close "	"			4½

	½" s.	d.	¾" s.	d.	1" s.	d.	1½" s.	d.	2" s.	d.	4" s.	d.
Lead service pipe and fixing with pipe hooks F.R.	1	2	1	7	2	1	2	8	3	8	—	
Do. soil pipe and fixing with cast lead tacks "	—		—		—		—		—		5	9
Extra, only to bends Each	—		—		—		—		2	3	6	6
Do. to stop ends "	7		9		1	0	1	3	2	0	—	
Boiler screws and unions "	3	6	4	0	5	6	8	0	—		—	
Lead traps "	—		—		—		7	6	10	6	—	
Screw down bib valves "	7	6	10	6	12	6	—		—		—	
Do. stop cocks "	10	0	12	0	16	0	23	6	56	6	—	

	£	s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	3
Extra, only stop ends	Each	1	0
Do. angles	"	1	6
Do. outlets	"	3	0
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	6
Extra, only for shoes	Each	2	6
Do. for plain heads	"	5	6

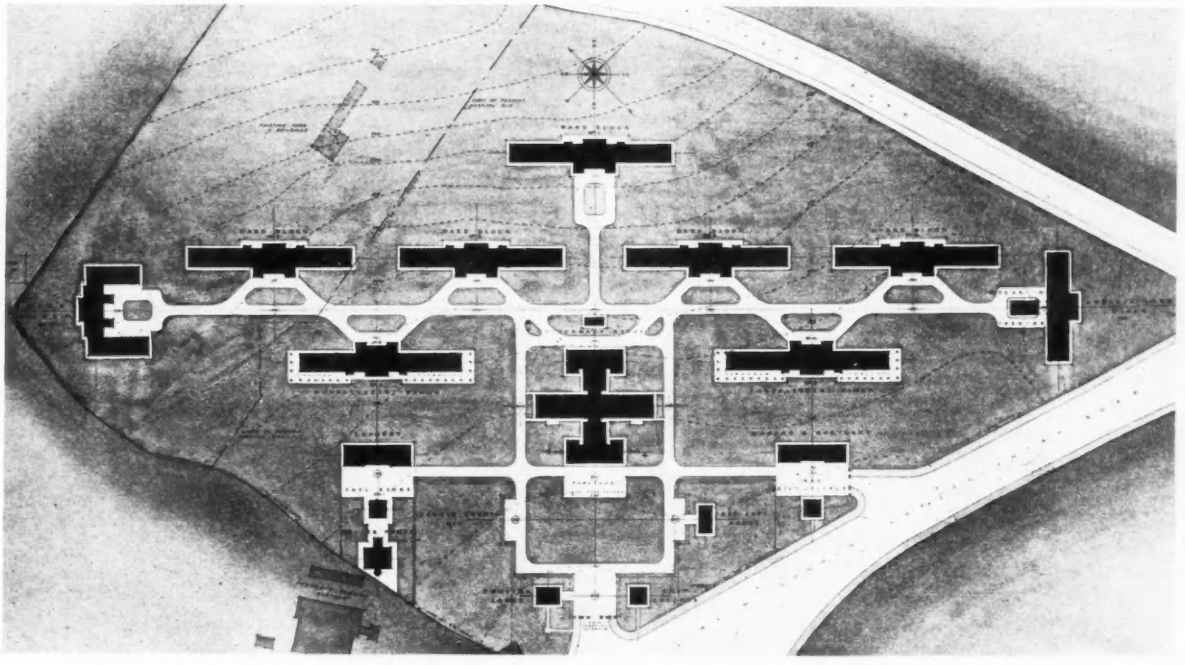
PLASTERER AND TILING		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		3	9
Do. in n/w to beams, stanchions, etc.	"		5	6
Lathing with sawn laths to ceilings	"		1	6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"		2	6
Do. vertical	"		2	9
Rough render on walls	"		2	3
Render, float and set in lime and hair	"		3	0
Render and set in Sirapite	"		3	3
Render, backing in cement and sand, and set in Keene's cement	"		4	6
Extra, only if on lathing	"			9
Keene's cement, angle and arris	F.R.			8
Arris	"			3
Rounded angle, small	"			3
Plain cornices in plaster, including dubbing out, per 1" girth	"			2
1" granolithic pavings	Y.S.		5	0
1½" "	"		6	0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1	2	6
9" × 3" " " "	"	1	7	6
Extra, only for small quadrant angle	F.R.			9

GLAZIER		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		8
26 oz. do. and do.	"	1	0
Arctic glass and glazing with putty	"	1	2
Cathedral glass and do.	"	1	3
Glazing only, British polished plate	"		8
Extra, only if in beads	"		2
Washleather	F.R.		4

PAINTER		s.	d.
Clearcolle and whiten ceilings	Y.S.		8
Do. and distemper walls	"	1	0
Do. with washable distemper	"	1	3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax-polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	6
Hanging ordinary paper	from "	3	0

COVENTRY INFECTIOUS DISEASES HOSPITAL

DESIGNS SUBMITTED IN COMPETITION BY STANLEY ATKINSON, WINNER OF THE FIRST PRIZE



BLOCK PLAN SHOWING THE RELATION OF THE SECTIONS

IN this competition for designs for a new infectious diseases hospital, at Coventry, Mr. E. Stanley Hall, M.A., F.R.I.B.A., the Assessor, last week made his award as follows :—First premium (£300) : Stanley Atkinson, London ; Second premium (£200) : Paine and Hobday, London ; Third premium (£100) : Harvey and Wicks, Birmingham. The assessor placed the design of Gibson and Gordon, London, fourth, and commended the following : Nicol & Nicol and Thomas & Walton, Birmingham ; J. H. Morton and Son, South Shields ; E. A. A. Rowse, Edinburgh ; W. Naseby Adams, London ; Elcock and Sutcliffe, London ; J. H. M. Bates and W. J. Baker, Hemel Hempstead, Herts ; S. N. Cooke and R. Love, Birmingham ; Collcutt and Hamp, London ; A. W. Kenyon and S. G. Livock, London. One hundred and thirty-one designs were submitted. The assessor says in his report : "The drawings reached a very high level of efficiency, and I think the City are to be congratulated on the response which has been made to their invitation." A selection of the drawings of the winning design is reproduced on this and the following three pages.

The site of the proposed hospital is at Pinley, about one-and-a-half miles south-east of Coventry. The hospital accommodation required comprised 152 beds for patients. It was contemplated, however, that the hospital might in the future be extended by 84 beds, giving an ultimate total accommodation of 236 beds for patients. In the patients' blocks, five ward blocks, one cubicle block, a small operating theatre unit, and a discharge block were stipulated.

Each of the five ward blocks was to contain 28 beds in all, comprising one 12-bed ward for men and one 14-bed ward for women and children, and two single-bed wards for either male or female cases. Each of the single-bed wards was to be self contained, and be provided with access from the ward block and from the outside, possibly through a veranda or lobby. All five ward blocks were to be of the same type and to contain in addition, among other accommodation, a nurses' ward kitchen, a sisters' duty room, linen, patients' clothes and box stores. It was suggested that verandas be added to two ward units only, which would be used as convalescent blocks. It was also suggested that a day room should be formed over the central part of two wards only.

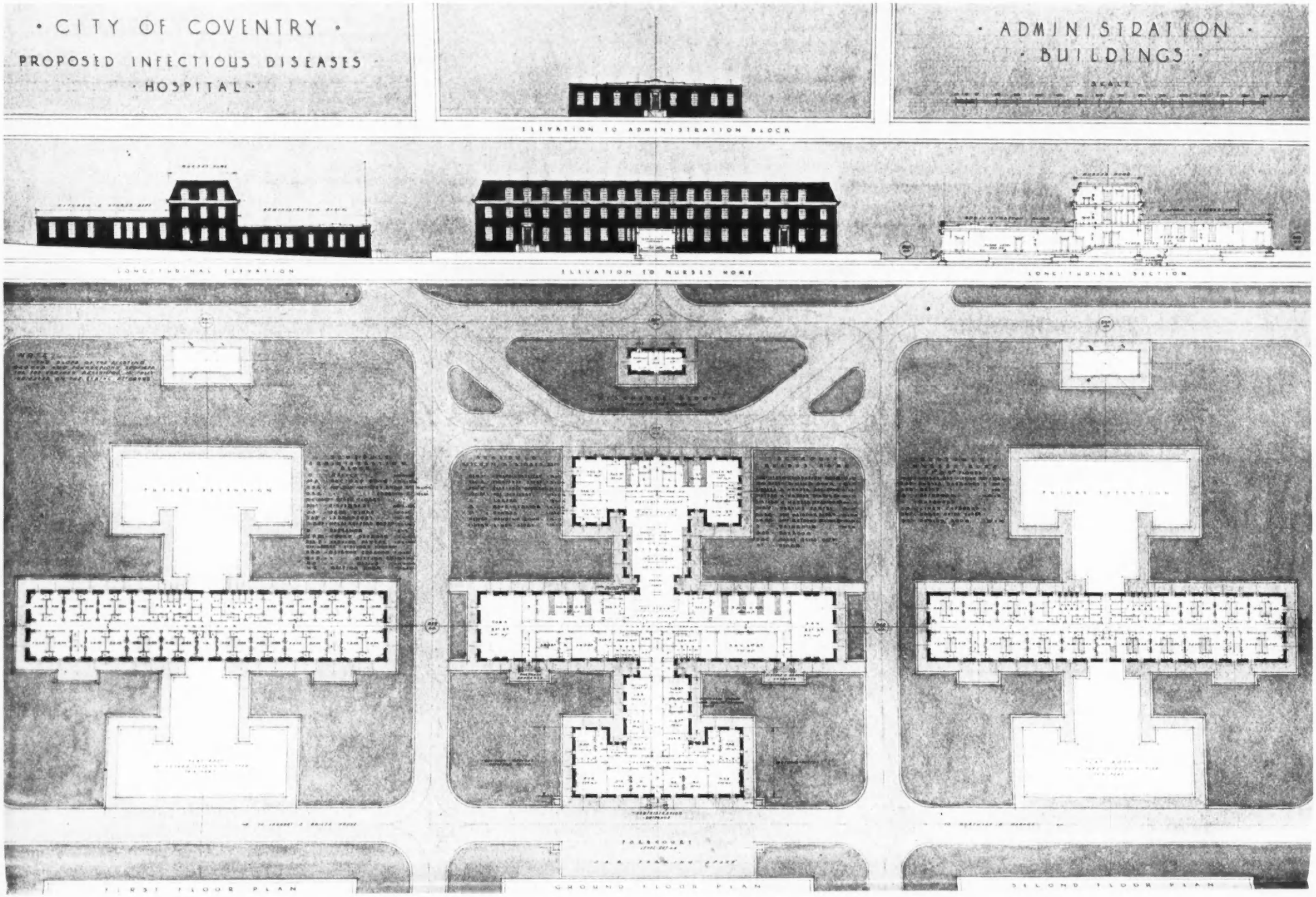
The cubicle block to be used for single cases of infectious diseases was to contain twelve single-bed wards, six for males and six for females, and to have access from an open corridor.

The small operating theatre block was to comprise theatre, sterilizing room, wash up, and blanket store. No anaesthetizing room, surgeons' room, appliances store, or recovery room was required, as the theatre suite was to be attached to one of the ward blocks or to the cubicle block. Covered ways between the various blocks were not required. Competitors were asked to consider in their schemes the future extension of the hospital by three ward units, each containing twenty-eight beds and similar in detail to the five ward blocks. The position of these ward blocks was to be indicated on the block plan. Provision was also to be made for a discharge block.

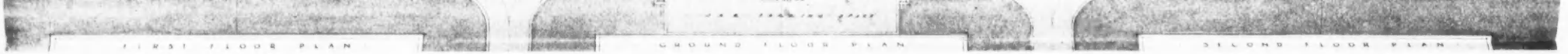
In the administration buildings were to be a house for the medical superintendent, administration block, staff home, kitchen and stores department—these units designed so that they might be easily extended to accommodate a 50 per cent. increase of staff and patients—two cottages for the ambulance driver and engineer, respectively, and a porter's lodge.

For the technical services the promoters asked for a laundry, boiler house, garage and mortuary.

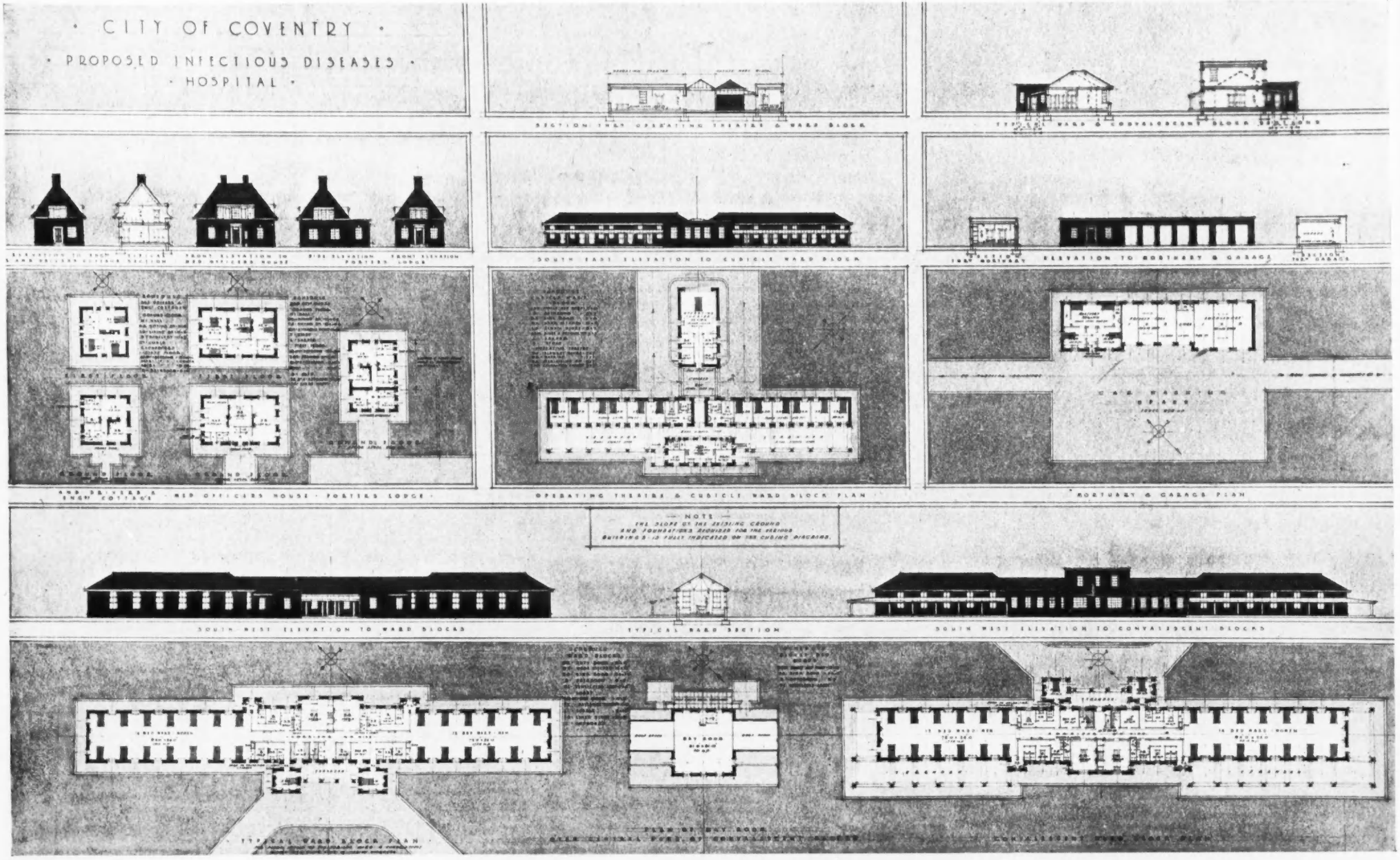
Competitors were at liberty to provide any further accommodation they might consider would add to the efficiency or facilitate the working of the new hospital, which it was desired should be as efficient and modern as possible. They were also at liberty to vary the accommodation suggested in the conditions if they considered that by so doing the hospital would be improved from the administrative, hygienic and medical points of view.



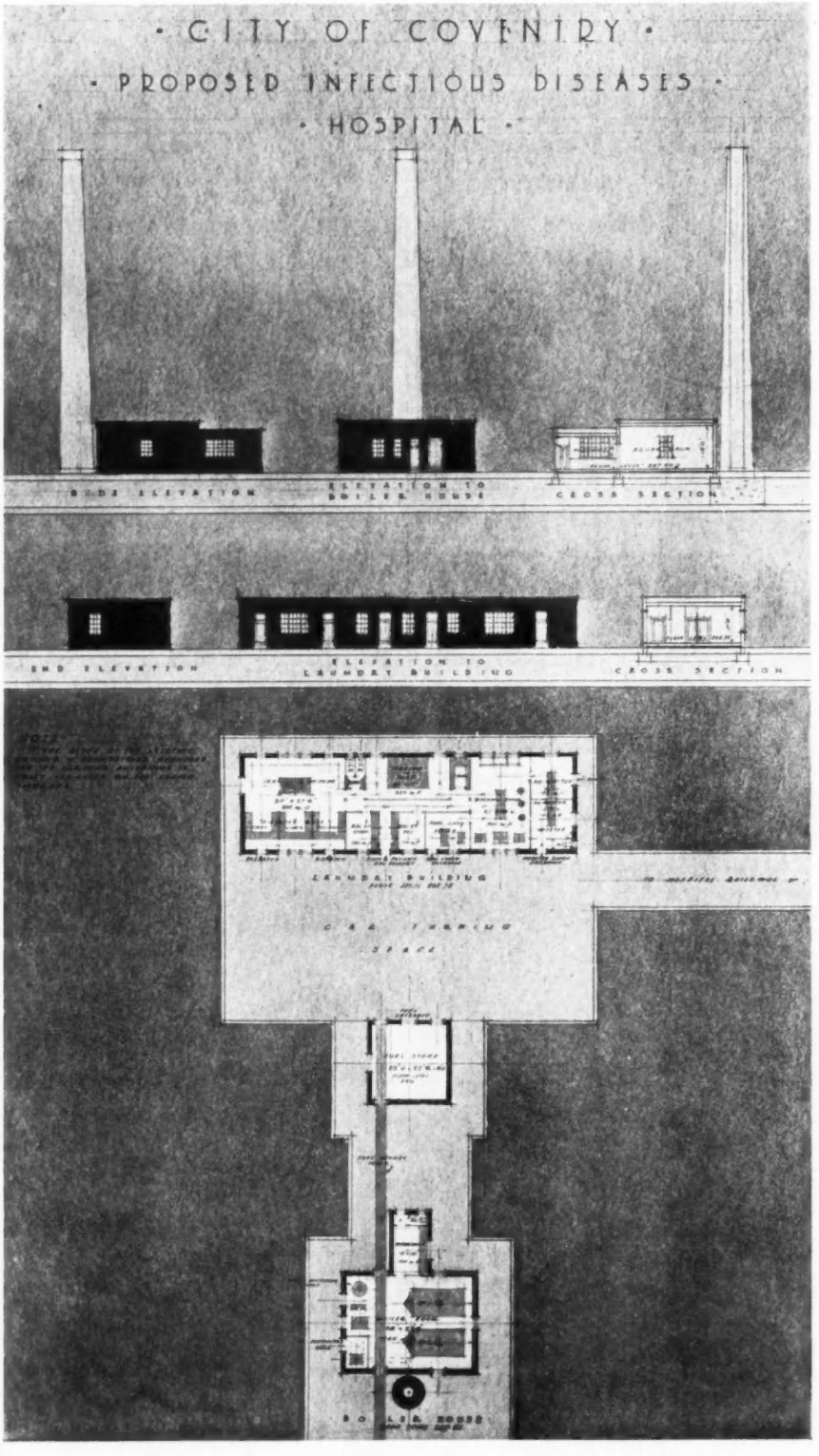
PLANS AND ELEVATIONS OF THE CENTRAL BUILDINGS: ADMINISTRATION BLOCK, NURSES' HOME, ETC.



PLANS AND ELEVATIONS OF THE CENTRAL BUILDINGS: ADMINISTRATION BLOCK, NURSES' HOME, ETC.



ELEVATIONS AND PLANS OF WARD AND CONVALESCENT BLOCKS, ETC.



LAUNDRY BUILDING, FUEL STORE, AND BOILER HOUSE

GABLE AND ENTRANCE FOR A CONVENT

SCALE DETAILS

DOORWAYS FOR A PUBLIC HALL



GABLE AT THE CANOSSIAN COLLEGE CONVENT, WELWYN GARDEN CITY, HERTS.

[Hugh Bankart, Architect

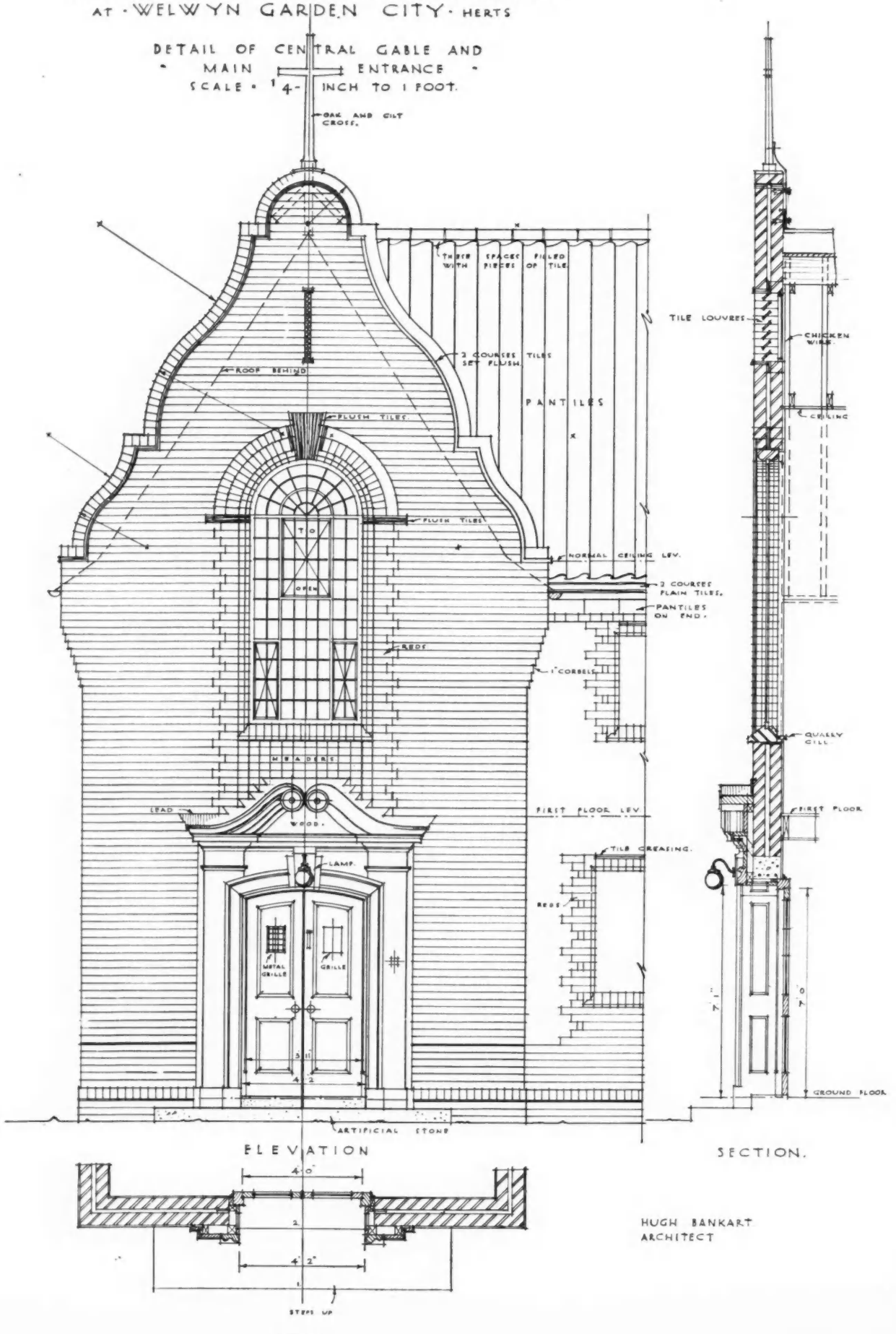
RECENTLY erected on a site in Parkway, Welwyn, and adjoining the Church of St. Francis, the building, of which the central gable and main entrance doorway are shown above, with a scale drawing overleaf, was designed for the Canossian Daughters of Charity. The window lights the private chapel on the first floor.

The walls externally are of a particularly attractive multicoloured facing brick, a darker red sand-faced brick having been used for the dressing of angles and plinth and for the moulded brickwork to the windows. The roof is of red pantiles, the under-eaves cornice being of similar tiles, set on edge upon an oversailing course of bricks and held in position with hoop iron straps behind.

The door surround is of wood, painted and stippled to a stone colour, the doors themselves being finished an attractive green with a scumbled surface. The gable is finished with a simple cross in oak, gilt.

THE CANOSSIAN COLLEGE CONVENT
AT WELWYN GARDEN CITY HERTS

DETAIL OF CENTRAL GABLE AND MAIN ENTRANCE
SCALE 1/4 INCH TO 1 FOOT.

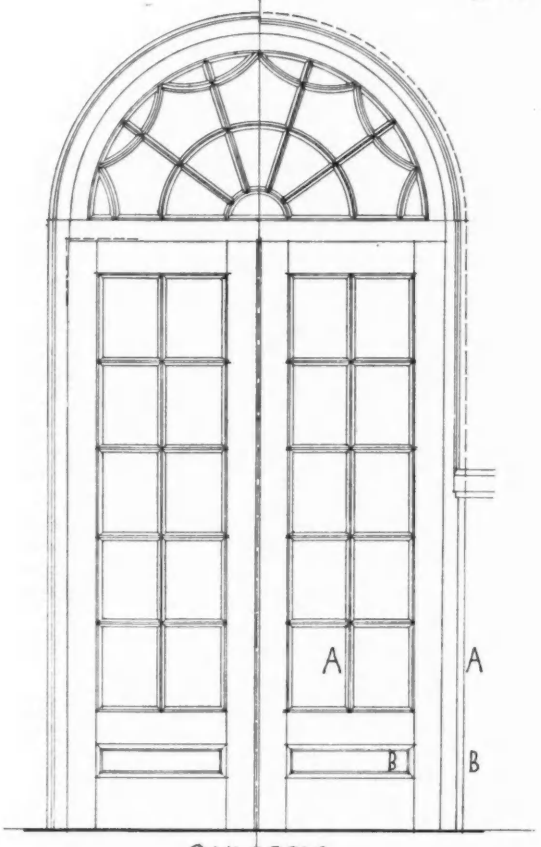


HUGH BANKART
ARCHITECT

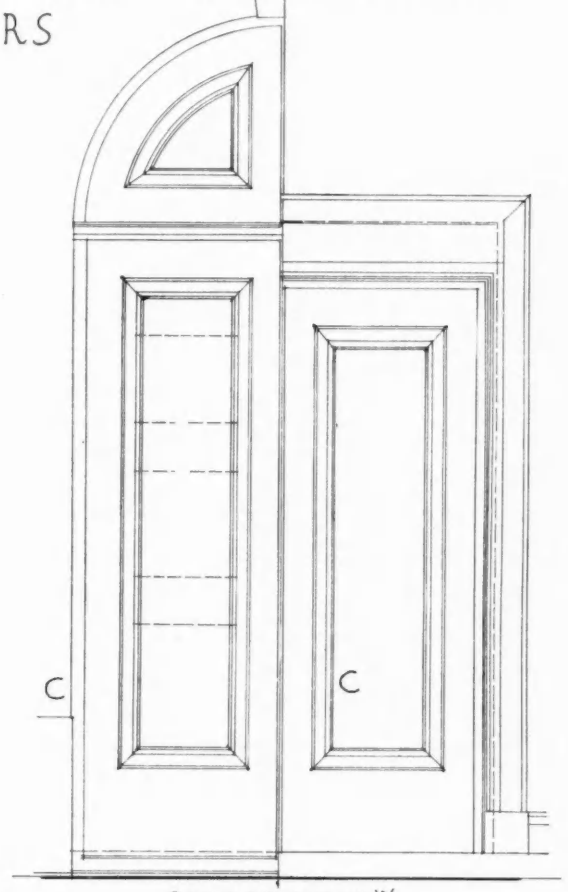
For photograph and a description, see preceding page

BRIDGETON HALLS · GLASGOW

DOORS



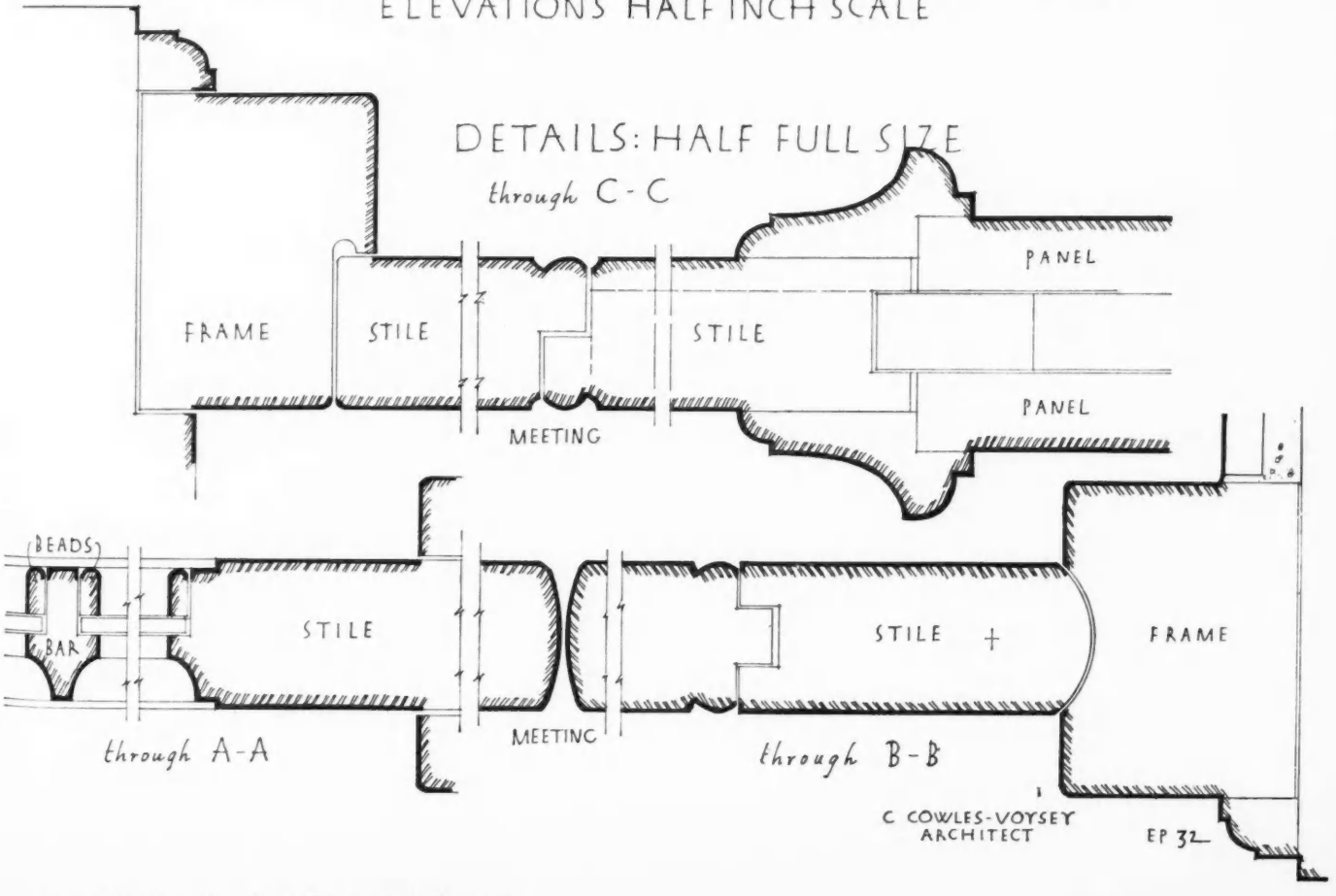
OAK DOORS
BETWEEN LOBBY & FOYER



OAK DOORS · TYPE 'B'
EXTERNAL + INTERNAL

ELEVATIONS HALF INCH SCALE

DETAILS: HALF FULL SIZE



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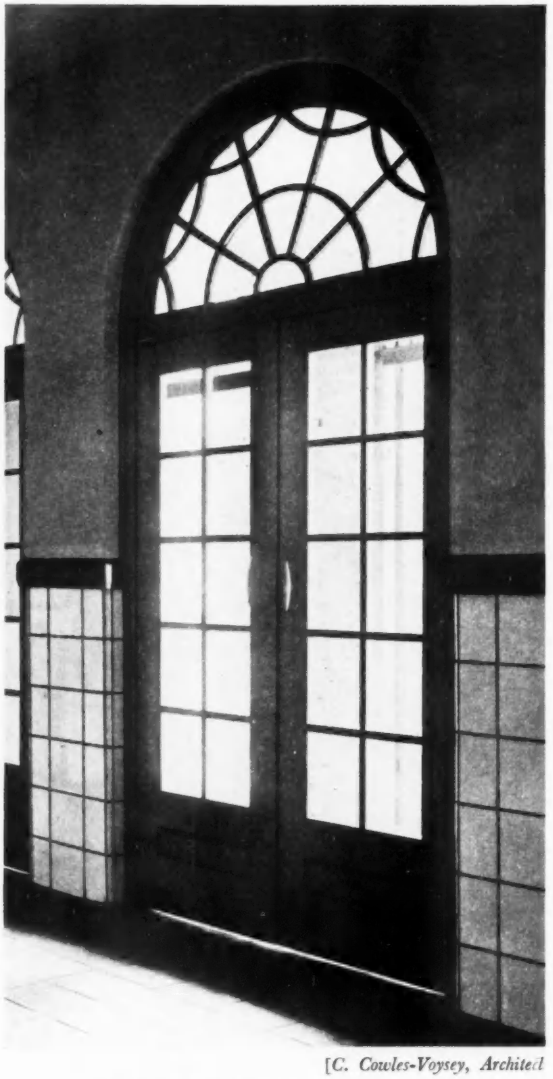


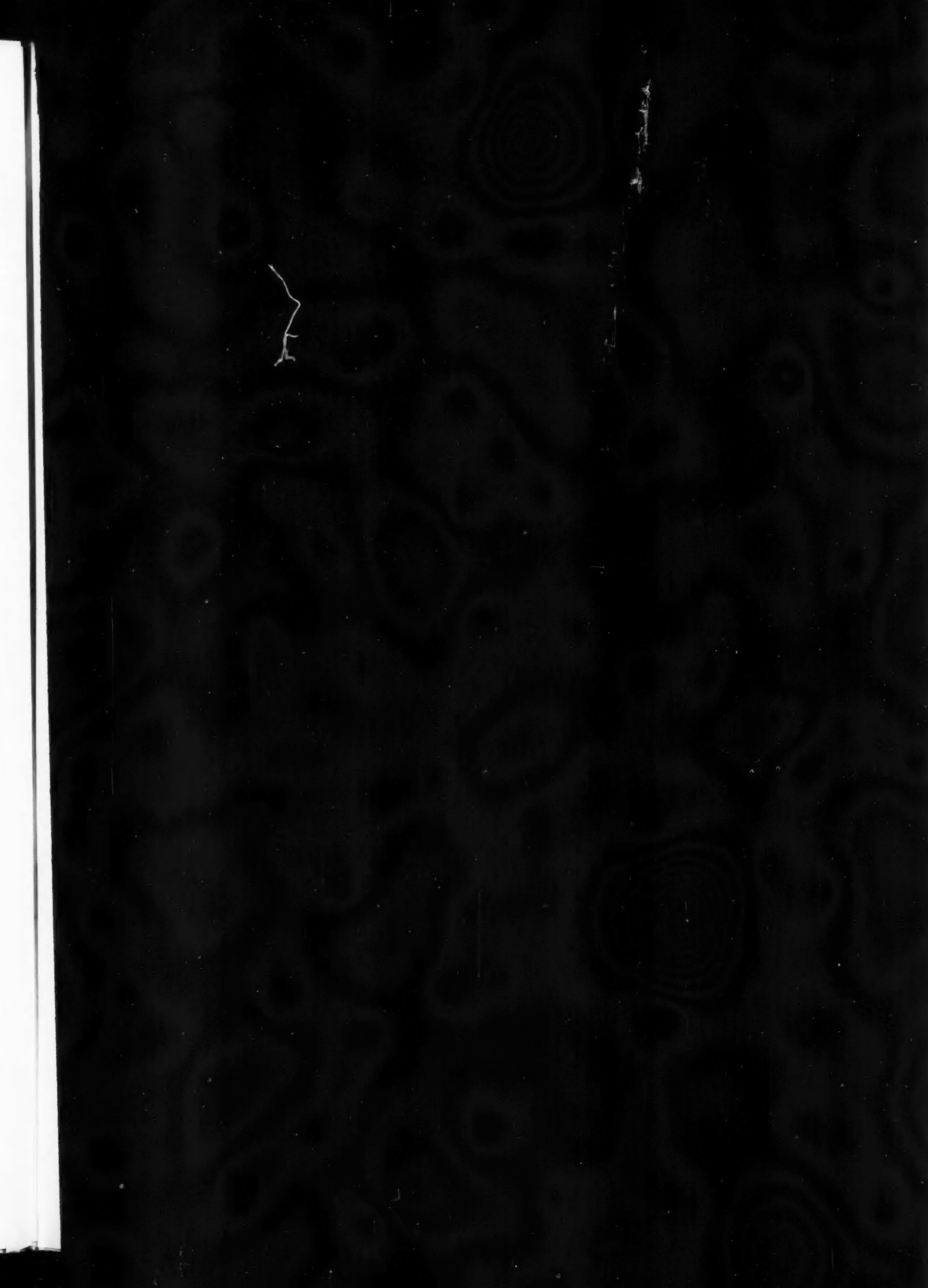
[*C. Cowles-Voysey, Architect*

BRIDGETON HALLS, GLASGOW: DOORS FROM LOBBY TO FOYER

TWO types of internal doors from Bridgeton Halls, Glasgow, which is built from designs by C. Cowles-Voysey, awarded the first premium in an open competition, are shown in the drawings overleaf. They disclose some interesting details, especially in the doors marked type "B," which, owing to the exigencies of their position, show a higher transom on one side than on the other. This difficulty has been very satisfactorily overcome by the expedient of increasing the depth of the top rail on the low side and dropping the panel mould to conform.

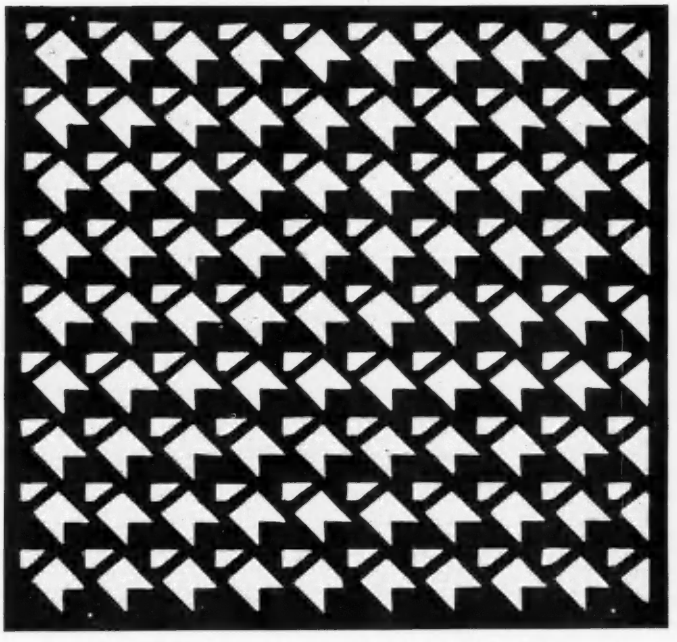
The panel moulding itself will repay study as an interesting and vigorous section expressing the material in an admirable manner.

Further illustrations and a description of these public halls appear in the body of this issue.



SELECTED PRECEDENTS:

MODERN CAST-IRON GRILLES



1

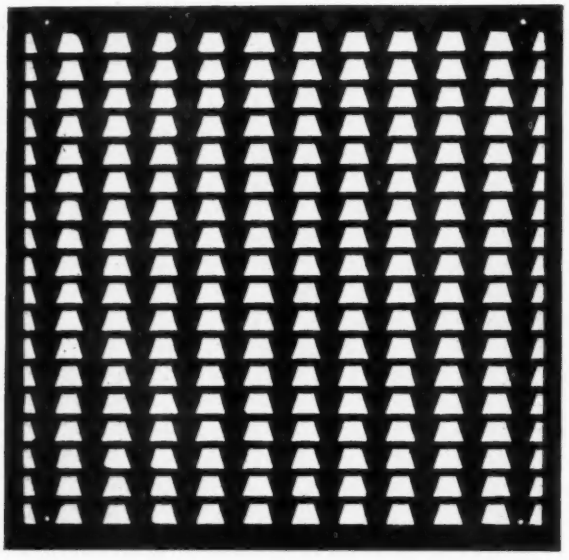
1. *SCREEN IN A SIMPLE GEOMETRICAL PATTERN*

SOME months ago there were printed on this page photographs and drawings of eighteenth- and nineteenth-century cast-iron designs. The accompanying illustrations are selected from a series of cast-iron grilles recently produced by an important firm of British ironfounders. These are suitable for various uses in modern buildings where pierced screens are required. The designs are by Mr. H. L. Curtis.

The sentiment controlling the choice of a pattern is here deliberately restrained, since the purposes for which such grilles are required do not usually call for arresting designs likely to compete unduly with more important architectural features in the building. A grille for general use may be placed so as to appear either as a dark solid against a light ground or vice versa. *For this reason it was necessary in these designs to study the patterns of the voids with particular care. A close inspection of the photographs will show with what success this has been done. The conditions of the craftsman's work have been carefully observed, the repeats being of sections easily withdrawn from the mould. The special quality of the metal used is clearly distinguished by the introduction at some point in each design of a member of the least admissible thickness.*

The designs range from the simple geometric pattern illustrated above (figure **1**), *reminiscent of primitive art, to the subtle illustrative playfulness of the " monkey-on-a-stick " pattern (figure* **5**) *overleaf. Figures* **2** *and* **3** *are derived from vegetable forms, the influence of cactus growth-forms being particularly noticeable, while figure* **4** *is an example of that highly interesting class of pattern, peculiarly modern in its nature, which is inspired by machine forms.*

2



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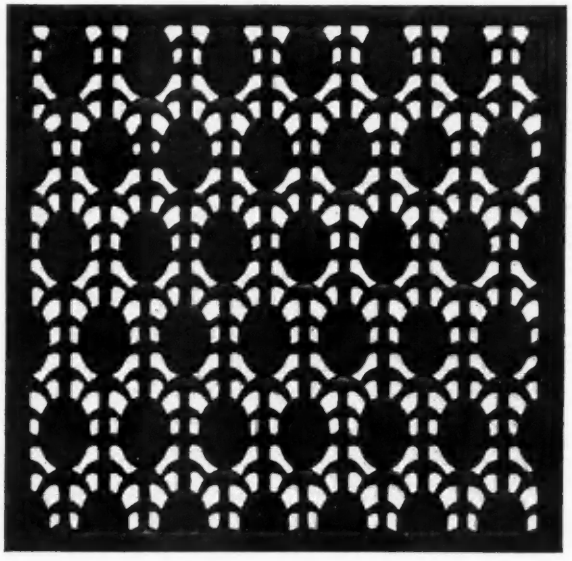
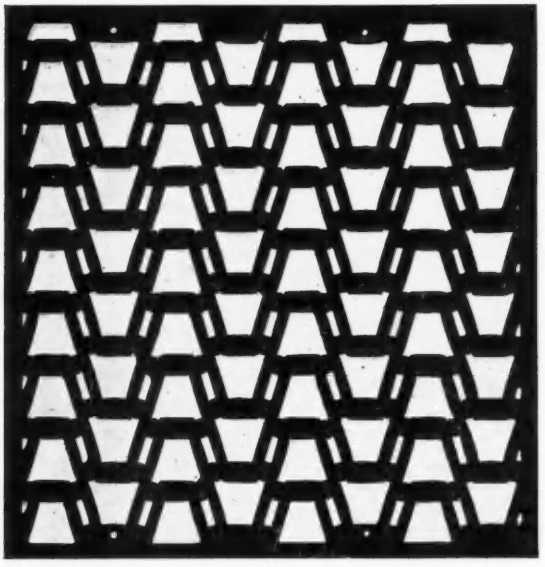
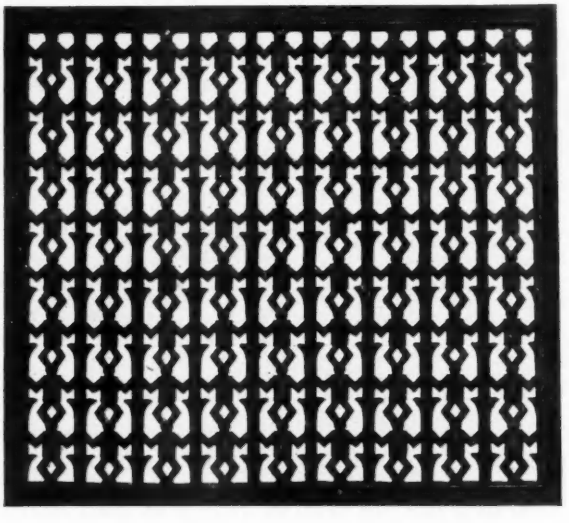




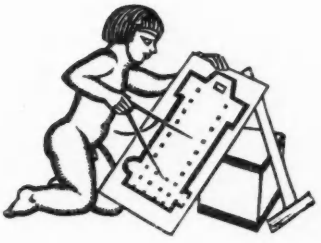
4

2. *DERIVED FROM A VEGETABLE FORM*
3. *ANOTHER BOTANICAL MOTIVE*
4. *A CRANKSHAFT PATTERN*
5. *"THE MONKEY ON A STICK"*



5

THE ARCHITECTS' JOURNAL



WEDNESDAY, JUNE 3, 1931

THE GREAT UNPLANNED

THE English builder, save when he has a spark of independent tradition in his work, is an imitative being. He proved that in the golden age of English building, which lasted 150 years and gave us the England that everyone remembers. He is now engaged in giving us the England that everyone wants to forget: the England of raw bungalows and Swiss Tudor chalets. He appears to be imitating the gable-and-casement revival that followed the rediscovery of texture forty years ago, and to that extent his work represents the last queer fruits of the deeply misunderstood teachings of William Morris.

He is somewhat hampered in this essay in imitation by the abundance of new and cheap building materials, with their direct appeal to his pocket and their complete unfitness to provide the "old-world" touch. Consequently, nearly all the patent materials that come his way are subjected to a process of disguise. The builder, like the English innkeeper, has been caught unready by the inventions of his century. He blanches before the rushing changes of his time, and takes the line of least resistance, which is cheapness, caring for nothing else if he can produce houses just sufficiently plausible for people to buy, live in, and constantly repair.

It is sometimes suggested that if architects would show, by example, how designs could be made so that the hundreds of new patent building materials could be used to the best advantage, England would in time recover in a new medium that deep national genius for making homes that look and are more comfortable than any others in the world. Certainly there are potentially pleasant things that could be, and occasionally are, made perfect by conscious design.

The architect is a designer; and the builder is a sincere if mildly inexpert practitioner in the sincerest form of flattery. But he is flattering a generation of architects that has passed, a generation unfamiliar with patent roofings and boards and slabs and cements. The architectural pearls of the arty nineties are roughcast before the nineteen-thirties. There are passionate protests against the work of the speculative builder, but it goes on, enormous in its output—the vast, haphazard, ruinous expression of English individualism.

Societies spring up and go roaring into battle with ancient war-cries. Unfortunately, so many people and societies who want to preserve England also want to ignore the twentieth century, the mechanized age of high-speed traffic, power cables, gigantic industrial plants, air travel and new structural methods in building and new building materials. The points these enthusiasts and their organizations make, that fine old buildings should be preserved and that no old thing should be destroyed unless something manifestly better is to replace it, are often muddled in with ideas about perpetuating old building traditions and abjuring modern industry's contributions to the building trade entirely. This attitude of mind does not help the builder to make better use of his new materials. Many of the people who are genuinely and earnestly distressed about the awful chaos of speculative building in town and countryside are only concerned with denouncing the builder; that his education or direction is more properly their concern is a thought that leaves them unmoved.

In a letter printed in our last issue, Mr. John Gloag discussed the possibilities of an educational censorship of the speculative builder's work. Despite the contrary opinion expressed by another correspondent this week, practical tests have shown that much beneficial editorial work could be done by local authorities, if they collaborated with architects in the scrutinizing of all contemplated building work from an æsthetic point of view. The sanitary point of view is always honoured and enforced; but while the nose is served and health safeguarded, the eyes are outraged. Powers do now exist. They should be used in intelligent partnership with the architectural profession.



THE BALLROOM OF AN "EMPRESS"

The decoration of the public rooms in the new Canadian Pacific liner, *Empress of Britain*, which sailed on her maiden voyage last week, was entrusted to a number of eminent artists. The above is a photograph taken in the ballroom, known as the Empress Room, for the decoration of which Sir John Lavery, R.A., was responsible.

The pilasters are of a delicate blue, with gilt capitals, against cream-coloured walls, and the shell over-doors are also gilt. The pelmets and hangings to the windows and to the wall-mirrors, barred in rectangles, are in coral-pink. The floor is of parquet. In the centre of the ceiling, which is, generally, in tones of warm cream, rises the dome. This is painted firmament blue, with a representation of the stars as they appeared in the heavens at the date of the liner's launching. On the platform night-club divertissements will be presented.

The liner's rooms have been christened. The dining-room is the Salle Jacques Cartier (by Frank Brangwyn, R.A.); the lounge, Mayfair (by Sir Charles Allom); the cocktail bar, Knickerbocker (by Heath Robinson, who has also decorated the children's nursery); the smoking-room, the Cathay Lounge (by Edmund Dulac). A photograph of the last-mentioned is reproduced on one of the "News and Topics" pages of this issue.

NEWS & TOPICS

CLEANING THE BANK'S STONEWORK

SOANE'S screen wall to the Bank of England is being cleaned in readiness for its marriage with its tall partner. The immediate result is to be observed in a rather pinkish flush—greyish pink and not too pleasant. Doubtless this will go, for there are many ways of cleaning stonework, and perhaps the flush is only temporary. We have tried cleaning with water on London buildings, and found it very efficacious, but I believe they use sand-blasting a great deal in America. Sand-blasting and steel-brushing always strike me as being rather barbarous methods of cleaning stone. Steam cleaning seems drastic enough. Acid is sheer murder, and so many of these ways of cleaning are the opposite of preservative.

★

A very expensive preservative, used on monumental buildings, is wax, impregnated three inches or so into the heated surface of the stone. Very often the wax is removed from the surface by patent processes, so that the appearance and reflective qualities of the stone are in no way impaired. But paint is the world's real preservative.

GRAINGER OF NEWCASTLE

There are those in Newcastle who are awake to the danger of losing everything that Grainger's balanced urban architecture once brought to that town. We all know the story of the gradual disintegration that is overtaking so many well-planned streets both in and out of London. It spells spoliation to the city and town as clearly as does the bungaloid growth to the country, and it is as difficult a matter to cope with.

★

Everything that unarchitectural people say about the need for variety is likely to be wrong. When they say that a street should have variety, they mean that buildings should be different and odd and unlike, not realizing how impossible it is to have variety until you deal in things that are similar in kind. A mixture of Woolworth's, Alexander the Great's, Lyons' and the Midland Bank building is not variety—but chaos. All these concerns, fitted into a scheme for a street façade, can continue to exercise their differences inside their own windows; but variety, æsthetically considered, must come from the handling of architectural forms upon which no shopkeeper has a prior claim. One reason why Paris has a never-failing charm for all who visit it is the " likeness " of the street architecture. And, similarly, it was Grainger, whose ordered architecture, all of a piece and therefore understandable, made a town out of the odd streets that were Newcastle before he came along. The best thing Newcastle could do to-day would be to find another Grainger.

OUR UNCONSCIOUS IRONISTS

From Holland House gates almost up to the lamentable Town Hall, the whole of the north side of High Street, Kensington, lies derelict or demolished behind four-square advertisement hoardings garish with the posters of democratic art. Such of Upper Phillimore Place as is still standing shows gaping wounds where the house-breakers have wrenched away the delightful plaster plaques (from the swags of which this triple terrace derived its local nickname of " Dishclout Row "), and the elegant wrought-iron balconies that have for so long graced the Royal Borough. Over the middle of the centre block, a vast placard, covering two houses, bears the inscription :

> " A Magnificent GEORGIAN BUILDING now being erected on this important Island Site comprising 23 Large Shops and 150 Splendid Modern Shops."

So far, the claim is only an intelligent commercial anticipation, for at present most of the old houses remain, and the foundations of Magnificence and Splendour have yet to be trenched.

★

A little to the west, on the opposite side of the street, a second huge signboard surmounts the open grave of another of those rows of simple eighteenth-century houses, which, till lately, helped to lend London dignity, to announce the imminence of " New Buildings comprising BOLD SHOPS with First-Class Modern Flats." What structural frightfulness is menaced in this alarming adjective, " bold " ? Is it synonymous with Georgian ? And what, one may ask, was the period of those neighbouring terraces now being swept away, if the new blocks which will replace them are to be " Georgian " ? The explanation would seem to be that, in modern estate-agency parlance, " Georgian " signifies that full Augustan magnificence and ripened splendour of a style, originally used in a very primitive and unassuming manner under the first four Georges, which we, under the Fifth, have perfected, thanks to the shams facilitated by steel-frame construction.

★

The pretentious, semi-detached Victorian " mansions " of Phillimore Gardens, in rear of the insignificant " houses " now doomed to disappear, are to be spared. At this season they are decently veiled by a luxuriance of fine flowering trees : memorials of an age that planted better than it built. Over the tops of them loom the eyries of derricks and pile-drivers—ominous preliminaries to the " rationalization " of Campden Hill's once lovely gardens into " commanding blocks of luxury flats." And they, too, will be " Georgian," with a capital " G."

THE LATE SIR SAMUEL TALBOT

A municipal administrator such as these times cannot afford to lose died a few days ago. Sir Samuel Talbot was a man who saw much farther ahead than most. Before motoring became the thing it is today, before housing became acute, he saw the need for planning. And Birmingham now, with its arterial roads leading out in all directions, with its well-planned suburbs and its enormous contribution to post-war housing, owes a lasting debt to his extraordinary vitality, so fortunately linked with a clear vision and geared by a capacity for sound administration.

MOVING FORWARD THROUGH STANDARDIZATION ?

Mr. Henry Ford has written a book, or more accurately has caused his ideas to be put in book form, and this book he calls very appropriately *Moving Forward*. Mr. Ford would be nothing if he were not an ardent believer in the civilizing agency of the machine, and he of all men should be able to say to what extent standardization, and the high wages and better living that are supposed to be its happy concomitants, will raise us all in the scale.

★

He says that " the one way to emancipate people from a crass, materialistic state of mind is to give them plentiful material possessions" ; which may be truth if you may translate that broadly as meaning that the accumulation of the wherewithal to stave off the necessity for grubbing

along leaves time for other things. Shaw confessed once that his characters always had money because only the moneyed had the time and opportunity to make love and war intelligently and gracefully. But Mr. Ford, I feel, means something rather more materialistic than that, and his rosy, optimistic picture of England a land basking in high wages, and with millions of shiny Fords cluttering up the byways, and rusty ones the rubbish tips, might be compared with that rejected masterpiece which is Detroit today. "Standardization," he says, "instead of making for sameness, has introduced unheard-of variety into our life." I would like to believe it. I do, in theory, hold that it should be so. But in fact I don't think it is.

ALL AT SEA

The Empress of Britain is indubitably a fine ship. Judge ye, from the accompanying picture of one of her public rooms, by Dulac, and Sir John Lavery's decoration of another, which is to go, I'm told, as frontispiece. She is the finer for them, inasmuch as, individually, they are happy compositions by artists of renown—whereas they might have been assorted Tottenham Court Road. Yet I cannot altogether suppress the feeling that a great opportunity has been missed in not handing her over, from deck to keel, to some one rising young architect—who, by the same token, has lost the chance of his life. As it is, she shows no more unity, inter-relation, co-ordination—call it what you will—than might an hotel that likes to do things in styles rather than in style; nay, not so much. For she is a ship, and ships should have a seagoing character.

*

Far from allowing her to disclose this character, the owners have seen fit to take every possible means to suppress it. Their tacit aim appears to be that, embarking in her, you should yet never for one moment realize that you are at sea. Almost one sees them applying for an injunction against ancient Father Neptune, lest he presume to rock her in his vasty cradle and so defeat their arduous make-believe. Floating hotels are all very well for plutocratic polyglots, but this is *The Empress of Britain*: she will ply between Britain here and Britain over the seas. Have Britons become so nondescript that they find no relish in sea-travel? Myself, I love it, and would be reminded of it by every circumstance of seagoing architecture. And only the work of one mind could produce that effect.



The Cathay Lounge in the new liner, *Empress of Britain*, decorated by Edmund Dulac. Choice figured woods, Chinese lacquer patterns, and a bar and fireplace of translucent glass: all play their parts in this new-style ship's smoke-room. Four darkly-glistening pillars uphold a rectangle of fret in mid-ceiling.

A SANITARY NOBLEMAN

I wonder if many architects remember the name of Sir John Harington, the Elizabethan nobleman, as the inventor of the water-closet. In the London library the other day I came across a reprint of a little book published in 1596, giving drawings and a specification of Sir John's sanitary flushing system. The Metamorphosis of Ajax, "wherein," runs the title, "by a tripartite method is plainly, openly and demonstrably declared, explained and eliquidated by pen, plot and precept how unsavoury places may be made sweet, noisome places made wholesome, filthy places made clean," contains details of construction and a priced specification of the various parts.

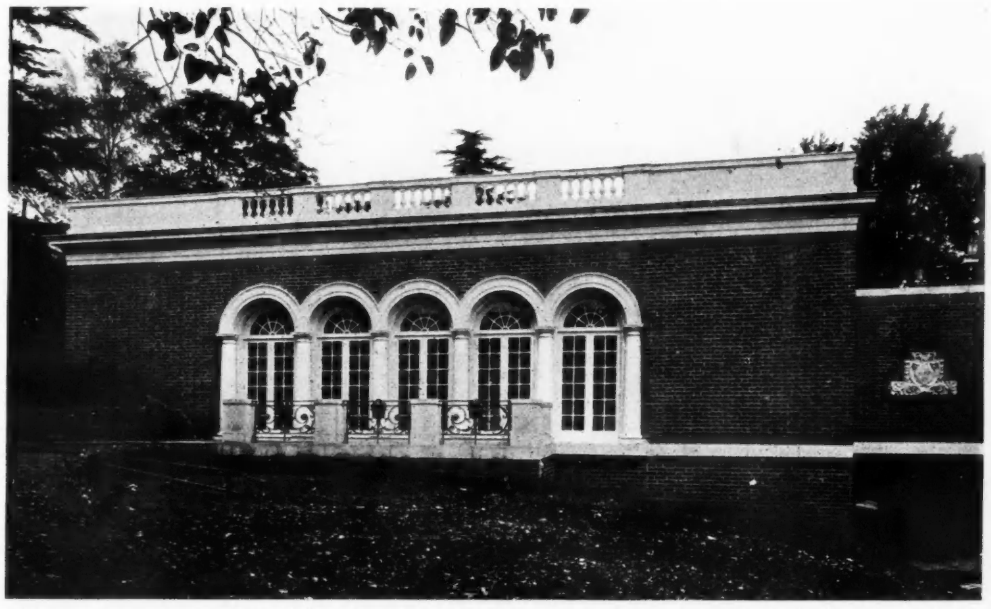
Cistern	6/8
pipe that comes from the cistern with a stopple to washer	3/6
waste pipe	1/–
stopple	1/6
stem of great stopple with a key to it ..	1/6
stool pan	8/–
great brass sluice to which is three inches current to send it down at a gallop ..	10/–

One would like to know what Sir Hugh Middelton and his New River Water Company had to say to the last item! Harington ends his description on a proud note. "And this being well done and orderly kept your worst privy may be as sweet as your best chamber." Queen Elizabeth, says Mr. Lytton Strachey, in his biography of Sir John Harington, had such a closet installed at Richmond Palace, and a copy of Ajax hung beside it. Our modern manufacturers give their w.c.'s and water-waste preventers high-sounding names, but I cannot recall a catalogue containing "The Harington."

ST. PAUL'S ISOMETRIC DRAWING FOR THE V. & A. MUSEUM

I learn that Sir Mervyn Macartney has presented the isometric drawing of St. Paul's Cathedral by Mr. R. B. Brook-Greaves to the Victoria and Albert Museum, where it will shortly be placed on exhibition in the Architectural Index Gallery. It is gratifying to know that this splendid work, which has become universally famous, is to find a permanent home in one of our national museums, where it can be seen and studied by all. It has been justly proclaimed as the largest and most important drawing that has ever been made of any building. It measures 12 ft. by 8 ft., and took the artist over four years to complete. Every detail of the Cathedral, inside and out, is shown with microscopic accuracy and precision; but, in addition to being the most valuable record of the building in existence, it is also a magnificent example of architectural draughtsmanship, and should be an inspiration to students for all time. Let us hope that this drawing may be the forerunner of others like it. They would give to students and laymen alike a better understanding of the principles underlying the great architecture of the past. Meanwhile I may perhaps remind my readers that collotype reproductions have been published by the Architectural Press, and that copies are still available at the cost of thirty shillings each.

ASTRAGAL



The main or south elevation of the swimming-bath block, facing the garden; the north elevation and end are comparatively plain. On the right is seen the connecting bridge to the main residence.

A COUNTRY HOUSE SWIMMING BATH

DESIGNED BY GOODWIN AND CHAPMAN

THE swimming bath building at Woodlands Park, Iver Heath, Bucks, is situated on a steep rise to the west of the residence, to which it is connected by a "bridge" at first-floor level. The side of the hill was excavated to receive the shallow end of the bath and, by taking advantage of the natural slope of the ground, the architects were enabled to design the walk around the pool at the same level as the first floor of the residence.

The building is rectangular on plan, measuring 55 ft. 6 ins. by 31 ft. 6 ins., with an ante-room at the east or deep end. The swimming pool is 40 ft. long by 20 ft. wide, the depth of the water varying from 7 ft. 6 ins. at the deep end to 3 ft. 6 ins. at the shallow end. A scum trough, which also serves as an overflow, is provided at the deep end. Beneath the sidewalks round the pool is a pipeway containing water supply, waste, heating and other piping, and electrical wiring.

The walls and bottom of the pond are constructed of reinforced concrete, and the containing walls of the building are of concrete and brick with horizontal and vertical asphalt damp-proof courses.

Multicoloured brick facings and artificial Portland stone dressings have been used in the elevations. The principal elevation faces due south and is treated in a simple manner with a central feature of Tuscan columns and arches in five spans containing casements opening on to a stone-paved terrace, with ornamental wrought-iron grilles between low balustrade stone piers. The building is surmounted with a stone cornice and balustrade, and has an asphalt flat and segmental glazed roof.

Colour plays an important part in the decorative treatment of the interior. The sidewalks to the pool are edged with a light buff-coloured stone curb, and the rest of the flooring, and the sides and bottom of the pool are covered with soft blue vitreous tiles and mosaic with eau-de-nil strings and margins. The fish pond is lined with multicoloured mosaic.

The whole of the plastering to the walls and ceilings is in Keene's cement, sprayed with cellulose. The walls are shaded a deep orange at the base, gradually dying out to a pale primrose, which is carried across the beams and plastered ceilings. The columns between the ante-room and the pool are treated similarly.

Fixed to the walls and ceilings are designs in treillage, painted eau-de-nil, and the arcading on the south side is simulated in treillage and reflected in mirrored casements on the opposite wall. The segmental roof over the pool is glazed with blue tinted glass, as also are the semi-dome at the west end and the saucer dome in the ante-room ceiling.

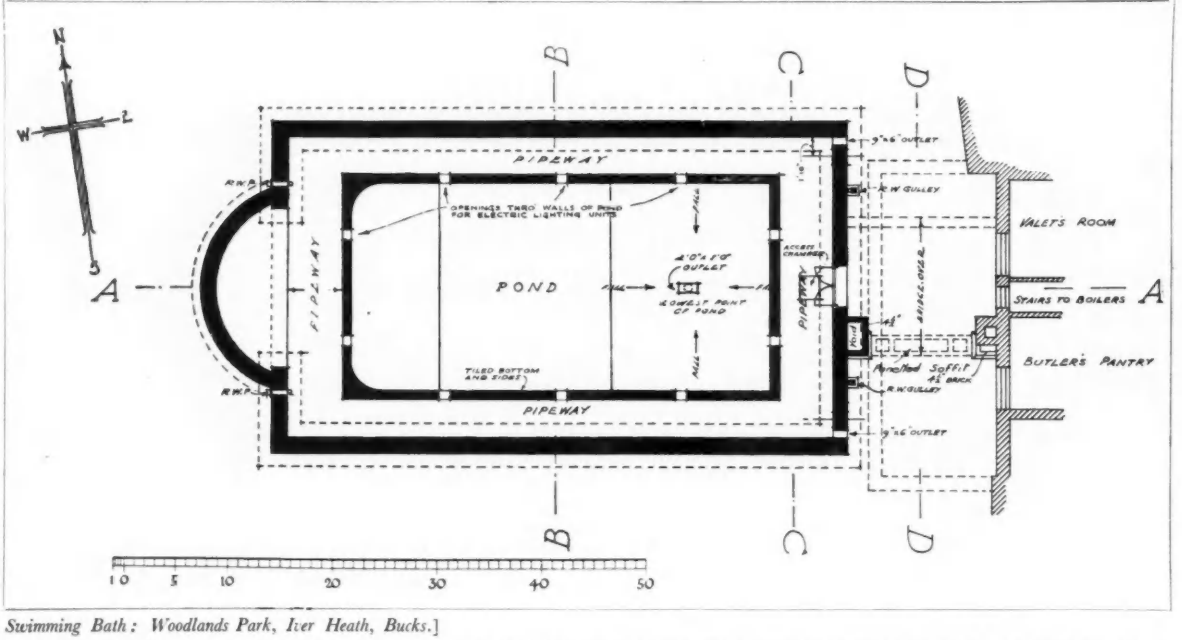
A feature has been made of the electric lighting, over a hundred points having been provided. Concealed lighting, with interchangeable colours, has been installed round the perimeter of the arch to the dome at the west end, and the fish pool contains a fountain illumined by vari-coloured lights under automatic control.

In the sides of the pool, under water, are ten openings, glazed with plate-glass, containing electric lighting units with interchangeable coloured screens. These units, which illumine the swimmers, are operated from the pipeway. It is believed that no other swimming pool in England is provided with underwater lighting.

The building is heated by low-pressure hot water, radiators being concealed under the seats placed round the pool. The water is oil-fire heated, filtered and aerated from a plant located in a basement boiler-house, access to which is from the residence. It is maintained at an even temperature under thermostatic control, and long-distance thermometers are installed, one in the ante-room and two in the main building. The whole of the metal fittings are chromium-plated.



The swimming pool, looking towards the deep end. Behind the diving board is seen, between the columns, the ante-room, its saucer dome-light reflected in the water. The door leads to the bridge connecting with the first floor of the house.

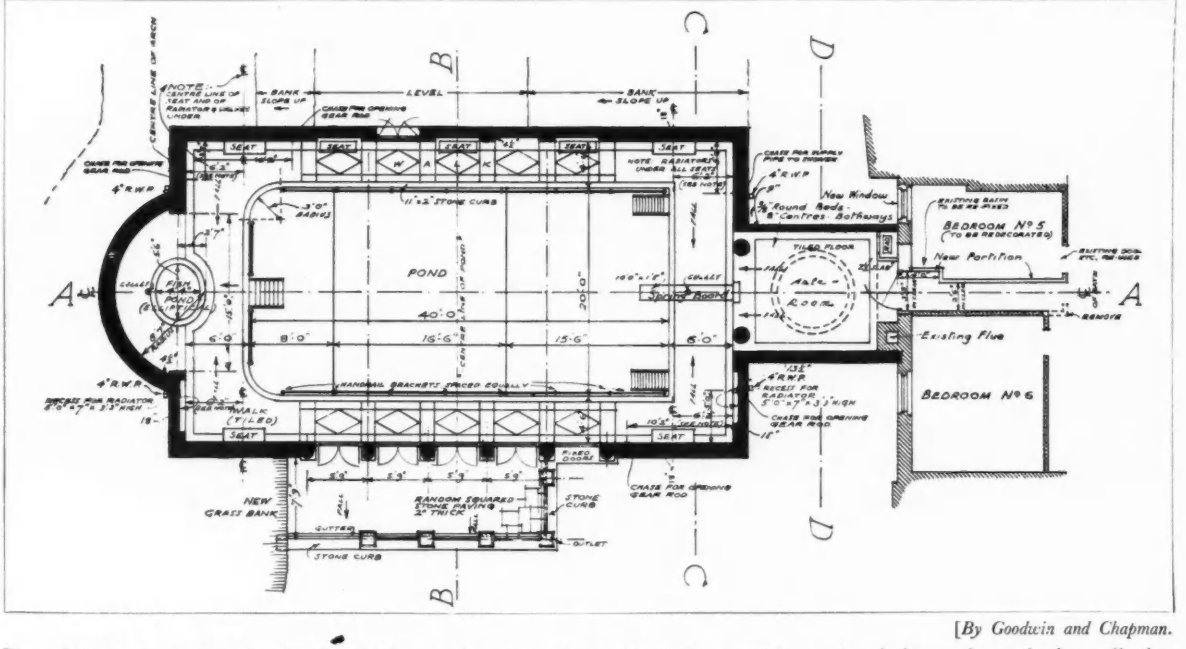


Swimming Bath: Woodlands Park, Iver Heath, Bucks.]

Plan of the bath at lower level. In the wall of the pool itself will be noticed a number of openings for electric lights; this is believed to be the only private swimming bath in England equipped with under-water coloured lighting.

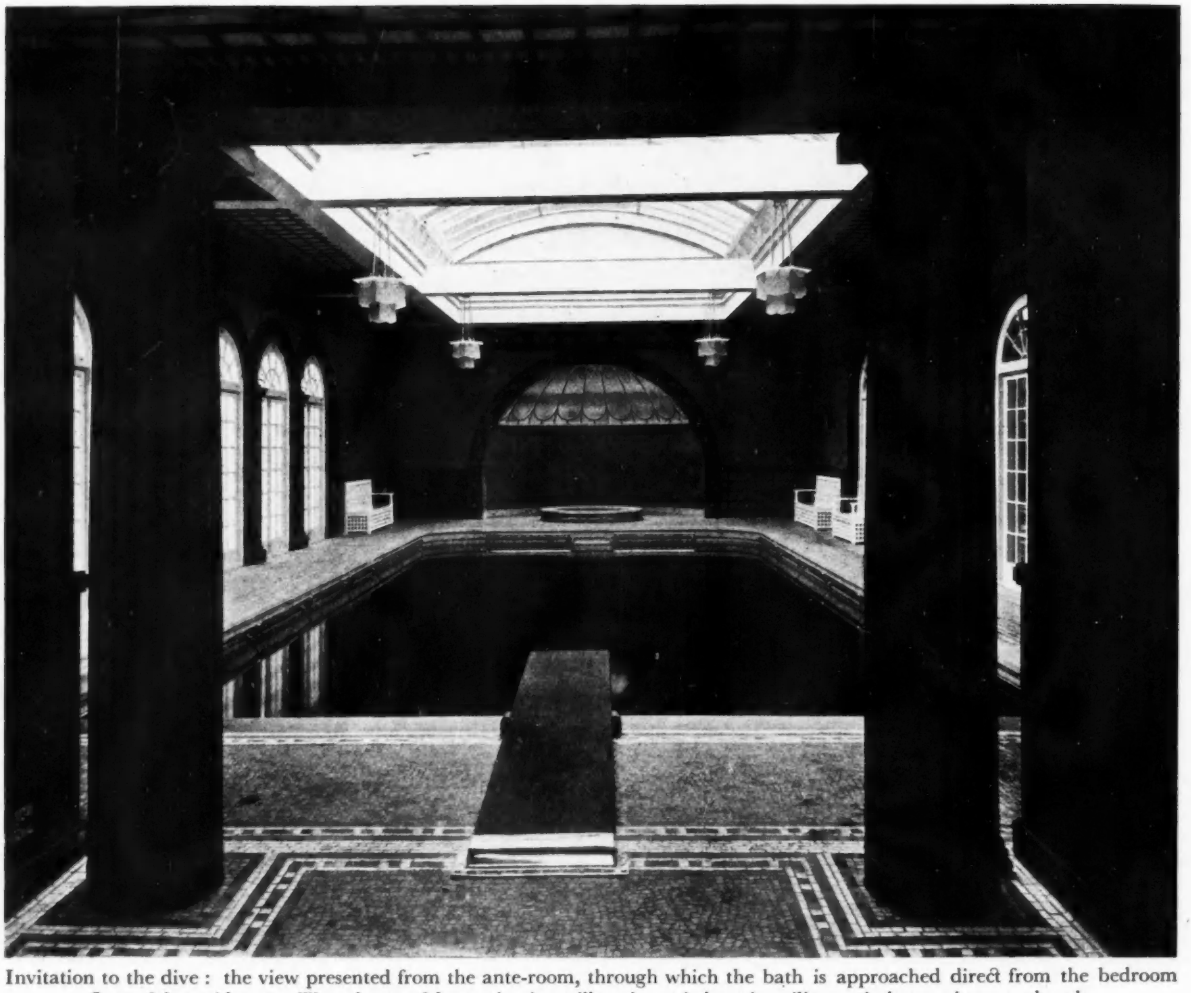


The shallow end of the pool, showing the fish pond, and, on the right, the wall treatment in treillage; this five-fold feature balances with the windows in the opposite wall, and is fitted with mirrors in which they are reflected.

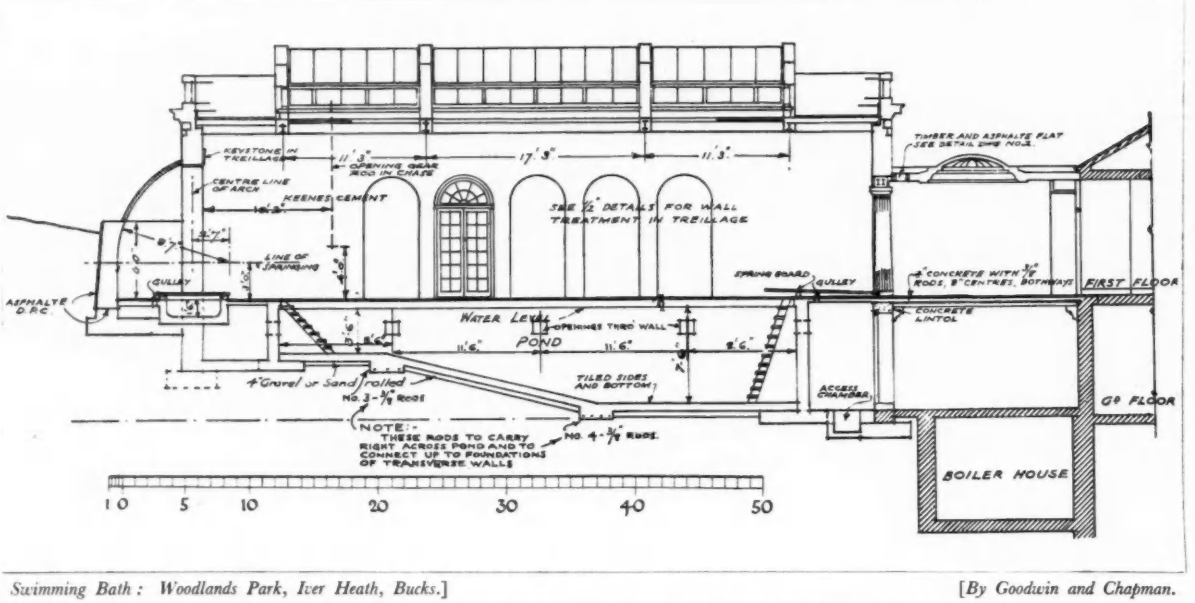


[*By Goodwin and Chapman.*

Plan of the bath at upper level. As will be seen by comparison with the lower plan, service ducts run beneath the walk that surrounds the pool. The apsidal end is lit by a segmental semi-dome over the elliptical fish pond.



Invitation to the dive : the view presented from the ante-room, through which the bath is approached direct from the bedroom floor of the residence. The scheme of decoration in treillage is carried out in ceilings, windows, mirrors and arch.



Swimming Bath : Woodlands Park, Iver Heath, Bucks.] [*By Goodwin and Chapman.*

This longitudinal section shows clearly the arrangement of the main details, both of the bath and of the junction with the house itself, which, owing to the slope of the ground, takes place at first-floor level. The pool measures 40 ft. by 20 ft.

EXTENSIONS TO OFFICES: SMITH SQUARE, S.W.

FROM DESIGNS BY GORDON AND GORDON

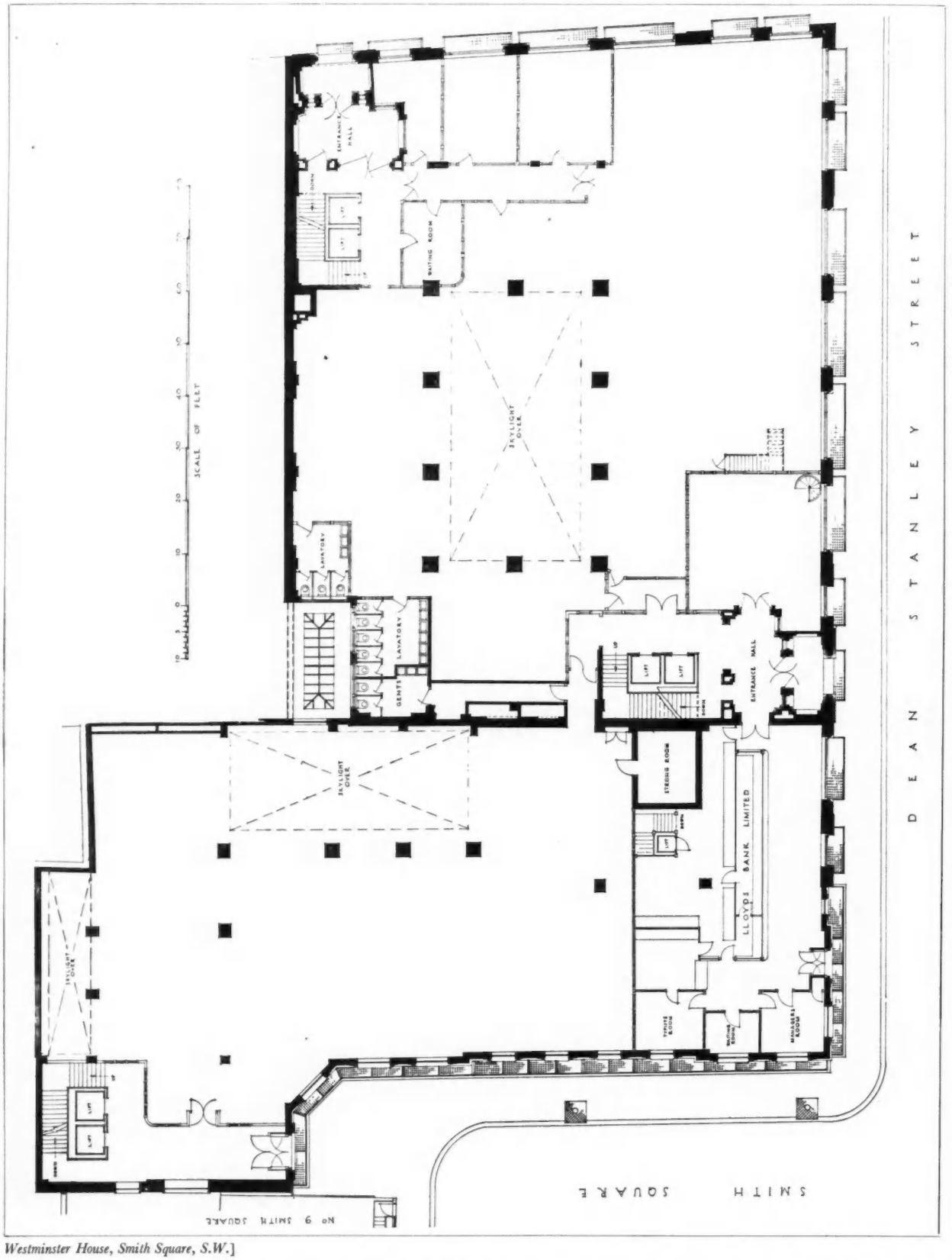


A general view of the new work from Smith Square. The right-hand portion of the addition, eight stories in height, is designed in keeping with the previous building which it adjoins; the remainder was restricted to six stories, and made to conform in style to the requirements that are locally operative.

THE building here illustrated is the result of compromise, an expedient in which the English temperament is said to excel. The conflicting influences were logic and the local building restrictions.

In 1913 the architects for the present work designed for erection in Dean Stanley Street, Westminster, for the British-American Tobacco Company, an elaborate eight-story modern office block. It terminated some 65 feet from Smith Square, and at this distance therefrom had to conform only to the L.C.C. regulations as regards height, etc.

More recently the company acquired the intervening space for an extension



Westminster House, Smith Square, S.W.]

This ground-floor plan includes the whole of the existing building as well as the addition, and shows how unity has been secured within, for the lower floors, despite the diversity between the two portions of the exterior. The strong room, built in reinforced concrete, entirely independent of the main structures, extends through several floors, forming, in effect, a tower.

to the earlier building. The logical thing would have been to continue in the same style; but Smith Square jealously guards its Georgian associations. It is ordained that brick is to be the facing material, that windows are to be of eighteenth-century type, cornice heights no more than 60 feet, and so forth. However, this ordinance holds only for a depth of 33 feet from Smith Square. Space is too valuable to be sacrificed; had the new building been designed as an entity governed by the Smith Square building regulations two stories would have been lost. There was nothing for it but to design the addition in two styles, keeping the existing eight-story height and general lines of the section adjoining the old building, and coming down to six stories and modifying the elevations for the remainder. Although in the less lofty part brick is actually the facing material, a very liberal use has been made of Portland stone for plinth, window surrounds and cornices. The windows here, however, have been designed in scale with the smaller proportions, and are of Georgian character.

There are one or two interesting points in the structure. A basement runs throughout the addition and actually extends some 11 feet beneath the pavement. Moreover, the lower floors betray no noticeable trace of the divergencies of the exterior until the fourth floor is reached. Against the dividing line between the old building and the new, an independent strong room has been incorporated, running through several floors, and thus furnishing a kind of vertical tower within, although entirely separate from, the new building.

A NEW MANCHESTER SOCIETY

A NEW architectural society has been founded at the School of Architecture, Manchester University, for the purpose of stimulating interest in architecture in Manchester and district. The following are the objects of the Society:

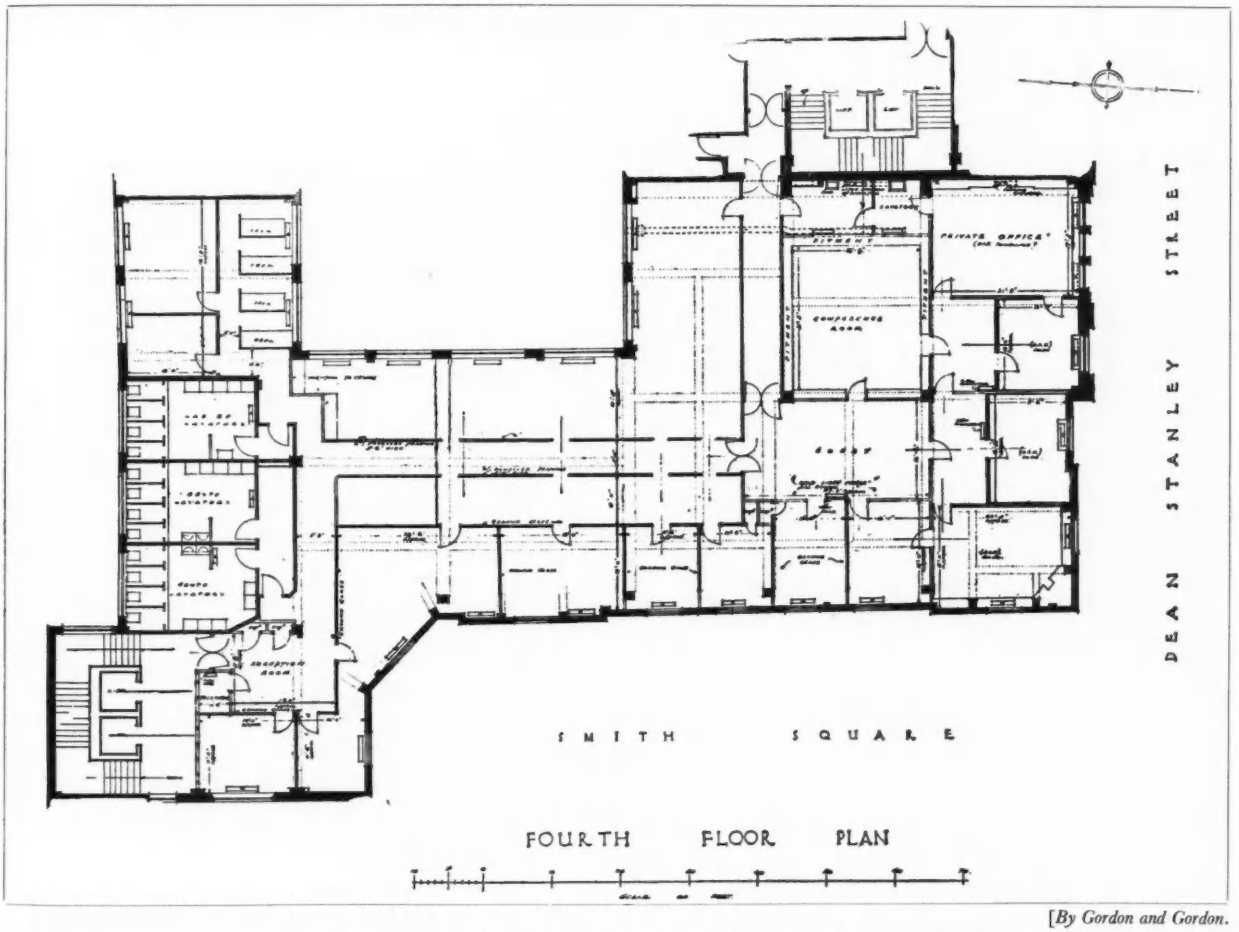
1: To advance and encourage knowledge and study amongst students of the profession, by the foundation of competitions to be organized by the Society, the delivery of lectures, and by such other means as may be thought expedient by the committee.

2: To maintain relations between the school and past students.

Two general meetings have already been held, at each of which there has lectured a prominent member of the architectural profession. At the first meeting Mr. Theo. J. Halliday, F.R.I.B.A., spoke on "The Life of an Architect"; at the second, Mr. J. Hubert Worthington, O.B.E., F.R.I.B.A., discussed the subject, "Is Historical Continuity worth while?" There was a large attendance at these meetings, and it seemed that many a well-founded argument was shattered in the discussion which followed each of the "talks."

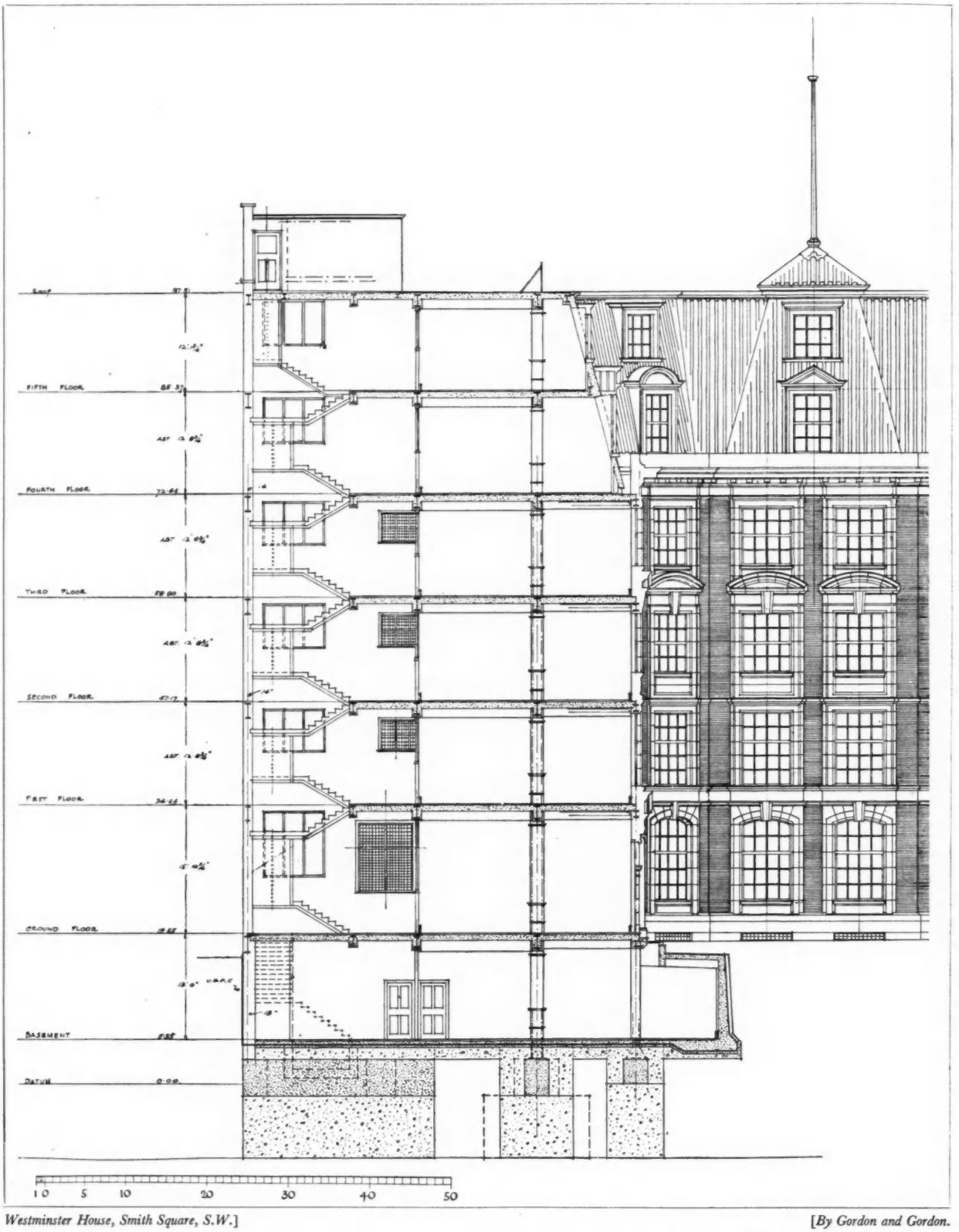
The following are the officers for the ensuing year:—

President, Prof. Dickie, M.A., F.S.A., A.R.I.B.A.; vice-president, Mr. W. B. Edwards, B.ARCH., A.R.I.B.A.; lecture secretary, Mr. Martin, A.R.I.B.A.; chairman of the committee, Mr. G. L. Greaves; hon. general secretary, Mr. G. H. Bray; committee, one member selected from each year at the School of Architecture.



[*By Gordon and Gordon.*

The plan at fourth-floor level. It is only here that the influence of the restrictions described in the letterpress makes itself felt upon the planning, which, however, provides a convenient suite of offices laid out for use by an advertising agency. A large conference room opens off the central lobby, from which run corridors flanked on either side by a number of smaller rooms.



Westminster House, Smith Square, S.W.] [*By Gordon and Gordon.*

Part sectional and part elevational drawing, taken looking eastwards on the building line facing Smith Square, through the six-story portion of the addition. One large basement runs throughout the whole of the extension, and, as will be seen, extends eleven feet under the pavement, to give additional space for storage, etc.

Bernard Whistlow, F.R.I.B.A. : An Autobiography : ii

REMINISCENCES OF PUPILAGE

BY KARSHISH

(H. B. CRESWELL)

THE episode which next comes to my mind is a vivid memory, for it is my experience on the first of some fourteen thousand days I have spent working in the profession of architecture, and it included a circumstance which, though ludicrous, was remarkable.

I was late that first morning in arriving at the office, for I first went to see my father off at King's Cross, where, for the last time, we exchanged the perfunctory salutation which had survived from childhood, and kissed like Frenchmen. The night before he had given me a taste of the gay life of London by taking me to Maskelyne and Cook's at the Egyptian Hall, after toying with the idea of Madame Tussaud's and weighing the rival attractions of the Moore and Burgess Minstrels; and he afterwards came with me to my room, when he said good-night, to improve the occasion with what is now irreverently called a pi-jaw, in which he startled me by exhibiting feeling, and even affection—a thing entirely new to me in my experience of him. The poor man was so agitated at leaving me to my own resources that he got into a train that did not stop at Yaw—as I realized only when the tail of it was disappearing at the end of the platform.

At Thalmer's Court, when I rang the bell, I was met, as before, by the clerk of the abdominal plotting pad. His name, I may say, was Potts, and he had risen by his aptitudes from office boy to the position of arch expert of the linen tracing and of the ink-grinding palette. When I gave him my name his eyebrows went up and he grinned widely.

"The new pupil?" he whispered in a surreptitious manner, as though I was joining a conspiracy.

He then beckoned me into the room he had come from, which was the chief drawing office and which, by removal of the folding doors that originally divided it, occupied the whole of the ground floor and was lighted at both ends. Here eight or nine men in shirt sleeves were bowed over drawing boards. Potts gave me a chair and went about whispering to the studious heads, which one after the other slowly turned and looked at me. Then, before spreading himself on his own drawing board, which was placed conveniently near the door, he delivered a message up a speaking-tube.

Silence reigned in the room as I sat, broken only by a sudden exclamation of "Shut up, you silly ass!" from the back end of the room, followed by sounds of a brief, loud skirmish, to which no one paid any attention.

As I waited, I received my first instruction in the art of architectural draughtsmanship, and the mystery of Potts's stomachic adornment was revealed to me. It arose from his wiping his pen on the lining of his waistcoat, turned back for that purpose, every time he loaded it. He did this with a brisk automatic movement like a bird sharpening its bill. Waterproof Indian ink in bottles did not then exist; the stuff had to be ground up freshly on a palette, from which Potts loaded his ruling-pen by dipping sideways, so that the pen required wiping; yet, though this was the first demonstration of draughtsmanship I saw, and it was highly dexterous and efficient, I never in my life observed anyone but Potts who employed the method.

When, after responding to a call from the speaking-tube at his elbow, he directed me to go upstairs, I was at once shown in to Grig, who, without turning, called me to his side while he worked at his drawing board—which he somehow managed to do seven or eight hours a day nearly all the year round—and then talked to me while the T and set squares, which I had never before seen in use, rapped and clattered under the guidance of his skilful hands and energetic mind. He had such practised efficiency that the act of putting down on paper seemed to be automatic, or at least subconscious, for he continued drawing while he discussed knotty points or instructed quantity surveyors or draughtsmen, and he dictated his letters and had documents read to him while so employed. The clicking noise of a draughtsman's squares even to this day sometimes brings him to my mind when I unexpectedly hear it.

The personality of this remarkable and most lovable man—who, as is too well remembered, was killed in Cockspur Street by being run down by one of the early electric cabs while his powers were still undiminished—lives with me; and even to this day, in spite of the disillusionments of a hard life, colours with the glamour of romance the routine of an architect's office. There was that about him which made mere physical contact a refreshment of spirit; and all associations of his presence became significant. Thus I remember well the faint scent of Turkish cigarettes which hung about him—Virginian had not then come on the scenes—and his slim, ascetic hands which, when he was at work, were commonly stained with the dust of plumbago, for he always worked with B or HB pencils on a thick soft cartridge paper which he liked because, as he said, "It bites so beautifully," and which suited his facile sketchy touch, and the pictorial rendering which he somehow gave to the most prosaic details.

Will it be believed that at this, my first interview, I pointed out to my master—to whom I owe more than I shall ever know, or he, were he alive, would ever guess—that his drawing would not work! This exploit was due to my being a young ass; but it is evidence of the expansive and stimulating effect on me of those few minutes' talk.

He had asked me various questions about myself in such a way as to make me feel that he was taking me into his confidence; and told me something of what lay ahead of me with a charm that banished my shyness and warmed my confidence. He then explained the purpose of the drawing he was engaged on, which was a joiner's detail of double-hung swing doors to the lobby of a church; and pointed out the full-size sections of the posts and head, and told me how they would direct the joiner in setting out the work.

I cannot have understood what I saw, but I seemed to recognize the only kind of door I knew anything of, and, out of the encouragement he had given me, I said:

"It won't open, sir, will it?"

He smiled as he worked away. "You think not, Whistlow. Why?"

"I thought it would stick half-way," I stammered, blushing hotly.

"Tell me why."

I could not tell him that; but I could sweat, and I immediately began to do so.

"Where do you think it will stick?" he continued, leaning forward to slap down the title.

"At the top, sir," I stammered.

He suddenly sat back; stared at the drawing, and frowned. Then he looked round at me:

"You are perfectly right, Whistlow.

It *will* ' stick '; and I never noticed it. How was it you knew ? "

I did not, in fact, know. I had made a shot in the dark. A year before, a lobby screen had been added to the door of Yaw church. It happened during the summer holiday and, with a boy's delight in practical work, I spent whole days with the carpenters, languishing during their dinner hour and hurrying through my own midday meal to get back to the enchanting scene. My father had entrusted the work to a local architect under whose guidance a small jobbing builder made double-hung swing doors which, when hung to the frame fixed to receive them, would only swing 15 ins. each way owing to the segmental head being square on the under side and some 5 ins. wide. I did not grasp the reason for this jamming, nor understand why things were put right by cutting half an inch off the top of the door and planting a 2-in. fillet under the head to fill the space; but I recognized a similar door in Grig's drawing, and my folly, espoused by luck, did the rest. I do not think that every distinguished London architect would have been as pleased as old Grig appeared to be at a schoolboy's coming into his office and pointing out that his carefully-designed door would not satisfy the elementary requirement of opening.

" You have good powers of observation, at any rate," he said kindlily, after my modest recital, as he rapidly rubbed out and drew in a new profile to the head with one firm continuous line; and he then turned and spoke down a tube in the wall at his elbow which opened beside the chief draughtsman in the office below.

I got to know that tube well, for the alertness with which Zaza would jump to his end of it when he heard Grig's whistle led us—at such times as Grig was out and Zaza did not know it—to sound the whistle and then immediately pour water down the tube —once it was ink—and urge it on with a blast timed to deliver it just at the moment Zaza's ear would be pressed against his end in devoted concentration. " We " and " us," it need scarcely be said, refer to the pupils in the office. Since the pupilage system went out of favour, architects' offices have been far less cheerful places than they were.

Zaza, as we called him, speedily answered the call of the tube in his shirt sleeves, and was introduced to me as " Mr. Johnson, who will look after you and make you comfortable."

" Whistlow is joining us as a pupil," said Grig to him; " and he has at once pointed out that this door we were designing for St. Barnabas cannot swing."

Zaza took the drawing gravely, and I went with him downstairs to the drawing office where he conducted me round to each board in turn and I shook hands with the staff and pupils, one by one.

" And I am Potts," said that person, who had somehow been overlooked, coming up and shaking hands, " bottle-washer and general factotum."

They seemed a happy family of men, as, with one exception, they were. Zaza arranged a place for me on the same bench as his own, and gave me a detail of part of a chancel screen with a full size of the brattishing, which I greatly admired, to copy; and I opened my brand-new case of instruments and made my first experiment at architectural drawing.

It does not seem I was ever taught anything. I noticed what others did, picked up hints, practised myself in various directions, and when I was capable of being useful I was made of use; and under Grig's general supervision and criticism and encouragement, and association with pupils and draughtsmen, I gradually got a sense of what was what and acquired proficiency and developed ideas of my own, and taste. The great delight to me in my work was the strictly practical bearing of every part of it; and this, I think, is an advantage the pupilage system has which no school of architecture can replace. I never knew the meaning of work till I went to Grig's office; for the essence of work is the accomplishment of something. At school I seem to have learnt nothing but evasion, desultoriness and inattention; because there seemed no purpose in anything required of me. That was now all changed. There was direct practical purpose in everything I did or saw done, and in the way it was done.

Once, in early days, when I took a detail of a service-lift hatch to Grig for his approval, he lifted a scuttle of coals to satisfy himself that the counter was not an inch or two too high for the ready raising of such weights upon it. I was enormously impressed that a man of Grig's experience and accomplishments, whose mind was engaged at all times with important matters, should concern himself on so trivial a point; and that he should be satisfied only with the exact knowledge that actual experiment provided. The event was momentous for me : it conferred a blessing, so to speak, on an impulse to extreme conscientiousness in me which I had resisted as a weakness; and it gave me an insight into the kind of application which is required of an architect. I perceived by what methods Grig had equipped himself, and realized with delight for the first time how I might set about doing the same; and from that day I gained a keener perception of what the architectural game actually was.

I learnt much from the chief draughtsman. I call him Zaza because I can think of him by no other name, and not from any disrespect; and although we — the pupils — tried his patience severely, we were fond of him. He was a short stocky man between thirty and thirty-five, and owed his name, first, to Garston's presence in the office; second, to his sporting a moustache with waxed ends and a bushy black beard of the pattern usually allotted to the more brawny of the Apostles in church windows; and, lastly, to the professional style of the most notorious " freak " in Barnum's show—" Zaza ; or, What is It ? "

It was due to Garston also that Zaza was always spoken of by us as " the harshitec" under the pretence—not altogether unjustified—that he so described himself. " Ask the harshitec," " Grig wants to see the harshitec." " Has the harshitec come back from lunch? " was common usage. The other paid assistants, Potts, MacVittie and Judo, always called him by his name, Johnson, as also did Chichester, the senior pupil, who was in his fifth year when I was beginning my first; but there were four other pupils : Caine, Garston and Blackdon, answering respectively to Tubal, Gar and Yeice; and myself, to whom Garston within a week had, for a reason I have never been able to understand, given the name of Twitters.

" Yeice " was derived from the way Blackdon, who had difficulty with his r's, was supposed to pronounce the word " rice." Chichester had, however, grown to resent being called Chicken, and Garston, who could be remorseless, always spoke to or of him as Mr. Chichester in a mock deference which kept us in mind of the way this man held himself apart and sought chances of ingratiating himself with Grig. He would never, if he could help it, let us know what he was working on or what his problem was; and he often used mean devices for getting credit with Grig for ideas that were ours. It was not long before I found this out; and there was an occasion when I resented it so effectively that the drawing in dispute was torn in half. The scene was equalled by many others that I witnessed or took part in at Thalmer's Court.

I commonly got my instructions from Zaza, if not from Grig himself; and when I had finished a drawing or carried it to a point when Grig's decisions were needed, Zaza would usually let me take it upstairs myself—a privilege I valued, for I always came down again glowing with encouragement and with some perplexity solved. It happened that Grig had told me to

get out details of doors in the servants' quarters of a house which Chichester was looking after, and directed me to get the necessary particulars from him. Chichester frowned, in a way he had, when I went to him. He did not like my instructions having come direct from Grig instead of through himself; and he withheld the information which would have allowed me to tackle the problems presented, and tried to get me to draw what he told me to draw without my understanding what I was doing. This led to a row and the interchange of schoolboy personalities; Garston lent me his pungent aid, and the rest joined in, so that at last Zaza intervened and, in the end, I got what I wanted.

It happened that I struck what was, for me, an exceptionally bright idea. I perceived that the awkward congestion of doors I was dealing with could be obviated by a simple transposition in the plan, and I so worked the drawing. Chichester frowned when he saw what I had done, for the working out of the plan of the house had been his task.

"I never told you to do that," he said.

Me: "I am working for Grig, not for you."

Chichester: "This is my job."

Me: "No, it's not; it's Grig's."

Chichester: "He doesn't want the plan altered."

Me: "How do you know, you silly ass? You haven't asked him."

Garston: "You must not speak disrespectfully to Mr. Chichester, Twitters."

Me: "Let those pins alone. What are you trying to do?" (*Pushing his hands away.*)

Chichester: "I'm going to take the drawing up to him."

Me: "No, you're not. Get out, I tell you! Take your dirty paws away." (*Striking at his arm so that the T square clattered to the floor.*)

Chichester: "Now look here, Whistlow; are you going to let me have that drawing?"

Me: "No, I am not. I'll take it up myself."

Chichester: "I shall come with you, then."

I slowly took out the pins, one by one, while Chichester stood by. Then my eye was suddenly arrested by something outside the window.

"By jove! Just look there!" I said.

Chichester fell to the ruse, but I was not quick enough in getting hold of the drawing. He turned and caught at it, and I made my plunge towards the door with half.

Potts deftly mended the drawing with a strip of linen gummed on the back, and, taking my chance, I was able to get a fair start with it; but Chichester was watchful and came charging upstairs on my heels so that we breasted together into Grig's room like runners at the goal. Grig probably understood very well what was up. He looked closely, but without comment, at the torn sheet. His manner was grave and reticent.

It was characteristic of Chichester's jealous nature that, while he would have claimed credit for the suggestion had he been able to submit it as his own, he urged every possible objection against it, since it was mine. Grig cut him short:

"No, I think this will do very well. You can finish the drawing, Whistlow," he said.

An atmosphere in which scenes such as this were of common occurrence was characteristic of offices where pupils were in numerical force.

NEXT WEEK—III: EPISODES OF GROWTH

The previous instalment appeared as follows:

May 27. i: I Am Articled.

LETTERS FROM READERS

The Enterprising Builder

SIR,—Your correspondent, Mr. Gloag, must be entirely ignorant of the nature of local authorities and the kind of "architect" they would be likely to employ, if he thinks that any good would come of his proposal to let such authorities "edit" the doings of speculative builders. In large towns such a system might have a measure of success, but in small towns and rural districts (where spoliation needs the more checking) the local authorities are composed of members with no more education and standard of taste than the speculative builder himself, in fact, the latter is generally to be found sitting on the District Council! Need I say more to show that æsthetic control by such bodies, even under the advice of a local (probably *very* local) "architect" would be useless?

The evil starts earlier than with the builder—it starts with the land speculator. Not so much is heard of this gentleman, but he is a worse enemy of the amenities than even the speculative builder. He cares not what is put on his land so long as he reaps the profit of increased values, so he allows it to be covered with cheap speculative houses of types the builder knows the public will buy. Why does the majority of the public buy them, while at the same time constantly complaining about them? For the reason that the same majority buys a ready-made suit at the stores instead of going to a tailor in Savile Row—economic circumstances give them no option. They know that an architect's house built under the present system will cost them more, and they know that even should they decide to spend a little extra for a good house, they have no safeguard against the speculative builder putting cheap and nasty erections nearby, and spoiling the value of their property.

What can be done, then, to provide the public with cheap ready-made well-designed houses? In my opinion nothing will work *immediate* improvement except "direct action" in obtaining control of the land instead of letting it pass to the land speculator. If architects and others interested in rural amenities would themselves form syndicates to acquire estates falling into the market for building, they would be in a position to exercise absolute control over the designs of the speculative builder. And they should not be above taking friendly advice from the latter—or even from the bricklayer or carpenter—as to the cheapest methods of constructing and detailing, always taking care to apply such methods to their own ends of obtaining good design and pleasing appearance.

F. G. COATES
(COATES HOUSES, LTD.)

[Mr. John Gloag has written pointing out that a misprint was made in the fourth paragraph of his letter on the above subject, published in our last issue. The word "initiated" should have read "imitated."—ED. A.J.]

Ventilation of Cavity Walls

SIR,—There are a good many of us who share the dislike of "R. H." (see page 732 of the last issue of the JOURNAL) for cavity walls of two half-brick skins, and not on account of prejudice, but from experience of the great difficulty of getting them so built as to give satisfactory results. I have seen a number of them opened out and have always found them bridged by mortar droppings, which can only be avoided by the exercise of such great care as to render the true additional cost of the work prohibitive.

I don't know how "W. A. D." arrives at his figure of £20 on a £1,500 house for extra value of cavity over 9-in. solid walls, but basing it on cube and assuming a 2-in. cavity (the most usual size) I get these figures:

32 ft. × 30 ft. × 25 ft. = 24,000 ft. cube at 1s. 3d. = £1,500.

31 ft. 8 ins. × 29 ft. 8 ins. × 25 ft. = 23,498 ft. cube at 1s. 3d. = £1,469 2s. 6d.

If, on account of the pitch of the roof, a greater height than 25 ft. is taken, there would be a larger discrepancy, and if the differences were

definitely ascertained by taking out quantities I believe that £50 would not cover it, providing that the true extra labour cost of keeping the cavity free of droppings were properly valued.

It is a moot point as to whether the cavity should be ventilated, not only on account of the question as to insulation, but also having regard to the admission of dirt on the one hand and the danger of setting up conditions favourable to the spread of dry rot on the other. But whether ventilators are fixed or not, dirt will get in owing to timber shrinkages if the floor joists enter in the usual manner. All who have seen old panelling taken down know how much dirt accumulates behind it in course of time, and in the case of wall cavities this will be added to mortar droppings due to vibration set up by all manner of ordinary happenings as well as that arising from passing traffic. As ordinarily constructed, it is almost impossible to clean a cavity. The ordinary wall ties, even though heavily galvanized, cannot be expected to last for any considerable number of years in moist surroundings, and the main underlying theory with regard to the uses of a cavity is that the admission of moisture is inevitable, but that the space prevents deeper penetration. Better wall ties would, of course, add to the cost and usually to the amount of retained mortar droppings also.

There is much more that could be said about this very debatable matter, but for the present purpose it is, perhaps, sufficient to show that objections are based on something more substantial than mere prejudice.

J. R. T.

SIR,—Stimulated by your correspondent "Psittacus," I am impelled to add my experiences to those of your expert "W. A. D." in reply to the inquiry of "R. H." on the ventilation of cavity walls.

I agree with both views—with the inquirer in his lack of favour for cavity walling, and with your expert that it represents a distinct improvement *as compared with bare 9-in. solid walling*. Theoretically, the 11-in. cavity wall is infallible as an insulator and damp defier; practically it is successful in perhaps nine out of ten cases, but in the tenth some careless workman or minor accident renders the whole thing useless, and it is the virtual powerlessness of the architect to ensure against this tenth case which makes people doubtful. Where thick solid walls—not 9-in. or (in exposed positions) even 14-in.—can be afforded, they are to be preferred; but we can't afford them usually now.

The expediency of ventilating the cavity will probably long form a subject of debate; undoubtedly the insulating value of the wall is much reduced if a brisk air circulation is induced by ample ventilation. The provision of open vertical joints is usually sufficient, but if more movement of air seems desirable the cavity may be ventilated indirectly by openings from beneath the ground floor, though in any case provision should be made for mesh protection which will exclude mice, which, from an entrenched position within the cavity, can produce most irritating scratching and scuffling sounds at dead of night—a further reason for a sealed air space!

I have lately been trying 9-in. solid walling, waterproofed externally by slurry—so far with complete success, though my Waterloo may be approaching!

EDWIN GUNN

SIR,—Your expert, "W. A. D.," replying to a question on "Ventilation of Cavity Walls," states that he cannot see that any benefit is gained by ventilating the cavity in hollow walls.

This opinion is of some importance, since it is not shared by the gentlemen who prepare model details for the guidance of candidates in the professional examinations, nor, incidentally by myself.

I have always considered the ventilation of cavity walls to be of importance, since the external 4½-in. skin is easily penetrated by wet, and the quickest means of dispersing such moisture is to maintain a constantly-moving current of fresh air in the cavity. If the hollow between the two skins is sealed, moisture, so far from accumulating at the base of the wall, would be held in suspension, ultimately to condense, perhaps on the face of the inner skin.

Another consideration is that first-floor joists are usually bedded on the inner skin of a hollow wall, and it is reassuring to know that the ends which face into the cavity are kept well ventilated and dry.

F. W. N.

S.P.A.B. Donation Scheme

SIR,—In September last a friend of the S.P.A.B. gave £20,000 for the general purposes of the Society, without any restriction. A full committee meeting was called to consider what should be done. It was then decided that the best way of utilizing the money was to make the capital and interest both work to the fulfilment of the objects of the Society. The best way of doing this was to invest the money in old buildings which might otherwise be destroyed, and if necessary to rearrange them so that while their chief characteristics remained unspoilt they could serve an economic purpose, producing revenue sufficient to bear the cost of maintenance and to pay an interest equivalent to that obtained from trust funds.

The committee thought that the right course would be to incorporate the Society under the Companies Act, with special permission from the Board of Trade to omit the word "limited" from its name, and immediately after incorporation to form a sub-committee with directors appointed by the committee of the Society to carry out its duties in regard to the use of this money. The Society's solicitor was instructed to proceed on these lines. In the course of his negotiations with the Board of Trade it was discovered that there would be difficulty in obtaining its consent to the omission of the word "limited" if the Society controls the subsidiary company formed to produce interest for the general purposes of the Society itself.

Another full committee was called and the matter was again discussed, and it was then decided that the subsidiary company should be formed on the lines outlined above, but that the incorporation of the Society itself should be left for the present.

Generally speaking, the objects of the company are threefold:—

1: To secure houses or other ancient buildings which can no longer be economically used for their original purposes and which therefore are likely to be neglected or even destroyed.

2: The second way in which the company will operate is in regard to those houses which stand on sites which have recently much increased in value, and which, on that account, cannot make economic return on their financial value. In this case the company would, after valuation had been made, inform the public that it is willing to pay such and such a sum for the house in order to hold it unspoiled, but that it is unable to pay the present value of the house and site without public contribution, and through the committee of the Society itself an appeal would be made to make up the difference between the economic value of the house, and the economic value of the house with the site it stands on. It is thought that some valuable property in the country towns of England may be saved in this way.

3: The third object, which the committee of the Society thinks the subsidiary company may fulfil, is the administration of important ancient houses on behalf of the owners. The company hopes to be in a position to advise how such buildings may be economically used, and through its connection with the Society to help the owners to achieve their preservation by these means.

The committee has gained the consent of the following gentlemen to direct the company:

The Rt. Hon. Viscount Esher (chairman), and Messrs. F. W. Troup, F.R.I.B.A., F.S.A., F. A. Minter, and Nigel de M. Bond.

There are to be seven directors in all. At the present time three remain unappointed, and will not be appointed until the company itself has worked for some time and finds from experience the people who would most usefully serve it.

A. R. POWYS
(SECRETARY, SOCIETY FOR THE PROTECTION OF ANCIENT BUILDINGS)

HOLIDAY SKETCHES COMPETITION

A New Series of Prizes

In view of the great success of last summer's Holiday Sketches Competition, the Editor of THE ARCHITECTS' JOURNAL has pleasure in announcing that prizes of ten and five guineas will again be awarded for the best sketches made during the months of June, July and August—one set of prizes for each month. The sketches should be the fruit of this year's holiday. They must also be unsigned. The rules are simple. Read them now.

1. Three competitions will be held to cover the 1931 holiday season, the closing dates of each being in the middle of July, August and September respectively.

2. The competitions are open to any reader of THE ARCHITECTS' JOURNAL.

3. Two prizes, a first prize of Ten Guineas and a second prize of Five Guineas, will be awarded in each month's competition for the best and next-best sketches sent in.

4. Competitors may enter for any or all of the three months indicated, if they choose, but no competitor can win more than one prize.

5. A maximum of five drawings may be submitted by individual competitors for each month's competition. Such batches must be sent complete under the same cover.

6. The size of the drawings is not to exceed that of Royal drawing-paper, i.e. 24 inches by 19 inches.

7. All drawings should possess some definite architectural or craftsmanship interest, but they need not be exclusively concerned with buildings, and drawings of boats, vehicles, etc., will also be eligible.

8. The drawings will be judged by the Editor of THE ARCHITECTS' JOURNAL, whose decision will be final.

9. Entries for the July competition should reach the Editor of THE ARCHITECTS' JOURNAL, 9 Queen Anne's Gate, Westminster, S.W.1, between the first post on June 15 and the first post on July 14. The result of the competition will be announced in THE ARCHITECTS' JOURNAL for August 12.

10. Entries for the August competition should reach these offices between the first post on July 15 and the first post on August 17. The result of the competition will be announced in THE ARCHITECTS' JOURNAL for September 9.

11. Entries for the September competition should reach these offices between the first post on August 18 and the first post on September 15. The result of this competition will be announced in THE ARCHITECTS' JOURNAL for October 7.

12. A motto of one word is to be chosen by the competitor, who will remain known by this motto until the award has been made. Only then will his identity be divulged.

13. Each entry must be accompanied by a sealed letter giving the competitor's name, address and occupation (whether principal, assistant or student). The letter should also state that the competitor will observe the rules of the competition and that the drawings submitted are his work, executed on his holiday this year. It must be enclosed in an envelope sealed with a blank seal and bearing nothing but a motto label on which is written the motto chosen by the competitor and the number of drawings entered. Copies of this label will be found in THE ARCHITECTS' JOURNAL during the period covered by the competitions. (See p. xlix of this issue.)

14. Each drawing must bear on the back a similar motto label bearing the competitor's motto and the number of drawings entered. No other means of identification must appear on the drawing. Drawings bearing a signature will be disqualified; so will drawings not bearing the printed motto label.

15. Owing to the drawings being submitted under a pseudonym no acknowledgment can be sent.

16. THE ARCHITECTS' JOURNAL will publish a selection of the drawings submitted.

17. No responsibility can be taken by the Architectural Press for loss or damage.

The motto label is simply a device for ensuring perfect anonymity. But its use is obligatory. Labels are printed in this issue, and others will follow in subsequent Sketch Club numbers

THE SKETCH CLUB

THIRTIETH SESSION

IT is hoped, periodically, to devote sessions of the Club to work of members of one architectural firm or of assistants in one architectural office. There are hung this week eleven sketches by Messrs. Ronald Knight, A. J. Passmore and K. C. Reid, all members of the L.C.C. Housing Department. The Holiday Sketches Competition is being repeated this summer; for conditions see previous page.



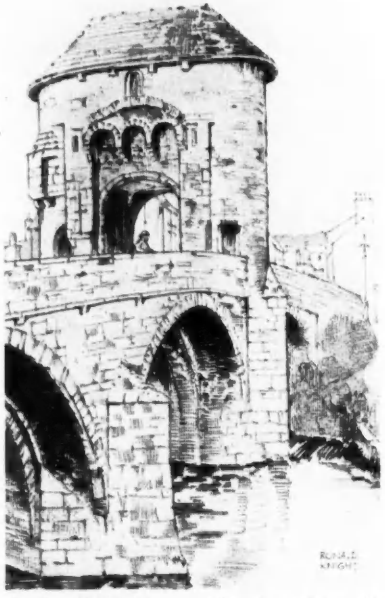
By K. C. Reid. (Pencil : 11½″ × 9″)
Strand Street, Sandwich.



By A. J. Passmore. (Pencil : 11″ × 8¾″)
Place de la Digue, Bruges.



By A. J. Passmore. (Watercolour : 10½″ × 11¼″)
Place des Tanneurs, Bruges.



By Ronald Knight. (Pencil : 7¾″ × 14″)
Monnow Bridge, Monmouth.



By A. J. Passmore. (Watercolour : 11½″ × 12″)
Maison du Pelican, Bruges.

Place des Tanneurs, Bruges.

Monnow Bridge, Monmouth.

Maison du Pelican, Bruges.



By Ronald Knight. (Pencil : 9″ × 10½″)

Robin Hood's Bay, Yorkshire.



By K. C. Reid. (Pencil : 7¼″ × 6″)

Long Street, Cerne Abbas, Dorset.



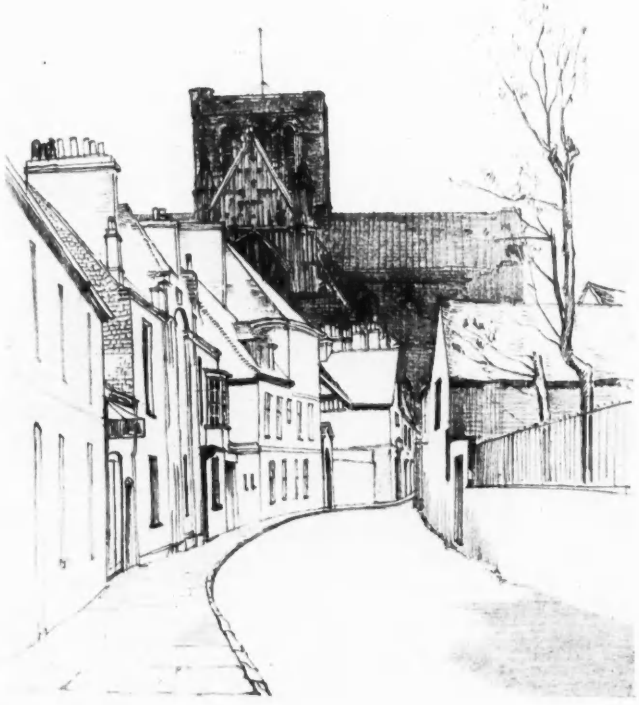
By Ronald Knight. (Pencil : 8½″ × 10″)

Whitby, Yorkshire.



By K. C. Reid. (Pencil : 9″ × 12¼″)

Mill Lane, Cerne Abbas, Dorset.



By K. C. Reid. (Pencil : 7″ × 8¼″)



By A. J. Passmore. (Water-colour : 8½″ × 12¼″)

A Corner in Ghent.

Colebrook Street, Winchester.

SCHEME FOR THE LIVERPOOL AIRPORT

SIR ALAN J. COBHAM'S LETTER AND REPORT

BELOW are printed extracts from the letter, and the report which accompanied it, presented at the close of last year by Sir Alan J. Cobham, originator of the airport scheme for the city, to the Town Clerk of Liverpool. The three drawings reproduced in one of the supplements to this issue are those numbered AL/137, AL/139 and AL/138 in the text of the report, and illustrate what is termed "the final development."

DEAR SIR,

Municipal Airport at Speke

The first development refers to that of preparing the ground, erecting buildings, providing an entrance road and laying down a certain amount of tarmac, so that the Airport, as such, may receive a Licence from the Air Ministry and be available for public use. In actual fact, the Airport has already been Licensed, and the first development, therefore, refers to the enlargement of the ground available for landing purposes and the provision of buildings and other services, so that proper facilities are in existence for handling passengers, goods and mails.

The work contemplated should occupy a period of not more than one year from the commencement of operations, and is the responsibility of the City of Liverpool, referred to hereinafter as "the City."

The final development visualizes the complete Airport developed by Municipal and private enterprise as and when traffic warrants extensions.

In order to relate the first stage of development to the final one, buildings are so planned that nothing is recommended for erection which cannot be in continuous use. This does not mean that it is necessary in the preliminary stage to have separate buildings for all purposes, as planned in the final scheme. For instance, the office for aerodrome officials and for any companies which may establish themselves at the Airport is combined with a small public café-restaurant and waiting-room in one building, whereas in the complete scheme, of course, buildings for the travelling and visiting public will be quite separate from those where the business of the Airport is conducted.

Similarly, workshops and stores will be combined with the first hangars to be erected, whereas at a later stage separate buildings for the former will be necessary.

The complete Scheme has been thought out on economic lines, so that no permanent buildings or "service" installations are put down except in permanent positions, the word "permanent" being used as it concerns the normal lifetime of the various equipment in mind. Naturally the process of replacement must take place as time goes on, but by means of a comprehensive scheme, taking into account all the known facts, and based, so far as the future is concerned, on progress made in the past, it is quite possible to avoid wasteful expenditure.

Whilst on the subject of constructing the Airport, it might be as well to review the possibilities of revenue as they concern Liverpool.

Liverpool lies on a route from London to Northern Ireland and to Western Scotland, and at the same time it is situated conveniently between Ireland, Manchester and Hull or Grimsby when considering an East to West service from Scandinavia and Germany.

The site itself is reasonably close to the centre of the City and, being adjacent to the River, traffic by marine aircraft may be developed at a later date.

The means of access from the site to the City are excellent, and the approaches to the site from the air on all boundaries are good, the take-off into the prevailing south-westerly wind being very good indeed.

The presence of the Airport will encourage private individuals to purchase aircraft, and it will be of great use to passengers using air taxis.

A direct connection to the Continent *via* London can be expected in the near future, with through services when the demand has been created.

It must not be expected that one Airport will be sufficient to serve the needs of Liverpool for all time, but the first one to be created will have an obvious advantage, and the present plans have been drawn up to cater for the City's needs within the next twenty-five years.

In preparing the Scheme and Plans, I have had in association with me Lt.-Col. J. D. K. Restler and Major J. Kidston Allsop, Consulting Engineers, and Sir John Burnet and Partners, as Architects.

Yours faithfully,
(Sgd.) ALAN J. COBHAM

First Development

The site having already received an Air Ministry Licence, the work of clearing further ground for landing purposes can follow a normal course with the object of throwing open the whole area for public use some time during the summer of 1931.

The dimensions of the site from boundary to boundary and those effective for actual operations will be as follows :—

	Actual. Yards.	Effective. Yards.
East to west	1,600	1,300
North to south	1,000	950
North-east to south-west	1,250	1,100
North-west to south-east	1,250	1,000

Buildings required consist of two hangars, numbered 7 and 8, containing a small workshop and stores accommodation. Also an administrative building surmounted by a Control Tower, which building includes accommodation for passengers and visitors to the aerodrome in the form of a lounge waiting-room, with facilities for serving light refreshments.

A road must be brought on to the site from Bailey's Lane and constructed parallel to the south-eastern boundary, leading into the site where buildings are to be erected.

A certain amount of tarmac must be put down around the hangars and the administrative building, so that a dry and permanent surface is obtained for intercommunication, and so that the surface of the ground in the immediate vicinity of the hangars will not be cut up by constant use.

The essential services of water, electric light and power, gas, telephone and drainage must be brought to the buildings.

When detailed plans are prepared, it may be found possible to leave some of the trees as part of the ornamental layout, as they would not form an obstruction if within the area allotted to buildings.

The plantation of trees along the north-western boundary must be considered as an obstruction, and its height must be controlled.

Those trees along the south-westerly boundary bordering the river must be felled, although a small clump at the extreme southern corner might remain for ornamental purposes.

Various hollows and depressions on the site are being dealt with at the present time, and it is therefore only necessary to stress the importance of filling every one as soon as possible, so that all ground inside the aerodrome boundary is safe for aircraft operations.

So far we have considered the Airport solely for use by day, whereas it will be necessary to equip it with certain essential lights so that an emergency landing could be made safely at night. These lights include defining the roofs of buildings as obstructions by means of ordinary electric lamps in red coloured shades.

It is estimated that the preliminary work during the first development stage will cost between £40,000 and £50,000, including work already carried out.

The Complete Airport

It has been found more practical to limit the stages of development to two instead of three, it being impossible to visualize an intermediate stage between the work which it is necessary to carry out immediately and the final scheme where the Airport is complete.

The construction of further buildings and the improvement of the Airport generally will take place as and when traffic warrants extensions. It will also be controlled by the amount of money available from public and commercial sources, so that development must be irregular, depending on the state of trade.

Drawing No. AL/137 shows the whole site, and Drawing No. AL/138 is an enlargement, dealing with the complete site alone. Drawing No. AL/139 shows the various buildings in elevation.

The Airport will be used by commercial aircraft and by private owners, the requirements in each case differing very considerably. It is proposed to divide the area reserved for buildings into two separate sections, one for the commercial side and one for private owners.

After a stage has been reached where the arrival and departure sheds (numbered 4 and 5 on the plan of final development) are necessary for commercial air-liners, one of these sheds must be located on the "private" side. Such sheds have not been used hitherto except in the United States, principally owing to the expense involved, but it will be found in future that first-class passengers will demand greater comfort when embarking and disembarking from aircraft, and the expense of such buildings must be recovered through landing and housing charges.

The area scheduled for buildings is shown in the final development as completely surrounded by tarmac. This latter can be any prepared and drained surface which is most economical at the time of construction. Buildings must be limited to this area, and the plans have been prepared so that no others are required beyond it, except a seaplane hangar and other incidental buildings on the river bank, where a site is also available for an hotel.

It is not intended that the City should be responsible for the erection of all buildings. For instance, the hotel could be erected by private enterprise, the City leasing the land for this purpose. This method has already been adopted at the London Airport, Croydon. On the Continent and in the United States many of the hotels, restaurants and club buildings situated at terminal airports have been constructed by the municipalities concerned or by the Governments, but in other cases they are privately owned.

The Control Tower, in which will be housed wireless operators and the Duty Officer controlling traffic, must surmount the building numbered 1, and therefore the actual construction and equipment of the rooms so occupied would be a Municipal responsibility.

In the preliminary scheme, accommodation for passengers is included in the administrative building, but it will be necessary eventually to have separate buildings. That numbered 2 is proposed as a central booking hall, with No. 3 for Customs and general administration. On the opposite side of the booking hall, building numbered 6 is intended for pilots and passengers of privately owned aircraft.

Buildings numbered 3 and 6 will be connected to the café-restaurant by a covered way.

Additional hangars will be required on the commercial side to house air-liners engaged on international traffic, and positions numbered 9 have been chosen so that sufficient space is available for manœuvring large machines on the ground. The exact type of construction for these can be left in abeyance until they are required, but an allowance for height, depth and tarmac space has been made when preparing the plans, based on the probable increase in size of aircraft during the next twenty years.

Whilst workshops and stores can be housed conveniently within the hangars during the early years, separate buildings will be required eventually, and positions for these have been indicated, numbered 11 and 12. No separate building has been shown for the necessary transport, because in the first stage vehicles can be kept in the hangars, and at a later date a special building can be put up in a position where it will not hamper the movement of machines. There is plenty of ground available within the area scheduled for buildings. It is quite possible that a garage proprietor would lease land from the City to erect a building available for the general public, in which case the City could stipulate that a lock-up for such aerodrome vehicles as tractors, floodlights, a fire tender, trailers, etc., should be included.

Additional hangars will be required on the "private" side in positions numbered 10. Their type can be varied so that one or more contains a double row of lock-ups approached from the outside, with a covered area in the centre where overhauls can be undertaken. This type can be erected in sections, following a practice which has been adopted successfully elsewhere. Previous types have allowed an exit and entrance only at each end, whereas by having a separate entrance to each lock-up on the outside of the hangar, the handling problem is simplified to its greatest possible extent. Another type could be constructed entirely as lock-ups with no central space for overhauls, these being carried out in a general workshop for major repairs. The original hangar numbered 8 is one large shed, and it would be available for the large type of private machine requiring housing accommodation.

The installation of wireless, night flying apparatus, a compass base, bulk storage for petrol and oil, and public enclosures will be required in addition to buildings set out in the plans.

Aerodrome Buildings

The design of hangars is one which needs careful thought, so that the needs of the future shall be taken into account when building for the present. Both in this country and abroad during the past ten years, hangars have been erected which are now found to be of the wrong shape, with awkward dimensions and lacking in some essential detail such as lighting, heating or door space. As soon as the City decides to proceed with the erection of buildings, the consulting engineers should be called on to submit detailed plans.

General Facilities for the Public

It will be necessary to visualize accommodation for the travelling public using the Airport as an arrival and departure station, for the visiting public in need of refreshment during a sightseeing tour, and for people willing to pay to watch flying operations both as an everyday occurrence and when pageants, races or other functions may be taking place. For this purpose an hotel has been sited adjacent to the river, and a café-restaurant in the most prominent position at the head of the main avenue. It was necessary to find a position for each of these buildings in the preliminary plans, although it is not contemplated that the City should be responsible for their complete erection.

The Control Tower, which could be increased in height as development takes place, is situated in the centre of the café-restaurant, numbered 1, of which it forms the upper part. The café-restaurant will have a lawn in front facing the aerodrome, to which access cannot be obtained except through gates where some form of control can be exercised.

Roads, Tarmac and Enclosures

To form an entrance to the Airport, a road must be constructed from Bailey's Lane as far as Banks Lane, following the course of the latter in a north-westerly direction. This road will take all passenger and goods traffic, and must, therefore, become of considerable width in the course of time. In the early years it need not exceed a width of 24 feet, with a 6 feet footpath in addition.

The Airport buildings in their final state will be surrounded by tarmac to permit manœuvring aircraft from one building to another with ease. During the first development it must be possible to taxi machines between hangars numbered 7 and 8, which means crossing the road. It follows, therefore, that the road must not be raised above the level of the surrounding land to any great extent.

It may be found desirable at a later date to bring a road on to the site from Banks Road, carrying it in a south-easterly direction and parallel to the present allotments in order to serve a public enclosure situated in the extreme northern corner and adjacent to the allotments.

Miscellaneous

The extent of tarmac to be constructed and the precise nature of this surface can be decided at a later date.

The construction of the main entrance road, with drainage and the carriage of water, electric light and power, gas and telephone mains to the building site is an item of expenditure to be spread over the gradual development of the Airport.

The cost of fencing the boundaries of the aerodrome, the public enclosures, and for defining the main entrance road cannot be allocated definitely to any particular stage.

The offices and café-restaurant will need to be equipped and provided with furniture under the first development scheme.

A tractor will be wanted eventually for haulage purposes and a vehicle equipped with fire-fighting appliances must be available on the landing ground.

No special transport need be provided, as the Airport will be within easy reach of the City by taxi.

Marine Aircraft Base

It is probable that the Airport can be used as a base for marine aircraft, but the expense involved in providing the necessary facilities may be considerable, and no detailed advice can be given on this subject without a careful survey and the preparation of detailed estimates.

A site for a seaplane hangar has been chosen, however, and it is shown on the final development scheme, numbered 14, with a strip of tarmac in front facing the river, numbered 15.

It would be necessary to construct a slipway or pier in order to manœuvre flying boats and seaplanes in and out of the water for overhauls and repairs.

The continuation of the main road into the aerodrome has been indicated as far as the hangar site by the river bank.

Conclusion

The scheme for the Airport visualizes the City as the ground landlord, responsible for the construction of the landing ground, for keeping it in good repair, lighting it, providing it with wireless, maintaining its entrance road, its fences and essential services, constructing the concrete tarmac and keeping it in repair, providing two hangars, a small workshop and store, an office, a waiting-room and café and a Control Tower.

By such means as outlined above, the Airport becomes fully licensed and suitable for public use, and it must be maintained in good order so far as the licensing authority (the Air Ministry) is concerned. It will become a base for the operation of public air transport and the principal aviation centre for a very large district.

The City can employ an aircraft operating company to staff and manage the Airport at little expense if it wishes, as in any case the administrative building will contain suitable offices for individuals and companies working at the Airport and paying a rental.

The erection of an hotel can be left to private enterprise, but a suitable site has been chosen where a building will not interfere with flying operations.

Regarding the provision of further hangars, their construction must be considered when private owners, air taxi proprietors and companies operating air-liners have created the demand.

Revenue can be expected from the lease of land for building purposes, the rental of office and other accommodation, landing and housing fees, etc.

The City should be prepared to spend the balance of a sum between £40,000 and £50,000 in the near future in preparing a first-class airport, after which development work can be shared between the City and commercial organizations interested in air transport.

(Sgd.) ALAN J. COBHAM

EFFLORESCENCE ON BRICKWORK

"Perplexed" writes: "*With regard to paragraph two of your expert's reply to my query on the above, in your issue for May 13, page 696, I should be glad to know if you could give me any information as to how this efflorescence is preventable. With regard to paragraph three, surely in the case of a brick being reduced to powder due to efflorescence, there must be some specia cause in the structure of the brick; presumably this condition does not usually occur, and is very exceptional.*"

Perhaps "avoidable" would have been a better term to use in my previous reply to your correspondent than "preventable." The subject is rather too extensive to treat at length in a correspondence column, and the reports quoted (obtainable from H.M. Stationery Office) should be read. Generally speaking, observation and avoidance of bricks which have been seen to be affected, the use of a mortar which is less dense than the bricks, and the avoidance of Portland cement, or if its use is obligatory, very careful mixing, with no excess of cement to sand and the addition of a waterproofer, are together precautions which will make for success.

As to "crumbling" this, though not common, is not so rare as to be "very exceptional." It does not appear to occur often with bricks of open porous texture, which presumably allow interstitial space for the formation of the crystals. Where observed, the crumbling has affected bricks of a dense solid structure, which has been broken up by the formation of crystals. E. G.

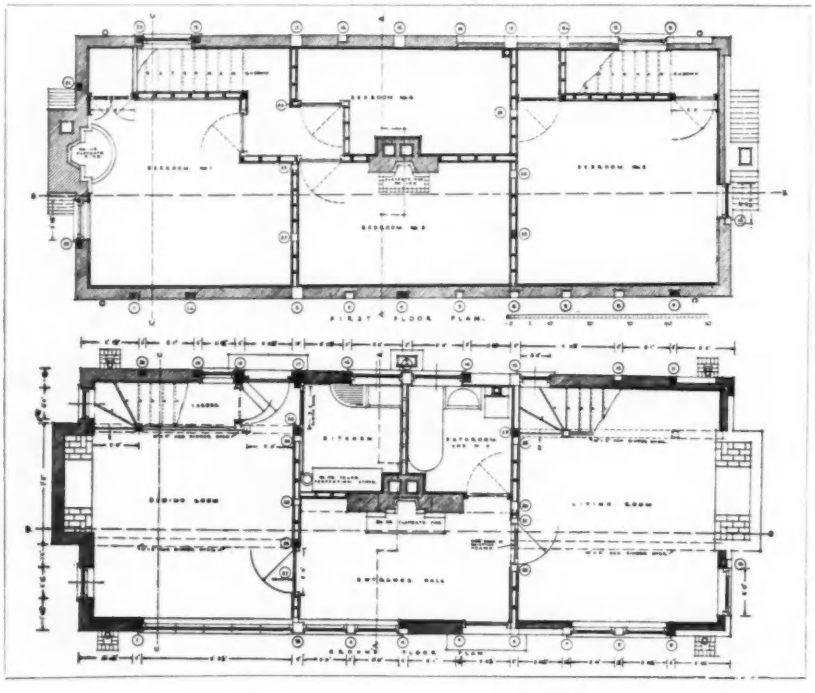
RECONSTRUCTION OF TUDOR COTTAGES, BUCKS

FROM DESIGNS BY ERIC HAYMAN



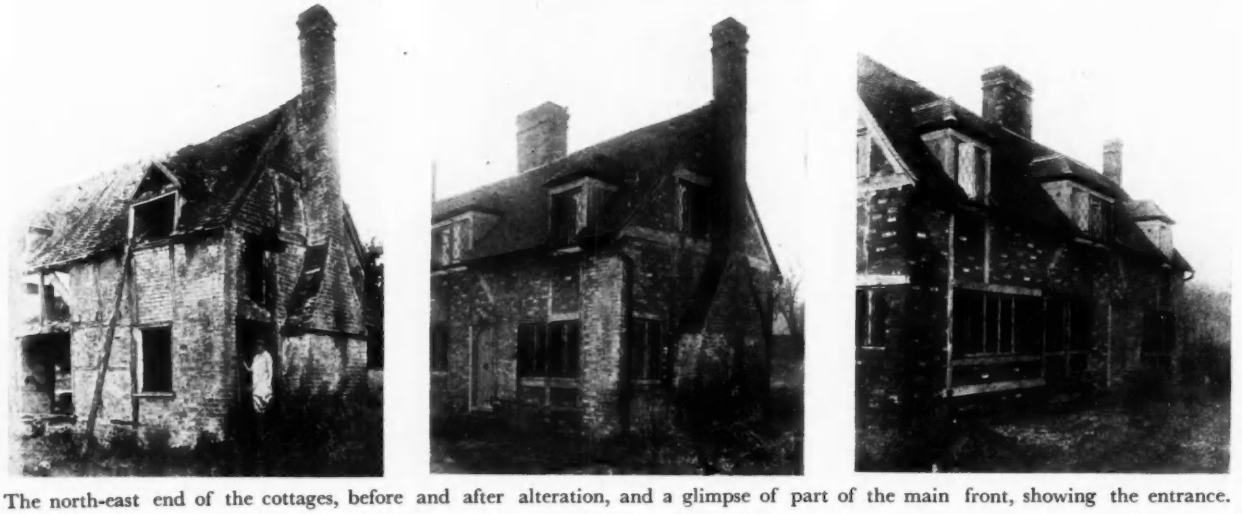


Two photographs, taken from different viewpoints, showing the skeleton of the cottages. This was carefully surveyed before the reconstruction work was started, and each portion of the framing marked for retention, piercing or replacement.

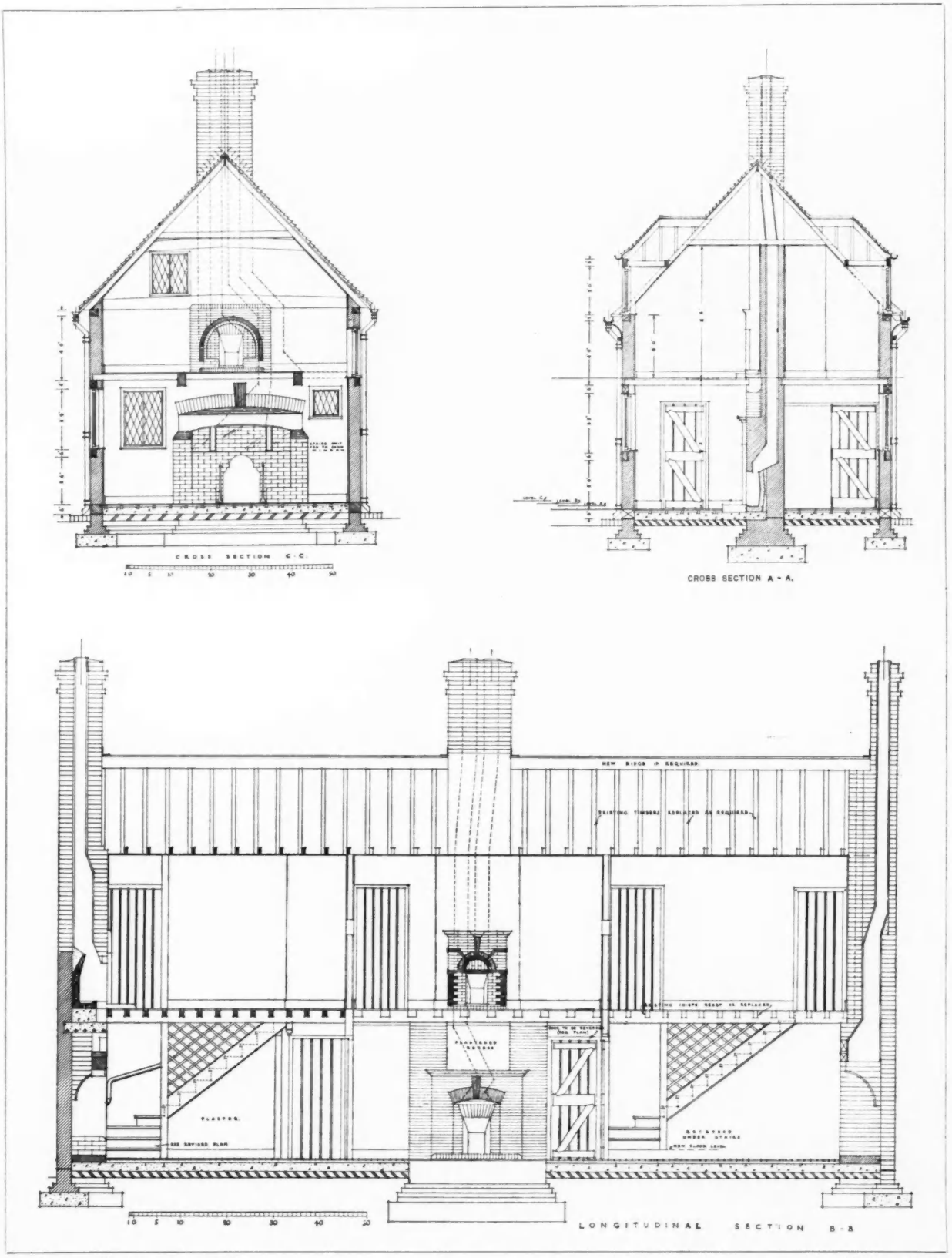


THE photographs and plans reproduced on this and the facing page illustrate the conversion of two Tudor cottages at Amersham, Bucks, doomed for demolition by the highway authority, into a country house.

The cottages contained one room on the ground and first floors, with a primitive staircase in each, too decayed to preserve. The framing had sagged badly, and was cramped up to vertical before any work was commenced. The joints generally were sound, the pins only having perished or fallen out. More serious decay was found in the purlins and in a massive roof plate, on both of which the soaking rains had lodged owing to the accumulation of decayed plaster, etc. All the brick filling was 4½ ins., and in dangerous condition in most places. The cottages were first underpinned, and concrete foundations and footings inserted and built up to the level of the cill beam, under which a damp course was laid. All the new filling was done in local facings with keyed Fletton backing. The roof was recovered mainly with the old tiles. Oak, locally sawn, was



The north-east end of the cottages, before and after alteration, and a glimpse of part of the main front, showing the entrance.



Reconstruction of Tudor Cottages, Bucks.] [*By Eric Hayman.*

The architect's longitudinal and cross sections of the cottages. The whole of the work was underpinned, and concrete foundations and footings inserted and built up to the cill beam, under which a damp course was laid.

used for all external framing. Internal work was carried out in English local oak as regards framing, and Columbian pine joinery, wax stained, for doors and floors. Every piece of furniture throughout the house was made at a local smithy "when horses were quiet," as the smith explained to the architect.

MUSEUM PLANNING

BY ERIC MACLAGAN

IT must never be forgotten that our ideas of what a museum building ought to be are in part conditioned by the historical origin of most European museum collections. The majority are, in essence, royal or princely treasures which have been made available to the public, and the shadow of the palace lies over the buildings in which they are housed. It has become the accepted plea that a museum (and, of course, this applies especially to the large museums) should have something sumptuous about it, even when it has been built as a museum pure and simple. I suppose it is not unnatural that one of the most obvious examples of this should be seen in the two gorgeous palaces in which the artistic and scientific collections of Vienna are housed, facing one another in the Ring just opposite to what was the Emperor's own palace. And, indeed, some collections are still housed in palaces like the Louvre. They have to pay dearly for their glory; as anyone who has tried to examine the enamels and jewels in the Galerie d'Apollon, where even on a bright day something like 50 per cent. of the objects are almost invisible, will remember. And the same difficulty applies, perhaps, at least as conspicuously to older buildings, not in themselves palaces, like the Musée de Cluny, where the lighting is altogether inadequate for the examination of a large part of its contents.

This point is not perhaps quite as irrelevant as it might seem, because a kindred problem on a minor scale arises in a good many English provincial towns. It is not an uncommon thing for large houses which formerly stood in the country or, at any rate, on the outskirts of a growing town, to be offered to the Municipality when they have ceased to be attractive as private residences. The park or gardens form an obvious attraction and can easily be made use of. The house almost always presents difficulties, and the obvious suggestion is to make it into a museum. But except for a display of furniture and certain other rather limited classes of museum objects, even a country house is by no means ideally fitted for museum purposes, and the satisfactory conversion of such a building will generally tax the ingenuity of a Town Council and of their architect to the utmost degree.

Our main concern, however, is with the cases when museums can be planned from the outset, and not adapted from existing buildings. I suppose that in the opinion of the general public the outside of a building tends to rank as of primary importance ; while those who use it are certainly much more concerned with its interior arrangements.

The style chosen for the exterior of a museum is bound to condition, at any rate to some extent, the inside arrangements of a museum. It seems, for example, hardly possible to secure satisfactory arrangements for side-lighting in any building laid out on at all strictly classical lines. But if it provides for adequate lighting, I feel sure that most museum officials would be glad enough to leave the exterior to the architect, although I will confess to a desire to see a large museum built on purely modern lines, an experiment which, so far as I know, has not yet been tried even in America, although it very likely may have been attempted in Russia. It is the interior that we are apt to be dictatorial, or even cantankerous, about.

I feel more and more convinced that where there is any choice as to the site of a museum, almost every other consideration should be sacrificed for centrality and accessibility. One of the difficulties of the converted mansion museums is that they are almost of necessity situated on the outskirts and not in the centre of the town they are meant to serve ; and I believe it is a great mistake when museums are built, as they are sometimes in America, in parks and open spaces, far removed from the business centre of a town.

The Interior Treatment of Museums

I have said that it is with regard to the interior treatment of a museum that museum officials tend to become critical. I suppose we might agree to allow the architect some say in the entrance hall and the staircases. Here, if anywhere, he has a right to be sumptuous within his means, and to give the public some taste of his decorative ability ; and yet I would remind him that even staircases provide a precious wall-space in these days of almost universal congestion, and that marble is not the best background for hanging ; and that even entrance halls have to be used for every reasonable purpose to which they can be adapted. It is, however, with the exhibition rooms and galleries that the museum official is chiefly concerned.

I think that there would be an almost universal agreement among them that in galleries intended for the exhibition of works of art almost all forms of architectural decoration are not merely superfluous but quite definitely detrimental to the main purpose for which such galleries are intended. Either they will clash with the style of the objects to be exhibited in close proximity to them (and this is much the most likely thing to happen, for even if the architect is given some idea of what a room is to contain it is extremely unlikely that this arrangement will be a final one), or, by echoing a similar style or period, they will, at best, distract the visitor's attention. I doubt if we shall ever see again those deliberate attempts to design elaborate decorations in harmony with the contents of a court or gallery which are so prominent in some at least of our older museums.

I believe that a museum gallery must necessarily be lighted very much more brightly than any room in which the average man (or woman) would wish to spend his time at home, and this alone, quite apart from other considerations, is a fatal objection to any attempt at the period decoration or arrangement of museum galleries.

Such a criticism is in no way directed against the arrangement of period rooms considered as exhibits in themselves and not as settings for exhibits. Such rooms are among the most useful and certainly the most popular features of the museums where they can be provided, and a great deal of ingenuity has been lavished on their display in recent years, especially in America.

The Decorative Problem

But the absence of any form of decoration in a definite historic style is not the only factor in the adaptability which all museum officials would wish to see carried to its farthest point in the planning of a new museum. Some of the more recent American buildings have provided long continuous galleries which are separated into rooms by purely temporary partitions in one of the various materials now available for such a purpose. These partitions are so constructed that it is hardly more than a matter of a day's work to shift one of them along the gallery or to remove it altogether, thereby enlarging one of the rooms when the collections for which it was designed have grown. I need hardly point out that such an arrangement would be of enormous convenience in the life of a growing museum, and the absence of it often compels a laborious and inconvenient shifting of a whole collection to some other part of the museum where it is perhaps less in place but where additional room can be secured for it.

It is obvious that such structural advantages can only be secured if the internal decoration is cut down to its barest essentials. The whole tendency of modern museum planning is undoubtedly in this direction, and it is even possible that in some cases it has

[Extracts from a paper on "Museum Planning," read by Mr. Eric Maclagan, HON.A.R.I.B.A., at a meeting of the R.I.B.A. on Monday last (June 1).]

gone a little too far, perfectly plain openings, without even a surrounding moulding, being used for access from one room to another, but I am persuaded that such bareness is a fault in the right direction.

At the same time I should like to suggest that the absence of strong colour, which is almost universal in the more recently arranged museum galleries, is a point still open to discussion. It is by no means the case that all pictures look best on the light backgrounds now fashionable.

The Question of Lighting

The question of lighting is essentially one for the architect, and perhaps exceeds in importance almost all others. It is complicated in every direction by subsidiary questions, and it seems to me quite impossible to lay down any definite principles which can be followed without exception. It has, for example, been maintained that sculpture should always, if possible, be shown with a top light, and I have known this accepted as an axiom for the guidance of future museum officials.

A side light, however, has its obvious disadvantages as well. One whole wall is inevitably lost, and the problem of reflections on the wall facing the windows becomes an acute one if glass has to be used. There is, further, the all-important and yet often predetermined question of aspect. It is clearly inadvisable that museum galleries should face south, if this can be avoided, when so many classes of museum objects are liable to suffer from fading.

The introduction of electric light has made artificial lighting almost universally practicable, and some at least of the recent systems of modifying its colour so as to produce the effect of daylight have still further increased its possibilities.

However efficient artificial lighting may be, I believe there can be no doubt that in Europe we should always regard it as a second best, and that we should be right in doing so.

Ventilation Systems

It is to America that we have to look for the most elaborate and successful devices for the ventilation of museums and the purification of the air in them. In several of the more modern museums, such as Cleveland and Baltimore, no air is directly admitted from outside. The whole ventilation of the galleries is carried out by a complicated apparatus in which the air is sucked in by fans and driven through fine water-sprays, so as to wash and cool it before it is admitted through muslin filtering screens into the building itself. It can be warmed or cooled to any desired temperature, and it is claimed that the amount of dirt and dust that actually enters the museum is infinitesimal, the entrance doors being, of course, all fitted on the revolving principle. The advantages of this system are undoubtedly very great, although they are felt still more in countries where, as in the northern parts of the United States, the variations of temperature between summer and winter are far more extreme than in England.

But even in England a warming system is, of course, necessary for every public building, although I can hardly suppose that museums present any very special problems to the architect in this respect.

When we come to the consideration of the actual lay-out of the museum, I suppose there are three interests which have to be considered—those of the staff, those of special students, and those of the general public, the last being by far the most important. It would be very difficult to lay down any definite principles as to the construction of offices for a staff which runs into considerable numbers. Probably there would be general agreement that these offices should be separated from one another, and that each should be in as close contact as possible with its own departmental galleries.

LITERATURE

LONDON BUILDING ACT, 1930

WHAT we may call the London Building Act came into existence after the Fire of London, when an Act, dated 1667, "for the rebuilding of the City of London" also appointed "one or more discreet and intelligent persons to see the said rules . . . well and truly observed." Thus was born, at one stroke, Act and District Surveyor.

From then to this present, no one single Act has governed building in London; but as the Metropolis has grown and added to itself new areas and authorities, so the first Act has become by efflux of time a mixed accretion of rules and restrictions complex as London itself. Under the general title, the London Building Act, have been gathered together Acts general, local and personal. Some, having had their day, have been repealed; others have stayed but no longer apply; others again can only be administered through wide powers of waiver or official discretion.

The Act of 1930 must not be taken as "goodbye to all that," for it is a Consolidation Act and must contain no alteration to the existing law. It merely gathers together and gives equal force to scattered legislation. It cannot, except by repealing or amending legislation, alter the wording of any part; and although it covers nearly the whole field of building, as carried out in these days of changing methods and new discoveries, it must be, by its very nature, always out of date, always in need of repair.

Therefore, while we welcome an Act that does at least consolidate what was scattered, we regret that so substantial an absurdity is given new lease of life at exactly the time when rationalization of all our activities is most urgently needed. Such rationalization would bring London into line with the rest of the country, which is governed as to its buildings, sanitation, etc., by flexible bylaws capable of revision from time to time, and closely in touch with modern methods of building, as tested and vouched for by Government research stations and by general practice.

But for good or ill the Act is with us and must be followed. Since it is complicated and to a certain extent diffuse, however clearly drafted; and since, after the manner of lawyers' works, it is unpunctuated, we require some guidance in its interpretation, an index, annotation, cross references.

These three works under review come once more to bridge the gap between lawyer and practitioner; to simplify by clear arrangement, and save precious time.

The possession of one or other of them is a necessity to every architect practising in the Metropolis. It is a pity, I repeat, that we are governed by an Act, and not by flexible bylaw regulation; but we are, and no clearer statement exists of the law as it will now continue for some time to be, than these latest editions of old and trusted friends. F.

London Building Act, 1930. By Bernard Dicksee. London: Stanford Ltd. Price 21s. net.

London Building Act, 1930. By T. J. Sophian. London: Sweet and Maxwell, Ltd. Price 21s. net.

Index to London Building Act, 1930. By J. A. Pinnock. London: P. S. King and Son. Price 1s. 6d. net.

Publications Received

The Slum: Its Story and Solution. By Major Harry Barnes, F.R.I.B.A. London: P. S. King and Son. Price 18s. net.

Planning for Good Acoustics. By Hope Bagenal and Alex. Wood. London: Methuen & Co., Ltd. Price 22s. 6d. net.

Building Science Abstracts. Vol. IV (New Series), No. 4, April, 1931. Abstracts Nos. 585–747. London: H.M. Stationery Office, 1931. Price 9d. net.

SOCIETIES AND INSTITUTIONS

R.I.B.A. COUNCIL MEETING

FOLLOWING are some notes from a recent meeting of the R.I.B.A. Council :

Officers of the Board of Architectural Education : The officers of the Board of Architectural Education were appointed as follows for the session 1931–1932 :

Mr. W. H. Ansell, F.R.I.B.A., Chairman; Mr. A. H. Moberly, F.R.I.B.A., Chairman of the Examinations Committee; Professor T. Harold Hughes, F.R.I.B.A., Chairman of the Schools Committee; Mr. W. S. Purchon, A.R.I.B.A., Chairman of the Prizes and Scholarships Committee, Vice-Chairmen; Mr. T. A. Darcy Braddell, F.R.I.B.A., Honorary Secretary.

The International Congress for Art Education, Vienna, 1932 : Mr. A. H. Moberly, F.R.I.B.A., was appointed to represent the R.I.B.A. on the organizing committee for the above Congress.

The Standardization of Aluminous Cement : Mr. Alan E. Munby, F.R.I.B.A., was appointed to represent the R.I.B.A. at a conference called by the British Engineering Standards Association to consider the standardization of aluminous cement.

Preparation of British Standard Schedule for Doors : Messrs. R. J. Angel, F.R.I.B.A., and Edwin Gunn, A.R.I.B.A., were appointed to represent the R.I.B.A. on a Technical Committee which has been set up by the British Engineering Standards Association to prepare a standard schedule for doors. They have also been appointed to represent the R.I.B.A. on the committees set up by the B.E.S.A. to prepare standard specifications for asbestos pipes and gutters, breeze and clinker slabs, and cast concrete roofing tiles.

Joint Committee of Architects and Quantity Surveyors : At the invitation of the Quantity Surveyors' Committee of the Chartered Surveyors' Institution it was agreed to appoint four members of the R.I.B.A. to serve on a joint committee of architects and quantity surveyors to consider questions in which both professions are jointly interested.

Conditions for Competitions and Assistants : It was decided, on the recommendation of the Competitions Committee, to insert a clause in the "Directions to Assessors," urging assessors to ensure that, whenever possible, competitions should be thrown open not only to architects established in private practice, but to all members of the R.I.B.A.

The Licentiateship Declaration : It was decided, on the recommendation of the Practice Standing Committee, to take the necessary steps to amend the declaration to be signed by Licentiates to bring it into line with that to be signed by Associates.

The Fellowship : The Council, by a unanimous vote, elected the following architect to the Fellowship under the powers defined in the Supplemental Charter of 1925 : Mr. Oscar Wilson, Hon. Secretary of the Singapore Society of Architects.

Resignations : The following resignations were accepted with regret : Major Thomas Gerard Davidson, F.R.I.B.A. ; and Messrs. Charles Frederick Burden, L.R.I.B.A., and Stephen Wilkinson, L.R.I.B.A.

Election of Students : The following Probationers were elected as students of the R.I.B.A. :

Bannerman, D. G. (Edinburgh College of Art), Bayes, K. A. H. (Birmingham School of Architecture), Bell, G. P. (Liverpool School of Architecture), Benjamin, R. E. (Architectural Association), Best, A. M. (Liverpool School of Architecture), Bloomer, H. C. (Birmingham School of Architecture), Bremner, R. M. (Robert Gordon's Colleges, Aberdeen), Bromilow, F. E. (Birmingham School of Architecture), Brooks, R. H. (Birmingham School of Architecture), Crickmay, H. W. (University of London), Crowley, M. B. (Architectural Association), Dadley-Moore, A. (Municipal School of Arts and Crafts, Southend-on-Sea), Dew, F. T. (Intermediate Examination), Field, H. C. (Municipal School of Arts and Crafts, Southend-on-Sea), Floyd, J. P. (Birmingham School of Architecture), Folkard, B. S. (Liverpool School of Architecture), Garrard, G. E. J. W. (Birmingham School of Architecture), Gollins, F. (Birmingham School of Architecture), Hare, H. L. (Birmingham School of Architecture), Hart, N. D. (Cambridge University), Hellberg, R. (Birmingham School of Architecture), Hutchinson, F. M. (Robert Gordon's Colleges, Aberdeen), James, B. V. (Birmingham School of Architecture), Mayorcas, E. (Architectural Association), Milner, D. L. (Architectural Association), Rathmell, M. (Liverpool School of Architecture), Renny, E. M. (Birmingham School of Architecture), Richards, C. A. (Architectural Association), Rouen, L. (Manchester University), Smith, W. R. (Robert Gordon's Colleges, Aberdeen), Stubbs, G. H. L. (Special Exemption), Wilmot, E. M. (Birmingham School of Architecture).

VISIT TO CLIVEDEN AND DROPMORE

Arrangements have been made for members of the Society for the Protection of Ancient Buildings and the National Trust to visit the grounds of Cliveden and Dropmore, Buckinghamshire, on Saturday, June 13, from half-past two to six o'clock.

Members of either society who wish to accept this invitation should communicate with the Secretary to the National Trust, 7 Buckingham Palace Gardens, S.W.1, before June 9, who will provide special admission tickets for members of the S.P.A.B. Members of the National Trust will be admitted upon production of their membership cards.

LAW REPORTS

MORTGAGE QUESTION

Halifax Building Society v. *Keighley. King's Bench Division. Before Mr. Justice Wright*

THIS action raised an interesting point of law in regard to mortgaged buildings, damaged by fire, where both mortgagee and mortgagor had insured the property.

The Halifax Building Society sued Mr. G. Keighley and Mr. F. H. Keighley, claiming £525 odd in discharge *pro tanto* of moneys owing on the security of the mortgage and further charge on Vulcan Mill, Dudley Hill, Bradford.

Mr. A. J. Belsham appeared for the plaintiffs and Mr. Gilbert Beyfus for the defendants.

Mr. Belsham said a mortgage on the mill was taken up in April, 1919, with the building society. The society was empowered under the mortgage to insure the premises against fire for any sum they considered proper, and a covering insurance was taken out by the society. At the same time another insurance was effected independently by the defendants. The mill was damaged by fire in November, 1930, and the amount of the damage was discharged by the two companies. Plaintiffs' case was that owing to the mill being doubly insured the society received some £525 odd less than they would have done if they had been the sole insurers. The plaintiffs contended that under the Law of Property Acts, 1925, and the Act of 1881, they were entitled to receive this sum out of insurance money held by the defendants, towards the discharge of the mortgage and the charge on the mill. Plaintiffs set up in the alternative that they were entitled to the money on the ground that the defendants were trustees or accounting parties in respect of moneys they had received from the insurance company.

Mr. Beyfus, for the defendants, said his case was that the plaintiffs had no right to the moneys his clients received.

His lordship held that in the present case there was no special covenant and no statutory provision which applied, and the result was that the plaintiffs' claim must be dismissed with costs.

ROAD CONSTRUCTION

Jameson v. *Kinmel Bay Land Co., Ltd. King's Bench Divisional Court. Before Justices Talbot and Finlay*

Questions of interest were raised by this appeal by the Kinmel Land Co., Ltd., of Rhyl, against a decision of the Rhyl County Court judge, in favour of Mr. T. L. Jameson, a poultry dealer, awarding him £25 damages and costs for breach of an oral warranty, collateral to a written agreement to purchase land from the company.

Mr. Jameson, in the Court below, alleged that there was an oral agree-

ment on the part of the managers of the Land Company that a road would be made which would give access to the three-quarters of an acre of land he was purchasing. The Company had failed to make such a road, and plaintiff said he had suffered damage.

Mr. A. Grant, K.C., for the Land Company, said his clients appealed against the judgment on several grounds. His main point was that the learned judge was wrong in holding that there was a warranty to build a road which was collateral with the written agreement to purchase the land. Counsel's submission was that there was no mention of a road in the agreement, and this being so no warranty could be made collateral to it unless the warranty itself was in writing.

Mr. Justice Talbot, in giving judgment, said in this case the learned county court judge had found as a question of fact that there were two contracts, the written contract and the oral contract collateral to it. Those findings were binding on that Court, unless it could be shown that there was no evidence to support it. In his opinion it was impossible to say that there was no evidence upon which the county court judge could have arrived at the decision he did. Other points had been raised, but he was satisfied that there were no grounds upon which the Court would be justified in interfering with the county court judge's decision. The appeal would be dismissed with costs.

Mr. Justice Finlay agreed.

Mr. Grant asked for leave to appeal, and this was given.

ARCHITECT'S CLAIM SETTLED

Beard v. *Kay. Official Referee's Court. Before Sir William Hansell, K.C.*

This was an action by Mr. John Stanley Beard, an architect, of Baker Street, W., against Mr. John Kay, of Oxford Street, W., for fees in connection with the erection of the Grange Cinema, Dagenham, which cost £22,138.

Plaintiff's case was that his charge was 6 per cent. on the cost of the building. His fees amounted to £1,328, and he had received sums on account, leaving a balance of £662.

Defendant by his defence pleaded that it was understood that the cinema was not to cost more than £11,000, whereas the lowest tender on the plaintiff's plans was £20,130. The plaintiff thereupon agreed to modify his plans so as to reduce the cost by £4,000. The alterations plaintiff made, defendant alleged, resulted in an increase by £2,000. Plaintiff had already been paid £1,086 and defendant pleaded that plaintiff was not entitled to anything further.

Defendant, by a counter-claim, complained that plaintiff did not comply with the regulations requiring the tiers, floors and roofs to be constructed of fire-resisting material, with the result that proper materials had to be supplied at a cost of £500. Defendant further alleged that the plaintiff was responsible for additional cost in regard to certain work to the foundations, and defendant counter-claimed for £1,500.

Plaintiff gave evidence and said he had been connected with the construction of cinemas, and his charge was always 6 per cent. of the total cost, including equipment.

At the conclusion of the plaintiff's case the parties arrived at a settlement, disposing of the whole action, all allegations of negligence against plaintiff being withdrawn. The counter-claim was also withdrawn. The terms were not disclosed.

COMPETITIONS OPEN

June 16.—Sending-in day. (Last day for conditions was February 25.) Offices for the Ingham Infirmary, South Shields. (Limited to architects within the area of the Northern Architectural Association.) Assessor: George Reavell, O.B.E., F.R.I.B.A. Premiums: £250, £100 and £50. Conditions were obtainable from John Potter, Secretary, Ingham Infirmary, South Shields. (Deposit £2 2s.)

June 24.—Sending-in day. King Edward VI. School, Mill Lane and Wilton Road, Southampton, for the Governors of the School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums, £150, £100 and £50. (Deposit, £1 1s.). Full particulars are obtainable from G. A. Waller, Clerk to the Governors, 7 Albion Place, Southampton.

June 26.—Sending-in day. Offices for the City of Leicester Corporation, Charles Street, Leicester. Assessor: E. Berry Webber, A.R.I.B.A. Premiums: £300, £200 and £100. Conditions from A. T. Gooseman, Engineer and Surveyor, Town Hall, Leicester. (Deposit £2 2s.)

June 29.—Proposed Tuberculosis Hospital, Hayes Farm, Sulley, near Cardiff. Assessors: Ernest Elcock, F.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A. Premiums: £400, £300, £175, and £100. Conditions, etc., obtainable from F. J. Alban, General Secretary, Memorial Offices, Westgate Street, Cardiff, before June 29.

June 30.—Sending-in day. (Last day for conditions was April 15.) New Branch Baths, Foleshill, for the Coventry Corporation. Assessor: F. J. Horth, F.R.I.B.A. Premiums: £210, £105 and £52 10s. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

September 21.—Sending-in day. (Last day for conditions: June 10.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £500, £400, £300 and £200. Conditions from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

March 31, 1932.—Sending-in day. Last day for questions: August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

THE ARCHITECTS' DIARY

WEDNESDAY, JUNE 3

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. First of five lectures on the Art of Making and Using Concrete: "Types of Cement and their Peculiarities." By Dr. R. E. Stradling, HON. A.R.I.B.A., A.M.INST.C.E. Illustrated by lantern slides and experimental demonstrations. **6 p.m.**

INTERNATIONAL HOUSING AND TOWN PLANNING CONFERENCE, Berlin. Until June 5, with six added days for tours and visits. Fourteen papers will be presented on "The Abolition of the Slums" and twenty-one on "The Traffic Problem in Relation to Town and Regional Planning." British Delegates: Messrs. Frank Hunt, C.V.O., and G. L. Pepler, F.S.I.

INSTITUTION OF GAS ENGINEERS. Sixty-eighth annual meeting and first International Gas Conference of the Institution, to be held at the Institution of Civil Engineers, Great George Street, Westminster, S.W.1. Until June 5.

THURSDAY, JUNE 4

MARGATE SCHOOL OF ART. Sixth of twelve illustrated lectures on Beauty in Design. "British Architects' Efforts." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JUNE 6

Sunrise 4.46 a.m. Sunset 9.10 p.m.

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS, METROPOLITAN DIVISION. Annual dinner, concert and dance, to be held at the Florence Restaurant, Rupert Street, W.1. 6.45 for 7 p.m. **6.45 p.m.**

WEDNESDAY, JUNE 10

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Second of five lectures on the Art of Making and Using Concrete: "The Raw Materials of Concrete and their Field Testing." By H. A. Holt, A.I.STRUCT.E. Demonstrations will be given. **6 p.m.**

THURSDAY, JUNE 11

MARGATE SCHOOL OF ART. Seventh of twelve illustrated lectures on Beauty in Design. "Interior Designs." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS. Scottish District Summer Meeting at St. Andrews. Discussion on the following papers: "St. Andrews and its Municipal Works," by W. Watson; "County Highway Maintenance," by C. M. Dawson; and "Town Planning of Built-up Areas," by Frank A. B. Preston.

SATURDAY, JUNE 13

Sunrise, 4.42 a.m. Sunset, 9.15 p.m.

SOCIETY FOR THE PROTECTION OF ANCIENT BUILDINGS. Visit to the grounds of Cliveden and Dropmore. 2.30 to 6 p.m. Motor coaches leave Victoria at 1.15. Fare 7s. 6d. **1.15 p.m.**

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS. Visit to Broadcasting House, Portland Place, W.1. **2.30 p.m.**

LIVERPOOL ARCHITECTURAL SOCIETY. Visit to the Home of the Earl of Crawford and Balcarres, Haigh Hall, near Wigan, in conjunction with the Manchester Society of Architects.

WEDNESDAY, JUNE 17

R.I.B.A. British Architects' Conference, Dublin. Until Saturday, June 20.

INSTITUTION OF STRUCTURAL ENGINEERS. Demonstration of the Making and Using of Concrete, by H. A. Holt, A.I. STRUCT. E. To be given at the L.C.C. School of Building, Ferndale Road, Brixton, S.W. 2.30 to 5.30 p.m., and 6.30 to 9.30 p.m. **2.30 p.m.**

THURSDAY, JUNE 18

MARGATE SCHOOL OF ART. Eighth of twelve illustrated lectures on Beauty in Design. "Cottages." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JUNE 20

Sunrise, 4.42 a.m. Sunset, 9.19 p.m.

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS. Visit to Messrs. Walkers, Parker & Co., Ltd., Lead Smelters, 63 Belvedere Road, Lambeth, S.E.1. **8 p.m.**

WEDNESDAY, JUNE 24

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Third of five lectures on the Art of Making and Using Concrete: "The Properties of Concrete, with special reference to handling on the Job." By Dr. R. E. Stradling, HON. A.R.I.B.A. 6 to 8 p.m. **6 p.m.**

SATURDAY, JUNE 27

Sunrise, 4.45 a.m. Sunset, 9.20 p.m.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. Joint excursion with the South-Eastern Society of Architects to Chichester.

TUESDAY, JUNE 30

LONDON SOCIETY, Lancaster House, St. James', S.W.1. River Trip. Tickets obtainable from the Secretary.

WEDNESDAY, JULY 1

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Fourth of five lectures on the Art of Making and Using Concrete. "The Effect of Misplacing Reinforcements." By Ewart S. Andrews, A.I.STRUCT.E. 6.30 to 9.30 p.m. **6.30 p.m.**

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office. All inquiries concerning inventions, patents and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated, readers should apply to the Patent Office, 25 Southampton Buildings, W.C.2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

13193. Laws, B. C. Means for measuring and recording strains in structures. May 5.

13469. Morton, B., and Morton, H. D. Ceilings, walls, etc. May 7.

13545. Bille, L. Manufacture of armoured or reinforced concrete bodies. May 7.

13800. Mauser Maschinenbau Ges., and Mauser, R. Apparatus for strengthening sheet-metal walls. May 9.

ABSTRACT PUBLISHED

342267. Carpenter, R. F., and Anderson, T. F. Buildings.

OBITUARY

GEORGE D. STEVENSON : 1846–1931

We regret to record the death of Mr. George Daniel Stevenson, A.R.I.B.A., at eighty-five years of age. *The Times*, referring to his death, said he was responsible for the architectural treatment of the Tower Bridge as we know it today. The bridge, opened by the late King Edward, as Prince of Wales, on June 30, 1894, was the outcome of a special committee of the Common Council of the City of London, to which the City architect, Sir Horace Jones, had reported in favour of a high-level bridge, having also a low-level roadway opening on the bascule principle to allow the passage of the larger shipping. Sir J. Wolfe Barry, son of the architect of the Houses of Parliament, was appointed to carry out the engineering work. The foundation stone was laid by the Prince of Wales on June 21, 1886, and before the substructure was completed Sir Horace Jones died.

Modifications in the ironwork made necessary fresh designs for the towers and superstructure, and these were entrusted to Stevenson, who had formerly served as assistant to Jones. Stevenson designed the lamp standards, brackets and parapets, and all the ornamental cast-iron work.

Mr. Stevenson was also associated with Sir J. Wolfe Barry in other constructions. Stevenson was a prominent Freemason. He was a founder of the Walsingham Lodge, subsequently becoming Master, and was Provincial Grand Pursuivant of Kent in 1894. He was chosen to illustrate the book dealing with all King Edward's Masonic jewels presented to him by the Grand Lodge when he was Prince of Wales.

EDWARD TAYLOR : 1878-1931

We regret to record the death, in his fifty-third year, of Mr. Thomas Edward Taylor, L.R.I.B.A., M.S.A., a well-known Durham architect.

Mr. Taylor, who practised at Annfield Plain and Lanchester, was for many years architect to the Rural Council of Lanchester. He was responsible for the designs of numerous public buildings throughout the district. Several of his designs for miners' welfare schemes were executed honorarily.

During the Great War Mr. Taylor served with the Royal Air Force, and in his early days was a prominent local sportsman.

He leaves a widow and four daughters.

TRADE NOTES

Today, June 3, at 11 o'clock, the Mayor of Hackney, in robes, with macebearer—accompanied by the Mayoress and the Deputy Mayor and his wife—will pay an official visit to the 170-year-old colour factory of Messrs. Lewis Berger and Sons, Ltd., at Homerton, E.9. He will be received by the chairman of the company, Sir Herbert Hambling, Bart. (deputy chairman of Barclays Bank). The purpose of the visit lies in the Mayor's desire to emulate within his own domain the example of the Prince of Wales and others who are using their activities for the benefit of British industry. The Mayor feels that his visit will tend to concentrate the public's attention on a great national industry in their midst—generally make them industry-conscious and proud of home production—and incidentally give a fillip to the "Buy British" idea. It is interesting to note that the original Lewis Berger made colours on this site 170 years ago, and his residence still forms part of the factory. The granite setts with which the building is paved are relics of the demolition of old London Bridge. Much use has been made of Berger paints. Turner, the famous artist, executed his celebrated pictures with Berger colours, and the *Mauretania* and the latest luxury liner, *Empress of Britain*, are both painted with the firm's materials.

*

Of the floor covering employed in the *Empress of Britain*, which sailed last week on her maiden voyage, approximately 4,000 sq. yds. of Leyland rubber and 4,000 sq. yds. of Leyland Rublino were used. Two other vessels at present on their first voyages, the *Winchester Castle* and the *Warwick Castle*, each employed approximately 3,500 sq. yds. of Leyland rubber : thus in three of the latest vessels, Leyland floors cover the area of approximately 15,000 sq. yds.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors, specialists, and some of the sub-contractors for the buildings illustrated in this issue :

Private Swimming Bath, Woodlands Park, Iver Heath, Bucks. (pages 779–782). General contractors, Hammond and Barr, Ltd. Sub-contractors : Matthew T. Shaw & Co., Ltd., steelwork; Rusts' Vitreous Tile and Mosaic Co., tiling; R. W. Steele & Co., heating, aeration, filtration and thermometers; J. P. White and Sons, Ltd., treillage; Paragon Glazing Co., Ltd., patent glazing; Robert Adams, opening gear and ironmongery; Emerson and Norris, Ltd., artificial stonework; Malcolm and Allan (London), Ltd., electrical work including under-water lighting; Salter, Edwards & Co., Ltd., asphalt; W. E. Whiteside & Co., wrought-iron grilles; W. S. Morgan, sculptor.

Offices for the British-American Tobacco Co., Ltd., 10 Smith Square, S.W. (pages 783–786). General contractors, William Downs, Ltd. Sub-contractors : Ewart and Son, Ltd., copper work; Luxfer, Ltd., pavement and roof lights; W. T. Allen & Co., Ltd., enclosure to book lift, Lloyds Bank, Ltd.; Dent and Hellyer, Ltd., internal plumbing, water supply drains, etc.; Sturtevant Engineering Co., Ltd., vacuum cleaning installation; Aerozon Air Conditioning Co., Ltd., ventilating plant; Ashwell and Nesbitt, Ltd., heating and hot-water installation; Roberts Adlard & Co., green Westmorland slates; Alfred Williams & Co., artesian well; British Challenge Glazing Co., lean-to light; Crittall Manufacturing Co., Ltd., steel windows; Acme Wood Block Flooring Co., wood block flooring; Carter & Co., tiling; John Fyfe, Ltd., granite plinths and bases; Palmer's Travelling Cradle and Scaffolding Co., Ltd., travelling cradles; J. Whitehead and Sons, Ltd., marble partitions in w.c.'s; W. and R. Leggott, Ltd., ironmongery; Aston Construction Co., Ltd., steelwork; Express Lift Co., Ltd., lift; Young, Ltd., plastering; A. Dreyfus, Ltd., rendering; Francis Polden & Co., Ltd., electrical work; The Cement Marketing Co., Ltd., cement; C. H. Mabey, stone carving.

Reconstruction of Tudor Cottages at Amersham, Bucks (pages 793–794). Messrs. Chesham Builders, Ltd., general contractors.

ANNOUNCEMENTS

The telephone number of Mr. Oliver Bernard, L.R.I.B.A., 11 Hampstead Square, N.W.3, has been changed to Hampstead 6894.

Mr. Wells Coates has removed his offices at Parkway Chambers, Welwyn Garden City, to 33 Bedford Place, Bloomsbury Square, London, W.C.1. Telephone Number : Museum 9952.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Mr. A. Mitchell Torrance is to build twelve houses in Westbrook Road, BLACKHEATH.

The FINCHLEY U.D.C. is erecting a new school on the Summers Lane site.

Plans passed at FINCHLEY: Two houses, Britannia Road, for Mr. W. S. Cook; new roads, Hampstead Garden Suburb, for the Co-partnership Tenants, Ltd.; two houses, Lichfield Way, for Mr. L. C. Gibson; alterations and additions, 32 and 43 The Broadway, for Messrs. Wyman and Sons, Ltd.; two houses, Gurney Drive, for Mr. A. Reast; four houses, Kingsley Way, for Mr. F. Wood.

Plans passed at HORNSEY: Sub-station, Holmesdale Road, for the North Metropolitan Electric Power Supply Co.; twenty-three houses, Muswell Hill Place, for Mr. W. F. Thorpe; alterations, Wesleyan Church, Middle Lane, for Mr. C. J. Crossman.

The Ministry of Health is to hold an inquiry into the scheme of the POPLAR B.C. for the provision of new baths and washhouses, at a cost of £138,500.

Plans passed at WESTMINSTER: Rebuilding, 18 Rutland Street, for Messrs. Farebrother, Ellis & Co.; flats, Eresby House site, Rutland Gate, for Messrs. Wimperis, Simpson and Guthrie; building, Wellington Street, for Messrs. W. and E. Hunt; extension of building, National Portrait Gallery, Orange Street, for H.M. Office of Works; layout of Hotel Cecil site and new street, Hotel Cecil, Strand, for Messrs. Josephs; building, Infants' Hospital, Vincent Square, for Messrs. Peach and Hall.

SOUTHERN COUNTIES

The Kent C.C. is acquiring a site at BEXLEY for the erection of a junior school.

Plans passed at BOURNEMOUTH: Three houses, Barrie Road and The Avenue, for Mr. B. Burt; shop, Columbia Road, for Mr. G. R. Wells; seven cottages, Luther Road, for Mr. G. Watherspoon; alterations and additions, Victoria Hotel, Commercial Road, for Messrs. Eldridge Pope & Co., Ltd.; joinery works, Alumhurst Road, for Messrs. Jones and Seward, Ltd.; four shops, St. Luke's Road, for Mr. A. S. H. Whitelock; three houses, Barrie Road, for Mr. B. Burt; three bungalows, Namu Road, for Mr. G. H. Burt; six houses, Wimborne Road, Kinson, for Mr. G. J. Gladman; two houses, Studland Road, for Mr. R. F. Seward; shop, Columbia Road, for Mr. G. R. Wells; two houses, Abinger Road, for Messrs. Rosser and Sturman; house and workshop, Iford Lane, for Mr. S. T. Jacobs; two houses, Christchurch Road, for Messrs. Pollocks, Ltd.; twenty-four flats, Bracken Road, for Mr. A. E. Armstrong; two houses, Newstead Road, for the Bournemouth Conference Centre, Ltd.; seven houses, Southcote and Vale Roads, for Mr. S. Kermode; flats and garages, Overcliffe Drive, Southbourne, for Mr. G. Algar; three shops, Wimborne Road, for Mr. W. E. Drew; eight houses, Hill View Road, for Mr. W. E. Drew; four bungalows, Kinson Park Road, for Mr. T. J. Rowley.

The CRANBROOK R.D.C. is to erect forty houses in various parishes.

The Kent Education Committee has acquired a site in Swan Row, CRAYFORD, for the erection of a branch library.

The MAIDSTONE Corporation has purchased Ringestone Farm, Sandling, for development as a housing estate.

The Kent C.C. is to erect a nurses' home at the PEMBURY hospital, at a cost of £15,750.

Messrs. Pearson, Dorman Long, Ltd., are developing a housing site at WOMENSWOLD, Kent.

SOUTH-WESTERN COUNTIES

The Devon Education Committee is considering the erection of new public elementary schools in PAIGNTON.

Plans passed at PAIGNTON: Layout, Batterways Bridge, Totnes Road, for Messrs. Webber and Stedham; house, Osney Crescent, for Mr. Weeks; house, Osney Crescent, for Messrs. W. H. Wills and Son; three houses, Fisher Street, for Messrs. Knapman Bros.; layout, Clifton Road, for Messrs. Couldrey, Waycott and others.

NORTHERN COUNTIES

Plans passed at BLYTH: House, De.aval Gardens, for Mr. A. Best; two houses, Barras Avenue, for Messrs. Pattison and Hush; two houses, Barras Avenue, for Mr. A. Best.

The BLYTH Education Committee is considering alternative sites for the proposed Bebside senior school.

Plans passed at CARLISLE: Six houses, Scawfell Road, for Mr. S. Mann; house, Upperby Road, for Mr. T. Carruthers; four houses and stores, London Road, for Messrs. Benwell and Slack; Sunday school hall, Botchergate, for Mr. S. W. B. Jack; vestry extensions, St. Cuthbert's Church, for Mr. C. J. F. Martindale; house, St. Aidan's Road, for Mr. H. Foxall.

The LIVERPOOL Corporation is to erect a school clinic and child welfare centre in Townsend Avenue, Norris Green.

The LIVERPOOL Corporation is to erect a public hall and eight lock-up shops on the Dovecot housing estate, and twenty-six shops on the Norris Green housing estate.

The PENRITH U.D.C. Housing Committee is to purchase the Penny Hill site for the erection of additional houses.

Plans passed at SEDGLEY: Two houses, Gorge Road, for Mr. J. H. Charles; two houses, Greenleighs, Wolverhampton Road, for Messrs. Whittingham and Whorton; two houses, Himley Road, for Mr. S. Beardmore; two houses, Robert Street, for Messrs. Collins and Oakley; house, Turls Hill Road, for Mr. W. Osborne; shop, Himley Road, for Mr. S. Phipps.

The SOUTH SHIELDS Corporation has obtained sanction to borrow £6,500 for the erection of a fire station in Keppel Street.

The SOUTH SHIELDS Corporation has approved plans for the erection of 296 flats to rehouse the residents of the Thames Street clearance area.

The SOUTH SHIELDS Education Committee has appointed Mr. H. Hill as architect in respect of the erection of the handicraft and domestic subjects centres at Dean Road school.

The SOUTH SHIELDS Corporation has approved a scheme for the erection on the Tyne Dock land of 236 houses in flats, 96 being three-apartment, 114 four-apartment, and 26 five-apartment. They will be built in two stories, in blocks of four and eight, each with separate entrances.

The TYNEMOUTH Corporation has approved a scheme for the provision of additional accommodation for infectious disease cases at the Moor Park Isolation Hospital, at a cost of £20,000.

Plans passed at TYNEMOUTH: Four houses, Manorway, for Mr. J. R. Wallace; showroom, 2 St. Cuthbert's Terrace, Bedford Street, for Mr. W. Stockdale; two houses, Mast Lane, for Mr. J. R. Wallace; six houses, Billy Mill Lane, for Mr. J. F. Charlton; shop, Billy Mill Lane, for Mr. J. H. Burn; six houses, Stanwick Street, for Messrs. B. Peel, Ltd.; weighhouse and office, Percy Main, for Backworth Collieries, Ltd.

The WARRINGTON Corporation is to erect thirty houses on land in Kingsway.

MIDLAND COUNTIES

The CHESTERFIELD Corporation has decided to proceed with the erection of forty-eight further houses on the Newbridge Lane housing site.

The CHESTERFIELD Corporation is to prepare a scheme for the erection of houses on a site in Bacon's Lane.

The CHESTERFIELD Education Committee has passed final plans for the reconstruction and additions at Hasland Hall at a cost of £6,000.

Plans passed at CHESTERFIELD: Warehouse, Union Walk, for Messrs. Crow and Son, Ltd.; hall, Storforth Lane, for the Hasland Adult School; four bungalows, Westbourne Grove, for Messrs. J. Collis and Sons, Ltd.

The CHESTERFIELD Education Committee has approved plans for the reconstruction of the following schools: Hipper Street School, £4,000; Cavendish School, £2,500; St. Helen's School, £3,500; Brampton Board School, £4,500.

Plans passed at CHESTERFIELD: Bungalow and shop, Derby Road, for Mr. Furness; cellulose works extensions, Walton Works, Brampton, for Messrs. Robinson and Sons, Ltd.; alterations to premises, New Beetwell Street, for Mr. C. Mason; two houses, The Green, Hasland, for Messrs. W. and H. W. Longden; alterations to premises, South Street, for Mr. L. Gothard; house, Storforth Lane, for Mr. H. Hind; two houses, Dark Lane, for Mr. J. McNab; two houses, Newlands Gardens, for Messrs. J. Collis and Sons, Ltd.; workshop, Sheepbridge Tar Macadam Works, for Messrs. W. Prestwich and Sons, Ltd.; house, Brookside Bar, for Mr. F. Wilkins; two houses, Rhodes Avenue, for Mr. L. Crossley; house, Rhodes Avenue, for Mr. A. Needham; four houses, Holme Bank, for Messrs. Robinson and Sons, Ltd.; bungalow, Handley Road, for Mr. W. Stubbs; house, Highfield Avenue, for Mr. W. Bargh.

The DUDLEY Corporation has asked the Ministry of Health if they would sanction the erection of a municipal lodging-house, in connection with a scheme for rehousing.

The Worcestershire C.C. has passed plans of the county architect for providing additional infirmary accommodation at the EVESHAM Institution at a cost of £17,250.

Plans passed at NORTHAMPTON: Sub-station, Birchfield Road, Weston Favell, for the Northampton Electric Light and Power Co., Ltd.; house, Weedon Road, for Mr. P. J. Justice; store, Chaucer Street, for Goodliff Manufacturing Co., Ltd.; shop, offices and flat, Wood Street, for Mr. J. Jelley; garage and workshop, St. James's Place, for Mr. G. B. Heap; twenty-nine houses, Beech Avenue, for Mr. H. W. Rainbow; extensions to nursing home and ten houses, Bethany Homesteads, Kingsley Road, for the trustees of the Bethany Homesteads; conversion of disused school into mission hall, Green Street, for Northants and Rutland Mission to Deaf and Dumb; ten garages, Victoria Gardens, for Northampton Brewery Co., Ltd.

The SMETHWICK Corporation has obtained sanction to borrow £45,000 for the erection of baths at Bearwood.

The Warwickshire Education Committee is to purchase a site at TIDBURY GREEN for the erection of an elementary school.

WALES

The SWANSEA Education Committee has acquired a site at Baptist Well for the erection of a new school.

Plans passed at SWANSEA: House and shop, Jersey Road, for Mrs. Ann Richards; two houses, Bryhyfryd Street, for Mr. W. D. Williams; two houses, Cwm Level Road, for Mrs. M. E. Hunt; mill and warehouse, Bath Lane, for Messrs. Thomas, Evans and Dyer, Ltd.; house, Penrice Street, for Mr. E. Davies; two houses, New Road, Manselton, for Mr. Gordon Davey; two houses, Carmarthen Road, for Messrs. Mainwaring and Morgan; two houses, Penyrheol Drive, for Mr. A. J. Bevan; house, Liliput Road, for Mr. A. J. Probert; two houses, Boarspit Lane, for Mr. John Saunders.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0¾
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_3	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_3	Atherstone	Mid. Counties	1 5	1 0¾
B_3	Aylesbury ..	S. Counties	1 3	11¼
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0¾
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_3	Bath ..	S.W. Counties	1 5	1 0¾
A	Batley ..	Yorkshire	1 6½	1 2
A_3	Bedford ..	E. Counties	1 5	1 0¾
A_3	Berwick-on-Tweed	N.E. Coast	1 5½	1 1¼
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_3	Bicester ..	Mid. Counties	1 3	11¼
	Birkenhead	N.W. Counties	*1 8½	1 3¼
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11¾
A	Bolton ..	N.W. Counties	1 6½	1 2
A_3	Boston ..	Mid. Counties	1 5	1 0¾
A_3	Bournemouth	S. Counties	1 5	1 0¾
B_2	Bovey Tracey	S.W. Counties	1 3½	11¾
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1¾
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11¾
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_3	Brighton ..	S. Counties	1 5	1 0¾
A	Bristol ..	S.W. Counties	1 6½	1 2
B_3	Brixham ..	S.W. Counties	1 3	11¼
A_2	Bromsgrove	Mid. Counties	1 5½	1 1¾
C	Bromyard ..	Mid. Counties	1 2	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11¾
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5½	1 0¾
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11¾
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11¾
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_3	Colchester ..	E. Counties	1 5	1 0¾
A	Colne ..	N.W. Counties	1 6½	1 2
A_3	Colwyn Bay	N.W. Counties	1 5	1 0¾
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_3	Conway ..	N.W. Counties	1 5	1 0¾
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1¾
A_3	Cumberland	N.W. Counties	1 5	1 0¾
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11¾
A_2	Denbigh ..	N.W. Counties	1 5	1 0¾
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11¾
A_2	Driffield ..	Yorkshire	1 5	1 0¾
A_2	Droitwich ..	Mid. Counties	1 5½	1 1¼
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0¾
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1¼
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0¾
A_3	Filey	Yorkshire	1 5	1 0¾
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11¾
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11¾
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1¾
A_2	Goole ..	Yorkshire	1 5½	1 1¼
A_3	Gosport ..	S. Counties	1 5	1 0¾
A_3	Grantham ..	Mid. Counties	1 5	1 0¾
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11¾
A_3	Hatfield ..	S. Counties	1 5½	1 0¾
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_3	Hertford ..	E. Counties	1 5½	1 0¾
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5½	1 0¾
B_3	Isle of Wight	S. Counties	1 3	11¼
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1¾
A_2	Kidderminster	Mid. Counties	1 5½	1 1¾
B_2	King's Lynn	E. Counties	1 3½	11¾
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1¾
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_3	Lewes ..	S. Counties	1 3	11¼
A_2	Lichfield ..	Mid. Counties	1 5½	1 1¾
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3¼
A_2	Llandudno	N.W. Counties	1 5½	1 0¾
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2¾
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_3	Luton ..	E. Counties	1 5	1 0¾
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_3	Malvern ..	Mid. Counties	1 5	1 0¾
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_3	Matlock ..	Mid. Counties	1 5	1 0¾
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1¾
B_2	Minehead ..	S.W. Counties	1 3½	11¾
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11¾
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1¾
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_3	Norwich ..	E. Counties	1 5½	1 1¼
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_3	OAKHAM ..	Mid. Counties	1 5	1 0¾
A_3	Oldham ..	N.W. Counties	1 5½	1 1¼
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1¼
A	PAISLEY ..	Scotland	*1 6½	1 2
B_3	Pembroke ..	S. Wales & M.	1 3	11¼
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1¼
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_3	Portsmouth	S. Counties	1 5	1 0¾
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0¾
B	Reigate ..	S. Counties	1 4½	1 0½
A_3	Retford ..	Mid. Counties	1 5	1 0¾
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_3	Ripon ..	Yorkshire	1 5	1 0¾
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_3	Rugeley ..	Mid. Counties	1 5	1 0¾
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1¾
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_3	Salisbury ..	S.W. Counties	1 3	11¼
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1¾
A_2	Skipton ..	Yorkshire	1 5½	1 1¾
A_3	Slough ..	S. Counties	1 5	1 0¾
A_2	Solihull ..	Mid. Counties	1 5½	1 1¾
A_3	South'pton	S. Counties	1 5	1 0¾
A_2	Southend-on-Sea	E. Counties	1 5½	1 1¾
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1¾
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_3	Swindon ..	S.W. Counties	1 5	1 0¾
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_3	Teignmouth	S.W. Coast	1 5½	1 0¾
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells ..	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1¼
A_2	Wellingborough	Mid. Counties	1 5½	1 1¼
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1¼
A_3	Whitby ..	Yorkshire	1 5½	1 1¼
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_3	Windsor ..	S. Counties	1 5	1 0¾
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1¼
A_3	Worksop ..	Yorkshire	1 5	1 0¾
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_3	Wycombe ..	S. Counties	1 5	1 0¾
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11¼
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter . . . . . ,,	1 8
Joiner . . . . . ,,	1 8
Machinist . . . . . ,,	1 9
Mason (Banker) . . . . ,,	1 8
,, (Fixer) . . . . ,,	1 9
Plumber . . . . . ,,	1 8
Painter . . . . . ,,	1 7
Paperhanger . . . . ,,	1 8
Glazier . . . . . ,,	1 8
Slater . . . . . ,,	1 8
Scaffolder . . . . . ,,	1 4
Timberman . . . . . ,,	1 4
Navvy . . . . . ,,	1 3
General Labourer . . . . ,,	1 3
Lorryman . . . . . ,,	1 5½
Crane Driver . . . . . ,,	1 7
Watchman . . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . . ,,	2 10 6
Hydrated Lime . . . . ,,	2 16 0
Portland Cement . . . . ,,	2 6 0
Rapid Hardening Cement . . ,,	2 13 6
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . . ,,	10 0
Building Sand . . . . ,,	10 6
Washed Sand . . . . ,,	11 6
2" Broken Brick . . . . ,,	9 6
¾" ,, ,, ... ,,	12 6
Pan Breeze . . . . . ,,	6 6
Coke Breeze . . . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . . each	2 10	4 4
Taper bends	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . . ,,	3 9	5 9
Double ,, . . . ,,	5 9	8 9
Straight channels . . ,,	2 6	3 2
¾" Channel bends . . ,,	7 8	—
Channel junctions . . ,,	7 0	12 6
Channel tapers . . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . . each	6 0	13 0
Inspection bends . . . ,,	15 3	24 0
Single junctions . . . ,,	9 3	18 0
Double junctions . . . ,,	14 0	27 6
Lead wool . . . . lb.	6	—
Gaskin . . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . . per M.	3 1 6
Grooved do. . . . . ,,	3 3 6
Stocks, 1st Quality . . . ,,	4 18 6
,, 2nd ,, . . . ,,	4 12 6
Blue Bricks, Pressed . . . ,,	9 18 0
,, Wirecuts . . . ,,	8 16 0
,, Brindles . . . ,,	8 0 0
,, Bullnose . . . ,,	10 8 0
Red Sand-faced Facings . . ,,	7 11 0
Red Rubbers for Arches . . ,,	15 0 0
Multicoloured Facings . . ,,	9 4 0
Luton Facings . . . . ,,	8 16 0
Midhurst White Facings . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . . ,,	21 10 0
Headers . . . . . ,,	21 0 0
Bullnose . . . . . ,,	28 0 0
Double Stretchers . . . ,,	30 0 0
Double Headers . . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . ,,	5 10 0
2" Breeze Partition Blocks . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

MASON

The following d/d F.O.R. at Nine Elms:	s. d.
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . .	4 9
Bath stone . . . . . ,,	2 11
York stone . . . . . ,,	6 9
,, Sawn templates . . . ,,	7 6
,, Paving, 2" . . . . F.S.	1 8
,, ,, 3" . . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . . ,,	28 0 0
20" × 10" Countesses . . ,,	20 5 0
18" × 10" Viscountesses . . ,,	17 0 0
18" × 9" Ladies . . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20" × 10" medium grey per 1,000 (actual)	26 0 0
,, ,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d.
Good carcassing timber . . F.C.	2 6
Birch . . . . as 1" F.S.	9
Deal, Joiner's, . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . ,, ,,	1 1
Deal floorings, ¾" . . . Sq.	1 1 0
,, 1" . . . ,,	1 3 6
,, 1¼" . . . ,,	1 5 6
,, 1½" . . . ,,	1 11 0
,, 1¾" . . . ,,	1 15 0
Deal matchings, ¾" . . . ,,	16 0
,, 1" . . . ,,	17 6
,, 1¼" . . . ,,	1 6 0
Rough boarding, ¾" . . . ,,	18 0
,, 1" . . . ,,	1 0 0
,, 1½" . . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	¼"			½"			¾"			1"		
Qualities	A.	A.	B.	A.	A.	B.	A.	A.	B.	A.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

Scotch glue . . . . . lb. 8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	½"	¾"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10	
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9	
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–	
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3	
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6	
Bends . . . ,,	8	11	1/7½	2/7½	5/2	
Springs not socketed ,,	5	7	1/1½	1/11½	3/11	
Socket union . ,,	2/–	3/–	5/6	6/9	10/–	
Elbows, square . ,,	10	1/1	1/6	2/2	4/3	
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1	
Crosses . . . ,,	2/2	2/9	4/1	5/6	10/6	
Plain sockets and nipples ,,	3	4	6	8	1/3	
Diminished sockets ,,	4	6	9	1/–	2/–	
Flanges . . . ,,	9	1/–	1/4	1/9	2/9	
Caps . . . ,,	3½	5	8	1/–	2/–	
Backnuts . . ,,	2	3	5	6	1/1	
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6	
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–	

Discounts:	TUBES. Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . .	55	,, steam .	40
	FITTINGS.		
Gas . . .	47½	Galvanized gas .	37½
Water . . .	42½	,, water .	32½
Steam . . .	37½	,, steam .	27½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ¾" . . . ,,	10 0
,, ,, ⅞" . . . ,,	9 9
,, ,, 1" . . . ,,	9 6
,, ,, 1⅛" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0
,, ,, 1¾" . . . ,,	9 0

	3" s. d.	4" s. d.
Cast-iron rain-water pipes of ordinary thickness metal . F.R.	7	10
Shoes . . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . . ,,	3 3	4 6
Bends . . . . ,,	2 9	4 0
,, with access door . ,,	—	6 9
Heads . . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6

	F.R. s. d.
Half-round rain-water gutters of ordinary thickness metal .	5 6
Stop ends . . . . each	6 7
Angles . . . . ,,	1 7 1 11
Obtuse angles . . . ,,	2 0 2 6
Outlets . . . . ,,	1 9 2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	21 0
,, drawn pipes . . . ,,	21 6
,, soil pipe . . . ,,	24 6
,, scrap . . . ,,	11 0
Solder, plumbers' . . . lb.	1 0
,, fine do. . . . ,,	1 4
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3" s. d.	4" s. d.	6" s. d.
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . ,,		1 3
¼" Polished plate, n/e 1 ,,	1 0 to	1 3
,, ,, 2 ,,	1 2 ,,	1 7
,, ,, 3 ,,	1 7 ,,	2 5
,, ,, 4 ,,	2 1 ,,	2 11
,, ,, 6 ,,	2 3 ,,	3 2
,, ,, 8 ,,	2 6 ,,	3 6
,, ,, 12 ,,	2 9 ,,	3 8
,, ,, 20 ,,	3 0 ,,	3 11
,, ,, 45 ,,	3 3 ,,	4 1
,, ,, 65 ,,	3 7 ,,	4 6
,, ,, 90 ,,	3 10 ,,	4 9
,, ,, 100 ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 ,,		1 0
,, ,, ,, 2 ,,		1 3
,, ,, ,, over 2 ,,		1 9
,, ,, plate, n/e 1 ,,		1 6
,, ,, ,, 2 ,,		3 0
,, ,, ,, 5 ,,		4 0
,, ,, ,, 7 ,,		5 0
,, ,, ,, 15 ,,		6 0
,, ,, ,, over 15 ,,		7 6
Putty, linseed oil . . lb.		5

PAINTER

	£ s d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 4
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 0
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR		s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.	3	6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10	0
" to form basement n/e 5' 0" deep and cart away	"	11	0
" " 10' 0" deep and cart away	"	11	6
" " 15' 0" deep and cart away	"	12	0
If in stiff clay	add "	3	0
If in underpinning	" "	5	0
Digging, return, fill and ram	"	5	0
Planking and strutting to sides of excavation	F.S.	1	0
" " to pier holes	"		6
" " to trenches	"		6
" " extra, only if left in	"		3½
Hardcore, filled in and rammed	Y.C.	14	0
Portland cement concrete in foundations (6-1)	"	1 13	6
" " " (4-2-1)	"	1 18	6
" " " underpinning	"	2 2	0
Finishing surface of concrete, spade face	Y.S.		9

DRAINLAYER		4" s.	d.	6" s.	d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8		2 6	
Extra, only for bends	Each	2 8		3 9	
" junctions	"	3 9		4 6	
Gullies and gratings	"	17 6		19 9	
Cast iron drains, and laying and jointing	F.R.	5 6		7 0	
Extra, only for bends	Each	12 6		18 6	

BRICKLAYER		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	32	0	0
" " in cement	"	34	0	0
" Stocks in cement	"	41	10	0
" Blues in cement	"	62	0	0
Extra only for circular on plan	"	3	0	0
" backing to masonry	"	2	0	0
" raising on old walls	"	3	0	0
" underpinning	"	10	0	0
Fair Face and pointing internally	F.S.			3
Extra only for picked stock facings	"		1	0
" red brick facings	"		1	6
" blue brick facings	"		1	9
" glazed brick facings	"		4	6
Tuck pointing	"			10
Weather pointing	"			4
Slate dampcourse	"		1	0
Vertical dampcourse	"		1	3

ASPHALTER		s.	d.
½" Horizontal dampcourse	Y.S.	5	6
½" Vertical dampcourse	"	7	6
½" paving or flat	"	5	6
1" paving or flat	"	6	6
1" × 6" skirting	F.R.	1	0
Angle fillet	"		2
Rounded angle	"		2
Cesspools	Each	5	0

MASON		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1	1	6
Bath stone and do, all as last	"		15	6
Artificial stone and do.	"		16	6
York stone templates, fixed complete	"		14	0
" thresholds	"		16	0
" sills	"	1	3	6

SLATER AND TILER		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4	5	0
Do., 18" × 9"	"	4	2	0
Do., 24" × 12"	"	4	12	0
Westmorland slating, laid with diminished courses	"	6	10	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4	0	0
Do., all as last, but of machine-made tiles	"	3	11	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	12	0
Shuttering to sides and soffits of beams	F.S.		1	0
" to stanchions	"		1	0
" to staircases	"		2	0
Fir and fixing in wall plates, lintols, etc.	F.C.		5	0
Fir framed in floors	"		6	9
" " roofs	"		8	3
" " trusses	"		9	0
" " partitions	"		12	0
½" deal sawn boarding and fixing to joists	Sqr.	1	17	6
1" " " " " "	"	2	1	6
1½" " " " " "	"	2	7	6
2" × 2" fir battening for Countess slating	"		12	6
Do. for 4" gauge tiling	"		16	0
Stout feather-edged tilting fillet	F.R.			6
Patent roofing felt, 1 ply	Y.S.		2	6
" " " 2 "	"		3	0
" " " 3 "	"		3	6
Stout herringbone strutting to 9" joists	F.R.		1	0
1" deal gutter boards and bearers	F.S.		1	4
1½" " " " " "	"		1	8
2" deal wrought rounded roll	F.R.			9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	15	0
1¼" do.	"	3	4	0
1½" do.	"	3	13	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	10
1¼" do.	"		2	1

CARPENTER AND JOINER—*continued.*		s.	d.
1¼" deal moulded sashes of average size	F.S.	2	3
2" " " " "	"	2	6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ¾" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4	3
2" " " " "	"	4	6
Extra only for moulded horns	Each		9
1¼" deal four-panel square, both sides, door	F.S.	2	6
2" " " " "	"	3	0
1¼" " but moulded both sides	"	3	0
2" " " " "	"	3	6
4" × 3" deal, rebated and moulded frames	F.R.	1	6
4½" × 3½" " " "	"	2	0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2	0
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3	0
1½" deal moulded wall strings	"	2	6
1½" " outer strings	"	2	9
Ends of treads and risers housed to string	Each	2	0
3" × 2" deal moulded handrail	F.R.	1	6
1" × 1" deal balusters and housing each end	Each	2	6
1½" × 1½" " "	"	3	3
3" × 3" deal wrought framed newels	F.R.	1	6
Extra only for newel caps	Each	7	6
Do., pendants	"	7	6

SMITH AND FOUNDER		s.	d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17	0
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3	0
Do. stanchions with riveted caps and bases and do.	"	1 2	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 0	0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1	0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15	0

PLUMBER		£	s.	d.
Milled lead and labour in flats, gutters	Per cwt.	1	17	6
Do. in flashings	"	2	0	0
Do. in covering to turrets, etc.	"	2	7	0
Do. in soakers	"	1	13	0
Labour to welted edge	F.R.			3½
Open copper nailing	"			3½
Close "	"			4½

		½" s.	d.	¾" s.	d.	1" s.	d.	1½" s.	d.	2" s.	d.	4" s.	d.
Lead service pipe and fixing with pipe hooks	F.R.	1 2		1 7		2 1		2 8		3 8		—	
Do. soil pipe and fixing with cast lead tacks	"	—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2 3		6	6
Do. to stop ends	"	7		9		1 0		1 3		2 0		—	
Boiler screws and unions	"	3 6		4 0		5 6		8 0		—		—	
Lead traps	"	—		—		—		7 6		10 6		—	
Screw down bib valves	"	7 6		10 6		12 6		—		—		—	
Do. stop cocks	"	10 0		12 0		16 0		23 6		56 6		—	

		£	s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	3	
Extra, only stop ends	Each	1	0	
Do. angles	"	1	6	
Do. outlets	"	3	0	
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	6	
Extra, only for shoes	Each	2	6	
Do. for plain heads	"	5	6	

PLASTERER AND TILING		£	s.	d.
Expanded metal lathing, small mesh	Y.S.	3	9	
Do. in n/w to beams, stanchions, etc.	"	5	6	
Lathing with sawn laths to ceilings	"	1	6	
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"	2	6	
Do. vertical	"	2	9	
Rough render on walls	"	2	3	
Render, float and set in lime and hair	"	3	0	
Render and set in Sirapite	"	3	3	
Render, backing in cement and sand, and set in Keene's cement	"	4	6	
Extra, only if on lathing	"			9
Keene's cement, angle and arris	F.R.			8
Arris	"			3
Rounded angle, small	"			3
Plain cornices in plaster, including dubbing out, per 1" girth	"			2
1" granolithic pavings	Y.S.		5	0
1½" " " " "	"		6	0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1	2	6
9" × 3" " " "	"	1	7	6
Extra, only for small quadrant angle	F.R.			9

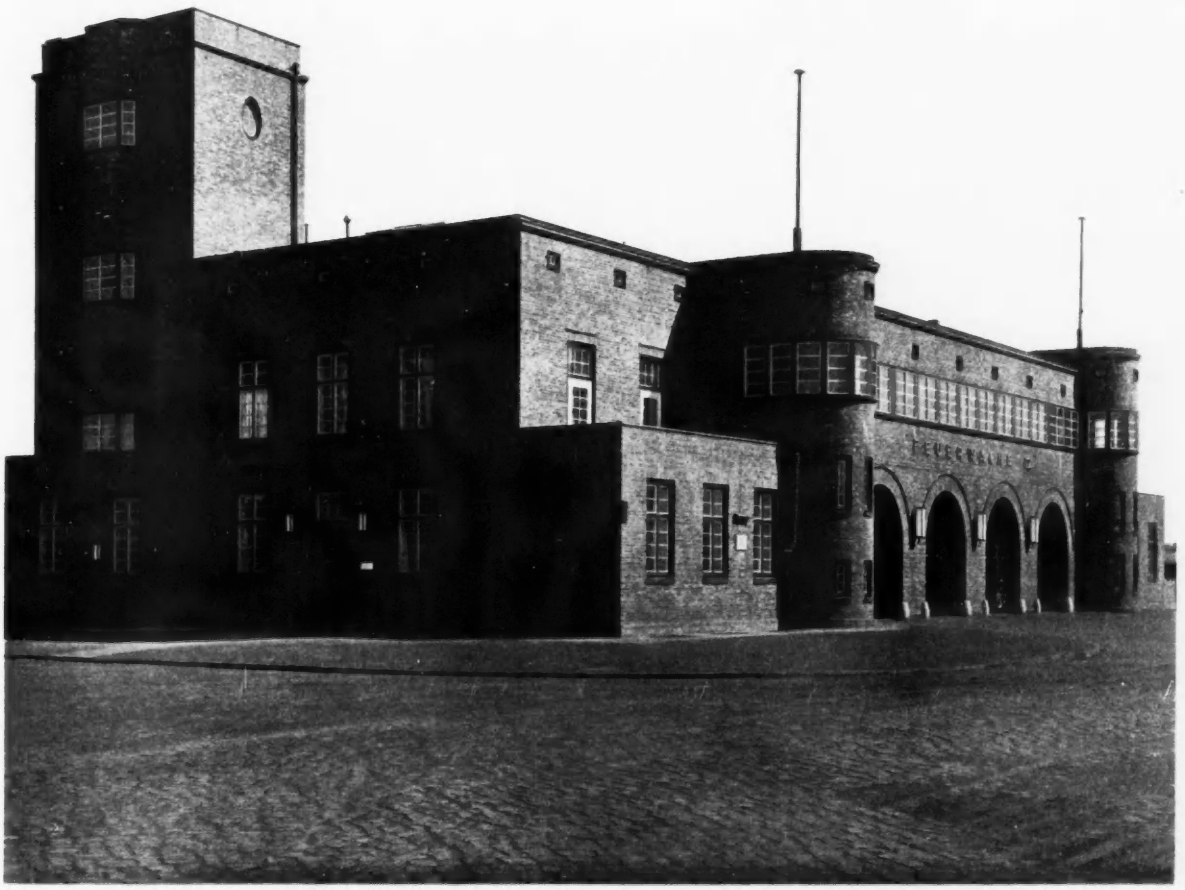
GLAZIER		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		8
26 oz. do. and do.	"	1	0
Arctic glass and glazing with putty	"	1	2
Cathedral glass and do.	"	1	3
Glazing only, British polished plate	"		8
Extra, only if in beads	"		2
Washleather	F.R.		4

PAINTER		s.	d.
Clearcolle and whiten ceilings	Y.S.		8
Do. and distemper walls	"	1	0
Do. with washable distemper	"	1	3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax-polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	6
Hanging ordinary paper	from "	3	0



A MODERN GERMAN FIRE-STATION

DR. FRITZ SCHUMACHER, ARCHITECT

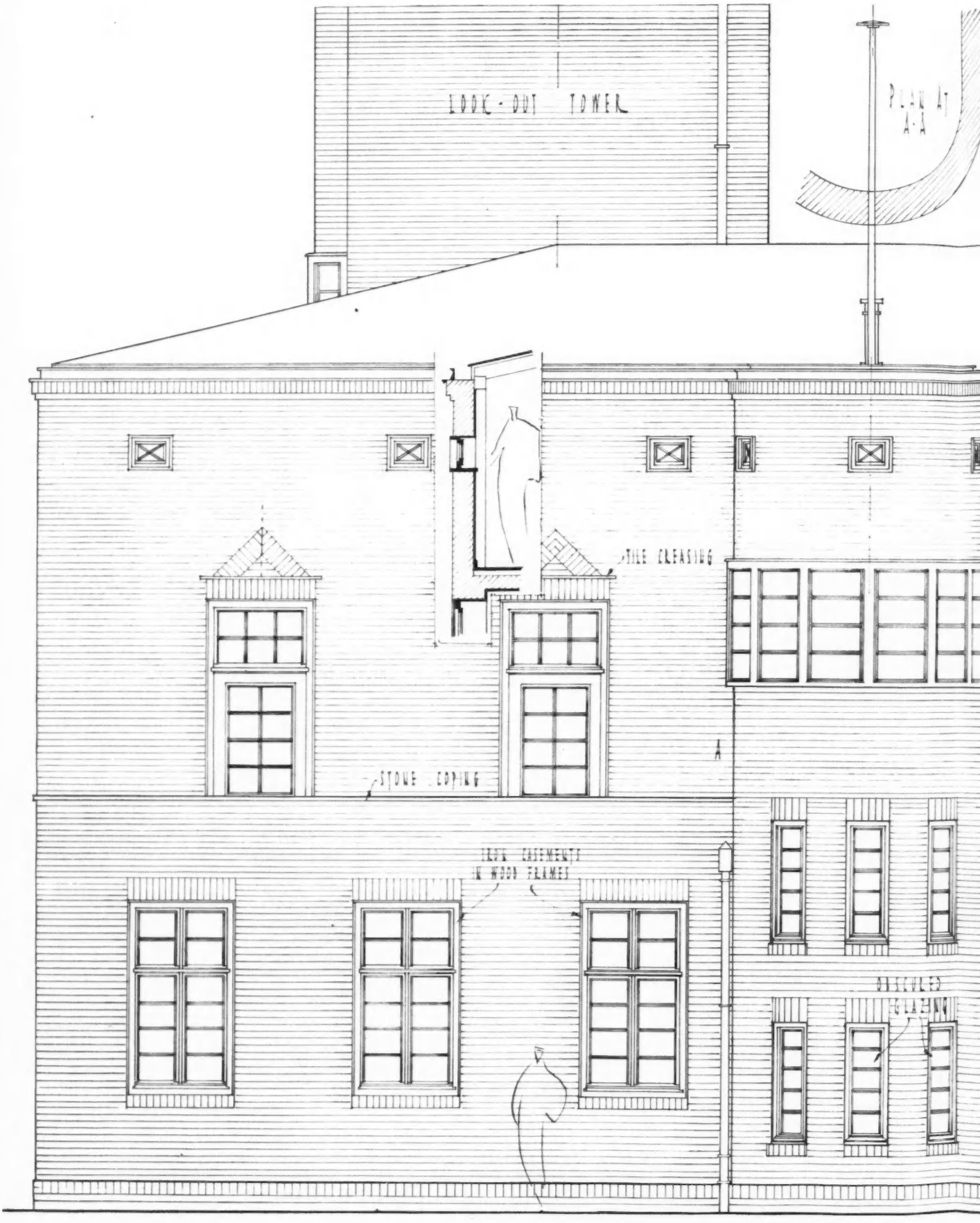


A GENERAL VIEW, SHOWING THE QUADRUPLE MAIN DOORS

THE design of the building illustrated photographically above, and overleaf in a scale detail drawing, bears so plainly the stamp of individuality that those already acquainted with Dr. Schumacher's work will identify his hand at a glance.

Though the family likeness between this and, say, the school at Langenfort, which was the subject of a supplement to the issue of May 6 last, springs in part from economy having dictated the use of the same material—brick—in both buildings, several of the actual features reappear as variants. Like human faces, buildings show windows for eyes, dominant outlines for noses, doors for mouths; the diversity of creation comes in in their arrangement and proportionment, and of this the comparison suggested will afford interesting and attractive evidence.

There is the same facility in handling large plain masses of flat-roofed walling in which the fenestration makes pleasant orderly patterns, the same use of semicircular bays to give character and cohesion to the composition, the same concentration upon doorways as the chief points of decorative interest in it. But these features can be, and here are, combined in a way proper to a particular purpose—that of a fire-station.


LOOK-OUT TOWER
PLAN AT A-A
TILE CREASING
STONE COPING
STEEL CASEMENTS IN WOOD FRAMES

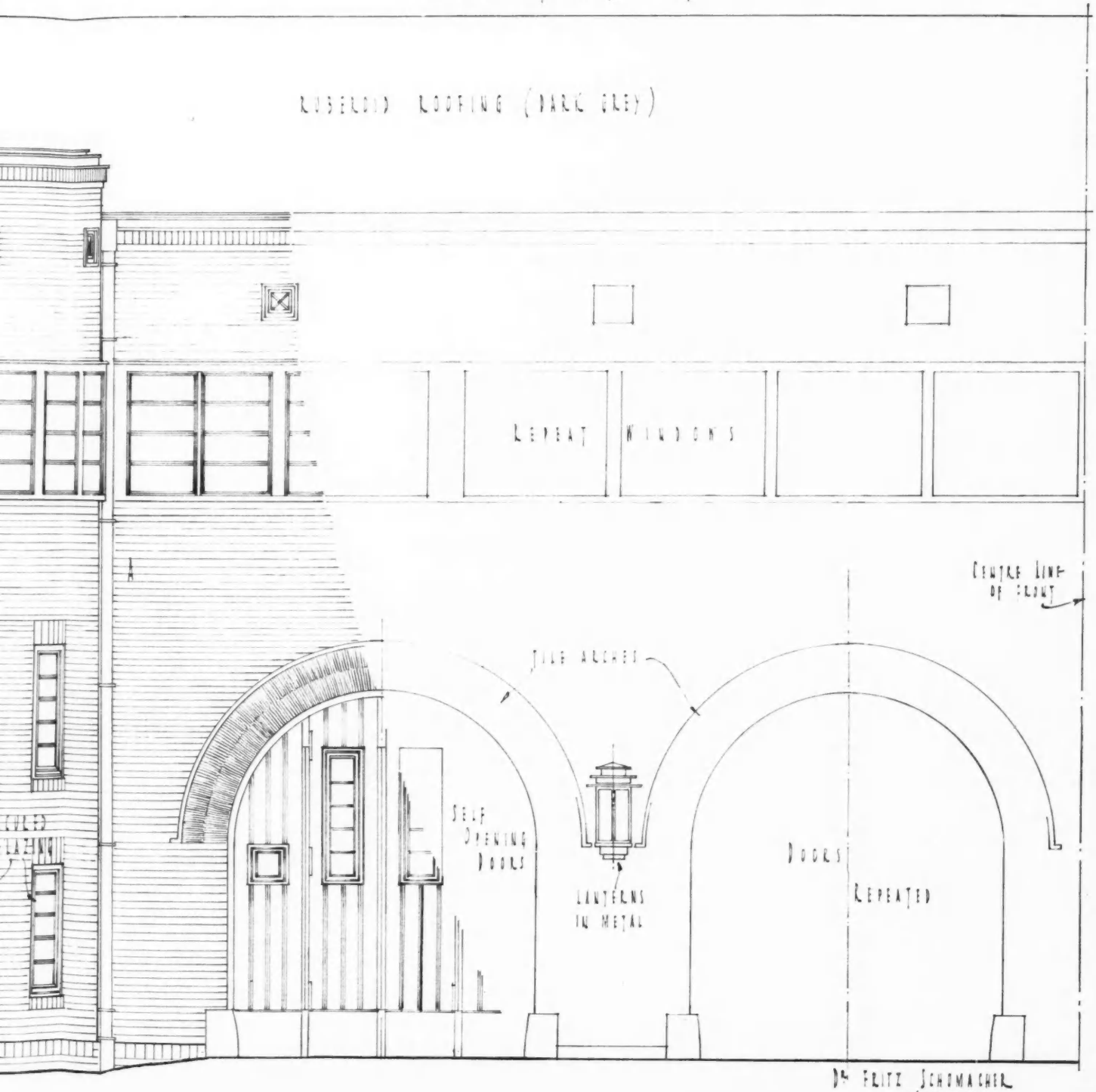
PLAN AT A-A

FIRE STATION AT ZOLLHAFEN · GERMANY ·

(ON THE VEDDEL)

· HALF FRONT ELEVATION ·

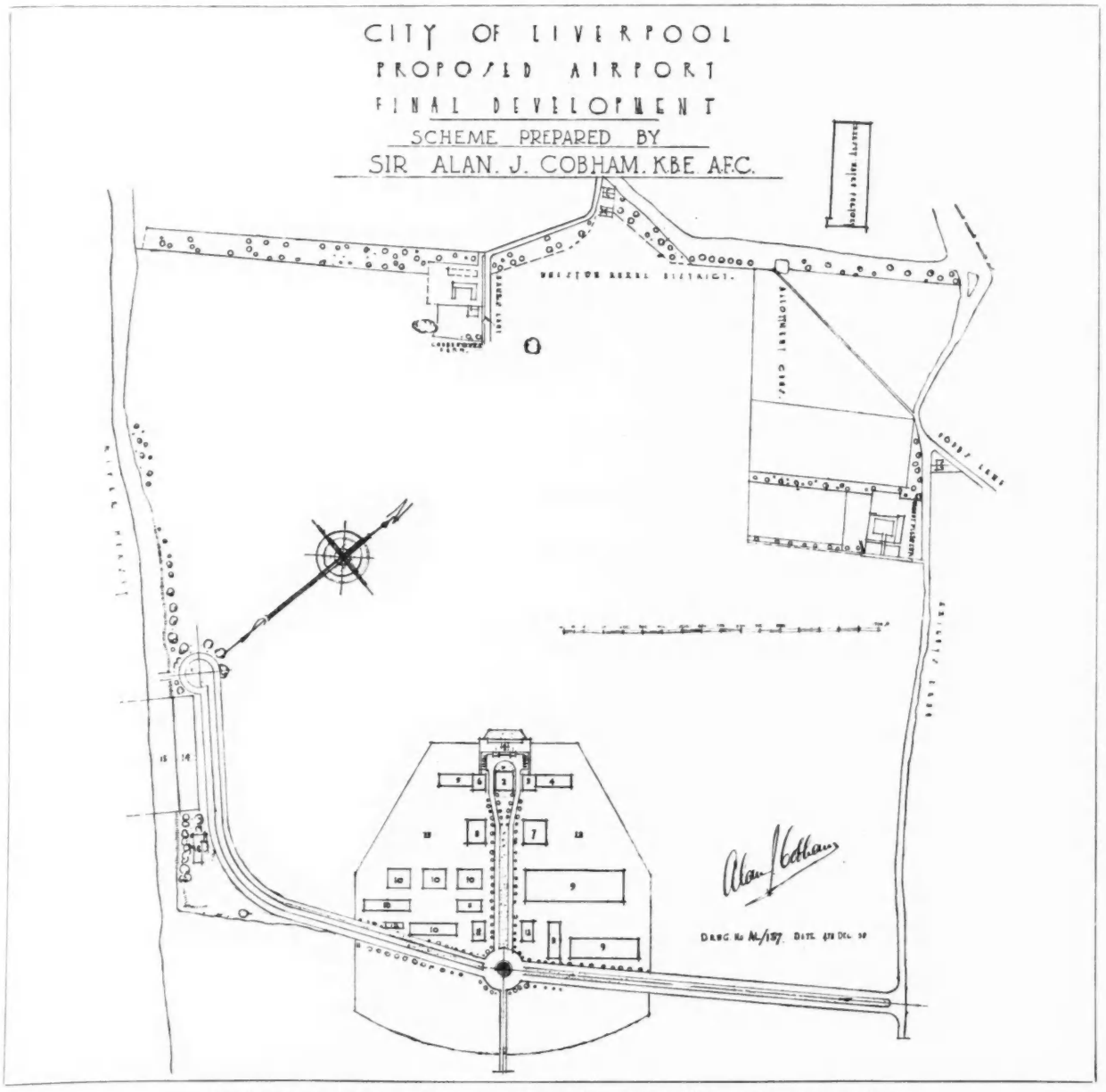
· SCALE · ¼ INCH TO 1 FOOT ·



Dr FRITZ SCHUMACHER
ARCHITECT.

SCHEME FOR THE AIRPORT OF LIVERPOOL

BY SIR ALAN J. COBHAM: SIR JOHN BURNET AND PARTNERS, ARCHITECTS IN ASSOCIATION



GENERAL LAYOUT OF THE LANDING GROUND AND BUILDINGS

THE drawings illustrated on this and the following pages show the general layout, elevations and plans, respectively, of Sir Alan J. Cobham's proposal for the development of Liverpool's new airport, as visualized at its completion in years to come. They are three of the designs accompanying Sir Alan's report recently presented to the city, detailed extracts from which are printed elsewhere in this issue, and should be read with them.

The references in the key-plan above are as follows: (1) Lounge, dining and reception rooms, club and control tower; (2) Booking hall; (3) Customs and administration offices; (4) Commercial arrival and departure shed; (5) Private owners' arrival and departure shed; (6) Waiting rooms; (7) Hangar for commercial aircraft; (8) and (10) Hangars for private aircraft; (9) Hangars for air liners; (11) Workshops; (12) Stores; (13) Prepared surface; (14) Seaplane hangars; (15) Concrete paving; (16) Hotel. The elevational drawings overleaf and the plans on the last page bear their own annotations.

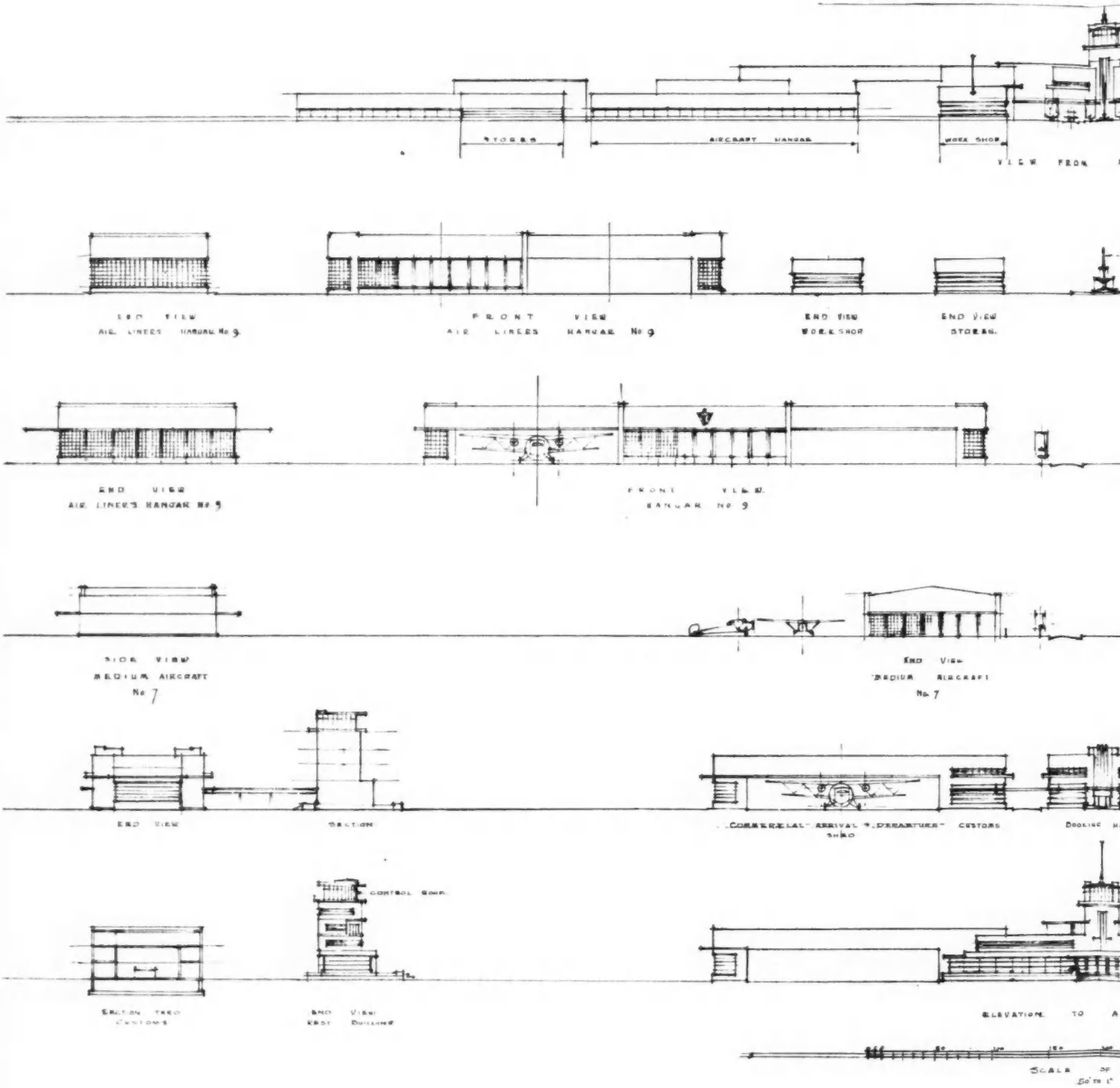
Lieut.-Col. J. D. K. Restler and Major J. Kidston Allsop have been in association as joint consulting engineers; and Sir John Burnet and Partners as architects.

CITY OF LI

PROPOSED AIRPORT ·

SCHEME PREPA

SIR ALAN. J. CO



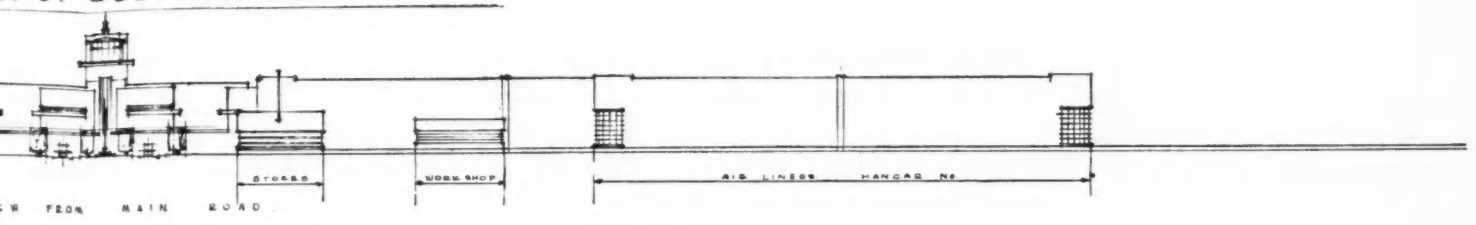
ELEVATIONS AND SECTIONS OF THE CONTROL T

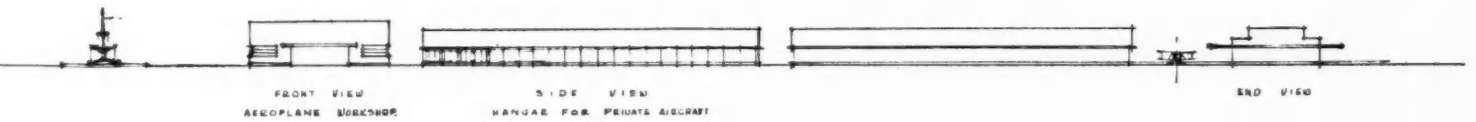
OF LIVERPOOL

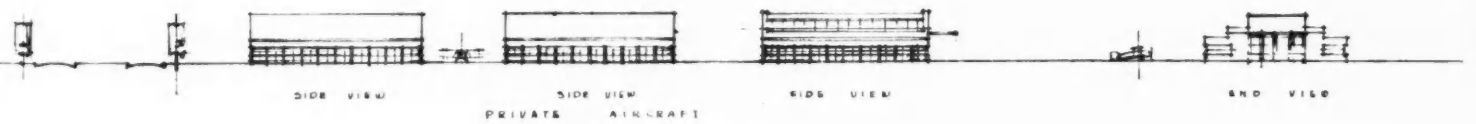
ORT · FINAL DEVELOPMENT

E. PREPARED BY.

I. J. COBHAM. K.B.E. A.F.C.

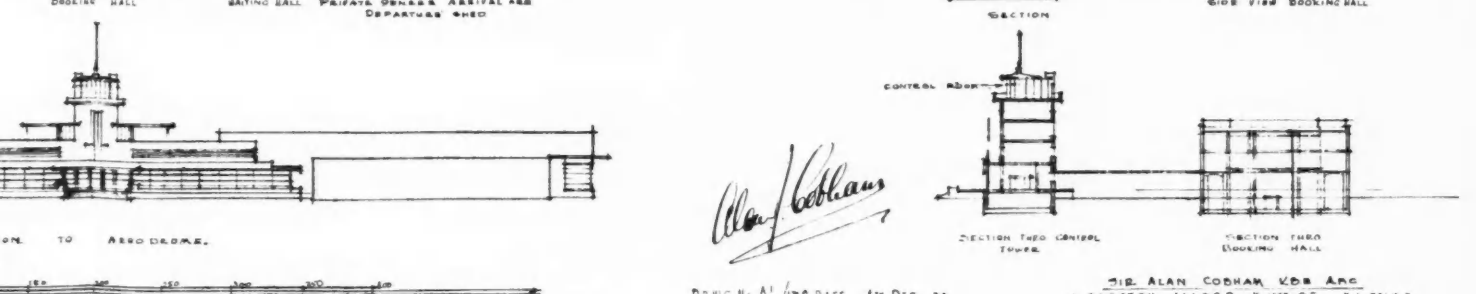














DRWG No. AL/139 DATE. 4TH. DEC 30

SIR ALAN COBHAM KBE AFC
J EDSTON ALLSOP M INST CE MI MECH E
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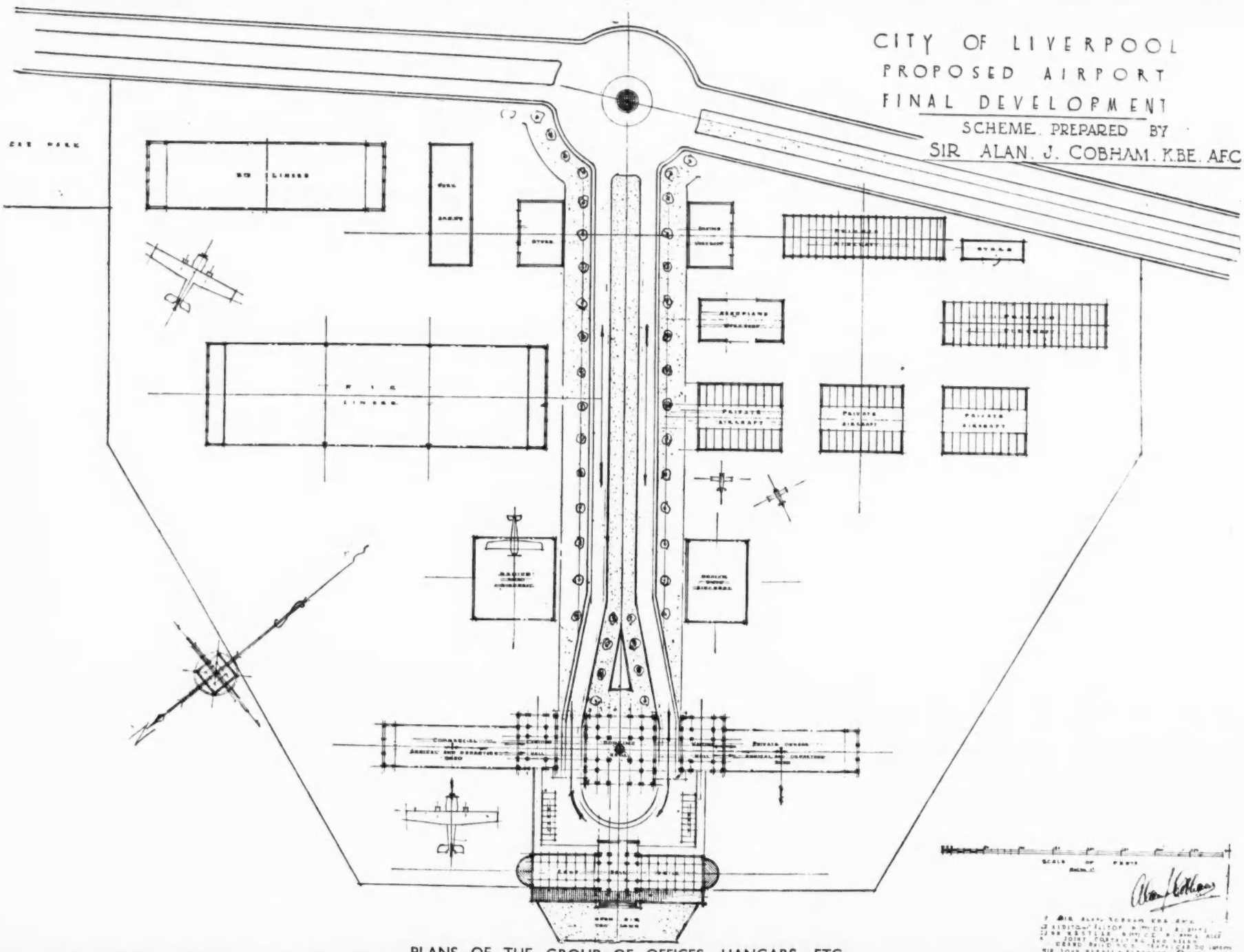
JOINT CONSULTING ENGINEERS
GRAND BUILDINGS. TRAFALGAR SQ LONDON
SIR JOHN BURNET & PARTNERS ARCHTS.
NOI MONTAGUE PLACE LONDON.

ONTROL TOWER, OFFICE BUILDINGS, AND HANGARS



PLANS OF THE GROUP OF OFFICES, HANGARS, ETC.



PLANS OF THE GROUP OF OFFICES, HANGARS, ETC.

SELECTED PRECEDENTS:

TIMBER-FRAMED COTTAGES

NOTES BEGINNING WHERE THE TEXT-BOOKS END: i



1. *A PAIR OF TIMBER-FRAMED COTTAGES AT ROLVENDEN, KENT*

IN some counties a form of timber-framed house construction in vogue for over two hundred years is well adapted to modern requirements. In Kent and Sussex, the outer coverings are either of painted weatherboarding or are tile-hung. Inside, the studding is lathed and plastered or might be covered with sheeting.

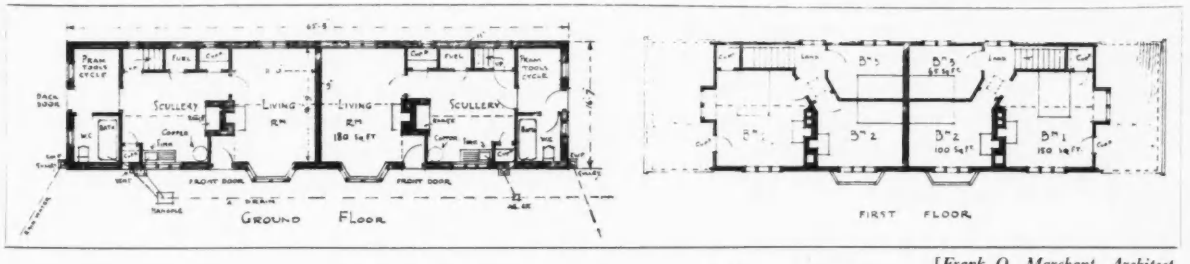
The progress photographs by which these notes are illustrated are of a pair of parlour cottages (figure 1) out of more than a hundred built at Rolvenden for the Tenterden Rural District Council.

The plans (figure 2) are self-descriptive. The aspect is the best of all, being south-east. The central fireplaces and chimneys ensure warm houses in winter. The floor areas are worked out exactly to Ministry of Health minima, no space being wasted. The room called "scullery" is really a kitchen-living-room-scullery combined, and experience shows that it is used as a work- and eating-room and that the room called "living-room" is in constant use for all other purposes. The fact is that the old fetish of an unused Best Parlour is dead.

The plan does not differ much from many others of similar elevations and accommodation; indeed, there is a limit to possible plan variations. The bath is a long way from the copper, from which hot water has to be carried, and the Council concerned might consider whether an inner door, to cut off the front door from the living-room, would not be worth the small additional cost. The ample space provided for "pram, tools and cycle" is commendable, for it meets current requirements.

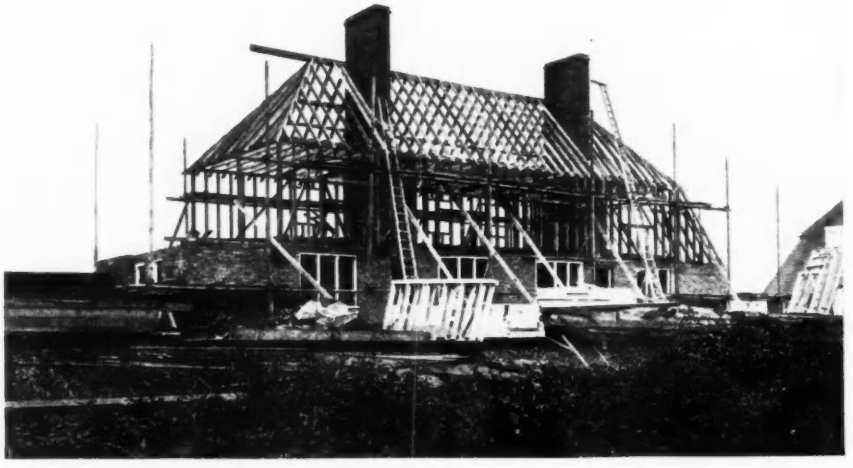
The larger rooms are spanned by 8-in. by 4-in. beams, which enable joists of smaller scantlings to be used than if the spans were greater. The dormer window for No. 1 Bedroom is a small extravagance, yet it adds to the amenities of the room.

Figure 3 shows the timber framework above first floor and the roof timbers. The photograph was taken when the rafter



[*Frank O. Marchant, Architect.*

2. *PLANS OF THE GROUND AND FIRST FLOORS*



3. *A PROGRESS PHOTOGRAPH OF THE TIMBER FRAMEWORK*



4. *DETAILS OF THE RAFTERS*

[*Frank O. Marchant, Architect.*

extension had been made at one end only. The scantlings of framing to weatherboarding to first floor are as follows :

Cill	.. ..	*4 ins.×2 ins.*
Head of framing	..	*4 ins.×3 ins.*
Angle posts	..	*4 ins.×4 ins.*
Studs	.. ..	*4 ins.×4 ins. and 4 ins. × 2 ins., with 16-in. centres and two rows of 3-in.×2-in. nogging pieces.*
Braces	.. ..	*4 ins.×2 ins.*
Ceiling joists	..	*4 ins.×2 ins.*

The scantlings of roof timbers are :

Rafters	.. ..	*4 ins.×2 ins.*
Hips	.. ..	*7 ins.×2 ins.*
Ridge	.. ..	*7 ins.×1¼ ins.*
Collars	.. ..	*4 ins.×2 ins.*
Purlin	.. ..	*5 ins.×3 ins.*
Struts	.. ..	*4 ins.×3 ins.*

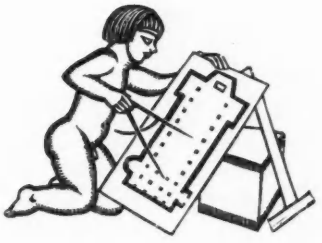
The angle posts are tenoned into the cill and head, which is halved at the angles. They are strutted from the cill to the head. Certain studs, as those on each side of the windows, are tenoned into cill and head, others are housed and spiked. The rafters are bird's-mouthed over the head and spiked to it and to the ridgepiece.

Figure 4 shows details of the east end of the building, where the rafters of the lean-to have been set up. The strut at the angle of the main structure can also be seen. Attention may be drawn to the correct trimming of the rafters at the chimneys. The latter are 4½-in. brickwork throughout, with a double tile creasing course below the brick-on-edge course of the cap. The upper courses are built in cement mortar, and 4½-in. brickwork caps are now common practice. One wonders how these will bear the test of time; this is the point where brickwork first begins to fail.

Next week other progress photographs will be given.

NATHANIEL LLOYD.

THE ARCHITECTS' JOURNAL



WEDNESDAY, JUNE 10, 1931

DESIGN IN MASS-PRODUCTION

"THE dwelling is filled with useful implements," affirms le Corbusier. But to the statement the distinguished Frenchman hastens to add, "useful, but also harmonious." That is le Corbusier's method. He knocks us down and then helps us up with a charming smile. The trouble is that the public is so startled by the brilliance and directness of his phrasing that it fails to read to the end of a paragraph. Consequently, the apostle of harmony is denounced as the high priest of ugliness. But, leaving aside Corbusier and the public's opinion of him, how far can we say that our dwellings in this twentieth-century England are filled with useful implements which are also harmonious ?

Many of us have gone around the hall of Ideal Homes. Let us be candid. Can we, speaking broadly, say that our implements are either one or the other ? The best that can be said of the best of them is that they are useful. Their claims to beauty are only at the expense of their usefulness. There is very little harmony.

The fact is that we in England are mechanizing our houses in spite of ourselves and against the whole trend of our education. We do so hate being the same as our neighbours—and architects are no exception. At Olympia the other day a builder was overheard saying with pardonable salesman's pride : "We guarantee, sir, never to build two houses alike on one estate. We have over 800 plans to choose from." In a flash one sees our never-ending suburbs, where each little house resembles its neighbour only by its difference. Of course, this spirit was not born in Barnet or Morden. When a novelist wants to suggest the very pit of dreariness, he begins : "Mr. and Mrs. Snooks lived at 58 Laburnum Road in a villa which was indistinguishable from 127 others in the same street." That has been the literary formula for half a century.

The time has come, however, when all of us, being in this machine age, must needs reason out just when we can afford to be individual and when we must be uniform. We ought to know that we can get a better car, a better telephone, a better print type, if we accept mass-production conditions. There are so many things we need which would cost far too much if others did not share our need. The next step is to be honest and share the design also. That seems to be the crux of the problem in modern design as far as we are concerned.

The Englishman can with difficulty bring himself to accept mass-production. No sooner is a popular car marketed with success than hundreds of coachbuilders are attributing to it something not better so much as different. The makers of lighting switches, cookers, grates, door-handles and the like are unable to concentrate on the twin objectives of utility and beauty of form. They are definitely trying to provide the salesmen with something different, quaint, reminiscent, pretentious—anything, so long as it is different. Result : frivolity and absurdity.

Occasionally a manufacturer, more conscientious or far-sighted than his rivals, markets an article that has both usefulness and harmony. The *Selected Precedent* series of illustrations in our two preceding issues has recorded examples. The reward of the makers of these things is that of craftsmen satisfied with a job well done. And that is why we hold it the particular duty of architects to scan their catalogues narrowly and lend the lone adventurer every possible aid. For we can be sure that what architects do today, the popular shopkeeper will be pleased to broadcast tomorrow.



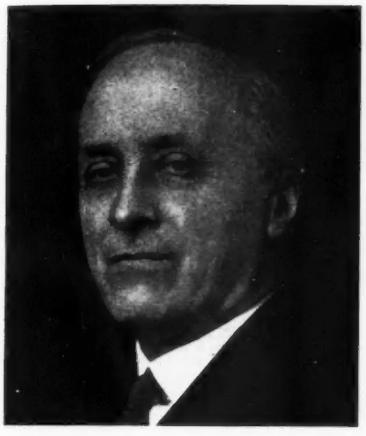
THE NEW BUILDING FOR THE ACCOUNTANTS

The late John Belcher's building, at the junction of Moorgate Place and Great Swan Alley, E.C., for the Institute of Chartered Accountants in England and Wales, has been enlarged from the designs of J. J. Joass, his pupil and successor in practice. The addition, shown on the right-hand side of the entrance, is designed in harmony with the older building.

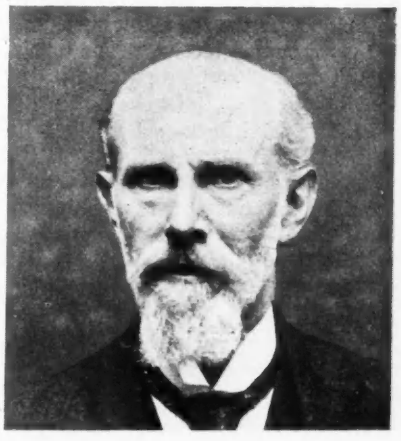
A striking feature of the latter is a frieze by the late Sir Hamo Thornycroft, in which are symbolized figures and imaginary portraits of notable architects and builders representing the art of building from early times. In the new frieze J. A. Stevenson, the sculptor, has continued this symbolism.

Some alteration has been made in the interior of the older building, particularly in the examination hall (see illustration on page 812).

NEWS & TOPICS



C. R. Peers, C.B.E., M.A., F.R I.B.A., President of the Royal Society of Antiquaries, upon whom a knighthood was bestowed in the Birthday Honours List.



William E. Reynolds-Stephens, HON. A.R.I.B.A., President of the Royal Society of British Sculptors, who also received a knighthood in the Honours List.

LONDON UNIVERSITY'S CHOICE

HOW splendid that Charles Holden should have been chosen by the Court of the University of London to be the architect to their great new scheme of building! There is no other man whose appointment to this great commission could be more warmly welcomed by both the profession and the public, for he is, like Sir Christopher Wren, a great architect and a modest man.

*

It would be nearly redundant to set down the reasons for the University's choice, for they stand about us—buildings that we know and admire as among the best things of our time, faultless in a world of cavil.

*

I remember first feeling Charles Holden's power when the Westminster Hospital emerged one day from its scaffolding, a new building; though with less alteration than any other man would have found possible to effect the transformation that still surprises and astonishes me.

*

The Underground Building will long remain Mr. Holden's finest and most spectacular job; but there are many others, great hospitals among them, which the Court of the University must have visited before their decision was made, with each one of which their decision must have become, one may say, more clearly a matter of Mr. Holden or nobody.

*

His task will be a prodigious one. When building operations begin, the site will be an island of over ten acres, bounded on the south by Montague Place, on the west by Malet Street, on the east by Russell Square and Woburn Square, and on the north by Gordon Square and Byng Place. The scheme will be many years in building, but Mr. Holden is to plan the entire thing now, to the end that in its completion, perhaps twenty years hence, it will form one unified conception for the whole site.

IN THE HONOURS LIST

Among the Honours bestowed on the King's sixty-sixth birthday are C. R. Peers, C.B.E., M.A., F.R.I.B.A., President of the Royal Society of Antiquaries, and W. E. Reynolds-Stephens, HON. A.R.I.B.A., President of the Royal Society of British Sculptors, both of whom become knights. P. L. Hanton, M.B.E., A.R.I.B.A., senior assistant to H.M.O.W., and Edward Twist, Architects' Works Division, Ministry of Finance, Northern Ireland, receive the C.B.E.

AN AMERICAN ARCHITECT FOR THE NEW TATE

Sir Joseph Duveen is to build yet another wing to the Tate Gallery at a cost of £50,000, and, most surprisingly, is to employ as his architect Mr. Russel Pope, an American. At first thought, the idea of more Tate Gallery from Sir Joseph's generous hand outweighs any other consideration; for while the Tate continues to thrive and buy contemporary work, irrespective of nationality and of popular opinion, I care not how many top-hats go to Burlington House, or who builds the new wing. But I know the question is bound to be asked: Why an American architect for this our very national institution? On the other hand, why not? Most of the money comes from America. But paid-for works produced in the past, in Europe. Stalemate!

*

Anyway, if Sir Joseph Duveen likes to employ an eminent American architect, whose taste he relies on, I do not see that we can very well object. America, after all, has built some of the most restrainedly beautiful galleries in the world, and Mr. Pope's own work has been the admiration of all who place American monumental classic architecture at a high level.

THE GOOD SHIP "REGISTRATION"!

Lt.-Colonel T. C. Moore, M.P., whose name will go down to posterity as the chief political sponsor of the Architects (Registration) Bill, and to whom much credit is due for the able manner in which he piloted the good ship "Registration" during its stormy passage through Parliament, was the chief guest of honour at the twelfth anniversary dinner of the Association of Architects, Surveyors and Technical Assistants, held in London last Saturday. Proposing the toast, "The Houses of Parliament," it was only natural that he should discuss the important question of Registration, thus being the first Member of Parliament who, to my knowledge, has spoken on the subject outside the precincts of the House. Those of us who have watched the progress of its maiden voyage may well congratulate ourselves that the damage sustained in collision with a rival vessel was not vital.

*

There was, the speaker explained, a slight mutiny among the crew, but this was successfully suppressed. It is now steaming full ahead for harbour, and Lt.-Colonel Moore has received an assurance from the Government that no further opposition can affect its progress. It is certain of

becoming the ship on which architects of future generations will ride over the sea of architecture. On future voyages it may certainly receive minor repairs, but this will only show that it is keeping pace with the needs of the day.

★

Lt.-Colonel Moore stated that it was an odd fact that, although many living architects had contributed to the promotion of the Bill, it would not bring them any financial remuneration, but instead would safeguard architects of the future. We had, he continued, a Bill calculated to bring distinction to our streets and public highways, peace to our countryside (good-bye to bungaloid growths!), and to mark the end of the blot on our civilization —the slums. It would, in fact, generally improve the whole standard of architecture.

HOUSING, A NATIONAL CONCERN

Housing is the most important architectural subject of the day. Not houses, but housing—planned housing. It was discussed by the National Association of Building Societies at their Edinburgh meeting; by a conference at Llandudno last week; and by the L.C.C. at the conclusion of another year's effort towards housing London's millions. Two distinct points of view emerge from these discussions : the public authority point of view, and that of private enterprise, voiced through the building societies.

★

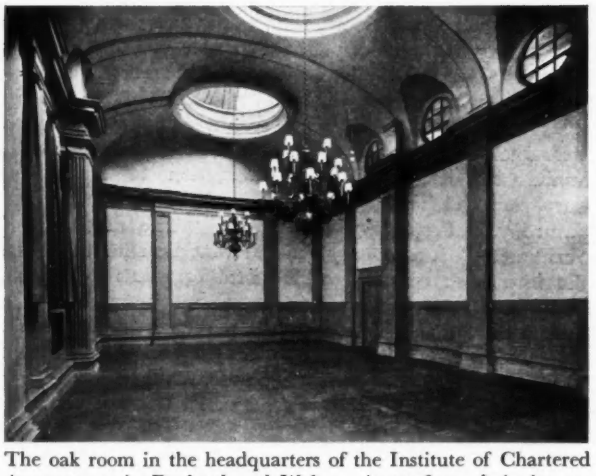
With the former we are very familiar, as we are familiar with the results of its policy; but if, as architects, we cannot always admire the results of speculative building, we cannot equally ignore the enormous potentiality of the Building Societies, a power that might well be turned to good account if it were incorporated with a policy of *widely planned* housing.

★

The suggestion of a National Housing Board is not new, but coming from the Housing Sub-Committee of the National Association of Building Societies it merits very full consideration.

★

These, I think, are its most important points, apart from the question of control and non-profit making. A National Housing Board, upon which would be representatives of both public and private enterprise, would represent the entire country, command the greatest possible supply of capital, and most importantly would be able to PLAN housing on a great scale, with greatest economy and at greatest speed. Instead of housing being provided locally with Government incentive, it would be undertaken to meet actual housing needs, irrespective of local purses and prejudices. We can see the problem nationally. Is there any really valid reason why we should not attack it nationally, with all the resources that lie to our hand, including much-maligned but very active private enterprise?



The oak room in the headquarters of the Institute of Chartered Accountants in England and Wales. Apart from designing an extension to Belcher's existing building (see frontispiece in this issue), J. J. Joass has panelled in oak the old Examination Hall and removed a gallery held to mar its proportions.

OVER-PRODUCTION ABROAD

It does not help our own business depression that the rest of the world is in the same trouble, but it is well to know the facts about other countries, and there is no better way of finding the facts than through the books on economic conditions issued by the Department of Overseas Trade. I have just been reading the new issues relating to America and Belgium, both revealing a condition of depression resulting from the slump in securities and the policy of over-production.

★

This is especially noticeable in the U.S.A., where the building industry has absorbed so great a proportion of labour and capital. The slump has been as heavy as the boom itself, and over-production has left its train of empty premises of all kinds, together with a corresponding depression and high figure of unemployment. Belgium was the last to be affected by the world slump, and will probably recover more quickly. Cement and bricks, it should be noted, only show increases in the export column relating to the United Kingdom.

THE BODLEIAN ADDITIONS

Why is it that architects should have to be reminded of their vocation by laymen ? I experienced something of shame in reading a letter to *The Times* from Professor Julian Huxley, pleading for the designing of really contemporary architecture in the building of the Bodleian Library additions. As he says, we, " the Anglo-Saxon nations, seem determined to keep the dead hand of the past on the architecture of churches and of colleges." In Oxford particularly does this stupid taboo serve to deny the spark of all originality, all real truthfulness whatever. Every year, as new buildings rise, Oxford is buried still deeper within the pile of meaningless, imitative, repetitive works. Oxford, where Wren performed marvels of ingenuity and mental bravery ; where the mixture of styles proves the right which belongs to every artist to build and design as he best knows, and not in a manner sanctified by dull men as collegiate, ecclesiastical.

BRITISH PICTURE POSTCARDS

Some months ago I published an illustration of the correspondence cards sold at Swiss Post Offices, and commented on the difference between our own dull pasteboards and these beautiful examples of commercial art, on each of which was printed, besides the stamp and decorative border, a little view of some famous Swiss landscape. Last Thursday, in reply to a question in the House, the Postmaster-General replied that he was considering the sale of picture postcards as a means of advertising British health resorts. Perhaps my little paragraph may not have been without effect after all. ASTRAGAL

No. 52 GROSVENOR GARDENS, VICTORIA, S.W.

Yates, Cook and Darbyshire, architects; Sir Edwin Lutyens, architect to the Grosvenor Estate



The main entrance from Grosvenor Gardens. It leads to the hall illustrated below.

IN designing this new office building the architects have used to the maximum advantage the prescribed height laid down by the L.C.C. It consists of nine floors and a basement, and stands on a corner site occupying an area of over half an acre, with a total floor space of 2½ acres.

Eight of the upper floors are available as offices; and each contains about 10,000 sq. ft. of floor space, which may be subdivided into large or small units. On the ground floor the floor space is approximately 14,000 sq. ft., and this also can be subdivided to meet tenant's needs. The ground floor has been designed to make it particularly appropriate for use for a banking and insurance or a shipping and insurance agency, or for showrooms for engineering and other products. The available frontages are: to Grosvenor Gardens, 132 ft.; to Buckingham Palace Road, 39 ft.; and to Lower Belgrave Street, 135 ft.

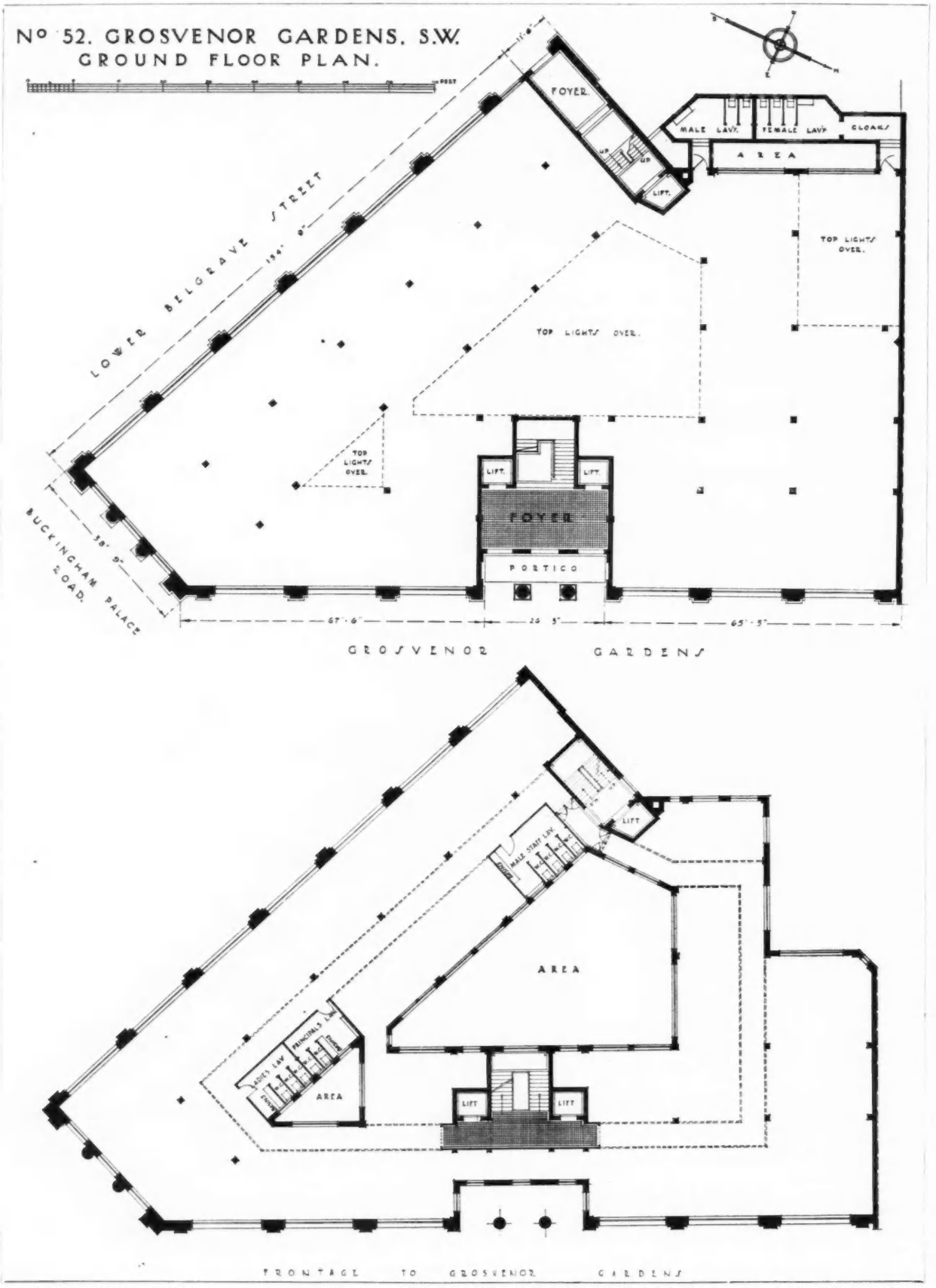
The building occupies an ideal position for accessibility to and from all parts of commercial, industrial and social London. It stands opposite to the approaches to Victoria Street and Station, and forms the most prominent feature of the district, in which are established the office headquarters of many important industries. The façades are faced with Portland stone, and steel casement windows are fitted. The roof is covered with asphalt.

The main entrance to the building is from Grosvenor Gardens, and leads into an entrance hall in which are two high-speed and self-levelling lifts, fitted with all possible safety devices. Letters can be posted on each floor by means of chutes leading to boxes in the entrance hall, which are under Post Office control.

Each floor is provided with the maximum of natural light, and parti-



The entrance hall from Grosvenor Gardens. There are two passenger lifts; and two letter-boxes into which letters can be posted by means of chutes from each floor.



No. 52 Grosvenor Gardens, S.W.] [*Yates, Cook and Darbyshire, architects; Sir Edwin Lutyens, architect to the Grosvenor Estate.*

Ground- and first-floor plans. There are eight office floors and a basement. The plans take the fullest advantage of the available street frontage and the maximum of natural light is obtained. All floors are arranged for subdivision into large or small units.



No. 52 Grosvenor Gardens, S.W.]

The façade to Grosvenor Gardens. The building occupies a corner site opposite to the approaches to Victoria Street and Station. W. C. H. King was the sculptor.



[*Yates, Cook and Darbyshire, architects; Sir Edwin Lutyens, architect to the Grosvenor Estate.*

The façades to Lower Belgrave Street and Buckingham Palace Road. The building is faced with Portland stone and has steel casement windows. The roof is of asphalt.

cular care has been taken to provide clear access to lifts, staircases and sanitary accommodation. Each floor has ample separate sanitary accommodation for principals, male and female staffs. Dressing-rooms with bathroom accommodation are also provided for the convenience of tenants. There is also a secondary entrance to the building from Lower Belgrave Street, the corner entrance from Buckingham Palace Road giving access only to the ground floor.

A tenant is put to no expense beyond rent, which includes office and window cleaning, heating, rates and water, porterage, services (lifts, corridor, sanitary, etc.). In the basement, 12,000 sq. ft. of accommodation are available for subdivision and letting with the ground floor.

As will be seen from the photograph and drawings on this and the facing page, the District Railway runs through the site from east to west. The crown of the tunnel arch is about 2 ft. above basement level of the new building and cuts the basement into two portions. The carrying of that portion of the superstructure directly over the tunnel was accomplished by spanning the tunnel with deep plate girders, each of an approximate length of 50 ft. and ranging from 7 ft. to 9 ft. in depth. The girders are fixed in pairs, each pair being 3 ft. 10 ins. between centres, and six pairs of these girders were required. The centres of the girders were primarily fixed by the position of stanchions carrying the superstructure, while a further consideration was the railway company's request for access to the inside of the girders for maintenance, painting, etc. The secondary beams for the ground floor are connected to the top flanges of the girders, and on the bottom flanges are connected the main steel carrying the stores floor.

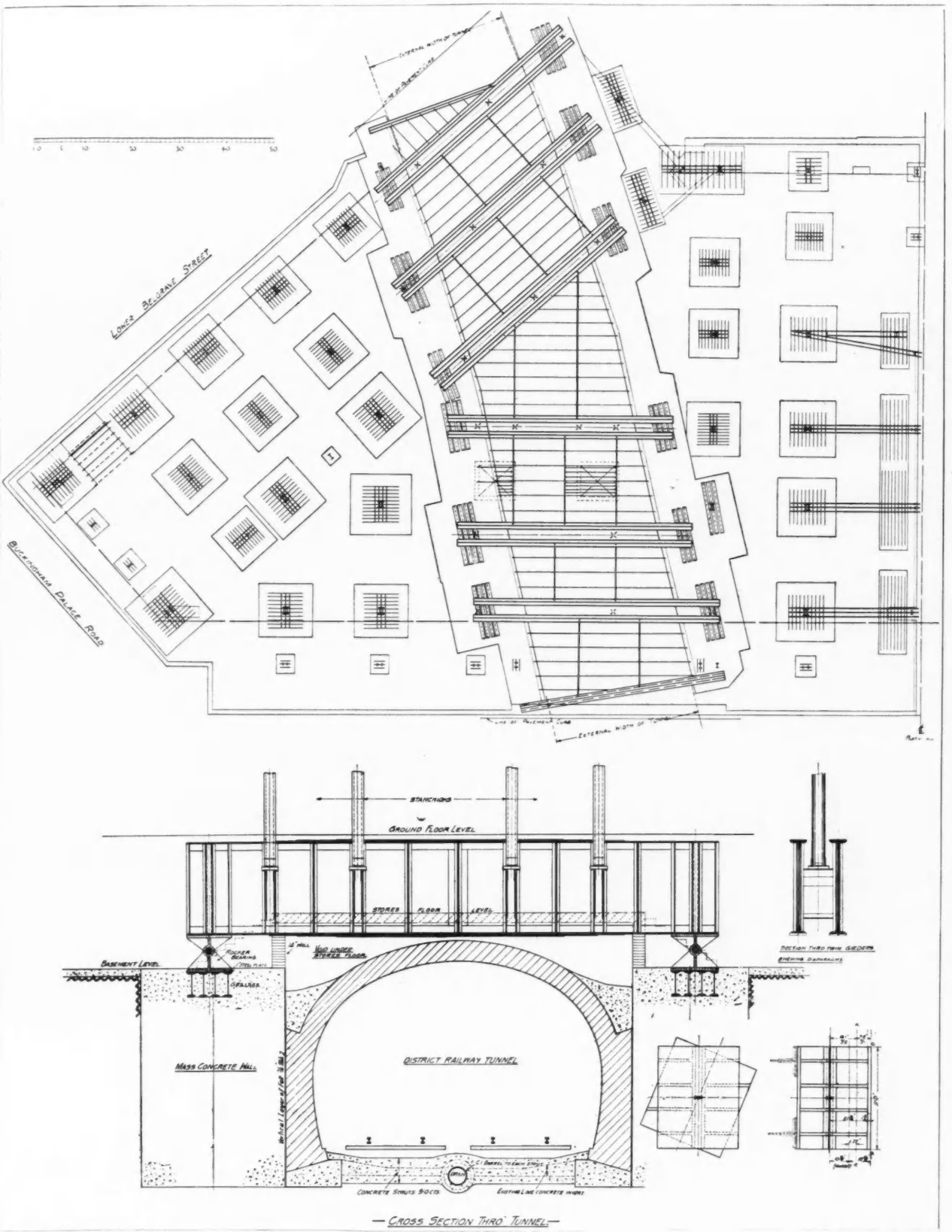
Rocker bearings were introduced as the best method of transferring the load to the foundation.

The total weight of steelwork employed in the new structure was 1,500 tons, of which 250 tons formed the bridge-work over the tunnel. The consulting engineer for the steelwork was Mr. E. W. Cook, A.M.INST.C.E.; the general contractors were Messrs. Humphreys, Ltd.; while the whole of the steel constructional work was carried out by Messrs. Smith Walker, Ltd.



No. 52 Grosvenor Gardens, S.W.] [*Engineering details.*

A photograph showing the steel girders on their rocker bearings, employed to carry the building over the tunnel of the District Railway, which traverses the basement from east to west. This photograph should be studied with the drawings on the facing page.



— CROSS SECTION THRO' TUNNEL —

No. 52 Grosvenor Gardens, S.W.] [*Engineering details.*

Plan of the basement showing the arrangement of the girders on the retaining walls above the District Railway tunnel; and a cross-section through the tunnel showing the design of the rocker-borne girders. The crown of the tunnel arch is about 2 ft. above basement level.

THE NEW "MANCHESTER GUARDIAN" BUILDINGS

DESIGNED BY HARRY S. FAIRHURST AND SON

THE new *Manchester Guardian and Evening News* building is an enlargement of the present Manchester home of those newspapers, which was an island site in Cross Street. The connection between the old and new is built on part of Strutt Street.

A primary condition of the plan was to extend the sub-basement floor to accommodate more printing presses, which are of the under-feeding type, and require, therefore, a sub-sub-basement, the floor of which is about forty feet below the street, so that a considerable amount of the excavation was in red sandstone. The paper service from the street level to the presses is by hoist, with which there is combined a weighing machine.

The layout of the presses made it necessary to reduce the number of stanchions to a minimum, resulting in very heavy steelwork in the principal floor beams.

Of equal importance in the plan is the provision of the dispatch room and loading floor at the ground level; paper conveyors on the endless-band principle bring the newspapers from the printing room direct to the dispatch counters.

The loading floor is formed of heavy steel troughing, capable of supporting any conditions of vehicular load; exits from this area serve no less than three streets, thus ensuring no loss of time in the dispatch of papers in their several directions to all parts of the city.

In order that the old building should function as long as possible without disturbance, the block fronting Pall Mall was first completed, and thereafter, by the use of temporary bridges connecting the respective ground floors and making available the new loading floor, the Strutt Street section was erected with a minimum of interference with the regular working of the establishment.



A general view of the Pall Mall façade. Photographs and a working drawing of the details of the central arched bay appear in one of the supplements presented with the present issue.

The upper floors also connect to the old building and house many of the mechanical and editorial departments. For their purpose an express passenger lift and staircase — with adjoining lavatories — provide access to the new building from the public passage, off which opens the entrance to the new premises. Another new staircase and passenger lift, with new entrance from Moult Street, is formed between the old and new buildings.

The need for large openings to the loading floor to some extent determined the free style of the elevations, and gave opportunity for the use of granite columns, which by their weight and size avoid the suggestion of spindly legs, a weakness very common in buildings whose ground floor is devoted to special purposes.

The arched window heads and low relief carving to spandrils are intended to express the restless spirit within the building; the winged figures, symbolic messengers of news, carry the torches of idealism. The spandrels to the Warren Street arch symbolize the incoming of news by flights of birds.

Restraint amounting to timidity in architectural sculpture has been too fashionable, and the modern spirit of freedom has, in this case, led to a refreshing boldness and vigour.

The Portland stone elevations generally have simple window openings and metal casements in wood surrounds, with an interesting cornice; and a low blocking course receives the roof of green Westmorland slates, in which are two stories.

The sections are interesting, as showing various setbacks owing to the rights of light.

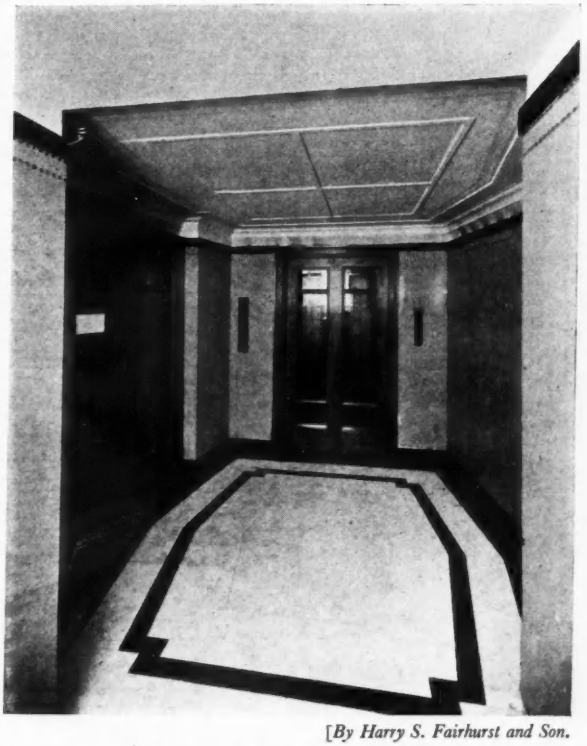


The main entrance to the editorial offices is seen on the right of this public passage, which runs through the site from Pall Mall to Warren Street. The street on the left of the granite pillar serves two of the delivery van exits from the loading floor across the road.



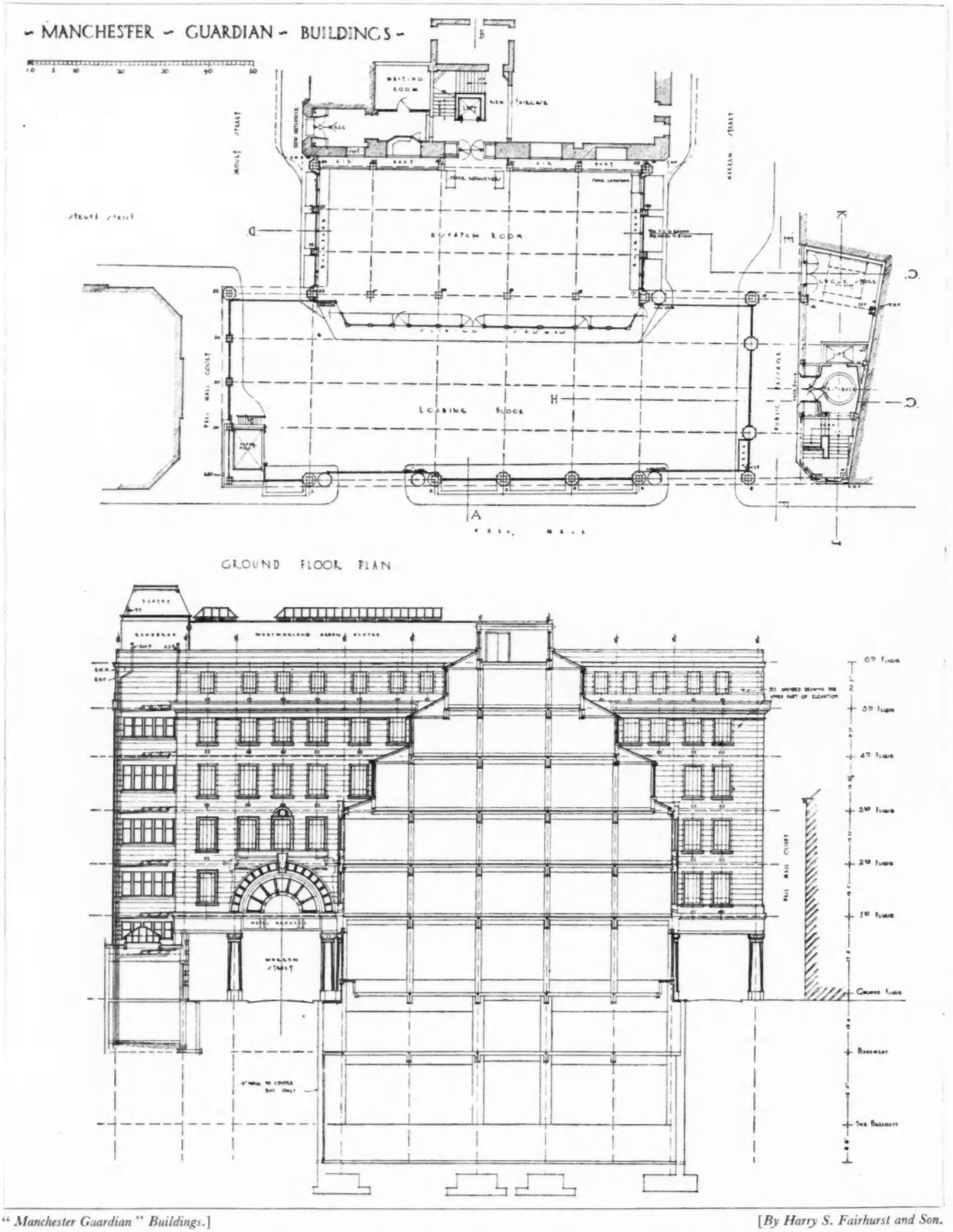
"Manchester Guardian" Buildings.]

A near view of the editorial entrance from the public passage referred to above. A stone architrave frames the doorway and the incised inscribed panel above it.



[*By Harry S. Fairhurst and Son.*

In the entrance hall. The glazed swing doors seen on the left are those shown in the adjoining illustration. In front of the camera is the express passenger lift.

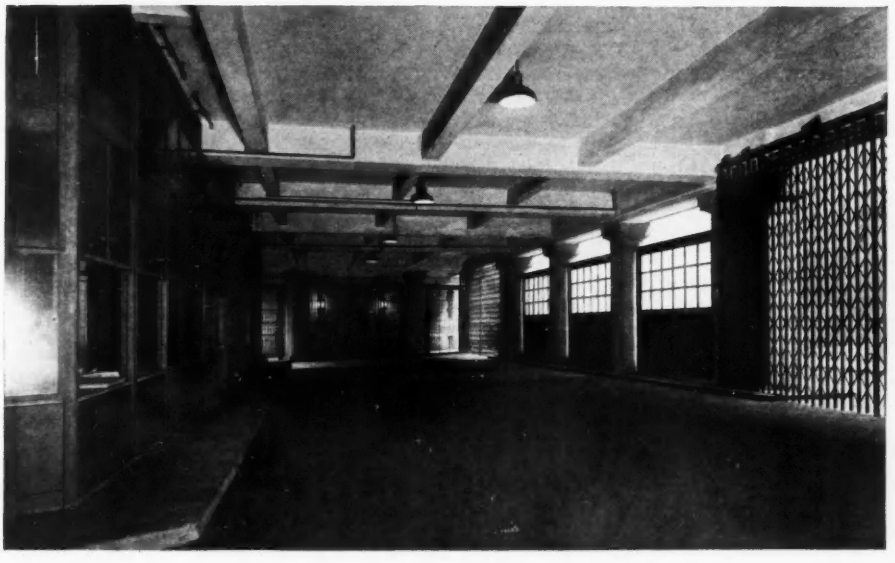


"Manchester Guardian" Buildings.] [*By Harry S. Fairhurst and Son.*

Ground-floor plan and vertical section on the line C—D. Practically the whole of the new site area at street level is given over to the purposes of distribution, facilities for which are a first need of newspaper operation. Another cardinal object was accommodation for the printing presses; hence the basement and sub-basement, reaching to 40 ft. below ground. Between these great open floors a small mezzanine is inserted with lavatory accommodation, which is repeated in the basement plan. The drawings of the upper floor spaces show $1\frac{1}{4}$-in. maple flooring on 1-in. deal.



"*Manchester Guardian*" *Buildings.*]



[*By Harry S. Fairhurst and Son.*

The upper view shows the aspect of the building from Warren Street, and should be considered with the sectional drawing, taken from the same standpoint, reproduced on the facing page. The lower was taken on the loading floor, looking towards the public passage and main entrance, and should be compared with the plan. On the left there is a glimpse of the dispatch room, equipped with sliding sashes. There are four exits for vans—two to Pall Mall, the others to Moult and Warren Streets.

Bernard Whistlow, F.R.I.B.A.: An Autobiography: iii

EPISODES OF GROWTH

BY KARSHISH

(H. B. CRESWELL)

DURING the seven years I was pupil and assistant at Thalmer's Court I do not remember, among all the many times I took up to Grig's room drawings in which I had made absurd mistakes or gone widely astray, that my master ever once allowed any sign of impatience or annoyance to escape him; and I can set an exact measure to the truth of this impression by a stupidity which, while it made me want to sink through the floor, drew no reprimand from him.

I had been with him about a year—at which time he was restoring the transept of a fourteenth-century church twenty miles out of London, which had been encroached upon by other buildings—when one morning he sent for me. The masons were in urgent need of certain details; Grig was stuck for want of exact information of a particular pier; and I was told to start off and get it and be back in time for the drawing to be dispatched that night. It was the first time I had been entrusted with such an errand, and I knew he was sending me because he thought the experience would be good for me; and I was so greatly elated that the upheaval of my hot-footed preparations upset the moral equilibrium of the office at an unusually early hour that day. I accoutred myself with levies on my friends and advice from the harshitec. Chichester asked in jealous apprehension: "Where is Whistlow going?" and was told by Garston, for his peace of mind, that I was going down to see how things were getting on at Keston—the Keston job being Chichester's special care.

"Your time will soon be up, Mr. Chichester," Garston explained to him, "and Grig probably wants Twitters to take on after you go."

I caught a train on the run; spent two hours measuring and plotting the complicated pier-base; drew the profiles full size, and came racing back, delighted with the ease with which I had performed and with the neat completeness of my notes.

When I displayed them to Grig he said: "Yes! That is very nice, Whistlow; but I must manage another way. You have measured the wrong pier!"

Grig, however, could tickle us up with merely a word when we deserved it; but that was only when we failed in our duty, and never when, by whatever stupidities, we failed in meaning well. This kindly indulgence and readiness in him to recognize honest endeavour set up in us a high standard of what was expected of us, and gave him a great advantage when we incurred his disapproval. I never had more than an admonitory word or two from him, and I should much like to know what it was he said to Tubal on one particular occasion. Tubal was voluble in his indignant justification of himself, but he would not tell us what it was Grig said that caught him so much on the raw.

Tubal, and Yeice also, were scions of titled families which, in a much more marked way than now, conferred a kind of social preciousness. Tubal satisfied the definition of snob in having a mean admiration for mean ideals. He set a higher value on hereditary rank than on anything in the world; doted on exclusive social functions; believed that to drink champagne in good company was a spiritual purification; referred to persons of rank with the reverence due to canonized saints; uttered titles of aristocracy lusciously, as though they were things good to eat, and affected a lofty fastidiousness in conduct and manners.

Thus equipped, our Tubal one day set off to take dimensions and particulars at a house near Canterbury to which Grig was designing additions. He was expected back on the afternoon of the second day; but turned up, very pleased with himself, shortly before noon on the third, and gave us a glowing account of the good time he had had. The implications are that Tubal had found opportunity to confess to a cousin in Lord Rathchurch—or whoever it was—and that thereupon snob had fallen to feeding on snob during those days at Canterbury: at any rate, he had first been invited to lunch; then to dine and sleep in the house; and, finally, to stay over for a dance on the following night. "Luckily I always make it a rule to take dress clothes with me *wherever* I go," said Tubal, with a self-approving snuffle. He was full of the charm of his hosts, and mentioned more than once an "awf'ly narce gairl," a daughter of the house, and evidently regarded his social success as a professional triumph and a guarantee of his future prosperity as an architect. He went upstairs with his notes and drawings to report to Grig, flushed with ambition: he came down again five minutes later still more flushed, but for a quite different reason.

Whether Tubal had been such a donkey as to let Grig know the excellent running he had been making with his master's clients did not appear. If he did so, it would explain the collapse of his complacency; for old Grig was not merely a human being but the son of a scientific instrument-maker as well, and Tubal supplied just the kind of boot that would pinch him. What did clearly appear was that Tubal's precious survey was so hurried and incomplete as to be almost useless.

"The old beast seems to think I'm his paid assistant," said Tubal, the authority on good manners, while Potts stood by and Zaza slogged away in his corner.

"Go down and propose to the 'awf'ly narce gairl,'" said Garston brutally. "Then they'll take the job away from Grig and give it to you."

Chichester unpinned his drawing, as an excuse for seeing Grig, and slipped away upstairs. He came down again shortly, frowning.

"He wants to see you, Johnson," he said; and we all knew Chichester had been trying to get himself sent to Canterbury; but it was Zaza, the harshitec, with his moustachios well waxed, and looking, in top-hat and frock coat, like a little rotund piano-tuner on his rounds, who two days later bustled off to make good Tubal's omissions and discourage hospitable ambitions—for both of which duties he was perfectly qualified.

Zaza was a good friend to all of us pupils. He was the sort of man who, though he had confused ideas of some day getting on his own legs, could never be anything but an assistant to others. At thirty-two he earned a salary of one hundred and sixty pounds a year, and was entirely employed on soul-destroying odds and ends which were too detestable for Grig to tackle—tiresome bits of contriving and construction, and the botchings necessitated by the oversights of others. His drawings usually called for more use of india-rubber than of pencil, and were not lovely to look upon; but he was unsparing in the patience with which he would answer our questions and unravel our difficulties, as he was also in his endurance of our persecution. I should feel some remorse on this point if I did not remember how freely he laid himself open to our jokes, and reflect that, on the whole, he enjoyed them—or at least enjoyed the boisterous good-fellowship in which they flourished.

His absurd admiration of his own work, when he had an opportunity of making an attractive drawing, rendered

it impossible for us to resist sometimes unpinning the sheet while his back was turned and refixing it a little out of the square; and once, when he was at lunch, Garston threw a quantity of ink on a sheet of paper, cut out the stains with minute care and arranged them on Zaza's precious board. Our little harshitec came trundling back—he walked always as though he were being pushed along—and at once hurried to renew his admiration of his own performance; yet when he viewed the disaster he said nothing, but at once set about considering how best to put things right, and it was only when he tentatively applied a bit of ink-eraser that he learnt the truth. He then brushed the litter aside and settled down as if nothing had happened, just as he did when repulsed by water blown at him down Grig's speaking-tube, or when he noticed his lines going awry. I only once saw him really annoyed. He brought a rose to the office and, in his characteristic way, was so demonstrative in his enjoyment of its scent that Garston went out to get snuff, which he shook into it. On that occasion Zaza so abashed us by the dignity of his disapproval that it is extraordinary to recall the picture of the little bearded man, as I several times saw him, rolling about on the floor in struggles with Garston and Yeice, who had declared their intention of clipping his moustache. This threat was, of course, merely the excuse for a rag; but Zaza always seemed to regard it as a serious menace, and the triumph of preserving his waxed ends inviolate appeared to reconcile him to attempts at raping them even when, as once happened, he lost the brace-buttons on the back of his trousers in the encounter.

This roistering may seem to point to disloyalty in us and to lack of discipline in Grig's office; but such was not the case. We, the pupils, were little more than schoolboys, and the occasional rioting, and the free interchanges of opinions and personalities, was a natural reaction to sedulous work and part of a healthy unanimity. We one and all identified ourselves with Grig's interests and had the sense of sharing in his work. The reason Grig himself rarely came into the drawing office was, probably, that he knew it might be embarrassing for him to do so. He had once been a pupil himself; he had confidence in his power to command our respect for himself and to sustain our respect for ourselves, and that confidence we did not abuse in the process of self-education which the pupilage system involved. I have elsewhere seen playing cards in use by paid draughtsmen; and once knew an architect who had no pupils, but who found a set of boxing gloves, and chessmen and a chess-board, hidden away in his drawing office. Anything of this sort would have been beyond imagining at Thalmer's Court in my day.

It must be remembered, however, that there was a certain point in Tubal's outraged: "he seems to think I'm his paid assistant." The pupilage system—if it was a good system, as I hold it to have been, for aspirants to a career in architecture—was considered even an ideal system by the established practitioner who, under it, was paid by those who did work for him, for which he was paid by those for whom the work was done: in fact, it is probable that such economic luxury was nowhere else enjoyed unless by Miss Sarah Thorne, of revered memory, who at about this time was running a theatre at Margate, where audiences paid her to be allowed to see actors who paid her to be allowed to act. Forms of Articles of Pupilage are still supplied by the Royal Institute at one and sixpence a time; but Grig preferred that the arrangement should be renewable from year to year, so that if there were grounds for dissatisfaction on either side, it could be terminated. In my own case, an interchange of letters fixed my total term at three years, with an annual premium of seventy-five guineas. In other offices the term was often five years, and the premium one initial payment of from 100 to 500 guineas.

The whole of my early years in London are crowded with events which I know to have been potent for me, though they are not likely greatly to interest anyone else; but before I pass on to record the adventures of my life as an individual I must say a few words of a man whose influence in those early days did much, as I now realize, to awaken that individuality; for it must not be forgotten that the person who scribbles these lines is a quite different person from the Twitters of those far-off years. Twitters, as I now see him, was merely an egg. It was the incubating contact of Angus MacVittie that first began to hatch him out.

I have already mentioned MacVittie as one of Grig's four paid assistants. He was not, however, a permanent member of the staff, but one of the men who came and went as the needs of the office called for many draughtsmen or few. When I went to Thalmer's Court MacVittie was caged alone—so to speak—in a small room on the half landing; and there, at all hours, we pupils attended to receive instruction in life and in the practice of architecture, and I more often than any, for I was the most callow, the most feverish for information and the most fascinated by the man. He was about forty-five, with a rugged weather-wrinkled face, a mat of brindled red hair, a great wiry moustache that covered his mouth, and huge shaggy eyebrows; and his genial friendliness and warm good-nature was combined with the most devilish cynicism I have ever in my life encountered. One of his eyebrows drooped heavily, but the other he held lifted; and I can see now the round, clear, pale-blue benign eye—which was exactly like one of the glass marbles or "ally tors" of my childhood—with which he held us petrified with dreadful accounts of his relations with his wife. It would be some amelioration of his treachery if the whole of these confidences were, in fact, lies; but, whether they were or not, he warped my young idea of womanhood so that I am not sure that I have ever yet completely recovered from his ministrations. He was, however, undoubtedly a humourist, for every recital—or lesson, as we regarded it—ended with a slow, deep-chested clicking chuckle that sounded exactly like water being poured from a bottle; and the more cruel and detestable the anecdote, the more prolonged the chuckle. Of course we laughed too: the dreadful part of MacVittie's teaching was that you laughed when the healthy impulse was to curse and tear your hair.

For instance, it was perfectly clear from many signs that MacVittie—who had great gifts and the mature powers of an established architect—had come on hard times, and was in part indebted to Grig's kindness of heart for the position he held; yet MacVittie showed us a drawer in which there were a number of sheets of his half-finished details, and told us, with a horrible chuckle, that he had dashed these off when Grig was away from the office so that he could go easy with his work, and, when Grig hinted he was not getting much done, could pull out some of the sheets as evidence of his industry. He also told us that at Christmas Grig had given him a present by adding to the amount of his cheque; and had afterwards by an oversight continued month by month to pay him the increased sum. MacVittie had said nothing, and he seemed more to enjoy Grig's ignorance of the overpayment than his own benefit from it. When after many months Grig found out what had been happening, MacVittie was quite undisturbed.

"Ah weel, I was going to ask ye for a rise in any case," was what he said; and he chuckled with prolonged satisfaction while he told us.

MacVittie's lessons to us pupils were imparted somewhat as follows (his slow speech, deep sincerity of manner, benign blue eye and rich Scottish burr must be imagined):

"Ye'll pick up a lot of worrk if ye mind and keep handy to public-houses an' the like; or maybe it'll be a hotel

where there's a lounge with a barr and some nice young women to keep things lively and prevent the company sitting away alone in corners. I mind how I got two hunder pounds one time, and next to nothing whatever to do for it."

"What! In an hotel lounge?"

"Aye. Just a bar-room, as it might be over yonder."

"Was that in Scotland?"

"Oo, aye. In Glasgie. It was after I'd set up in practice with a partner, and there was not enough worrk for the two; and I would go out and round and about to the public-houses and hotels, and teaching at the Sunday schools and all sorts, here and there, to get it. Weel, there was a friend of mine, Donald Taggit, that had been at the school I was at when I was a boy; and one night I found him fou' at the Bannock Hotel, in the Burnside Road, roaring and shouting about the money he was going to mak' with a' the pedigree Aberdeen terrier dogs he was breeding; so I just sat along with him, and we had two or three to keep out the damp, and I got talking to him how he'd feel the need of a proper house, and kennels for the dogs, if he was going to grow into a gran' big man at that business; and he got to saying the fashion he would have this and that in his house, and I to making sketches just on the hotel note-paper at a table there was. And it was a grade big fine gran' house he would have, with a tower and a dam' grade boiling copper, and a larder for the grade fine joints of cab horse he would hang there, and kennels for I don't know how many; and by the time I had settled everything he was thinking I was his mother, and had his arms about ma neck singing to me, before I could get him away out and put him on a Kelvin Grove tram—*Glug—glug—glug—glug*."

"But you said he gave you two hundred pounds?"

"Oo, aye: but when you're a little older you'll find what whiles you'll have to wait before you get paid. It was five or six days when I had the plans and elevations all drawn to scale and inked in and coloured, and the specification ready; and then I let him have word of how the business was going in case he might think there was any delay about it, or in case there might be any deefficulty crop up."

"Was there any?"

"Oo, aye! There was a deefficulty. He said he had no mind to build any sort of house at all, and that it had just been all clack."

"Then there was nothing more to be done."

"No. Naething more—except just to tak' and pay me two hunder and seventeen pounds for ma professional services."

"But he said he never ordered you to make any plans?"

"Aye! He said that: but, I'm verra businesslike, and there was his signature on the sketches."

"So he had to pay?"

"Oo, aye: he had to pay in the end, after he had come to ma office roaring that he'd be ruined, and set an attorney to argue for him; but I treated him verra leniently—I accepit two hunder pounds just out of conseederation for all the law expenses he had been put to."

"But surely it was most unfair he should have been made to pay?"

"Unfair! It's just the law! When you've been in practice two-three years, and had a few sma' deefficulties of your own, I'm thinking, you'll have a little more conseederation for other architects—*Glug—glug—glug—glug*."

NEXT WEEK—IV: MY FIRST JOB

The previous instalments appeared as follows:

May 27. i: I Am Articled.
June 3. ii: Episodes of Pupilage.

A COTTAGE AT BOSHAM, SUSSEX

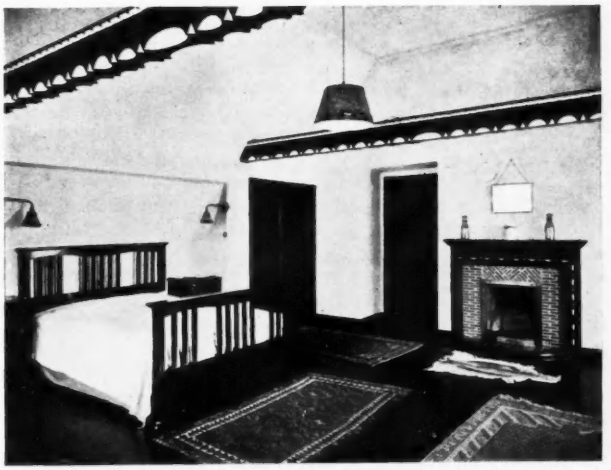
DESIGNED BY IMRIE AND ANGELL



A general view of the main front, facing south-east. This side of the house, finished with weatherboarding, should be compared with the photograph of the garden elevation, reproduced on the facing page. A warm garage is secured by its incorporation in the main structure. A glimpse of the water can be seen on the extreme left.



The dining-room, looking towards the fireplace, which has a tiled surround within a carved wood frame, with side pilasters and a shallow arched recess above.



The best bedroom, showing, on the left, a recessed cupboard with folding doors, and, overhead, decorated beams, the motive of which is continued for the fireplace.

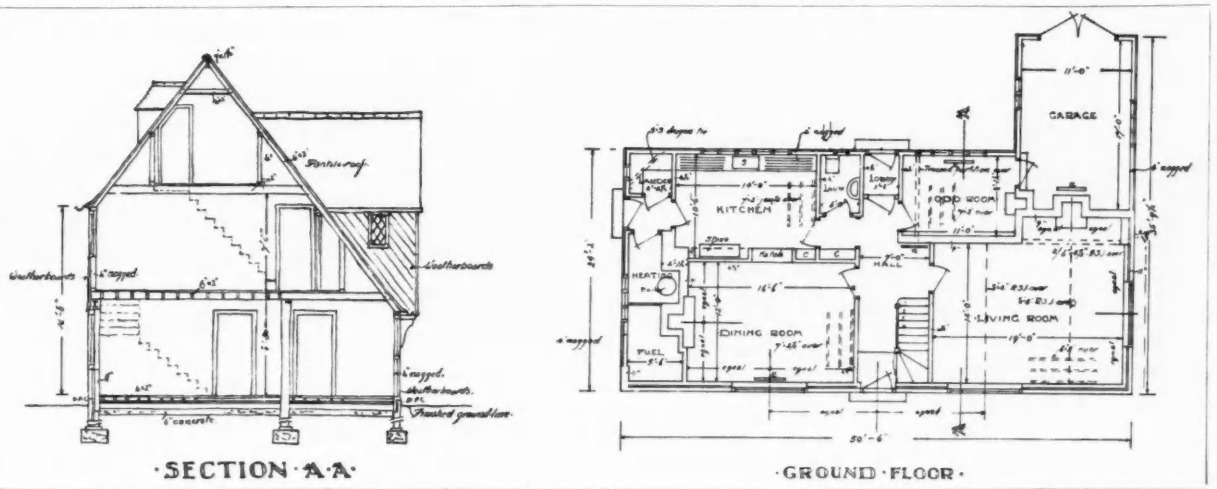
"SOUTH MEADOW," Bosham, is a cottage built on a waterside site, overlooking an arm of Chichester Harbour; six inches of concrete were therefore laid down, with vertical and horizontal damp-proof course, as shown in the section. A garage is incorporated in the ground floor, with bathroom and lavatory above. Kitchen and dining-room are side by side; a living-room and odd room lie on the other side of the central hall and stairway. On the first floor are three bedrooms, and in the attic two boxrooms.



The north-west or garden front, where brick finish is employed up to first-floor level. The dining-room is on the left and a large living-room on the right of the central door.

The exterior is finished partly in brick and partly in weatherboarding fixed to 4-in. nogged walls. The roof is covered with pantiles. Metal casements are fitted in wood frames and glazed with leaded lights.

The placing of larder, etc., between the outer wall of the north-east end and the adjoining inhabited rooms makes for their protection from cold winds.



"South Meadow," Bosham, Sussex.] [By Imrie and Angell.

The architects' drawings of cross-section and ground plan. Advantage has been taken of the deep roof to fit in recessed cupboards to the three bedrooms on the first floor. In the attic are two boxrooms.

LETTERS FROM READERS

Architects and Builders

SIR,—The correspondence in your JOURNAL during the past year cannot fail to have conveyed the impression to your readers that the views of the R.I.B.A. and the Institute of Builders were widely divergent on such matters as bylaws, registration and the form of contract.

Misunderstandings easily arise and, if not removed, may develop into permanent distrust and definite antagonism.

In our opinion the building industry, in which our respective Institutes are so deeply concerned, is too important and far-reaching to allow misunderstandings to retard its progress, and it is therefore with great pleasure that we are able to inform you that, as the result of informal conferences which have taken place between our respective bodies, these differences have been removed. We are confident that the goodwill and public spirit of our members will ensure that for the future our efforts towards the advancement of education and the progress of building in general will be inspired by mutual confidence and understanding.

BANISTER FLETCHER
(PRESIDENT OF THE R.I.B.A.)
N. L. ROBERTS
(PRESIDENT OF THE INSTITUTE OF BUILDERS)

The Registration of Architects

SIR,—I have received a very large number of communications from municipal surveyors on the above subject. Many of these communications are in the nature of an inquiry as to the position of municipal surveyors and engineers under the Architects (Registration) Bill when it becomes an Act.

The Bill, of course, is for the Registration of Architects, and not for the Registration of Surveyors and Engineers as such. I am aware that many municipal surveyors are responsible for the carrying out of work of an architectural nature for their authorities, e.g. housing schemes, pumping and power stations, pavilions and so on. In some cases, however, the actual design and relevant drawings are executed by architectural assistants working under the Borough Surveyor, and, although the plans bear the latter's name, the work is actually done by someone else. In any case the design of (say) a housing scheme does not necessarily denote a skilled knowledge of architecture.

The qualifications for registration, as laid down in the Bill, include the following paragraph :—

"(*b*) that his application for registration was made within two years from the commencement of this Act and that at the commencement of this Act he was, or had been, practising as an architect in the United Kingdom."

I am assured, officially, that a salaried or employed architect is included in the term "practising as an architect."

Registration is permissive, not compulsory, and it may be added usefully that there is nothing in the Bill preventing any local authority, corporate body or *person* from performing any act or operation in connection with the design or the construction of buildings which such local authority, corporate body or *person* was entitled to perform before the passing of the Act, provided such persons do not use the title "registered architect" unless they are, in fact, registered architects. For instance, there is nothing *in the Bill* to prevent a Borough Surveyor from using the title "Architect to the..... Council." Again, an architect who does not desire, or who does not consider it necessary, to register, is still entitled to use the title "Architect."

G. B. J. ATHOE
(SECRETARY, INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS)

The Enterprising Builder

SIR,—Mr. Gloag, in his letter, printed in your issue for May 27, blames the speculative builder for a misuse of new materials, and gives lack of æsthetic sensibility as the cause. This, of course, is true up to a point, but there is, I think, another cause, a wider and more serious one, the æsthetic ignorance of the very large majority of the population.

The builder, like his confrères in other trades, supplies what is wanted, and the public gets what it deserves. Whether one looks to the building trades—to the "sex talkies,"—to the hysterical false sentiment of the sensational press, to the dirt track or any other social activity, one is struck by the deplorable taste of the general public on the one hand and the unscrupulous exploitation of it on the other.

The same thing applies to a misuse of the actual new building materials which science gives us today. It is misapplied not so much through ignorance of its functions, as a desire to exploit it to the best selling advantage.

To this brake on good design is added an Englishman's innate sense of property summed up in that somewhat offensive proverb, "An Englishman's home is his castle." This leads to disorderly layouts (an expression of individuality), and selfish enclosure. The proverb is often taken literally, and the family in effect becomes enclosed in a box of tricks which is a cross between a five-roomed castellated fortress and a Tudor bijou monstrosity. In these surroundings the family grows and multiplies.

How this state of affairs can be rectified beats me, seeing that the majority are probably satisfied. To try and educate the builder, even in three or four generations, would be a hopeless affair unless an architect, by which I mean a chartered architect, could be a builder too. It is the public who must be educated, through the schools, the press and such bodies as the Design and Industries Association.

Again, to put the matter into the hands of an æsthetically uneducated local authority, even working through an architect, would probably result in the wrong architect being given dictatorial powers; while to put copy-book designs into the hands of the speculative builder would merely give rise to the reproductive sort of work that was turned out by the "Jacobethans."

No—public education or National Control through the R.I.B.A. would appear to be the only solutions.

W. R. B.

Ventilation of Cavity Walls

SIR,—I trust the following experience will not depress Mr. Gunn on his road to Waterloo. Fortune may be kinder to him than to me. Some years ago I built a village hall and rendered the outside of the 9-in. walls with a waterproof cement and sand mixture. The whole of the moisture seemed to dry out through the internal plaster, and, although now dry, the hall was damp for some eighteen months after completion. If the walls had been hollow, the drying would have been quicker, and, incidentally, a grand piano would not have been ruined.

The fear of damp crossing hollow wall ties through droppings seems to be much exaggerated, especially if the outer skin is built in cement. I have only known this to happen in two cases, and in each the damp was caused by a brick fragment lodging on the tie. Cement is, after all, a non-conductor of moisture, and will not carry damp to the inner skin by capillary attraction alone.

LL. E. WILLIAMS

Under-water Lighting

SIR,—With reference to the illustration of a country house swimming bath in the JOURNAL for June 3, you state that it is believed that no other swimming bath in England is provided with under-water lighting. Two years ago we incorporated this in a swimming bath at Woodfalls, Hampshire.

We believe also that the bath at Grosvenor House and the private bath at Lympne have similar lighting.

HUMPHRY DEANE

THE SPECIFICATION WRITER

Rural Cottage Specifications: Type vi. For a Poultry Farm

BY EDWIN GUNN

THIS design is suggested as suitable for detached poultry farms on open chalk downs or sandy heaths, where minimum cost is obligatory and a dwelling on one floor is thought more convenient and less conspicuous. The building as planned should be executed for between £300 and £350 in most districts, and makes a comfortable dwelling. Grey roofing is specified, and is generally both cheaper and more pleasing than the so-called red types of asbestos-cement slate, while the type of square form with slightly chamfered bottom corners has a less "cardboard" effect than the common diagonal type. In some districts where red roofs are more harmonious, the colour known by manufacturers as "rustic red" (a sort of rust brown) may be more suitable. In all cases the ridge and hips should be of similar colour to the roof, and the prevalent custom of picking out casements and frames in contrasting colours (usually "dried blood" and white) should be utterly taboo. Internally, with the wallboard lining laid horizontally in manageable widths, the joints covered by skirting, chair rail, picture rail, and ceiling fillet, there should be few joints vertically which cannot be covered by architrave mouldings or angle fillets, and the fidgety effect of frequent vertical strips can be avoided. The cover-strips or mouldings should be painted or distempered similar colours to the adjoining surfaces.

SPECIFICATION

WALLS.—The whole of the building bricks used are to be good, hard, well-burnt common bricks; or approved concrete blocks (not clinker or breeze) may be used for base wall below timber framing, but not for chimney or work above floor line. Sound second-hand bricks may be used.

Build brick or concrete base 4½ ins. thick in stretching bond, finished level to receive timber framing. All joints to be well filled and struck off externally with a neat flush face. The chimney openings to be formed as shown, and flues gathered over and carried up with easy bends to 9-in. by 9-in. flues, parged and cored, and finished at top with double tile creasing and 9-in. flue lining as pots. Build in cambered and caulked chimney bars 2 ins. by ⅝ in., and turn one ring arches over. Form open brick hearths in scullery and one bedroom.

External framings to have 4-in. by 2-in. cills, heads, studs and braces, all properly framed together, morticed at head and cill and securely nailed. To be covered externally with sawn fir rebated weather-boarding, cut feather-edged (two out of 1¼ ins. by 7 ins.), lapped 1½ ins., and bottom nailed with 2-in. cut nails to each stud, so that nails pass through each board singly just above lap. Lowest board to lap 1½ ins. over brick or concrete base.

All external faces to be underlined with approved asphalted sarking felt below the boarding, lapped 4 ins. at horizontal joints and neatly fitted to openings.

Studs to be spaced at 16-in., 18-in. or 24-in. centres, and doubled at internal corners for nailing wall boards. Put 3-in. by 1½-in. angle fillet at each corner externally to receive butt ends of weatherboards and well lap felt underlining round angle below same.

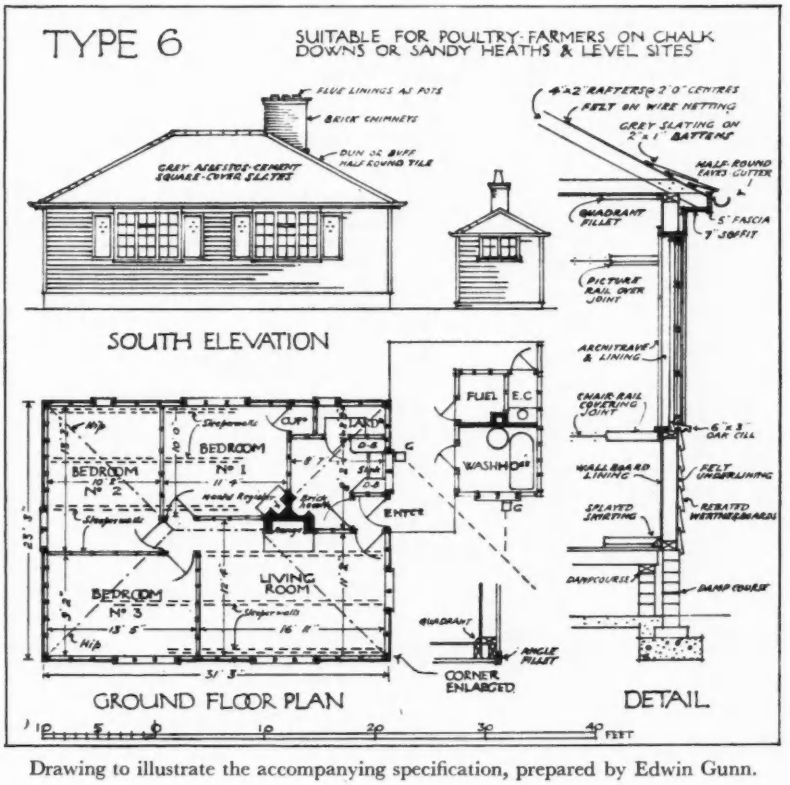
Lay roll bitumen damp course of approved manufacture on all brick walls at level below timber framing. Build in six air bricks 9 ins. by 3 ins. for ventilation of space below floors. Build honeycomb sleeper walls not more than 4 feet apart for support of floor joists.

ROOF.—Cover the roof with grey square-cover asbestos cement slates with clipped corners, laid in accordance with the makers' instructions and stoutly nailed to 2-in. by 1-in. sawn battens spaced to suit centres. Eaves to be bedded on an asbestos-cement strip as under-eave course. Execute raking cutting next hips. Cover hips and ridges with dun or blue half-round *tile* ridges, bedded in lime and hair and pointed in cement. Supply plain hip hook of ¼ in. by 2 ins. iron 15 ins. long to each. Flash chimney stack with 5-lb. lead apron flashings, wedged and pointed into brickwork and closely dressed on to tiling so as to lie 5 ins. on surface.

Construct roof with 4-in. by 2-in. rafters, 2-ft. centres, notched over heads, spiked at head, purlin and ridge. Purlins to be 4 ins. by 3 ins., strutted from partitions or binders at intervals not exceeding 6 ft. Ridge and hips 7 ins. by 1 in., struts 4 ins. by 3 ins., ceiling joists 4 ins. by 2 ins., with 6-in. by 3-in. binder where span exceeds 6 ft. Finish the eaves with 5-in. by 1-in. fascia board and 7-in. by ¾-in. soffit. Cover the roof with 3-in. mesh galvanized rabbit-wire netting and sarking felt, as described for walls, nailed to the rafters and secured in position by fixing battens for tiling.

INTERNAL LINING.—The wall boards, except in scullery, are to be laid horizontally in three heights, the lowest 2 ft. 6 ins. wide to line with window boards, the intermediate 4 ft. wide, and the upper 1 ft. 6 ins. wide, forming a frieze. Joints to be covered by skirting, chair rail, picture rail and ceiling fillet, and vertical joints to be avoided as far as possible.

WINDOWS.—Windows to be 1½-in. rebated and square casements with 1¼-in. bars, and set out to standard



Drawing to illustrate the accompanying specification, prepared by Edwin Gunn.

glazing square throughout. To be hung with 2-in. iron butts to 4-in. by 2¼-in. rebated and throated frames and 6-in. by 3-in. double sunk rebated, throated and twice grooved oak sills, and fitted with plain malleable iron cockspur and staybar to all opening lights. Fit cover fillets externally and narrow linings and window boards internally.

Fit to south windows 1½-in. framed sun shutters having ½-in. panels. Hang same on Parliament butts and fit each with small iron neck bolt working in block fixed to hold same open, and to sinking with plate in sill when closed.

DOORS.—External doors to be 1½ ins. framed, ledged and braced, covered externally with 1-in. grooved and tongued V-jointed boarding and fitted with boldly projecting weatherboards to drip clear of brick threshold. Hang same with 3 2½-in. steel butts to 4-in. by 3-in. wrought rebated frames, and fit with stout rimlocks and furniture in dead black iron and two stout iron barrel bolts. Doors to E.C. and fuel store to be 1 in. ledged and braced, fitted with Norfolk latches and hung with 18-in. cross garnets. E.C. door to have 2 ins. space at bottom and 6 ins. at top.

Internal doors to be 1½-in. stock doors, 2 ft. 6 ins. by 6 ft. 6 ins. to rooms, and 2 ft. by 6 ft. to larder and store. To be hung with 2-in. butts to linings before specified and fitted with dead black iron rimlocks and furniture.

EXTERNAL PAINTING.—All gutters, downpipes, and other external ironwork to be freed from rust and given one coat of oxide of iron before fixing and two coats standard grey bitumastic after fixing. Casements and frames, fascia and soffit, to be knotted, primed, stopped and painted two coats in addition with indestructible paint finished broken white. Doors and frames and sun shutters (both sides) to be similarly painted, finished bright Brunswick green. Weatherboards to be twice creosoted. Brick or concrete base up to level of boarding to be twice tarred with hot tar and pitch.

"Extras" in Contractual Work

BY A BARRISTER-AT-LAW

IN building contracts the parties often find it desirable to decide during the progress of the work upon some deviation from the original plan. The properly drawn building contract should, and generally does, include among the main conditions of agreement between the building owner and the contractor a provision for the adjustment of errors and omissions in the bills of quantities and settlement of "extras," as well as a provision for deviations from the drawings and specification, under the architect's and employer's order, and the settlement of additions and omissions.

In such cases, with a competent architect, upon whom the employer and the contractor can equally rely, a deviation that has become necessary presents no difficulty and should lead to no trouble upon completion and payment, for in such circumstances the building contract itself would doubtless have provided that the decision of the architect on all matters relating to the work should be final and that payment should be made on his certificates.

In most building contracts an architect is placed in the position of a quasi-arbitrator in respect of certain matters, and, in such cases, he is bound to exercise his judgment impartially between the parties to the contract, namely, the employer and the contractor. His position, indeed, is analogous to that of an arbitrator, and whilst so acting he must be an honest judge and not allow himself to be interfered with by the employer.

It may be stated that the House of Lords has clearly recognized that an architect who is not an arbitrator, but one acting in a quasi-judicial position, should take great care in holding any communication with the employer that there is no interference with his powers under the contract; although it is quite true to add that on certain occasions during the earlier stages of the contract the architect may be acting as the agent of the employer, paid by the latter to safeguard and look after his own especial interests.

The meaning of extras. It is only possible, of course, within the limits of this short article, to deal briefly and generally with a few of the points which arise in connection with the questions of extras and deviations. It may be said at once that when there is a deviation from the original plan by consent of the parties the rule as to the payment to the employee for the extras so entailed is that the original contract is to be followed so far as it can be traced.

The term extra is sometimes applied to work and materials entirely outside and quite independent of the contract itself. But, to be correct, as a learned authority points out, it should be applied only to work done in a different method from, or to work additional to, the contract; yet of a nature necessary to render the contract work complete, and such extras are subject to the conditions of the contract.

Dictum of a Lord Chief Justice. It was laid down by a former Lord Chief Justice in one particular case that "the word extra is not used in the sense of money payment, but in the sense of extra work or of omitted work"; while in another case it was decided that an extra to a contract for works was something not specified in, or fairly comprised within the contract, but which is cognate to the subject-matter of the contract and applied to the carrying out of its design.

It should be remarked that if a contractor complies with instructions to vary work or to do extra work in a case where there is no provision in the actual contract for extras and variations, it is possible that his compliance may have the effect of leading to a rescission of the contract; that rescission being the legal result of the conduct of the parties in the matter.

Generally speaking, however, such work, in so far as it could be traced in the original contract, would be paid at a price commensurate with the prices of that contract and otherwise priced reasonably. But in a case where such extra work deviates so much from the original contract as actually to displace the original intention, then the original contract would be probably held to be abrogated as already indicated, in which event the substituted work would be regarded as matter forming a new contract and priced accordingly.

Two distinct classes of extras. In general, a contractor can, of course, refuse to do extra works if they are not such as are essential to the proper completion of the contractual work, or if they are not stipulated in the conditions of the contract. But usually provision is made in the contract against such a contingency; and where it is likely that additional works of magnitude may be required, a clause is frequently inserted in the contract making such works, if required, a part of that contract, provided that, in each case, the cost does not exceed a fixed percentage of the contract price. In the absence of such a clause it is more desirable to make any additional work or omission, which involves the expenditure of considerable sums, the subject of a separate contract.

It will be readily understood, therefore, that there are two distinct classes of extras; that is to say, those falling within the terms and prices of the main contract, and those which form the subject of supplementary or additional contracts which are independent of the main contract. In short, it may be stated that all orders for extras which are accepted and executed form new contracts, unless they are, in fact, essential to the completion of the main contract. Moreover, even if the original contract has been invalidated or voided by reason of any circumstance, such new contracts would, nevertheless, bind the parties thereto.

Employment of Quantity Surveyors. Unless there is provision made for it in the contract itself the employer must give his express authority to enable a quantity surveyor to be engaged to measure up deviations, more particularly if the architect is designated as the person to settle accounts; although, where a quantity surveyor's services are of benefit to the employer and are essential in making large and extensive measurements, it should be added that custom has been successfully advanced in respect of such employment.

Legal position of parties. It follows, of course, that if the original contract has been totally abandoned, the employee may charge for his work according to its value, as if the original contract had never been made. But if the extras have been done by the contractor without any authority by or on behalf of the employer, the latter is not bound to pay for them; and where, under the terms of the contract, extras are to be ordered in writing, the employer is liable only for such as are so ordered.

Furthermore, even where the employer has assented to a deviation, he will not be liable for extras unless he must necessarily have known that the effect would be to increase the expense.

Contract work not in Specification. Although a contractor may be misled or insufficiently informed by the documents when making out his tender, he is still bound to complete the works by supplying everything necessary, and he has no ground of claim either against the employer or architect in such circumstances.

In a well-known case a contractor agreed to build a house under a specification which gave scantlings for carpenters' work but made no mention of the flooring boards. A general clause stipulated that all materials necessary for completion were to be provided by the contractor, and at the foot of the specification the builder signed a memorandum whereby he agreed " to do all the works of every kind mentioned and contained in the specification, and in accordance with drawings, for the sum of £1,100, to be completed by a certain date." The builder prepared flooring boards and brought them to the site; he then fitted them to the several rooms, but he refused to lay them down without extra payment on the ground that flooring was not specified. The employer thereupon put an end to the contract, took possession of the works and completed the building, using the flooring boards provided. The court held that the contractor was not entitled to recover for the flooring as an extra because it was included in the contract though not mentioned in the specification.

QUESTIONS THAT ARISE

Architect's Fees

F. B. H. writes : " *Some time ago a certain party required alterations and additions at the rear of his business premises. A builder, having been asked the cost of the work, introduced me as architect to prepare the necessary drawings and, assisting me to take measurements, left me as the architect with the client, with whom I then had personal dealings. Drawings for the required work were then prepared by me on strictly economical lines as required, involving a lot of work, and a thoroughgoing job was produced. Copies were obtained, tracings were submitted to the local Council and approved, and a copy or copies used, I believe, by the client for obtaining a further tender or further tenders. These, however, being more than he was prepared to expend, the work was not carried out, and I have never been paid the nominal sum charged. What is my position in the matter ? Am I legally entitled to this charge, and what is my best course?*"

It is not clear from the facts of the question as to whether the architect was engaged by the client and was to look to him for his remuneration or whether the architect was engaged by the builder.

There is no doubt that the architect is entitled to sue for professional services rendered as an architect for work and labour done and material supplied. I am not in a position to say the amount the architect is entitled to receive.

When an architect is employed to do work and his fees are the scale rates of the R.I.B.A., and this fact is brought to the notice of his employer directly, or by implication, he will be able to sue for his fees according to the R.I.B.A. scale.

Assuming that the scale of fees of the R.I.B.A. was not a term of the contract, either express or implied, then he will not be entitled to the scale fees, but only to a reasonable sum ; but whilst it is open to the court to say the R.I.B.A. fees are reasonable, yet these fees do not bind the court at all. There is no information to enable me to judge whether the scale fees of the R.I.B.A. are a term of the contract.

The Editor invites readers' inquiries on all matters connected directly or indirectly with architectural practice. These inquiries are dealt with by a board of experts, to which additions are constantly being made as and when the need arises. Readers must enclose name and address, and should send their inquiries to the Editor at 9 Queen Anne's Gate, S.W.1.

The next question, which is of considerable difficulty, is, Who is liable to pay ? It is not conclusive, but it would appear from the facts, that the proper person to be a defendant to this action is the lay client.

It is suggested that the architect should consult his solicitor and give him full information as to from whom he received his instructions, as it depends on all the facts as to whether the builder or the lay client is liable.

If the builder was acting as agent for the lay client, then the lay client is liable, but if the builder was not acting as agent for the lay client, then the builder is liable. E. F. I.

Rain-water Pipes

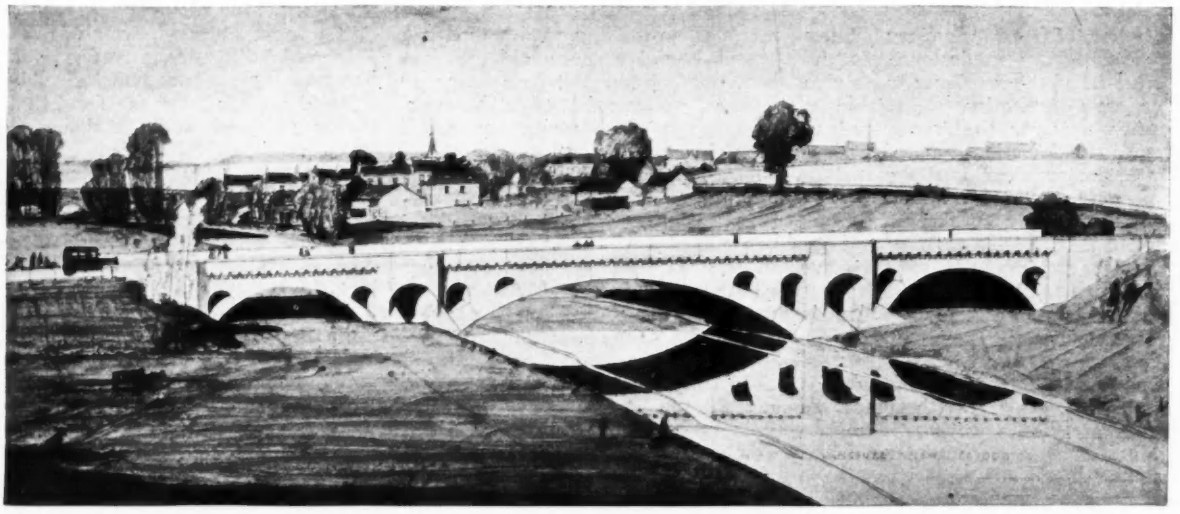
L. E. writes : " *Will you kindly give me some particulars of dealing with the rain-water to a City building between party walls (say four floors and basement) with pitched roof, i.e. no means of taking the water to the sides or back of building? From an examination of the pages of your* JOURNAL *the water is conducted in pipes in chases. Are these just ordinary cast iron, with red lead joints and mesh, and plaster face to cover ? Is the usual method to have a sealed manhole in the basement and direct connection to the sewer ? Is a syphon necessary ? If so, how is the fresh air inlet and ventilating pipe dealt with ? What is the arrangement when the sewer is above the basement floor ? Is it permissible to deal with soil pipes in a similar way* (a) *when there is a separate system ;* (b) *when there is a combined system? Pavement channels not permissible.*"

The rain-water pipes may be placed in chases cut in the brickwork, and the face covered with expanded metal and plastered as suggested. Heavy pattern cast-iron pipes treated by Dr. Angus Smith's process and jointed with molten lead or lead wool would be preferable to ordinary rain-water pipes jointed with red lead.

The water should be conducted to a sealed manhole in the basement. The method of connection to the sewer will depend on the requirements of the bylaws of the district, but whether the sewerage is on the " separate " or " combined " system an intercepting trap is desirable. An air inlet to the chamber should be provided by bringing a four-inch pipe from near the top of the manhole into a chase in the brickwork and fixing an air brick on the outer face of the front wall.

If the floor of basement is below the sewer invert, hermetically sealed cast-iron manholes, which are made specially for the purpose, may be fixed either at or below ground-floor level. These should be carried on suitable supports, i.e. a brick or concrete base or on cantilevers.

Soil pipes may be dealt with in a similar manner, both on the separate and combined systems of sewerage. N. H.



Drawn by Keith D. P. Murray.] [*From* Architectural Drawing, Perspective and Rendering.

Bridge over the River Nene, Wansford. Maxwell Ayrton, Architect. Sir E. Owen Williams, Engineer.

LITERATURE

ARCHITECTURAL DRAWING

MANY excellent works have been written on the subject of architectural draughtsmanship, both from an historical and technical point of view. It is refreshing, however, to find a new volume written from an entirely different angle.

The title of the book under review, by Messrs. Cyril Farey and Trystan Edwards, covers a very wide field, and the reader will probably be astonished at the many ways in which the architect expresses himself, from the rough thumb-nail sketch to the carefully rendered perspective drawing, and the measured to the competition drawing, and also at the wide range of media which he uses in his work.

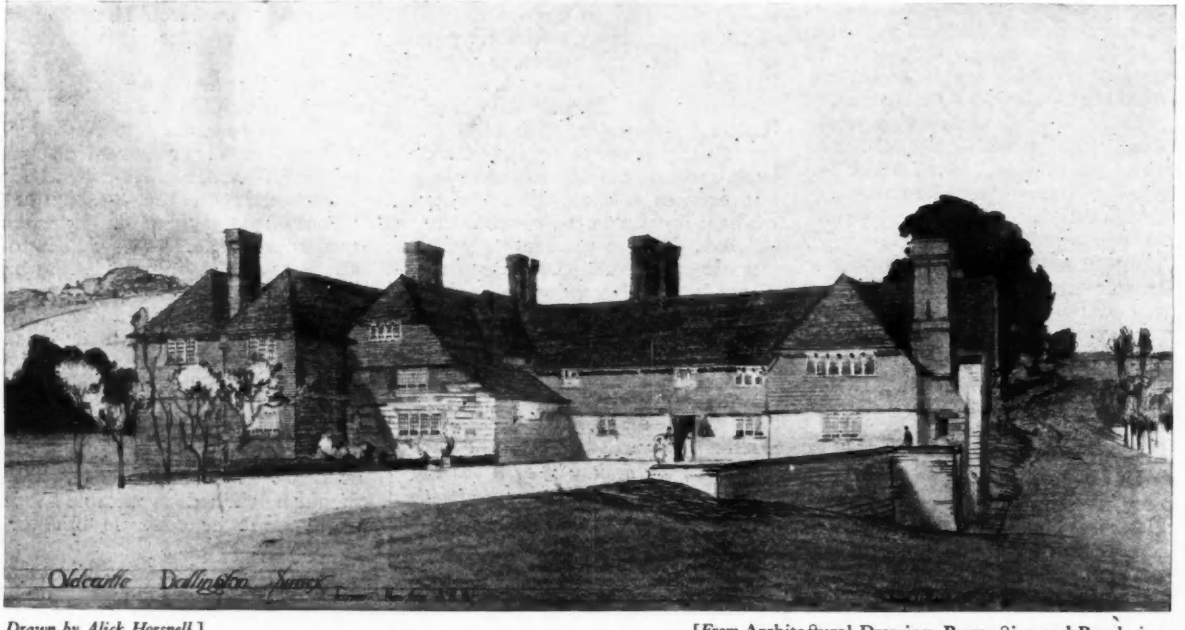
He will also be conscious, perhaps, that the subject is rather too large for the size of the book. Each chapter opens up new ideas, the discussion of which is all too short. He may feel slightly bewildered and, like Oliver Twist, be wanting more.

The professional touch, composition, sketching, point of view, competition draughtsmanship, are titles of some of the chapters, while the illustrations include plans, measured drawings, finished perspectives, phantasies, posters, and examples of almost every type of architectural drawing.

Undoubtedly the book should appeal not only to architects but also to the general public. The layman today is becoming more keenly interested in architecture, and it is well that he should in some measure understand the media through which the architect expresses his ideas.

The student, too, will find much to help and instruct him.

The delightful little rough studies by Professor Richardson, Mr. Harvey and others illustrate well the value of this form of drawing in the training of the architect, and it is only through the untiring use of his pencil and the laborious work of the finished drawing that the student will be able to attain the ease and facility with which these little drawings have been made.



Drawn by Alick Horsnell.] [*From* Architectural Drawing, Perspective and Rendering.

The entrance front, Oldcastle, Dallington, Sussex. The late Ernest Newton, A.R.A., Architect.

The power to record swiftly and surely one's ideas and impressions should be, one feels, the aim of every architect.

The charming and beautifully rendered perspectives executed by Mr. Farey and other well-known draughtsmen would appear to fall into a different category, in that they are of more interest to the client and the general public than to the architect.

The trained architect should not require a finished drawing to help him in his design, as he should be able to visualize his work and illustrate his ideas by means of a few quick free-hand sketches without the aid of elaborately set-up perspective drawings.

The great lesson, however, which this book would appear to teach is that there is no field of draughtsmanship that is not open to the architect, and that he should dabble in them all, not only in his capacity as an architect, but also as a recreation and hobby.

The authors have given us a delightful and interesting book, and one that deserves every success.

E. B. MUSMAN

Architectural Drawing, Perspective and Rendering. By Cyril Farey and A. Trystan Edwards. London: B. T. Batsford, Ltd. Price 16s. net.

ILLUMINATION CONGRESS

THE International Illumination Congress, 1931, is to be held for the first time in Great Britain in September next, and is unlikely to take place again in this country for many years.

In order to mark the importance of this Congress, organized by the National Illumination Committee of Great Britain and the Illuminating Engineering Society, a booklet has recently been issued, entitled: *The International Commission on Illumination: The Origin, Organization and Work.*

The specific purpose of this publication is that the international and basis and nature of the Congress may be appreciated, and that it may achieve the fullest measure of success in stimulating interest in better lighting, thus not only benefiting the many associated industries, but, it is hoped above all, arousing public interest so as to further the advancement of the science and practice of illumination in Great Britain.

The International Commission on Illumination: The Origin, Organization and Work. Issued by the International Illumination Congress, 1931, 32 Victoria Street, S.W.1. Gratis.

Publications Received

The Art of Lettering. Report of a Special Committee of the British Institute of Industrial Art. London: Humphrey Milford. Oxford University Press. Price 3s. 6d. net.

The Ancient Bridges of the North of England. By E. Jervoise. Architectural Press. Price 5s. 6d. net.

Portmeirion Explained. Edited by Noel Carrington. London: The Kynoch Press. Price 1s. net.

Roof Tiling. By C. G. Dobson. London: Crosby Lockwood and Son. Price 12s. 6d. net.

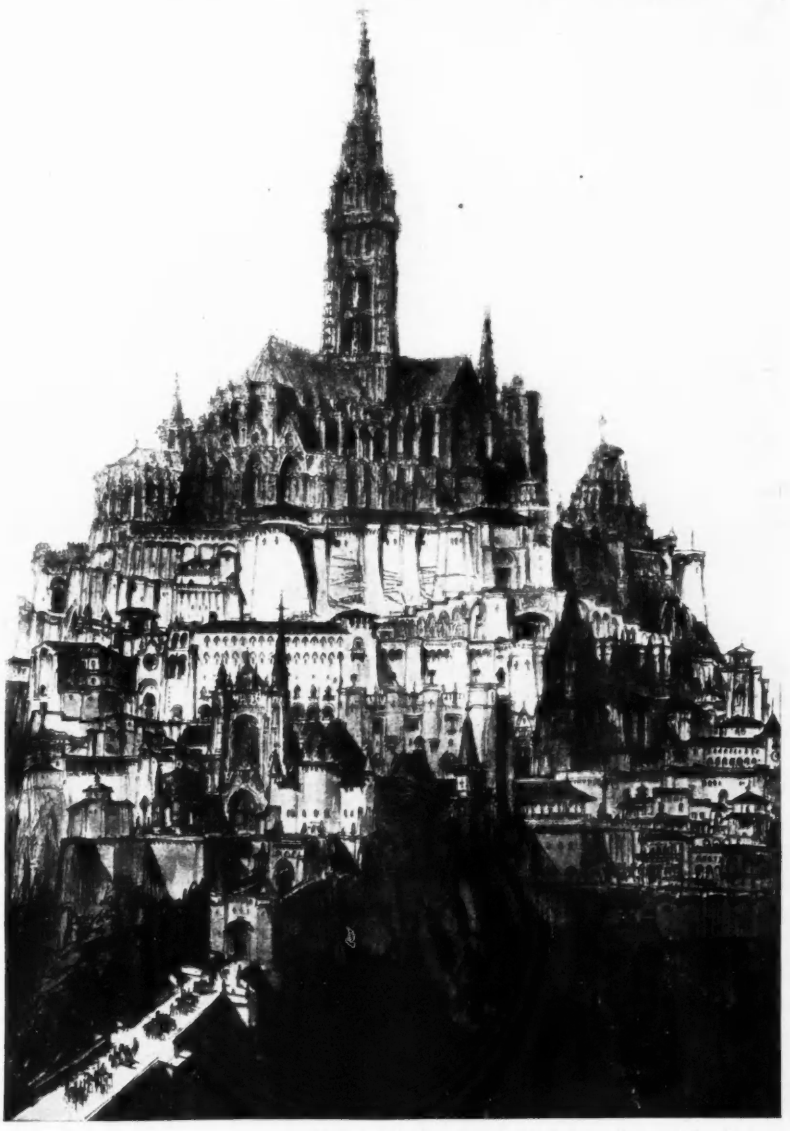
OBITUARY

W. CLIFFORD-SMITH: 1854–1931

WE regret to record the death of Mr. William Charles Clifford-Smith, M.INST.C.E., retired Fellow of the R.I.B.A., which occurred at his home at Wallington, on Wednesday last, in his seventy-seventh year.

Educated at the Anglo-French College and privately, he was trained in civil engineering by the late Mr. James C. Simpson and, as stated by *The Times*, served his works' apprenticeship with Hawks, Crawshay & Co., at Gateshead. Among other experience he served with Maudslay, Sons and Field, both in their drawing office and their workshops. He then entered the service of the Turkish Government as chief of the technical department at the Constantinople dockyard.

He was for thirty-two years engineer to the Asylums Committee of the L.C.C., and his work included the design of the Manor Asylum, the Epileptic Colony, the 11th London County Asylum, the Maudslay Hospital, and the Manor Certified Institution. He also carried out improvements and additions at Hanwell and Colney Hatch, and laid out the Horton Estate, designing the central station for the supply of electricity and water. He was made an O.B.E. in 1920 and retired from practice in 1924.



[*From* Architectural Drawing, Perspective and Rendering.
A Phantasy. Drawn by Professor A. E. Richardson.

SOCIETIES AND INSTITUTIONS

R.I.B.A. MAINTENANCE SCHOLARSHIPS IN ARCHITECTURE

THE R.I.B.A. offer for award in July, 1931, two maintenance scholarships in architecture.

One scholarship is the Artists' General Benevolent Institution Maintenance Scholarship of a maximum value of £100 per annum. This scholarship is open only to orphans or sons or daughters of architects or artists, and is restricted to applicants in England and Wales.

The second is the Ralph Knott Memorial Scholarship, tenable at the School of Architecture of the Architectural Association, London. It is of a value of about £45 per annum, and is available for applicants in England, Scotland and Wales.

The scholarships will be tenable in the first instance for one year, and will be renewable for two further periods of one year each. They are intended to enable students who have not the necessary means to attend an approved course at one of the schools of architecture recognized for exemption from the R.I.B.A. Examinations (the Ralph Knott Memorial Scholarship being tenable only at the Architectural Association School of Architecture). Students who are already taking such a course are also eligible to apply for a scholarship.

The value of the scholarships up to the limits stated will depend upon the financial circumstances of the parents or guardians of the candidates. The parents or guardians will be required to furnish particulars, on the proper form, of their financial position.

Particulars and forms of application may be obtained free on application to the Secretary to the Board of Architectural Education, R.I.B.A., 9 Conduit Street, London, W.1.

The closing date for the receipt of applications, duly completed, is Saturday, July 4, 1931.

EXHIBITION OF ARCHITECTS' WORKING DRAWINGS

An exhibition of Architects' Working Drawings will be held in the R.I.B.A. Galleries from Wednesday, June 17, to Tuesday, June 23, 1931, inclusive.

The exhibition will be open daily, between the hours of 10 a.m. and 8 p.m. (Saturday, 5 p.m.), and will include drawings lent by :

Messrs. C. Cowles-Voysey, F.R.I.B.A. (Corporation of Hastings Offices at the White Rock Approach); W. Curtis Green, A.R.A., F.R.I.B.A. (Stockgrove Park); L. Sylvester Sullivan, F.R.I.B.A. (Office Building at 37–39 Lime Street, London); Maurice E. Webb, D.S.O., M.C., F.R.I.B.A. (Commercial Union New Head Office, Cornhill, Sebright's Endowed School, Worcestershire).

The exhibition is intended primarily for students of architecture; they will be able to examine the drawings that a practising architect hands to a contractor, and thus will be afforded an insight into the methods adopted in a modern architect's office.

A special students' evening will be held at the exhibition on Tuesday, June 23, 1931, at 8 p.m. It is hoped that the architects (or their representatives) who have lent exhibits will be present in order to explain the drawings to the students. Refreshments will be provided, and no cards of admission are required.

HANTS AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION

Mr. J. Arthur Smith, F.R.I.B.A., president, moving the adoption of the annual report at a meeting of the above Association, said it indicated continued progress. They began a few years ago with seventy members, and now they were approaching three hundred.

Mr. H. Collins, F.R.I.B.A., speaking of the increasing number of " open competitions " for designs of buildings, said the growth meant that many men were wasting a lot of time. He wondered whether a case could not be made out for " limited competitions."

The president indicated certain difficulties. Was the limit, he asked, to be one of district or age ?

Mr. Collins replied that for all the important matters there should be no limit, but for small designs, perhaps, the competition could be limited to the county concerned.

Mr. A. C. Townsend said any scheme of limitation would adversely affect the architect who happened to live in a small town. He did not agree that it was wasted effort to send in plans for a big job; it meant that something had been thought out.

The following were elected officers for the ensuing year :

President, Mr. Ingalton Sanders, F.R.I.B.A.; Vice-Presidents : Messrs. R. F. Gutteridge, F.R.I.B.A., W. J. Mountain, L.R.I.B.A., and C. McArthur Butler. Members of Council : Fellows : Messrs. E. Bird, F.R.I.B.A., J. S. Brown, A.R.I.B.A., L. M. Field, L.R.I.B.A., L. W. Jukes, L.R.I.B.A., H. S. Sawyer, A.R.I.B.A., A. C. Townsend, A.R.I.B.A., H. Collins, A.R.I.B.A., and E. H. Ebbs, A.R.I.B.A. Associates : Messrs. E. E. Brown, S. A. Gulliford, P. E. Mitchell and E. G. Newman.

AUSTRIAN BAROQUE GARDENS

Mr. G. A. Jellicoe, A.R.I.B.A., in a paper on the above subject, read before a meeting of the Institute of Landscape Architects at the Royal Horticultural Hall, London, on June 2, said the two art influences upon Austria were Italy and France—the former, because she was the centre of culture and in close proximity, and the latter because of the political eminence of Louis XIV during the seventeenth century.

Architecturally, with the exception of the Belvedere, there was no Austrian garden that could equal the masterpieces from Italy or France. The detail was essentially vigorous, however, especially the sculpture and ironwork. Flowers played little part for the same reason as in France, that the monumental scale did not call for the intimacy with which they were usually associated.

The Austrian garden was essentially for a town. Even on open country sites there was rarely, if ever, the same sympathy to surroundings that was found in the Italian garden, nor was there the forceful extension into nature adopted by Le Notre. The development of clipped hedges, possibly the grandest in Europe, was but an expression of the rigid formality of court life. For this the gardens were a perfect setting.

NORTHERN ARCHITECTURAL ASSOCIATION

At the annual meeting of the Northern Architectural Association, held at its headquarters in Newcastle, the following members were elected officers for 1931–32:

President, Mr. H. L. Hicks, A.R.I.B.A.; vice-presidents, Messrs. F. E. Dotchin, William Milburn, jun., F.R.I.B.A., and G. H. Mackellar, A.R.I.B.A.; hon. treasurer, Mr. R. Burns Dick, F.R.I.B.A.; hon. librarian, Mr. G. E. Charlewood, A.R.I.B.A.; hon. auditors, Messrs. James W. Corking and J. Logan, A.R.I.B.A.; Council : Messrs. R. A. Cordingley, A.R.I.B.A., S. F. Bestow, A.R.I.B.A., G. Talbot Brown, A.R.I.B.A., F. M. Dryden, F.R.I.B.A., S. W. Milburn, F.R.I.B.A., and H. Oswald; associate members of Council : Messrs. R. Bradbury, F. A. Child, A.R.I.B.A., and W. Usher, A.R.I.B.A.

SCOTTISH ARCHITECTS

At the monthly meeting of the Council of the Royal Incorporation of Architects in Scotland, held at Edinburgh, it was announced that there had been fifty-eight competitors for the various prizes for 1930–31. The winners were as follows :

Mr. Basil Spence, Edinburgh College of Art, who gained first place in the Rowand Anderson competition, silver medal and £100; Mr. John D. Carnegie, Edinburgh College of Art, second place, £20 ; Mr. T. Arnold Jeffreys, Edinburgh College of Art, Rutland Prize of £50; Mr. A. W. Varcoe, Edinburgh College of Art, Incorporation Prize, £15; and Mr. J. N. Summerson, B.A., London, late of Edinburgh College of Art, Essay Prize and £20.

THE MAIDSTONE ARTS AND CRAFTS SOCIETY

The Maidstone Arts and Crafts Society was founded about twelve months ago, in order to encourage the study and practice of the arts and crafts. It arranges for lectures and discussions, for the exhibition and criticism of works, and visits to illustrative examples of craftsmanship, in both its wide and detailed application. One of the founders and the first chairman is Mr. Sydney Loweth, F.R.I.B.A., the Deputy County Architect.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

THE House of Commons re-assembled, after the Whitsuntide Recess, on Tuesday, June 2.

Slum Clearance

Mr. Albery asked the Minister of Health, with reference to the seventy authorities who had declared 205 slum-clearance areas, if he could say in how many of those slum-clearance areas the clearing of ground had commenced and in how many cases had the building of alternative accommodation been started.

Mr. Greenwood replied that the information desired in the first part of the question was not at present available. As regarded the second part, he had approved of the erection of 12,248 houses by 94 authorities which were either earmarked or available for the purposes of the Act of 1930. 3,634 of these houses had on April 30 been commenced.

Rent Restriction Act

Mr. W. Brown asked the Minister of Health when he anticipated receiving a report from the committee set up to consider the Rent Restriction Act, and whether legislation on the matter might be expected this session.

Mr. Greenwood said he hoped to receive the report before the end of the session, but he did not anticipate that it would be possible to introduce any legislation which might be necessary this session.

Costs of House Building

Mr. Hurd asked the Minister of Health if he was satisfied that the costs of house building in the schemes of Sir Tudor Walters which were now before the Government were applicable to small units of productions, say, 4 or 6 houses to the unit, as in villages, as well as to mass-production; and whether the opinions of rural housing authorities would be sought on this point.

Mr. Greenwood said he could only say that the whole of this question was receiving consideration.

Housing (Rural Workers) Act, 1926

Mr. Day asked the Minister of Health whether he could state the number of labourers' cottages that had been reconditioned or rebuilt in respect of the Housing (Rural Workers) Act, 1926; whether any complaints had been received by his department to the effect that local authorities were not availing themselves of the conditions as set out in this Act; and would he give particulars.

Mr. Greenwood said that 3,377 cottages had been improved under this Act in England and Wales by March 31 last. He had received a certain number of complaints, but they were usually concerned with the refusal of the local administrative body to exercise their discretion under the Act in favour of the complainant.

Rubber for Public Buildings

Mr. D. G. Somerville asked the First Commissioner of Works if he would consider the possibility of utilizing rubber in connection with any public buildings under his control, with the object of helping the industry and demonstrating the advantages of this commodity.

Mr. B. Smith, who replied, said that rubber was used at present by the department in cases where it was considered desirable and economical to do so.

COMPETITIONS OPEN

June 16.—Sending-in day. (Last day for conditions was February 25.) Offices for the Ingham Infirmary, South Shields. (Limited to architects within the area of the Northern Architectural Association.) Assessor: George Reavell, O.B.E., F.R.I.B.A. Premiums: £250, £100 and £50. Conditions were obtainable from John Potter, Secretary, Ingham Infirmary, South Shields. (Deposit £2 2s.)

June 24.—Sending-in day. King Edward VI. School, Mill Lane and Wilton Road, Southampton, for the Governors of the School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums, £150, £100 and £50. (Deposit, £1 1s.). Full particulars are obtainable from G. A. Waller, Clerk to the Governors, 7 Albion Place, Southampton.

June 26.—Sending-in day. Offices for the City of Leicester Corporation, Charles Street, Leicester. Assessor: E. Berry Webber, A.R.I.B.A. Premiums: £300, £200 and £100. Conditions from A. T. Gooseman, Engineer and Surveyor, Town Hall, Leicester. (Deposit £2 2s.)

June 29. — Proposed Tuberculosis Hospital, Hayes Farm, Sulley, near Cardiff. Assessors: Ernest Elcock, F.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A. Premiums: £400, £300, £175, and £100. Conditions, etc., obtainable from F. J. Alban, General Secretary, Memorial Offices, Westgate Street, Cardiff, before June 29.

June 30.—Sending-in day. (Last day for conditions was April 15.) New Branch Baths, Foleshill, for the Coventry Corporation. Assessor: F. J. Horth, F.R.I.B.A. Premiums: £210, £105 and £52 10s. Conditions from Frederick Smith, Town Clerk, Council House, Coventry. (Deposit £1 1s.)

September 21.—Sending-in day. (Last day for conditions was May 29. Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £500, £400, £300 and £200. Conditions from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

March 31, 1932.—Sending-in day. Last day for questions: August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1. Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I.B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

The Brighton Corporation, acting on the advice of Mr. Kenneth M. B. Cross, F.R.I.B.A., recommends a competition for designs for the various public buildings to be erected on the West Street brewery site, the cost of the buildings being estimated at £150,000.

THE ARCHITECTS' DIARY

WEDNESDAY, JUNE 10

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Second of five lectures on the Art of Making and Using Concrete: "The Raw Materials of Concrete and their Field Testing." By H. A. Holt, A.I.STRUCT.E. Demonstrations will be given. **6 p.m.**

THURSDAY, JUNE 11

MARGATE SCHOOL OF ART. Seventh of twelve illustrated lectures on Beauty in Design. "Interior Designs." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS. Scottish District Summer Meeting at St. Andrews. Discussion on the following papers: "St. Andrews and its Municipal Works," by W. Watson; "County Highway Maintenance," by C. M. Dawson; and "Town Planning of Built-up Areas," by Frank A. B. Preston.

SATURDAY, JUNE 13

Sunrise, 4.42 a.m. Sunset, 9.15 p.m.

SOCIETY FOR THE PROTECTION OF ANCIENT BUILDINGS. Visit to the grounds of Cliveden and Dropmore. 2.30 to 6 p.m. Motor coaches leave Victoria at 1.15. Fare 7s. 6d. **1.15 p.m.**

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS. Visit to Broadcasting House, Portland Place, W.1. **2.30 p.m.**

LIVERPOOL ARCHITECTURAL SOCIETY. Visit to the Home of the Earl of Crawford and Balcarres, Haigh Hall, near Wigan, in conjunction with the Manchester Society of Architects.

WEDNESDAY, JUNE 17

R.I.B.A. British Architects' Conference, Dublin. Until Saturday, June 20. Also exhibition of architects' working drawings at 9 Conduit Street, W.1. The architects whose work will be shown are Messrs. C. Cowles-Voysey, F.R.I.B.A. (Corporation of Hastings, Offices at the White Rock Approach); W. Curtis Green, A.R.A., F.R.I.B.A. (Stockgrove Park); L. Sylvester Sullivan, F.R.I.B.A. (Office Building at 37–39 Lime Street, London); Maurice E. Webb, D.S.O., M.C., F.R.I.B.A. (Commercial Union New Head Office, Cornhill, Sebright's Endowed School, Worcestershire). Until June 23. 10 a.m. to 8 p.m. (Saturday 5 p.m.). **10 a.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Demonstration of the Making and Using of Concrete, by H. A. Holt, A.I.STRUCT.E. To be given at the L.C.C. School of Building, Ferndale Road, Brixton, S.W. 2.30 to 5.30 p.m., and 6.30 to 9.30 p.m. **2.30 p.m.**

THURSDAY, JUNE 18

MARGATE SCHOOL OF ART. Eighth of twelve illustrated lectures on Beauty in Design. "Cottages." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JUNE 20

Sunrise, 4.42 a.m. Sunset, 9.19 p.m.

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS. Visit to Messrs. Walkers, Parker & Co., Ltd., Lead Smelters, 63 Belvedere Road, Lambeth, S.E.1. **8 p.m.**

WEDNESDAY, JUNE 24

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Third of five lectures on the Art of Making and Using Concrete: "The Properties of Concrete, with special reference to handling on the Job." By Dr. R. E. Stradling, HON. A.R.I.B.A. 6 to 8 p.m. **6 p.m.**

SATURDAY, JUNE 27

Sunrise, 4.45 a.m. Sunset, 9.20 p.m.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. Joint excursion with the South-Eastern Society of Architects to Chichester.

TUESDAY, JUNE 30

LONDON SOCIETY, Lancaster House, St. James's, S.W.1. River Trip. Tickets obtainable from the Secretary.

WEDNESDAY, JULY 1

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Fourth of five lectures on the Art of Making and Using Concrete. "The Effect of Misplacing Reinforcements." By Ewart S. Andrews, A.I.STRUCT.E. 6.30 to 9.30 p.m. **6.30 p.m.**

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Last of five lectures on the Art of Making and Using Concrete: "The Mechanical Appliances for the handling of concrete on the Job." By Lt.-Colonel R. A. B. Smith, M.I.STRUCT.E. **6 to 8 p.m.**

THURSDAY, JULY 2

MARGATE SCHOOL OF ART. Tenth of twelve lectures on Beauty in Design. "Town Planning." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JULY 4

Sunrise 4.47 a.m. Sunset 9.19 p.m.

ROYAL SANITARY INSTITUTE. Forty-second Congress to be held at Glasgow. Until July 11. Papers to be read will include the following: "Architecture and Engineering"; "Hospitals—Planning and Construction"; "Discharge of Sewage into Sea"; "Housing"; "Slum Clearances"; and "Single-Pipe Drainage."

R.I.B.A., 9 Conduit Street, W.1. Latest date for submission of applications for the maintenance scholarships in architecture.

TRADE NOTES

As a result of the Prince of Wales's "Wake Up Business" speech to industrialists in Birmingham, the Mayor of Hackney has undertaken a spirited campaign to stimulate "business consciousness" and pride in home industries amongst the people of Hackney. In furtherance of this campaign, he paid an official visit on his own initiative on June 3, in his robes of office and accompanied by his mace-bearer, to the works of Messrs. Lewis Berger, Ltd., paint manufacturers. This firm have met the present trade depression by greatly increasing their advertising in the press, with the result that they have extended their business and maintained full staffs in spite of the world-wide slump that is adversely affecting so many other industries. The Mayor of Hackney was shown over the works by Sir Herbert Hambling, Bart., chairman of the company. In reply to an address of welcome, the Mayor drew attention to the way in which Messrs. Lewis Berger were successfully maintaining employment during the present trade depression through their go-ahead policy. He pointed out that paint had been made on that very site ever since the original Mr. Berger started work there 170 years ago, and that this firm had supplied paint for such diverse purposes as Turner's famous landscapes, the painting of the Sydney Harbour Bridge, and great liners such as the *Empress of Britain* and the *Mauretania*, etc. It is understood that the Mayor intends to pursue this campaign with vigour, stimulating interest in commerce, and his action is arousing a great deal of interest and approval. It is expected that other mayors will probably follow his example in different localities.

*

In a booklet recently issued by the Walpamur Co., Ltd., entitled *Problems of Corrosion*, the following interesting description is given of "Arcanol" pigment. This pigment, it is stated, is a fine-grained material consisting chiefly of metallic lead, which, when incorporated with a suitable medium, yields a paint possessing excellent working properties. The manufacture of "Arcanol" in Great Britain rests upon the invention and practical development of entirely novel and patented means of producing a very fine metallic powder from soft metals such as lead. The individual particles of "Arcanol" are of a spongy nature, and for that reason, despite the high density of lead, it is a relatively light pigment, which, in the suitable medium employed, is non-settling and remains indefinitely in suspension. In the patented process by which this pigment is made, molten metallic lead, alloyed with a small proportion of antimony, is dispersed by impact in a specially designed centrifugal disintegrator with the aid of an addition of a fine powder, usually zinc oxide. The product is air-levigated to eliminate coarse particles and then forms a fine grey pigment consisting chiefly of metallic lead, the individual particles of which are coated with a film of zinc oxide and, probably, zinc plumbate ($Zn_2\ PbO_4$). As a result, therefore, one has available a metallic lead pigment with an active surface coating which, since it contains potentially a higher oxide of lead, is said to be capable of rendering iron and steel passive. Among the further advantages of "Arcanol," it is claimed that the most important arises directly from its metallic nature, since, being chiefly metallic lead, it can, in the presence of air and water, react with drying oils in a way impossible for any metallic oxide. The drying oils, consisting chiefly of the glycerides of various fatty acids, can split up, to yield a fatty acid and glycerine. The fatty acids in turn can form, with metallic oxides such as lead oxide, metallic soaps, in this case lead soap, the formation of which plays an important part in the drying and consolidation of all lead paints. For a corresponding action to occur with the metallic lead present in "Arcanol," it is necessary first, that oxygen should be absorbed, and secondly, that water should be consumed in hydrolyzing oil to fatty acid and glycerine. Thus the process of forming lead soaps from oil and metallic lead absorbs and fixes appreciable quantities of both oxygen and water. For this reason "Arcanol" is claimed to have the remarkable property of reacting with, and destroying any traces of, moisture or oxygen which may happen to be enclosed in or below the paint film. "Arcanol" can be used for priming for other paints, and being of a grey colour requires, in most cases, only one further coat of a finishing paint.

*

Messrs. Bovis, Ltd., owing to the growing needs of the firm, have transferred their offices to larger premises at 35 High Street, Marylebone, W.1. Telephone: Welbeck 5500.

*

Messrs. Robert Adams, of Emerald Street, Bloomsbury, W.C.1, inform us that they were responsible for the door springs, special fittings, etc., used in the Dorchester Hotel, Park Lane, W.1, illustrated in THE ARCHITECTS' JOURNAL for April 22 last.

ANNOUNCEMENTS

Mr. J. W. Goodison has removed from 9 Millington Road to 15 Bateman Street, Cambridge.

Messrs. Anthony Minoprio, M.A., A.R.I.B.A., and Hugh G. C. Spencely, A.R.I.B.A., DIP. CIV. DESIGN, Chartered Architects, have moved their office to 18 Seymour Street, Portman Square, W.1. Telephone No.: Welbeck 3912.

Mr. Robert A. Cutlar, architect and surveyor, has transferred his practice from 57 St. Declan's Place, Waterford, to 17 George's Street, Waterford.

Mr. S. H. Loweth, F.R.I.B.A., has removed from "The New Bothy," Mote Park, Maidstone, to "Westways," Bearsted. Telephone No.: Bearsted 6217.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:

No. 52 Grosvenor Gardens, S.W.1 (pages 813–817). General contractors, Humphreys, Ltd. Sub-contractors: B. Goodman, Ltd., demolition and excavation; Smith Walker, Ltd., steelwork; Kleine Co., Ltd., patent floors; F. J. Barnes, Ltd., stonework; R. E. Pearse & Co., Ltd., steel windows; British Challenge Glazing Co., lantern lights; Borough Engineering Works, pavement lights; Thomas and Wilson, plastering; Hammond Bros. and Champness, Ltd., lifts; Hoffmann Sprinkler Co., Ltd., sprinklers; S. Mulliner, Ltd., heating; Thorpe and Thorpe, Ltd., electrical work; Burn Bros., Ltd., sewage pumping plant; John Stubbs and Sons, marble work; Camden Tile and Mosaic Co., Ltd., terrazzo work; Walter Cowen, Ltd., plumbing work; F. Knight & Co., Ltd., wrought metal work; W. J. Furse & Co. (London), Ltd., lightning conductors; Joseph Chater and Sons, Ltd., glazing; Limmer and Trinidad Lake Asphalt Co., Ltd., asphalt.

Extension of Offices and Printing Rooms, Manchester Guardian and Evening News, Ltd., Pall Mall, Manchester (pages 818–821 and Supplement). General contractors, Robt. Carlyle & Co., Ltd., who were also responsible for the excavations, foundations, dampcourses, reinforced concrete, stone and stonework, partitions and joinery. Sub-contractors: G. H. Jones, demolition; J. Lord and Sons, asphalt; Wm. Kirkpatrick, Ltd., granite; Redpath Brown & Co., Ltd., structural steel; Huntingdons, Ltd., slates; Luxfer, Ltd., copper glazing; W. H. Heywood & Co., Ltd., patent glazing; J. M. McDougall and Son, wood-block flooring; Kerner Greenwood & Co., Ltd., 'Pudlo' waterproofing materials; G. N. Haden and Sons, Ltd., central heating and ventilation; General Electric Co., Ltd., electric light fixtures; Jaffrey & Co., plumbing; Morrison, Ingram & Co., sanitary fittings; Laidlaw and Thomson, door furniture; Doodson and Bain, Ltd., and Crittall Manufacturing Co., Ltd., casements and window furniture; Bostwick Gate Co., folding gates; John Hall and Son (Oldham), Ltd., fireproof doors and iron staircases; A. and S. Wallace, plaster; Hindshaw & Co., decorative plaster; The Crittall Manufacturing Co., Ltd., external metal screens; J. and H. Patteson, marble; Conway & Co., tiling; Etchells, Congdon and Muir, lifts; Walter Macfarlane & Co., cast ironwork; Earp, Hobbs and Miller, sculpture; Maclean & Co., pavement lights; J. Faulkner and Sons, lightning conductor; Hindsford Foundry, cast-iron curbs; Geo. Wragge, Ltd., ornamental ironwork; N. F. Ramsay & Co., bronze lanterns; Jones and Jackson, Ltd., decorating; Sturtevant Engineering Co., Ltd., vacuum cleaning installation and conveyors; Mather and Platt, Ltd., sprinkler installation.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The Ministry of Health has held an inquiry into the application of the ACTON Corporation to borrow £104,000 for the erection of municipal buildings.

The BERMONDSEY B.C. has approved plans for the erection of twenty-four flats in Rotherhithe Street and flats and shops in Spa Road, at a total cost of £31,000.

The KENSINGTON B.C. has prepared a larger scheme for rehousing on the cleared area in Lancaster Road, provision being made for the erection of blocks of flats, at a cost of £58,500.

The POPLAR B.C. is seeking sanction to borrow £45,419 for the erection of eighty flats in Glengall Road.

Plans passed by the ST. PANCRAS B.C.: Buildings, site at junction of Gloucester Road and Oval Road; alterations, Court Cinema, Malden Road; alterations, Bedford Theatre, High Street, Camden Town.

The SOUTHWARK B.C. has approved plans for the erection of two blocks of dwellings on the Doddington Grove site, accommodation being provided for a total of sixty-five dwellings.

The Ministry of Health has held an inquiry into the proposal of the SURBITON U.D.C. to erect a fire station and a public library, at a cost of £23,000.

SOUTHERN COUNTIES

The BRIGHTON Corporation has adopted a revised scheme for the erection of 200 houses on Tarners Land for rehousing persons displaced by slum clearances.

The BRIGHTON Corporation Electricity Committee has purchased a site in St. Aubyns Road, Portslade, for the erection of a sub-station.

The BRIGHTON Corporation is to lay out a further section of the Whitehawk housing estate and construct roads and sewers, at a cost of £31,500.

Messrs. Thomas Tilling, Ltd., have acquired a site near Wilson Avenue, BRIGHTON, for the erection of a bus garage.

Plans passed at BRIGHTON: Two houses and eight garages, Hertford Road, for Mr. J. Morley; construction, 68 East Street, for Messrs. E. S. Hawkins and F. Bennett; layout, Ladies' Mile Road, Patcham, for Mr. H. E. Roberts; two houses, Widdicombe Way, Bevendean, for Messrs. Braybons, Ltd.; eight houses and shop, May Road, for Mr. G. Ayling; five shops, Lewes Road, for Mr. A. S. Tilley; alterations, 102 North Road, for Messrs. Tamplin and Sons Brewery, Ltd.; additions, 181–5 Western Road, for Messrs. F. W. Woolworth & Co., Ltd.; alterations and showroom, 22 Preston Road, for Messrs. Milner and Casselden; additions, Continental Café, High Street, Rottingdean, for Mrs. M. I. Wilshire.

Plans passed at EASTBOURNE: House, King's Drive, two houses, Moy Avenue, and two houses, Pashely Road, for Mr. H. H. Ford; two houses, Moy Avenue, for Mr. J. Bowley; two houses, Longland Road, for Mr. W. R. Hamblyn; ten houses, Kingston Road, and house, Carlisle Road, for Messrs. Stonham and Son; alterations and additions, Princess Alice Hospital, Carew Road, for Mr. T. A. Pole.

The EASTBOURNE Corporation proposes to proceed with the first part of the Redoubt improvement scheme, at a cost of £9,700.

The NEWBURY Corporation has purchased a site adjoining Speenhamland infants' school, for the proposed Speenhamland council junior school.

The NEWBURY Corporation Housing Committee has received sanction to borrow £24,855 for the erection of seventy-six houses on the London Road site.

The NEWBURY Corporation Housing Committee has approved plans for the erection of twenty-four houses on the Monks' Lane housing estate.

The PORTSMOUTH Corporation is to erect electricity sub-stations at Denmead and at East Ashling.

EASTERN COUNTIES

Plans passed at CHELMSFORD: Alterations to hall, Legg Street, for the Chelmsford Industrial Loan Society; six houses, St. John's Road, for Mr. W. J. Aldred; two houses, Longstomps Avenue, for Mr. R. H. Currie; four houses, Galleywood Road, for Mr. H. Stubbings; two houses, Sandford Road, for Mr. W. J. Wade; four houses, Gainsborough Crescent, for Mr. J. Gowers.

The COLCHESTER Corporation has decided to erect seven blocks of flats on the Serpentine Walk site.

The ISLE OF ELY Education Committee has acquired a site at Parsons Drove, for the erection of an elementary school.

The Isle of Ely Education Committee has purchased a site at County Road, MARCH, for the erection of a senior school.

MIDLAND COUNTIES

The COVENTRY Corporation is to lay out a housing estate at Stoke Aldermoor and is to proceed with road and sewer construction, at a cost of £11,000.

The DUDLEY Corporation has instructed the borough engineer to prepare a scheme for the erection of houses on the Hutments site.

Plans passed at DUDLEY: Parish hall, St. John's Road, Kate's Hill, for the Rev. B. H. Green; warehouse, King Street, for Messrs. Chilton Bros.; school and caretaker's house, Priory estate, for the Dudley Education Committee; two cottages, Nith Place, and messroom and van store, Nith Place, for the Dudley Co-operative Society, Ltd.

Mr. A. G. Sherwin, architect, has prepared plans for the erection of business premises in Blurton Road, FENTON, Staffs.

Messrs. G. Evans and Sons are to develop land at Shelton New Road, HARTSHILL, Staffs.

The LEICESTER Corporation is to erect 211 houses on the Green Street and Sandacre areas, at a cost of £73,750.

The NORTHAMPTON Corporation Housing Committee has decided to proceed with the development of the Duston site in Bant's Lane.

Plans passed at NORTHAMPTON: Eight houses, Murray Avenue, for Messrs. Chowns, Ltd.; house, Boughton Green Road, for Mr. P. S. Branch; house, Park Avenue, for Mr. A. Watts; nine houses, off Park Avenue, for Messrs. Walker and Perrett; two houses, Billing Road, for Mr. H. Harris; house, Wycliffe Road, for Messrs. Throssell & Co.

The SMETHWICK Corporation has obtained sanction to borrow £8,094 for extensions at the works depot in Rolfe Street.

Plans passed at SMETHWICK: Shop, Norman Road, for Mr. J. Reece; alterations and additions, National Provincial Bank, High Street; house, Holly Lane, for Messrs. Strong Bros.; four houses, Pitcairn Road, for Messrs. W. C. Stevens, Ltd.; two houses, Pitcairn Road, for Mr. T. E. Lowe; twenty-eight houses, Hurst Lane and Hurst Avenue, for Mr. J. Reece; alterations, "Empire Cinema," St. Paul's Road, for Messrs. Hewitsons, Ltd.; parish hall, Cambridge Road, for St. Stephen's Parish; inn, Queen's Road, for Messrs. Mitchells and Butlers.

Mr. J. B. Whitehouse is to erect shops at the corner of Cemetery Road and Hales Lane, SMETHWICK.

The SMETHWICK Corporation is to proceed with the erection of 250 houses on the Warley estate.

The STOKE-ON-TRENT Corporation Housing Committee has received sanction to borrow £21,529 for the erection of fifty-seven houses on the High Street site, at Fenton.

NORTHERN COUNTIES

The West Riding Education Committee has purchased a site in Windmill Lane, ADWICK-LE-STREET, for the erection of a Grammar School.

The BOLTON Corporation Waterworks Committee has received sanction to borrow £27,000 for water mains.

Plans passed at BOLTON: Two houses, Crompton Way, for Mr. John Moore; six houses, Verdure Avenue, for Mr. A. S. Woods; six houses, Hall-i'-th'-Wood estate, for the Housing Committee; additions, 276 Bridgeman Street, for L.M. and S. Railway Co.; two houses, Boot Lane, for Mr. J. H. Sharples; house, Harpers Lane, for Mr. J. K. Dugdale; eight houses, Verdure Avenue, for Mr. A. Woods; two houses, Plodder Lane, for Mr. Maurice Welch; workshop, Deane House, Wigan Road, for Dr. Alex. Reid; extensions to booster station, Lostock Hall Estate, for Manchester Corporation Waterworks Department; thirty houses, New Church Road, for Messrs. T. P. Smith, Ltd.; thirty-one houses, Verdure Avenue, for Mr. Alfred S. Woods; four shops, Whitecroft Road, for Messrs. T. P. Smith, Ltd.

The BOLTON Corporation Housing Committee is to purchase twenty acres of land adjoining the Cameron Street housing estate, for housing purposes.

The BOLTON Corporation Housing Committee is to erect six houses on the Crumpsall Street site and six houses and eight shops on the Hall-i'-th'-Wood site.

The BOOTLE Corporation is to erect 136 houses in Fernhill Road.

The West Riding Education Committee has purchased a site in Doe Quarry Lane, DINNINGTON, for the erection of a senior school.

Plans passed at ESTON: Two houses, Ormesby Road, Normanby, for Mr. Raybould; two houses, Hampden Street, South Bank, and two houses, King Street, for Mr. Miles; eight houses, Flatts Lane, Normanby, for Messrs. Whitehead Bros.; two bungalows, Flatts Lane, for Messrs. Whitehead Bros.

The West Riding Education Committee has obtained a site in Doncaster Road, HATFIELD, for the erection of a senior school.

The MANCHESTER Corporation is to erect 438 houses on the Victoria Avenue estate.

Plans passed at MORECAMBE: Twelve houses, Beaufort Road, for Messrs. Sawley and Atkinson; twelve houses, Limes Avenue and Myrtle Grove, for Mr. W. Smith; house, Stanley Road, for Mr. J. W. Hodgson; house, Stanley Road, for Mr. H. McVernon; four bungalows, Beaufort Road, for Messrs. Wm. Gardner & Co.

The SHIPLEY U.D.C. is to erect 100 houses on the Carr Lane and Busy Lane sites.

The SHREWSBURY Education Committee is obtaining a site for the erection of an open-air school.

The SHREWSBURY Corporation has under consideration a scheme for the construction of a new main road through the town, provision being made for a central bus station and a car park.

The SHREWSBURY Corporation has prepared plans for building 400 houses during the next three years.

The SHREWSBURY Corporation has in view a scheme for the augmentation of the water supply, at a cost of £115,000.

WALES

The CARDIFF Corporation is to erect a further fifty houses on the Ely estate.

The Pembrokeshire Education Committee has purchased a site at HAVERFORDWEST for the erection of a central school.

The SWANSEA borough architect has prepared plans for the erection of eighty-two houses on the Townhill estate.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A1	ABERDARE	S. Wales & M.	1 6	1 1½
A1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A2	Addlestone	S. Counties	1 5	1 0¾
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B2	Appleby ..	N.W. Counties	1 3	11¼
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A2	Atherstone	Mid. Counties	1 5	1 0¾
B2	Aylesbury ..	S. Counties	1 3	11¼
B1	BANBURY	S. Counties	1 4	1 0
B1	Bangor ..	N.W. Counties	1 4	1 0
A2	Barnard Castle	N.E. Coast	1 5	1 0¾
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B1	Basingstoke	S.W. Counties	1 4	1 0
A2	Bath ..	S.W. Counties	1 5	1 0¾
A	Batley ..	Yorkshire	1 6½	1 2
A2	Bedford ..	E. Counties	1 5	1 0¾
A2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1¼
A2	Bewdley ..	Mid. Counties	1 5½	1 1¼
B2	Bicester ..	Mid. Counties	1 3	11¼
	Birkenhead	N.W. Counties	*1 8½	1 3¼
A	Birmingham	Mid. Counties	1 6½	1 2
A1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B2	Bognor ..	S. Counties	1 3½	11¾
A	Bolton ..	N.W. Counties	1 6½	1 2
A2	Boston ..	Mid. Counties	1 5	1 0¾
A2	Bournemouth	S. Counties	1 5	1 0¾
B2	Bovey Tracey	S.W. Counties	1 3½	11¼
A	Bradford ..	Yorkshire	1 6½	1 2
A2	Brentwood	E. Counties	1 5½	1 1¼
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B2	Bridgwater	S.W. Counties	1 3½	11¾
A1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A2	Brighton ..	S. Counties	1 5	1 0¾
A	Bristol ..	S.W. Counties	1 6½	1 2
B2	Brixham ..	S.W. Counties	1 3	11¼
A2	Bromsgrove	Mid. Counties	1 5½	1 1¼
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A1	Buxton ..	N.W. Counties	1 6	1 1½
A1	CAMBRIDGE	E. Counties	1 6	1 1½
B2	Canterbury	S. Counties	1 3½	11¼
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A2	Cheltenham	S.W. Counties	1 5	1 0¾
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B2	Chichester ..	S. Counties	1 3½	11¾
A	Chorley ..	N.W. Counties	1 6½	1 2
B2	Cirencester	S. Counties	1 3½	11¾
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A2	Colchester ..	E. Counties	1 5	1 0¾
A	Colne ..	N.W. Counties	1 6½	1 2
A2	Colwyn Bay	N.W. Counties	1 5	1 0¾
A1	Consett ..	N.E. Coast	1 6	1 1½
A2	Conway ..	N.W. Counties	1 5	1 0¾
A1	Coventry ..	Mid. Counties	1 6½	1 2
A2	Crewe ..	N.W. Counties	1 5½	1 1¾
A2	Cumberland	N.W. Counties	1 5	1 0¾
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B2	Deal ..	S. Counties	1 3½	11¾
A2	Denbigh ..	N.W. Counties	1 5	1 0¾
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B2	Dorchester	S.W. Counties	1 3½	11¾
A2	Driffield ..	Yorkshire	1 5	1 0¾
A2	Droitwich ..	Mid. Counties	1 5½	1 1¼
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A2	EASTBOURNE	S. Counties	1 5	1 0¾
A1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A1	E. Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A2	Exeter ..	S.W. Counties	*1 5½	1 1¼
B1	Exmouth ..	S.W. Counties	1 4	1 0
A2	FELIXSTOWE	E. Counties	1 5	1 0¾
A2	Filey	Yorkshire	1 5	1 0¾
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B2	Folkestone	S. Counties	1 3½	11¾
A	Frodsham ..	N.W. Counties	1 6½	1 2
B2	Frome ..	S.W. Counties	1 3½	11¾
A	GATESHEAD	N.E. Coast	1 6½	1 2
B1	Gillingham	S. Counties	1 4	1 0
A2	Gloucester ..	S.W. Counties	1 5½	1 1¼
A2	Goole ..	Yorkshire	1 5½	1 1¼
A2	Gosport ..	S. Counties	1 5	1 0¾
A2	Grantham ..	Mid. Counties	1 5	1 0¾
A1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B2	Hastings ..	S. Counties	1 3½	11¾
A2	Hatfield ..	S. Counties	1 5	1 0¾
B	Hereford ..	S.W. Counties	1 4½	1 0½
A2	Hertford ..	E. Counties	1 5	1 0¾
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A2	Ipswich ..	E. Counties	1 5	1 0¾
B2	Isle of Wight	S. Counties	1 3	11¼
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A2	Kettering ..	Mid. Counties	1 5½	1 1¼
A2	Kidderminster	Mid. Counties	1 5½	1 1¼
B2	King's Lynn	E. Counties	1 3½	11¾
A	LANCASTER	N.W. Counties	1 6½	1 2
A2	Leamington	Mid. Counties	1 5½	1 1¼
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B2	Lewes ..	S. Counties	1 3	11¼
A2	Lichfield ..	Mid. Counties	1 5½	1 1¼
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3¼
A2	Llandudno	N.W. Counties	1 5	1 0¾
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A2	Luton ..	E. Counties	1 5	1 0¾
A	Lytham ..	N.W. Counties	1 6½	1 2
A1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A2	Malvern ..	Mid. Counties	1 5	1 0¾
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B1	Margate ..	S. Counties	1 4	1 0
A2	Matlock ..	Mid. Counties	1 5	1 0¾
A1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A2	Middlewich	N.W. Counties	1 5½	1 1¼
B2	Minehead ..	S.W. Counties	1 3½	11¼
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11¼
A	Morecambe	N.W. Counties	1 6½	1 2
A2	NANTWICH	N.W. Counties	1 5½	1 1¾
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A2	Norwich ..	E. Counties	1 5½	1 1¼
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A2	OAKHAM ..	Mid. Counties	1 5	1 0¾
A2	Oldham ..	N.W. Counties	1 5½	1 1¼
A	Oswestry ..	N.W. Counties	1 6½	1 2
A2	Oxford ..	S. Counties	1 5½	1 1¼
A	PAISLEY ..	Scotland	*1 6½	1 2
B2	Pembroke ..	S. Wales & M.	1 3	11¼
A	Perth ..	Scotland	*1 6½	1 2
A2	Peterborough	E. Counties	1 5½	1 1¼
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A1	Pontypridd	S. Wales & M.	1 6	1 1½
A2	Portsmouth	S. Counties	1 5	1 0¾
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A2	READING	S. Counties	1 5	1 0¾
B	Reigate ..	S. Counties	1 4½	1 0½
A2	Retford ..	Mid. Counties	1 5	1 0¾
A1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A2	Ripon ..	Yorkshire	1 5	1 0¾
A	Rochdale ..	N.W. Counties	1 6½	1 2
B1	Rochester ..	S. Counties	1 4	1 0
A1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A2	Rugeley ..	Mid. Counties	1 5	1 0¾
A	Runcorn ..	N.W. Counties	1 6½	1 2
A2	ST. ALBANS	E. Counties	1 5½	1 1¼
A	St. Helens ..	N.W. Counties	1 6½	1 2
B2	Salisbury ..	S.W. Counties	1 3	11¼
A1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A2	Shrewsbury	Mid. Counties	1 5½	1 1¼
A2	Skipton ..	Yorkshire	1 5½	1 1¼
A2	Slough ..	S. Counties	1 5	1 0¾
A2	Solihull ..	Mid. Counties	1 5½	1 1¼
A2	South'pton	S. Counties	1 5	1 0¾
A2	Southend-on-Sea	E. Counties	1 5½	1 1¼
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A2	Stafford ..	Mid. Counties	1 5½	1 1¼
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A2	Swindon ..	S.W. Counties	1 5	1 0¾
A1	TAMWORTH	N.W. Counties	1 6	1 1½
B1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A2	Teignmouth	S.W. Coast	1 5½	1 0¾
A	Todmorden	Yorkshire	1 6½	1 2
A1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A2	Warwick ..	Mid. Counties	1 5½	1 1¼
A2	Welling-borough	Mid. Counties	1 5½	1 1¼
A2	West Bromwich	Mid. Counties	1 6½	1 2
A2	Weston-s-Mare	S.W. Counties	1 5½	1 1¼
A2	Whitby ..	Yorkshire	1 5½	1 1¼
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B1	Winchester	S. Counties	1 4	1 0
A2	Windsor ..	S. Counties	1 5	1 0¾
A	Wolverhampton	Mid. Counties	1 6½	1 2
A2	Worcester	Mid. Counties	1 5½	1 1¼
A2	Worksop ..	Yorkshire	1 5	1 0¾
A1	Wrexham ..	N.W. Counties	1 6	1 1½
A2	Wycombe ..	S. Counties	1 5	1 0¾
B1	YARMOUTH	E. Counties	1 4	1 0
B2	Yeovil ..	S.W. Counties	1 3½	11¾
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter . . . . ,,	1 8
Joiner . . . . ,,	1 8
Machinist . . . . ,,	1 9
Mason (Banker) . . . . ,,	1 8
,, (Fixer) . . . . ,,	1 9
Plumber . . . . ,,	1 8
Painter . . . . ,,	1 7
Paperhanger . . . . ,,	1 8
Glazier . . . . ,,	1 8
Slater . . . . ,,	1 8
Scaffolder . . . . ,,	1 4
Timberman . . . . ,,	1 4
Navvy . . . . ,,	1 3
General Labourer . . . . ,,	1 3
Lorryman . . . . ,,	1 5½
Crane Driver . . . . ,,	1 7
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . ,,	2 10 6
Hydrated Lime . . . ,,	2 16 0
Portland Cement . . . ,,	2 6 0
Rapid Hardening Cement . . ,,	2 13 6
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . . ,,	10 0
Building Sand . . . ,,	10 6
Washed Sand . . . ,,	11 6
2" Broken Brick . . . ,,	9 6
¾" ,, ,, . . . ,,	12 6
Pan Breeze . . . ,,	6 6
Coke Breeze . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s. d.	6" s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . . ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . . ,,	3 9	5 9
Double ,, . . . ,,	5 9	8 9
Straight channels . . . ,,	2 6	3 2
¾" Channel bends . . . ,,	7 8	—
Channel junctions . . . ,,	7 0	12 6
Channel tapers . . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . each	6 0	13 0
Inspection bends . . . ,,	15 3	24 0
Single junctions . . . ,,	9 3	18 0
Double junctions . . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . ,,	3 3 6
Stocks, 1st Quality . . . ,,	4 18 6
,, 2nd ,, . . . ,,	4 12 6
Blue Bricks, Pressed . . . ,,	9 18 0
,, Wirecuts . . ,,	8 16 0
,, Brindles . . ,,	8 0 0
,, Bullnose . . ,,	10 8 0
Red Sand-faced Facings . . ,,	7 11 0
Red Rubbers for Arches . . ,,	15 0 0
Multicoloured Facings . . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . ,,	21 10 0
Headers . . . ,,	21 0 0
Bullnose . . . ,,	28 0 0
Double Stretchers . . ,,	30 0 0
Double Headers . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . ,,	5 10 0
2" Breeze Partition Blocks . . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

MASON

The following d/d F.O.R. at Nine Elms:	s. d.
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . ,,	4 9
Bath stone . . . . ,,	2 11
York stone . . . . ,,	6 9
,, Sawn templates . . ,,	7 6
,, Paving, 2" . . . F.S.	1 8
,, ,, 3" . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchionesses . ,,	28 0 0
20" × 10" Countesses . ,,	20 5 0
18" × 10" Viscountesses . ,,	17 0 0
18" × 9" Ladies . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20"× 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d
Good carcassing timber . . . F.C.	2 6
Birch . . . as 1" F.S.	9
Deal, Joiner's, . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . ,, ,,	1 1
Deal floorings, ¾" . . . Sq.	1 1 0
,, ¾" . . . ,,	1 3 6
,, 1" . . . ,,	1 5 6
,, 1¼" . . . ,,	1 11 0
,, 1½" . . . ,,	1 15 0
Deal matchings, ¾" . . . ,,	16 0
,, 1" . . . ,,	17 6
Rough boarding, ¾" . . . ,,	1 6 0
,, 1" . . . ,,	18 0
,, 1¼" . . . ,,	1 0 0
,, 1½" . . . ,,	1 8 0

Plywood, per ft. sup.

Thickness	¼"			½"			¾"			1"		
Qualities	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	½"	¾"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket union . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:	TUBES. Per cent.		Per cent.
Gas . . .	62½	Galvanized gas	50
Water . . .	58½	,, water	45
Steam . .	55	,, steam	40
	FITTINGS.		
Gas . . .	47½	Galvanized gas	37½
Water . . .	42½	,, water	32½
Steam . . .	37½	,, steam	27½

SMITH AND FOUNDER—*continued.*

	s. d.
Rolled steel joists cut to length . . cwt.	9 6
Mild steel reinforcing rods, ½" . . . ,,	10 0
,, ,, ⅝" . . . ,,	9 9
,, ,, ¾" . . . ,,	9 6
,, ,, ⅞" . . . ,,	9 0
,, ,, 1" . . . ,,	9 0
,, ,, 1¼" . . . ,,	9 0
,, ,, 1½" . . . ,,	9 0
,, ,, 1¾" . . . ,,	9 0

Cast-iron rain-water pipes of ordinary thickness metal .	3" s. d. F.R. 7	4" s. d. 10
Shoes . . . each	2 3	3 3
Anti-splash shoes . . ,,	5 0	8 6
Boots . . . ,,	3 3	4 6
Bends . . . ,,	2 9	4 0
,, with access door . ,,	—	6 9
Heads . . . ,,	4 0	5 0
Swan-necks up to 9" offsets . ,,	4 0	6 3
Plinth bends, 4½" to 6" . ,,	4 0	5 6
Half-round rain-water gutters of ordinary thickness metal .	F.R. 5	6
Stop ends . . . each	6	7
Angles . . . ,,	1 7	1 11
Obtuse angles . . . ,,	2 0	2 6
Outlets . . . ,,	1 9	2 3

PLUMBER

	s. d.
Lead, milled sheet . . . cwt.	19 0
,, drawn pipes . . . ,,	19 6
,, soil pipe . . . ,,	22 6
,, scrap . . . ,,	9 0
Solder, plumbers' . . . lb.	1 1
,, fine do. . . . ,,	1 3
Copper, sheet . . . ,,	1 0
,, tubes . . . ,,	1 4

L.C.C. soil and waste pipes:	3"	4"	6"
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . ,,	3 9	5 3	10 3
Shoes . . ,,	2 10	4 4	9 6
Heads . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . lb.	3½

GLAZIER

	s. d.	s. d.
Sheet glass, 21 oz. . . F.S.		3½
,, ,, 26 oz. . . ,,		4½
Arctic glass . . . ,,		5
Cathedral glass . . . ,,		6
Hartley's rough rolled . ,,		9
Do. wired plate . . . ,,		1 3
¼" Polished plate, n/e 1 . ,,	1 0 to	1 3
,, ,, 2 . ,,	1 2 ,,	1 7
,, ,, 3 . ,,	1 7 ,,	2 5
,, ,, 4 . ,,	2 1 ,,	2 11
,, ,, 6 . ,,	2 3 ,,	3 2
,, ,, 8 . ,,	2 6 ,,	3 6
,, ,, 12 . ,,	2 9 ,,	3 8
,, ,, 20 . ,,	3 0 ,,	3 11
,, ,, 45 . ,,	3 3 ,,	4 1
,, ,, 65 . ,,	3 7 ,,	4 6
,, ,, 90 . ,,	3 10 ,,	4 9
,, ,, 100 . ,,	4 0 ,,	5 0
Vita glass, sheet, n/e 1 . ,,		1 0
,, ,, ,, 2 . ,,		1 3
,, ,, ,, over 2 . ,,		1 9
,, ,, plate, n/e 1 . ,,		1 6
,, ,, ,, 2 . ,,		3 0
,, ,, ,, 5 . ,,		4 0
,, ,, ,, 7 . ,,		5 0
,, ,, ,, 15 . ,,		6 0
,, ,, ,,over 15 . ,,		7 6
Putty, linseed oil . . lb.		3

PAINTER

	£ s d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 3
Turpentine . . . . ,,	3 4
Patent knotting . . . ,,	14 0
Distemper, washable . . . cwt.	3 0 0
,, ordinary . . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.	3	6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10	0
" to form basement n/e 5' 0" deep and cart away	"	11	0
" " 10' 0" deep and cart away	"	11	6
" " 15' 0" deep and cart away	"	12	0
If in stiff clay	add "	3	0
If in underpinning	" "	5	0
Digging, return, fill and ram	"	5	0
Planking and strutting to sides of excavation	F.S.	1	0
" " to pier holes	"		6
" " to trenches	"		6
" " extra, only if left in	"		3½
Hardcore, filled in and rammed	Y.C.	14	0
Portland cement concrete in foundations (6-1)	"	1 13	6
" " " (4-2-1)	"	1 18	6
" " " underplanning	"	2 2	0
Finishing surface of concrete, spade face	Y.S.		9

DRAINLAYER

		4" s.	4" d.	6" s.	6" d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	8	2	6
Extra, only for bends	Each	2	8	3	9
" junctions	"	3	9	4	6
Gullies and gratings	"	17	6	19	9
Cast iron drains, and laying and jointing	F.R.	5	6	7	0
Extra, only for bends	Each	12	6	18	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	32	0	0
" " in cement	"	34	0	0
" Stocks in cement	"	41	10	0
" Blues in cement	"	62	0	0
Extra only for circular on plan	"	3	0	0
" backing to masonry	"	2	0	0
" raising on old walls	"	3	0	0
" underpinning	"	10	0	0
Fair Face and pointing internally	F.S.			3
Extra only for picked stock facings	"		1	0
" red brick facings	"		1	6
" blue brick facings	"		1	9
" glazed brick facings	"		4	6
Tuck pointing	"			10
Weather pointing	"			4
Slate dampcourse	"		1	0
Vertical dampcourse	"		1	3

ASPHALTER

		s.	d.
4" Horizontal dampcourse	Y.S.	5	6
½" Vertical dampcourse	"	7	6
½" paving or flat	"	5	6
1" paving or flat	"	6	6
1" × 6" skirting	F.R.	1	0
Angle fillet	"		2
Rounded angle	"		2
Cesspools	Each	5	0

MASON

		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1	1	6
Bath stone and do, all as last	"		15	6
Artificial stone and do.	"		16	6
York stone templates, fixed complete	"		14	0
" thresholds	"		16	0
" sills	"	1	3	6

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4	5	0
Do., 18" × 9"	"	4	2	0
Do., 24" × 12"	"	4	12	0
Westmorland slating, laid with diminished courses	"	6	10	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4	0	0
Do., all as last, but of machine-made tiles	"	3	11	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	12	0
Shuttering to sides and soffits of beams	F.S.		1	0
" to stanchions	"		1	0
" to staircases	"		2	0
Fir and fixing in wall plates, lintols, etc.	F.C.		5	0
Fir framed in floors	"		6	9
" " roofs	"		8	3
" " trusses	"		9	0
" " partitions	"		12	0
1" deal sawn boarding and fixing to joists	Sqr.	1	17	6
1" " " " "	"	2	1	6
1½" " " " "	"	2	7	6
2" × 2" fir battening for Countess slating	"		12	6
Do. for 4" gauge tiling	"		16	0
Stout feather-edged tilting fillet	F.R.			6
Patent roofing felt, 1 ply	Y.S.		2	6
" " " 2 "	"		3	0
" " " 3 "	"		3	6
Stout herringbone strutting to 9" joists	F.R.		1	0
1" deal gutter boards and bearers	F.S.		1	4
1½" " " " "	"		1	8
2" deal wrought rounded roll	F.R.			9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	15	0
1¼" do.	"	3	4	0
1½" do.	"	3	13	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	10
1¼" do.	"		2	1

CARPENTER AND JOINER—*continued.*

		s.	d.
1¼" deal moulded sashes of average size	F.S.		3
2" " " "	"		6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ½" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4	3
2" " " "	"	4	6
Extra only for moulded horns	Each		9
1½" deal four-panel square, both sides, door	F.S.	2	6
2" " " "	"	3	0
1½" " but moulded both sides	"	3	0
2" " " "	"	3	6
4" × 3" deal, rebated and moulded frames	F.R.	1	6
4½" × 3½" " "	"	2	0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2	0
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3	0
1½" deal moulded wall strings	"	2	6
1½" " outer strings	"	2	9
Ends of treads and risers housed to string	Each	2	0
3" × 2" deal moulded handrail	F.R.	1	6
1" × 1" deal balusters and housing each end	Each	2	6
1½" × 1½" " "	"	3	3
3" × 3" deal wrought framed newels	F.R.	1	6
Extra only for newel caps	Each	7	6
Do., pendants	"	7	6

SMITH AND FOUNDER

		s.	d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17	0
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3	0
Do. stanchions with riveted caps and bases and do.	"	1 2	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 0	0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1	0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats, gutters	Per cwt.	1 15	6	
Do. in flashings	"	1 18	0	
Do. in covering to turrets, etc.	"	2 5	0	
Do. in soakers	"	1 11	0	
Labour to welted edge	F.R.			3½
Open copper nailing	"			3½
Close "	"			4½

		½" s.	½" d.	¾" s.	¾" d.	1" s.	1" d.	1½" s.	1½" d.	2" s.	2" d.	4" s.	4" d.
Lead service pipe and fixing with pipe hooks	F.R.	1	2	1	7	2	1	2	8	3	8	—	
Do. soil pipe and fixing with cast lead tacks	"	—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2	3	6	6
Do. to stop ends	"		7		9	1	0	1	3	2	0	—	
Boiler screws and unions	"	3	6	4	0	5	6	8	0	—		—	
Lead traps	"	—		—		—		7	6	10	6	—	
Screw down bib valves	"	7	6	10	6	12	6	—		—		—	
Do. stop cocks	"	10	0	12	0	16	0	23	6	56	6	—	

		£	s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	3	
Extra, only stop ends	Each	1	0	
Do. angles	"	1	6	
Do. outlets	"	3	0	
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	6	
Extra, only for shoes	Each	2	6	
Do. for plain heads	"	5	6	

PLASTERER AND TILING

		£	s.	d.
Expanded metal lathing, small mesh	Y.S.	3	9	
Do. in n/w to beams, stanchions, etc.	"	5	6	
Lathing with sawn laths to ceilings	"	1	6	
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"	2	6	
Do. vertical	"	2	9	
Rough render on walls	"	2	3	
Render, float and set in lime and hair	"	3	0	
Render and set in Sirapite	"	3	3	
Render, backing in cement and sand, and set in Keene's cement	"	4	6	
Extra, only if on lathing	"			9
Keene's cement, angle and arris	F.R.			8
Arris	"			3
Rounded angle, small	"			3
Plain cornices in plaster, including dubbing out, per 1" girth	"			2
1" granolithic pavings	Y.S.	5	0	
1½" " "	"	6	0	
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1	2	6
9" × 3" " " "	"	1	7	6
Extra, only for small quadrant angle	F.R.			9

GLAZIER

		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		8
26 oz. do. and do.	"	1	0
Arctic glass and glazing with putty	"	1	2
Cathedral glass and do.	"	1	3
Glazing only, British polished plate	"		8
Extra, only if in beads	"		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcole and whiten ceilings	Y.S.		8
Do. and distemper walls	"	1	0
Do. with washable distemper	"	1	3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax-polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	6
Hanging ordinary paper	from "	3	0

THE TOWN HALL, BURY ST. EDMUNDS

ROBERT ADAM: ARCHITECT

MEASURED AND DRAWN BY LAURENCE KING



A PHOTOGRAPH SHOWING THE SIMILARITY BETWEEN SIDES AND ENDS

THERE must be many visitors to Bury St. Edmunds who pass this building by without realizing that it is the work of Robert Adam, for in books dealing with the works of the Brothers Adam, the Town Hall, Bury St. Edmunds, is rarely mentioned.

It originated in the Market Cross, built in 1583-4 and destroyed by fire in 1608. When rebuilt in 1620 it consisted of a cornstead below and a clothiers' hall above, and "was adorned with a lanthorn and clock." In 1734 it was converted into a playhouse, and continued to be so used until 1819.

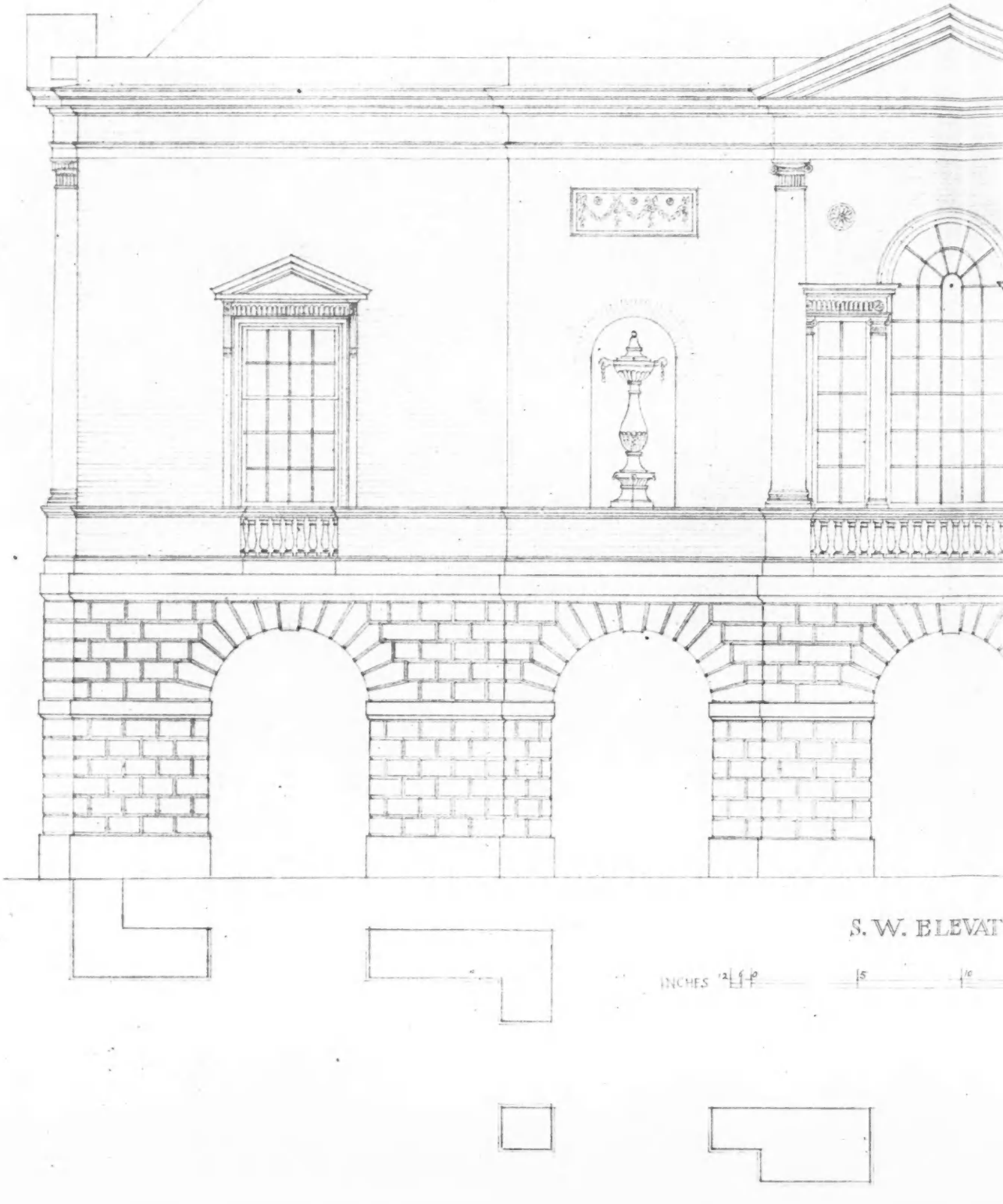
In 1774 the town directed Robert Adam, who was at that time in the mid-period of his career in London (1758-92), to reconstruct the playhouse. This work was carried out at a cost of £3,825.

It had an open rusticated ground floor which was still in use as a corn market until the middle of the last century, when it was enclosed and doors and windows of unfortunate proportions and detail were inserted. The ground floor is now occupied as Borough offices. The structure above is of stock brick and stone.

Generally speaking, the building is most distinctive of the author in the freedom with which the Orders are employed. The use of the Ionic Order in the centre portion of each elevation is light and pleasing, and contributes to that charming elegance so characteristic of the period.

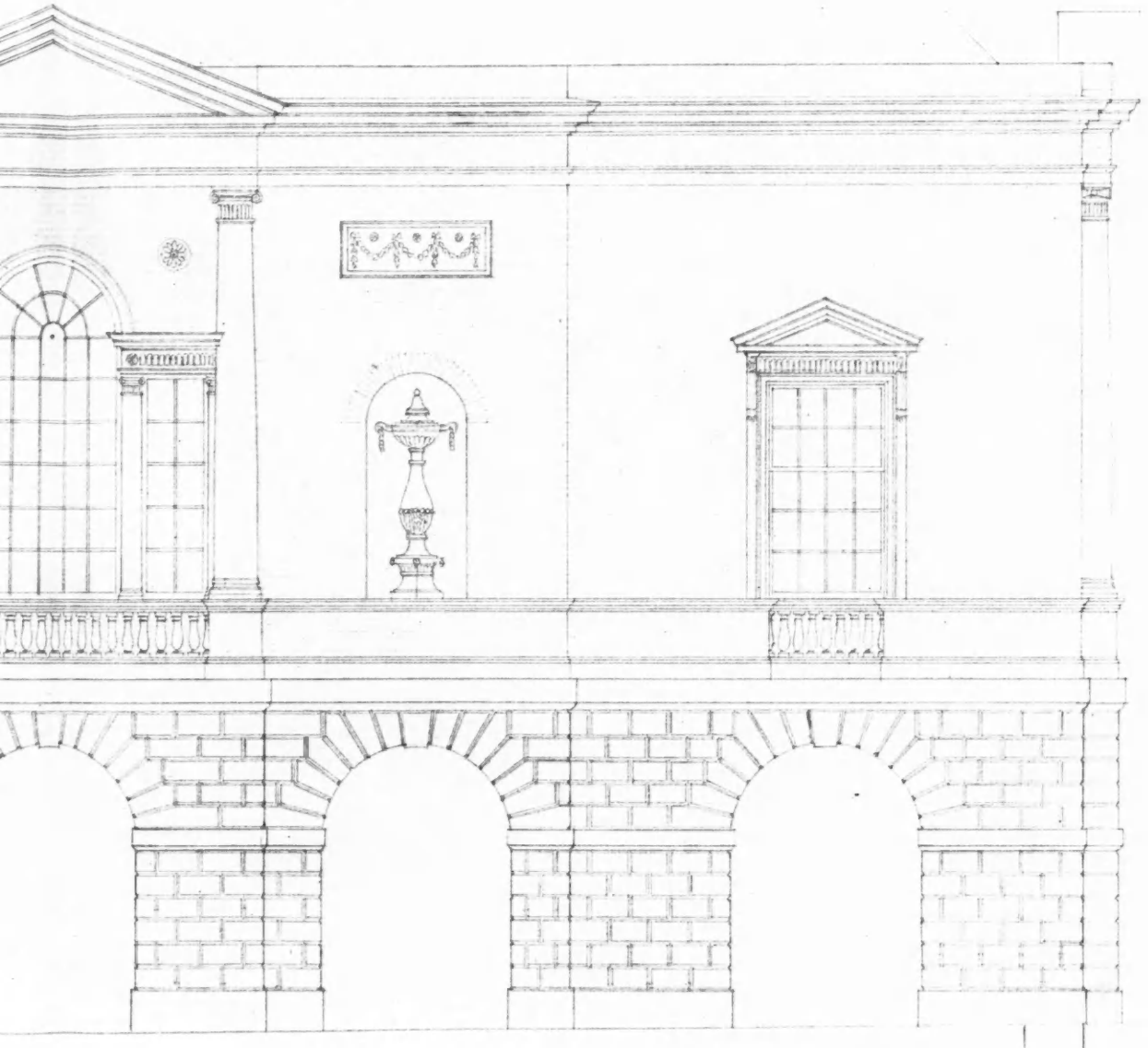
THE TOWN HALL BURY

ROBERT ADAM



RY ST EDMUNDS SUFFOLK

ARCHITECT 1775



ELEVATION

10 15 20 FEET

THE TOWN HALL
BURY ST EDMUNDS SUFFOLK

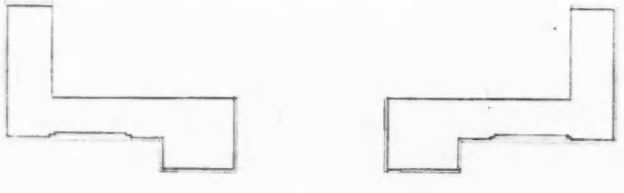
ROBERT ADAM ARCHITECT 1775



S. E. ELEVATION







MANCHESTER GUARDIAN BUILDINGS, 1930

THE ARCHITECTS' WORKING DRAWING OF THE ENTRANCE FROM PALL MALL, MANCHESTER



THE MAIN DOORWAY OF THE PALL MALL FRONT

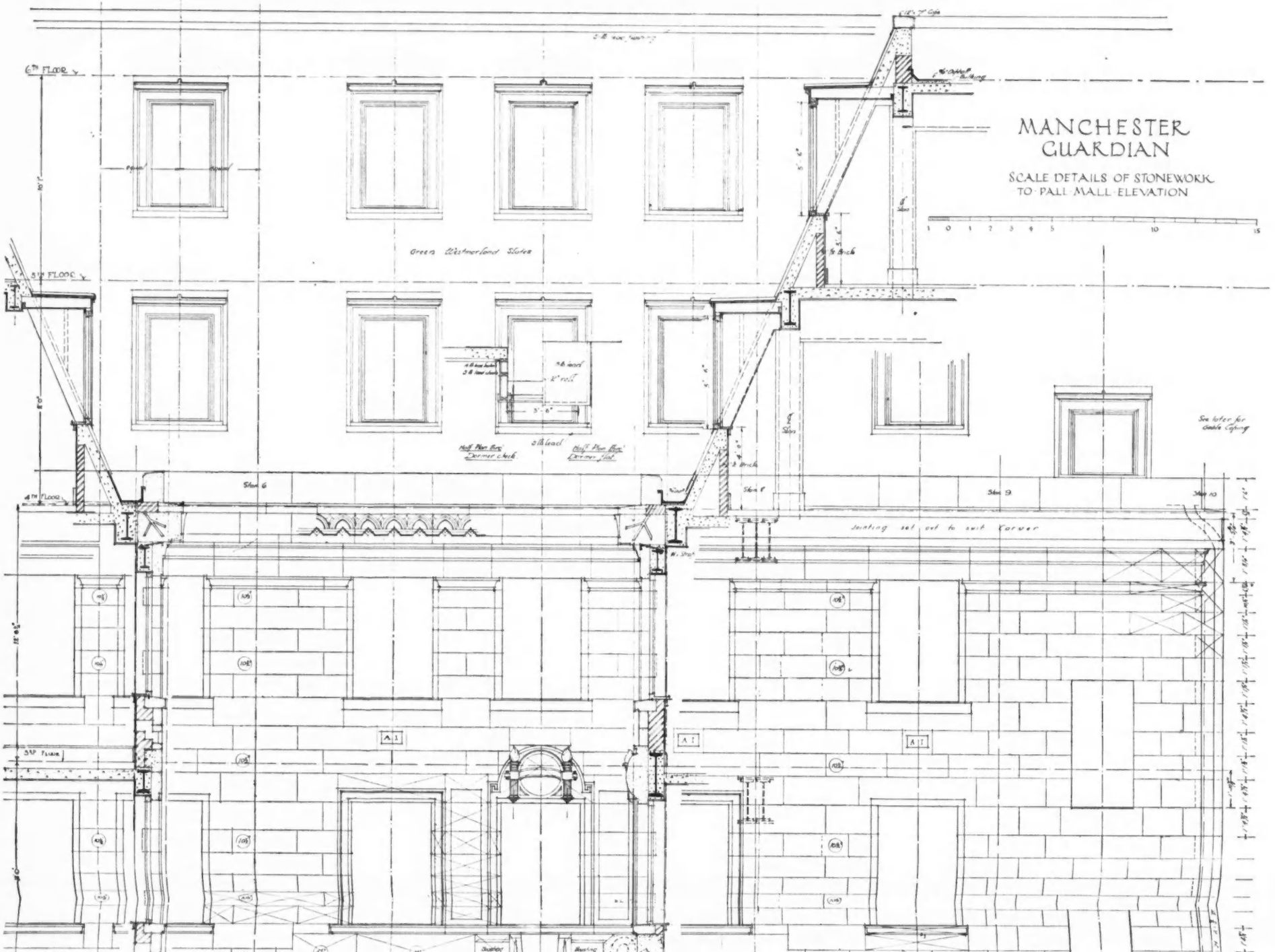
[Harry S. Fairhurst and Son, architects

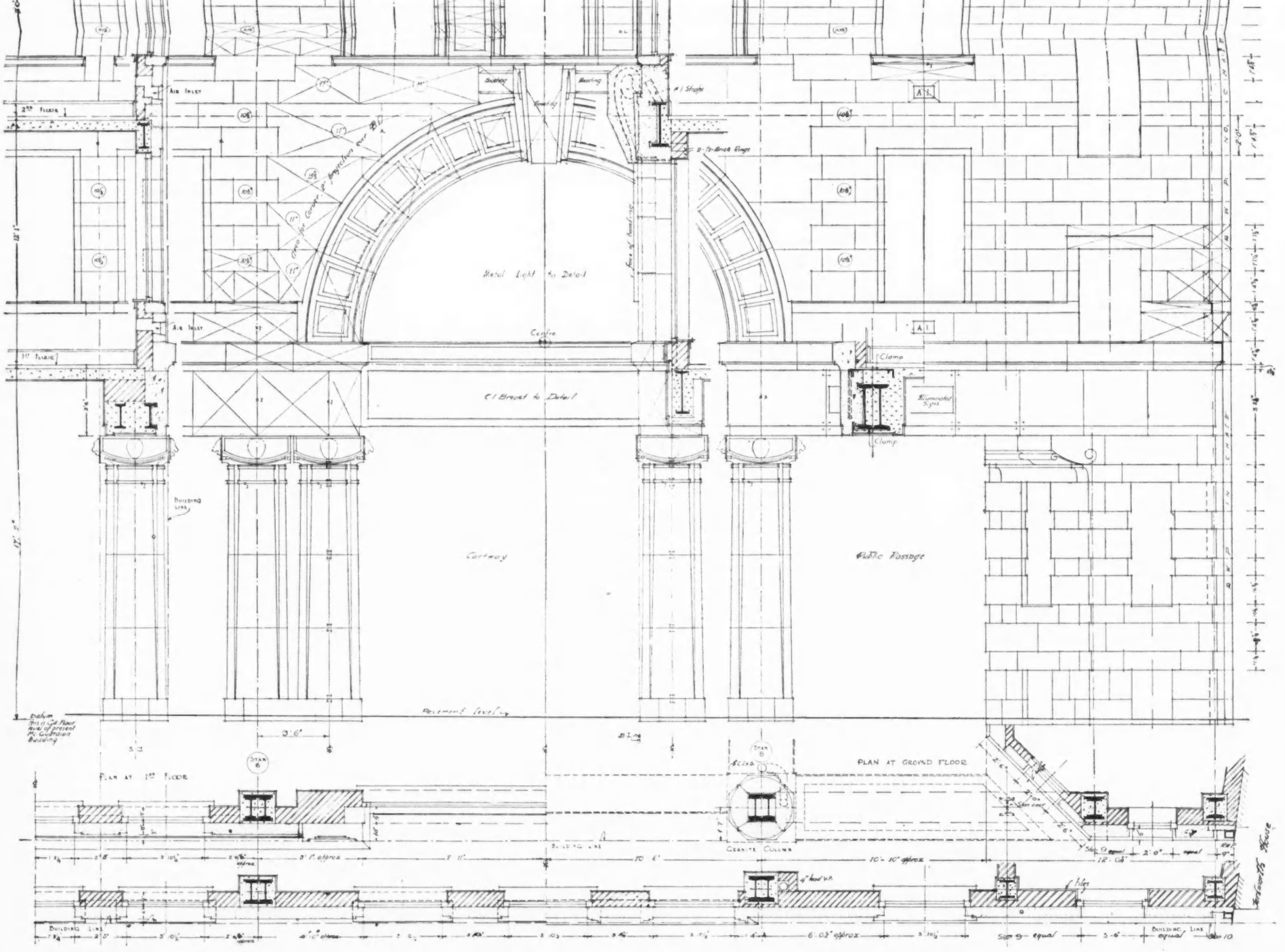
AS will be seen from the other illustrations, drawings and description of the new headquarters of "The Manchester Guardian," published in this issue, this is the more important of two arched entrances of similar character giving access from Pall Mall and Warren Street, Manchester, respectively.

The elevations are faced with Portland stone, but in view of the large spans, necessitated by the provision of free access to the loading space at ground floor level, essential to a newspaper undertaking, extensive use has been made of granite columns to support the upper part of the structure.

In the case of the Pall Mall front, illustrated photographically above, and overleaf in a working drawing, a denticulated cornice defines the third-story height; above this are two more stories in the roof of green Westmorland slates. The window openings, fitted with metal casements in wood frames, are mainly simple in character, but air inlets are made to play an effective decorative part in the design of the façade. Otherwise, decoration is concentrated on the arched bay.

The spandril sculptures illustrated in detail on the fourth page of this sheet are based on motives of winged figures, intended to symbolize the carrying of the torches of idealism, and of birds in flight with the news of the day. There are similar emblems of incoming intelligence carved above the corresponding Warren Street arch. The carving was executed by Messrs. Earp, Hobbs and Miller.


MANCHESTER
GUARDIAN
SCALE DETAILS OF STONEWORK
TO PALL MALL ELEVATION
6TH FLOOR
5TH FLOOR
4TH FLOOR
3RD FLOOR
Green Westmorland Slates
Stone 6
Stone 8
Stone 9
Stone 10
Jointing set out to suit Corner
See later for Cable Coping
A1



Air Inlet
2nd Floor
Metal Light to Detail
Centre
Clamp
Illuminated Signs
Clamp
Building Line
Cartway
Public Passage
Pavement Level
Datum
Plan at 1st Floor
Plan at Ground Floor
Granite Column
Building Line
Plan at 3rd Floor
Plan at 2-Floor
Tenworth House



THE SYMBOLICAL FIGURES SCULPTURED ON THE ARCH SPANDRILS

SELECTED PRECEDENTS:

TIMBER-FRAMED COTTAGES

NOTES BEGINNING WHERE THE TEXT-BOOKS END: ii



[Frank O. Marchant, Architect.

1. TIMBER-FRAMED COTTAGES AT ROLVENDEN, KENT

IN considering again figure **1**, *of the completed cottages, attention may be directed to the value of wood window-frames having mullions, where steel casements are to be used. Without wood mullions, steel windows look empty and are ill-proportioned. The glass line of the windows is 3 ft. 3 ins. from the floor. To omit hoods from the front doors is a daring economy, but the bay windows provide the necessary focal points and the elevation is satisfactory. These are real, honest cottages, not aspiring villas tricked out in tawdry accessories. They have been grouped judiciously and put to shame the ugly, ill-designed cottages which now ruin the approaches to the town of Tenterden, which, itself, is perhaps better laid out and has more good house-fronts than any other of its size in England.*

Figure shows another stage of progress. The party wall has been carried up to the roof, and finished with cement breeze. The first-floor walls have been covered with weather-boards and the roofs battened ready for the tiler. The dormers have been completed to the same point as the main roof. Lead saddle-pieces can be seen above the chimney and dormer window.

At the eaves, there are no sprocket pieces, only a piece of feather-edged board as a tilting fillet. At little cost a larger fillet, or eaves lath, as it is called locally, would have produced a nicely swept bell-cast at all the roof eaves. If a brick course had been set with a little oversailing behind the lowest weather-board of the wall-covering, this would have given the boarding an outward tilt, and the slightly projecting eaves thus produced would have given an effect of shelter over the door and window heads.

Figure **6** *shows the tiling well advanced. Soakers are in position at the chimneys, which await the plumber for lead flashings. Both hip and valley tiles of the dormer are to roof pitch.*

The cost—contract price—of the pair of cottages in 1929, including structure, drains and paths, but not including architect's fees, was £812. Had the walls, above first floor, been tile-hung, the cost would have been £17 10s. the pair additional to weather-boarding. Had the cottages been placed side-by-side instead of end-to-end the cost would have been reduced by £52 the pair. To cut out the bay windows would have effected a saving of £20 the pair. To cut out the dormer windows would have effected a saving of £10 the pair. Had sand-faced, hand-made tiles been used instead of cement tiles for roofing, the cost would have been increased by about £60 the pair.

NATHANIEL LLOYD



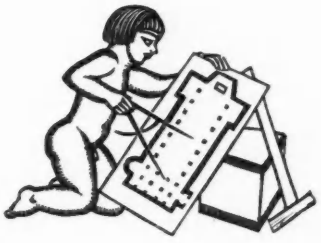
5. *PROGRESS PHOTOGRAPH: WALLS AND WINDOW-OPENINGS COMPLETED*



[*Frank O. Marchant, Architect.*

6. *PROGRESS PHOTOGRAPH: ROOF TILING WELL ADVANCED*

THE ARCHITECTS' JOURNAL



WEDNESDAY, JUNE 17, 1931

PENALIZING OPEN SPACES

PROFESSOR TREVELYAN'S letter, printed in this issue, draws attention to a situation of the utmost gravity for all those engaged in schemes for land development and the provision of open spaces. Under Part III of the Government's present Finance Bill it is proposed, after Government valuation, to levy a tax on all land of greater value than £120, exemption only being granted to land held by local authorities and to property of the National Trust.

It is incredible that any Government responsible for such intelligent and far-reaching proposals as are embodied in the Town and Country Planning Bill should attempt to impose a tax that will not only hinder that very development, but will have the immediate effect of forcing into the market for building many valuable open spaces, in the vicinity of towns, that are at present used for the recreation of people of all classes. This must inevitably occur before arrangements have been completed for planning schemes to cover all land in the country, and it will be disastrous.

Anyone who has a knowledge of the difficulties of reserving adequate open spaces in a regional or town-planning scheme must be aware that no landowner can possibly afford to hold land undeveloped, or let it on lease for playing fields at a reasonable rent, when the meagre income derived from such land is to be exceeded by the tax on its building value payable to the State.

In areas where statutory planning schemes are not operative, the effect will inevitably give an impetus to ribbon development of the worst type, because owners with road frontage anywhere near the centres of population will be encouraged to dispose of their frontages in small plots, resulting in a high building density.

Even in urban and suburban districts, the effect will be a reduction in private garden space; indeed, an adequate garden will be a luxury only for the wealthy. As for the effect on London, there is no provision in the Bill for the exemption of tax payable by the owners of the numerous garden squares and enclosures which now afford amenities to the town worker.

In short, every private open space and playing field in and near our great towns—all of undoubted building value—will be endangered by the proposal. These fields are in many cases held by charitable institutions, by universities, schools, polytechnics, boys' clubs, by banks and industrial firms, for the recreation of their employees. It is certain that a tax on such grounds will render it impossible to retain them for their present useful purpose; and the whole community must suffer.

The financial difficulties involved in the creation of new industrial towns or villages, like Letchworth and Welwyn, are already immense. Is it likely therefore that we shall see any more well-conceived schemes of this nature brought to fruition if an additional burden is to be borne by such undertakings in the form of a tax on land values ? It is poor encouragement to the individual or public utility society to embark on a comprehensive scheme where the provision of roads, sewers and other services will create values on which the promoters will have to pay tax long before they receive any return for their expenditure. It will, in fact, become much more profitable to speculate in land and, by quick disposal of small plots, realize the increment, than to embark on a sound scheme of development and building : this statement can be proved by the experience of those who have studied conditions in North America.

Yet the Government does not seek to levy a tax on realized increment as its sole objective, but to penalize all and sundry who hold land—even if, as happens in so many cases, they hold it at a loss.

Whatever additional exemptions may be demanded by Parliament, it is clear that any annual tax on land values will have effects exactly opposite to those anticipated in the Town and Country Planning Bill. At the present time the Greater London Planning Committee is actively engaged upon the problem of reserving a green belt and park system round London; therefore it is particularly unfortunate that the Chancellor's proposals should embarrass this and other planning authorities before their schemes are completed. The C.P.R.E.—a strictly non-political body—and individual members of every shade of political opinion have already drawn attention to the folly of forcing into the market any undeveloped land essential to health and amenity before it is decided where further building is required in the national interest.



GATES OF COMMERCE

The principal entrance to the new City branch of the Westminster Bank, Lothbury, E.C., is emphasized by a bold arched doorway carried up the height of two floors. This is closed by a huge disappearing wrought-iron gate 15 ft. long by 15 ft. high, and weighing three tons. The opening in the pavement, through which the gate travels up, is automatically covered by a bronze flap when the gate is in its lower position; this flap is also automatically raised and held open by means of the upward movement of the gate.

The new branch, further views of which appear on pages 846–848, has just been completed from the designs of Mewès and Davis. It is faced with Portland stone, and has a base of polished granite. The sculpture was carried out by W. Aumonier.

NEWS & TOPICS



Mr. Frederick G. Hicks, F.R.I.B.A., President of the Royal Institute of the Architects of Ireland; one of the vice-presidents of the R.I.B.A. Conference now being held in Dublin. The guests will be welcomed by him at the reception in the Round Room of the Mansion House today, Wednesday.

WHEN IS AN ARCHITECT——?

I CANNOT quite understand the purpose of Mr. G. B. J. Athoe's letter, printed in the JOURNAL for June 10. It must be clear to a municipal surveyor or engineer that a Bill for the Registration of Architects is not a Bill for the Registration of Surveyors and Engineers. It must be equally clear that an assistant architect has as good a right to registration as a principal has. There is, therefore, no confusion to exist between the assistant registered architect who performs the municipal work and the principal, be he engineer or a surveyor, who puts his name to the work and collects the fee.

*

Anybody, good or bad, can continue to call himself architect, including those who employ architects, but are not responsible for the work; but in future their status will be considerably lowered by the exact definition of the term "registered architect," which will increasingly signify a man who is a trained and responsible person, in contradistinction to those who are not so trained. Mr. Athoe tells us in fact that, despite registration, we will have all sorts of unqualified people continuing to call themselves architects. And I, in reply, will say that I'm glad to hear it on such good authority.

SAVE THE FOUNDLING !

July 4 is the last date before which the Foundling Hospital site can be bought for London. An appeal is being made for a last great effort to save this absolutely invaluable lung for the use of Londoners, and if we can bring ourselves to see truly that it is worth more to the working and resting lives of thousands of people than nearly any park of twice its size, situated *outside* the radius of built-up London, then we will all press its claims, first upon the L.C.C. as the prime Governors of the Metropolis, then upon Parliament, the Boroughs, and lastly and more generally upon that section of the community that can afford to put down its cash for the best of purposes. The Foundling site once vanished, that quarter will become unrelieved in its concentration of building, and our London will take another nasty jerk downwards into mediocrity. We *must* save the Foundling !

THE PROPOSALS FOR RE-PLANNING EDINBURGH

The recent issue of the draft Town-planning Report for Central Edinburgh is of importance, for Edinburgh is one of our greatest architectural assets. It has been drawn up by Mr. F. C. Mears, F.R.I.B.A., M.T.P.I., who has an unrivalled knowledge of his city, its living conditions today and its traditions of yesterday. In no sense does it claim to be final, as the Lord Provost points out in his introduction—it aims rather at formulating ideas for the better development of the city, and invites criticism and constructive suggestions to amplify those ideas. Clearly, until some such report had been published, no definite body of public opinion could be expected to focus its attention on the subject profitably.

*

The report itself is a slim affair of sixteen pages, illustrated by a specially-drawn development plan. Recent controversies will have acquainted us already with several of the subjects discussed, such as the sites of the Scottish National Library and of the new Scottish Government offices, but whereas these problems have hitherto been regarded rather as unrelated to bigger issues, they are now revealed as part of a definite scheme for the whole city, proving that the Office of Works and National Library Trustees are as petty and unpublic-spirited in this respect as they always appeared to be.

L.N.E.R. AND L.M.S.—ONE STATION ?

Apart from making many interesting suggestions for the future development of several public institutions considered in relation to slum-clearance activities, Mr. Mears attacks the knotty problem of providing the union station necessitated by possible railway fusion in the near future. One station would eliminate much overlapping and mitigate the smoke nuisance; at present two large stations exist in Princes Street, and as the site of Waverley Station has recently been the object of envious eyes for a Central Exhibition Hall, the present L.M.S. station is suggested as most suitable for future railway developments. One regrets, in passing, that no insistence was laid on the importance of electrical railway development to the town-planning of Edinburgh; a view of the city from Salisbury crags reveals a pall of smoke through which the familiar shapes of St. Giles, the Castle and the North British Hotel are but dimly visible—and this where electricity is famed for its cheapness !

*

No other criticism occurs to me; indeed, after re-reading Mr. Mears's report, I feel rather ungenerous to have stated this one so definitely, for the report is full of good ideas, well expressed, and should be of great assistance to the Corporation of Edinburgh and other institutions concerned with the future of the city.

BUILDING FOR FIFTY YEARS ONLY

At the Design and Industries Association luncheon on Thursday last, the subject of discussion was " New Materials

—and Methods of using them." Mr. Crittall, the principal speaker, confined himself nearly entirely to a discussion of new materials, and in the course of a tightly-packed speech, examined and commented upon a list of materials which we are using and will still more largely use, in a way that was more stimulating than any number of generalizations on the subject.

★

I liked particularly the idea that we should build, not for permanence, but for fifty years or less, and in materials adapted to that span of life. Not that I feel I can reject the human need for the idea of permanence : that is basic and, for some buildings, absolutely and finally necessary. But for other classes to build to last is to choke the future, and 'twere better to build lightly in steel and glass for fifty years of aery existence than to dump tons of masonry on the earth to rot and rot others forever. Mr. Bossom's idea of progress I like not at all. It seems to spell an age of fear : the glorification of the machine. A " Get on or get out " sort of civilization.

EVIL HOUSING CONDITIONS

The report on housing in Paddington, which the Westminster Survey Group made last year, is bearing fruit. The London Diocesan Housing Committee has issued its report, and this report not only stresses the findings of the survey group, but points to conditions, no less evil and more widespread, in the Royal Borough of Kensington. The Ecclesiastical Commissioners were inclined to sniff at the first mutterings about bad conditions, but things have taken another turn. Responsibility is finding a home; and a small group of public-spirited men have caused the large lump to turn uneasily.

THE PUBLIC AS ASSESSOR ?

I am constitutionally averse from the judging of architectural competitions by a newspaper ballot of the general public, because I think, not unnaturally, that the general public is ignorant of and generally uninterested in architecture, cannot be expected to analyze the merits of a design shown in perspective, and will vote casually and not from formed judgment. As a means of educating the public the procedure may have some recommendation, but only when there is absolutely no risk that a good design may be rejected.

★

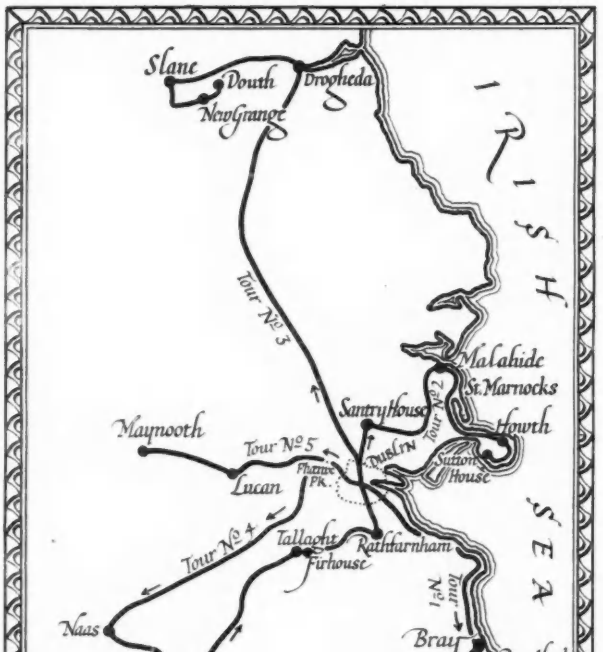
Bristol is choosing a war memorial by this surprising method. Some eighteen designs have been narrowed down to three by the assessor (if in this instance he can be correctly so called), Mr. S. C. Lawrence, F.R.I.B.A. The risk of the public choosing a dull design is so much a matter of certainty that the introduction of this popular method of selection can do no great harm. I am also of the opinion that it will do no good either. ASTRAGAL

PROGRAMME OF THE R.I.B.A. CONFERENCE

THE headquarters of the R.I.B.A. Conference will be in the premises of the Royal Institute of the Architects of Ireland, 8 Merrion Square North, Dublin. Members should call there as early as possible to obtain conference badges, information, etc. The programme of arrangements for the four days, June 17–20 inclusive, are as follows :

TO-DAY, June 17 : 8.30 p.m.—An informal reception will be held in the Round Room, Mansion House, Dublin.

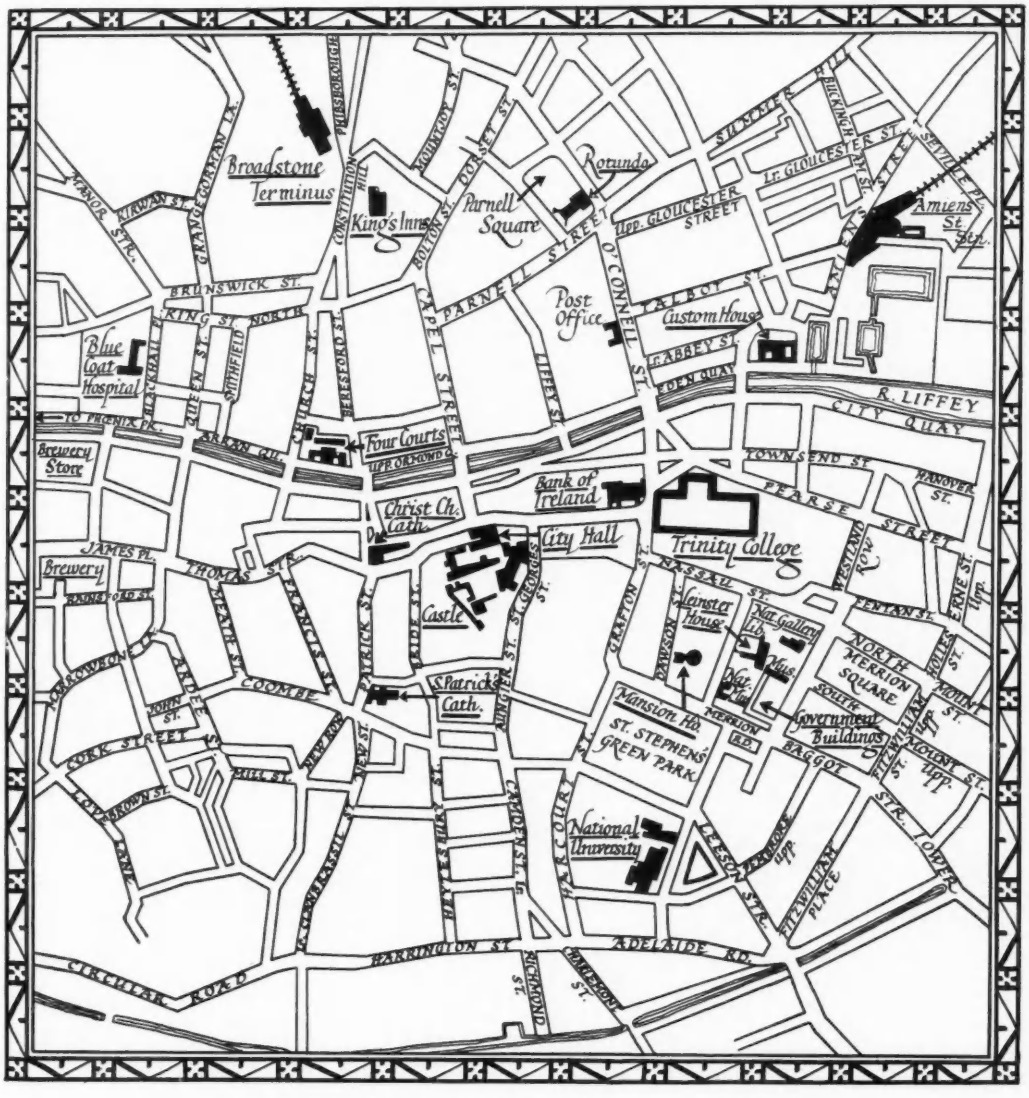
THURSDAY, June 18 : 10.30 a.m.—The Conference will assemble at the Round Room, Mansion House, for the inaugural meeting. The members will be officially welcomed by the Rt. Honourable the Lord Mayor of Dublin. The inaugural address will be delivered by the President, to be followed by papers on two periods of Irish Architecture by Professor R. M. Butler, A.R.H.A., F.R.I.A.I., F.R.I.B.A., and Mr. R. Caulfeild Orpen, B.A., R.H.A., F.R.I.A.I.



A map of Dublin and the surrounding districts, showing places of interest to which tours have been arranged for Friday.

(*a*) Ancient and Mediæval; (*b*) Georgian. 1 p.m.—*Lunch*. To be arranged privately and independently. 2 p.m.—Assemble in the quadrangle, Trinity College, where the conference photograph will be taken. 2.30 p.m.—*Alternative Visits*. (*A*) St. Patrick's Cathedral, Christchurch Cathedral, St. Catherine's Church. (*B*) Trinity College, Bank of Ireland, Dublin Castle, City Hall, Powerscroft House, Dublin; passing Four Courts, Custom House, Bluecoat Hospital. (*C*) Custom House, Four Courts, Bluecoat Hospital, Kings Inns, Blessington House, Broadstone Terminus, Rotunda, Charlemont House, Belvedere House. (*D*) Leinster House (Legislative Headquarters), formerly residence of Duke of Leinster; Government Buildings, College of Science. 7.15 p.m. for 7.30 p.m.—Banquet in the Great Hall, Royal Hospital, Kilmainham.

FRIDAY, June 19 : *Alternative Whole-Day Motor Coach Tours*, from 9.30 a.m. to 6.30 p.m. Halts for



A street plan of Dublin, showing the principal places of interest.

lunch and tea will be made on each tour.

(1) Vico Road, Ballybrack, Bray, Glen of the Downs, view Walpole's Gardens, Glendalough. Return via Devil's Glen, visit Powerscourt House, Co. Wicklow. (2) Santry Court and Gardens, Malahide Castle, Old Church and Gardens, Malahide. St. Marnocks, Harbour and Abbey, Howth. Sutton House. Howth Castle and Gardens. (3) Casino, Marino, All Hallows College, Drumcondra, St. Doulough's, early Irish Church, Drogheda. Boyne Valley, Mellifont Abbey, New Grange, Dowth, Monasterboice. (4) Phœnix Park, Viceregal Lodge, Belgard, Curragh Grange, Japanese Gardens, Naas, Poulaphouca Waterfall, Tallaght, Firhouse, Rathfarnham. (5) Phœnix Park, Viceregal Lodge, Castletown, Lucan Demesne, Sarsfield's Monument, Lucan, Carton, Maynooth.

8.30 p.m.—At University College, Dublin. Reception by President of the College. Exhibition of Students' drawings in connection with the School of Architecture and the Ecole des Beaux Arts, Paris.

SATURDAY, June 20: *Informal Visits:* 10.30 a.m.—Science and Art Museum. Exhibition of Irish Antiquities, Celtic Gold Ornaments, etc., described by Dr. A. Mahr, D.PH., M.R.I.A. 11.30 a.m. —Visit to Guinness's Brewery. The party will be entertained to luncheon by Messrs. Arthur Guinness, Son & Co., Ltd. If sufficient numbers are available the following arrangements will be made: (1) Day excursion to Limerick and the Shannon Scheme. (2) Week-end excursion to Cork, Glengariffe and/or Killarney. (3) Week-end excursion to Belfast, Giant's Causeway, etc.

Arrangements for Golf.—The following golf clubs have agreed to extend the courtesy of their links to golfing members of the Conference from June 17–21, inclusive:

Royal Dublin Golf Club; Portmarnock Golf Club; Castle Golf Club; Hermitage Golf Club; Milltown Golf Club; Malahide Golf Club; Delgany Golf Club; Elm Park Golf Club; and Dun Laoghaire Golf Club (Kingstown). [June 21 only.]

By the courtesy of the Royal Irish Yacht Club, members of the Conference may avail themselves of the usual privileges of that club.

C



The Lothbury front, looking from Bartholomew Lane, which bounds the east side of the Bank of England. A view of the main entrance appears on page 842.

WESTMINSTER

Offices in

DESIGNED BY

IT will be recalled that the original design for this City branch of the Westminster Bank, Ltd., won a limited competition three years or so ago. It was the only scheme submitted which had the imaginative quality of decentralizing its main entrance feature so that it terminated the vista to Bartholomew Lane. Two other examples of similar terminations to London streets by modern buildings occur in Kingsway on to Bush House, and in Lower Regent Street on to the County Fire Office building.

The off-centre entrance pavilion of the bank illustrating these notes is not disturbing to the balance of the elevation viewed from the narrow street named Lothbury, and by its position the plan falls logically into two unequal portions. In the larger area the great banking hall with its subsidiary departments is placed; in the smaller space the securities department is planned, with subsidiary entrances from Angel Court. The essence of the plan is in its directness.

The sections reveal zoning to the return flanks in Tokenhouse Yard and Angel Court, and three floors of basement under the eastern block. The task of the architect in City building is intensified in difficulty by that particular form of ransom pleasantly named "right of light." To the task of planning specialized buildings to suit



The architects' drawing of the main elevation to Lothbury. Architects have learnt to expect perfection of proportion, beautiful and severely proper detail, and above all a rigid adherence to traditional form in the work of Mewès and Davis. This bank does not disappoint them in one single degree.

BANK, LIMITED

Lothbury, E.C.

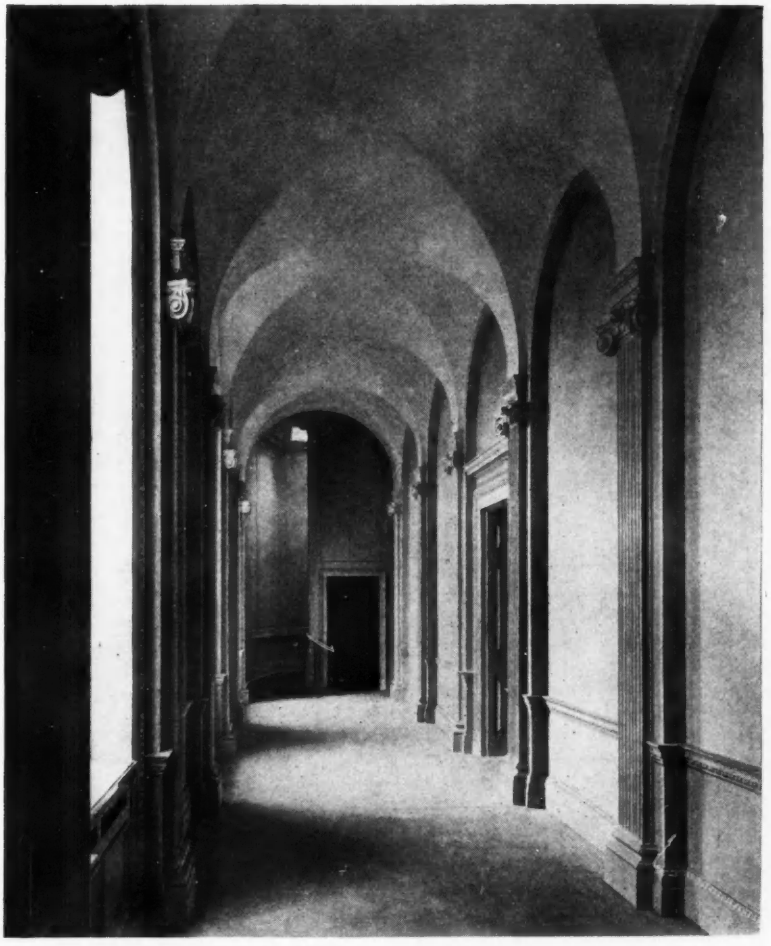
MEWÈS AND DAVIS

the whims and idiosyncrasies of departmental heads, the architect is beset with problems relating to expenditure, party wall questions, right-of-light claims of adjoining owners (how adjoining owners do make a god of the sun when it comes to assessing his value in terms of cash !) Building Act, and City fire regulations, constructional difficulties, and a multitudinous mass of intricate detail of which the lay person has no possible conception.

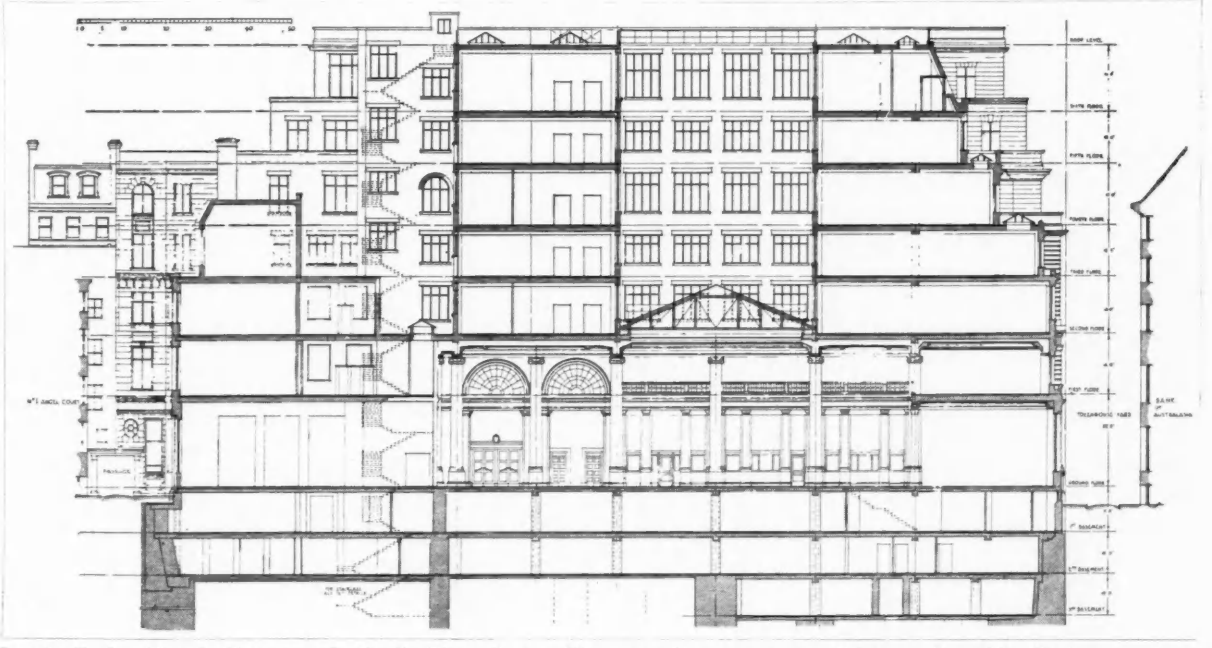
Uninfluenced by passing fashions, by neo-isms, by functional expressions, the work of Mewès and Davis pursues the even tenor of its architectural way. With a lofty and slightly supercilious air it gently chides the impatience of the younger school in its effort to kick overboard the paraphernalia of the orders and orthodoxy. It insists, with calm aloofness, that chastity and correctitude are architectural shibboleths of the traditional school, which are not to be broken down by the assaults of the restless youngsters who despise architecture when it is draped on steel bones.

Perhaps the cold precision of the detailing, the unfaltering adherence to orthodoxy, and the stylist insistence of this design leaves one somewhat chilled. As a foil to the playful vivacity of the work of Sir Edwin Lutyens in the neighbourhood, however, this austere building is interesting.

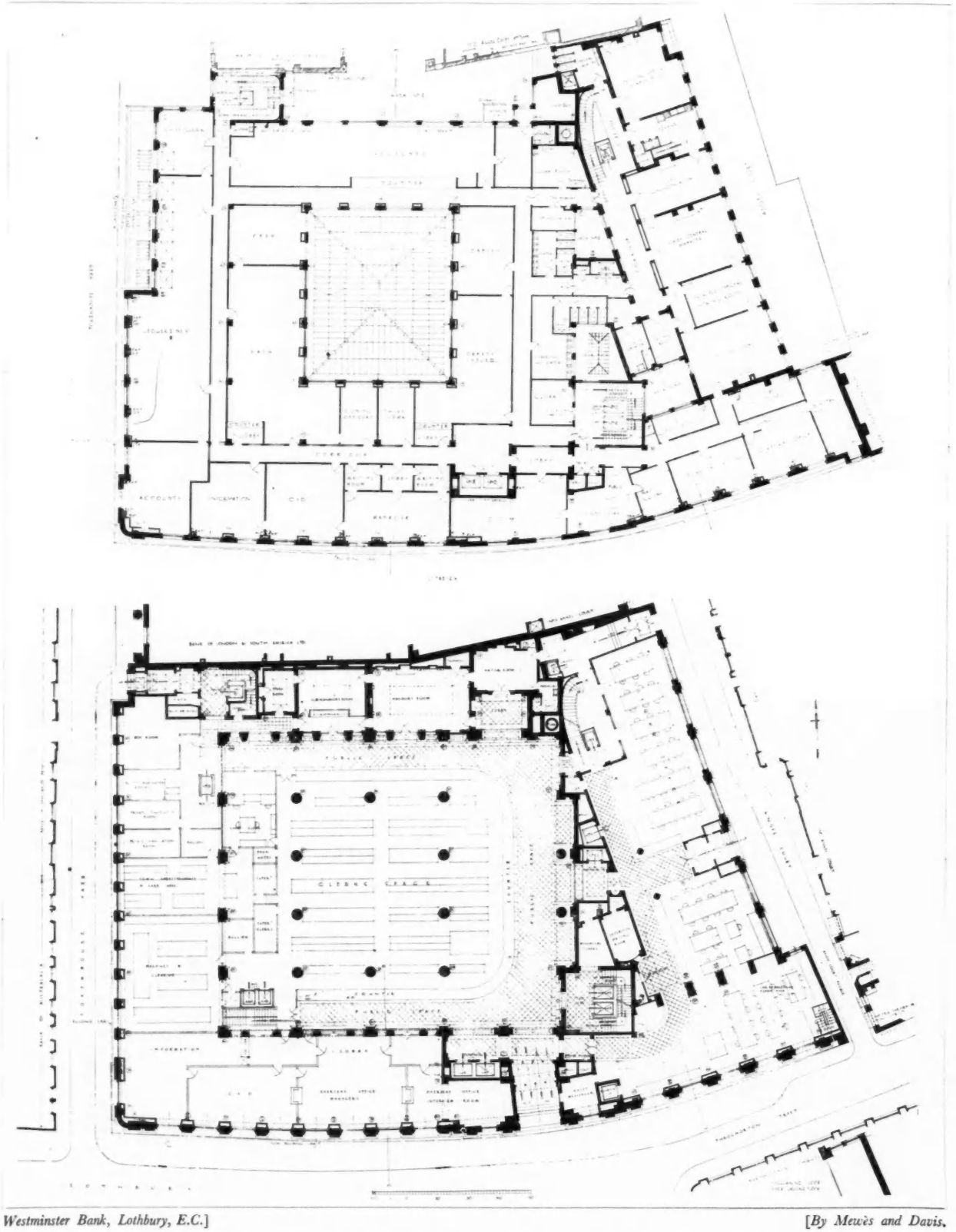
J. R. LEATHART



Gallery on the third floor. As will be seen from the plans on page 848, the staircase leads to a subsidiary entrance on the right-hand corner of the Angel Court front.

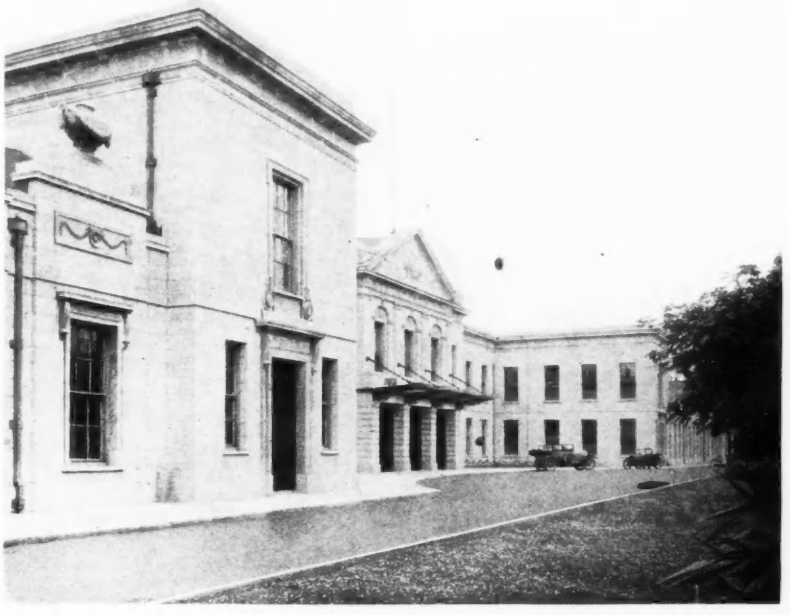


Longitudinal section looking towards the Lothbury front. The upper floors are arranged in central corridor blocks around the large well which lights the banking hall below. Staff lavatories are grouped round smaller areas. The adequate lighting of all working spaces is an outstanding feature of the planning.



Westminster Bank, Lothbury, E.C.] [*By Mewès and Davis.*

Plans of the ground and second floors. Quick access to the public spaces from the streets is facilitated by the omission of elaborate entrance halls, and complete circulation between the main departments is skilfully arranged. Additional flexibility is achieved by the three distinct entrances to the central public space from Tokenhouse Yard, Angel Court and Lothbury.



The main entrance to the Society's show premises at Ballsbridge, Dublin. The block on the left houses the administrative offices; in the corresponding one on the right, members' rooms are situated.

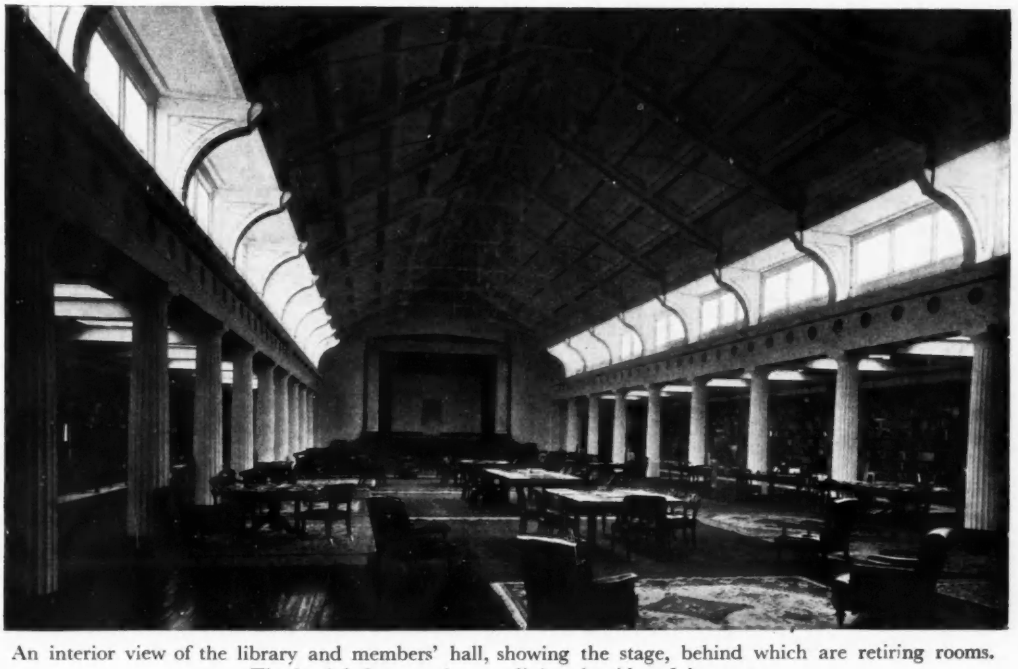
THE ROYAL DUBLIN SOCIETY'S BUILDINGS

DESIGNED BY O'CALLAGHAN AND WEBB

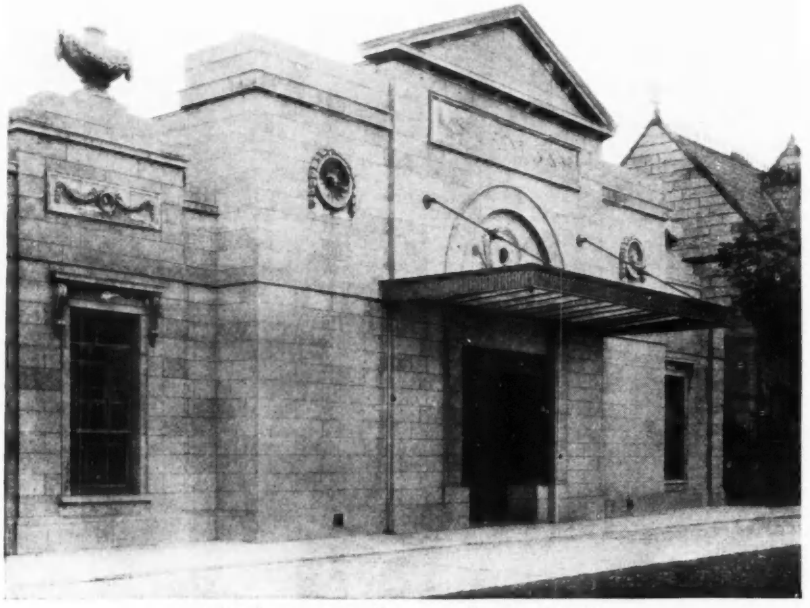
THE Royal Dublin Society's original headquarters were at Leinster House, once the residence of James Fitzgerald, twentieth Earl of Kildare, afterwards Duke of Leinster; it housed them for a period of over a century. This house, in addition to accommodating the administrative offices, contained the library, concert hall and spacious rooms for the use of the members.

Upon the setting up of the new Government of the Irish Free State, however, it became necessary to find suitable premises for that body, and as Leinster House not only occupied a most desirable central position in the city, but had a concert hall which was readily adaptable to the requirements of the Government, the premises were acquired by them.

In addition to Leinster House, the Society has its show grounds and other buildings at Ballsbridge, where the



An interior view of the library and members' hall, showing the stage, behind which are retiring rooms. The bookshelves can be seen lining the sides of the room.



The front of the library and concert hall.

world-famous Dublin Horse Show, of which they are the promoters, is held each year. New premises became necessary on vacating Leinster House, and it was decided that, from the point of view of centralization and development, Ballsbridge would provide the most suitable site.

The existing buildings, consisting of a long frontage of show halls, with a main central entrance, having been set well back from the road, the new buildings were erected in front of these on either side of the main entrance.

This main entrance, and about twenty-five feet of frontage on either side, were faced up to bring them into harmony with the additions.

The new buildings consist mainly of two sections—the administrative, containing offices, committee room and council chamber; and the members', containing entrance hall, reading and conversation rooms, cloak rooms, laboratories and library.

The buildings are of local stock brick, faced with granite from Ballyknocken, Co. Wicklow, and have Portland stone dressings. The roofs are covered with Welsh Bangor slates to harmonize with the existing roofs.

The total frontage amounts to 562 feet. Owing to the Society's long associations with Leinster House, it was considered desirable that the new buildings should be somewhat similar in character. This has been accomplished in a general way, without any slavish copying, but with just sufficient freshness of detail and composition to give them a modern and individual character.



The Royal Dublin Society's Buildings.] [*By O'Callaghan and Webb.*

The corridor in the members' quarters.

July Holiday Sketches Competition

ENTRIES are now being received for the July Holiday Sketches Competition—the first of three—which closes on July 14. It is open to all readers of the JOURNAL, who have the chance of winning a first prize of ten guineas or a second prize of five guineas, for the fruits of this year's holiday sketching. Five sketches may be submitted, under a pseudonym, and each must bear one of the printed motto labels, of which three appeared on page xlix of the June 3 issue, two appear on page 869 of the present issue, and further sets will appear in subsequent Sketch Club issues. One more motto label must be pasted, with nothing else, on the outside of a sealed envelope containing the entrant's declaration of authorship of the sketches he submits.

The full rules were printed on page 791 of the JOURNAL for June 3, last.

Bernard Whistlow, F.R.I.B.A.: An Autobiography: iv

MY FIRST JOB: THE SEWER

BY KARSHISH

(H. B. CRESWELL)

MY first job was—"to be precise," as my father used to say—a little matter of drains; in saying which I am reminded that I had, on an earlier occasion, when acting as drain-inspector for Grig, laid bare a disgraceful attempt at scamping on the part of the builder. This story I must tell, for it is well worth the telling; but I am impelled first to record a characteristic lesson on drains I received from Angus MacVittie, and upon which my early reputation as a drain expert was founded. The matter is particularly to the point, as MacVittie yielded the anecdote in answer to my question: "Do you remember your first job?"

"Aye," said he, "I remember ma first job a' reicht; an' Mr. Alexander Macfearson remembered it too, I'm thinking—as long as he could remember anything; an' maybe one or two others remember it yet."

"Tell me about it."

"Weel, it would be when I was just a young lad of four-, or maybe, five-and-twenty, assisting Sandy Macfearson in his office at Garrigburgh. A gran' architect was Sandy: he built the herring warehouse down yonder by Port Garrig fish market."

"But I thought you were going to tell me about your *own* job!"

"Aye, an' A'm telling ye. I didn't design the sewer, but it was ma job to set it out and get it properly built."

"But architects don't build sewers, do they?"

"Ah! but ye have to conseeder that Sandy had married the daughter of Johnnie Campbell; and Johnnie was Provost—Mayor, you call it—of Garrigburgh that year, an', of course, he gave Sandy the job of the gran' new town sewer to the new outfall by Glen Garrig that was to keep the drainage from silting up the harbour."

"I see. Go on."

"Sandy came to me one day—'D' ye ken the surveying an' the levelling over, an' that?,' he says. 'Oo, aye!' says I."

"*Did* you know?"

"Weel, I kenned more about it than Sandy, an' ye see, he said he would give me a pound a month extra money while the job lasted. 'Ye mean five shillings a week, I suppose,' says I, for I was engaged by the week, and I was mindful he would be knocking off sevenpence every time he paid me. 'I'll just tak' an' sleep on that,' says he.

"Now, there was a sma' builder, William Troth—daft Wullie, he was called; an' Johnnie wanted him to have the contrac', an'——"

"Why?"

"Weel, ye see, Wullie was building a salting-shed for Johnnie Campbell, and I've a mind Johnnie wanted to have things a' snug and comfortable just in an or'nary business way before the account came in; but there were other contractors who had friends on the council, so Wullie was given just the straight length of sewer that ran across the town moor, where he could do what I told him and not fash himself; and the work of gathering up the town drains, and all the digging and concreting down the side of the glen and connecting to the outfall, was let awa' from Wullie to two other contractors. D'ye mind me?"

"Yes, I understand."

"When Wullie was ready, Sandy came out and they gave me a datum from the ordnance mark that was there on the moor—just a stone set in the ground for me to tak' ma level from. It was a fine grade flat stretch of moor an' I had nigh two and a half furlong to go, with four manholes: and the sewer was oval and three feet eight inches high, with salt-glazed invert blocks all from Stockbridge, and the rest two half-brick rings of Kintolloch wire-cuts in cement. The fall was only one in four hunder and fifty, on account of the ground being so flat, so, ye see, I had to be verra careful and exact in all ma setting out and levelling, and checking the bedding of the invert so that the fall was not lost anywhere and the sewer would run out dry. I had ma builder's level and staff, an' sighting rails an' boneing rods an' centering gauges, an' a gran' grade pine straight-edge, twenty-five feet long, to go shooting the invert in case a spoonful of watter might lodge anywhere and displease Sandy. Oo, aye. It was a dam' fine sewer, I was thinking."

"Well, wasn't it?"

"Have ye ever had to tak' an' handle a surveyor's level, Mr. Twitters?"

"No."

"No more had I; but when ye do ye'll find ye want to be whiles standing on your head to read the staff. The figures are turned upside down and the readings all travel backwards."

"Did something go wrong, then?"

"Aye, something went wrong."

"How did you find out?"

"Just wi' a golf ba'."

"A golf ball!"

"Aye. One day when ma fine gran' sewer was within a quatter of being feenished I just tossed a golf ba' I had in ma pocket into the top end to see her run the length."

"Well?"

"Weel, the ba' just trickled back again."

"Why did it do that? Do you mean you'd made the sewer fall the wrong way?"

"Aye, just that."

"Good lord! How did it happen?"

"Weel, y' see, I'd got so twisted about in ma' head by that dam' staff with the ground lying along the top end of it, that I'd levelled the sighting-rails through backwards. The lan' was rising here an' falling there for all it was so flat, an' along its whole length the trench might be anywhere seven feet deep or it might be ten, so ye'll mind there was nothing to cry me a warning. Wullie did not fash himself wi' levels, and when Sandy came down he just put his old parrot eye to the rails an' thought everything was a' right."

"So the work was all wasted?"

"Oo, aye. It was wasted."

"What on earth did you do?"

"Weel, I refleckit; and then I decided to tak' the reesk."

"What risk?"

"Aweel, ye see, it was a Thursday morning, and I drew ma pay on Friday afternoon, so I reesked it. I just went back to the office and reported to Sandy how the worrk at the sewer went on fine; but the only occupation I found that day was just to sit with ma' hat handy watching out of the windy for Wullie on the run from the moor, so that I might nip out of the office before he got into it. Friday morning was the same; but ma bag was packit an' ready at the station, an' directly I got ma money I slippit out and was into the first train and awa' frae Mr. Alexander Macfearson Esquire. I'd feenished ma job, ye see! *Glug—glug—glug—glug—*"

"Didn't you write and tell him the sewer was being built the wrong way on?"

"Weel, we're a verra canny folk up yonder in Scotland. I wasna weeshful to be offeecious; an' it would have cost a halfpenny for the post card; and I didna want Sandy to ken ma whereabouts. *Glug—glug—glug—glug—*"

This, as I have said, was my introduction to the practical aspect of drains, and the lesson must have been given me during the early months of my term with Grig, for MacVittie left within a year of my arrival to be no more heard of, or seen by me, till six or seven years later, when for a few minutes I found myself standing beside him at the bookstall in Lime

Street Station, Liverpool. He appeared to be wearing the same clothes and the same hat, which was always loaded with dust; and he opened his kindly blue eye upon me, and chuckled when I asked him how he was. He was fine. He had a partner, and the partner had got some gran', grade big jobs; an' MacVittie had got a strangle-hold on the partner, and was going to take ten thousand pounds out of the practice, and the practice would then go to blazes. Oo, aye. *Glug—glug—glug—glug*. It was all most frank and most ingenious, and it was probably all lies—as a wider experience of men and affairs would in earlier days have warned me his other exemplars mainly were.

However, his lesson on drains served me well when, after the termination of my pupilage, I had been newly promoted to assistant at a salary of one pound a week, and was one day instructed by Grig to go down to Stevenage and overlook the testing of the drains of a small house he was building there. I had never before applied a knowledgeable eye to house drains, yet on that occasion I surprised a well-laid plot to deceive me.

I wish here to say that this was the only time in a long workaday experience when I have encountered any serious dishonesty by a builder. That it should have happened at the very outset of my career, and on one of the first occasions when it devolved upon me to overlook building work, is merely one of the strange accidents of which life seems to be compacted. It is my well-matured opinion that the builders of my country are, as a class, the most honest men of affairs in it; and I regard my intercourse with them and with their foremen and their workpeople as one of the happiest circumstances of my life. The impulse to do a thing well for its own sake, and not solely for the money to be gained from it, is specially noticeable in the old-established provincial firms in which the tradition of the Craft Guilds still lingers, and to be associated with those who engage in work on these honourable and manly terms gives zest to an architect's work. It is true that I have avoided employing builders who are unknown to me or whose capacity is not guaranteed by architect friends or known by well-established repute; but such builders are to be found over the length and breadth of the land, and Grig was certainly as circumspect as I have been, so that the backsliding of a reputable Hertford builder at Grig's Stevenage house was a deplorable affair. In those days, however, the new ideas of sanitary perfection, which highly placed architects were almost alone in enforcing, were regarded by builders as an obsession of cranks and the fussy enactment of theorists who did not know one end of a pipe from the other. Builders and their workpeople had a tradition of drain-laying; they thought they knew perfectly what a drain should be, and were restless at the senseless restrictions and fantastic elegancies the specifications of some architects imposed. I have grown up with the growth of sanitary reform, and in no other field have I found such resistance by builders to new ideas as in this one.

There was no clerk of works at Stevenage, and when I arrived on the site I found the builder's dogcart in the road outside, and was greeted by him and by a foreman who touched his hat deferentially. I was flattered by my reception, as no doubt they were by my god-sent callowness of appearance. Their solicitude for the great value of my time and for my perfect comfort was most meritorious and excited my gratitude. The drains had been stopped, and laboriously filled from buckets early in the day; pencil marks had been made hours before at the standing-level of the water in the manholes, so that the perfect tightness of the system should be demonstrated to me and I should not be put to the trouble of proving it for myself; and there was a great running and bustle to lay planks so that I might make my inspection without risk of muddying my boots. I found all the lengths of piping to be perfectly dry, and there was not only no leakage at the joints, but no trace of damp in the cement filling. The builder said he had told the foreman to leave the pipes charged while the trenches were being filled in to make sure no damage was done to the drains during that operation; and if Mr. Barstairs would like afterwards to send any of his young gentlemen down to see the water standing in the manholes, why, he would be glad to postpone taking out the stops for that purpose, and he was going past the station and it would be no trouble to drive me over just in time to catch the 12.21 fast up train, as I should otherwise not get another till seventeen minutes to three.

It is possible that if I had had more experience I should have passed the drains and travelled by that fast 12.21 instead of walking to the station to catch the 2.43, as I did; but this was the first time I had looked upon drains in a responsible capacity and I wanted to guzzle them. Great as my ignorance might be, I was on no occasion ever aware of it to the extent of being abashed; and nothing ever daunted my tenacity in securing explanations of anything that baffled me.

The separate lengths of drain between manholes were being tested by fixing a drain-stop on the inlet to each manhole, and filling water into the manhole next above some inches over the top of its outlet, so that the whole length of each section of drain was under a head of water. It happened, however, that at one part of the system there was a congestion of manholes, and one of these was between the stop and the head, so that water lay in it at the same level as at the head. MacVittie's detestable anecdote was in my mind, and its lesson bore fruit.

"Why isn't the level of the water the same in the two manholes?" I asked.

"It must be, sir, mustn't it?" said the builder. "We all know water keeps its level," and he laughed indulgently and looked at his watch.

"It does not seem to be."

"The fall of the ground misleads the eye, sir. We all have to get experience in these matters. It's time we made a start, sir, or you'll miss your train."

"Well, but the dampcourse in the wall of the house is level; and you can see, from it, that the water in the lower manhole isn't as high as it is in the upper."

"Well, I'm afraid I've no time now, sir. Some other day we will have a talk, but——"

"I only want to know why it is," I said.

"The water *must* be lying at a level, sir—and there is nothing more to it. You must excuse me saying——"

"But it *isn't!*"

"Get a straight-edge, George," he said irritably.

The foreman went aside and the builder then said:

"While he's testing it, sir, I will ask you just to come round to the front entrance. There's a little difficulty we have there and I would like your approval of what we are doing."

"No, I want to understand about this."

The foreman brought the straight-edge, but even when, out of the corner of my eye, I saw him stopped in the act of taking something from his pocket by a nudge from the builder, who swung the back of his hand against him, it did not occur to me that I was being tricked. I merely wanted to relieve myself of a perplexity. My inexperience was such that, though I must have known there were such things as spirit-levels, it never entered my mind to commandeer one to settle the point. It was a spirit-level, no doubt, that the foreman had been checked from using. What he did was to support one end of the straight-edge against the dampcourse of the house, and hold the other while he measured down from it to the surface of the water, and he got the same reading in each case, as I discerned, by holding the straight-edge to slope a

little upwards towards the top manhole and a little downwards to the lower, so that the first measurement was increased and the lower diminished to give an identical figure.

It was then, for the first time, that I realized they were deceiving me.

"He didn't hold the board level," I said hotly.

"What do you mean, sir?"

"He held it too high here, and too low there," I said, my mind flying from one explanation to another in search of a solution of the varying levels.

I do not know by what means the builder could have eluded a congenital tenacity such as mine, but he gave himself no chances when he tried to bully me.

"You will allow me to say, sir, that I am not used to have young gentlemen come down from the offices of London architects and tell me I don't know my business; and if Mr. Barstairs gets to hear of it, as he certainly will do if I have to put up with any more interference, he will properly haul you over the coals, and so I warn you. You won't be the first young spark that has got the sack for plaguing and obstructing the builder just to show what a fine clever fellow he is. Here have I made all ready for you so as you should be put to no sort of trouble, instead of keeping you hanging about all day as might be; and come down here myself and waited on you hand and foot, and I've had enough of your silly ignorant talk. The drains are right and tight before your eyes for you to see so you could never hope to find better, and if you are not satisfied you can go back to Mr. Barstairs and tell him so, and let him send someone down who knows what drains ought to be, to see if he can find a fault in them; but not one hand's turn more do I, or any of my men do for you this day—so now you know." He had worked himself up into a passion; and spoke so loudly that the men all left off working and stared.

I was at that time not yet nineteen years old, and my considerable backwardness in experience and manly qualities is already in evidence; but I learned a great lesson at school when I once turned madly on my persecutor and emerged bruised, bloody and defeated from a hopeless encounter in a state of joyful elation, the memory of which, it is no exaggeration to say, has lasted me through life. I had, by that impulse of lawlessness, justified something within myself.

It is on few occasions that I have lost my temper, and then only in the sense of letting myself go, for I have at those times always been vividly aware of what I was doing and saying. This moment at Stevenage was one of the first of those occasions. In a flash I seemed to get the whole hang of the situation, and though I knew what I was doing and why, reflection had no part in it; I was moved solely by impulse. I did not answer the builder in words, but, impelled by rage, I jumped into the trench, seized a heavy bricklayer's cavil that was lying on the edge of it, and with three or four blows of my nerveless, scraggy arm, smashed to pieces one length of the earthenware pipes. The drain was dry. They must have plugged the ends of pipe-runs, not closed by the stops, with puddle pushed down into them.

There was not a sound as I climbed from the trench and hurried out of the place and off to the station, trembling with excitement; and I am only sorry I have no memory of the faces of the builder and foreman at that moment, for I looked neither to right nor left. When I told my confused story to Grig, he asked me many questions of minute detail, and shook his head, and pulled at his ear in the odd way he had when disturbed.

"You did very well, Whistlow," was my sufficient reward from him. How he dealt with the builder I do not know for, oddly, it did not occur to me to explore the letter-book and letter files; but when Zaza the harshitec went down a fortnight later to overlook the testing, he was able to pass the work.

NEXT WEEK—V : MY FIRST JOB
"THE PIPES"

The previous instalments appeared as follows :

May 27. i : I Am Articled.
June 3. ii : Episodes of Pupilage.
June 10. iii : Episodes of Growth.

THE CONCRETE WAY

MR. W. F. CRITTALL, speaking on "New Materials—and Methods of Using Them" at a luncheon of the Design and Industries Association, held in London last week, said that the Prince of Wales, in a speech which he made after his return from Buenos Aires, emphasized the importance of providing goods which were not so lasting, and it seemed to him that this touched at the core of the whole matter.

If only our buildings were not so permanent we should have, in the first place, more building to do, and secondly, our buildings would be more up to date, more in keeping with the functions they had to fulfil. New methods and materials would more readily appear and be used and, if sound functionally and economically, would develop, and a new tradition would be evolved. But, instead, we inhabited houses and offices hundreds of years out of date—we used factories and workrooms for operations for which they were never intended, and our public buildings were for the most part merely monuments to tradition, instead of representing the spirit, ingenuity and skill of the age they were supposed to represent.

In talking over this subject with various architect and builder friends, the London Building Act had often been referred to—and whilst he realized that this was a somewhat controversial topic, it seemed to him that an intelligent revision of it would go a long way towards stimulating new methods and materials.

When we spoke of modern buildings, what, he asked, was it that we usually had in mind ? Something with a flat roof, fewer mouldings, flatter surfaces and perhaps a stressing of the horizontal treatment of the windows, but very rarely was the conception something fundamentally new; it was rather a new dress on an orthodox skeleton. Hardly more than a decoration.

Considering the development of new materials, he thought that somehow concrete building did not seem to have been developed as much in this country as on the Continent, particularly in France. The reason was that *beton armée* was more suited to the French temperament. For instance, if a floor starting at two or three different sections was found to vary 2 or 3 inches when the sections joined, the Frenchman would form a slope, whereas, in England we were too pernickety about the exactness and finish of our work, and consequently the cost of shuttering was too high.

Further, the Continental builders had a tradition in stucco and rendering with which to cover up the roughness of the concrete.

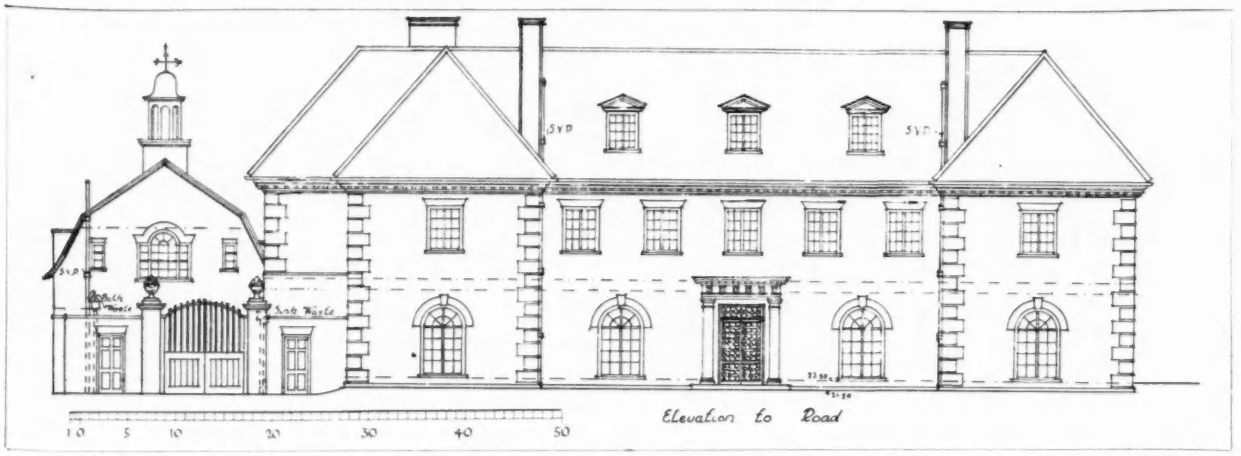
Of course, concrete was no new material. The Romans were known to have used it as a filling between single brick walls. This method was used at Dorchester House, in which the walls consisted of 2-in. polished concrete face blocks on the outside, 2-in. cork bricks on the inside, with a space of 6 ins. between, which was poured with wet concrete.

But the uses of concrete were strictly limited. It could never be economically possible (at any rate in England) for house building (he was not, he mentioned, referring to dry concrete blocks), although the introduction of the system of delivering concrete ready mixed to the site, together with the standardization of metal shuttering, which could be hired, would go a long way towards popularizing its use for ordinary floor construction.

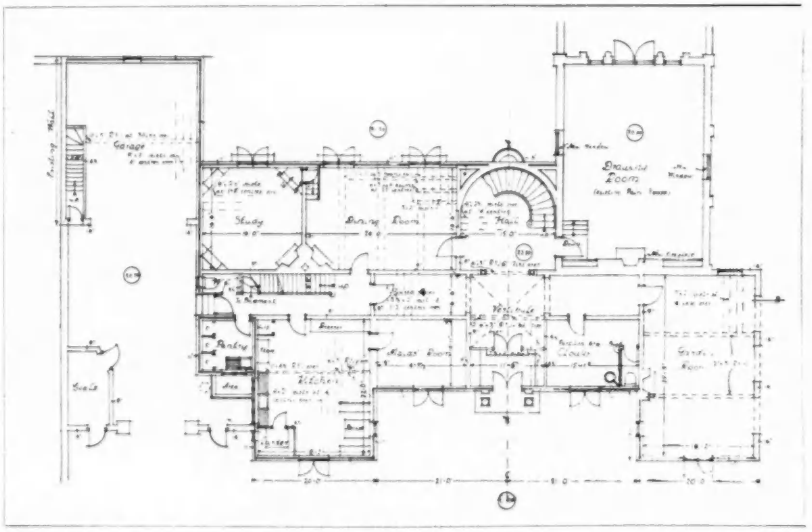
More use could and should be made of concrete as a substitute for imported timber for such articles as telegraph and telephone poles, which he noticed was being done extensively in the United States and on the Continent.

HOUSE AT COOMBE HILL, KINGSTON, SURREY

DESIGNED BY ADSHEAD AND RAMSEY



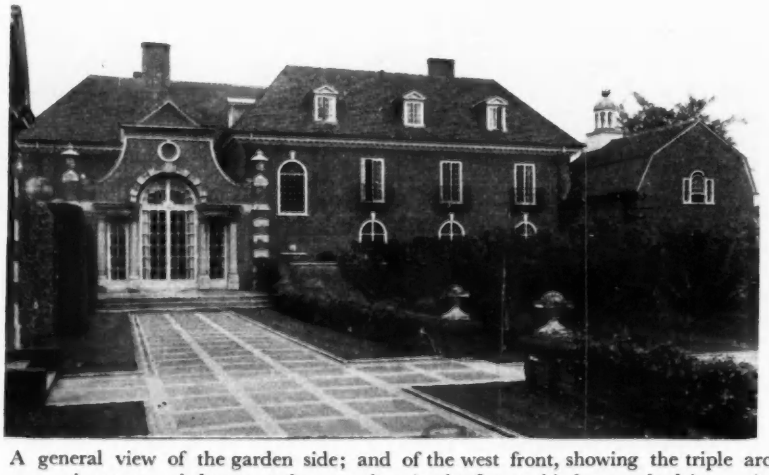
The architects' drawing of the main elevation. The walls are built of hand-made bricks, and the roof is covered with hand-made tiles. The door surround is of Portland stone. The garage and chauffeur's quarters are housed in the wing on the left.

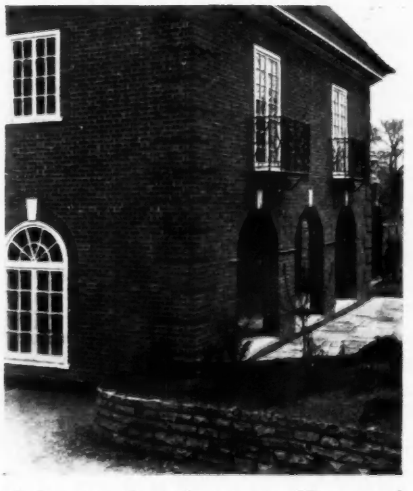


Ground-floor plan. The principal living-rooms are planned on the garden side, while the kitchen, bathroom, offices, etc., overlook the main front.

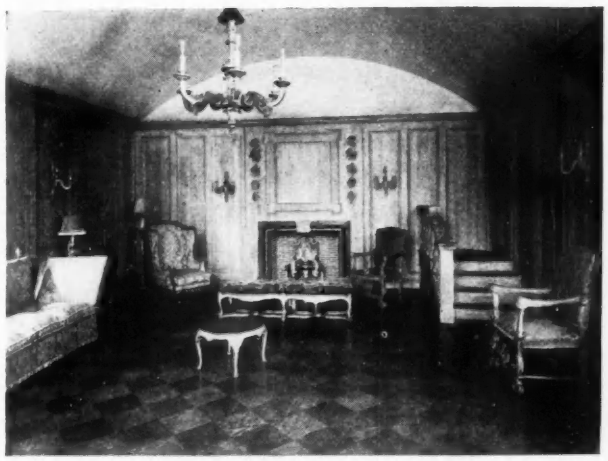
THIS house at Coombe Hill, Kingston, Surrey, was built on the site of a previous house erected in the latter part of the last century. A small orangery, erected about 1870 in the manner of the Queen Anne revival inaugurated by Mr. Norman Shaw, determined in some measure the character of the new structure. The site slopes from the main front to the garden side, with the result that a raised terrace has been incorporated in the design, overlooking the orchard. In addition to the accommodation shown on the ground-floor plan, the first floor contains three bedrooms, night and day nurseries, bathroom, dressing room and lavatory accommodation. On the second floor are three bedrooms, bathroom and store room.

Mrs. A. J. Greenly, the wife of the owner, was mainly responsible for the colour scheme and the furnishings.





A general view of the garden side; and of the west front, showing the triple arcading of the open-air garden room. The ground is very much lower at the rear than in the front; this has resulted in a raised terrace being incorporated in the design.



The drawing room, which was originally the orangery, is floored with large squares of alternating oak and ash plywood.



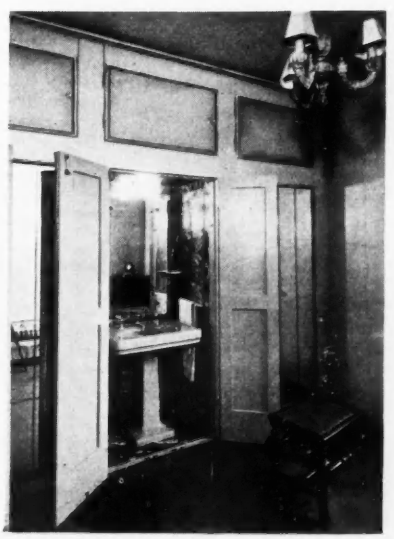
The principal features of the best bedroom on the first floor are the cupboards, which have large plate glass doors.



One of the two bathrooms on the first floor. Cupboards are fitted on each side of the recessed bath.



The staircase, seen from the entrance vestibule. The floor is of Bianca del Mare marble, finished with a dull polish.



A washing recess in a bedroom on the first floor. It is flanked on each side by cupboards, with plate-glass doors.



House at Coombe Hill, Kingston.]

The dining room, with its heavily oak-beamed ceiling, brocaded shutters and corner stone fireplace, is faintly reminiscent of the Spanish Renaissance. The floor is covered with York stone, laid with a wide joint. The door in the far corner leads to the study.



[*By Adshead and Ramsey.*

The study, access to which is obtained from the dining room. The house is centrally heated, with all the radiators in recesses, and the pipes carefully contrived so as to be hidden from view. Here, the radiator grille is seen beneath the table.



University College, Earlsfoot Terrace. [*By Professor R. M. Butler.*

DUBLIN, OLD AND NEW

BY HENRY H. HILL

AN old city such as Dublin, a city with a history, a city wherein again and again all the human emotions have been well wrung, is bound to contain interesting buildings. But here, not only is this the case; much more, Dublin is a city of exceptional architectural richness and merit. Where else can one find two universities, one an ancient and the other a modern foundation; where else, two mediæval cathedrals within a stone's throw of each other? A third cathedral, too, is even likely to be built, for the Roman Catholic pro-cathedral, a large Greek-revival church, is not a sufficiently worthy building.



[*From an engraving of 1841.*
Nelson's Pillar, Sackville Place.

What so greatly distinguishes the capital of Ireland is the free rein that it gave to the spacious ideas of the eighteenth century. At this period there was much building, many new streets and squares were formed on both sides of the Liffey, and with a lavish use of space; yet not a large city, with the mountains close by on the one hand and the sea on the other.

Here the urban and the uncouth were wont to meet and mingle. Here was the western outpost of European



[*From a rare aquatint, drawn by J. Carr and engraved by T. Medland, engraver to H.R.H. the Prince of Wales.*
The Four Courts, begun from Gandon's designs in 1785, as seen from across the River Liffey.



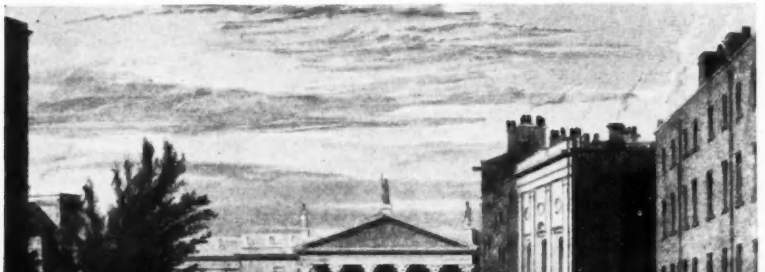
[From an engraving of 1830, drawn by W. H. Bartlett and engraved by W. Woolnoth.

The Custom House on the north bank of the River Liffey, designed by Gandon in 1781.



[From an engraving drawn by George Petrie and engraved by B. Winkles.

The south portico of the Bank of Ireland, the original Parliament House, adjoining College Green.



[*From an engraving of 1832, drawn by G. Petrie and engraved by B. Winkles.*
College Street, with the Bank of Ireland, adjoining Trinity College.

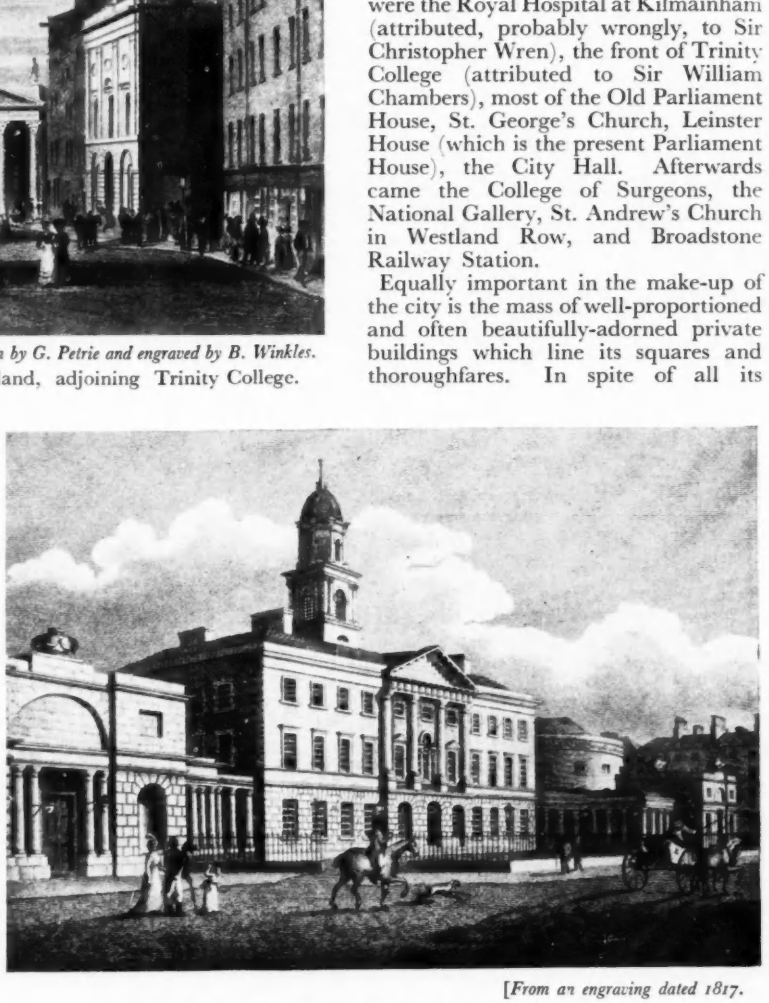
culture. Here the gentry came from all the remote and at that time semi-barbarous corners of Ireland to meet, often for the first time, the civilization of their day. Here to meet them came from across the sea people of all descriptions, merchants, musicians, dancing masters, adventurers. Many of the country families who could afford it built their town houses. Many of those who could not afford it built their town houses too.

And what an odd sort of life must have been led in some of them! Gandon relates how, when he first came to Dublin and was entertained at the houses of some of the influential people of the day, he noticed good pictures and prints often hung on the walls unframed, and crooked. That story alone suggests a whole host of delicious incongruities.

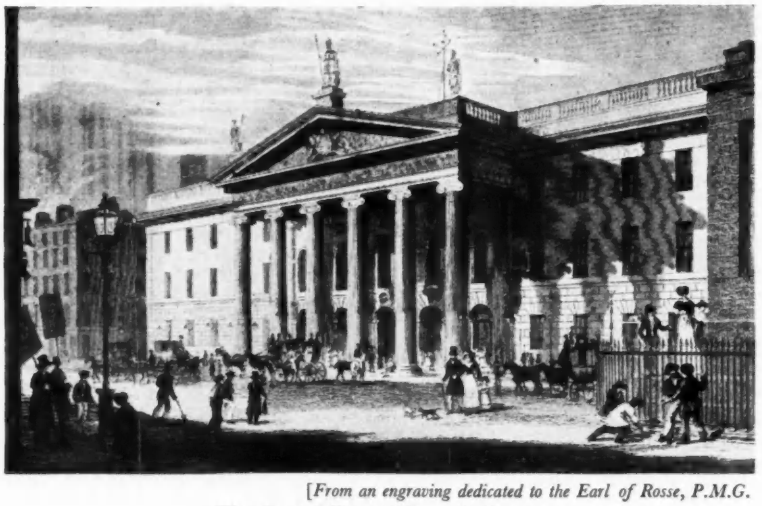
Gandon's acquaintance with Dublin extended, roughly, over the last quarter of the century. The Custom House, his greatest building, was begun in 1781, and the Four Courts some four years later. These two works may be taken as the climax of a great building era. Before and after them there is a great succession of worthy edifices.

Mentioning a few at random, there were the Royal Hospital at Kilmainham (attributed, probably wrongly, to Sir Christopher Wren), the front of Trinity College (attributed to Sir William Chambers), most of the Old Parliament House, St. George's Church, Leinster House (which is the present Parliament House), the City Hall. Afterwards came the College of Surgeons, the National Gallery, St. Andrew's Church in Westland Row, and Broadstone Railway Station.

Equally important in the make-up of the city is the mass of well-proportioned and often beautifully-adorned private buildings which line its squares and thoroughfares. In spite of all its



[*From an engraving dated 1817.*
The Lying-in Hospital and the Rotunda, Parnell Street.



[*From an engraving dedicated to the Earl of Rosse, P.M.G.*
The Post Office, O'Connell Street.

vicissitudes, I cannot think of any other city containing such rows of unspoiled eighteenth-century town houses. It is a fortunate thing that so much of this building has been recorded in the publications of the Dublin Georgian Society. The main thing is the vitality of the tradition. Nineteenth-century revivals, certainly until after the middle of the century, failed to kill it. One can see the same sense of scale, the same dignity, the same breadth, coupled with Greek, or even Gothic, details. Towards the end there was a break. Smaller windows and a multiplication of details were the physical causes of the decline.

One can see in the twin buildings flanking Leinster House, the National Library and the National Museum, how the idea of scale had declined. The commercial men, as elsewhere, are guilty of much greater damage to the

local spirit. In the rebuilding of O'Connell Street, for instance, where the architects could have given them sufficient diversity in a unity of design, the power of these paymasters compelled a unanimity of diversity. But for the less happy modern buildings the Dublin people are not always to blame. One notices that some of the English merchant adventurers, tasteful tailors, and others, have manfully done their bit to push the style of architecture that might be termed third-rate cosmopolitan.

However, the spark of tradition is far from dead, and it shows with more or less vigour in many of the recent buildings. The breadth of the old Dublin is to be seen in Professor Butler's University College; its refinement in the Royal Dublin Society's new buildings at Ballsbridge, by O'Callaghan and Webb (illustrated elsewhere); its strength in Wynn's Hotel, by Mr. F. P. Russell; its quiet dignity in the Appointments Commission Building, designed by the Board of Public Works. Also, at the upper end of O'Connell Street, one notices that the block of buildings, of which Mr. Atkinson's gracious Gresham Hotel forms a part, is content, as in the past, to be a piece of plain street architecture, even if not very successfully proportioned or detailed. Finally, just emerging from its scaffolding, one sees again quiet Georgian brickwork in a new bank in Dame Street, by Messrs. Donnelly, Moore and Keating.



[*By F. P. Russell.*

Wynn's Hotel, Lower Abbey Street.

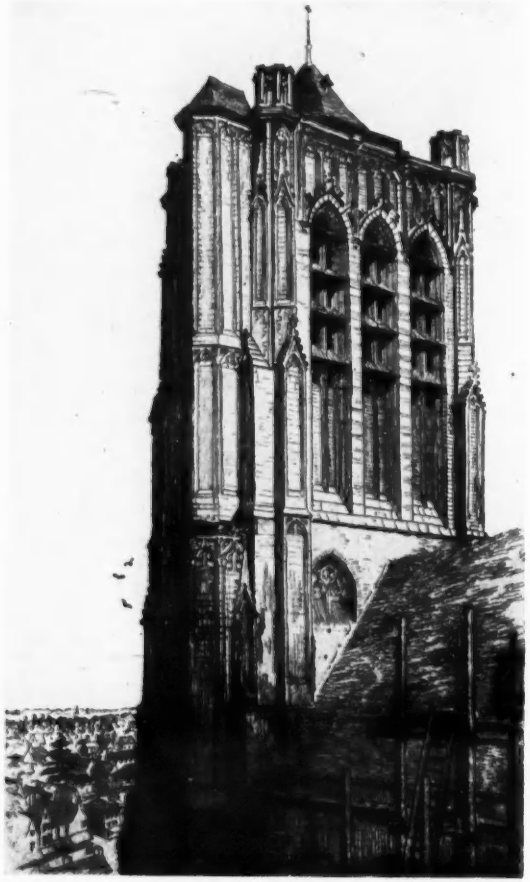


No. 45 Upper O'Connell Street, in the same block as the Gresham Hotel.



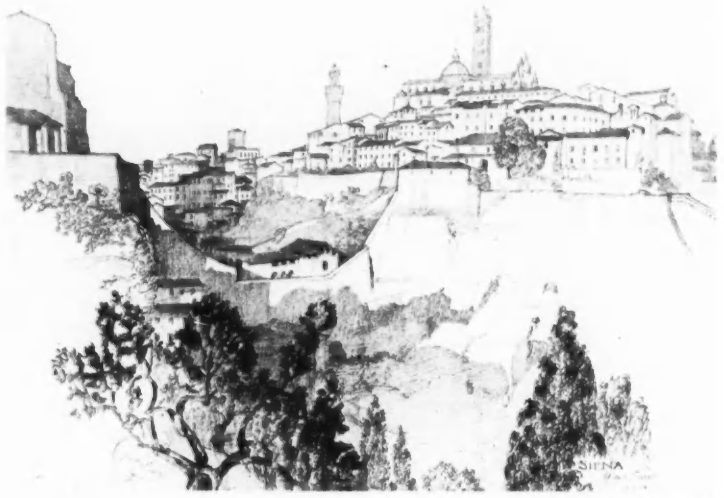
[*By Donnelly, Moore and Keating.*

New bank premises in College Green for Messrs. Guinness, Mahon & Co.



(Etching : 7″×11¾″)

St. Martin's, Ypres.



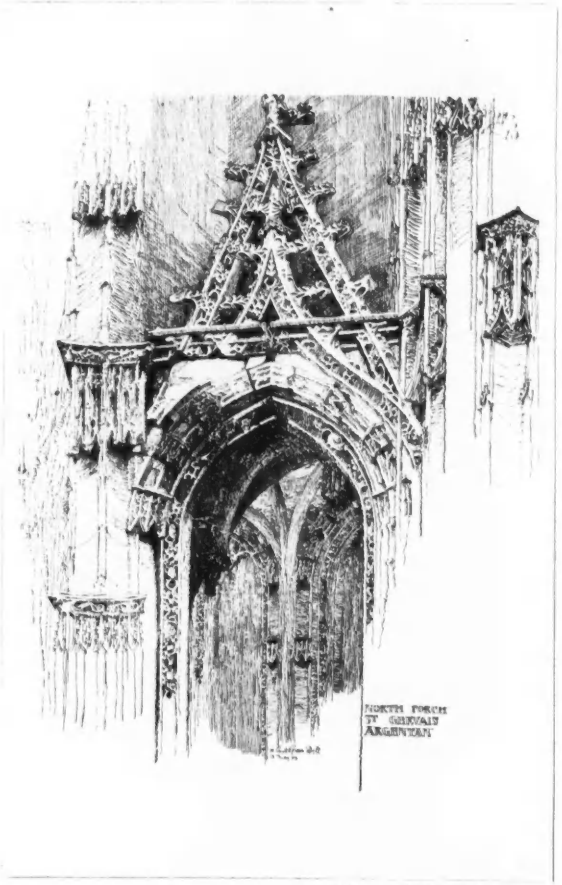
(Pencil : 14″×10¼″)

1924. *Siena.*



(Etching : 8½″×6½″)

Pont Audomier.



(Pen and ink : 7½″×10¼″)

1903. *North Porch, St. Gervais, Argentan.*

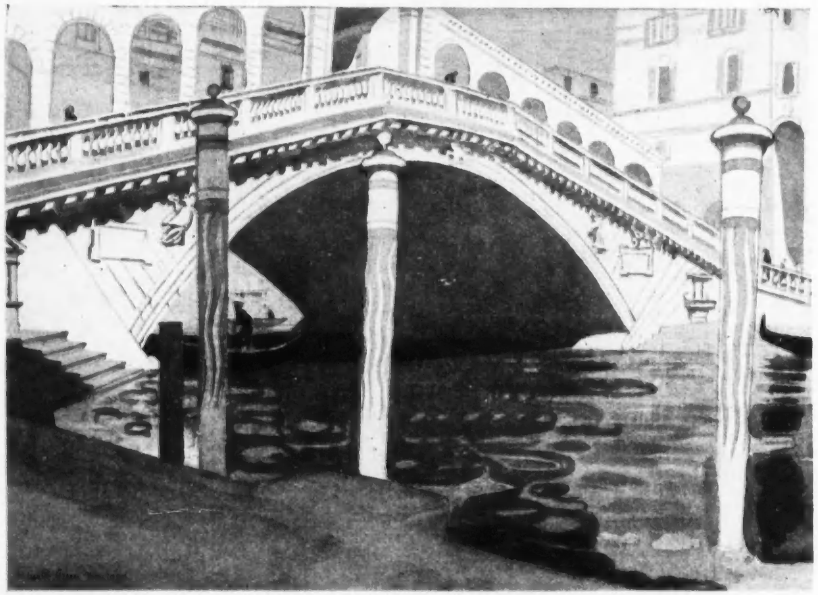
THE SKETCH CLUB

THIRTY-FIRST SESSION

Being Examples by *W. Curtis Green, A.R.A.*

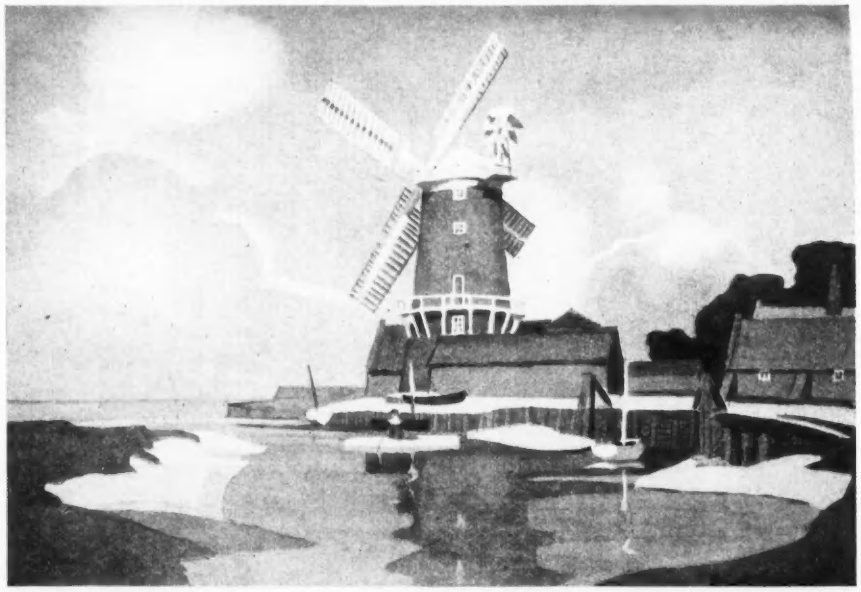


These subjects have



These subjects have been selected specially to show diversity of media—etching, pen-and-ink, pencil and water-colour; and of date—the earliest is from 1903, the latest is only just finished.

S. Raphael, Venice.
(Water-colour: 14″ × 10″).
1931.



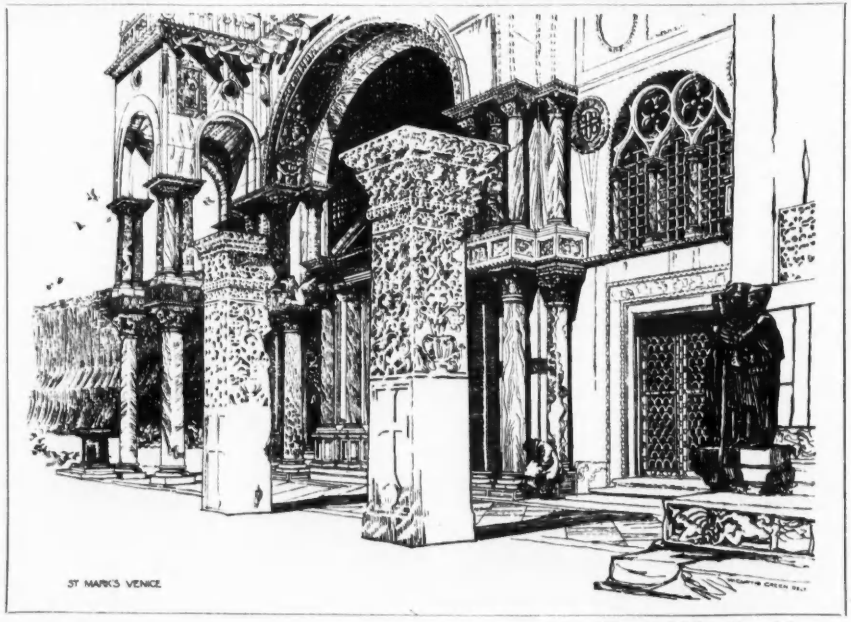
A Norfolk Mill.
(Water-colour: 10″ × 7″).
1928.

In the Stranger's Hall, Norwich.
(Pen-and-ink: 3″ × 8¼″).
1907.



(Pen and ink: 16¼″ × 14½″).
1914. *Venice: Chiesa dei Miracoli.*





(Pen-and-ink: 6″ × 4½″).
St. Mark's, Venice.

LETTERS FROM READERS

Land Tax Proposals

SIR,—All those interested in the amenities of the country and in the success of town and regional planning, as your readers must specially be, will, I hope, realize the grave crisis that has arisen owing to the present position of the Land Tax proposals. If a tax is put upon the selling value of all land (beyond agricultural value) those landowners who are now holding back from building on particular spots for reasons of public amenity will be forced by the new taxation to put them into the building market. If the Liberal amendment is carried to the relief of land already developed, that change, however just in itself it may be, will make things worse rather than better for the preservation of unbuilt-on land.

The right principle is clear: if the State is going to tax unbuilt-on land to force it into the market, it must decide which lands it wants to see built upon, and which lands it wants to preserve for purposes of amenity. The town-planning schemes will do this more or less, but unfortunately it will be many years before the whole country is town-planned or regionally-planned, and meanwhile the proposed tax will drive beauty spots, parks and roadsides, helter-skelter into the market. What is wanted is an amendment to bridge over this time-gap until the whole island is planned. The amendment should permit a landowner (with the consent of the local authority) to dedicate a piece of land not to be built on, either for always or for a term of years, for reasons of amenity and public policy, and so escape the land tax on it.

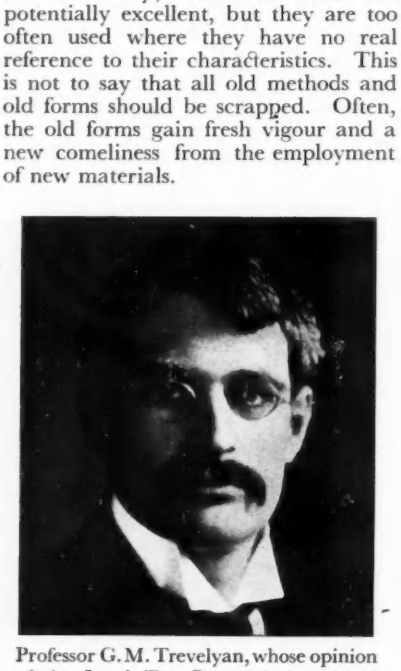
G. M. TREVELYAN

The Enterprising Builder

SIR,—Mr. Gloag's letter, which you published in your issue for May 27, is just another instance of the necessity for planning the development of residential areas in the country. Perhaps that national phrase, "An Englishman's home is his castle," is an explanation of the singular reluctance displayed by the Englishman to accept the larger civic implications of building.

We have suffered from this half-baked insularity for over a century; half-baked because the little private pimples that get spotted along the great arterial roads are believed to be more private than the terraced house or flat, a belief that is now untenable. Planning is no new thing in this country. We have some wonderful examples at Bath, Brighton and Bloomsbury, but since then we have been free to spoil the most beautiful countryside in the world just how and where we liked. We have been given small-scale freedom, but freedom in the grand manner has been taken from us.

The whole question of to plan or not to plan has been enormously aggravated by the output of modern materials. There are hundreds of thousands of new materials in existence. Some of them are unworthy; most of them are potentially excellent, but they are too often used where they have no real reference to their characteristics. This is not to say that all old methods and old forms should be scrapped. Often, the old forms gain fresh vigour and a new comeliness from the employment of new materials.



Professor G. M. Trevelyan, whose opinion of the Land Tax Proposals is printed on this page. (See also leading article.)

Mr. Gloag himself has touched on the happy marriages that are possible between new materials and old in the curious instance described in his letter, and illustrated, of the cottages that have been re-roofed with metal. But whether new materials are used for expressing old forms, or whether they become the starting point of a fresh conception of design, the importance of a discerning study of their characteristics and a full understanding of the æsthetic implications and limitations of those characteristics, must be an essential preliminary to the production of buildings that are fit to live in and to look at.

J. CRAVEN PRITCHARD

Cavity Walls

SIR,—Replying to your correspondent, "J. R. T.," in giving an approximate figure of £20 for the cost of hollow-wall construction over 9-in. solid walling for houses ranging round £1,500, I have not taken out quantities, but I based my figure upon alternative prices given by builders, in a lump sum, for hollow walling in lieu of 9-in. solid walling.

I am surprised, however, that "J. R. T." attempts to compare the cost by cubing. This method is sufficient as a rough guide for approximate building costs, but it is useless for estimating the comparative values of two methods of construction.

Other than the question of cost, "J. R. T." seems to have a thorough dislike for cavity walling, and I should like to hear some reasonable objections from him.

It is true that, despite precautions, mortar is dropped upon wall ties, but trouble accruing from this appears to be greatly exaggerated. I have had no trouble myself with the appearance of damp patches, but possibly I am fortunate, although only in one case have I direct evidence of a failure in this manner.

I do not share "J. R. T.'s" fear that galvanized wall ties will not last the full term of service expected of them. At least, I see no cause for worry. Dirt may find its way into the cavity, but I doubt whether this would give many people a single anxious thought. Dirt finds its way between floor boards, behind panelling, and into unoccupied roof spaces. Even more so than into the cavity between the two wall thicknesses; but who cares?

Personally, I am particularly interested in cavity-wall construction, and feel that if the work is properly carried out the majority of arguments against its use are unjustifiable.

"J. R. T." has concluded rather hastily, for he says that "there is much more that could be said in this very debatable matter."

I should be very grateful to hear further comments from him, and also if he has any proposals for construction which might give more weather protection than bare solid 9-in. walling.

W. A. D.

SIR,—I have used hollow walls, viz., two half-brick skins on practically all my domestic work since the war, and have never yet had a failure. On several occasions a few years ago I asked for the extra cost incurred over 9 in. solid work to be stated in the tender and found the builders' idea of this varies considerably. In one contract of £1,600, the sums of £22, £36, and £40 were quoted, but now that builders are more conversant with the method, I find that it scarcely affects the tender.

I cannot follow "J. R. T.," who endeavours to arrive at the extra cost by cubing. Surely the internal work is precisely the same, whether hollow work or solid, and he cannot expect to get anywhere by this method.

In my opinion there is undoubtedly extra labour if the work is done thoroughly. Small contractors hardly give it consideration when estimating in their endeavours to get the job.

I would add, further, that I have never yet ventilated the cavity, but leave a few open joints at bottom in the outer skin to get rid of any surplus moisture, which I find exists chiefly in theory.

R. W. M.

LITERATURE

CONTINENTAL ARCHITECTURE

ANY Englishman, however encrusted with insularity he may be, in looking through the recently published books from the Continent, must realize that, in the opinion of foreign critics, something is wrong with the architecture of this country. Book after book is written on all sorts of architectural subjects without reference to our work. It may be that being, as we are, off the main track of Continental intercourse, our efforts are overlooked by the learned authors of these works; on the other hand it is, unhappily, possible that they are familiar with our buildings and do not consider that they have any message to give to the world today.

Our domestic work is the one exception to this gloomy rule, but even here one must exclude flats, which are ignored as pointedly as our factories, offices, hotels and hospitals. It is with reference to the last two categories that this depressing state of affairs is brought home to us, as in the 500 illustrations of *Neuzeitliche Hotels und Krankenhäuser*, a new and excellently produced German book, there is no single example of work from these islands, although the United States, France, Holland, Sweden, Denmark, Switzerland, Czechoslovakia and Austria, as well as Germany itself, are well represented. This, it must be admitted, is not flattering to our vanity, and some inquiries as to the reason for these omissions are not out of place.

In the case of hospitals the reason, in all probability, is that our practice is not very helpful to the German architect, as the climate in the two countries differs so greatly and the larger amount of sun that he enjoys allows him to use open-air wards more generally than is possible here, and this has forced a distinct type of hospital building. Nevertheless, some few examples of the work of, say, Adams, Holden and Pearson and W. A. Pite would probably have been helpful to the Continental specialists had they been included. After all, much of the pioneer work in hospital planning that followed the Crimean war was done in England by Sidney Herbert and Florence Nightingale and others, and our hospital practice has always kept in the van of progress. In the case of the United States, where there are even greater climatic differences, financial and social conditions have encouraged greater divergence from the English practice than is usual on the Continent. There, the wards tend to become smaller and the hospitals higher, with consequent concentration of plumbing due to superimposition of sanitary units. The nursing and domestic staff, also, are given better accommodation than is general elsewhere.

In the field of hotels and apartment-houses, which are in this volume somewhat incongruously grouped with hospitals, there is more excuse for the omission of British work, as very few buildings in this class have been carried out since the war which might justify their inclusion in such a work of international scope.



[*From* Neuzeitliche Hotels und Krankenhäuser.

The Hotel " Haus Oberschlesien," Gleiwitz, Germany. B. D. A. Gaze, Architect.

Most of the plates are taken from buildings that have been actually completed, but there are several important schemes which are shown by drawings only; mention may be made in this connection of projects by Herr Oud and M. Lurçat. The illustrations include a fair number of plans, with some axiometric projections and many detailed photographs of fittings and special rooms, operating theatres, kitchens and so on, as well as general views of exteriors, and others of the interior decoration, which for the most part is of a non-period nature.

GRAHAME B. TUBBS

Neuzeitliche Hotels und Krankenhäuser. Edited by Herman Gescheit. Berlin: Ernest Pollak.

ANCIENT BRIDGES OF THE NORTH

THIS publication, which is the second from the pen of Mr. Jervoise, follows the lines of his first effort, namely, *The Ancient Bridges of the South of England.*

Mr. Jervoise is doing first-class work on behalf of the Society for the Protection of Ancient Buildings, and when his survey is complete we shall possess a record of the ancient bridges of England which will be of the utmost value alike to engineers, architects and archæologists.

The work under review consists of a concise record of the situation, history and appearance of the ancient bridges in the counties of Cumberland, Durham, Northumberland, Westmorland, Lancashire and Yorkshire, in which area 1,200 bridges were visited, their situation and general construction described, and what could be gleaned of their history recorded.

The book, consisting of 141 pages, is illustrated by eighty charming pictures, obviously taken with a view to making the main features of the bridges as clear as possible.

While the author does not make a point of the necessity for preserving ancient bridges, his pictures appeal very strongly to all those who are reluctant to see the beautiful stone bridges of England replaced by less picturesque structures. He does, however, draw attention to the spoiling of Rothbury Bridge in Northumberland by the construction of a concrete parapet which rests on the mediæval piers; this, as he rightly says, completely spoils the appearance of the bridge.

The author may or may not have intended his book to be an appeal for more discretion and sympathy in dealing with ancient bridges by local authorities, but it is to be hoped that the direct result of his good work will be to open the eyes of those responsible to the rich heritage which it is their duty to safeguard, so far as urgent modern traffic requirements will permit.

The book is to be commended for its obvious accuracy, and for the avoidance of all exaggeration and conjecture, and presents a straightforward record of the bridges inspected, compiled in such a manner as to render reference easy.

Mr. Jervoise well deserves the thanks of all those concerned with bridges, whether from a constructional or artistic standpoint. G. H. JACK

The Ancient Bridges of the North of England. By E. Jervoise, A.M.INST.C.E. London: The Architectural Press. Price 5s. 6d. net.

Publications Received

The Art of Carved Sculpture. By Kineton Parkes. London: Chapman and Hall. Price 21s.

Everyday Things in Archaic Greece. By Marjorie and C.H.B. Quennell. London: B. T. Batsford, Ltd. Price 7s. 6d. net.



[*From* Neuzeitliche Hotels und Krankenhäuser.

The Edelweiss Sports Hotel, Mürren, Germany. H. Ittens, Architect.



[*From* The Ancient Bridges of the North of England.

Rothbury Bridge (left) and Felton Bridge, over the River Coquet, Northumberland. (For a review of this book, see previous page.)

QUESTIONS THAT ARISE

Competition Fees

"Swim" writes: "*Does it not seem an imposition on competitors in bath competitions to ask for an engineer's report? To be of real use it should be from an independent—a consultant—and paid for, presumably. Is this so, and what is a reasonable fee?*"

It is indeed an imposition that competitors should be asked to supply a report from an engineer, for which they would be called upon to pay. The expenses to which competitors are put are already sufficiently onerous, and any tendency to add to them should be resisted.

Architects should themselves be sufficiently acquainted with the broad principles of the heating system which they propose, to be able to outline such a system in the usual competitive architect's report.

Should competitors be compelled to call in consultants, their fees would be proportionate to their own professional standing and the size of the building scheme. K. C.

Stone Walls

T. P. writes: "*I have often spent my holidays in the Lake District, and in walking through the passes have noticed the local method of building with rough stones. In several of the farmhouses where I have put up, the farmer told stories of terrible winters, especially the continuous wet periods, but even in the most exposed houses I scarcely saw traces of damp on the inside walls. This is difficult to understand, as the stone walls are not pointed in any way, and have wide cavities between the rough undressed stones extending right into the wall.*"

The method of building noticed by your correspondent is one of the most interesting examples in this country of the ability of the workmen of a locality to overcome difficulties. The walls are in all cases very thick, two feet being a minimum, and the stones are laid dry except for a narrow bed of mortar to keep them from shifting as they are laid.

The peculiarity which your correspondent missed was the way the stones are laid with a slope outward, the difference in level of the inner and outer edges of a course being sometimes as much as three inches. This throws the water off as soon as it falls and the thickness prevents it entering, no matter how severe the storm.

Such work looks easy to carry out, but it has taken generations of workmen to perfect the method of laying these random stones to a slope and lacing them so that they will not slip. One or two erected by imported labour have proved as porous as sieves, solely due to the fact that the courses were laid level.

So many of the old crafts are disappearing before the introduction of modern standardized materials that the skill of the old Westmorland stone layers deserves to be remembered.

D. E. W.

SOCIETIES AND INSTITUTIONS

R.I.B.A. COUNCIL MEETING

FOLLOWING are some notes from a recent meeting of the R.I.B.A. Council:

R.I.B.A. Examination for Building Surveyors: The Board reported that Mr. L. A. Jones had passed the R.I.B.A. Examination for Building Surveyors, May, 1931.

Conditions of Contract: The following members were appointed to represent the R.I.B.A. on the Joint Tribunal which is being set up to watch the working of the new Form of Contract: Messrs. E. Stanley Hall, F.R.I.B.A., Sydney Tatchell, F.R.I.B.A., Percy E. Thomas, O.B.E., F.R.I.B.A., W. E. Watson, F.R.I.B.A.

Rules of the Northern Architectural Association: Under the terms of Bylaw 77 formal approval was given to certain alterations in the Rules of the Northern Architectural Association submitted by the Council of the Association.

Nomination of Hon. Auditors for 1931–32: Messrs. A. H. Goslett, F.R.I.B.A., and G. Ronald Topham, A.R.I.B.A., were nominated as Hon. Auditors for 1931–32.

Transfer to the Retired Members Class: The following members were transferred to the Retired Members Class:

As Retired Fellows

Anderson, A. W. (A. 1884, F. 1922).
Andrews, G. S. B. (F. 1925).
Hall, J. (F. 1907).
Jackson, C. E. (F. 1925).
Leeming, J. (F. 1901).
Neill, A. (F. 1905).
Oakeshott, G. J. (F. 1928).
Ridgway, F. W. (A. 1886, F. 1889).
Roberts, F. W. (F. 1906).
Sharp, W. R. (F. 1925).
Somake, M. J. H. (F. 1925).
Still, J. E. (F. 1921).
Sudlow, H. (F. 1906).

As Retired Associates

Jones, H. E. (A. 1894).
Selby, E. H. (A. 1887).

As Retired Licentiates

Bentley, R. (L. 1911).
Miller, G. F. (L. 1910–15—1927).
Ross, W. H. (L. 1911).

The Fellowship: The Council, by a unanimous vote, elected the following architects to the Fellowship under the powers defined in the Supplemental Charter of 1925: Messrs. George Bennett Mitchell (Aberdeen), and R. S. Reid (Edinburgh).

Reinstatement: The following ex-member was reinstated: As Licentiate: Mr. Joseph Hunt Stanford.

Election of Students: The following Probationers were elected as Students of the R.I.B.A.:

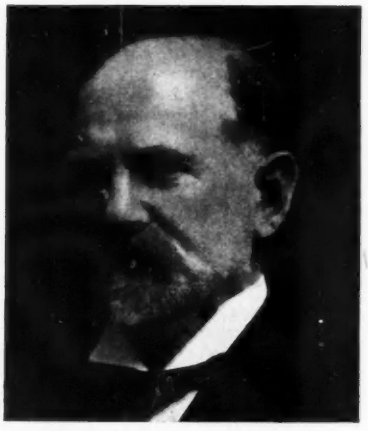
Ashcroft, W. R. (Edinburgh College of Art).
Bird, G. V. (Architectural Association).
Blair, W. (Liverpool School of Architecture).
Braun, H. S. (Architectural Association).
Cooper, A. (Architectural Association).
Drake, L. A. Thompson Webster (Architectural Association).
Fuller, T. B. (Leicester College of Arts and Crafts).
Hawkes, W. N. (Birmingham School of Architecture).
Hall, W. R. (Bartlett School of Architecture).
King, I. H. L. (Architectural Association).
Kinloch, A. (Robert Gordon's Colleges, Aberdeen).
MacLeod, N. (Robert Gordon's Colleges, Aberdeen).
Murphy, A. (Architectural Association).
Philip, A. (Robert Gordon's Colleges, Aberdeen).
Rivett, M. S. (Municipal School of Art, Southend-on-Sea).
Rowlands, B. (Architectural Association).
Smith, H. B. K. (Liverpool School of Architecture).

SCOTTISH ARCHITECTS' ANNUAL CONVENTION

At the fifteenth annual Convention of the Royal Incorporation of Architects in Scotland, held in the Town Hall, St. Andrews, Mr. John Watson, F.R.I.B.A., was re-elected President for the ensuing year.

Referring to the work of the past year, Mr. Watson said a committee had been working in conjunction with members of the Association for the Preservation of Rural Scotland, more particularly in relation to housing, and the preparation of standardized plans.

The main object of the committee was the formation of panels of architects in the various districts, whose duty it would be to prepare plans which would be suitable for their particular areas—plans of which local authorities might have the privilege of making use.



Mr. John Watson, A.R.S.A., F.R.I.B.A., who has been re-elected President of the Royal Incorporation of Architects in Scotland.

RENEWAL OF MANCHESTER SCHOLARSHIPS

The Manchester City Council is again offering a number of scholarships tenable in the Faculty of Technology of the University of Manchester. Successful candidates are required to follow a full-time course leading to the degree of Bachelor of Technical Science in the College of Technology, and matriculation or its equivalent is an essential qualification.

For students who have been engaged in industry, and who have attended part-time day or evening classes, the Scholarships are of the value of £100 per annum, while for students leaving secondary or central schools the value is £60. Both classes of scholarships are tenable for three years.

LAW REPORTS

LONDON BUILDING ACT: LIABILITY FOR DANGEROUS STRUCTURES

London County Council v. *Stilgoe. King's Bench Divisional Court. Before the Lord Chief Justice and Justices Avory and Humphreys*

THE Court delivered its reserved judgment in this case, in which the London County Council appealed, by way of case stated, against a decision of a Police Court magistrate in favour of Messrs. Stilgoe.

The case raised an issue of some importance to the London County Council under the London Building Act, 1894, and subsequent amending Act, as to who was liable to pay the expenses incurred where in the case of a dangerous structure the Council had done the work. The Council brought proceedings against Messrs. Stilgoe in respect of an overhead arch connecting two buildings in the Charing Cross Road, under which was a public highway, and in respect of which they had incurred the expense. The decision of the magistrate was that the Council could not recover against the freeholder, but must in the first instance sue the occupier.

The Council appealed against that decision on the ground that if it were correct, then, in the event of the occupier being unable to pay, the Council would be liable for the expenses incurred.

JUDGMENT

The Lord Chief Justice, Lord Hewart, in giving judgment, said the question raised in this case was whether the Council were entitled to proceed against the respondents, the owners in fee simple of a dangerous structure, to recover expenses incurred by the Council in the demolition of that structure, without first attempting to recover it from the occupier or owner immediately entitled in possession. It had been contended that section 173, subsection 1, of the Act, operated to postpone the rights of the Council against the freeholder until the proceedings had been taken against the occupiers or lessees. That was the submission favoured by the magistrate.

Proceeding, Lord Hewart said, if the effect of section 173 was that which was contended for, it seemed to follow that in every case where the occupier of a dangerous structure was, as he might often be, a weekly tenant, proceedings must in the first instance be taken against that person to recover the whole amount of the expenses, although the Council might know that he was entirely without means to pay, and in any event his liability was restricted to the amount of rent due. In this case the Council contended that section 173 dealt only with the rights and obligations *inter se* of the various persons who might be to a greater or less degree liable to some outside person for expenses, leaving untouched the right of the Council under section 109 to recover expenses incurred by them in connection with a dangerous structure from any person whom they chose to select being an owner within the definition of that term in section 5. For the respondents it was contended that the question in this case was governed by authority. The Court, however, came to the conclusion that the case of *Mourilyan* v. *Labalmondiere* governed the present case, and that the Council, if they wished to contest that decision, must do so elsewhere. They therefore agreed that the appeal should be dismissed.

Justices Avory and Humphreys concurred.

The Court granted leave to appeal further.

ALLEGED MISDIRECTION

Cullinan v. *Brandon. Court of Appeal. Before Lords Justices Scrutton, Greer and Slesser*

This was an appeal by Mr. Wm. Cullinan, who was lessee of the second floor of 44 Hatton Garden, part of which he had sub-let, from a verdict and judgment in an action before Lord Darling and a special jury in the King's Bench Division, in which he sued Mr. Henry Brandon, claiming damages for alleged trespass, nuisance and breach of covenant for quiet enjoyment.

The appellant alleged that the respondent wished to get possession of the premises for rebuilding, and that in order to do so he carried out a series of acts calculated to make it impossible for appellant to continue in possession.

The respondent denied these allegations, and it was stated that it was the

respondent's intention to convert the lower part of the premises into shops and leave the lower walls alone, but the London County Council issued a dangerous structure notice with which he was forced to comply.

The jury at the trial found that the respondent did not wrongfully evict the appellant, and that the appellant was not entitled to damages.

Judgment was entered for the defendant with costs, and the plaintiff now appealed on the ground that the verdict was against the weight of evidence, and that the judge misdirected the jury.

JUDGMENT

Lord Justice Scrutton, after hearing legal arguments, said, though many features in the summing up were unsatisfactory, there were a number of other questions of fact which ought to have been left to the jury, if the case had been tried according to the pleadings. However, his lordship thought that the questions which were put followed the line of counsel's speech, and in the circumstances he did not think that the Court ought to order a new trial.

Lords Justices Greer and Slesser concurred, and the appeal was dismissed.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Whitehall Sites Bill

AS a result of a decision of the Joint Committee of Lords and Commons which is considering the Whitehall Sites Bill, the present Government scheme for throwing forward the building line on the Embankment to the line of New Scotland Yard has been rejected. It will now be for the Government to bring forward another scheme, but this is unlikely to be possible this session.

Two Important Bills Discussed

Good progress is being made by the Standing Committee of the House of Commons which is considering the Town and Country Planning Bill. The Government should have no difficulty in securing the passage of the measure this session. The Architects' (Registration) Bill, however, is still not yet ready for the Royal Assent. Determined objection is being taken by Mr. MacShane and his friends to the consideration by the Commons of the amendments made by the House of Lords. It appears as if the Government will have to provide time for the consideration of these amendments. It is inconceivable that, now the Bill has gone so far, it will be allowed to drop.

Rent Restrictions Act

At question time, Mr. Gould asked what progress had been made by the committee dealing with the questions arising out of the Rent Restrictions Act; and when their report might be expected.

Miss Lawrence said that the Committee had practically completed the hearing of evidence, and the Minister hoped to receive the report before the end of the session.

Building Progress in Lancashire

Mr. Gordon Macdonald asked the Minister of Health if he would state the number of houses built in the rural districts of Lancashire during the last five years; the amount of land taken over by the rural districts for building purposes, giving separate figures for the rural district of Wigan; and would he state what action his department was taking to accelerate the rate of building in these areas.

Mr. Greenwood said that 6,783 houses had been built in rural districts in Lancashire, and forty acres had been bought or appropriated by district councils for housing purposes. Of these, eighty-six houses, but none of the land, were in the Wigan rural district. His officers were in communication with the Lancashire County Council, who, under the Housing Act of last year, had responsibility in regard to the housing conditions of rural districts.

COMPETITIONS OPEN

June 24.—Sending-in day. King Edward VI. School, Mill Lane and Wilton Road, Southampton, for the Governors of the School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums, £150, £100 and £50. (Deposit, £1 1s.). Full particulars are obtainable from G. A. Waller, Clerk to the Governors, 7 Albion Place, Southampton.

June 29.—Proposed Tuberculosis Hospital, Hayes Farm, Sulley, near Cardiff. Assessors: Ernest Elcock, F.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A. Premiums: £400, £300, £175, and £100. Conditions, etc., obtainable from F. J. Alban, General Secretary, Memorial Offices, Westgate Street, Cardiff, before June 29.

September 21.—Sending-in day. (Last day for conditions was May 29.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £500, £400, £300 and £200. Conditions from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

March 31, 1932.—Sending-in day. Last day for questions: August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1 Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

THE ARCHITECTS' DIARY

WEDNESDAY, JUNE 17

R.I.B.A. British Architects' Conference, Dublin. Until Saturday, June 20. For full particulars, see pages 844–845 of this issue. Also exhibition of architects' working drawings at 9 Conduit Street, W.1. The architects whose work will be shown are Messrs. C. Cowles-Voysey, F.R.I.B.A. (Corporation of Hastings, Offices at the White Rock Approach); W. Curtis Green, A.R.A., F.R.I.B.A. (Stockgrove Park); L. Sylvester Sullivan, F.R.I.B.A. (Office Building at 37–39 Lime Street, London); Maurice E. Webb, D.S.O., M.C., F.R.I.B.A. (Commercial Union New Head Office, Cornhill; Sebright's Endowed School, Worcestershire). Until June 23. 10 a.m. to 8 p.m. (Saturday 5 p.m.). **10 a.m.**

INSTITUTION OF STRUCTURAL ENGINEERS. Demonstration of the Making and Using of Concrete, by H. A. Holt, A.I.STRUCT.E. To be given at the L.C.C. School of Building, Ferndale Road, Brixton, S.W. 2.30 to 5.30 p.m., and 6.30 to 9.30 p.m. **2.30 p.m.**

THURSDAY, JUNE 18

LONDON SOCIETY. Visit to Staple Inn, Holborn, W.C.1. Under the guidance of Sir T. Cato Worsfield, Bt. **2.30 p.m.**

MARGATE SCHOOL OF ART. Eighth of twelve illustrated lectures on Beauty in Design. "Cottages." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JUNE 20

Sunrise, 4.42 a.m. Sunset, 9.19 p.m.

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS. Visit to Messrs. Walkers, Parker & Co., Ltd., Lead Smelters, 63 Belvedere Road, Lambeth, S.E.1. **8 p.m.**

MONDAY, JUNE 22

LONDON SOCIETY. Visit to the House of Dickinson, Croxley Mills, Watford, Herts. **3 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Summer Meeting to be held at Harrogate. Until June 24. 5.30 p.m. Council Meeting in the Hotel Majestic, followed by an informal meeting of members at 9.30 p.m. **5.30 p.m.**

TUESDAY, JUNE 23

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At Harrogate. 9.45 a.m. Special Meeting at the Hotel Majestic. Paper on "Radiant Heat: A Contribution to the Study of the Heating of School Buildings," by A. F. Dufton, M.A. Afternoon: Golf Competition, at the Oakdale Golf Links. Also lawn tennis competition. 2.30 p.m. Motor Drive to Fountains Abbey. 6.45 p.m. Reception by the President and Mrs. Fox, at the Hotel Majestic. 7.15 p.m. Banquet. **9.45 a.m.**

WEDNESDAY, JUNE 24

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Third of five lectures on the Art of Making and Using Concrete: "The Properties of Concrete, with special reference to handling on the Job." By Dr. R. E. Stradling, HON. A.R.I.B.A. 6 to 8 p.m. **6 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At Harrogate. 9 a.m. Assemble at the Hotel Majestic for group photograph. 10 a.m. Circular Motor Drive. 12.30 p.m. Lunch. 4.15 p.m. Tea. **9 a.m.**

THURSDAY, JUNE 25

MARGATE SCHOOL OF ART. Ninth of twelve lectures on Beauty in Design. "Civic Design." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JUNE 27

Sunrise, 4.45 a.m. Sunset, 9.20 p.m.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. Joint excursion with the South-Eastern Society of Architects to Chichester.

TUESDAY, JUNE 30

LONDON SOCIETY, Lancaster House, St. James's, S.W.1. River Trip to King George V. Dock. Leave Westminster Pier at 2 p.m. **2 p.m.**

WEDNESDAY, JULY 1

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Fourth of five lectures on the Art of Making and Using Concrete. "The Effect of Misplacing Reinforcements." By Ewart S. Andrews, A.I.STRUCT.E. 6.30 to 9.30 p.m. **6.30 p.m**

THURSDAY, JULY 2

MARGATE SCHOOL OF ART. Tenth of twelve lectures on Beauty in Design. "Town Planning." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JULY 4

Sunrise 4.47 a.m. Sunset 9.19 p.m.

ROYAL SANITARY INSTITUTE. Forty-second Congress to be held at Glasgow. Until July 11. Papers to be read will include the following: "Architecture and Engineering"; "Hospitals—Planning and Construction"; "Discharge of Sewage into Sea"; "Housing"; "Slum Clearances"; and "Single-Pipe Drainage."

R.I.B.A., 9 Conduit Street, W.1. Latest date for submission of applications for the maintenance scholarships in architecture.

WEDNESDAY, JULY 8

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Last of five lectures on the Art of Making and Using Concrete: "The Mechanical Appliances for the handling of concrete on the Job." By Lt.-Colonel R. A. B. Smith, M.I STRUCT.E. **6 p.m.**

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue :

Westminster Bank, Ltd., Lothbury, E.C. Final Section (pages 842, 846–848). General contractors, Holloway Bros., Ltd., Sub-contractors : Redpath Brown & Co., Ltd., steelwork; Diespeker & Co., Ltd., fireproof flooring; J. Whitehead and Sons, Ltd., marble and granite work; Moler Products, Ltd., Moler blocks for partitions; Stuart's Granolithic Co., Ltd., granolithic paving; Stevens and Adams, Ltd., wood-block flooring; Doulton & Co., Ltd., sanitary fittings; Matthew Hall & Co., plumbing and drainage work ; Benham and Sons, Ltd., and Richard Crittall & Co., Ltd., heating, ventilation and hot-water system; Val de Travers Asphalte Paving Co., Ltd., asphalt; W. Aumonier and Sons, carving; A. Goslett & Co., Ltd., glazing; the Morris-Singer Co., decorative metal work and wrought-iron rising gates; Waygood-Otis, Ltd., and Smith, Major and Stevens, Ltd., lifts; Caston & Co., Ltd., lift enclosures; Robert Adams, spring hinges; Luxfer, Ltd., lantern lights; F. Braby & Co., Ltd., bronze windows (ground floor); Crittall Manufacturing Co., Ltd., metal windows (upper floors); Jackson and Sons, Ltd., fibrous plaster and decoration of upper floors; Higgins and Griffiths, Ltd., electric light installation; Merryweather and Sons, Ltd., hydrants; Art Pavements and Decorations, Ltd., and W. B. Simpson and Sons, Ltd., tiling for lavatories; C. Isler & Co., Ltd., artesian wells; Hobbs, Hart & Co., general ironmongery, strong-room doors and fittings; Howard and Sons, Ltd., counters in banking hall and wooden panelled rooms on upper floors; James Hill & Co., window gearing and bronze name plates; Waygood-Otis, Ltd., main entrance doors mechanism.

The Royal Dublin Society's Building Ballsbridge, Dublin (pages 849 – 850), General contractors, Collen Bros., Ltd., who were also responsible for demolition, excavation, foundations and joinery. Sub-contractors : Clifton and Cooper, Ltd., asphalt; McEvoy, stone; J. and C. McGloughlin, Ltd., structural steel; Art Pavements and Decorations, Ltd., and Carter & Co., Ltd., tiles and tiling; Mellowes & Co., Ltd., patent glazing; Ioco Rubber and Waterproofing Co., Ltd., rubber flooring; Hadens Engineering Co., Ltd., central heating; Frank G. Sherwood, electric wiring and electric light fixtures; Bairds, Ltd., plumbing; Shanks & Co., Ltd., sanitary fittings; J. J. O'Hara, door furniture; Parkes, window furniture; Alex. Malcolm & Co., Ltd., plaster and decorative plaster; J. and C. McGloughlin, Ltd., metalwork; H. Emery and Son, carving; Ronuk, Ltd., floor polishing.

House, Coombe Hill Road, Kingston (pages 854–855). General contractor, J. Parsons, who was also responsible for the excavation, foundations, dampcourses, asphalt and plumbing. Sub-contractors : Colliers, bricks; F. S. Barnes, Ltd., stone; Empire Stone Co., Ltd., artificial stone; Permanite, Ltd., special roofings; John M. Newton and Sons, Ltd., glass doors; Venesta, Ltd., plywood flooring; Benham and Sons, Ltd., central heating; Girdlestone & Co., electric wiring and bells; W. N. Froy and Sons, Ltd., sanitary fittings; Yannedis & Co., door and window furniture; E. C. Blackmore, metalwork; J. W. Mees and Sons, marble and tiling; Hammond and Champness, lifts.

TRADE NOTES

A cable from Bangkok announces that the new Memorial Bridge, built by Dorman, Long and Company, Ltd., at a cost of nearly £300,000, was formally handed over after all tests had been satisfactorily carried out. H.R.H. Prince Purachatra, Minister of Communications, has also cabled his personal congratulations to the contractors on the successful completion of the work, four months in advance of the stipulated contract time. The bridge was built to commemorate the 150th anniversary of the foundation of the city of Bangkok, and carries a roadway across the River Chow Pnya, in the centre of the city. It has a large central opening span of the bascule type to allow for shipping passing through Bangkok.

*

A new leaflet and a new catalogue illustrating and describing Franki piles have been published by the Franki Compressed Pile Co., Ltd., 15 Victoria Street, Liverpool. One of the most important advantages of the Franki system is claimed to be the enormous carrying capacity per pile. This means that fewer piles are required, as instanced in the great Peninsular Hotel at Hong Kong, which stands on only 600 Franki piles. Among hundreds of tests of Franki piles, it is said that some have been loaded with several hundred tons, and when the pile rests on a good soil stratum it can be guaranteed to carry 70 to 80 tons in absolute security. The firm state that more than 200,000 Franki piles have been driven in all kinds of soils, and amongst the contracts executed have been foundations for churches, hotels, custom houses, railway stations, bridges, sea walls, gasometers, factories, coke ovens, power plants, etc.

*

Over 28,000 "Bull Dog" floor clips, supplied by Messrs. Redalon, Ltd., were used in the new block of offices, 52 Grosvenor Gardens, S.W.1, illustrated in the last issue of THE ARCHITECTS' JOURNAL. A photograph showing the clips incorporated on the third floor of the offices, appeared on page xxiii of the JOURNAL for May 27 last.

OBITUARY

CHARLES W. ENGLISH : 1862–1931

We regret to record the death of Mr. Charles W. English, F.R.I.B.A., which occurred on May 29.

Born in 1862, he studied in London and Munich, and commenced his professional practice in London in 1884.

During his career he specialized in perspective drawing and painting, much of his work being exhibited at the Royal Academy. He was responsible for the design of buildings both in England and abroad, including the Memorial Fountain at Church Stretton, Salop (1887); the Gospel Hall, New Cut, S.E. (1902); the English Church, Frankfurt-am-Main, Germany (1906-7); the Waterworks of Baden-Baden, Germany (1912–13); new students' wing to Carmarthen Training College (1923–24); Gilbert House, a block of shops and flats at the corner of Princeton Street and Red Lion Street, W.C.1 (1926–27); and the rebuilding of Christiansborg Castle, as well as the Town Hall, both in Copenhagen.

During the Great War of 1914–18, he took up Special Constabulary; and, on account of his extensive knowledge of foreign languages, he did valuable work as a censor, on one occasion being employed by the Secret Service. Shortly after the war he was made a Fellow of the R.I.B.A. Owing to a serious illness he was compelled to retire from business at the beginning of this year.

ANNOUNCEMENTS

The partnership of Mr. Ernest Newton and Mr. Leslie Ward, architects, of Philos Chambers, 195 Oxford Road, Manchester, has been dissolved. The practice will be continued by Mr. Newton, under his own name, at the same address.

Subsequent to the death of their late partner, Mr. David Raeside, Sir John Burnet and Partners, practising at No. 1 Montague Place, Bedford Square, W.C.1, have taken into partnership Mr. Francis Lorne, F.R.I.B.A. The name of the firm has been altered from Sir John Burnet and Partners to Sir John Burnet, Tait and Lorne.

The practice of the late Mr. W. Courtenay Le Maitre, F.R.I.B.A., has been taken over by Messrs. William and Segar Owen, architects, of Warrington and London. The present office and staff at 28 Albemarle Street, W.1, which will be carried on under the personal management of Mr. Godfrey Segar Owen, will be run in conjunction with the Warrington branch, which remains under the management of Mr. Geoffrey Owen. The firm will be known as Messrs. Le Maitre and William and Segar Owen.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

Mr. E. H. Burgess has prepared plans for the development of a factory site on the Great West Road, BRENTFORD.

The BRENTFORD and CHISWICK U.D.C. has purchased eleven acres of land on the Syon estate for a housing scheme.

The BRENTFORD and CHISWICK U.D.C. has appointed a committee to consider the question of the provision of washhouses at the Brentford baths and additional slipper baths at the Chiswick baths.

The BRENTFORD and CHISWICK Joint Education Committee is to acquire a site adjoining Strand-on-the-Green Council school, for the purpose of erecting a senior boys' school to accommodate 400 boys.

Plans passed at BRENTFORD and CHISWICK: Rebuilding of factory, Waldeck Road, for Messrs. Bonfield Bros.; additions to county school, Burlington Lane, for Mr. W. T. Curtis; alterations at stores, Essex Place, for Messrs. Whitbread & Co.; forty-eight tenements, Brook Road, for Middlesex County Council; three houses, Wellesley Road, for Messrs. Hearn and Chutte; acetylene generating plant house, L.G.O.C., Chiswick Works, for Mr. S. A. Heaps; first-aid station, Chiswick Works, for Mr. S. A. Heaps.

Mr. Maurice B. Adams is to erect almshouses in Alexandra Avenue, CHISWICK.

Messrs. Davidson and Sherwood are to erect a church in Marlborough Road, CHISWICK.

The North Metropolitan Electric Power Supply Co. has purchased a site in Fore Street, EDMONTON, for the erection of showrooms.

Plans passed by the HACKNEY B.C.: Swimming baths, London Fields, for the L.C.C. architect; drying kiln, Theydon Road, for Messrs. Lathans.

The HACKNEY B.C. recommends the appointment of Messrs. Josephs as architects for the proposed tenements in Banister Street and Lower Clapton Road.

Plans have been prepared for the development of the Northfield Park estate, HAYES, Middlesex.

Plans passed by the ILFORD Corporation: Factory extensions, Grove Road, for Mr. F. H. Toms; fourteen houses, Danehurst Gardens, for Mr. T. J. S. Blake; eight houses, Kenneth Road, for Mr. A. E. Wichello; three houses, Sunnymede Drive, and three shops and houses, Loxford Parade, for Mr. T. Anders; six houses, Canterbury Avenue, and four houses, Gloucester Gardens, for Mr. A. P. Griggs; church, Woodford Avenue, for Mr. C. A. Nicholson; nine houses, Highcliffe Cardens, for Mr. F. Stimpson; four houses, Hatley Avenue, for Mr. G. F. Deeks; four houses and two shops, Grove Road, club-house for L.G.O.C., Grove Road, seven houses, Glemdale Avenue, and workshop, Green Lane, for Mr. G. F. Seigerts; three houses, Perkins Road, for Mr. E. Meredith; two houses, Egerton Gardens, and two houses, Westrow Gardens, for Messrs. J. W. Moore and Son; institute, U.M. Church, Seven Kings Road, for Messrs. G. Baines and Son; twenty-two houses, Hastings Avenue, for Mr. H. W. Christopher; United Methodist Sunday school, Ilford Lane, for Mr. T. J. Hill; four houses, Holcombe Road, and seven houses, Green Lane, for Mr. J. Aldridge; extensions, Britannia Works, Roden Street, for Messrs. Ilford, Ltd.; twenty houses, Fairmead Gardens, for Mr. H. A. Smith; four houses, Roy Gardens, for Mr. F. H. Catchpole; sixty-eight houses, Fairfield Road, for Messrs. Kemsleys.

Plans passed by the LEWISHAM B.C.: Four houses, Neiderwald Road, for Mr. R. B. Rowell; alterations, 163–5 High Street, for Messrs. H. Mills and Sons, Ltd.; seven streets on Hall Park estate, for Mr. J. Everington; four houses, Belmont Grove, for Mr. W. H. Penfold; thirteen houses, Grove Park estate, for Mr. W. J. Brise; Salvation Army hall, Avenue Road, for Mr. Oswald Archer; thirty-eight houses, Chudleigh Road, for Messrs. J. W. Heath and Sons; ten houses, Holmesley Road, for Messrs. W. T. Champion and Son.

Plans passed by the WATFORD Corporation: Forty-seven houses, Purbrook Avenue, for Mr. F. W. Brockett; store, Whippendell Road, for Messrs. Millars; four houses, Osborne Road, for Mr. H. Waller; twenty-one houses, North Western Avenue, for Messrs. Kempster and Williams; laundry buildings, Hagden Lane, for Watford Model Laundry; hall, Clarendon Road, for Y.W.C.A.; warehouse extensions, George Street, for Messrs. Pickfords; shopping centre, Cassiobury Drive, for Cassiobury Estates, Ltd.

MIDLAND COUNTIES

Plans passed at STOKE-ON-TRENT: Four houses, Vicarage Lane, Hartshill, for Messrs. Till Bros.; house, Allerton Road, Trentham, for Mr. T. Horwill; ten houses, Victoria Place, Penkhull, for Messrs. Holloway & Co.; two houses, Park Road, Shelton, for Mr. A. Gurney; seven houses, Hanley Road, Sneyd Green, for Mr. B. S. Phillips; two houses, Drubbery Lane, Longton, for Mr. S. Simpson; three houses, Gladstone Street, Basford, for Mr. J. M. Dimbleby; two houses, Chell Green Avenue, Tunstall, for Messrs. Ray and Son; additions to Sunday school, off Williamson Street, Goldenhill, for Christ Church, Goldenhill; two houses, Stone Road, for Mr. H. Colclough; two houses, Eaves Lane, Bucknall, for Mr. F. Rushton; additions, Brownhills Tileries, for Messrs. D. Platt and Sons; four houses, Brackley Avenue, for Mr. P. Hollins; new stores, "Abbey" Inn, Leek Road, for Messrs. Alsopp and Sons; three houses, Mynors Street, for Mr. W. Sergeant; shop, Lichfield Street, for Messrs. Swettenhams, Ltd.; alterations, Palissy Pottery, for Messrs. A. E. Jones, Ltd.; alterations, "Swan" Hotel, High Street, for Parkers' Brewery, Ltd.; alterations, "Jolly Colliers" Inn, High Street, for Messrs. Showell's Brewery Co., Ltd.; alterations, "Globe" Inn and "Masons' Arms," High Street, for Messrs. Worthington & Co., Ltd.; extensions, off Boundary Street, for Messrs. Brookfield Engineering Co.

Messrs. Adams, Holden and Pearson have prepared plans for extensions and alterations at the WORCESTER general infirmary.

NORTHERN COUNTIES

The HULL Corporation has approved the lay-out, prepared by the city architect, for the erection of a further 600 houses on the Endyke estate.

The Ministry of Health has held an inquiry into the application of the HULL Corporation for a loan of £40,800 for the erection of swimming baths in Albert Avenue.

Plans passed by the HULL Corporation: Two houses, Allderidge Avenue, for Mr. C. Wray; six houses, Bellfield Avenue, for Mr. E. Pickering; ten houses, Wolfreton Lane, for Mr. W. Marsden; house, Hessle-Derriby Road, for Mr. A. Harrison; house, Swanland, for Mr. J. Webber; house, Beverley High Road, for Mr. G. Overton; thirteen houses and shops, Endyke Lane, for Messrs. Moore and Arundel; three shops, Inglemire Lane, for Mr. J. Elston; two houses, Waldegrave Avenue, for Messrs. Simmonite, Curtis and Holtby; fourteen houses, Gillshill Road, for Mr. R. Ashton.

Motto labels should be pasted on the backs of all sketches submitted and on the sealed envelope containing the competitor's name and address.

Architects' Journal Sketch Club

Holiday Sketches Competition

JUNE, 1931

MOTTO	NUMBER OF DRAWINGS ENTERED

IMPORTANT:—ENTRIES FOR THIS COMPETITION SHOULD REACH THE EDITOR OF THE ARCHITECTS' JOURNAL, 9 QUEEN ANNE'S GATE, WESTMINSTER, S.W.I, NOT LATER THAN TUESDAY, JULY 14, 1931.

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RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0¾
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11¼
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0¾
B_2	Aylesbury ..	S. Counties	1 3	11¼
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0¾
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0¾
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0¾
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1¼
A_2	Bewdley ..	Mid. Counties	1 5½	1 1¼
B_2	Bicester ..	Mid. Counties	1 3	11¼
	Birkenhead	N.W. Counties	*1 8½	1 3¼
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11¾
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0¾
A_2	Bournemouth	S. Counties	1 5	1 0¾
B_2	Bovey Tracey	S.W. Counties	1 3½	11¾
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1¼
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11¾
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0¾
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11¼
A_2	Bromsgrove	Mid. Counties	1 5½	1 1¼
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11¼
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0¾
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11¾
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester ..	S. Counties	1 3½	11¾
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2.
A_2	Colchester ..	E. Counties	1 5	1 0¾
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0¾
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0¾
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1¼
A_2	Cumberland	N.W. Counties	1 5	1 0¾
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11¾
A_2	Denbigh ..	N.W. Counties	1 5	1 0¾
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11¾
A_2	Driffield ..	Yorkshire	1 5	1 0¾
A_2	Droitwich ..	Mid. Counties	1 5½	1 1¼
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0¾
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1¼
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0¾
A_2	Filey	Yorkshire	1 5	1 0¾
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11¼
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11¼
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1¼
A_2	Goole ..	Yorkshire	1 5½	1 1¼
A_2	Gosport ..	S. Counties	1 5	1 0¾
A_2	Grantham ..	Mid. Counties	1 5	1 0¾
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11¾
A_2	Hatfield ..	S. Counties	1 5	1 0¾
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0¾
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0¾
B_2	Isle of Wight	S. Counties	1 3	11¼
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1¼
A_2	Kidderminster	Mid. Counties	1 5½	1 1¼
B_2	King's Lynn	E. Counties	1 3½	11¾
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1¼
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11¼
A_2	Lichfield ..	Mid. Counties	1 5½	1 1¼
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3¼
A_2	Llandudno	N.W. Counties	1 5	1 0¾
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2½
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0¾
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0¾
A	Manchester ..	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0¾
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1¼
B_2	Minehead ..	S.W. Counties	1 3½	11¾
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11¾
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1¼
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1¼
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0¾
A_2	Oldham ..	N.W. Counties	1 5½	1 1¼
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1¼
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11¼
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1¼
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0¾
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0¾
B	Reigate ..	S. Counties	1 4½	1 0½
A	Retford ..	Mid. Counties	1 5	1 0¾
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0¾
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0¾
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_1	ST. ALBANS	E. Counties	1 5½	1 1¼
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11¼
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1¼
A_2	Skipton ..	Yorkshire	1 5½	1 1¼
A_2	Slough ..	S. Counties	1 5	1 0¾
A_2	Solihull ..	Mid. Counties	1 5½	1 1¼
A_2	South'pton	S. Counties	1 5	1 0¾
A_2	Southend-on-Sea	E. Counties	1 5½	1 1¼
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_2	Stafford ..	Mid. Counties	1 5½	1 1¼
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0¾
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0¾
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells ..	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1¼
A_2	Welling-borough	Mid. Counties	1 5½	1 1¼
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1¼
A	Whitby ..	Yorkshire	1 5½	1 1¼
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A	Windsor ..	S. Counties	1 5	1 0¾
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1¼
A_2	Worksop ..	Yorkshire	1 5	1 0¾
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0¾
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11¾
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£	s.	d.
Bricklayer . . . . per hour		1	8
Carpenter . . . . ,,		1	8
Joiner . . . . ,,		1	8
Machinist . . . . ,,		1	9
Mason (Banker) . . . ,,		1	8
,, (Fixer) . . . ,,		1	9
Plumber . . . . ,,		1	8
Painter . . . . ,,		1	7
Paperhanger . . . ,,		1	8
Glazier . . . . ,,		1	8
Slater . . . . ,,		1	8
Scaffolder . . . . ,,		1	4
Timberman . . . . ,,		1	4
Navvy . . . . ,,		1	3
General Labourer . . . ,,		1	3
Lorryman . . . . ,,		1	5½
Crane Driver . . . ,,		1	7
Watchman . . . . per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

	£	s.	d.
Grey Stone Lime . . . per ton	2	8	6
Blue Lias Lime . . . ,,	2	10	6
Hydrated Lime . . . ,,	2	16	0
Portland Cement . . . ,,	2	6	0
Rapid Hardening Cement . . ,,	2	13	6
Thames Ballast . . . per Y.C.		8	9
¾" Crushed Ballast . . ,,		10	0
Building Sand . . . ,,		10	6
Washed Sand . . . ,,		11	6
2" Broken Brick . . ,,		9	6
¾" ,, ,, . . ,,		12	6
Pan Breeze . . . ,,		6	6
Coke Breeze . . . ,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4" s.	4" d.	6" s.	6" d.
Straight pipes . . per F.R.	1	1	1	6
Bends . . . each	2	10	4	4
Taper bends . . ,,	6	3	7	2
Rest bends . . ,,	5	9	8	9
Single junctions . . ,,	3	9	5	9
Double ,, . . ,,	5	9	8	9
Straight channels . . ,,	2	6	3	2
¼" Channel bends . . ,,	7	8	—	—
Channel junctions . . ,,	7	0	12	6
Channel tapers . . ,,	5	6	7	9
Yard gullies . . ,,	9	6	11	6
Interceptors . . ,,	18	6	25	9
Iron drain pipe . . per F.R.	2	3	3	5
Bends . . . each	6	0	13	0
Inspection bends . . ,,	15	3	24	0
Single junctions . . ,,	9	3	18	0
Double junctions . . ,,	14	0	27	6
Lead wool . . . lb.		6		—
Gaskin . . . . ,,		5		—

BRICKLAYER

	£	s.	d.
Flettons . . . . per M.	3	1	6
Grooved do. . . . ,,	3	3	6
Stocks, 1st Quality . . ,,	4	18	6
,, 2nd ,, . . ,,	4	12	6
Blue Bricks, Pressed . . ,,	9	18	0
,, Wirecuts . . ,,	8	16	0
,, Bridles . . ,,	8	0	0
,, Bullnose . . ,,	10	8	0
Red Sand-faced Facings . ,,	7	11	0
Red Rubbers for Arches . ,,	15	0	0
Multicoloured Facings . ,,	9	4	0
Luton Facings . . . ,,	8	16	0
Midhurst White Facings . ,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:			
Stretchers . . . ,,	21	10	0
Headers . . . . ,,	21	0	0
Bullnose . . . . ,,	28	0	0
Double Stretchers . . ,,	30	0	0
Double Headers . . ,,	27	0	0
Glazed Second Quality, *Less* . ,,	1	0	0
,, Buffs and Creams, Add . ,,	2	0	0
,, Other Colours ,, . ,,	5	10	0
2" Breeze Partition Blocks . per Y.S.		1	9
2½" ,, ,, ,, . . ,,		2	0
3" ,, ,, ,, . . ,,		2	3
4" ,, ,, ,, . . ,,		3	0

MASON

The following d/d F.O.R. at Nine Elms:

	£	s.	d.
Portland stone, Whitbed . . F.C.	4	6	
,, ,, Basebed . . .	4	9	
Bath stone . . . . ,,	2	11	
York stone . . . . ,,	6	9	
,, Sawn templates . . ,,	7	6	
,, Paving, 2" . . . . F.S.	1	8	
,, ,, 3" . . . . ,,	2	6	

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£	s.	d.
24" × 12" Duchesses . . per M.	31	0	0
22" × 12" Marchionesses . ,,	28	0	0
20" × 10" Countesses . . ,,	20	5	0
18" × 10" Viscountesses . ,,	17	0	0
18" × 9" Ladies . . . ,,	15	0	0
Westmorland green (random sizes) per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:			
20" × 10" medium grey per 1,000 (actual)	26	0	0
,, green . . ,,	27	15	0
Best machine roofing tiles . ,,	5	0	0
Best hand-made do. . . ,,	5	10	0
Hips and valleys . . . each		9	6
,, hand-made . . . ,,		10	
Nails, compo . . . . lb.		4	
,, copper . . . . ,,		2	0

CARPENTER AND JOINER

	£	s.	d.
Good carcassing timber . . F.C.		2	6
Birch . . . as 1" F.S.			9
Deal, Joiner's, . . . ,, ,,			5
,, ,, 2nds . . ,, ,,			4
Mahogany, Honduras . . ,, ,,	1		3
,, African . . ,, ,,	1		1
,, Cuban . . ,, ,,	2		6
Oak, plain American . . ,, ,,	1		0
,, Figured ,, . . ,, ,,	1		3
,, Plain Japanese . . ,, ,,	1		2
,, Figured ,, . . ,, ,,	1		5
,, Austrian wainscot . ,, ,,	1		6
,, English ,, . . ,, ,,	1		11
Pine, Yellow . . . ,, ,,	1		0
,, Oregon . . . ,, ,,			4
,, British Columbian . ,, ,,			4
Teak, Moulmein . . ,, ,,	1		3
,, Burma . . . ,, ,,	1		2
Walnut, American . . ,, ,,	2		3
,, French . . . ,, ,,	2		3
Whitewood, American . ,, ,,	1		1
Deal floorings, ¾" . . . Sq.	1	1	0
,, 1" . . . ,,	1	3	6
,, 1¼" . . . ,,	1	5	6
,, 1½" . . . ,,	1	11	0
,, 2" . . . ,,	1	15	0
Deal matchings, ¾" . . ,,		16	0
,, 1" . . ,,		17	6
,, 1¼" . . ,,	1	6	0
Rough boarding, ¾" . . ,,		18	0
,, 1" . . ,,	1	0	0
,, 1½" . . ,,	1	8	0

Plywood, per ft. sup.

Thickness	¼" d.	½" AA. d.	½" A. d.	½" B. d.	¾" AA. d.	¾" A. d.	¾" B. d.	1" AA. d.	1" A. d.	1" B. d.
Qualities	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.	AA. d.	A. d.	B. d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon												
Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak												
1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak												
1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	½"	1"	1½"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6
Bends . . ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket union . ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square . ,,	10	1/1	1/6	2/2	4/3
Tees . . . ,,	1/–	1/3	1/10	2/6	5/1
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges . . ,,	9	1/–	1/4	1/9	2/9
Caps . . . ,,	3½	5	8	1/–	2/–
Backnuts . . ,,	2	3	5	6	1/1
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

Discounts:

TUBES.

	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . .	55	,, steam .	40

FITTINGS.

	Per cent.		Per cent.
Gas . . .	57½	Galvanized gas .	47½
Water . . .	52½	,, water .	42½
Steam . . .	47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s.	d.
Rolled steel joists cut to length . . cwt.	9	
Mild steel reinforcing rods, ¾" . . . ,,	10	0
,, ,, ⅝" . . . ,,	9	9
,, ,, ½" . . . ,,	9	6
,, ,, ⅜" . . . ,,	9	6
,, ,, ¼" . . . ,,	9	0
,, ,, ¼" . . . ,,	9	0
,, ,, 1" . . . ,,	9	0
,, ,, 1¼" . . . ,,	9	0
,, ,, 1½" . . . ,,	9	0

	3" s.	3" d.	4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal . F.R.	7			10
Shoes . . . . each	2	3	3	3
Anti-splash shoes . . ,,	5	0	8	6
Boots . . . . ,,	3	3	4	6
Bends . . . . ,,	2	9	4	0
,, with access door . ,,	—		6	9
Heads . . . . ,,	4	0	5	0
Swan-necks up to 9" offsets . ,,	4	0	6	3
Plinth bends, 4½" to 6" . ,,	4	0	5	6
Half-round rain-water gutters of ordinary thickness metal . F.R.	5			6
Stop ends . . . . each	6			7
Angles . . . . ,,	1	7	1	11
Obtuse angles . . . ,,	2	0	2	6
Outlets . . . . ,,	1	9	2	3

PLUMBER

	s.	d.
Lead, milled sheet . . . cwt.	19	0
,, drawn pipes . . . ,,	19	6
,, soil pipe . . . ,,	22	6
,, scrap . . . ,,	9	0
Solder, plumbers' . . . lb.		11
,, fine do. . . . ,,	1	3
Copper, sheet . . . ,,	1	0
,, tubes . . . ,,	1	4

	3"	4"	6"
L.C.C. soil and waste pipes:			
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£	s.	d.
Lime, chalk . . . per ton	2	8	6
Plaster, coarse . . ,,	2	10	6
,, fine . . ,,	5	10	0
Hydrated lime . . ,,	2	16	0
Sirapite . . . ,,	3	10	0
Keene's cement . . ,,	5	10	0
Sand, washed . . Y.C.		11	6
Hair . . . lb.			6
Laths, sawn . . bundle		2	4
,, rent . . ,,		3	9
Lath nails . . . lb.			3½

GLAZIER

	s.	d.	s.	d.
Sheet glass, 21 oz. . . F.S.				3½
,, ,, 26 oz. . . ,,				4½
Arctic glass . . . ,,				5
Cathedral glass . . ,,				6
Hartley's rough rolled . ,,				9
Do. wired plate . . ,,			1	3
¼" Polished plate, n/e 1 . ,,	1	0 to	1	3
,, ,, 2 . ,,	1	2 ,,	1	7
,, ,, 3 . ,,	1	7 ,,	2	5
,, ,, 4 . ,,	2	1 ,,	2	11
,, ,, 6 . ,,	2	3 ,,	3	2
,, ,, 8 . ,,	2	6 ,,	3	6
,, ,, 12 . ,,	2	9 ,,	3	8
,, ,, 20 . ,,	3	0 ,,	3	11
,, ,, 45 . ,,	3	3 ,,	4	1
,, ,, 65 . ,,	3	7 ,,	4	6
,, ,, 90 . ,,	3	10 ,,	4	9
,, ,, 100 . ,,	4	0 ,,	5	0
Vita glass, sheet, n/e 1 . ,,			1	0
,, ,, ,, 2 . ,,			1	3
,, ,, ,, over 2 . ,,			1	9
,, ,, plate, n/e 1 . ,,			1	6
,, ,, ,, 2 . ,,			3	0
,, ,, ,, 5 . ,,			4	0
,, ,, ,, 7 . ,,			5	0
,, ,, ,, 15 . ,,			6	0
,, ,, ,,over 15 . ,,			7	6
Putty, linseed oil . . lb.				3

PAINTER

	£	s.	d.
White lead . . . . cwt.	2	8	0
Linseed oil . . . . gall.		3	3
Boiled oil . . . . ,,		4	1
Turpentine . . . . ,,		3	8
Patent knotting . . . ,,		14	0
Distemper, washable . . cwt.	3	0	0
,, ordinary . . . ,,	2	5	0
Whitening . . . . ,,		4	0
Size, double . . . firkin		3	0
Copal varnish . . . gall.		13	0
Flat varnish . . . ,,		14	0
Outside varnish . . ,,		16	0
White enamel . . . ,,	1	15	0
Ready-mixed paint . . ,,		13	6
Brunswick black . . . ,,		17	6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR		s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.	3	6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10	0
" to form basement n/e 5' 0" deep and cart away	"	11	0
" " 10' 0" deep and cart away	"	11	6
" " 15' 0" deep and cart away	"	12	0
If in stiff clay	add "	3	0
If in underpinning	" "	5	0
Digging, return, fill and ram	"	5	0
Planking and strutting to sides of excavation	F.S.	1	0
" " to pier holes	"		6
" " to trenches	"		6
" " extra, only if left in	"		3½
Hardcore, filled in and rammed	Y.C.	14	0
Portland cement concrete in foundations (6-1)	"	1 13	6
" " " (4-2-1)	"	1 18	6
" " " underpinning	"	2 2	0
Finishing surface of concrete, spade face	Y.S.		9

DRAINLAYER		4" s.	d.	6" s.	d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	8	2	6
Extra, only for bends	Each	2	8	3	9
" junctions	"	3	9	4	6
Gullies and gratings	"	17	6	19	9
Cast iron drains, and laying and jointing	F.R.	5	6	7	0
Extra, only for bends	Each	12	6	18	6

BRICKLAYER		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	32	0	0
" " in cement	"	34	0	0
" Stocks in cement	"	41	10	0
" Blues in cement	"	62	0	0
Extra only for circular on plan	"	3	0	0
" backing to masonry	"	2	0	0
" raising on old walls	"	3	0	0
" underpinning	"	10	0	0
Fair Face and pointing internally	F.S.			3
Extra only for picked stock facings	"		1	0
" red brick facings	"		1	6
" blue brick facings	"		1	9
" glazed brick facings	"		4	6
Tuck pointing	"			10
Weather pointing	"			4
Slate dampcourse	"		1	0
Vertical dampcourse	"		1	3

ASPHALTER		s.	d.
½" Horizontal dampcourse	Y.S.	5	6
½" Vertical dampcourse	"	7	6
½" paving or flat	"	5	6
1" paving or flat	"	6	6
1" × 6" skirting	F.R.	1	0
Angle fillet	"		2
Rounded angle	"		2
Cesspools	Each	5	0

MASON		£	s.	d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1	1	6
Bath stone and do, all as last	"		15	6
Artificial stone and do.	"		16	6
York stone templates, fixed complete	"		14	0
" thresholds	"		16	0
" sills	"	1	3	6

SLATER AND TILER		£	s.	d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4	5	0
Do., 18" × 9"	"	4	2	0
Do., 24" × 12"	"	4	12	0
Westmorland slating, laid with diminished courses	"	6	10	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4	0	0
Do., all as last, but of machine-made tiles	"	3	11	0
Fixing only, lead soakers	Doz.			9
Stripping old slating and clearing away	Sqr.		10	0

CARPENTER AND JOINER		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	12	0
Shuttering to sides and soffits of beams	F.S.		1	0
" to stanchions	"		1	0
" to staircases	"		2	0
Fir and fixing in wall plates, lintols, etc.	F.C.		5	0
Fir framed in floors	"		6	9
" " roofs	"		8	3
" " trusses	"		9	0
" " partitions	"		12	0
¾" deal sawn boarding and fixing to joists	Sqr.	1	17	6
1" " " " " "	"	2	1	6
1¼" " " " " "	"	2	7	6
2½" × 2" fir battening for Countess slating	"		12	6
Do. for 4" gauge tiling	"		16	0
Stout feather-edged tilting fillet	F.R.			6
Patent roofing felt, 1 ply	Y.S.		2	6
" " " 2 "	"		3	0
" " " 3 "	"		3	6
Stout herringbone strutting to 9" joists	F.R.		1	0
1" deal gutter boards and bearers	F.S.		1	4
1½" " " " " "	"		1	8
2" deal wrought rounded roll	F.R.			9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	15	0
1¼" do.	"	3	4	0
1½" do.	"	3	13	0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.		1	10
1¼" do.	"		2	1

CARPENTER AND JOINER—*continued.*		s.	d.
1½" deal moulded sashes of average size	F.S.		3
2" " " "	"		2 6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ¾" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4	3
2" " " "	"	4	6
Extra only for moulded horns	Each		9
1½" deal four-panel square, both sides, door	F.S.	2	6
2" " " "	"	3	0
1½" " but moulded both sides	"	3	0
2" " " "	"	3	6
4" × 3" deal, rebated and moulded frames	F.R.	1	6
4½" × 3½" " "	"	2	0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2	0
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3	0
1½" deal moulded wall strings	"	2	6
1½" " outer strings	"	2	9
Ends of treads and risers housed to string	Each	2	0
3" × 2" deal moulded handrail	F.R.	1	6
1" × 1" deal balusters and housing each end	Each	2	6
1½" × 1½" " "	"	3	3
3" × 3" deal wrought framed newels	F.R.	1	6
Extra only for newel caps	Each	7	6
Do., pendants	"	7	6

SMITH AND FOUNDER		s.	d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17	0
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3	0
Do. stanchions with riveted caps and bases and do.	"	1 2	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 0	0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1	0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15	0

PLUMBER		£	s.	d.
Milled lead and labour in flats, gutters	Per cwt.	1	15	6
Do. in flashings	"	1	18	0
Do. in covering to turrets, etc.	"	2	5	0
Do. in soakers	"	1	11	0
Labour to welted edge	F.R.			3½
Open copper nailing	"			3½
Close "	"			4½

		½" s.	d.	¾" s.	d.	1" s.	d.	1½" s.	d.	2" s.	d.	4" s.	d.
Lead service pipe and fixing with pipe hooks	F.R.	1	2	1	7	2	1	2	8	3	8	—	
Do. soil pipe and fixing with cast lead tacks	"	—		—		—		—		—		5	9
Extra, only to bends	Each	—		—		—		—		2	3	0	6
Do. to stop ends	"	7		9		1	0	1	3	2	0	—	
Boiler screws and unions	"	3	6	4	0	5	6	8	0	—		—	
Lead traps	"	—		—		—		7	6	10	6	—	
Screw down bib valves	"	7	6	10	6	12	6	—		—		—	
Do. stop cocks	"	10	0	12	0	16	0	23	6	56	6	—	

PLASTERER AND TILING		£	s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1		3
Extra, only stop ends	Each	1		0
Do. angles	"	1		6
Do. outlets	"	3		0
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1		6
Extra, only for shoes	Each	2		6
Do. for plain heads	"	5		6

PLASTERER AND TILING		£	s.	d.
Expanded metal lathing, small mesh	Y.S.		3	9
Do. in n/w to beams, stanchions, etc.	"		5	6
Lathing with sawn laths to ceilings	"		1	6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"		2	6
Do. vertical	"		2	9
Rough render on walls	"		2	3
Render, float and set in lime and hair	"		3	0
Render and set in Sirapite	"		3	3
Render, backing in cement and sand, and set in Keene's cement	"		4	6
Extra, only if on lathing	"			9
Keene's cement, angle and arris	F.R.			8
Arris	"			3
Rounded angle, small	"			3
Plain cornices in plaster, including dubbing out, per 1" girth	"			2
1" granolithic pavings	Y.S.		5	0
1½" " "	"		6	0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1	2	6
9" × 3" " " "	"	1	7	6
Extra, only for small quadrant angle	F.R.			9

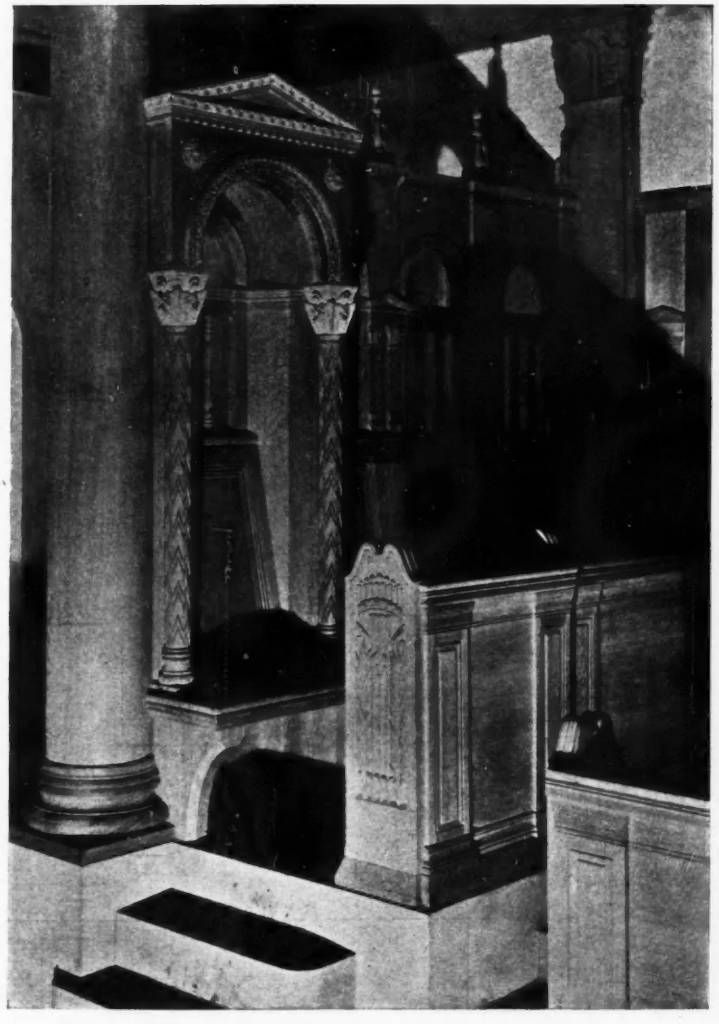
GLAZIER		s.	d.
21 oz. sheet glass and glazing with putty	F.S.		8
26 oz. do. and do.	"	1	0
Arctic glass and glazing with putty	"	1	2
Cathedral glass and do.	"	1	3
Glazing only, British polished plate	"		8
Extra, only if in beads	"		2
Washleather	F.R.		4

PAINTER		s.	d.
Clearcolle and whiten ceilings	Y.S.		8
Do. and distemper walls	"	1	0
Do. with washable distemper	"	1	3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax-polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	6
Hanging ordinary paper	from "	3	0



STALLS IN WHITELANDS COLLEGE CHAPEL

DESIGNED BY SIR GILES GILBERT SCOTT, R.A.

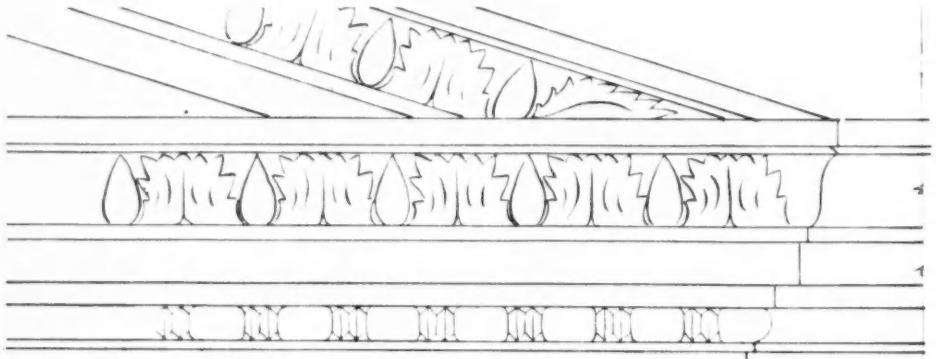


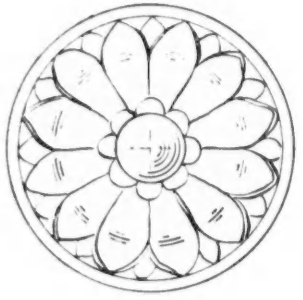
THE SOUTHERN RANGE OF STALLS

THE subject of the above photographic illustration, and of the detail drawings reproduced overleaf to the scales indicated, is a range of stalls for the accommodation of the Principal and staff of Whitelands College, Putney, S.W. Carved in oak from the architect's designs, these occupy the west end of the college chapel.

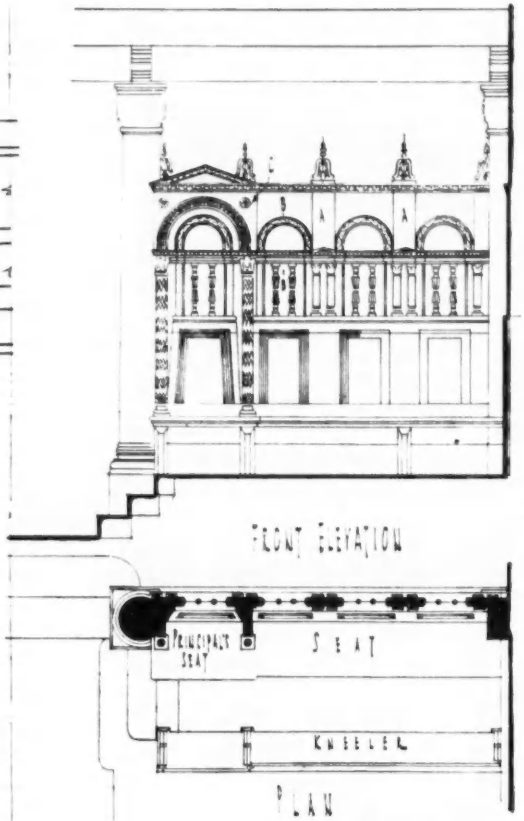
Only one side is shown, with the Principal's stall on the left. A similar range of stalls balances the design on the other side of the chapel.

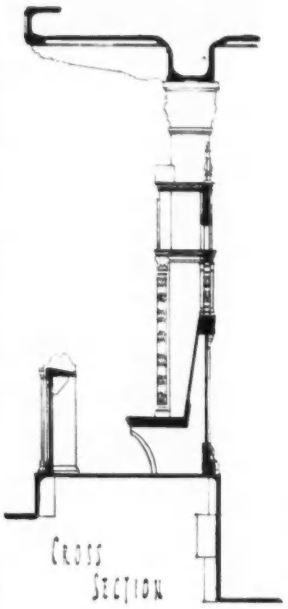
Whitelands College, founded in Chelsea in 1841 for the training of women teachers in elementary schools, is now established in the new buildings that were fully illustrated and described in the issue for December 31, 1930. They were formally opened by H.M. the Queen at the beginning of this month.

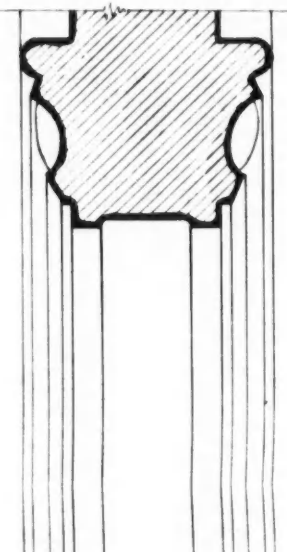


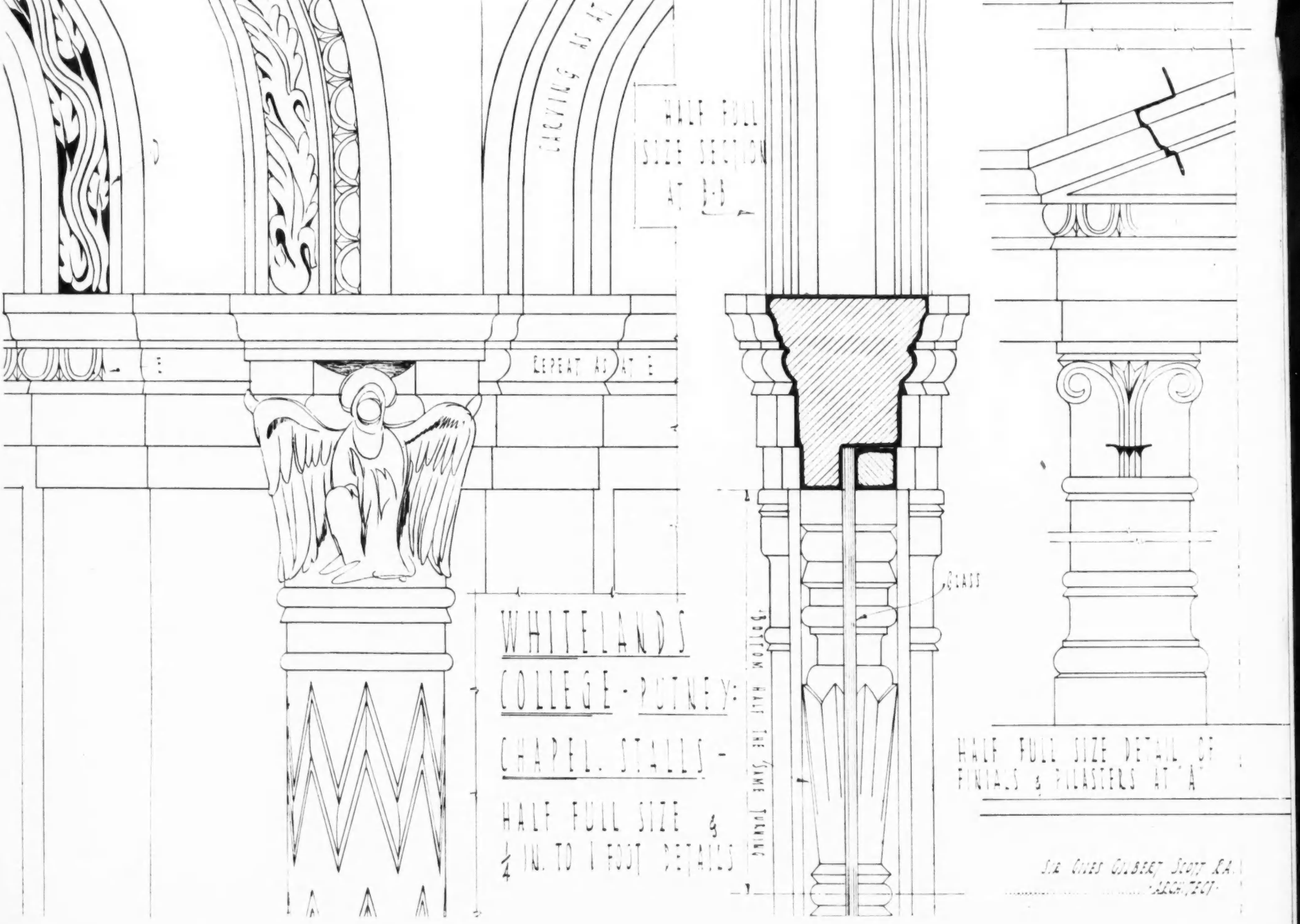


HALF FULL SIZE DETAIL
OF PART ELEVATION OF
CANOPY OVER PRINCIPAL'S
SEAT AT 'C'









WHITELANDS COLLEGE - PUTNEY:

CHAPEL. STALLS -

HALF FULL SIZE & ¼ IN. TO 1 FOOT DETAILS

HALF FULL SIZE DETAIL OF FINIALS & PILASTERS AT A

SIR GILES GILBERT SCOTT R.A. ARCHITECT.

PORCHED ENTRANCE of a STATE SCHOOL

A SCALE DETAIL DRAWING FROM THE DESIGNS OF DR. FRITZ SCHUMACHER, OF HAMBURG

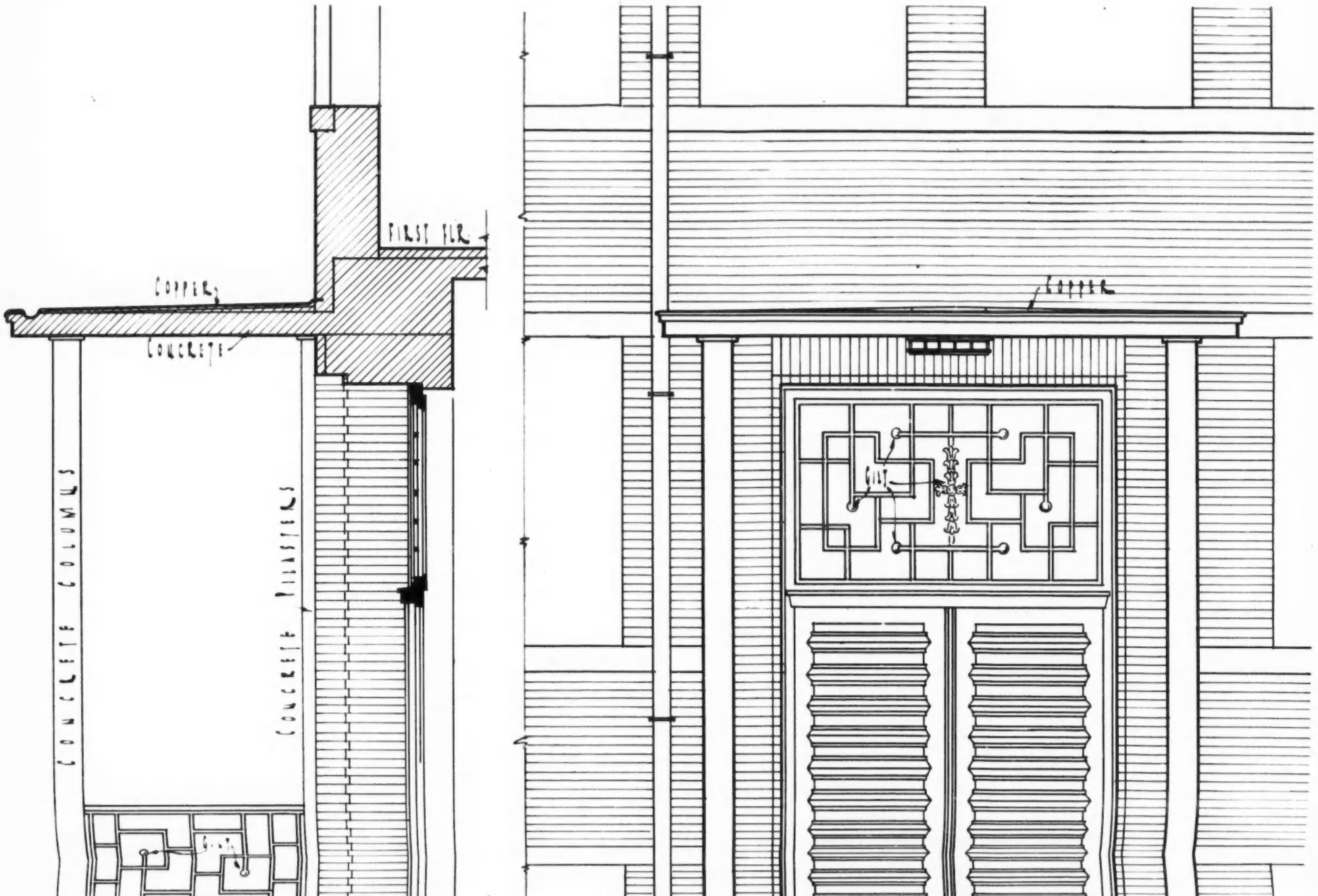


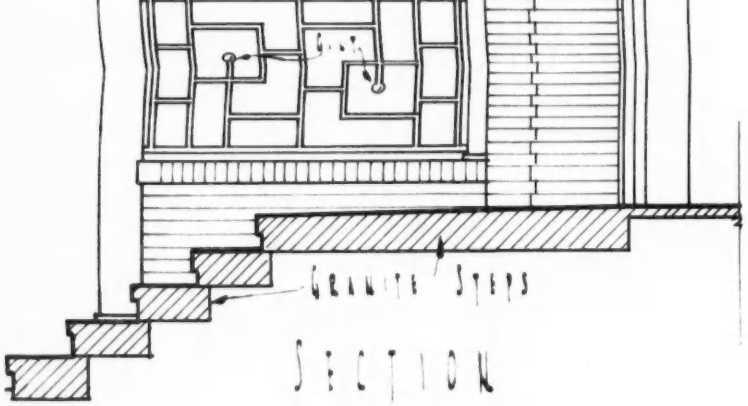
THE MAIN FRONT AND ENTRANCE OF THE ALSTERTAL SCHOOL

THE Alstertal school is a further example of the elementary schools erected for the State of Hamburg by its chief architect, Dr. Fritz Schumacher. A detail from one of these schools, at Langenfort, was included as a supplement with the issue for May 6 last.

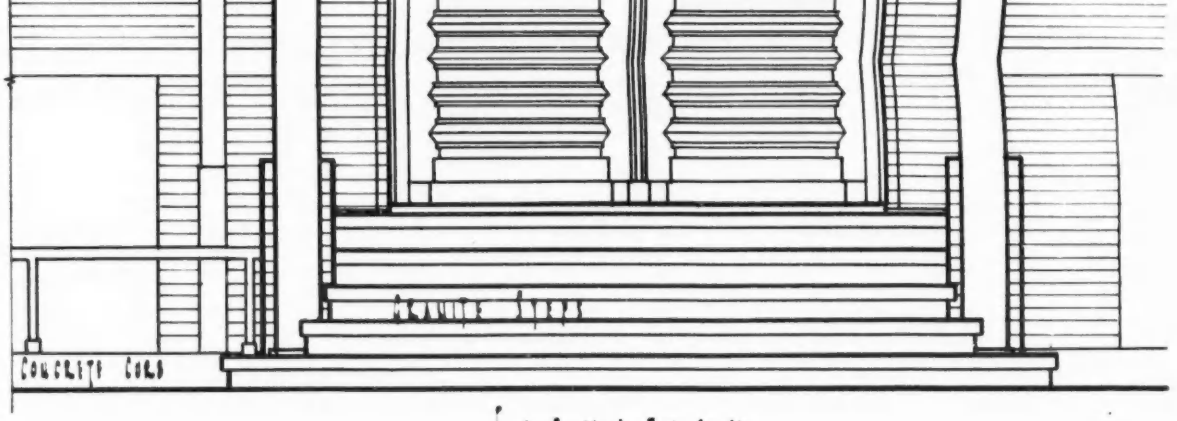
The buildings are all of the hard dark-purplish brick typical of the region, which was also used in the great new commercial buildings of Hamburg and the neighbouring towns.

The doorway seen in the above photograph, and illustrated overleaf in a scale detail drawing, differs from that of the Langenfort school in that it is equipped with a light reinforced concrete porch. The fanlight design is repeated in the porch railings, which stand on a low parapet wall of brick, with a brick-on-edge coping.


FIRST FLR
COPPER
CONCRETE
CONCRETE COLUMNS
CONCRETE PILASTERS
COPPER
GILT



SECTION

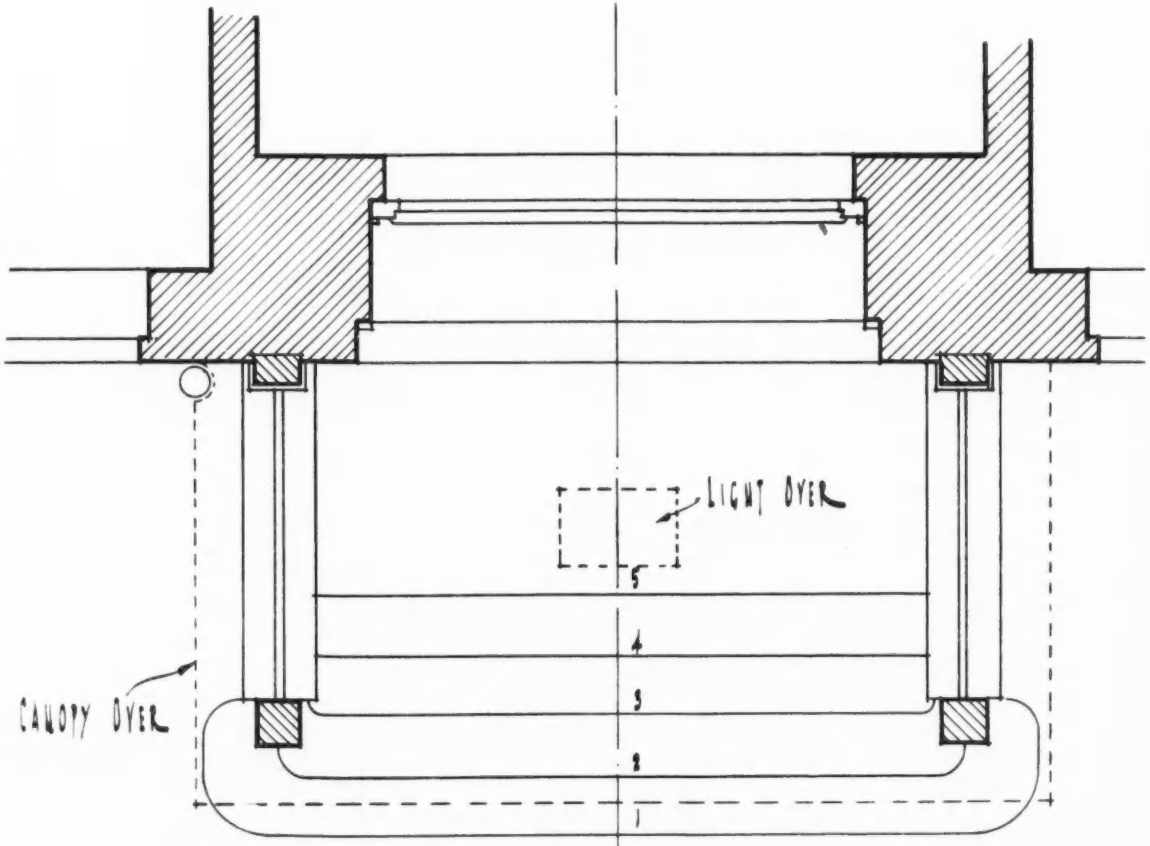


ELEVATION

SCHOOL BUILDING AT ALSTERTAL · GERMANY ·

DETAIL OF ENTRANCE DOORWAY ·

SCALE · 3/8 INCH TO 1 FOOT ·



PLAN ·

Dr FRITZ SCHUMACHER
ARCHITECT ·

SELECTED PRECEDENTS:

GLASS AS A ROOFING AND WALLING MATERIAL



[*Wilhelm Kreis, Architect.*

1. *THE MODEL HOSPITAL AT DRESDEN INTERNATIONAL EXHIBITION OF HYGIENE, 1930*

GLASS for roofs and walls—which we are apt to associate with the names of Mendelsohn and Mies van der Rohe—is as old as Paxton and the Crystal Palace. Almost any large railway station offers an example of glass roofing—and often of partial glass walling as well. Hundreds of industrial buildings with ridge-and-furrow roof-glazing were in existence long before the glittering Van Nelle tobacco factory at Rotterdam, or the now famous "Sunlight Sanatorium" at Hilversum, were built.

The "Zeiss-Diwidag" and other systems of cupola construction enable vast domes of glass to be vaulted with concrete of almost literally egg-shell thickness. Glass for walling purposes—whereby the façade of a building becomes one immense window—has recently been exemplified in England by L. de Soissons's Shredded-Wheat Factory at Welwyn, and Wallis Gilbert and Partners' extension of the Gramophone Company's works at Hayes. In his much-discussed competitive design for the League of Nations buildings, Corbusier proposed to face the whole of the Secretariat with sheets of plate-glass: a project which (if only on paper) has already inspired a host of Russian imitators.

Figure 1 *shows the main front of the model hospital erected for last year's International Exhibition of Hygiene at Dresden, in which the glazing is divided into vertical window-strips by concrete mullions.*

Figure 2 *presents a side view of the celebrated Dessau* "Bauhaus" *(a sort of technical school for severely-functionalized arts and crafts), which has its prototype in the Fagus factory designed by Gropius jointly with Adolf Meyer in 1912. Here the walls are formed by continuous sheets of glass. (It is rumoured that in strong sunlight the glare is so blinding that the students have to be provided with screens.)*

Figures 3 *and* 4 *illustrate the use and construction of "reinforced glass" roofing—known in France, where it originated, as* béton translucide*—which Otto Haesler has employed with good effect for lighting the gymnasium of his well-known school at Celle. The glass studs are woven into a mesh of reinforcement, and then embedded in concrete of very finely-screened aggregate, so that a homogeneous canopy is formed, which is both stronger and lighter in weight than steel-framed glazing. It was adopted in its more familiar capacity of "pavement lights" for flooring some of the terraces of the new Dorchester Hotel that have corridors running beneath them.*

Figure 5, *the kindergarten of a large Berlin housing settlement, is again walled entirely with ultra-violet-ray glass, disposed in panels five panes deep.* P. M. S.



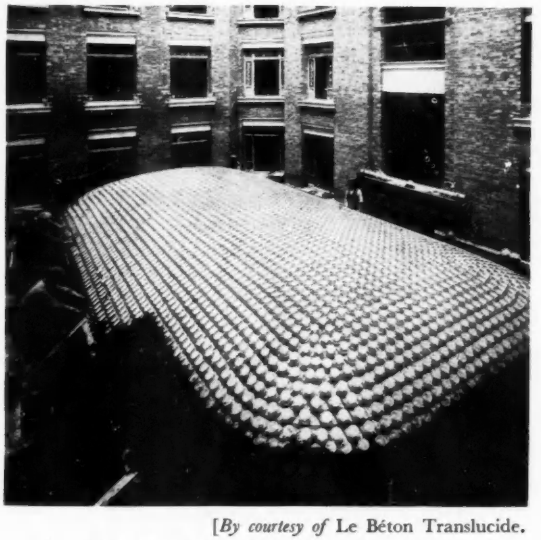
[*Walter Gropius, Architect.*

2. *THE GLASS-WALLED "BAUHAUS" AT DESSAU*



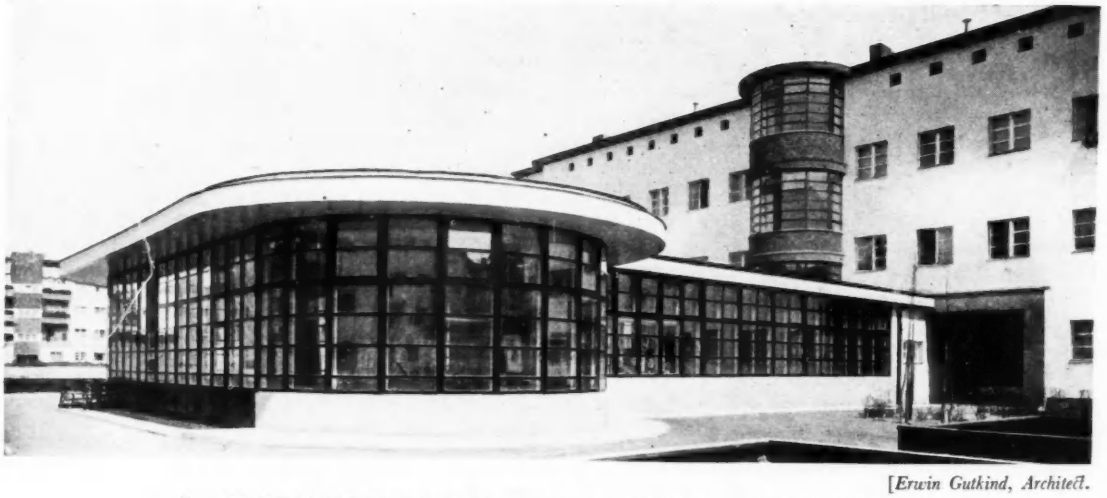
[*By courtesy of* Le Béton Translucide.

3. *REINFORCED GLASS ROOF TO THE HALL OF A PARIS FLAT BUILDING*



[*By courtesy of* Le Béton Translucide.

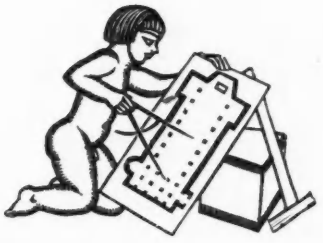
4. *CONCRETING IN PROGRESS ON THE REINFORCED GLASS ROOF IN PARIS*



[*Erwin Gutkind, Architect.*

5. *KINDERGARTEN AT THE PANKOW HOUSING ESTATE, BERLIN*

THE ARCHITECTS' JOURNAL



WEDNESDAY, JUNE 24, 1931

THE PLAN'S THE THING

BEYOND dispute, the architectural profession is unique in that, by the system of open competition, opportunities are offered to unknown and often poor men to pass at one stride from the position of a weekly wage-earner as an assistant to the status of a practising architect with a definite job to carry out, amounting in many instances to some hundreds of thousands of pounds. For such opportunities, and splendid rewards offered, it is inevitable that the work entailed in the preparation of competition schemes must be arduous and expensive.

Of the three interested parties in a particular competition—the promoter, the assessor and the competitor—the assessor alone has control over the amount of labour involved to ensure qualification for adjudication. He can be merciful, and call for the minimum work necessary to expose the competitor's solution of the problem set; or he can be harsh to the point of unreasonableness, and demand drawings of unnecessarily large scale, together with rendered half-inch details and a coloured perspective. We have observed, however, that in recent years this tendency to superfluous elaboration merely to satisfy the whim of an assessor has happily diminished. This is probably due to the increasing tendency to select assessors from among those who have themselves been through the competition mill.

In our issue of last week, " Swim's " letter drew attention to the requests for engineers' reports in baths competitions. He describes these demands as impositions, involving as they do expense in connection with consultants' fees for their preparation. Apart from the fact that " Swim " need not pay a consultant, and that any specialist engineering firm will supply him, free of charge, with all the information he desires, the question of principle involved still remains as to the necessity for the assessor to call for these reports. Whilst it is admitted that a working knowledge of the requirements in question must be acquired by the competitor to enable him to accommodate the necessary apparatus in his plan, is it vital for him to submit a report describing in detail the intricacies of the engineering work? In fact, does the omission of this detailed report prejudice his chance of winning, even though his scheme may be the best solution of all submitted?

In a current competition, an engineering specialist's report is required, and the competitors narrowly escape having to indicate the pipe-runs of the scheme on their plans !

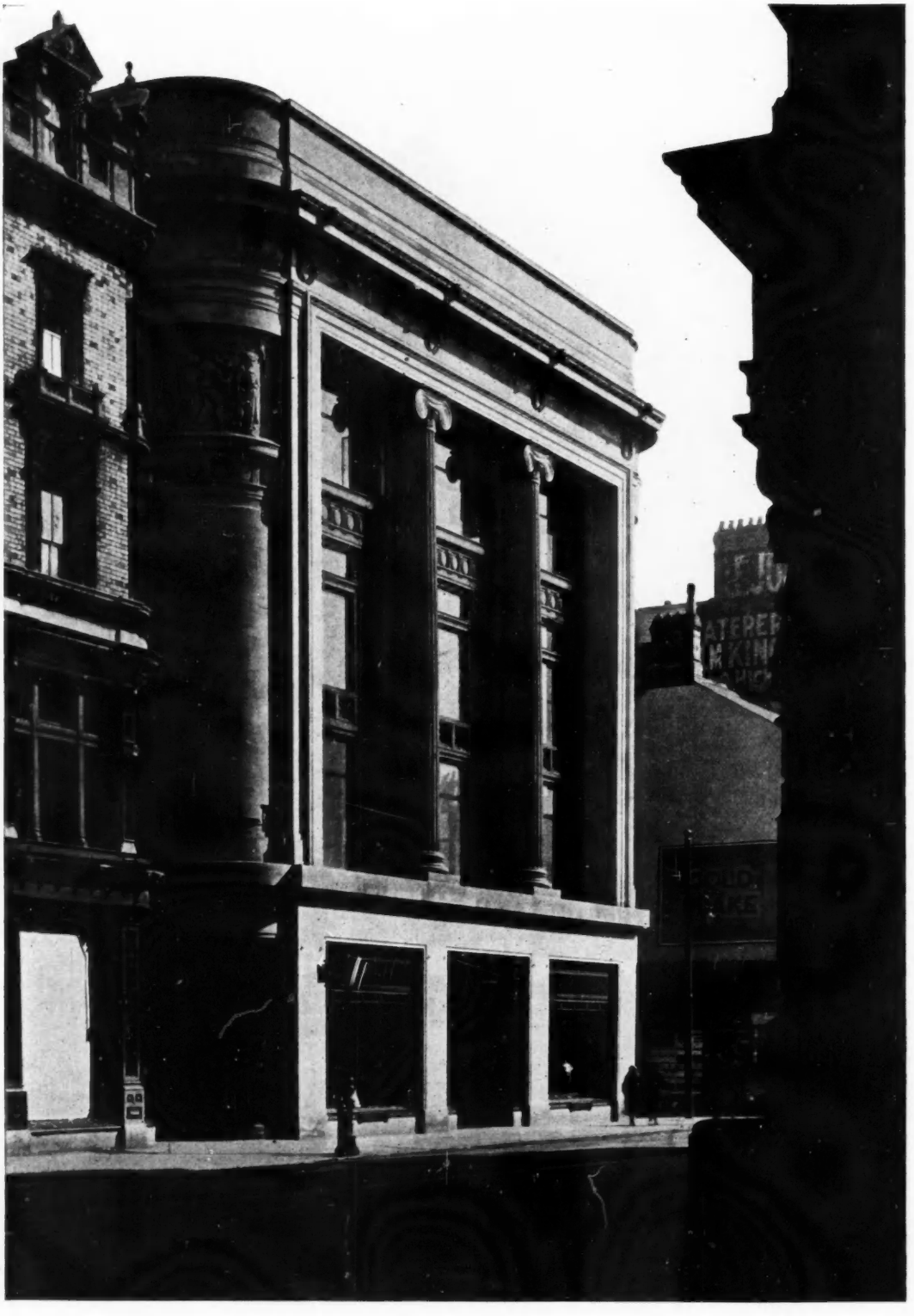
The assessor should be able to see from a cursory glance at the drawings whether provision is made for the apparatus necessary to aerate and reheat the bath water, without the aid of a highly technical report on the minute detail of the engineering work involved. If this is not so, then there is no reason why reports should be confined to this particular branch of engineering alone; the structural steelwork scheme should be accompanied by the necessary calculations, and the electrical installation by a detailed specification. It would seem to be logical to demand all of these reports or none.

Again, is it not reasonable to suppose that the most precise and elegant report in the world on the engineering work would be quite valueless if the accompanying solution of the problem was an indifferent one? In competitions, the plan's the thing, and no report, however excellent it may be, will put a bad scheme in the winning flight.

It is almost time that assessors realized this incontrovertible fact, and restrained their zest for inventing programmes which put competitors to unnecessary expense and work.

The competition programme which calls for uncoloured $\frac{1}{16}$th scale plans, elevations and sections together with a simple general report and the cube figures, but without half-inch details and elaborate rendering, has yet to be issued. Until it can be demonstrated that a half-inch detail has actually won a competition, we shall continue to believe that such drawings are quite unnecessary additions to the burden of labour which the competitor is called upon to shoulder.

Another point in connection with competitions we may have occasion to return to at a later date is the studied ambiguity of assessors in their answers to competitors' questions. Some of them seem incapable of giving a direct answer to a simple and straightforward query.



THE FIRST R.I.B.A. MEDAL BUILDING IN S. WALES

For the first time in history the R.I.B.A. medal has been awarded to a building in S. Wales: the new premises of James Howell & Co., St. Mary Street, Cardiff, illustrated above. The architect is Percy Thomas, F.R.I.B.A., of Ivor Jones and Percy Thomas. The award extends still further the principle, operative in London for the last nine years, of selecting, annually, a building erected during the preceding three years for distinction: similar medals were conferred in Scotland in 1927, and in the Essex, Cambs. and Herts. district in 1928. Five architects and two laymen, one of which—Sir William Seager—was chairman, composed a jury of assessors.

NEWS & TOPICS

EMBANKMENT AMENITIES PRESERVED

THE Office of Works have been defeated in their attempt to build up to the line of the Thames Embankment. The open space, which is now the site of gardens, was originally reclaimed from the river on the building of the Embankment, and more or less dedicated for open space for ever. This dedication the Office of Works have wished to set aside, being pressed for space; but Parliament has reaffirmed a position it took up quite definitely in 1912 when the same petition was made for a similar purpose—and the gardens and the line of building on the Embankment are saved.

PRESERVING CAMBRIDGE

The Report of the Cambridge Preservation Society is encouraging. They made hostages to fortune when they bought the beautiful farm-land which they knew to occupy the key position of Cambridge's extra-urban amenity, and now their bravery is justified in the gift from the Pilgrim Trust of £13,000, a sum which places them out of debt, and gives new lease to their so well-directed activities. Work such as theirs, constructive where it might seem negative, needs all the help that Cambridge men, and all who love Cambridge, can give to it. Take, for instance, their policy of tree-planting. Can you not say at once that trees are one of the chief glories of Cambridge? Not lasting glories if there is no one to watch the movements of land and the fall of trees. There is no finer thing for men to do than plant young trees so that they will grow great for future men to sit under. Preserve, and plant. Cambridge has need of both.

£10,000 FOR THE R.I.B.A.

The R.I.B.A. have just been the recipients of a gift of £10,000 from Mr. H. J. E. Vanderpant. The gift, which is to commemorate the late Henry Louis Florence, Vice-President of the R.I.B.A. 1897–99, with whom Mr. Vanderpant was associated for many years, will be devoted in half to the R.I.B.A. New Premises Fund and in half to found a Henry Louis Florence Travelling Studentship. Mr. Vanderpant's generosity will be recorded in the new building by naming some important room after the late Mr. Florence. The terms of the studentship are being considered by the Board of Architectural Education.

WHAT SIR EDWIN LUTYENS THINKS

To the current issue of *Country Life* Sir Edwin Lutyens, who all too rarely appears in print, contributes an arresting article on "What I Think of Modern Architecture," from which I am permitted to make the following extracts :

It is both exhilarating and somewhat alarming to watch the work that is being produced by the younger men of today—youthful glamour striving after something fresh, something better. New materials, new needs and strange sources of ideas have come into being since men of my age began, in our turn, to try to produce fresher and better things.

It is inevitable, and right, that these things should influence architecture, the machines no less than the materials. But for my part I regret the passing, be it temporary or permanent, of humanism and the personal note.

The modern impersonal architecture of so-called functionalism does not seem to me to be replacing the inherited lore of centuries with anything of comparable excellence or to show as yet a genuine sense of style.

My generation is—perhaps I ought to say was—a humanist generation. We believed that the measure of man's architecture was man, and that the rhythm of a building should correspond to the rhythms familiar in human life. All architecture must have rhythms, that affect the eye as music does the ear, producing vibrations in the brain. The rhythms of modern architecture rarely produce what I should call a happy or genial vibration in the brain of the spectator. It is either a wearisome staccato like the noise of an hydraulic drill or, to my mind, a confused medley like the tuning of a brass band. Instead of making a statement gracefully, and perhaps with distinction and humour—which is what I require of a building as of an individual—many modern buildings, to me, are just shouting very loud and quite unintelligibly. I catch a phrase here and there, recognise now and then a scrap of English or Italian maybe, but there seems to me no grammar and little sincere effort at style. There is vitality—heaps of it, but crude. Perhaps the human rhythm which modern architecture expresses, along with the rhythm of electric drills and combustion engines, is the rhythm of a football crowd or of "the proletariat" in the mass. Crowd psychology in place of the conversation of a civilized man.

These adventurous young men thrill me tremendously and all my sympathies are with them. But good architecture needs more than bright ideas, and by my traditional standards most modern buildings seem to me to lack style and cohesion, besides being unfriendly and crude.

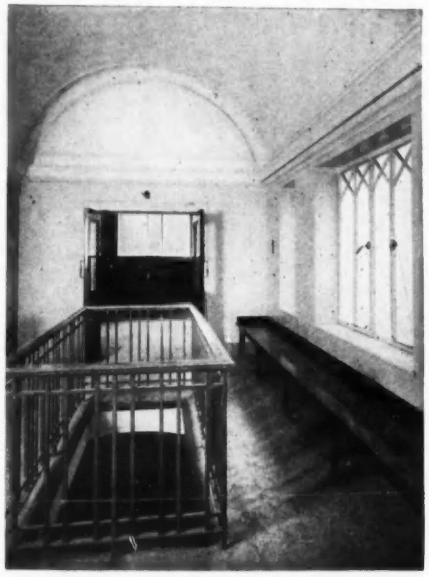
REVISING THE LONDON BUILDING ACT

The Advisory Council of the Building Industry, which was inaugurated as a result of a deputation to the Minister of Health, in July of last year, held a meeting on May 29 for the purpose of adopting a constitution and the appointment of an executive committee to replace the temporary organizing committee. Their first meeting was held at the R.I.B.A. last week, and considered in detail the suggestions to be forwarded to the L.C.C. This follows on the L.C.C.'s appointment of an advisory committee consisting of members of the Council and prominent members of organizations interested in building to consider and report as to any necessary amendments in the London Building Act, 1930. That Committee has invited suggestions as to amendments of Parts V and VI by June 30. The Advisory Council of the Building Industry are collecting and collating suggestions. The executive committee is constituted as follows. President : The Rt. Hon. Lord Ebury, D.S.O., M.C. Vice-President : Mr. Maurice Webb, D.S.O., M.C., F.R.I.B.A. Hon. Secretary : Mr. C. Roland Woods, M.B.E., LL.B., A.I.STRUCT.E. Members : Messrs. Ewart S. Andrews, B.SC., M.I.C.E., M.I.STRUCT.E., Louis Blanc, L.R.I.B.A., George M. Burt, Alan E. L. Chorlton, C.B.E., M.I.C.E., R. Coppock, E. C. Harris, F.S.I., C. J. Kavanagh, O.B.E., Herbert Kay, F.I.S.A., T. A. McIntyre, M.R.SAN.I., F. W. Purse, M.I.E.E., M.I.M.E., H. T. Young, M.I.E.E. Secretary : Mr. H. B. Bryant, 5 Duke Street, Adelphi, W.C.2.

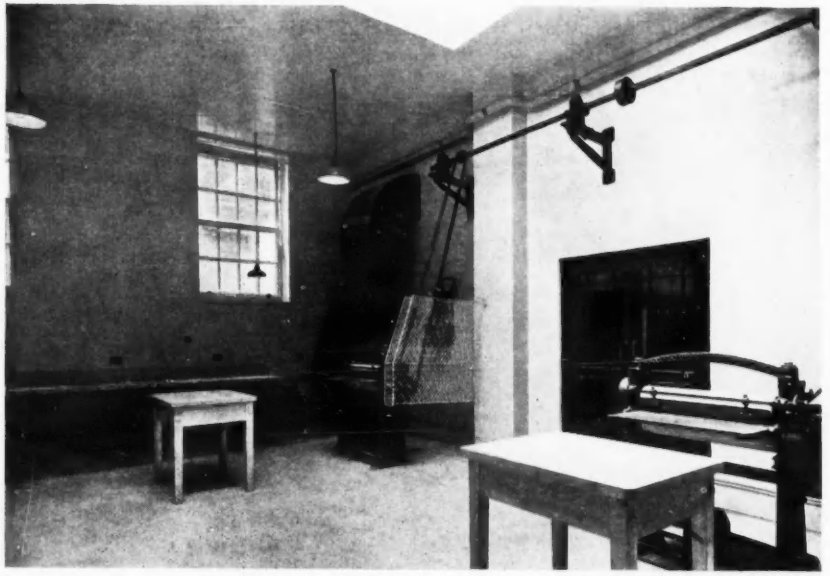
AMERICA FOLLOWS BRITAIN'S LEAD IN PANEL-HEATING

At this year's summer meeting of the Heating and Ventilating Engineers, at Harrogate, Mr. A. F. Dufton's account of some comparative experiments in radiant heat, as practically applied to the warming of school-rooms, was of particular interest to architects. The principle of invisible panel-heating is one in which this country has led the way, and modern electrical developments are greatly extending its applicability. I cannot repress a chuckle when I read the announcement of an American commercial research laboratory that it is *now* conducting experiments in "a *new* theory of keeping warm." What has really happened seems to have been that some of our cousins across the Atlantic "went crazy" about the installation of panel-heating in the new British Embassy building in Washington. Anyhow it has, since then, become the vogue over there : many houses are being equipped with plant constructed—and herein lies the score for us—under licence from the British patentees, who led the way twenty years ago. No wonder the laboratory is getting busy !

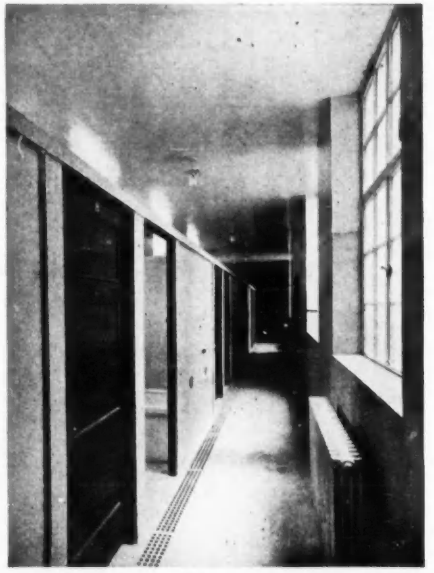
ASTRAGAL



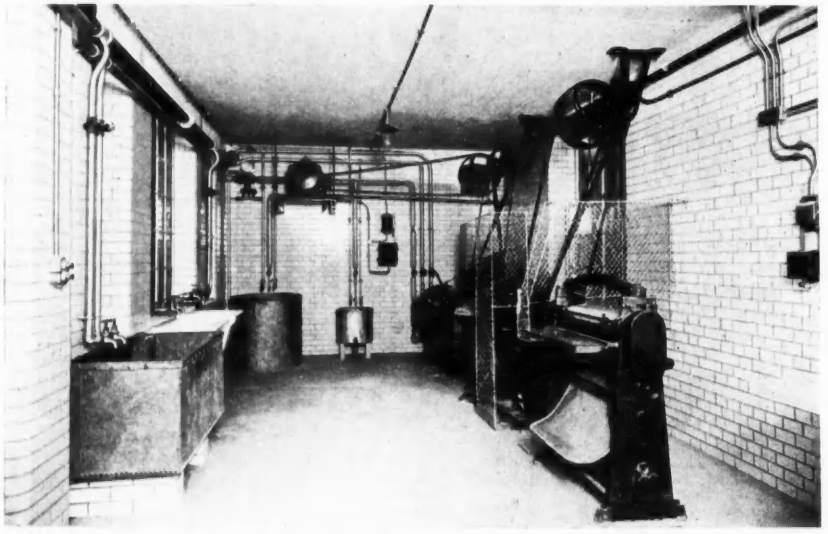
The first-floor waiting lobby or lounge, showing well above entrance hall.



In the mangling and ironing room. There are three vertical mangles, and ironing tables along the walls, with points for electric irons.

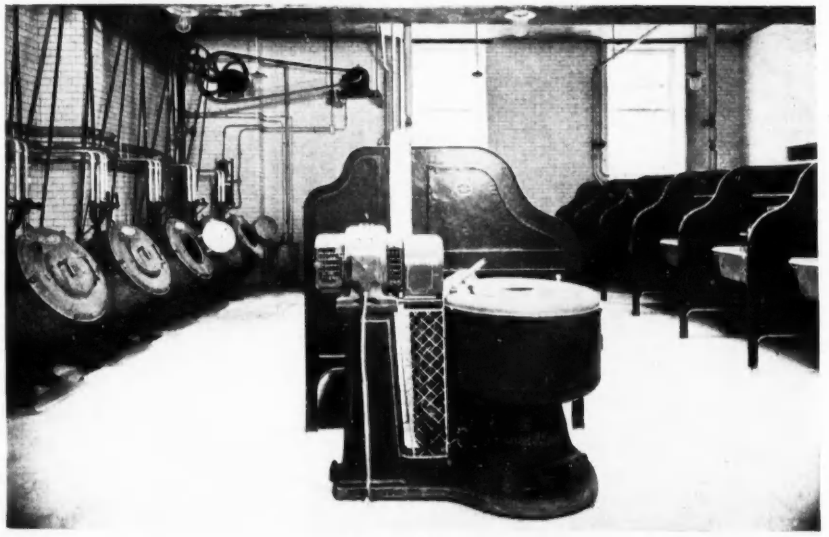


A corridor serving the women's slipper baths; the men's quarters are similar.



The establishment laundry in the basement, showing some of the very complete range of up-to-date mechanical equipment.

FINSBURY WASH-HOUSES



In the public laundry on the ground floor. On the right are seen some of the washing compartments.



The building stands at the junction of Ironmonger Row and Norman Street (which runs parallel with City Road and a little northward of it) with its long side to the former. The main entrance is in the longer front on the right; the staff entrance in that on the left. The walling is of multicoloured bricks, with dressings of reconstructed stone, and the roof is of pantiles.

PUBLIC WASH-HOUSES AT FINSBURY

DESIGNED BY A. W. S. AND K. M. B. CROSS

THE principal elevations to Finsbury public baths and wash-houses are to Ironmonger Row and Norman Street, and are faced with multicoloured facing bricks, enriched with dark-red bricks and with reconstructed stone dressings. In the treatment of the ground floor, an arcaded design is employed, in which large sliding sash-windows form prominent features; and the principal entrance is centrally placed in the Ironmonger Row front. Metal windows of special design are used for the second floor, and the roof is covered with pantiles, dormer windows being introduced to light the upper floors. A staff entrance is provided in Norman Street.

The front entrance lobby is lined with Roman stone, and the ceiling is in the form of a flat plastered dome. The main hall is paved with green and white marble, is top-lighted, and has a segmental barrel ceiling in plaster, and the walls are lined with Roman stone. A centrally-placed ticket office serves the whole building, and a small lift is provided for the service of towels to each floor. The waiting-room for the users of the public laundry is placed to the right of the entrance, and to the left is the pram store and cloak room, and adjacent is the children's room.

The public laundry contains eighteen washing compartments, five washing machines and special washing troughs and draining boards, three hydro-extractors, thirty drying horses, one soda and soap dissolver. Adjoining it the mangling room makes provision for three vertical mangles and ironing tables with points for electric irons planned round the walls.

The superintendent's room, matron's room and staff rooms complete the accommodation on the ground floor.

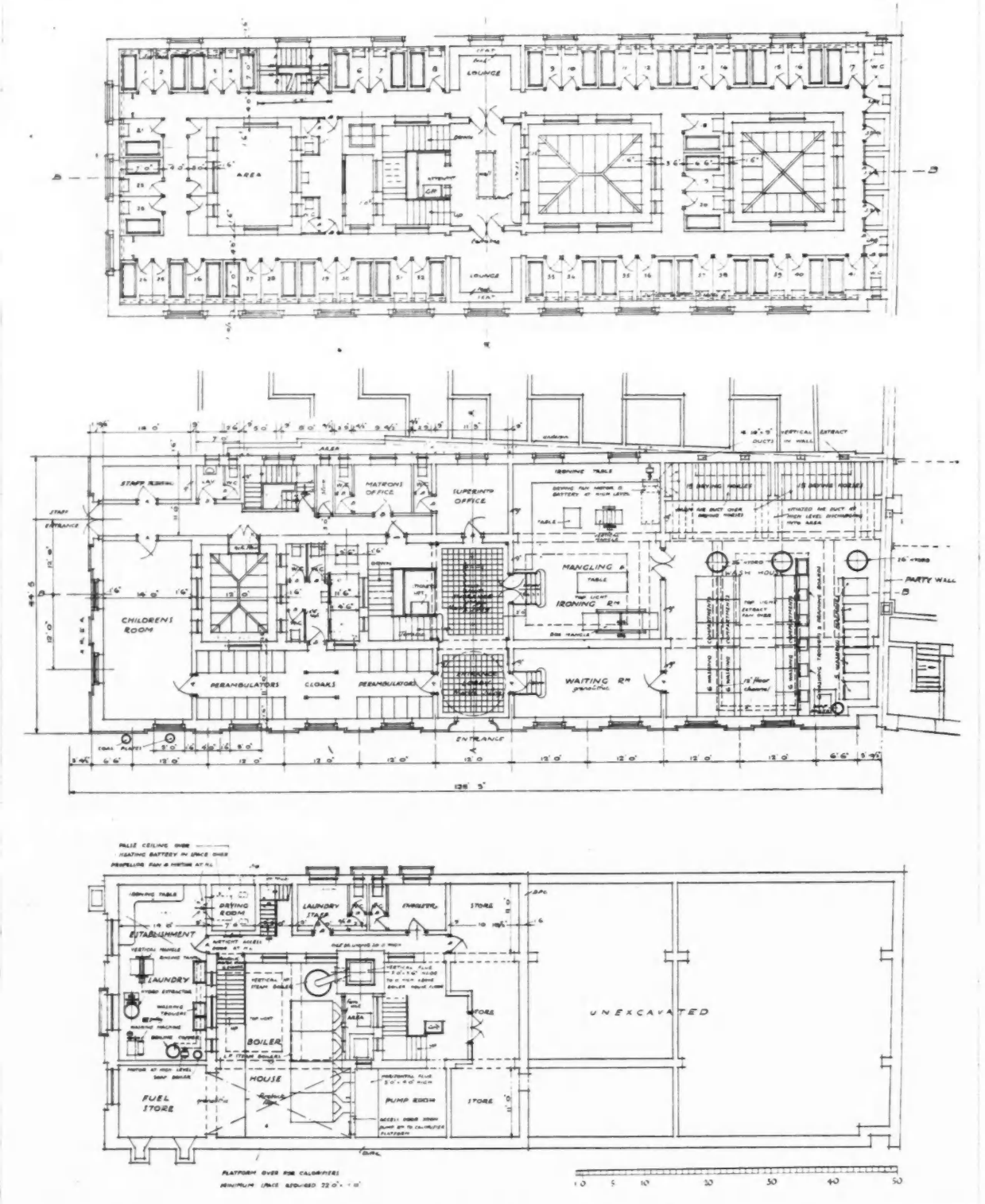
The first floor contains waiting-rooms and forty slipper baths for women, with lavatories, store rooms, etc., so planned that the proportionate division into first and second classes can be easily made as and when the requirements of the borough dictate.

The second floor contains forty slipper baths for men, planned on identical lines, with equal facilities for division into first and second classes.

In the basement the establishment laundry occupies the end of the building adjoining Norman Street, and contains seven drying horses, one washing machine, one hydro-extractor, one boiling copper, one soap and soda dissolver.

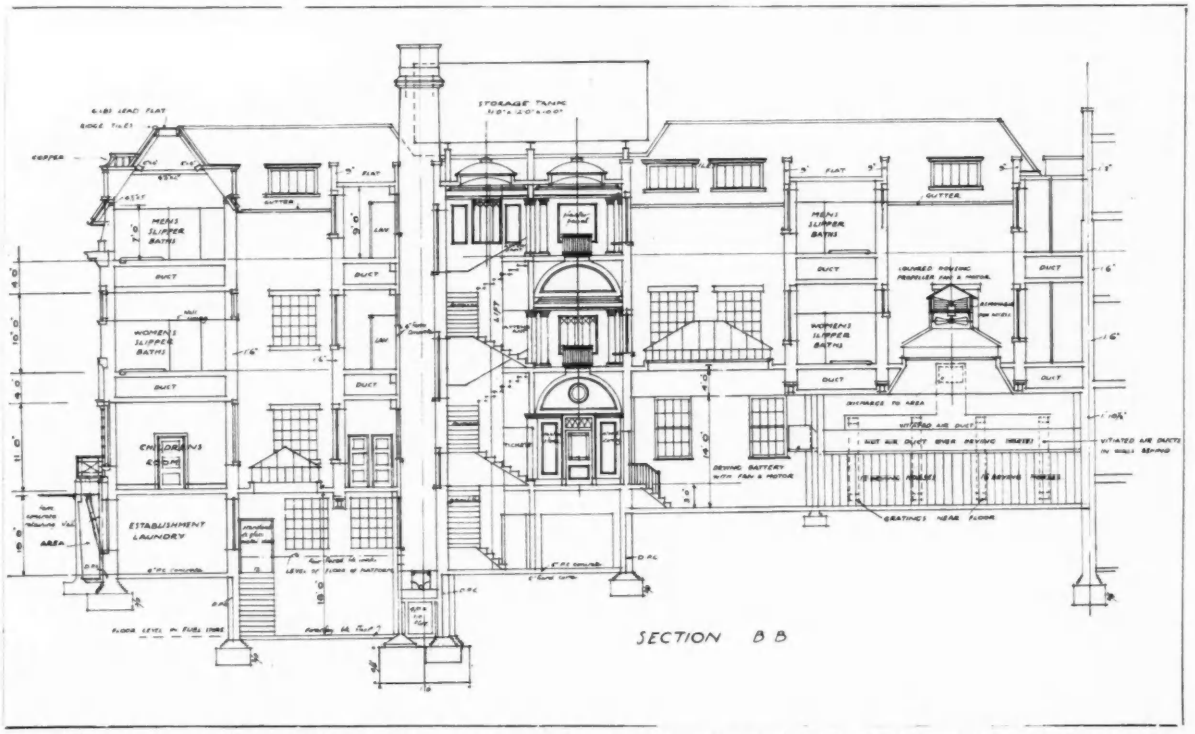
The boiler house is centrally placed, and contains a battery of four cast-iron sectional boilers, while four calorifiers are placed on the gantry at a higher level. One high-pressure boiler is also provided for steam to the public laundry, and three pumps—one for heating, one for hot-water supply, and one stand-by—complete the equipment. Other accommodation in the basement comprises engineers' room, fuel store, staff and mess rooms, store rooms, meter room, etc.

Internally, the walls and floors of the slipper baths are lined with terrazzo, joinery work being of teak; other rooms are plastered and fitted with teak joinery. The staircase balustrading is of wrought iron with bronze handrails.



Public Wash-Houses at Finsbury.]

Plans of the basement, ground and first floors. At the lowest level are the establishment laundry, boiler house and other engineering services. Administrative offices, the wash-house and mangling rooms, with children's and waiting-rooms, etc., occupy the ground floor. The first is given over entirely to some forty slipper baths for women ; the second, similarly planned except for the areas over roof lights, to the same number for men.



Longitudinal section on the line B-B (see facing page). The arrangements for passing hot air through the drying room, and its subsequent extraction by way of ducts and a fan are of particular interest.



[*By A. W. S. and K. M. B. Cross.*

A view in the entrance hall, taken from the lobby entered from Ironmonger Row. On the right are doors leading, down a shallow flight of steps, to the mangling and ironing room; the door facing the camera is to the superintendent's office.

AN ADAPTABLE MODERN THEATRE

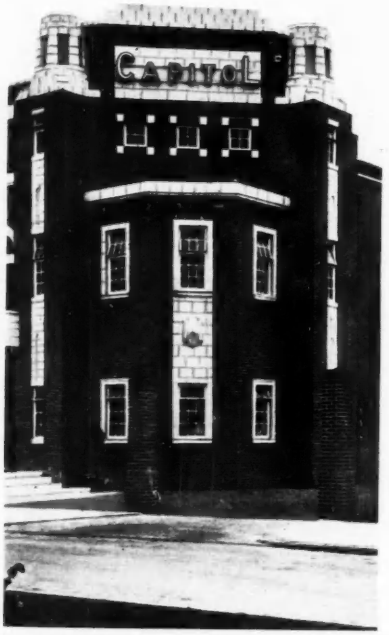
DESIGNED BY P. CUMMINGS



The exterior, of brick and terra-cotta, to Parrs Wood Road South, and School Lane, Didsbury, Manchester, shows a judicious placing of rectangular and round-headed openings. The main entrance dominates this corner, while on the left are seen two of the auditorium exits and the street entrance to the café.

IN designing a building for a purpose still so comparatively young, yet so vigorous and well grown, as the presentation of cinema films, it is tempting to an architect to indulge in some degree of freakish or bizarre extravagance in form or in decoration. It is therefore pleasant to perceive the restraint which characterizes the general scheme of the Capitol Cinema, erected on a corner site between Parrs Wood Road South, and School Lane, Didsbury, Manchester.

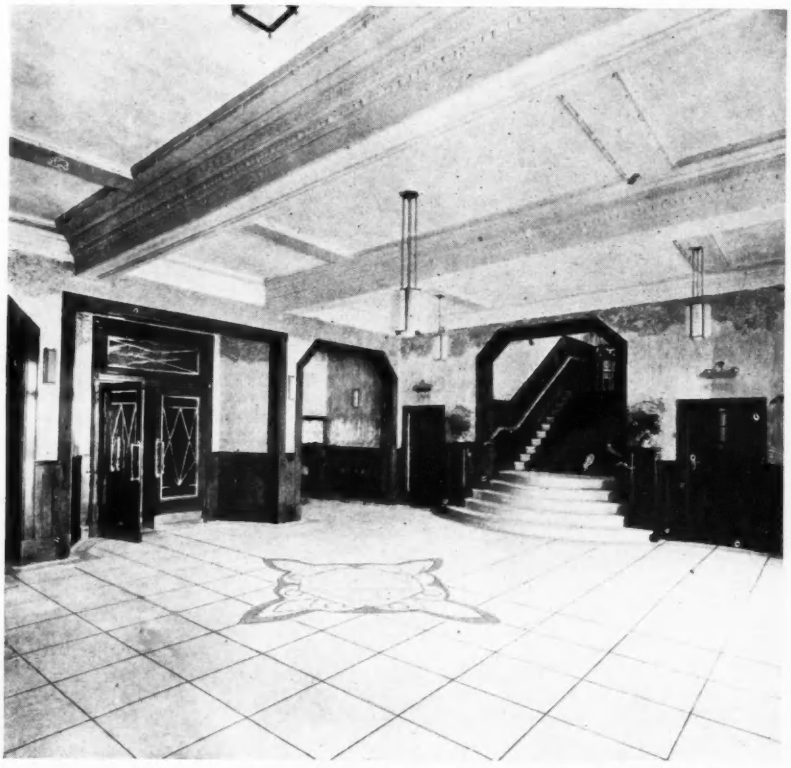
Both exterior and interior have a character and quality of their own, combining successfully straightforward modern lines and masses with effects reflecting traditional ideas. At the same time full opportunity is given for the exercise of the various contributory and accessory contrivances which it is desired to "feature." Owing to the fact that the management of this new theatre does not limit its projects to picture entertainment or even to sound films, a considerable proportion of the back of the building is occupied with very up-to-date mechanism for transforming the stage and its accessories in a short space of time to serve dramatic or musical programmes. Moreover, organ chambers, organ-blower room, and organ-action room were necessitated by the installation of a modern organ with its 1,000 pipes. A number of dressing-rooms for artistes were required, besides accommodation for musicians when not actually performing.



A secondary corner feature contains the manager's office and a landing with the motor generating room above. Hexagonal pylons crown the rectangular flanking piers.

In connection with this intention to vary the type of performance, an ingenious arrangement of lifts makes it possible for the organ console and the orchestra itself to be lowered, each independently of the other, into a space provided in the basement floor. On the other hand, the film screen and the loud speaker can be cleared out of sight into the flies as occasion requires, the screen being replaced by appropriate stage settings, for which a complete and interchangeable set of scene pieces are provided, with a variety of curtains and the necessary counterweighted scenic lines. The large cyclorama gives the illusion of great depth in the stage.

The exceptionally large size of the proscenium opening and the screen foreshadows the possibility of future development in wider screens and films, but the large screen is capable of reduction to normal size by means of an electrical device. Above the balcony are installed projectors of the latest type in a spacious operating box, with battery room and motor generating room, respectively, situated at the two



Looking across the foyer from the vestibule. The doors into the auditorium are flanked by a confectionery and tobacco counter on one side and an alcove on the other.

cinema building relies for its effect upon grouping of masses and well-placed sparse enrichment related to reasonable purpose. In avoiding the ponderous garishness of some picture-houses, it does not lack the requisite gaiety, but produces therewith an impression of tasteful dignity.

The use of hand-made, sand-faced bricks in combination with white cement joints and cream terra-cotta dressings ensures the latter effect, while coloured window glass contributes the lighter quality of the façade. Structurally, one of the points of interest is the fact that the main girder of the balcony, where 500 people can be seated, spans from side to side of the auditorium, so that no intermediate supports encumber the ground-floor seating space.

The balcony staircase treads and risers are of monolithic reinforced concrete. The asphalted flat roofs and the floors are of reinforced concrete hollow-tile construction, the latter being paved with terrazzo and the main roof being covered with vitreous mottled roofing tiles.

In view of the reliance placed on decorative illumination in modern cinema practice details of the present installation are given on page 902.

V. M. C.

angles of the building. Staff rooms, both for men and women employees, are provided close by.

The nature of the lighting arrangements for the stage and for the house have had considerable influence upon the actual design and decoration. For instance, the main walls of the auditorium are plain white, but with a broken rough-cast finish, and the ceiling surface is broken up into decorative compartments with a special view to enhancing the effect of colour-lighting. For the same reason, moulded plaster enrichments are sparingly used, where they are most appropriate; as at the proscenium arch.

In contrast to the plain plaster work, the walnut panelling in foyer and café and the simple modern woodwork of the glazed doors and other fittings introduce a warmer tone in those portions of the building where the public desires to enjoy comfort without the more spectacular attractions of the stage and auditorium.

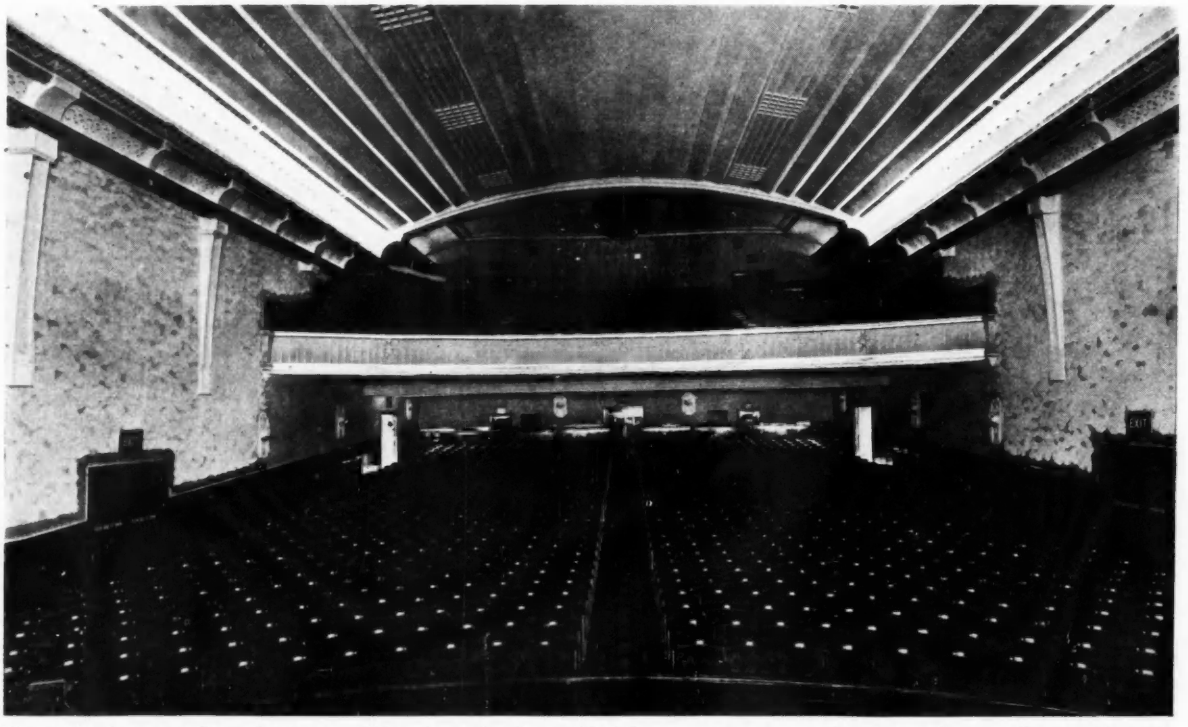
Fibrous plaster and plastic paint are used throughout in the attainment of decorative ends, and stainless steel where metal is introduced. Up-to-date fire-extinguishing plant and automatic safety devices are provided, and an emergency lighting system. Adequate cloakroom and lavatory accommodation is provided on various floors, and ample staircases and landings.

Externally, as well as within, this



Capitol Cinema, Didsbury.] [*By P. Cummings.*

From the foyer a staircase leads up to the walnut-panelled café, on the first, or balcony, floor. The furnishing and fittings are modestly sumptuous, and the decorative scheme is punctuated by tasteful hanging lamps.

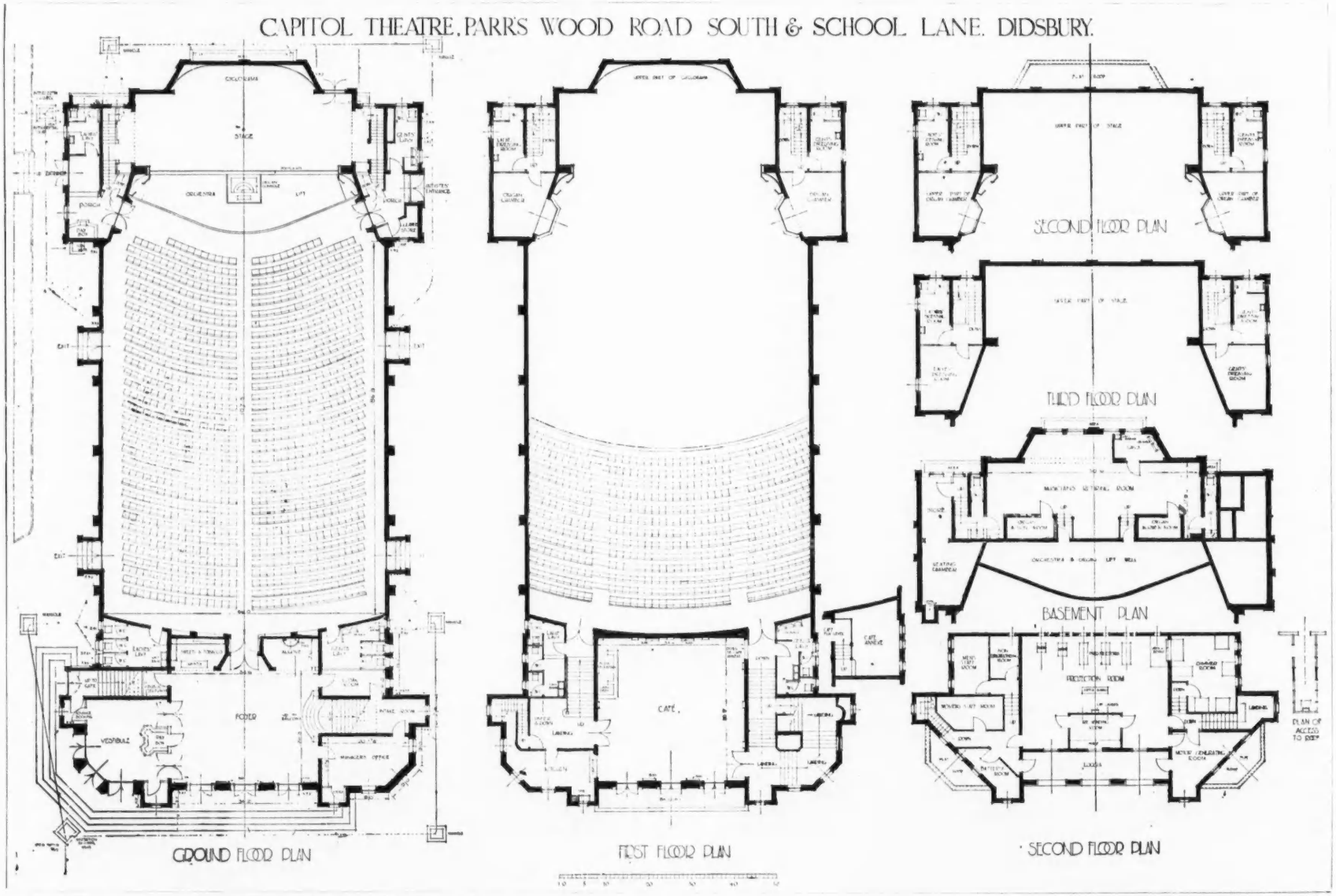


The auditorium seen from the stage. Although seating is provided for nearly 2,000, care has been taken to allow ample room between the rows. The material for covering the seats was specially chosen for satisfactory reaction to lighting of changeable colours.



Capitol Cinema, Didsbury.] [*By P. Cummings.*

From the back of the balcony the exceptionally wide proscenium may be noted, also the treatment of the white ceiling in a series of angular surfaces arranged parallel to the main axis. Plaster organ grilles enrich the junction of stage and auditorium.



CAPITOL CINEMA, DIDSBURY

The site lends itself to symmetrical planning in the three distinct parts peculiar to cinema design. At the stage end four floors and basement are occupied by equipment for stage productions and orchestral performances in addition to screen presentations. At the other end are pay-boxes, vestibule, foyer and cloakrooms and the manager's office at ground level. The first floor, devoted to the public, contains also the café and kitchen. The second floor is for mechanism and staff, the projectors naturally occupying a principal position, with switchboard and dimmer room adjacent. On all three upper floors dressing rooms flank the stage.



THE ARCHITECTS' CONFERENCE IN DUBLIN



Mr. James McNeill, the Governor-General of Saorstat Eireann, the Patron of the R.I.B.A. Conference.

Mr. H. Allberry, A.R.I.B.A., the Hon. Secretary to the Executive Committee of the Conference.

THE annual conference of the R.I.B.A. was held in Dublin last week. At the opening meeting on Thursday morning in the Round Room of the Mansion House the members of the conference were accorded a civic welcome by the Right Hon. the Lord Mayor, Senator and Alderman Alfred Byrne, and with him on the platform was His Excellency the Governor-General.

The Lord Mayor welcomed the conference. He said he was especially privileged to receive them, as the first Lord Mayor of Greater Dublin. Dublin was an ancient and historic city, and its citizens were proud of it, and he ventured to think that when the visitors had seen it and become acquainted with it, they would admit that they were citizens of no mean city.

Since the war the Corporation of Dublin had built some 5,000 houses, and expended thereon about £3,000,000. During the same period £1,500,000 approximately had been expended upon the making of new roads or the improvement of existing ones, and £2,000,000 upon sewerage and water supplies: all exclusive of the large sums separately laid out on housing in the now added areas. They were also deeply concerned with the maintenance of existing open public spaces and playgrounds for the children, and with the provision of new ones. Dublin was also an important port, the chief gateway of Ireland for cross-Channel goods traffic, and very considerable sums had been from time to time expended in the maintenance and the improvement of the port and docks, to make them equal to all the demands of commerce.

The President said they were very much honoured in having His Excellency with them. He felt sure that they would like to express to him their heartfelt thanks that he had been able to find time to come and help them in the opening deliberations of the Conference. He thanked the Right Hon. the Lord Mayor for his very inspiring address, and he thought that it formed a very good starting point for their conference.

They were there, he continued, primarily as architects, and they went to Dublin because it was a treasure-house of fine architecture. The reputation of this beautiful capital city for its noble and historic buildings, its spacious and well-planned streets, its beautiful open spaces and parks, was world-wide. There was, perhaps, more of the glory of the eighteenth century there than in any other great city of Europe. We lived in days of revolutionary change so far as design was concerned, but he could not help hoping that their School of Architecture, under his friend, Professor Butler, would never lose its touch with the past, and would always strive to carry forward in its progress something of the feeling and of the spirit that inspired the designers of the buildings that had made Dublin famous.

Compared with our own countryside, theirs was still almost unspoilt; their cities had not grown as fast as to outstrip all rational planning; their streets were not yet hopelessly congested by motor traffic. But he thought they had no time to lose, and the country would be wise to see that, at the earliest possible date it got on its Statute Book the best and up-to-date Town and Country Planning Act that could be devised.

In Britain they were just succeeding, after a very long struggle, in passing through both Houses of Parliament the Architects (Registration) Bill. It had gone back to the House of Commons, and they were awaiting its passing almost daily. He hoped it would not be long before they, too, had a Registration Act in the Free State. They had the example of the United States, of Australia, Canada, New Zealand and South Africa to encourage them. They had the principle accepted in one form or another in almost every civilized country in the world.

They had in their University a rapidly developing and improving school of architecture under the guidance of Professor Butler; and with that example to inspire them there was no reason why the whole standard of architectural education should not be continuously raised throughout the whole country.

It was not the first time he had been in Dublin, for he remembered coming over to read a paper on "Palladio" many years ago, and he had been reminded by Professor Butler that, after a long interval, his father, the late Professor Banister Fletcher, first lectured on architecture in Dublin about forty years ago, in the great hall of the old Royal University, now incorporated in the buildings of University College, Dublin. He would like to say, in connection with that, that the honorary degree to which the Lord Mayor had referred was a gesture on behalf of the University, not to himself but to the profession to which he had the honour to belong, and in that respect it would give him the greatest possible pleasure to accept it, as well as to know their own Professor of Architecture in Dublin, Professor Butler, had received the same award.

Professor Butler, University College, Dublin, submitted a paper on "Irish Architecture—Ancient and Mediæval"; and Mr. R. Caulfield Orpen, B.A., R.H.A., R.I.A.I., followed with a paper on the "Georgian period of Architecture in Ireland."

Mr. Howard Walker said that the next International Congress of Architects was to meet in Washington in 1933. He had the honour as Chairman of that Committee to extend courtesies, goodwill, and a welcome to the U.S.A. to whomever or who would go.

The conference banquet was held in the Great Hall of the Royal Hospital, Kilmainham, in the evening.

Sir Banister Fletcher, F.S.A., President of the R.I.B.A., occupied the chair, and the members of conference and guests present numbered 2,110.

The first toast was that of H.M. the King, which was proposed by the President and duly honoured.

"Prosperity to Ireland" was proposed by Professor Patrick Abercrombie, M.A., F.R.I.B.A., Liverpool. He said it struck him that morning, while he was in Merrion Street and Merrion Square that those beautiful Georgian houses with their four and five stories, were really as fine and as modern buildings as are being put up in Germany, France, Sweden or Italy today. The great scheme of electrification in Ireland was on far better lines than ours. It seemed to him what they wanted today was to make a beautiful life—to make the ordinary normal human life a little simpler, less work for the woman in the home.

The Chief Justice responded.

Mr. F. G. Hicks, F.R.I.B.A. (President of the R.I.A.I.), proposing the toast of the R.I.B.A., said that among the long roll of eminent architects who had presided over the destinies of the British Institute, and whose portraits adorn the walls of the Council Chamber, he ventured to think that the name of Sir Banister Fletcher would go down to posterity long after some of the others were forgotten—not only for his literary and artistic works—but for the triumph he had achieved in getting the Bill for the Registration of Architects on the Statute Book during his term of office. He felt sure that the President's services to the profession would be suitably recognized, and they were proud that their country had been the first to do so by the Honorary Degree of Master of Architecture, which the National University proposed to confer upon him, and they were also proud that their colleague, Professor Butler, was to be similarly honoured.

The President, in responding, said he would like to thank his old friend Mr. Hicks for all the kind things he had said about him, half of which, of course, he did not mean (laughter), and particularly for all he had said about the R.I.B.A.

The gathering that evening did in a very concrete way illustrate the character of the Royal Institute. For they were not an English body, far less were they a London body. They were a federal republic of architectural societies—they were, he believed, no less than ninety-eight in number—established in every corner of their great commonwealth. It was a free union. Nobody governed anyone else. They were all freely co-operating together for the advancement of the art of architecture and in the interests of the architectural profession. The whole of this architectural federation was held together simply by the bonds of friendship and free co-operation for the general and individual good.

The toast of the "Guests" was proposed by Mr. Sydney Kitson, M.A., F.S.A., hon. secretary R.I.B.A., and responded to by the Lord Mayor of Dublin, His Excellency the French Minister, and Sir Philip Hanson, C.B.

Bernard Whistlow, F.R.I.B.A. : An Autobiography : v

MY FIRST JOB: THE "PIPES"

BY KARSHISH

(H. B. CRESWELL)

THE admission that my first job—the first occasion, that is, when I advised clients and directed and supervised work on my own responsibility—was a little matter of defective house drains will probably be greeted with a disdainful sniff. I may say, however, that in those far-off days drains provoked sniffs that were not disdainful. I knew of an old gentleman who, when he came down to breakfast, would sniff with relish and say "Ah! a fine day for the bazaar!" or "We shall have some rain at last!" accordingly as the rise or fall of barometic pressure confined or released the gasses in the cess-pool under his dining room floor. This old person—he lived to be over ninety—was acclimatized to his cess-pool; he had become drain-proof; bad smells nourished and fattened him, and when he needed a change of air he had merely to put his head out of the window to get a complete one.

The effect of facetiousness in this description is mainly due to the revolution in our ideas of sanitation, for it is true to fact and to physiology. The attitude to his drains of this old gentleman was characteristic of his day, as was the sanitation of his house; and workers in London sewers have always been robust and hardy men. At the time I entered Grig's office, however, scientific investigators had lately established that what we now call "insanitary conditions" were enervating to the vitality of those who lived in association with them, and were the source of epidemic outbreaks of diphtheria, typhoid and other horrors; principles of sanitary science were only then being evolved, and the well-established rules now enforced by Sanitary Authorities all over the country were the subject of wide controversy. Norman Shaw employed a system by which closets discharged into open heads connected to three-inch cast iron "rainwater" down pipes; the rival advocates of up-cast and down-cast ventilation howled and raged; the septic anaerobic and aerobic sewage purification principle had not been discovered, for it was twenty years later that Colonel Crompton laid down an experimental plant at Chelmsford—at about which time I was re-draining a country house sumptuously equipped with eleven closets, mostly lighted from fixed skylights, which were connected by zinc pipes inside the house to unknown labyrinths of drains underneath it; and the disconnecting chamber and trap was popularly regarded as a kind of sanitary charm—or "mascot" as our modern savages name the fetishes of civilization. My early adventure as drain expert was not, therefore, the elementary affair it may appear; nor was the fee I received a due measure of the services I rendered on that important occasion.

Among my early friends in London was a lady who had three daughters of a maturity which rendered them, as my father would have considered, safe. They were not acquaintances of my own family, but I had been recommended to them as a young man thrown on his own resources in London by a friend of theirs whose country seat was at Yaw, and who had a high esteem for my father for the position he had taken up in a controversy touching a vital matter of altar-dressing. My friends lived in that part of London which was called Belgravia in the "Court and Fashion" column of *The Morning Post* and Pimlico in *The Police News;* they were lavish in the hospitality they extended to me, and the freedom of their house where—to quote from a comic opera of those days—"dukes were three a penny," sustained my social aspirations, and was an education at a time when the formalities of conventional good manners counted for far more than they do now, and when anyone who was not a gentleman by birth was expected to disguise that fact by at least behaving as though he were one. A day came when one of my hostess's daughters was so stricken with typhoid fever as to be brought to the brink of the grave, and her mother confided to me that her doctor suspected the drains.

It was a matter of extreme difficulty and delicacy in those days for any lady to speak of drains in the presence of a gentleman: for many it would have been an impossibility. I was, however, a very young man; my friend was old enough to be my grandmother and was, besides, widely travelled and a woman of great social experience. Accordingly, after the daughters had one day left us together for the purpose, the embarrassment of the situation was in great part overcome by the device of referring to the drains as "pipes"; and by dint of tactful implications and circumlocutions I was at last made aware that a "builder man" had been employed to "do something" in the front area. My friend was careful to make clear that she had no idea *what* the something was that the builder man had done in the front area; but, whatever it might be, would I mind seeing whether he had done it right, as she knew she could rely on me, and was herself quite helpless in the matter.

Accordingly, I looked up Mr. Braceball, who lived in Tachbrook Street with closet fitting and a roll of wall paper in his front parlour window; and Mr. Braceball showed me a new disconnecting chamber which he had built to cut off the house-drain from the public sewer. The chamber was lined with white-glazed bricks and finished with a white-glazed channel, and the rim of the cover was sealed with tallow. It was by far the best bit of work in the whole house, and Mr. Braceball was very proud of it. There was no ventilation; but in those days ventilation of drains cannot have been regarded as essential, for I made no comment on the lack of it. I did, however, comment on the fact that there was no flow in the channel nor any sign of a flow. It was, in fact, a virgin chamber which for its spotless perfection might have been an exhibit at Olympia—if Olympia had then existed.

"Oh! *she's* all right!" said Mr. Braceball. "She run a treat, you may rely on *that!*"

"Go and turn on the scullery tap," I told him.

He went to do so and returned before the water appeared. We stood attentive, as though we had put in a ferret and were waiting for the rabbit to bolt. We waited in vain.

"There must be something wrong," I said.

"It takes a bit of time for a trickle of water like that to get away. I guarantee as you won't find a better bit of work anywhere in—"

"Go and turn on all the taps and flush everything all over the house," I said.

He was away two or three minutes, but again got back in time to view the event. We waited. Nothing happened. Mr. Braceball tilted his hat forward to scratch his head.

"You must have built the chamber on the wrong drain," I told him; but he assured me he would never go for to take and make a mistake like that. All the houses in the street were drained the same as what that there was, as he knew for certain having had to do with several of them. His own father had worked as a bricklayer on some of these same houses when they were being built, and when Mr. Braceball was a boy he often used to take and——

"It is no use your telling me what you did when you were a boy," I said, "I want to understand what you've been doing *now*."

"Well, there's the drain; and the sewer is just below, as you wouldn't want for me to tell you if I took that clearing eye off for a minute, and I pledge my word you won't find a better job —— "

"It's no earthly good talking like that, my good man. Where's the water going to; *that's* what I want to know."

"Well, there's slow drains, aren't there, and there's fast; but I'd rather see a drain a bit sluggish—— "

"Sluggish! You've had every tap in the house running for five or ten minutes. Why is there no flow in the drain?"

"Well, I shouldn't be surprised as what the tanks is all run empty by now," Braceball said, helpfully.

"Well, where has the water gone to? The drain must be obsolete—out of use. Didn't you look for the flow when you were at work?"

"Why, naturally I ask the maids not to throw water down while we was at work; and, besides, the men likely had a stop in—there you are! What did I tell you!"

A creeping tongue of dirty water peeped from the inlet, spilled a spoonful into the channel, and withdrew as though it had seen us and decided to remain in hiding.

"That's not my idea of a flow," I said, as the water peeped out a little more boldly and again receded. "What does it mean?"

What it meant was that the drains under the house were broken and discharging the whole of the sewage on to the ground under the floor of a little dingy room that there was in the basement, where it soaked away into the earth except on the rare occasions, such as the present, when the whole space became flooded and the water lipped over into the outfall. My friend Braceball had assimilated modern thought by regarding a disconnecting chamber as an amulet against all sanitary ills, and its installation as a ritual of science: he had prescribed the chamber as a knowledgeable man, and executed it with the enthusiasm of an artist. Whatever he thought of my captiousness he made no complaint at being kept busy for three weeks digging out tons of polluted earth, and renewing drains and the floors over them. As for me, I drew an elaborate contract and specification in which I first announced myself as "Bernard Whistlow, Architect," and supervised the work; and when a fee was hinted at I shyly discountenanced the idea—which, I may mention, my friend evidently thought a most proper and usual thing for an architect to do.

The silk umbrella with the gold knob, engraved with my initials, which she afterwards gave me, was no doubt an expression of that kind of gratitude which lies heavy on the conscience until the obligation has been wiped out by a "tip," for my kind friend was an inveterate great lady; but if she had realized how readily another might have passed the work and left her in the same death-trap in which he found her, she would have had cause to thank her stars that I chanced to be in her pocket when I was.

Such was my first job, and as such it is recorded. I was at the time still an assistant at Grig's, and many years were to pass before I again acted in an independent capacity as architect. Over those intervening years I will stride to the day, eight years after I walked across the park that May morning beside my father to Westminster, when I began to get on my own legs—which feat was miraculously accomplished some three more years later.

I say miraculously because my whole career seems to have been shaped by a succession of miracles: and I have no doubt that it is the lot of all to look back amazed at the procession of adventitious circumstances—or even accidents—that have decided their destinies. It is the one aspect of life which I am unable to contemplate without superstitious feelings: there is, it seems in very fact, a divinity that shapes our ends, rough-hew them how we may; and when I read intimate recitals of the lives of others, such as Winston Spencer Churchill's enthralling narrative, *My Early Years*, I am similarly impressed. I reflect on the many things near to hand that I strove for and which were snatched from my grasp; the many others that were thrown into my lap unexpected and undeserved; I recall the capricious and trivial accidents which throughout have determined my activities and have directed my course to fields where other adventitious events enchained my future, and I am bewildered. What is the meaning of it all? Retrospection, however, makes clear to me that all men have ample chances to prove their mettle and take their place in life as individuals according to their capacities; and that though no man can measure what fruit will come to him when he throws his stick into the walnut tree, it is he that throws strongly and throws often who wins nuts.

Like most men who look back on their lives, I most deplore opportunities lost, which, in my case, as I now realize, were lost by lack of self-confidence and to the lack of that pertinacity which self-confidence begets. Courage and tenacity were in some degree mine, I think; but the failing of allowing myself to be cast down and discouraged by rebuffs instead of being enraged and antagonized by them, was also mine. My own observation, enforced by Galton's *Enquiries into Human Faculty*, persuades me that all men are brothers under their skins, and that all, in varying degrees, are alike tormented by that conflict of ideals which lies at the root of our disabilities; and if I were asked to say a kind word to a young man conditioned as I was when I left Grig's office to make my way in the world, that word would be—hold your tail up straight and keep pegging away in your own fashion.

How, then, was I conditioned? My prospects when I set out to establish myself and make my way in life as an architect were decidedly inauspicious, and if I was not daunted by those conditions it was only because I had no ideas how "setting up" was ever accomplished. I supposed in a vague way that I should somehow one day find myself an architect, and I straightly took every blind turning that presented itself, and the thing at last befell. I can only suppose that if it had not happened as it did, it would have happened in some other way; but for the life of me I cannot conceive how, for I had no wealthy or socially powerful friends or connections; my relatives were all in the Church, the professions or the services; I had no opportunities to expect from them and, in point of fact, I have never, from first to last, either directly or indirectly, been helped to a commission by any one of them.

I had no money when I left Grig's, and no property except some bits of old furniture I had picked up and a few books in good editions. My father gave me £100 a year while I was a pupil, and had continued the allowance after Grig employed me at a salary of £50 a year, and afterwards at £75; but it was a necessity for him, and a point of honour with me, that I should earn my own living as soon as possible.

It may be of interest to add that I paid 16s. for two rooms and attendance in a delightful panelled Queen Anne house at the west end of Ebury Street, and that my food and laundry cost me about 13s. more; I lunched in one of the new A.B.C. shops for 5d., and allowed myself a shilling gallery—usually to see Irving at the Lyceum or Nellie Farren and Edward Terry at the (old) Gaiety—once a week.

If I say that I was a fairly well-equipped student, who had passed the Intermediate Examination of the Institute, and a neat and conscientious draughtsman, I have said all that anyone could truthfully say of me. In those days there were scant opportunities for instruction outside the office routine which occupied me from ten till five; but I attended certain desultory lectures given at the Architectural Association in Great Marlborough Street by good-natured seniors,

whose best efforts only added to the confusion of mind engendered by Rivington and by Fergusson, and who set subjects we worked out at home and rolled up to flatten out for their brief, tongue-tied commentary at Marlborough Street.

I also attended at the School of Art in Tufton Street, and learnt to make stumped charcoal drawings of fourteenth-century Gothic foliations; and at a later date learned to draw the Orders to scale by rote in order to qualify for studentship at the Royal Academy Schools, where I afterwards sat under the evening newspaper and disparaging glance of Mr. Phené Spiers, and tasted the loathing with which he seemed to regard all of us on the rare occasions when he came round the room to see what we were doing and snort his contempt at whatever it happened to be. Spiers was perfectly genial and companionable in his own sphere, and was a man of distinguished attainments as an antiquarian whose beautiful water-colour studies of architectural subjects are well known; but his task at the Schools might well have disgruntled one of far less erudition and much fewer accomplishments. Subjects were set by eminent architects, Associates or Members of the Royal Academy, who, at intervals, came to the school as "visitors" to criticize our work and ginger up our aspirations. Spiers's position as master was, therefore, almost an impossible one; for if he directed or advised us the visitor might discountenance all his ideas, and perhaps recommend the very treatment he had condemned, to the stultification of the student and the destruction of the master's authority. Thus, to keep order, read the paper and grunt disparagement was all there was left for Spiers to do.

Instead of sticking things out—after all the vast effort I had made in competitive qualification for studentship with sheets of testimonies and a fortnight's examination in the Drawing and Architectural School—I characteristically allowed myself to be discouraged after two subjects had been worked out, and ceased to attend. One of those subjects was a cloister, set by Sir Arthur Blomfield. On this I engaged with great zest till Spiers one day came behind me while I worked, and completely deflated me by uttering the words "Strawberry Hill" as he passed by. The other subject was set by Norman Shaw, and was a covered bridge connecting two buildings. On this occasion it was the great man himself who wrecked my complacency. The design I hatched out was one that, flagrantly and unblushingly, blew a loud, public kiss to the Bridge of Sighs, but *my* bridge was lighted with three fine windows, each with two dropsical cherubs nestling in swags below the sill. On his third visit, when the drawing was nearly completed, Norman Shaw came; nodded to me; gazed; took a piece of india-rubber; wiped out the whole of the lower part of the windows, so that their proportions approached a square; gave me a smile, and passed on. It was at once a new design and, of course, a far better and more forceful one; but it was no longer my own design; it did not complete my idea, and I at once lost all interest in it.

I do not hold up to admiration an instance of what may seem pig-headed vanity: I merely record how my natural instinct to self expression, in fact, reacted; and I do so because I believe that what is true of myself is true of others. If I am wrong in so believing, then I engaged in the pursuit of architecture with yet another disability.

These, then, were my circumstances when, at the age of twenty-four, I said goodbye to Grig and, with his testimony of my service as his pupil and assistant in my pocket, fared forth to find my own legs.

NEXT WEEK—VI: I TURN CLERK OF WORKS

The previous instalments appeared as follows:

May 27. i: I Am Articled.
June 3. ii: Episodes of Pupilage.
June 10. iii: Episodes of Growth.
June 17. iv: My First Job: The Sewer.

ADVERTISING *AND* ADVERTISING

THE fact that one so deeply involved in anti-uglification and in rural preservation as Mr. Clough Williams-Ellis should open the Shell Company's exhibition of modern pictorial advertising is in itself a testimony to the aim and quality of the exhibition. There is certainly abundant evidence that, with the work of such artists as those represented here to draw upon, poster advertising need not take any other path than the "intelligent, discreet and witty way" described in the opener's speech, rather than that of "mad dog publicity." Mr. Williams-Ellis reiterated the opinion, which is becoming increasingly held, that "good manners and good business have a lot to do with one another."

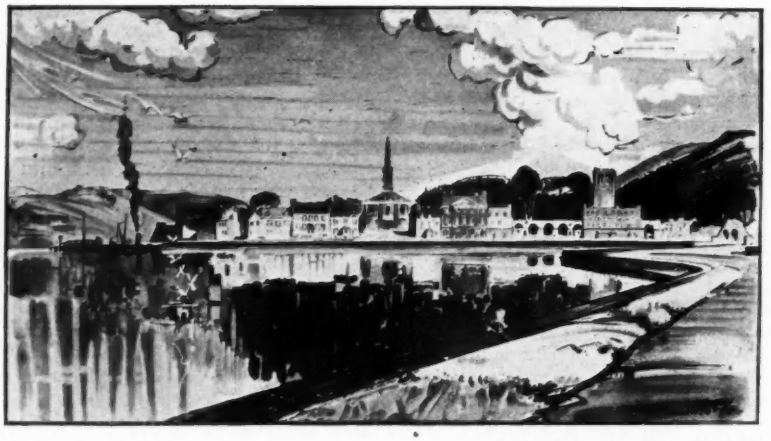
Among the posters on exhibition at the New Burlington Galleries until June 27 can be seen a new series of country scenes, entitled "See Britain first on Shell." Some of these achieve more evidently than others a definite pictorial quality along with poster essentials, but all are worthy of note. Posters are essentially picture-writing, to be read at a rapid glance. The sharpness of character which makes it possible to "take in" a poster at one glance as it passes by on a lorry is not always to be found in a well-painted landscape. Nevertheless, by an interesting variety of methods the same principal aim is achieved—that of portraying a piece of English scenery and of doing so briskly and brightly and briefly.

In one word, as it were, Mr. McKnight Kauffer presents Stonehenge, Mrs. Vanessa Bell gives us a glimpse of Alfriston, or Mr. J. D. M. Harvey describes Inverary, while with a note



[*Shell Co.'s Advertising Exhibition.*

St. Osyth's Mill. By Cedric Morris.



[*Shell Co.'s Advertising Exhibition.*

Inverary. By J. D. M. Harvey.

of satire Mrs. Edna Clarke Hall shows Lavenham, and Mr. Cedric Morris courteously and kindly points out St. Osyth's Mill. Among the other well-known types of work are Mr. Tom Purvis's delightful Kingfishers, the "quick-starting pair," and his elephant who "pulls." These and others are notable as works of ingenuity and art, with the true modern poster spirit.

LETTERS FROM READERS

Birmingham Bank Competition

SIR,—If it is necessary to justify the seeming presumption of a layman in architecture expressing an opinion on the winning design for the new Municipal Bank in Broad Street, let it be said that even "the man in the street" is bound to be affected by the buildings which he must necessarily pass day by day. No one can be familiar with Broad Street without realizing that it affords one of the great opportunities for adding architectural charm and value to our city. We now have the drawings of the first official building in that increasingly important thoroughfare, apart from the Hall of Memory, and I confess frankly to disappointment.

It is true that I have not had an opportunity of seeing the full drawings which, I am told, reveal particularly fine draughtsmanship, but the question I want to ask is, why another building in the familiar classical mould? The number of classical porticos in Birmingham would almost suggest that architects or assessors find it impossible to escape from the influence of the imitation Greek Temple we call our "town hall." One is not surprised that the Masonic Temple should be conceived around Ionic columns, but is it really necessary for the adjoining bank to continue the same style?

Let it not be thought that I am foolishly decrying the ancient models. I have revelled in what I have seen of original fragments of ancient Greek and Roman architecture, as indeed also of the later Norman and Early English and Perpendicular. My inquiry is whether we must be bound to the past, whether Greek or Gothic.

Have the architects of today no original thought to express? Those who know anything of architectural development in Sweden and Germany —two countries I happen to know— will be familiar with the answer to this question. Thought of today can create its own art forms, in architecture as in other realms. Such buildings as the Town Hall and New Art Gallery in Stockholm, and some of the churches and secular buildings of Hamburg, for instance, strike a new and distinctive note. I fail to believe that the architects of our own country are, or need be, merely slavish imitators of the past. Then why should we not in our official buildings, at any rate, give an opportunity to new and creative design? The new Municipal Bank does not appear to say anything at all: it merely joins the family of the Town Hall and the Masonic Temple. In my humble judgment it is a great opportunity missed.

A city building conceived in the new, simple, unfettered and direct form, which is illustrated in many of the new Continental buildings, and in just a few in our own country, would have been a source of interest to our city, an encouragement to fresh and original thought, and an arresting influence in the life of the "man in the street." It is in his interest particularly that I express genuine disappointment at this further indication of unnecessary artistic bondage. (REV.) E. BENSON PERKINS

An Orangery by Devey

SIR,—"A small orangery, erected about 1870 in the manner of the Queen Anne revival inaugurated by Mr. Norman Shaw" at Coombe Hill, Kingston (see page 854 of the last issue of the JOURNAL), is the one built by George Devey for Mr. Bertram W. Currie, and illustrated by the late Mr. E. L. Wratten's pen-and-ink drawing which formed the frontispiece to *The Architectural Review* for February, 1907. Devey was Norman Shaw's senior by eleven years.

WALTER H. GODFREY

[*The above letter was submitted to Mr. Stanley C. Ramsey, who has sent us the following reply.*]

SIR,—I was very much interested in the letter from Mr. Walter H. Godfrey on the orangery at Coombe Hill.

Mr. Greenly, the owner, and I, have repeatedly sought information on this building which we, of course, understood must be by an architect of distinction, but we had not been able to find out who he was.

I always had a difficulty in reconciling certain other of the outbuildings which remained with any contemporary of Norman Shaw, they seemed to portray an earlier hand. Mr. Godfrey's little note now explains the mystery.

STANLEY C. RAMSEY

A Neighbour of the Bank

SIR,—May I be allowed to draw attention to an omission in the criticism of Messrs. Mewès and Davis's Westminster Bank building in your issue for June 17? This is, that the elevation facing up Bartholomew Lane is designed as a near neighbour of the Bank of England—a rare example of architectural courtesy and good taste which one wishes were observed in all designs for new street buildings.

NATHANIEL LLOYD

Chapel Architecture

SIR,—I am trying to collect an exhaustive inventory, and should it prove sufficiently fruitful, to publish and illustrate it, to consist of a list, with architectural details, of all Nonconformist places of worship which were built before 1830.

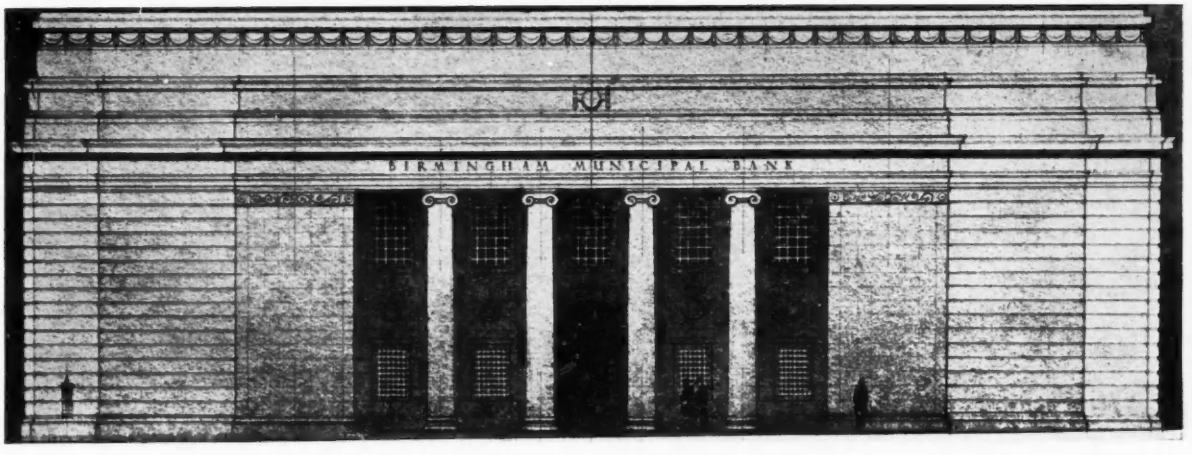
I have already found many examples of beautiful little buildings, such as the Octagon Chapel, Norwich; Friar Street, Ipswich; Church Street, Bury St. Edmunds; and Underbank Chapel, Stannington. These are well known, and I feel sure that there must be many more.

If any of your readers could let me know of any old chapels and meeting-houses, I should be very grateful for the information. J. BETJEMAN

BIRMINGHAM MUNICIPAL BANK COMPETITION

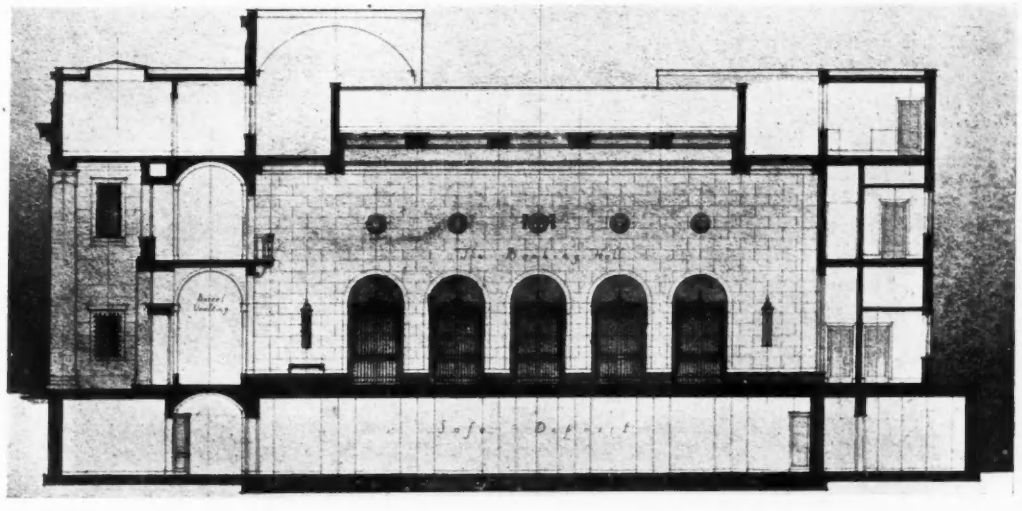
FIRST PRIZE-WINNING DESIGN

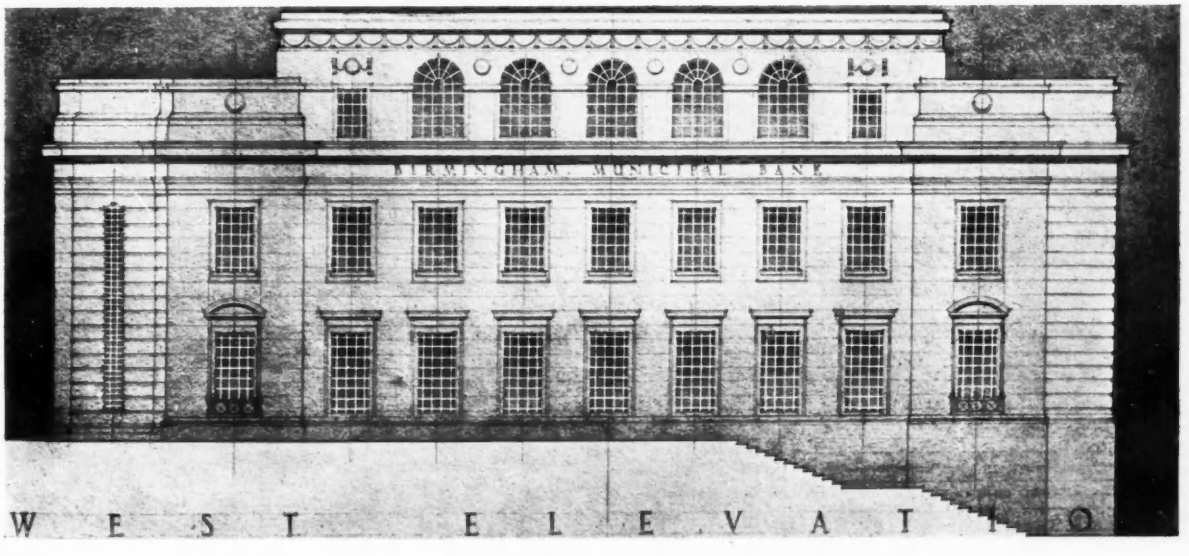
BY T. CECIL HOWITT



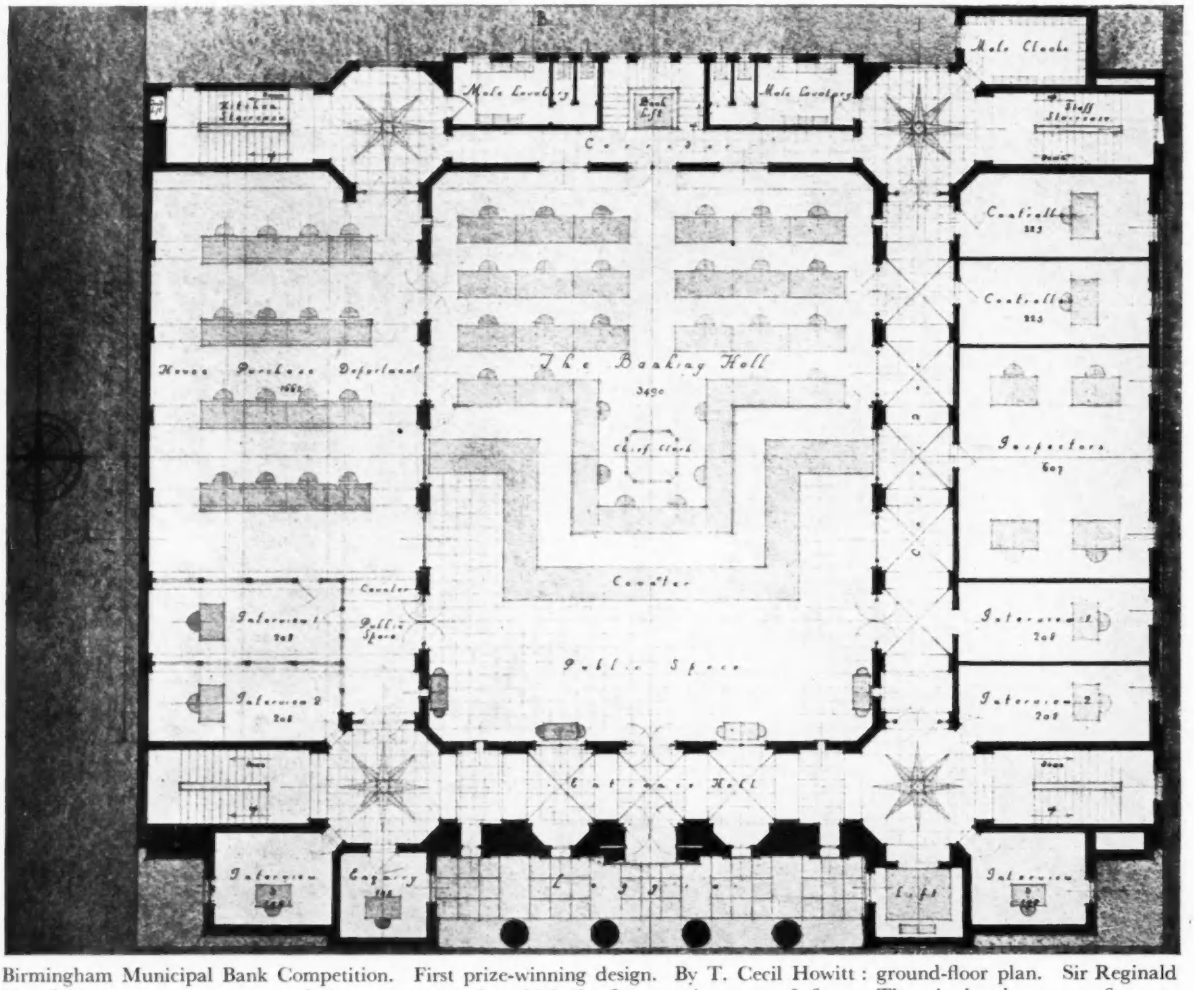
The three illustrations reproduced on this page show the drawings of the front or north elevation, longitudinal section and west elevation, respectively, of the design placed first. The building is to be faced with Portland stone.

Further illustrations and particulars of the award appear on the two following pages.





WEST ELEVATION



Birmingham Municipal Bank Competition. First prize-winning design. By T. Cecil Howitt : ground-floor plan. Sir Reginald Blomfield, R.A., F.R.I.B.A., assessed the competition, for which the first premium was of £400. The stipulated cost was £75,000, and it is intended to erect the building in Broad Street, Birmingham, on a site adjoining the Masonic Temple.

IN THAT CONTINGENCY

The following abstracts of inquiries represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may, in the course of time, indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for application to all similar problems. Crown Copyright Reserved.

Creep or Flow of Concrete Floors

IN a cotton-spinning mill, the concrete floor of one particular bay of approximately 135 ft. by 14 ft. and 7 ins. thick was of a 1 : 6 concrete, reinforced with steel rods. Soon after the machinery was installed, this floor was found to have sagged, a deflection of ½ inch being apparent at mid-span. After the floor had been levelled and the machinery reset, a similar sagging occurred. The architect wished to know if there were prospects of continued sagging, and if instances of similar types of failure have been known to occur.

The trouble you are experiencing with concrete floors is a comparatively common one. It is due to the creep or flow of concrete under sustained load. A considerable amount of experimental work has been done at the Building Research Station on this problem, and Building Research Technical Paper No. 12 describes the results of the work.

The deflections will usually increase until a value at least three or four times that occurring immediately on loading is reached, and will proceed at a gradually decreasing rate. From the tests made, it appears that the movement becomes comparatively small after a period of two years, and it seems probable that in your case any movements occurring in the future will be much less than those already experienced.

The effect is more pronounced when the concrete is maintained dry, and is probably more severe than usual in rooms maintained at high temperatures, such as are common in spinning mills.

Failure of Internal Decorations

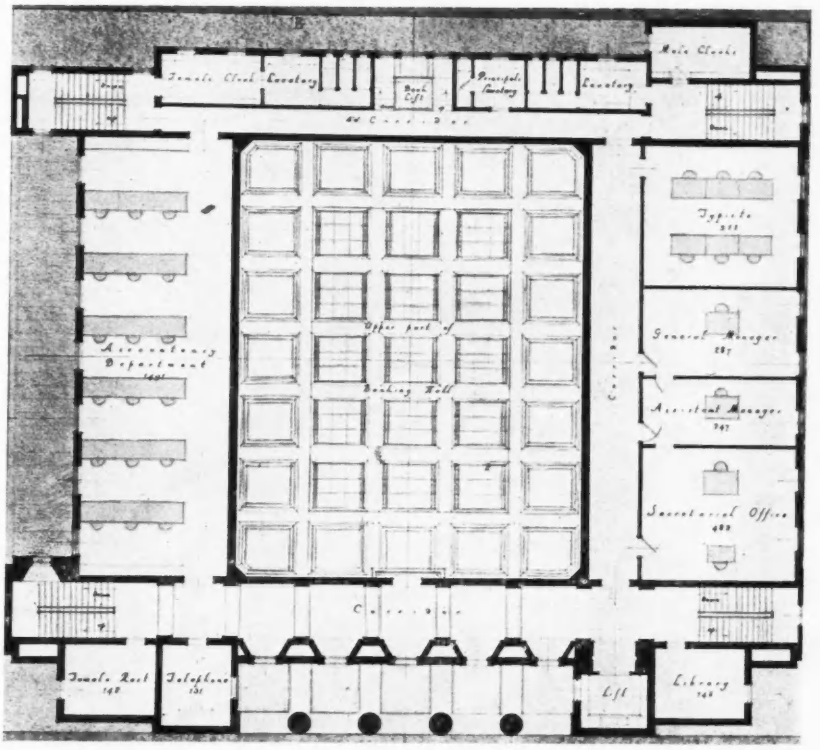
A contractor requested information as to the probable cause of patches of mould, discoloration of distemper, and a certain amount of efflorescence appearing on the internal decoration of a riverside house, which has only occasional occupation. The house, built about five years ago, is constructed of common building bricks and rendered externally with cement and sand. Two years after the building was erected, water was found to be penetrating through cracks in the rendering : this cracking was presumed to have been caused by the presence of a high content of soluble salts in the bricks, which led to failure of adhesion of the rendering; repeated attempts to renew the rendering resulted in further failure.

So severe did the cracking of the rendering and the penetration of water become, that two years later an independent system of metal lathing was erected and rendered with cement and sand, in such a manner as to form an independent skin, out of contact with the old rendering and brickwork. The internal decorations were then removed

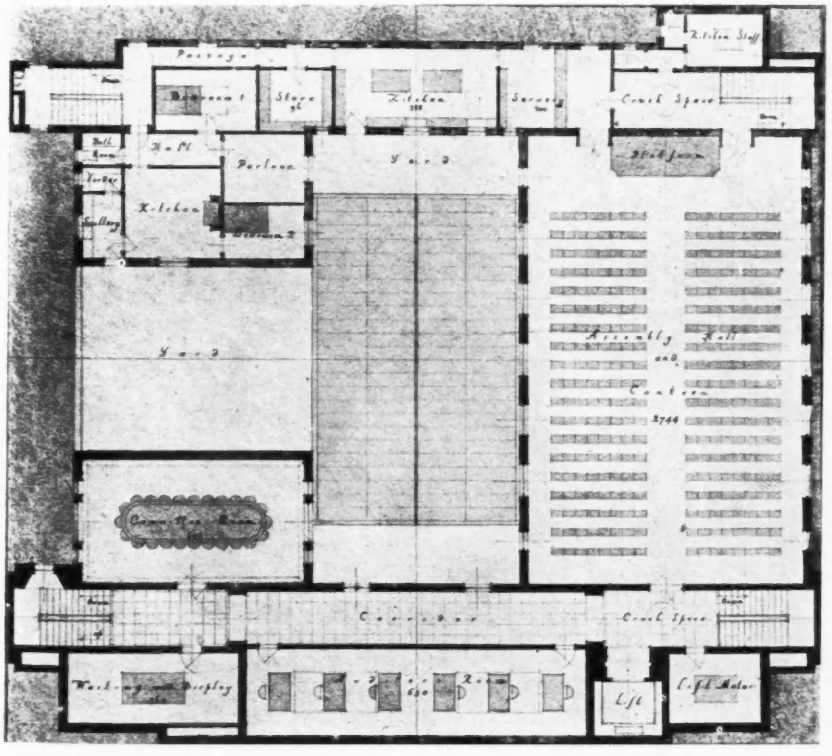
and the surfaces redecorated. Notwithstanding these precautions, failure of the decorations has again occurred, although, on careful inspection, no evidence of any penetration of water from the exterior or from the soil could be observed.

Prior to the work carried out in erecting the independent rendering, the walls must have been extremely wet on account of the gross penetration which had occurred. This would probably make them as wet as the walls of a new house at the completion of building operations. It is generally recognized that the moisture introduced in the walls of a new building takes a long time to dry out, even under favourable conditions. It is by no means uncommon to allow a period of as much as a year before proceeding with permanent decorations. In the present instance, decorations of a kind very sensitive to the effects of damp and salts in solution appear to have been applied at a rather early stage, taking the large amount of water into consideration.

The house is used only for occasional occupation, more particularly during the warmer months of the year, and is otherwise shut up entirely for various periods; it is a matter of common observation that sudden changes in temperature lead to pronounced condensation of atmospheric moisture on walls of passages, and other cold parts of inhabited houses. The house in question being situated on a river bank, atmospheric conditions are likely to be humid at times, and it is not unreasonable to suppose that at periods when the house is cold, unventilated and unoccupied, condensation of atmospheric moisture may lead to some deterioration of decorations, even when all effects of the original penetration of moisture are eliminated.



Birmingham Municipal Bank Competition. First prize-winning design, by T. Cecil Howitt: first-floor plan. The upper part of the banking hall is divided by corridors from the accountancy department and managerial rooms. The second premium of £300 was awarded to S. A. Cooke and W. N. Twist, FF.R.I.B.A., of Birmingham.



Birmingham Municipal Bank Competition. First prize-winning design, by T. Cecil Howitt: second-floor plan. Much of the space at this level is given over to an assembly hall and canteen. The third premium of £150 was awarded to L. Roberts and Michael Waterhouse, AA.R.I.B.A., of London.

Sheet Lead Embedded in Concrete

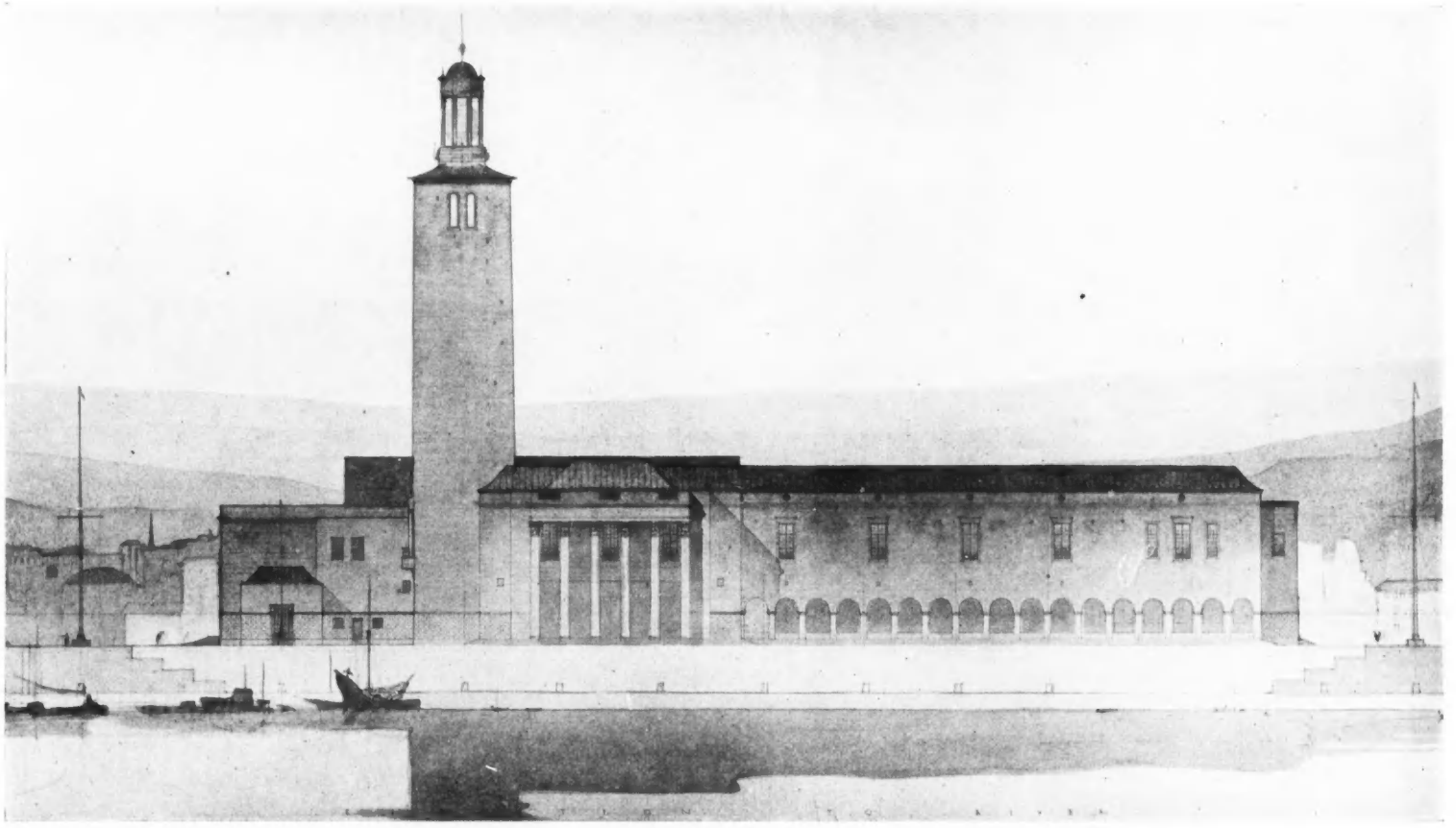
A contractor, desiring to use sheet lead as a waterproofing layer in cement concrete, inquired whether chemical reactions might occur which would be deleterious to the lead, and whether, in jointing the sheet, it would be preferable to burn the joints, instead of lapping them in the usual way.

It is pointed out in Building Research Bulletin No. 6, *The Prevention of Corrosion of Lead in Buildings*, that when lead is embedded in cement mortar or concrete, in such a way as to exclude the air from the metal, it is likely to suffer fairly serious corrosion. In such conditions corrosion may penetrate the sheet at the rate of 1/200th inch per year. It is advisable, therefore, that some protection be afforded to the metal, and the most suitable method in the present instance would appear to be a complete coating of a good bitumastic paint before laying, or, alternatively, sheet copper might be substituted.

With regard to the second point raised, it is not considered that "burning" the joints would have any marked advantage over lapping.

THE ROME SCHOLARSHIP IN ARCHITECTURE FOR 1931

THE WINNING DESIGN BY C. ST. CLAIR R. OAKES

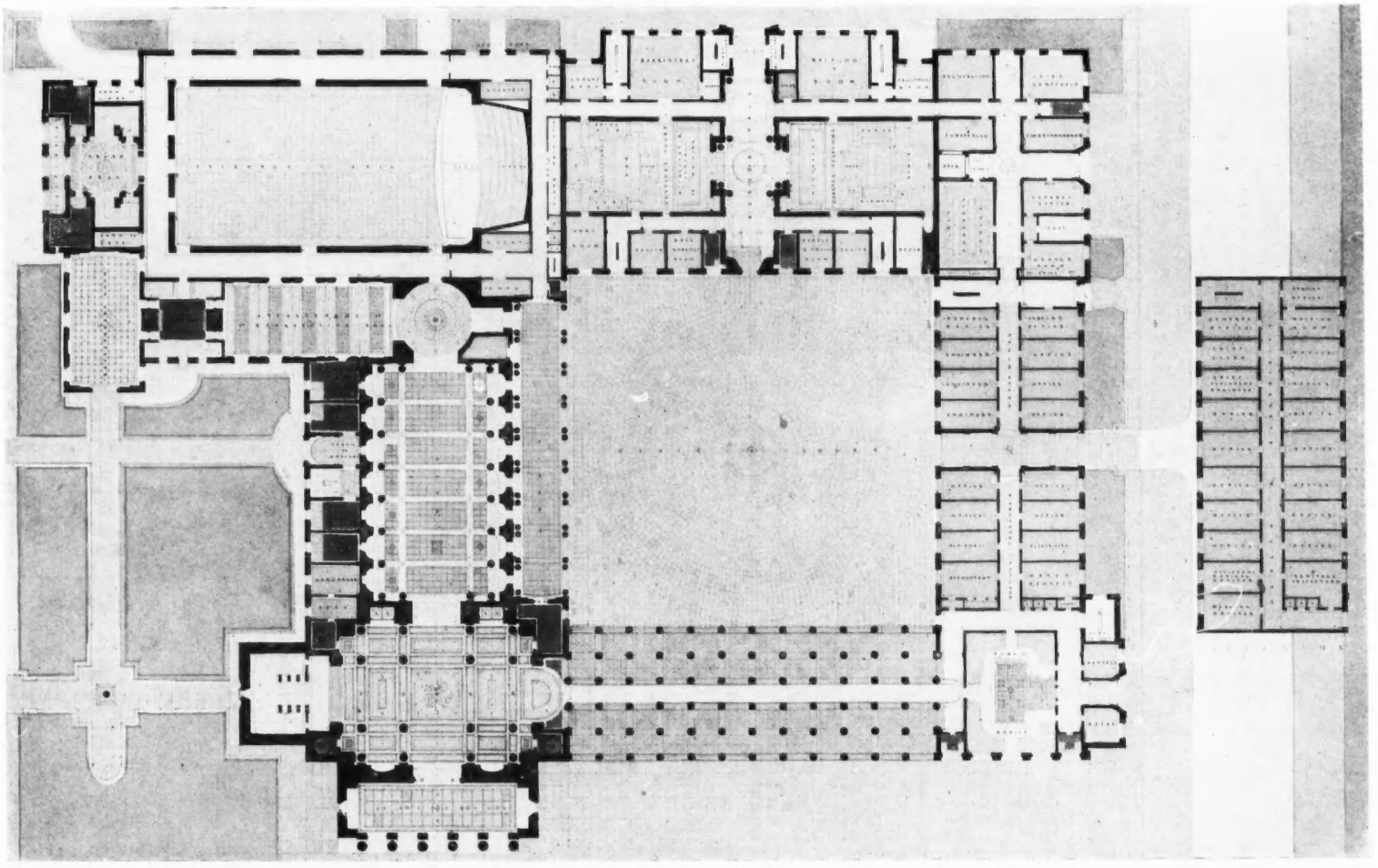


A town hall in a maritime city: front elevation to the river.

THE Faculty of Architecture of the British School at Rome have awarded the Rome Scholarship in Architecture for 1931 to C. St. Clair R. Oakes, A.R.I.B.A., a student of the Royal Academy Architectural School. Mr. Oakes obtained his training at the Northern Polytechnic, where he was a student from 1926–29, passing the Final Examination of the R.I.B.A. in his fourth year, since when he has been studying in the evenings at the Royal Academy School. The Faculty have highly commended the work of Mr. Robert H. Matthew, A.R.I.B.A., of the Edinburgh College of Art.

The Rome Scholarship in Architecture is now provided for by an annual grant made to the British School at Rome by the Council of the R.I.B.A. It is of the value of £250 per annum, and is ordinarily tenable for two years at the British School at Rome.

The subject set this year was a town hall for a large maritime city, situated at the mouth of a wide river. The imagined site was level, its dimensions being 340 ft. by 450 ft. It was



A town hall in a maritime city: ground plan.

surrounded on three sides by streets and on one of its long sides it faced a wide embankment raised above a quay leading to the riverside. The principal entrance had to be made to face the embankment, but secondary entrances for the assembly rooms, other departments and services were to be provided. The building was to consist of ground and first floors and a basement. A dominating tower was to be introduced for the purpose of indicating the position of the building from the distance.

The accommodation was to include, upon the ground floor: A main entrance, with imposing vestibule, an assembly hall, to seat 1,500 people, and a large refreshment room; departments for borough treasurer, waterworks, electricity, health, education, and borough engineer; law courts and police quarters, with a separate entrance; and a chief constable's department. On the first floor were to be a council chamber, mayor's parlour, etc.; and in the basement a large garage and storage for archives.

An exhibition of the competition designs will be held at the Galleries of the R.I.B.A., 9 Conduit Street, W.1, from June 27 to July 4 inclusive, between the hours of 10 a.m. and 8 p.m. (Saturdays 10 a.m. to 5 p.m.).

THE SPECIFICATION WRITER

Radiant Heat in School Buildings

BY A. F. DUFTON, M.A., D.I.C.

(The following are extracts from a paper read at the summer special meeting of the Institution of Heating and Ventilating Engineers at Harrogate yesterday (June 23).

THE Building Research Station was recently invited to investigate the conditions obtaining in a school classroom heated by radiant heat. The opportunity of comparing the results of laboratory work with practical experience, which this invitation afforded, was welcomed, and in order to make full use of it the investigation was extended to provide a comparison between different systems of heating.

Any scale of effective temperature must essentially attempt a refinement of the sensation scale. In terms of our sensations we may say, "It is colder now that the sun has gone in," or "Come round the corner, it will be warmer out of the wind." But when we attempt to express "how much colder" or "how much warmer," it is necessary to have a scale of temperature. Human sensations are affected by diurnal and seasonal acclimatization and are notoriously variable and individual. For accurate work, it is desirable that physiological sensations should be interpreted in terms of physical quantities capable of exact measurement.

In 1929 an instrument was constructed for recording the effective temperature in a room. This instrument, which is called a eupatheoscope, is essentially a black-painted hollow copper cylinder at 75° F., the heat loss from which is recorded in degrees of effective temperature. It is an instrument of precision and responds rapidly to changes in environment.

DESCRIPTION OF INSTALLATION

The Willesden Education Committee kindly lent the use of two classrooms, 22 ft. 6 ins. by 21 ft. 6 ins. by 11 ft. high, at Wykeham School, Neasden, during the Christmas holidays. They are equipped with five electric radiators. The radiators, which are composed of a ceramic material and non-luminous, are 7 ft. 3 ins. above the floor, and the angle at which they are fixed is designed to give a uniform horizontal intensity and to limit the vertical intensity of radiation to a suitable figure.

It is, of course, important that the carefully balanced distribution of the radiant installation should not be marred by the use of only a proportion of the heaters. The heaters have a considerable thermal capacity and the intensity is controlled by means of a radiation thermostat. This device is based upon the eupatheostat developed for research purposes at the Building Research Station. Like this instrument, it is sensitive to surrounding objects, to draughts and to sunshine, and keeps comfortable by regulating the heating of the room. Heaters which emit 8,000 B.T.U. per hour were used in some of the experiments to simulate the presence of children during school hours.

Two types of radiators were available for the experiment: the M type, as actually installed at Wykeham School, and the recently developed R type, in which the back of the heater is insulated. The R type is stated by the makers to emit 40 per cent. more radiation from the face for the same electrical input.

For comparative purposes, tubular heaters were installed in the other classroom along the walls, under windows, and also along the back wall of the room. Experiments were also made with convection heaters. In this case three heaters were installed, one under each window. These heaters are not a commercial type, but have been used at the Building Research Station as typical convectors; radiation from the heaters is reduced to a practical minimum by means of screens covered with polished tin.

TESTS IN CLOSED ROOMS

In view of the limited time available for the investigation, it has not been possible to make an exhaustive comparison of the four installations, and the experiments performed were chosen with a view to obtaining as much information as possible, and to elucidating specific points.

The variations induced by ventilation are of great interest, but are also of great complexity. To obtain a datum from which to survey the effects of ventilation, it was thought advisable to ascertain the performance of each installation in a classroom with all the windows shut and with no thermostatic control of the heaters. The comparison of the four installations under these conditions is very interesting and is well shown in figure one, which shows the records taken by a eupatheoscope approximately in the centre of the room. In each case the effective temperature is shown by a full curve and the air temperature by a dotted curve.

The most striking deduction from the records is the difference between the

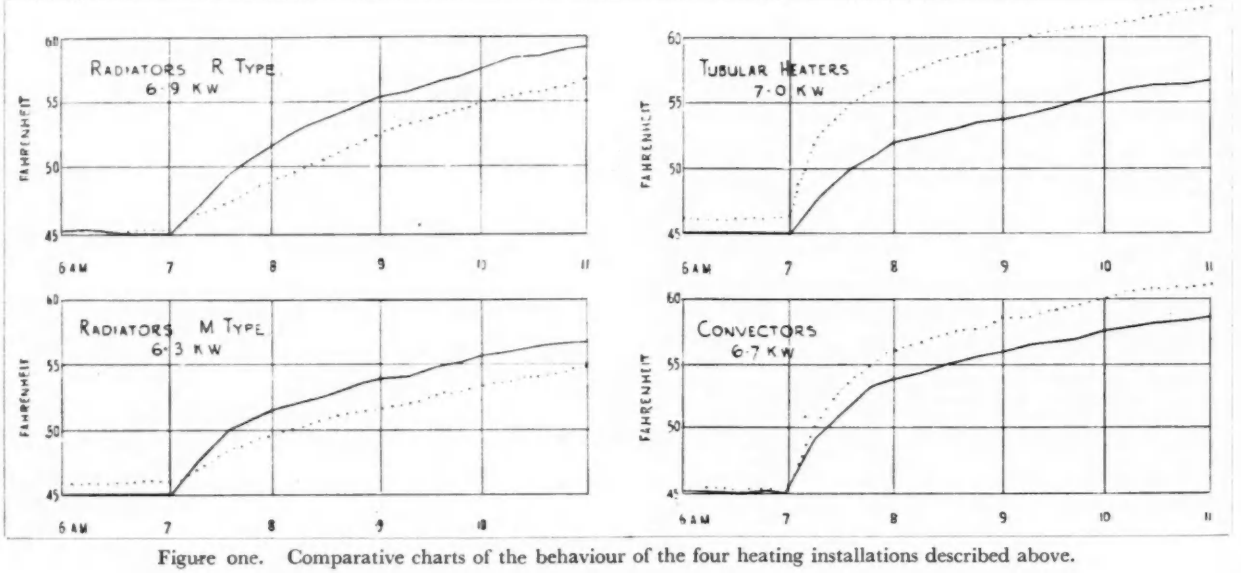


Figure one. Comparative charts of the behaviour of the four heating installations described above.

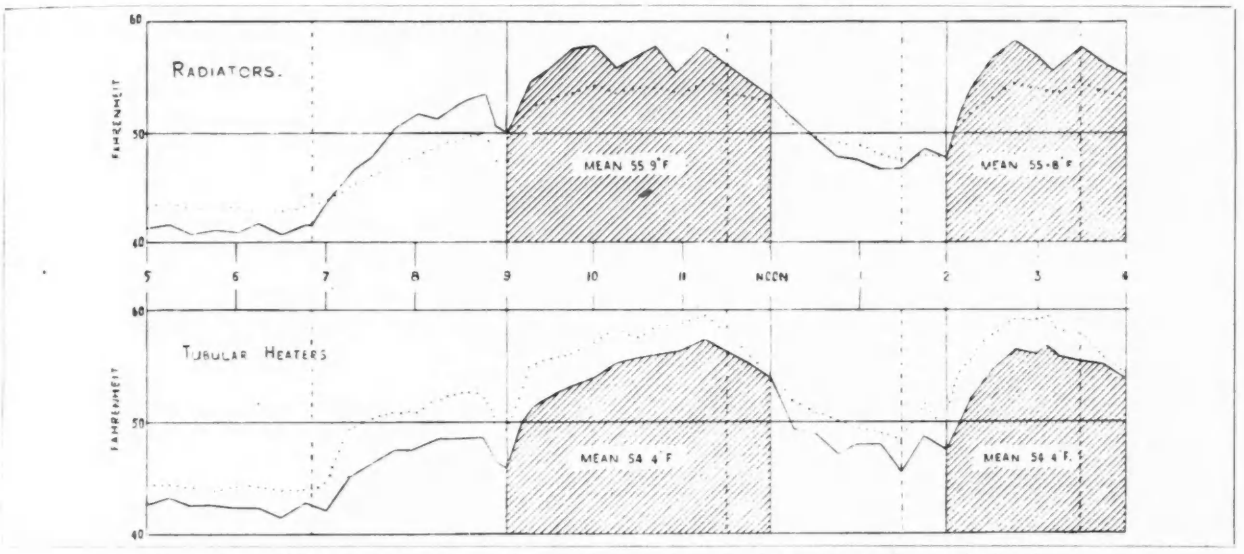


Figure two. Chart recording observations during a typical school day, obtained as set forth below.

air temperature and the effective temperature; when the effective temperature was 55° F., the air temperature was 61° F. with the tubular heaters, 57° F. with the convectors, 53° F. with the M type, and 52° F. with the R type radiators. It is significant that in raising the effective temperature 10° F., one system raised the air temperature 9° F. more than another.

It was decided to make a survey of the room with a second eupatheoscope to determine the variation in effective temperature at various points in the room. In the room heated with R type radiators the variation observed was 1° F., the effective temperature in the centre being the average for the room. The room with the installation of tubular heaters was also surveyed, the maximum variation being 2½° F.; the effective temperature in the centre was equal to the average for the room.

It is, perhaps, somewhat surprising to find that for the same air temperature the convection heaters afforded a higher effective temperature than the tubular heaters; with an air temperature of 60° F. the effective temperature was 57½° F. with the convectors, but only 54° F. with the tubular heaters. The explanation of this apparent anomaly appears to be that an appreciable amount of the radiant heat from the tubes goes to heat the wall just behind them to no great advantage.

The rates at which the different installations warm a room are of interest. When allowance is made for the differences in rating of the heaters, the records show that at the end of one hour there is nothing to choose between the two types of radiators and the tubular heaters; the convection heaters, however, show a 30 per cent. greater rise in effective temperature. At the end of four hours the R type radiators showed a rise 10 per cent. greater than either the M type or the convectors and 20 per cent. greater than the tubular heaters.

TYPICAL SCHOOL DAYS

After the experiments in closed rooms, comparisons were made of the performance of the installations in ventilated rooms. The ventilation was that afforded by two of the eight clerestory windows in each room, and the rooms were heated as on a typical school day. The radiation thermostat was adjusted to control the effective temperature at about 57°–58° F., and the thermostat of the tubular heaters was set to cut off at an " air " temperature of about 60° F.

The school hours were taken to be from 9 a.m. to noon and from 2 p.m. to 4 p.m. For ten minutes before each period the doors of the classrooms were left open, and during each period heaters simulated the presence of children.

The heating of the classrooms was begun just before 7 a.m., in preparation for nine o'clock, and at 1.30 p.m. in preparation for two o'clock. The heat was switched off at 11.30 a.m. and 3.30 p.m., that is, half an hour before the end of each period.

A record obtained in this manner is shown in figure two, in which the operation of the thermostats is clearly seen. The heating-up period from 7 to 9 a.m. is interesting and shows the radiators to advantage. The experiment was made on a somewhat cold day. The radiators maintained an effective temperature about a degree and a half higher than the tubular heaters, and the consumption of electricity was 15 per cent. less. The tubular heaters installed appear to be inadequate for intermittent heating in weather as cold as this.

CONCLUSIONS

The conditions obtaining in a school classroom warmed by electric radiant heaters have been investigated. In comparison with another type of electric heating, now extensively used, it was found that the radiant system is economical, a smaller consumption of electricity providing an equal degree of warmth. This warmth is obtained with a lower air temperature.

No opinion is expressed as to the optimum temperature for a schoolroom.

THE INFLUENCE OF WALL FABRICS

In addition to giving the above description of specific tests Mr. Dufton drew attention to the need for more exhaustive experimental investigation into the influence of varying wall fabrics on the rate of rise of temperature in a room heated by artificial means. It was well known that some rooms were not readily warmed. In a tentative experiment, a ground-floor room, 13 ft. by 10 ft. by 9 ft. high, with lath and plaster ceiling (not boarded above the joists), warmed by a gas fire, was found to be warmer in half-an-hour, after the walls had been panelled in oak, than in an hour and a quarter, before panelling. In other words, the same degree of warmth was obtainable with half the fuel consumption; and this though only one-half of the area of the boundary surfaces of the room was changed by the panelling.

It was hoped to extend the research to cover observations of some form of air-heating.

LITERATURE

IN VENICE WITH TURNER

PERHAPS too much can scarcely be added to our knowledge of the work of so significant an artist as Turner, although it is doubtful if the purpose of this book is to widen general appreciation. Rather, it appears that the writer, according to his own account, has taken an opportunity of becoming personally acquainted with Venice and adding to matter already known "a little fresh information which patient research has revealed." We are taken swiftly over the groundwork of Turner's earlier years to his development into the mature and individual artist he became, "to discover a more human document than biographers had led us to believe." Relative to the Venetian work of which the volume is principally concerned, we find the fabric of this was based upon "a tourist experience of a few weeks spread over a period of twenty years," and that his first paintings were produced thirteen years after he had seen the city. This Venetian work is divided into three periods, Turner's first visit being made in 1819 (another fact not generally known to his biographers). Mr. Finberg pictures him gazing over towards St. Mark's by 6 o'clock on the morning following his arrival, and wonders if he is "saddened like Lady Morgan by images of desolation" or "tempted to sigh with Tom Moore over the disenchantment." However, "Turner has told us in line and colour he was neither disgusted nor disenchanted."

The sketches providing us with this information are undated, and reveal the artist as a man who opens his sketch-book at random, frustrating all efforts to discover "the order of his movements and the arrangement of his time." (We conclude the writer is thus unable to categorize them in his inventory with meticulous precision.)

In spite of this disadvantage, we are provided with 130 pencil sketches and four colour drawings, examples of which illustrate the text and testify "the shrewd observation and accurate topography of a man who could communicate his impressions with extraordinary clearness and power."

The second visit was undertaken in 1833. Mr. Finberg has reorganized the sketch-books from results made from his researches since the inventory of 1909. By this means we are able to trace Turner's second tour via Berlin, Dresden, Prague, and so on to Venice, though, "even when one has mapped them (the sketch-books) out, it is not always possible to be certain of the direction in which he travelled."

Among the seven sketch-books related to this tour, one only contains sketches of Venice, these numbering six, although, we note, subsequent research may possibly add another ninety-six to the category.

The outcome of this visit was the production of many important paintings, including "The Piazzetta at Night," "The Bridge of Sighs," "Juliet and Her Nurse," etc.

The last visit of Turner was in 1840, when Mr. Finberg notes a change in the work itself. "The eager eye for detail is absent," and "the majority of the sketches so empty we wonder why they were made." We are informed that Turner "hesitates, hums and haws," and that the part he seems to be interested in is the sea and sky, though "not always intensely interested in these." However, the "water is struck in decisively," and at times there is "magic in the making." "The world for Turner has become dematerialized," indicative of "the artist's waning years." "Lighting his cargo, he throws aside all but his most cherished possessions." In this last statement perhaps Mr. Finberg has struck the truth. In this latter work, indeed, we find the culmination of Turner's art. G. E. R.

In Venice with Turner. By A. J. Finberg. London: The Cotswold Gallery. Price, four guineas.

A GEORGIAN ANTICIPATION OF INDUSTRIAL ORGANIZATION

"IT is commonly supposed that problems such as those of scientific works design, subdivision and specialization of labour in conformity with the greater use of machinery, more accurate methods of wage payment, keeping of records and of systems of cost accounting did not arise until thirty or forty years ago, during the era of what is termed the 'new industrial revolution.'" This supposition is destroyed in detail by the author of *An Early Experiment in Industrial Organization*, and although we suspect that he is innocent of any conscious attempt to upset our complacency concerning modern methods, especially those emanating from that hotbed of spurious efficiency, the United States, he fires so many facts at our faith in the creative gifts of modern industry that it totters. And yet he never rises to more than a gentle, disillusioning comment such as we have quoted above. His book is a history of the great engineering firm of Boulton and Watt, of Soho, Birmingham, from 1775 to 1805.

Professor J. G. Smith, who contributes an introduction, points out that "Neither Taylor, Ford, nor other modern experts devised anything in the way of plan that cannot be discovered at Soho before 1805; and the Soho system of costing is superior to that employed in very many successful concerns today."

So it has all happened before. They thought of everything, those masterful pioneers in Birmingham. Wages were calculated on statistical data; there were bonus schemes to lubricate output; welfare schemes alleviated the horrors of early industrial working conditions, and an Insurance Society was founded which had for its first Article: "That every perſon employed in the SOHO MANUFACTORY ſhall be a member of this ſociety, who can earn from two ſhillings and ſixpence per week, or upwards, and no one to be excluded."

Even in the situation chosen for their industrial activities the firm anticipated modern ways. "Birmingham was essentially unsuited to this new industry," the author tells us, adding, somewhat innocently "and it is surprising, therefore, that it should have been chosen." Not at all: it was merely the beginning of the process which is now in full blast all over England, the great, unplanned growth of Industry which has made us the workshop of the world and the slum of Europe. JOHN GLOAG

An Early Experiment in Industrial Organization. By Erich Roll, B.COM., PH.D. (Birmingham). London: Longmans, Green & Co. Price 15s. net.

THE FUTURE OF SOUTH-WEST LANCASHIRE

THIS volume is a popular abridged edition of *The Future Development of South-West Lancashire*, the report of the South-West Lancashire Regional Planning Committee, which was published in September last.

It may be remembered that this report dealt with the large questions of future development of an area of some 300 square miles, including, with the towns of Liverpool, Southport, St. Helens and Widnes, most of the Lancashire plain lying at the foot of the Pennines.

It is an intensely interesting region for the planner, overawed as it is by the great city of Liverpool, and battered by a century of highly concentrated industry. Interesting too, in its violent contrasts of industrial upheaval and parsimonious agriculture, of busy city and wellnigh deserted coast line.

Many of the problems dealt with are of local interest, but they involve principles which are universal, and whose frequent discussion in the pages of this book give it an appeal far beyond the areas with which it is immediately concerned.

Several of the excellent line maps and diagrams, and one coloured regional map, that were conspicuous features of the large report, are reproduced in the

book to make this more than a pamphlet, a really useful condensation of an exemplary Regional Report.

E. M.

The Future of South-West Lancashire. Report of the South-West Lancashire Regional Committee. University Press of Liverpool, and Hodder and Stoughton, Ltd. Price 1s. net.

MODERN TRANSPORT

ITALIAN railway stations do not often figure in the architectural press, for the simple reason that they have not been, in the past, of sufficient interest to merit reproduction. The photographs reproduced in this number of *Modern Transport*, while they do not do very much, at any rate, to cause us to alter our opinions of Italian railway architecture, prove that there is much activity of rebuilding under Fascist reorganization.

In a page of photographs, including views of stations at Forli and Naples, only one station seemed interesting; but this, at Bolzano, is really surprisingly good in the light of what we have been used to. It has an American hardness, and may be built of unpleasant material (the photograph does not make this clear), but it is neither pompous nor grandiose.

The great central terminus at Milan, on the other hand, its fine steel station roof apart, is everything that is *vieux jeu* and vulgar. In its tumultuous architecture one may detect the whole fiery history of the Renaissance, hints of the Rome of the Emperors, the Lions of St. Mark's. It will make a marvellous monument to Mussolini Maximus.

All this heavy bravura is a great pity, for behind it the engineers have built one of the finest steel roofs in the world.

I forbear to remark at length on the internal decorations of the Royal train. They drip with enrichment. Stalactite and stalagmite, all in pure gold and faultless taste. At all events His Majesty will know he is still in Italy. F.

Modern Transport. Enlarged issue with Special Section dealing with Transport in Italy. Price 3d. net.

R.I.B.A. ELECTION RESULTS

R.I.B.A. ELECTION RESULTS

AT a general meeting of the R.I.B.A., held on Monday, June 15, the results of the annual elections to the Council and the Standing Committees were announced as follows :

PRESIDENT, Dr. Raymond Unwin, F.R.I.B.A.; VICE-PRESIDENTS : Professor C. H. Reilly (Liverpool), and Messrs. Ernest C. Bewlay (Birmingham), Leo. Sylvester Sullivan, and Sydney Tatchell; HONORARY SECRETARY, Mr. Sydney Decimus Kitson (Oxon.).

MEMBERS OF COUNCIL : Professor Stanley D. Adshead, Sir Herbert Baker, A.R.A., Sir Edwin Cooper, A.R.A., Major Harry Barnes, and Messrs. Henry V. Ashley, Robert Atkinson, H. S. Goodhart-Rendel, W. Curtis Green, A.R.A., E. Stanley Hall, Charles H. Holden, Arthur Keen, Henry V. Lanchester, George C. Lawrence (Bristol), Thomas R. Milburn (Sunderland), Oswald P. Milne, Howard M. Robertson, Percy E. Thomas (Cardiff), Maurice E. Webb.

ASSOCIATE MEMBERS OF COUNCIL : Messrs. Cyril A. Farey, E. Gunn, R. Goulburn Lovell (Eastbourne), John D. Scott, Edgar A. D. Tanner, Michael J. Tapper, Michael T. Waterhouse, E. Berry Webber, and Charles Woodward.

LICENTIATE MEMBERS OF COUNCIL : Alderman Ewart G. Culpin, Captain A. Seymour Reeves, Major F. W. Rees, R.E., and Messrs. Arthur B. Hayward, John Ll. Smith (Aberdare), Percy J. Waldram.

PAST-PRESIDENTS : Sir Banister Fletcher, and Mr. Walter Tapper.

REPRESENTATIVES OF ALLIED SOCIETIES IN THE UNITED KINGDOM OR THE IRISH FREE STATE

Northern Province of England : Professor Leslie P. Abercrombie (Liverpool Architectural Society), and Messrs. W. G. Buck (Sheffield, South Yorkshire and District Society of Architects and Surveyors), Norman Culley (West Yorkshire Architectural Society), George D. Harbron (York and East Yorkshire Architectural Society), Henry L. Hicks (Northern Architectural Association), and J. Hubert Worthington (Manchester Society of Architects).

Midland Province of England : Major T. Cecil Howitt (Nottingham and Derby Architectural Society), and Messrs. Francis H. Allen (Northamptonshire, Bedfordshire and Huntingdonshire Association of Architects), Walter Brand (Leicester and Leicestershire Society of Architects), John B. Surman (Birmingham Architectural Association), and Edwin T. Johns (East Anglian Society of Architects).

Southern Province of England : Sir Harold Brakspear (Wessex Society of Architects), and Messrs. Hugo R. Bird (Essex, Cambridge and Hertfordshire Society of Architects), T. Lawrence Dale (Berks, Bucks and Oxon. Architectural Association), Arthur R. G. Fenning (South-Eastern Society of Architects), Ingalton Sanders (Hampshire and Isle of Wight Architectural Association), and Benjamin P. Shires (Devon and Cornwall Architectural Society).

Allied Societies in Scotland (nominated by the Council of the Royal Incorporation of Architects in Scotland) : Messrs. William L. Duncan (Aberdeen), Robert S. Reid (Edinburgh), William Salmond (Dundee), and John Watson (Glasgow).

Representative of Allied Societies in Wales (nominated by the Council of the South Wales Institute of Architects) : Mr. Jacob H. Jones (Swansea).

Allied Societies in Ireland : Mr. Frederick George Hicks (Royal Institute of the Architects of Ireland), and one representative to be nominated by the Council of the Ulster Society of Architects.

Allied Societies in the British Dominions Overseas, to be nominated by the Council of each of the following : The Royal Architectural Institute of Canada, the Royal Australian Institute of Architects, the New Zealand Institute of Architects, the Institute of South African Architects, and the Indian Institute of Architects.

Representative of the Architectural Association (London) : Mr. Arthur Bedford Knapp-Fisher.

Representative of the Association of Architects, Surveyors and Technical Assistants : Mr. Leonard A. F. Ireland.

Chairman of the Board of Architectural Education : Mr. William H. Ansell.

Chairman of the Allied Societies' Conference : Mr. Ernest C. Bewlay (Birmingham).

Also Chairmen of the Art, Literature, Practice and Science Standing Committees.

ART STANDING COMMITTEE

Fellow Members : Messrs. Ernest C. Bewlay (Birmingham), H. Chalton Bradshaw, Leonard H. Bucknell, Charles F. W. Dening (Bristol), C. H. Holden, A. B. Knapp-Fisher, Edward Maufe, Oswald P. Milne, F. Winton Newman, and M. H. Baillie Scott. *Associate Members :* Messrs. R. A. Duncan, E. Maxwell Fry, Walter M. Keesey, S. Rowland Pierce, Frederic E. Towndrow, and E. Berry Webber. *Licentiate Members :* Alderman Ewart G. Culpin, and Messrs. Samuel G. Short and Reginald M. Taylor.

LITERATURE STANDING COMMITTEE

Fellow Members : Professor Lionel B. Budden (Liverpool), and Messrs. Robert Atkinson, Martin S. Briggs, Arthur S. G. Butler, Frederick Chatterton, John M. Easton, David T. Fyfe (Cambridge), Lionel G. Pearson, Charles S. Spooner, C. F. Annesley Voysey. *Associate Members :* Lieut.-Col. H. P. L. Cart de Lafontaine, O.B.E., Professor F. S. Granger (Nottingham), and Messrs. Harold W. Chester, A. Trystan Edwards, Eric R. Jarrett, and Hope Bagenal. *Licentiate Members :* Messrs. Arthur B. Hayward, Frederick H. Mansford, and Arthur J. Penty.

PRACTICE STANDING COMMITTEE

Fellow Members : Messrs. Henry V. Ashley, Harry S. Fairhurst (Manchester), Arthur Keen, George C. Lawrence (Bristol), John A. Slater, John Swarbrick (Manchester), Sydney J. Tatchell, Percy E. Thomas (Cardiff), Francis T. Verity, and William E. Watson. *Associate Members :* Messrs. Robert N. Mackellar (Newcastle-on-Tyne), Christopher J. F. Martindale (Deal), John D. Scott, Edward Unwin, Michael T. Waterhouse, and Charles Woodward. *Licentiate Members :* Messrs. Frederick R. Betenson, Louis Blanc, and George N. Kent.

SCIENCE STANDING COMMITTEE

Fellow Members : Dr. Raymond Unwin and Messrs. Alfred H. Barnes, William E. V. Crompton, William A. H. Harvey (Birmingham), Arthur J. Hope (Bolton), Harry Hutt (Reading), Alan E. Munby, Thomas E. Scott, H. D. Searles-Wood, and Samuel P. Taylor. *Associate Members :* Messrs. Percy W. Barnett (Watford), John A. Bessant, Eric L. Bird, Arnold F. Hooper, Charles S. White, and L. W. Thornton White. *Licentiate Members :* Major F. W. Rees and Messrs. Oliver P. Bernard and Francis R. Taylor.

ELECTION OF MEMBERS

The following were elected members of the R.I.B.A. :

As Hon. Corresponding Members (2).

Bierbauer, Dr. ing. Virgil; Kertesz, Charles R.

As Fellows (16)

Messrs. Bennett, R.; Fortescue, G. Alan; Ashworth, B.; Cook, H.; Culpin, Ewart G.; Hamilton, A.; Kelsall, J. S.; Kirby, F. M.; Leed, J. C.; Lewin, G. H.; Robinson, H. M.; Scott, T. H. B.; Ward, K.; Klingender, F. L.; Lancashire, J.; and Mansford, F. H.

As Associates (11)

Firth, T. F.; Hawson, Hugh (Jun.); Matthew, R. H.; Mhatre, G. B.; Penn, W. H. M.; Russell, J. B.; Thompson, E. L.; White, N. J. S.; and Misses Edmunds, R. M.; Peden, B. C. W.; Turner, H. A. N.

As Licentiates (22)

Messrs. Ashworth, J. R.; Bridges, G. P.; Brierley, S.; Colman, E. E.; Dodds, A. K.; Eldred, H. S. G.; Gould, V. R.; Gray, E. S.; Hamilton, P. A. R. F.; Hobbs, H. P.; Littlejohn, L. S.; Pilling, R. S.; Pollard, T. A.; Pritlove, S. B.; Procter, B.; Quinn, C. D.; Stott, G. E.; Thakur, K. P.; Turner, P. R.; Walshe, A. C.; Wilding, F. M.; and Winning, A. B.

SOCIETIES AND INSTITUTIONS

DEPUTATION TO MR. SNOWDEN

ON Thursday, June 11, the Chancellor of the Exchequer received a deputation from the Council for the Preservation of Rural England and its associated bodies on the subject of the proposed tax on land values, as outlined in Part III of the Finance Bill, 1931.

The representations made by the members of the deputation were based upon a memorandum which had been prepared on the subject.

The resolution stated that this meeting of representatives of:

the Council for the Preservation of Rural England, the R.I.B.A., the Town Planning Institute, the National Housing and Town Planning Council, the Chartered Surveyors' Institution, the Garden Cities and Town Planning Association, the National Trust, the Metropolitan Public Gardens Association, the Commons, Open Spaces and Footpaths Preservation Society, the National Playing Fields Association, and the Boy Scouts' Association,

who are interested in the good development or preservation of land so that it may best serve the interests of the community, is seriously concerned as to the effect which the proposed tax on land values will have.

It is feared that the tax in its present form must tend:

a: To force into the market for building use much land, which better serves the public welfare by remaining open.

b: To increase the difficulty, already very great, of maintaining an adequate supply of open spaces and playing fields within reach of the dwellers in urban centres.

c: To promote the production on urban land of the largest crop of buildings which it will hold, and thus increase congestion in the centre.

d: To encourage ribbon development.

e: To fall on those who have paid in the increment value when purchasing their site, and not on those who obtain such increment by speculative buying on intensive development.

f: To check the expenditure of money in preparing land for desirable development, as, for example, of garden cities, because the expenditure would be taxed.

Such tendencies must, it is thought, greatly increase the difficulty of securing good and generous schemes for the development of land, whether carried out by owners or public-utility associations, and thus run counter to the aims of the Town and Country Planning Bill, from which so much good is expected.

This deputation therefore laid before him a list of suggestions along the lines of which desirable amendments might be drafted in the form of additions to the list of exemptions under Section 19, para. 1, and the list of encumbrances from which land is not deemed to be free for purposes of valuation under the First Schedule, para. 1.

It was suggested:

a: That a clause be inserted allowing landlords who are reserving land from building, with the approval of the Local Authority, to make arrangements with the Inland Revenue Commissioners to secure exemption from the tax by a binding contract that the land shall be reserved from building either permanently, or for a term of years.

This would, in effect, be an interim arrangement to fill up the gap between the coming into force of the Act and the completion of Town and Country Planning for the whole country.

It is not therefore contrary to the Government policy, and carries out the general intentions of the Town and Country Planning Bill.

b: That any land in regard to which the Local Authority or other Town Planning Authority may certify that it is better for public welfare that the land be not used for building purposes should be exempt.

c: That all land, temporarily or permanently reserved from building under the provisions of a Town Planning Scheme, should be exempt.

d: That all land which is reserved by a formal agreement with the Authority responsible for a Planning Scheme in course of preparation, as a public or private open space, should be exempt.

e: That all land *used* as a public or private open space under a formal agreement with any Local Authority that is not preparing a Planning Scheme, should be exempt.

f: That the exemption given to "public undertakers" should be extended to public-utility organizations, such as garden suburb or garden city societies as defined for purposes of the Housing and Town Planning Acts.

g: That an option might be given to each owner to undertake to pay an appropriate levy on any realized increment if and when the land is sold or developed.

This would give no inducement to put on the market land which the owner wishes to preserve from building but is not able or willing to dedicate permanently.

h: That land which is subject to Section 193 of the Law of Property Act, 1925, should be exempt.

i: That land which is subject to a regulation scheme under any Act relating to Commons, Open Spaces, or Recreation Grounds, should be exempt.

j: That land which is maintained as a publicly owned Open Space, Recreation Ground or Playing Field, by Trustees, should be exempt.

k: That land which comes within the scope of the protection afforded to Recreation Grounds by Section 17 (3) (*d*) of the Finance (1909–10) Act, 1910, should be exempt.

l: That land which is preserved permanently as an Open Space under any Act passed during the present Session of Parliament to provide for the preservation, and for restricting the use of, certain Squares, gardens and enclosures in the Administrative County of London, should be exempt.

m: That land allocated for national purposes to any body incorporated for the purpose of preserving lands and buildings of historic interest or natural beauty, or for the purposes of a nature reserve, for the benefit of the Nation, should be exempt.

Mr. Snowden expressed his sympathy with the aims and objects of the C.P.R.E., and said that the fears which had been expressed that the taxation of land values would be detrimental to those objects were, in his opinion, exaggerated.

He expressed the view that many of the points raised by the deputation were already covered by the various clauses of the Bill, and intimated that he would give further consideration to other points which had been enlarged upon by the deputation.

A.A.S.T.A., TOURS ABROAD

The Association of Architects, Surveyors and Technical Assistants has arranged the following tours this summer:

1: To the Ardennes, Luxembourg, Trèves, Liége, Namur and Dinant. Leave London July 25, and return August 4. Approximate cost £10 to £12. Conductor, Mr. C. H. Rattenberry.

2: To Vienna, visiting Munich, Salzburg, a river trip from Linz to Vienna, returning by Zurich. (An extension to Buda-Pesth can be arranged.) Leave London, August 29, returning on September 13. Cost £25 10s. Conductor, Mr. Charles McLachlan.

Full particulars obtainable from Mr. A. Seymour Reeves, Secretary, A.A.S.T.A., 26 Buckingham Gate, S.W.1.

CEMENT TESTING DEMONSTRATIONS

In connection with the series of lectures on "The Art of Making and Using Concrete," arranged by the Institution of Structural Engineers through Dr. R. E. Stradling and Mr. H. A. Holt, a party of about sixty conducted a series of ten demonstrations at the L.C.C. School of Building, Ferndale Road, Brixton, on Wednesday last.

The demonstrations, arranged by Mr. H. A. Holt, included ascertaining the setting time and fineness of cement, making briquettes to determine tensile strength; sampling and grading aggregates; determining the effect of grading of aggregates upon the strength of concrete; determining the consistency of concrete as affected by crushed and rounded aggregate; consistency and strength as affected by water content; testing aggregate for organic matter, loam and voids; ascertaining the effect of organic matter and loam on strength; determining the presence of harmful coal in breeze, ashes, clinker, etc.; carrying out various treatments on concrete surfaces.

Specimens made at these demonstrations will be tested at various laboratories on Wednesday, July 1.

OBITUARY

JOHN LOVE: 1874–1931

We regret to record the death of Mr. John Love, A.R.I.B.A., which occurred at his home in Fleet, Hampshire, at the age of fifty-seven.

Educated at St. Albans, Mr. Love was articled to Messrs. J. Brown and Son, of Luton, and later gained further experience with Messrs. Worssam and Son, building engineers, of London. In 1899 he purchased the practice of the late Mr. Clamp, A.R.I.B.A., of Fleet. Later on, he took over the business of an estate agent of that town. He was responsible for the design of many buildings in Fleet and was honorary architect to the Fleet and District Hospital.

IN PARLIAMENT

[BY OUR SPECIAL REPRESENTATIVE]

Town and Country Planning Bill

THE Standing Committee of the House of Commons which is considering the Town and Country Planning Bill had before them last week Clause 16, which permits a local authority to prohibit the alteration or demolition of any ancient building, subject to the approval of the Minister of Health.

Major Muirhead said that the majority of the owners of old buildings would not do anything to spoil them, and the Committee should be careful in imposing restrictions. To preserve a pretty building was not merely to preserve it as a museum piece. Many of the best buildings in the country contained examples of various styles. He lived in a house that had a Queen Anne back, two Georgian wings, and a piece of William IV stuck on the corner of it.

Sir Thomas Inskip said that care should be taken to prevent buildings being stripped inside and shipped to America. As the Bill now stood, there was nothing to prevent beautiful ceilings, staircases, and fireplaces being removed while the interior of the building was left intact.

Miss Lawrence, the Parliamentary Secretary to the Ministry of Health, said that there was great need of preserving exteriors. Everybody had come across examples of the way in which the streets of England were being spoiled by demolition, to make way for modern shopfronts.

The Clause was agreed to.

Unemployed in the Building Industry

At question time Miss Bondfield, Minister of Labour, informed Mr. McGovern that the number of insured persons in the building industry recorded as unemployed on May 18, 1931, the latest date for which statistics of unemployed by industries were available, was 144,447. Assuming that the average rates for men and boys applied to this trade, the approximate cost of unemployment benefit would be £135,000 for the week.

Rural Housing

Mr. Greenwood, the Minister of Health, said he hoped to be in a position to make a statement on the subject of rural housing at an early date.

Roman Amphitheatre at Chester

Mr. Benson asked the First Commissioner of Works if he was aware of the discovery of the Roman amphitheatre at Chester; and whether he was prepared to co-operate with the city authorities for its preservation.

Mr. Lansbury said he was greatly interested in the discovery of the amphitheatre, and he was fully prepared to co-operate, as far as possible, with the City authorities for its preservation.

COMPETITIONS OPEN

June 24.—Sending-in day. King Edward VI School, Mill Lane and Wilton Road, Southampton, for the Governors of the School. Assessor: Sydney Tatchell, F.R.I.B.A. Premiums, £150, £100 and £50. (Deposit, £1 1s.). Full particulars are obtainable from G. A. Waller, Clerk to the Governors, 7 Albion Place, Southampton.

June 26.—Sending-in day. Offices for the City of Leicester Corporation, Charles Street, Leicester. Assessor: E. Berry Webber, A.R.I.B.A. Premiums: £300, £200 and £100. Conditions from A. T. Gooseman, Engineer and Surveyor, Town Hall, Leicester. (Deposit £2 2s.)

June 29.—Proposed Tuberculosis Hospital, Hayes Farm, Sulley, near Cardiff. Assessors: Ernest Elcock, F.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A. Premiums: £400, £300, £175, and £100. Conditions, etc., obtainable from F. J. Alban, General Secretary, Memorial Offices, Westgate Street, Cardiff, before June 29.

September 21.—Sending-in day. (Last day for conditions was May 29.) Proposed Public Baths, Police and Fire Stations, Sessions Court, etc., to be erected on a site in Campbell Square and Upper Mounts, Northampton, for the Northampton Corporation. Assessor: Percy Thomas, O.B.E., F.R.I.B.A. Premiums: £500, £400, £300 and £200. Conditions from W. R. Kew, Town Clerk, Guildhall, Northampton. (Deposit £2 2s.)

October 1.—Sending-in day. Proposed New Municipal Technical College and School of Art, for the County Borough of Southport. Limited to architects practising in Lancashire. Assessor: Francis Jones, F.R.I.B.A. Premiums: £200, £100 and £75. The first prize will be merged into the commission if the appointed architect executes the work. Full particulars obtainable from the Director of Education, Municipal Buildings, Southport. (Deposit, £1 1s.)

March 31, 1932.—Sending-in day. Last day for questions: August 4. New Headquarters for the R.I.B.A., corner of Portland Place and Weymouth Street, W.1 Assessors: Robert Atkinson, F.R.I.B.A., Charles Holden, F.R.I.B.A., H. V. Lanchester, F.R.I.B.A., Sir Giles Gilbert Scott, R.A., F.R.I B.A., Dr. Percy S. Worthington, F.R.I.B.A. Premium: £500; also a further amount of £750 will be awarded to other designs according to merit.

ANNOUNCEMENTS

Messrs. H. E. Hawker, Mountain and Bailey, FF.R.I.B.A., chartered architects, surveyors and valuers, have removed their offices from St. Peter's Chambers, Gervis Place, to Westover Mansions, 13 Gervis Place, Bournemouth. Telephone No.: Bournemouth 285.

The partnership of Messrs. Stanley Hamp, F.R.I.B.A., J. F. Watkins, L.R.I.B.A., and A. B. Llewelyn Roberts, A.R.I.B.A., carrying on business as architects under the style of Collcutt and Hamp, having expired, has been dissolved by mutual consent. Messrs. Stanley Hamp and J. F. Watkins will continue the practice of Collcutt and Hamp at the same address, 126 Wigmore Street, W.1. Mr. A. Beaver Llewelyn Roberts will practise on his own account, his address being 8 Sumner Place, South Kensington, S.W.7.

THE ARCHITECTS' DIARY

WEDNESDAY, JUNE 24

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Third of five lectures on the Art of Making and Using Concrete: "The Properties of Concrete, with special reference to handling on the Job." By Dr. R. E. Stradling, HON. A.R.I.B.A. 6 to 8 p.m. **6 p.m.**

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At Harrogate. 9 a.m. Assemble at the Hotel Majestic for group photograph. 10 a.m. Circular Motor Drive. 12.30 p.m. Lunch. 4.15 p.m. Tea. **9 a.m.**

THURSDAY, JUNE 25

MARGATE SCHOOL OF ART. Ninth of twelve lectures on Beauty in Design. "Civic Design." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

FRIDAY, JUNE 26

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Ganges Canal Hydro-Electric Scheme: A System of Rural Electrification." By W. L. Stampe, C.I.E., Chief Engineer, United Provinces. Chairman: The Rt. Hon. Lord Snell. **4.30 p.m.**

TOWN PLANNING INSTITUTE. Annual General Meeting to be held at Caxton Hall, Caxton Street, Westminster, S.W.1. **5.30 p.m.**

SATURDAY, JUNE 27

Sunrise, 4.45 a.m. Sunset, 9.20 p.m.

R.I.B.A., 9 Conduit Street, W.1. Exhibition of designs submitted in the Rome Scholarship Competition. Until July 4.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. Joint excursion with the South-Eastern Society of Architects to Chichester.

TUESDAY, JUNE 30

LONDON SOCIETY, Lancaster House, St. James's, S.W.1. River Trip to King George V. Dock. Leave Westminster Pier at 2 p.m. **2 p.m.**

WEDNESDAY, JULY 1

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Fourth of five lectures on the Art of Making and Using Concrete. "The Effect of Misplacing Reinforcements." By Ewart S. Andrews, A.I.STRUCT.E. 6.30 to 9.30 p.m. Also a demonstration of the mixing, placing, and ramming of concrete will be given at the L.C.C. School of Building, Ferndale Road, Brixton, by H. A. Holt. 2.30 to 5.30 p.m. **2.30 p.m.**

THURSDAY, JULY 2

MARGATE SCHOOL OF ART. Tenth of twelve lectures on Beauty in Design. "Town Planning." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JULY 4

Sunrise 4.47 a.m. Sunset 9.19 p.m.

R.I.B.A., 9 Conduit Street, W.1. Latest date for submission of applications for the maintenance scholarships in architecture.

LIVERPOOL SCHOOL OF ARCHITECTURE. At the Old Blue Coat Buildings, Liverpool. Annual Exhibition of Architectural Drawings to be opened by the Rt. Hon. Arthur Greenwood, P.C., M.P., at 4 p.m. Chairman: The Rt. Rev. the Lord Bishop of Liverpool. Until Saturday, July 18. 10 a.m. to 6 p.m. **4 p.m.**

ROYAL SANITARY INSTITUTE. Forty-second Congress to be held at Glasgow. Until July 11. Papers to be read will include the following: "Architecture and Engineering"; "Hospitals—Planning and Construction"; "Discharge of Sewage into Sea"; "Housing"; "Slum Clearances"; and "Single-Pipe Drainage."

WEDNESDAY, JULY 8

INSTITUTION OF STRUCTURAL ENGINEERS, 10 Upper Belgrave Street, S.W.1. Last of five lectures on the Art of Making and Using Concrete: "The Mechanical Appliances for the handling of concrete on the Job." By Lt.-Colonel R. A. B. Smith, M.I STRUCT.E. **6 p.m.**

THURSDAY, JULY 9

MARGATE SCHOOL OF ART. Eleventh of twelve lectures on Beauty in Design: "Hygiene and Acoustics." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

SATURDAY, JULY 11

Sunrise, 4.55 a.m. Sunset, 9.15 p.m.

MONDAY, JULY 13

INSTITUTION OF MECHANICAL ENGINEERS. Summer Meeting to be held at Cambridge.

THURSDAY, JULY 16

MARGATE SCHOOL OF ART. Last of twelve lectures on Beauty in Design. "Illumination and Colour." By R. Goulburn Lovell, A.R.I.B.A. **5.30 p.m.**

FRIDAY, JULY 17

DESIGN AND INDUSTRIES ASSOCIATION. Short Cruise to Norway, returning July 24.

HAMPSHIRE AND ISLE OF WIGHT ARCHITECTURAL ASSOCIATION. Annual Exhibition to be held at Winchester.

SATURDAY, JULY 18

Sunrise, 5.2 p.m. Sunset, 9.9 a.m.

SOUTH-EASTERN SOCIETY OF ARCHITECTS. Visit to the neighbourhood of Guildford by the Brighton and Guildford Chapters.

TRADE NOTES

Not only does the modern cinema theatre employ the appeal of music to enhance its attractions, but also the psychological and decorative effect of lighting receives increased attention as time goes on. And it is not simply the lighting that is directly concerned with the performance that receives expert consideration, but also lighting in the auditorium.

Of outstanding interest in this connection is the elaborate and advanced colour-lighting scheme devised for the new Capitol Theatre, Didsbury, Manchester, by Messrs. Holophane, Ltd. By means of this complex but comparatively simply-operated system, the auditorium, which is over one hundred feet in length and more than half that in width, is illuminated by a softly-graduated and ever-varying flood of colour, emanating from equipment concealed in large cornices at the two sides of the hall. This lighting equipment is, however, actually threefold, one set being devised with the purpose of supplying a strong reflected light from the white ceiling, capable by that means of lighting the whole of the house. A second set of equipment provides independent concentrated beams on the walls, which may thus be veiled with a set of colours entirely different from those thrown on the ceiling. The third set illumines the interior of the cornices with a subtle combination of hues. In addition, beneath the balcony is a run of colour-light troughing, also capable of being changed in colour-effects as desired.

Apart from the actual lighting fittings, special attention has been given to the fabrics chosen for the seating of the audience. It was important that the material used should change colour in harmony with the lighting scheme. The decorative plasterwork has also been designed with a view to co-operation with the rest of the lighting arrangements.

The auditorium colour-lighting is controlled by the Holophane automatic controller, which makes possible by the minimum of manual control a maximum of variety of effects, yet allows of the introduction of such combinations as may be particularly appropriate for any special purpose or occasion.

The entrance vestibule, pay-boxes, staircases, landings, foyer and café are provided with more normal lighting by means of Holophane fittings, while the flood-lighting of the exterior, surmounted by the beacon-like pylons, is also carried out by the same firm.

The proscenium opening is so arranged that from both sides of coves in the arch a flood of coloured light is projected from a concealed source, and plays upon a broken surface within the coves, with remarkable colour-effects. In addition to the proscenium lighting an opportunity for further effects is provided by the open plasterwork organ grilles. Behind these yet another set of three-colour lighting is arranged, to play upon the rucked surface of gauze curtains hung appropriately for the purpose.

The lighting of the stage itself consists of Holophane footlights, three-top battens and portable three-colour ground rows. In addition there are a number of stage dips and other supplementary lights, such as provision for illuminating the acting area of the stage by means of Holophane "baby spots" set above the auditorium ceiling. The dimmer-switchboard placed adjacent to the projector-room controls the stage lighting.

The stage curtains and drapery, because of their importance in connection with the lighting, are included in the scheme, and for their designing Messrs. Holophane are responsible, as for the actual lighting. The scenic settings too are planned by them, and the spectacular effect of the whole scheme is due to this unity of responsibility in this important aspect of the work.

So important an affair is the reliable and constant supply of electric power, not alone for ordinary lighting purposes and the needs of the screen, but also for the operation of lifts, for the organ, for the café kitchen, and in particular for the special colour-lighting effects here mentioned, that a special 6,600-volt high-tension sub-station has been erected close to the cinema to provide the necessary electricity, of which the consumption in this up-to-date enterprise is naturally very considerable.

*

Owing to increase in business in London, it has been necessary for Messrs. A. E. Edmonds & Co., Ltd., shopfitters and museum fitters, to obtain larger premises, situated on the ground floor at 18 Featherstone Buildings, High Holborn, W.C.1.

*

Messrs. Clark and Fenn, Ltd., of London, theatre decorators, have opened a large factory at Ainsdale, Southport, near Liverpool, where they hope to further their activities. This will ensure an even better service for architects and clients than heretofore in the northern areas, as they are equipping a studio from amongst their London staff.

*

Messrs. May Oil Burner (England) Ltd., the distributors of the Quiet May fully-automatic oil burner, inform us that owing to the steady growth of their business, they are moving very shortly to more commodious and modern offices at Lion House, 72/75 Red Lion Street, Holborn: 250 yards west of Chancery Lane Tube Station, and 400 yards east of Holborn Tube Station.

*

Messrs. British Insulated Cables, Ltd., of Prescot, have prepared a cinematograph film for exhibition in South America, Australia, New Zealand, India, South Africa, and other countries, designed to show how British electric cables are manufactured, and the research work connected therewith. The film also includes many interesting scenes depicting the erection of towers and overhead lines on the Central Scottish Transmission Scheme. A preliminary London showing will be given at the New Scala theatre on Thursday, June 25, at 3 p.m.

*

We are informed that the connection between Marryat and Scott, Ltd., and John Bennie, Ltd., has been severed, and that the resignation of Mr. Murray D. Scott and Mr. Howard Marryat from the board of the latter company has been accepted.

THE BUILDINGS ILLUSTRATED

Following are the names of the general contractors and some of the sub-contractors for the buildings illustrated in this issue:

Finsbury Public Baths (pages 878–881). General contractors, Allen Fairhead and Sons, Ltd. Engineers, Z. D. Berry and Sons. Sub-contractors: Archibald D. Dawnay and Sons, Ltd., steelwork; Davis, Bennett & Co., Ltd., slipper baths; Nettlefold and Sons, Ltd., door furniture; Finch & Co., Ltd., sanitary fittings; Duncan Watson & Co., electric lighting; Birmingham Guild, bronze lettering; Brookes, Ltd., terrazzo; Ragusa Asphalte Paving Co., Ltd., asphalt; Stone and Marble Co., roman stone and marble paving; Roberts Adlard & Co., roof tiling; Luxfer, Ltd., copper glazing; H. H. Martyn & Co., Ltd., fibrous plaster; Waygood - Otis, Ltd., electric hoist; Patent Victoria Stone Co., Ltd., reconstructed stone.

"Capitol" Theatre, Parrswood, Didsbury (pages 882–885). Sub-contractors: Holophane, Ltd., colour lighting; Wm. Hill and Son, and Norman and Beard, Ltd., Christie unit organ; Geo. Pixton & Co., Ltd., seating and stage draperies; Banister, Walton & Co., Ltd., constructional steelwork; W. J. Furse & Co., Ltd., lifts, curtain control and screen frame; Middleton Fireclay Co., Ltd., terra-cotta; Saunders and Taylor, Ltd., heating; Henry Hargreaves and Sons, ventilating; Sturtevant Engineering Co., Ltd., cleaning plant; J. Lenegan, fibre plaster; Mather and Platt, fire appliances; Reliance Telephone Co., Ltd., telephones; Williams and Williams, Ltd., steel windows; F. Butterworth, Ltd., joinery; Chloride Electrical Storage Co., Ltd., safety lighting; Rowe Bros., Ltd., Sloan valves; Kershaws, electric wiring; Laidlaw and Thomson, Ltd., door fittings; Charles Lightfoot, Ltd., leaded lights; Baxendales & Co., Ltd., sanitary appliances; Insulite Products Corporation, Insulite; A. and O. Stefanuttie & Co., Ltd., terrazzo; T. and R. Boote, Ltd., wall tiles; Thos. Firth and John Brown, Ltd., kicking plates; R. H. Lord and Son (Asphalters), Ltd., asphalt; Brilliant Sign Co. (1907), Ltd., signs; G. and T. Earle & Co., Ltd., cement; Grip Steel Bar Co., Ltd., reinforcing bars; Wm. Hayward & Sons, Ltd., area railings.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS

The BATTERSEA B.C. is to erect, by direct labour, the first block of thirty-nine tenements on the St. John's College site, at an estimated cost of £26,970.

The BRENTFORD AND CHISWICK U.D.C. has asked the surveyor to prepare plans for the erection of flats or houses on a site in Church Walk.

Messrs. J. Harris & Co. are to erect a Spiritualist Church at the corner of Stone and Shrewsbury Roads, EAST HAM.

Plans passed by the EAST HAM Corporation: Two houses, Berkeley Road, for Mr. R. C. Turner Gordon; four houses, Napier Road, and extensions, 311–13 Barking Road, for Mr. R. Slater; eight houses, Kennard Street, for Mr. R. C. Turner Gordon; five shops and houses, Katherine Road, for Mr. J. Aldridge.

The Health Ministry is to hold an inquiry into the proposal of the EPSOM U.D.C. to erect municipal offices, at a cost of £40,500.

The Bethnal Green and East London Housing Association, Ltd., is to erect twenty-four flats in Devonshire Street, HACKNEY.

The L.C.C. is to prepare a comprehensive scheme for the improvement of dock approaches in the POPLAR district.

The SHOREDITCH B.C. has obtained sanction for a loan of £9,000 for the erection of a dental hospital in Laburnum Street.

SOUTHERN COUNTIES

Plans passed by the DARTFORD U.D.C.: Two houses, Knowle Road, for Messrs. H. C. Wright and Company, Ltd.; nurses' room, Livingstone Hospital, East Hill, for the governors; two bungalows, Summerhouse Drive, for Mr. W. H. Williams; two houses, Shepherds Lane, for Ideal Homesteads, Ltd.; extensions, Biscuit factory, Hythe Street, for Messrs. Daren, Ltd.; two houses, Knowle Road, for Mr. B. F. Servant; club premises, Spital Street, for the Dartford Conservative Club.

Reporting upon the scheme for the construction of the EGHAM by-pass, the Surrey C.C. states that the scheme evolved by Sir Edwin Lutyens has been adopted in order to preserve the amenities of the district. The cost of the scheme will be £63,000.

Plans passed by the FARNHAM U.D.C.: New premises, Runfold, for Mr. G. H. Perkins; house, Tilford Road, for Mr. H. H. Silverston; house, Waverley Road, for Mr. A. J. Lehman; house, Lancaster Avenue, for Mr. A. H. Larkin; house, Wings Road, for Mr. F. W. Rollings.

The GRAVESEND Corporation recommends leasing a site on the King's Farm housing estate to Messrs. Truman, Hanbury, Buxton & Co., Ltd., for the erection of a public-house, at an estimated cost of £16,000.

Plans passed by the HASTINGS Corporation: Four houses, St. Helen's Road, for Mr. P. H. Oxley; ten houses, Bexleigh estate, for Mr. H. H. Ford; two houses, St. Helens Road, for Mr. J. S. D. Hicks; two houses, Filsham Road, and four houses, St. Helens Road, for Messrs. Jeffery and Bowcock; two houses, Bexhill Road, for Messrs. Hy. Ward, Son and Wray.

Plans passed by the HERNE BAY U.D.C.: House, Queensbridge Drive, for Mr. T. G. Cullingham; two bungalows, Pier Avenue, for Messrs. Goodwin and Russell, Ltd.; two houses, Linden Avenue, for Mr. E. Nicholas; two houses, Canterbury Road, for Mr. B. W. Twigg; alterations and additions, 155–57 Mortimer Street, for Messrs. F. W. Woolworth & Co., Ltd.

The Ministry of Health is to hold an inquiry into the scheme of the PORTSMOUTH Corporation to construct a sea wall and promenade, at a cost of £18,860.

Plans passed by PORTSMOUTH Corporation: Six houses, Brecon Avenue, for Mr. H. R. Horsey; thirty-two verandahs and eighty-six garages, Kirby Road, for Mr. H. Townsend; four houses, Hawke Street, for Mr. A. A. Grubb; eight houses, off Tangier Road, for Mr. S. J. Todd; ten houses, off Tangier Road, for Mr. V. Dye; hall, Kingston Crescent, for Messrs. John Croad, Ltd.; seventy-two houses, Hawthorne Crescent, Cosham, for Messrs. G. and W. Mitchell; showroom and offices, London Road, for Messrs. Wards Bros.; seven houses, Seymour Street, for Mr. D. Davies.

SOUTH-WESTERN COUNTIES

The BRISTOL Corporation is to prepare a clearance scheme for the Hope Square area.

The BRISTOL Corporation is to erect a further 250 houses on the Southmead estate, by direct labour, at a cost of £92,500.

The Air Ministry has approved the plans of the PLYMOUTH Corporation for the layout of the aerodrome and the erection of a hangar and office accommodation.

Plans passed by the PLYMOUTH Corporation: Additions, laboratories, The Hoe, for Marine Biological Association; four houses, Somerset Place, for Mr. W. H. Webb; eight houses, Glendower Road, for Messrs. Hender Bros.; store, Cattedown, for British Oxygen Co.; alterations, Oxford Inn, Claremont Street, for Messrs. Norman and Pring; forty-nine houses, Higher Street, Budeaux, for Mr. W. O. Sims; shop premises, 43 George Street, for Messrs. H. E. Randall, Ltd.

EASTERN COUNTIES

The COLCHESTER Education Committee has obtained a site in Harwich Road, for the erection of an elementary school.

The COLCHESTER Education Committee has approved the plans of Messrs. Duncan Clark and Beckett for the erection of a selective modern school in Barrington Road.

Plans passed by the COLCHESTER Corporation: Four houses, Castle Road, for Mr. F. Humm; two houses, Shrub End Road, for Mr. G. Hearsum; extensions, Sun Works, Maidenburgh Street, for Mr. R. K. Derham.

The COLCHESTER Corporation has obtained sanction for a loan of £6,190 for the provision of new electricity offices.

MIDLAND COUNTIES

The BURTON-ON-TRENT Corporation is to erect thirty-six houses on the Woods Lane site.

The BIRMINGHAM Corporation has acquired housing sites at Messuage Farm, Perry Barr, for the erection of 400 houses, and at Mill Pool Hill, for the erection of forty-two houses.

The Staffordshire Education Committee is to erect an elementary school in Coppice Lane, QUARRY BANK.

The TIPTON U.D.C. is to construct swimming and slipper baths, at a cost of £23,500.

Messrs. R. J. Patchett, Ltd., are to erect 456 houses at Horton Bank Top, BRADFORD.

The BRADFORD Corporation has passed plans prepared by the city architect for the erection of seventy-eight tenements on the White Abbey cleared area, at a cost of £25,510.

The Board of Education has approved the plans of the BIRKENHEAD Education Committee for the proposed central school in Alpha Drive.

The BIRKENHEAD Education Committee has submitted plans of the proposed extension of the Brassey Street central school to the Board of Education for approval.

Plans passed at BIRKENHEAD: Four houses, Reservoir Road; house, Pensby Road; extensions, rear of Emmanuel Missionary Training Home, Palm Grove; three houses, Inglemere Road; additions, Recreation Hall, adjoining St. Joseph's School, Dingle Road; alterations, Crescent Hall, Spencer Avenue; additions to paint works, Claughton Road.

NORTHERN COUNTIES

The CARLISLE Corporation has selected the Old Greystoke site for the proposed central transport depot, estimated to cost £14,500.

The CARLISLE Watch Committee has approved plans for the erection of new police and fire stations, including a new court and housing for firemen in Spring Gardens Lane and George Street, at an estimated cost of £45,000.

The CARLISLE Corporation has obtained a site of about three acres of land at Scalegate Road, for the erection of houses.

The DUKINFIELD Corporation is to erect ninety-two houses on the Astley Mill estate.

The HULL Corporation is to ask the Board of Control to sanction the acquisition of the whole of the Winestead estate of 158 acres of land for the provision of a colony for mental defectives.

The HULL Corporation is to submit the plans by the city architect for a new nurses' home and mortuary at the mental hospital, to the Board of Control for approval.

The L.M.S. is to erect a new hotel at MORECAMBE in connection with the harbour improvement scheme.

The ROCHDALE Corporation is to erect 102 houses on the Spotland Tops estate.

The ROTHERHAM Corporation is to erect seventy houses on the South Street site.

Plans passed by ROTHERHAM Corporation: Four houses, Ledsham Road, for Messrs. G. Bilton and Sons; seven-story mill, Westgate, for Messrs. Robinson Bros., Ltd.; buildings, Millmoor Football Grounds, for Greyhound Racing Co., Ltd.; rebuilding Effingham Arms Hotel, Frederick Street, for Truswell's Brewery Co., Ltd.; rolling mills, Forge Lane, for Rotherham Forge and Rolling Mills Co., Ltd.; two houses, Old Wortley Road, for Mr. E. Atton; four bungalows, Old Wortley Road, for Mr. R. Harrington.

The SCARBOROUGH Corporation is considering various sites for the proposed new swimming baths, estimated to cost £50,000.

The SEFTON R.D.C. is to erect ten houses in Fleetwoods Lane.

Plans passed at SHEFFIELD: Two houses, Whirlowdale Road, for Mr. E. Walker; house, Strelley Road, for Mr. J. T. Redmile; six houses, Brooklands Avenue, for Mr. Riley Watson; two houses, Haugh Lane, for Mr. J. T. Redmile; six houses, Donnington Road, for Mr. J. C. Mason; eleven houses, Strelley Avenue, for Messrs. J. Marsh and Son; three houses and shops, Nether Shire Lane, for Mr. J. Maxfield; six houses, Marsh House Road, for Mr. H. E. Mottram.

The SHIPLEY U.D.C. is to erect 100 houses on the two council estates.

The SOUTH SHIELDS Corporation is to erect sixteen houses on various vacant sites on housing estates, at a cost of £5,600.

The SOUTH SHIELDS Corporation is to consider a clearance scheme for the Mitre Square area.

The LIVERPOOL Corporation is to erect 498 houses on the Ackers Hall estate.

The WALLASEY Education Committee is to enlarge the Oldershaw school, Valkyrie Road, from plans prepared by Messrs. Rees and Holt.

The MANCHESTER Corporation is to erect 126 houses on the Heaton Park estate, at a cost of £59,000, to rehouse people now living in hutments.

The SHEFFIELD Corporation has obtained sanction to borrow £312,000 for the erection of 816 houses on the Shiregreen estate.

The SHEFFIELD Corporation is to erect 448 houses on the Wybourn estate, from plans prepared by Mr. W. G. Davies, the city architect.

The WALLASEY Corporation has purchased land in Pasture Road for the erection of 100 houses.

The WEST BROMWICH Corporation is to erect 190 houses on various estates from plans prepared by Mr. A. D. Greatorex.

MISCELLANEOUS

The BANGOR Corporation is to erect thirty-two houses on the Glynne Road estate from plans prepared by Mr. B. Price Davies, the city architect.

Mr. Harley Strickland, the Breconshire county architect, has prepared plans for the erection of a school and clinic at CEFN COED, near Merthyr.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers. The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I s. d.	II s. d.
A_1	ABERDARE	S. Wales & M.	1 6	1 1½
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
B	Abingdon ..	S. Counties	1 4½	1 0½
A	Accrington	N.W. Counties	1 6½	1 2
A_2	Addlestone	S. Counties	1 5	1 0¾
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11¼
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
A_2	Atherstone	Mid. Counties	1 5	1 0¾
B_4	Aylesbury ..	S. Counties	1 3	11¼
B_1	BANBURY	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0¾
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke	S.W. Counties	1 4	1 0
A_2	Bath ..	S.W. Counties	1 5	1 0¾
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5	1 0¾
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1¼
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	Mid. Counties	1 3	11¼
	Birkenhead	N.W. Counties	*1 8½	1 3¼
A	Birmingham	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth ..	N.E. Coast	1 6½	1 2
B_2	Bognor ..	S. Counties	1 3½	11¾
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0¾
A_2	Bournemouth	S. Counties	1 5	1 0¾
B_2	Bovey Tracey	S.W. Counties	1 3½	11¾
A	Bradford ..	Yorkshire	1 6½	1 2
A_2	Brentwood	E. Counties	1 5½	1 1¼
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B_2	Bridgwater	S.W. Counties	1 3½	11¾
A_1	Bridlington	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5	1 0¾
A	Bristol ..	S.W. Counties	1 6½	1 2
B_2	Brixham ..	S.W. Counties	1 3	11¼
A_2	Bromsgrove	Mid. Counties	1 5½	1 1½
C	Bromyard ..	Mid. Counties	1 2½	11
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury ..	N.W. Counties	1 6½	1 2
A_1	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE	E. Counties	1 6	1 1½
B_2	Canterbury	S. Counties	1 3½	11¾
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen	S. Wales & M.	1 4½	1 0½
B_1	Carnarvon ..	N.W. Counties	1 4	1 0
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
B	Chatham ..	S. Counties	1 4½	1 0½
B	Chelmsford	E. Counties	1 4½	1 0½
A_2	Cheltenham	S.W. Counties	1 5	1 0¾
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield	Mid. Counties	1 6½	1 2
B_2	Chichester ..	S. Counties	1 3½	11¾
A	Chorley ..	N.W. Counties	1 6½	1 2
B_2	Cirencester	S. Counties	1 3½	11¾
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5	1 0¾
A	Colne ..	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay	N.W. Counties	1 5	1 0¾
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5	1 0¾
A	Coventry ..	Mid. Counties	1 6½	1 2
A_1	Crewe ..	N.W. Counties	1 5½	1 1¼
A_2	Cumberland	N.W. Counties	1 5	1 0¾
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_2	Deal ..	S. Counties	1 3½	11¾
A_2	Denbigh ..	N.W. Counties	1 5	1 0¾
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_2	Dorchester	S.W. Counties	1 3½	11¾
A_2	Driffield ..	Yorkshire	1 5	1 0¾
A_2	Droitwich ..	Mid. Counties	1 5½	1 1¼
A	Dudley ..	Mid. Counties	1 6½	1 2
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE	S. Counties	1 5	1 0¾
A_1	Ebbw Vale	S. Wales & M.	1 6	1 1½
A	Edinburgh	Scotland	1 6½	1 2
A_1	E. Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter ..	S.W. Counties	*1 5½	1 1¼
B_1	Exmouth ..	S.W. Counties	1 4	1 0
A_2	FELIXSTOWE	E. Counties	1 5	1 0¾
A_2	Filey	Yorkshire	1 5	1 0¾
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_2	Folkestone	S. Counties	1 3½	11¾
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11¾
A	GATESHEAD	N.E. Coast	1 6½	1 2
B_1	Gillingham	S. Counties	1 4	1 0
A_2	Gloucester ..	S.W. Counties	1 5½	1 1¼
A_2	Goole ..	Yorkshire	1 5½	1 1¼
A_2	Gosport ..	S. Counties	1 5	1 0¾
A_2	Grantham ..	Mid. Counties	1 5	1 0¾
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B_1	Guildford ..	S. Counties	1 4	1 0
A	HALIFAX	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_2	Hastings ..	S. Counties	1 3½	11¾
A_2	Hatfield ..	S. Counties	1 5	1 0¾
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5	1 0¾
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield	Yorkshire	1 6½	1 2
A	Hull ..	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5	1 0¾
B_2	Isle of Wight	S. Counties	1 3	11¼
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY	Yorkshire	1 6½	1 2
B	Kendal ..	N.W. Counties	1 4½	1 0½
B	Keswick ..	N.W. Counties	1 4½	1 0½
A_2	Kettering ..	Mid. Counties	1 5½	1 1¼
A_2	Kidderminster	Mid. Counties	1 5½	1 1¼
B_2	King's Lynn	E. Counties	1 3½	11¾
A	LANCASTER	N.W. Counties	1 6½	1 2
A_2	Leamington	Mid. Counties	1 5½	1 1¼
A	Leeds ..	Yorkshire	1 6½	1 2
A	Leek ..	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh ..	N.W. Counties	1 6½	1 2
B_2	Lewes ..	S. Counties	1 3	11¼
A_2	Lichfield ..	Mid. Counties	1 5½	1 1¼
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8½	1 3¼
A_2	Llandudno	N.W. Counties	1 5	1 0¾
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12–15 miles radius)		1 7½	1 2¾
A	Long Eaton	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_2	Luton ..	E. Counties	1 5	1 0¾
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
B	Maidstone ..	S. Counties	1 4½	1 0½
A_2	Malvern ..	Mid. Counties	1 5	1 0¾
A	Manchester	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A_2	Matlock ..	Mid. Counties	1 5	1 0¾
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich	N.W. Counties	1 5½	1 1¼
B_2	Minehead ..	S.W. Counties	1 3½	11¼
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11¼
A	Morecambe	N.W. Counties	1 6½	1 2
A_2	NANTWICH	N.W. Counties	1 5½	1 1¼
A	Neath ..	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton	Yorkshire	1 6½	1 2
A_1	Northampton	Mid. Counties	1 6	1 1½
A	North Staffs.	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_2	Norwich ..	E. Counties	1 5½	1 1¼
A	Nottingham	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A_2	OAKHAM ..	Mid. Counties	1 5	1 0¾
A_2	Oldham ..	N.W. Counties	1 5½	1 1¼
A	Oswestry ..	N.W. Counties	1 6½	1 2
A_2	Oxford ..	S. Counties	1 5½	1 1¼
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11¼
A	Perth ..	Scotland	*1 6½	1 2
A_2	Peterborough	E. Counties	1 5½	1 1¼
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract	Yorkshire	1 6½	1 2
A_1	Pontypridd	S. Wales & M.	1 6	1 1½
A_2	Portsmouth	S. Counties	1 5	1 0¾
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING	S. Counties	1 5	1 0¾
B	Reigate ..	S. Counties	1 4½	1 0½
A_2	Retford ..	Mid. Counties	1 5	1 0¾
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A_2	Ripon ..	Yorkshire	1 5	1 0¾
A	Rochdale ..	N.W. Counties	1 6½	1 2
B_1	Rochester ..	S. Counties	1 4	1 0
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5	1 0¾
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_2	ST. ALBANS	E. Counties	1 5½	1 1¼
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_2	Salisbury ..	S.W. Counties	1 3	11¼
A_1	Scarborough	Yorkshire	1 6	1 1½
A	Scunthorpe	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury	Mid. Counties	1 5½	1 1¼
A_2	Skipton ..	Yorkshire	1 5½	1 1¼
A_2	Slough ..	S. Counties	1 5	1 0¾
A_2	Solihull ..	Mid. Counties	1 5½	1 1¼
A_2	South'pton	S. Counties	1 5	1 0¾
A_2	Southend-on-Sea	E. Counties	1 5½	1 1¼
B	Stroud ..	S.W. Counties	1 4½	1 0½
A	Sunderland	N.E. Coast	1 6½	1 2
A	Swadlincote	Mid. Counties	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A_2	Swindon ..	S.W. Counties	1 5	1 0¾
A_1	TAMWORTH	N.W. Counties	1 6	1 1½
B_1	Taunton ..	S.W. Counties	1 4	1 0
A	Teesside Dist.	N.E. Counties	1 6½	1 2
A_2	Teignmouth	S.W. Coast	1 5½	1 0¾
A	Todmorden	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
C	Truro ..	S.W. Counties	1 2½	11
B	Tunbridge Wells ..	S. Counties	1 4½	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington	N.W. Counties	1 6½	1 2
A_2	Warwick ..	Mid. Counties	1 5½	1 1¼
A_2	Wellingborough	Mid. Counties	1 5½	1 1¼
A_2	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s-Mare	S.W. Counties	1 5½	1 1¼
A_2	Whitby ..	Yorkshire	1 5½	1 1¼
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B_1	Winchester	S. Counties	1 4	1 0
A_2	Windsor ..	S. Counties	1 5	1 0¾
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester	Mid. Counties	1 5½	1 1¼
A_2	Worksop ..	Yorkshire	1 5	1 0¾
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A_2	Wycombe ..	S. Counties	1 5	1 0¾
B_1	YARMOUTH	E. Counties	1 4	1 0
B_2	Yeovil ..	S.W. Counties	1 3½	11¾
A	York ..	Yorkshire	1 6½	1 2

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given. The rates for every trade in any given area will be sent on request.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices of materials are for materials of good quality, and include delivery to site in Central London Area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

	£ s. d.
Bricklayer . . . . per hour	1 8
Carpenter . . . . ,,	1 8
Joiner . . . . ,,	1 8
Machinist . . . . ,,	1 9
Mason (Banker) . . . . ,,	1 8
,, (Fixer) . . . . ,,	1 9
Plumber . . . . ,,	1 8
Painter . . . . ,,	1 7
Paperhanger . . . . ,,	1 8
Glazier . . . . ,,	1 8
Slater . . . . ,,	1 8
Scaffolder . . . . ,,	1 4
Timberman . . . . ,,	1 4
Navvy . . . . ,,	1 3
General Labourer . . . . ,,	1 3
Lorryman . . . . ,,	1 5½
Crane Driver . . . . ,,	1 7
Watchman . . . . per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

	£ s. d.
Grey Stone Lime . . . per ton	2 8 6
Blue Lias Lime . . . ,,	2 10 6
Hydrated Lime . . . ,,	2 16 0
Portland Cement . . . ,,	2 6 0
Rapid Hardening Cement . . ,,	2 13 6
Thames Ballast . . . per Y.C.	8 9
¾" Crushed Ballast . . . ,,	10 0
Building Sand . . . ,,	10 6
Washed Sand . . . ,,	11 6
2" Broken Brick . . . ,,	9 6
¾" ,, ,, . . . ,,	12 6
Pan Breeze . . . ,,	6 6
Coke Breeze . . . ,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS.

	4"	6"
	s. d.	s. d.
Straight pipes . . per F.R.	1 1	1 6
Bends . . . each	2 10	4 4
Taper bends . . . ,,	6 3	7 2
Rest bends . . . ,,	5 9	8 9
Single junctions . . . ,,	3 9	5 9
Double ,, . . . ,,	5 9	8 9
Straight channels . . . ,,	2 6	3 2
¼" Channel bends . . . ,,	7 8	—
Channel junctions . . . ,,	7 0	12 6
Channel tapers . . . ,,	5 6	7 9
Yard gullies . . . ,,	9 6	11 6
Interceptors . . . ,,	18 6	25 9
Iron drain pipe . . per F.R.	2 3	3 5
Bends . . . each	6 0	13 0
Inspection bends . . ,,	15 3	24 0
Single junctions . . ,,	9 3	18 0
Double junctions . . ,,	14 0	27 6
Lead wool . . . lb.	6	—
Gaskin . . . . ,,	5	—

BRICKLAYER

	£ s. d.
Flettons . . . . per M.	3 1 6
Grooved do. . . . ,,	3 3 6
Stocks, 1st Quality . . . ,,	4 18 6
,, 2nd ,, . . . ,,	4 12 6
Blue Bricks, Pressed . . . ,,	9 18 0
,, Wirecuts . . ,,	8 16 0
,, Brindles . . ,,	8 0 0
,, Bullnose . . ,,	10 8 0
Red Sand-faced Facings . . ,,	7 11 0
Red Rubbers for Arches . . ,,	15 0 0
Multicoloured Facings . . ,,	9 4 0
Luton Facings . . . ,,	8 16 0
Midhurst White Facings . . ,,	5 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st Quality:	
Stretchers . . . ,,	21 10 0
Headers . . . ,,	21 0 0
Bullnose . . . ,,	28 0 0
Double Stretchers . . ,,	30 0 0
Double Headers . . ,,	27 0 0
Glazed Second Quality, *Less* . ,,	1 0 0
,, Buffs and Creams, Add . ,,	2 0 0
,, Other Colours ,, . ,,	5 10 0
2" Breeze Partition Blocks . per Y.S.	1 9
2½" ,, ,, ,, . . ,,	2 0
3" ,, ,, ,, . . ,,	2 3
4" ,, ,, ,, . . ,,	3 0

MASON

The following d/d F.O.R. at Nine Elms:	s. d.
Portland stone, Whitbed . . . F.C.	4 6
,, ,, Basebed . . . ,,	4 9
Bath stone . . . . ,,	2 11
York stone . . . . ,,	6 9
,, Sawn templates . . ,,	7 6
,, Paving, 2" . . . F.S.	1 8
,, ,, 3" . . . ,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

	£ s. d.
24" × 12" Duchesses . . per M.	31 0 0
22" × 12" Marchioneases . ,,	28 0 0
20" × 10" Countesses . ,,	20 5 0
18" × 10" Viscountesses . ,,	17 0 0
18" × 9" Ladies . . ,,	15 0 0
Westmorland green (random sizes) per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:	
20"× 10" medium grey per 1,000 (actual)	26 0 0
,, green . . ,,	27 15 0
Best machine roofing tiles . . ,,	5 0 0
Best hand-made do. . . . ,,	5 10 0
Hips and valleys . . . each	9½
,, hand-made . . . ,,	10
Nails, compo . . . . lb.	4
,, copper . . . . ,,	2 0

CARPENTER AND JOINER

	£ s. d
Good carcassing timber . . F.C.	2 6
Birch . . . as 1" F.S.	9
Deal, Joiner's, . . . ,, ,,	5
,, ,, 2nds . . ,, ,,	4
Mahogany, Honduras . . ,, ,,	1 3
,, African . . ,, ,,	1 1
,, Cuban . . ,, ,,	2 6
Oak, plain American . . ,, ,,	1 0
,, Figured ,, . . ,, ,,	1 3
,, Plain Japanese . . ,, ,,	1 2
,, Figured ,, . . ,, ,,	1 5
,, Austrian wainscot . . ,, ,,	1 6
,, English ,, . . ,, ,,	1 11
Pine, Yellow . . . ,, ,,	1 0
,, Oregon . . . ,, ,,	4
,, British Columbian . . ,, ,,	4
Teak, Moulmein . . . ,, ,,	1 3
,, Burma . . . ,, ,,	1 2
Walnut, American . . ,, ,,	2 3
,, French . . . ,, ,,	2 3
Whitewood, American . . ,, ,,	1 1
Deal floorings, ¾" . . . Sq.	1 1 0
,, 1" . . . ,,	1 3 6
,, 1¼" . . . ,,	1 11 0
,, 1½" . . . ,,	1 15 0
Deal matchings, ¾" . . . ,,	16 0
,, 1" . . . ,,	17 6
Rough boarding, ¾" . . . ,,	1 6 0
,, 1" . . . ,,	18 0
,, 1¼" . . . ,,	1 0 0
	1 8 0

Plywood, per ft. sup.

Thickness	¼"			½"			⅝"			¾"		
Qualities	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	3½	3	2	5	4	3	6½	5½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4½	9½	7½	–	1/0½	10	–
Figured Oak 1 side	8½	7	–	10	8	–	11½	–	–	1/6	–	–
Plain Oak 1 side	6½	6	–	7½	7	–	9½	–	–	1/0	–	–
Oregon Pine	5	4	–	5½	5	–	6	–	–	–	–	–

	d.
Scotch glue . . . . . lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices, from which should be deducted the various percentages as set forth below.)

	¼"	⅜"	½"	¾"	1"	1¼"	2"
Tubes, 2'–14' long, per ft. run	4	5½	9½	1/1	1/10		
Pieces, 12"–23½" long, each	10	1/1	1/11	2/8	4/9		
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–		
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3		
,, ,, 3"–11½" long ,,	8	10	1/5	1/11	3/6		
Bends . . ,,	8	11	1/7½	2/7½	5/2		
Springs not socketed ,,	5	7	1/1½	1/11½	3/11		
Socket union . ,,	2/–	3/–	5/6	6/9	10/–		
Elbows, square . ,,	10	1/1	1/6	2/2	4/3		
Tees . . ,,	1/–	1/3	1/10	2/6	5/1		
Crosses . . ,,	2/2	2/9	4/1	5/6	10/6		
Plain sockets and nipples ,,	3	4	6	8	1/3		
Diminished sockets ,,	4	6	9	1/–	2/–		
Flanges . . ,,	9	1/–	1/4	1/9	2/9		
Caps . . ,,	3½	5	8	1/–	2/–		
Backnuts . . ,,	2	3	5	6	1/1		
Iron main cocks . ,,	1/6	2/3	4/2	5/4	11/6		
,, ,, with brass plugs ,,	—	4/–	7/6	10/–	21/–		

Discounts:

TUBES.

	Per cent.		Per cent.
Gas . . .	62½	Galvanized gas .	50
Water . . .	58½	,, water .	45
Steam . .	55	,, steam .	40

FITTINGS.

Gas . . .	57½	Galvanized gas .	47½
Water . . .	54½	,, water .	42½
Steam . . .	47½	,, steam .	37½

SMITH AND FOUNDER—*continued.*

	s. d.		s. d.
Rolled steel joists cut to length . .	cwt.	9	6
Mild steel reinforcing rods, ¼" . . .	,,	10	0
,, ,, ⅜" . . .	,,	9	9
,, ,, ½" . . .	,,	9	6
,, ,, ⅝" . . .	,,	9	0
,, ,, ¾" . . .	,,	9	0
,, ,, 1" . . .	,,	9	0
,, ,, 1¼" . . .	,,	9	0
,, ,, 1½" . . .	,,	9	0

	3"	4"
	s. d.	s. d.
Cast-iron rain-water pipes of ordinary thickness metal .	F.R. 7	10
Shoes	each 2 3	3 3
Anti-splash shoes . .	,, 5 0	8 6
Boots	,, 3 3	4 6
Bends	,, 2 9	4 0
,, with access door . .	,, —	6 9
Heads	,, 4 0	5 0
Swan-necks up to 9" offsets .	,, 4 0	6 3
Plinth bends, 4½" to 6" . .	,, 4 0	5 6
Half-round rain-water gutters of ordinary thickness metal .	F.R. 5	6
Stop ends	each 6	7
Angles	,, 1 7	1 11
Obtuse angles . . .	,, 2 0	2 6
Outlets	,, 1 9	2 3

PLUMBER

	£ s. d.
Lead, milled sheet . . . cwt.	19 0
,, drawn pipes . . ,,	19 6
,, soil pipe . . ,,	22 6
,, scrap . . ,,	9 0
Solder, plumbers' . . . lb.	11
,, fine do. . . ,,	1 3
Copper, sheet . . . ,,	1 6
,, tubes . . ,,	1 4

L.C.C. soil and waste pipes:	3"	4"	6"
	s. d.	s. d.	s. d.
Plain cast . . F.R.	1 0	1 2	2 6
Coated . . ,,	1 1	1 3	2 8
Galvanized . . ,,	2 0	2 6	4 6
Holderbats . . each	3 10	4 0	4 9
Bends . . . ,,	3 9	5 3	10 3
Shoes . . . ,,	2 10	4 4	9 6
Heads . . . ,,	4 8	8 5	12 9

PLASTERER

	£ s. d.
Lime, chalk . . . per ton	2 8 6
Plaster, coarse . . . ,,	2 10 6
,, fine . . . ,,	5 10 0
Hydrated lime . . . ,,	2 16 0
Sirapite . . . . ,,	3 10 0
Keene's cement . . . ,,	5 10 0
Sand, washed . . . Y.C.	11 6
Hair . . . . lb.	6
Laths, sawn . . . bundle	2 4
,, rent . . . ,,	3 9
Lath nails . . . . lb.	3½

GLAZIER

	s. d.		s. d.
Sheet glass, 21 oz. . . F.S.			3½
,, ,, 26 oz. . . ,,			4½
Arctic glass . . . ,,			5
Cathedral glass . . ,,			6
Hartley's rough rolled . ,,			9
Do. wired plate . . ,,			1 3
¼" Polished plate, n/e 1 ,,	1 0	to	1 3
,, ,, 2 ,,	1 2	,,	1 7
,, ,, 3 ,,	1 7	,,	2 5
,, ,, 4 ,,	2 1	,,	2 11
,, ,, 6 ,,	2 3	,,	3 2
,, ,, 8 ,,	2 6	,,	3 6
,, ,, 12 ,,	2 9	,,	3 8
,, ,, 20 ,,	3 0	,,	3 11
,, ,, 45 ,,	3 3	,,	4 1
,, ,, 65 ,,	3 7	,,	4 6
,, ,, 90 ,,	3 10	,,	4 9
,, ,, 100 ,,	4 0	,,	5 0
Vita glass, sheet, n/e 1 ,,			1 0
,, ,, ,, 2 ,,			1 3
,, ,, ,, over 2 ,,			1 9
,, ,, plate, n/e 1 ,,			1 6
,, ,, ,, 2 ,,			3 0
,, ,, ,, 5 ,,			4 0
,, ,, ,, 7 ,,			5 0
,, ,, ,, 15 ,,			6 0
,, ,, ,, over 15 ,,			7 6
Putty, linseed oil . . lb.			3

PAINTER

	£ s d.
White lead . . . . cwt.	2 8 0
Linseed oil . . . . gall.	3 3
Boiled oil . . . . ,,	4 1
Turpentine . . . . ,,	3 8
Patent knotting . . . ,,	14 0
Distemper, washable . . cwt.	3 0 0
,, ordinary . . ,,	2 5 0
Whitening . . . . ,,	4 0
Size, double . . . firkin	3 0
Copal varnish . . . gall.	13 0
Flat varnish . . . ,,	14 0
Outside varnish . . . ,,	16 0
White enamel . . . ,,	1 15 0
Ready-mixed paint . . ,,	13 6
Brunswick black . . . ,,	17 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London Area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12" deep and cart away	Y.S.	3 6
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	10 0
" to form basement n/e 5' 0" deep and cart away	"	11 0
" " 10' 0" deep and cart away	"	11 6
" " 15' 0" deep and cart away	"	12 0
If in stiff clay	add	3 0
If in underpinning	"	5 0
Digging, return, fill and ram	"	5 0
Planking and strutting to sides of excavation	F.S.	1 0
" " to pier holes	"	6
" " to trenches	"	6
" " extra, only if left in	"	3½
Hardcore, filled in and rammed	Y.C.	14 0
Portland cement concrete in foundations (6-1)	"	1 13 6
" " " (4-2-1)	"	1 18 6
" " " underpinning	"	2 2 0
Finishing surface of concrete, spade face	Y.S.	9

DRAINLAYER

		4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 8	2 6
Extra, only for bends	Each	2 8	3 9
" junctions	"	3 9	4 6
Gullies and gratings	"	17 6	19 9
Cast iron drains, and laying and jointing	F.R.	5 6	7 0
Extra, only for bends	Each	12 6	18 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	32 0 0
" " in cement	"	34 0 0
" Stocks in cement	"	41 10 0
" Blues in cement	"	62 0 0
Extra only for circular on plan	"	3 0 0
" backing to masonry	"	2 0 0
" raising on old walls	"	3 0 0
" underpinning	"	10 0 0
Fair Face and pointing internally	F.S.	3
Extra only for picked stock facings	"	1 0
" red brick facings	"	1 6
" blue brick facings	"	1 9
" glazed brick facings	"	4 6
Tuck pointing	"	10
Weather pointing	"	4
Slate dampcourse	"	1 0
Vertical dampcourse	"	1 3

ASPHALTER

		s. d.
½" Horizontal dampcourse	Y.S.	5 6
½" Vertical dampcourse	"	7 6
½" paving or flat	"	5 6
1" paving or flat	"	6 6
1" × 6" skirting	F.R.	1 0
Angle fillet	"	2
Rounded angle	"	2
Cesspools	Each	5 0

MASON

		£ s. d.
Portland stone, including all labours, hoisting, fixing and cleaning down, complete	F.C.	1 1 6
Bath stone and do, all as last	"	15 6
Artificial stone and do.	"	16 6
York stone templates, fixed complete	"	14 0
" thresholds	"	16 0
" sills	"	1 3 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal, laid to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	4 5 0
Do., 18" × 9"	"	4 2 0
Do., 24" × 12"	"	4 12 0
Westmorland slating, laid with diminished courses	"	6 10 0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	4 0 0
Do., all as last, but of machine-made tiles	"	3 11 0
Fixing only, lead soakers	Doz.	9
Stripping old slating and clearing away	Sqr.	10 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 12 6
Shuttering to sides and soffits of beams	F.S.	1 0
" to stanchions	"	1 0
" to staircases	"	2 0
Fir and fixing in wall plates, lintols, etc.	F.C.	5 0
Fir framed in floors	"	6 9
" " roofs	"	8 3
" " trusses	"	9 0
" " partitions	"	12 0
½" deal sawn boarding and fixing to joists	Sqr.	1 17 6
1" " " " "	"	2 1 6
1½" " " " "	"	2 7 6
½" × 2" fir battening for Countess slating	"	12 6
Do. for 4" gauge tiling	"	16 0
Stout feather-edged tilting fillet	F.R.	6
Patent roofing felt, 1 ply	Y.S.	2 6
" " " 2 "	"	3 0
" " " 3 "	"	3 6
Stout herringbone strutting to 9" joists	F.R.	1 0
1" deal gutter boards and bearers	F.S.	1 4
1½" " " " "	"	1 8
3" deal wrought rounded roll	F.R.	9
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 15 0
1¼" do.	"	3 4 0
1½" do.	"	3 13 0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 10
1½" do.	"	2 1

CARPENTER AND JOINER—*continued.*

		s. d.
1½" deal moulded sashes of average size	F.S.	2 3
2" " " "	"	2 6
1½" deal-cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅝" parting beads, and with brass-faced axle pulleys, etc., fixed complete	"	4 3
2" " " "	"	4 6
Extra only for moulded horns	Each	9
1½" deal four-panel square, both sides, door	F.S.	2 6
2" " "	"	3 0
1½" " but moulded both sides	"	3 0
2" " " "	"	3 6
4" × 3" deal, rebated and moulded frames	F.R.	1 6
4½" × 3½" " "	"	2 0
1½" deal tongued and moulded window-board, on and including deal bearers	F.S.	2 0
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	3 0
1½" deal moulded wall strings	Each	2 6
1½" " outer strings	"	2 9
Ends of treads and risers housed to string	Each	2 0
3" × 2" deal moulded handrail	F.R.	1 6
1" × 1" deal balusters and housing each end	Each	2 6
1½" × 1½" " " "	"	3 3
3" × 3" deal wrought framed newels	F.R.	1 6
Extra only for newel caps	Each	7 6
Do., pendants	"	7 6

SMITH AND FOUNDER

		s. d.
Rolled steel joists, cut to lengths, and hoisting and fixing in position	Per cwt.	17 0
Riveted plate or compound girders, and hoisting and fixing in position	"	1 3 0
Do. stanchions with riveted caps and bases and do.	"	1 2 0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 0 0
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.	1 0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 15 0

PLUMBER

		£ s. d.
Milled lead and labour in flats, gutters	Per cwt.	1 15 6
Do. in flashings	"	1 18 0
Do. in covering to turrets, etc.	"	2 5 0
Do. in soakers	"	1 11 0
Labour to welted edge	F.R.	3½
Open copper nailing	"	3½
Close "	"	4½

		½" s. d.	¾" s. d.	1" s. d.	1½" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks	F.R.	1 2	1 7	2 1	2 8	3 8	—
Do. soil pipe and fixing with cast lead tacks	"	—	—	—	—	—	5 9
Extra, only to bends	Each	—	—	—	—	2 3	6 6
Do. to stop ends	"	7	9	1 0	1 3	2 0	—
Boiler screws and unions	"	3 6	4 0	5 6	8 0	—	—
Lead traps	"	—	—	—	7 6	10 6	—
Screw down bib valves	"	7 6	10 6	12 6	—	—	—
Do. stop cocks	"	10 0	12 0	16 0	23 6	56 6	—

		£ s. d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1 3
Extra, only stop ends	Each	1 0
Do. angles	"	1 6
Do. outlets	"	3 0
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 6
Extra, only for shoes	Each	2 6
Do. for plain heads	"	5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	3 9
Do. in n/w to beams, stanchions, etc.	"	5 6
Lathing with sawn laths to ceilings	"	1 6
½" screeding in Portland cement and sand for tiling, wood block floor, etc.	"	2 6
Do. vertical	"	2 9
Rough render on walls	"	2 3
Render, float and set in lime and hair	"	3 0
Render and set in Sirapite	"	3 3
Render, backing in cement and sand, and set in Keene's cement	"	4 6
Extra, only if on lathing	"	9
Keene's cement, angle and arris	F.R.	8
Arris	"	3
Rounded angle, small	"	3
Plain cornices in plaster, including dubbing out, per 1" girth	"	2
1" granolithic pavings	Y.S.	5 0
1½" " "	"	6 0
6" × 6" white glazed wall tiling and fixing on prepared screed	"	1 2 6
9" × 3" " " "	"	1 7 6
Extra, only for small quadrant angle	F.R.	9

GLAZIER

		s. d.
21 oz. sheet glass and glazing with putty	F.S.	8
26 oz. do. and do.	"	1 0
Arctic glass and glazing with putty	"	1 2
Cathedral glass and do.	"	1 3
Glazing only, British polished plate	"	8
Extra, only if in beads	"	2
Washleather	F.R.	4

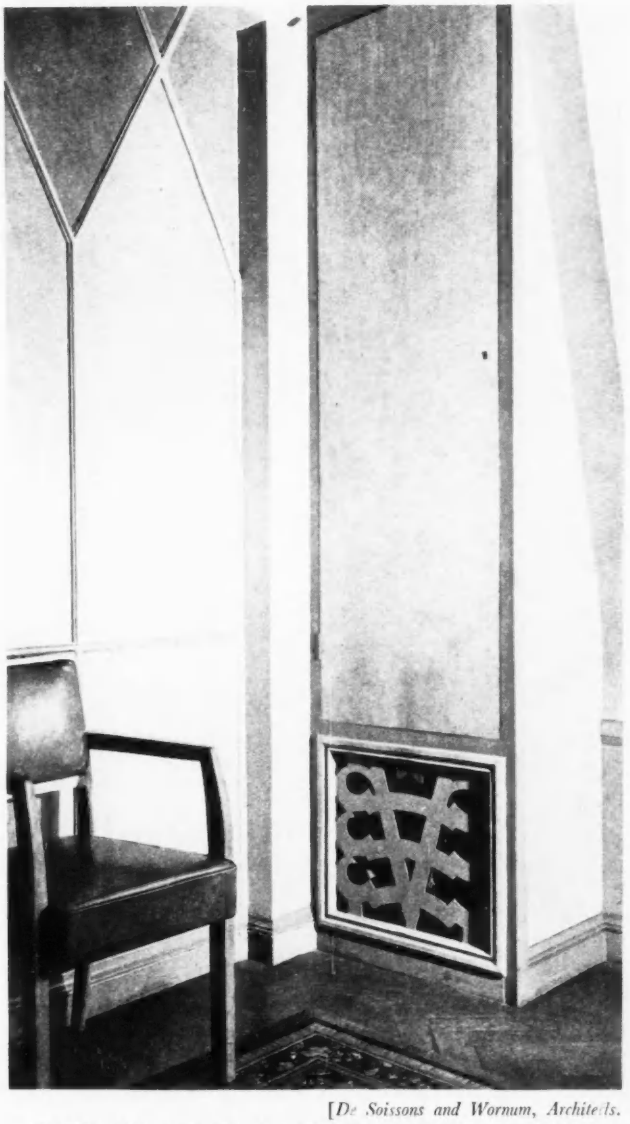
PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	8
Do. and distemper walls	"	1 0
Do. with washable distemper	"	1 3
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3 3
Do. on woodwork	"	3 6
Do. on steelwork	"	3 0
Do. and brush grain and twice varnish	"	5 6
Stain and twice varnish woodwork	"	1 11
Stain and wax-polish woodwork	"	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper	from "	3 0

A RADIATOR GRILLE

MORE PLYWOOD POSSIBILITIES

TABLE AND CHAIRS



[*De Soissons and Wornum, Architects.*

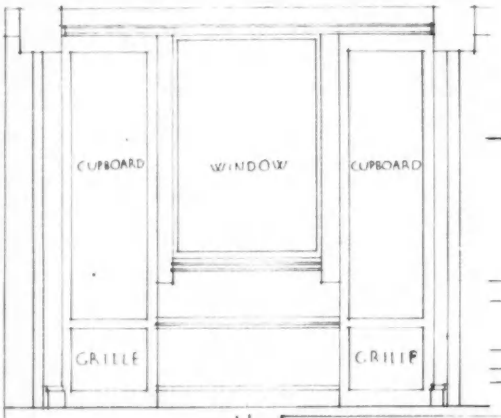
RADIATOR GRILLE AT VINTRY HOUSE, LONDON

ONE of the supplements to the issue for May 13 last was devoted to details in plywood from Vintry House. Here is another from the same source. The possibilities of the pierced wooden grille (which in Eastern and tropical building has for centuries been exploited in wood, stone and marble) have been applied to this modern material in rooms which have been decorated for Messrs. Venesta Limited.

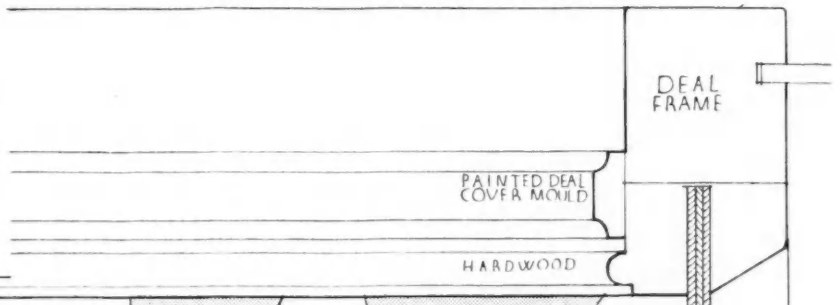
The detail drawing reproduced overleaf shows, to half full size, one of the many clean and refreshing patterns adopted for radiator grilles—a pattern which, though somewhat involved and made up of complicated curves and angles, has been effectively cut in plywood, a material lending itself most admirably to this treatment. As the above photographic view indicates, it has also been used in large sheets for the wall surfaces of the room.

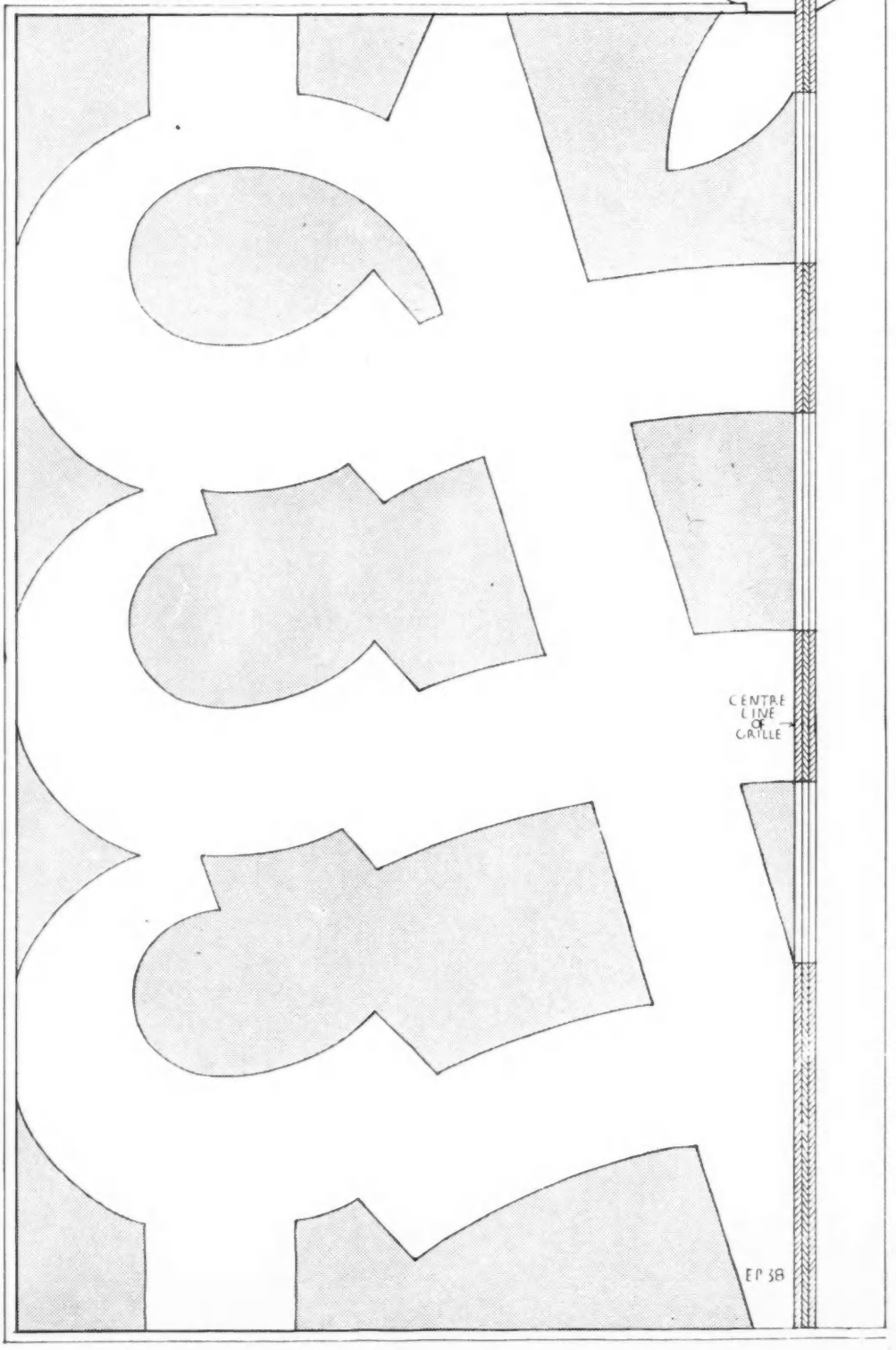
VINTRY HOUSE, SOUTHWARK BRIDGE
DETAIL OF PIERCED PLYWOOD GRILLE HALF FULL SIZE

DE SOISSONS & WORNUM ARCHITECTS



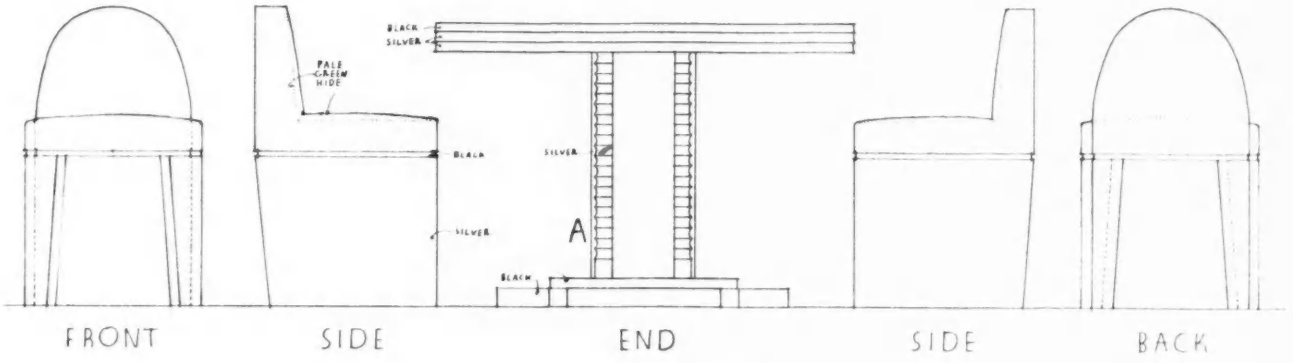
KEY ELEVATION
QUARTER INCH SCALE





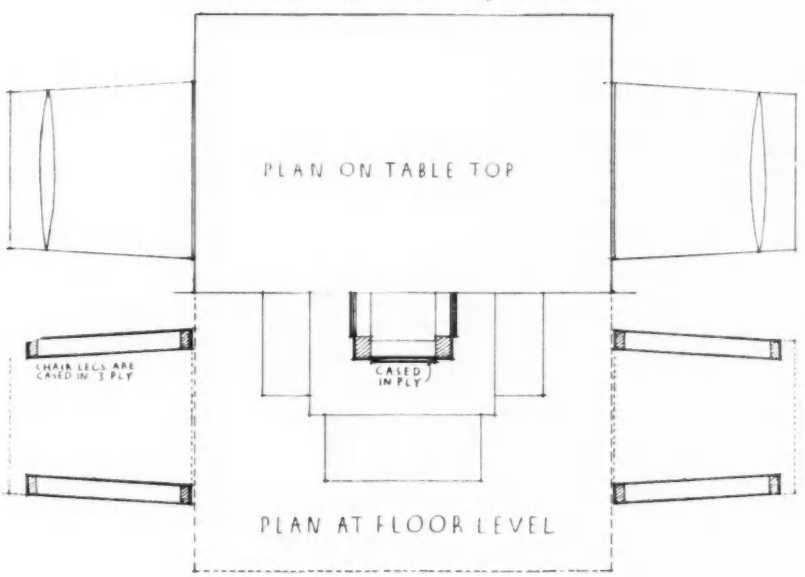
[For photograph and a description, see preceding page.

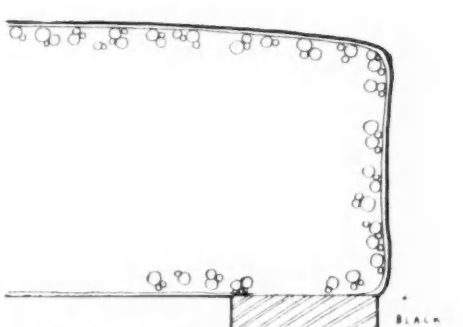
DINING TABLE AND CHAIRS
AT 35 GODFREY STREET · CHELSEA · S.W.

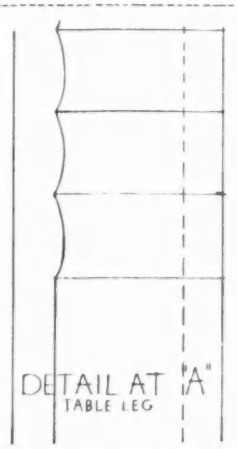


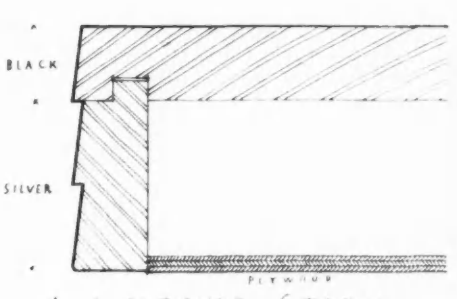
ONE SIXTEENTH AND HALF FULL SIZE

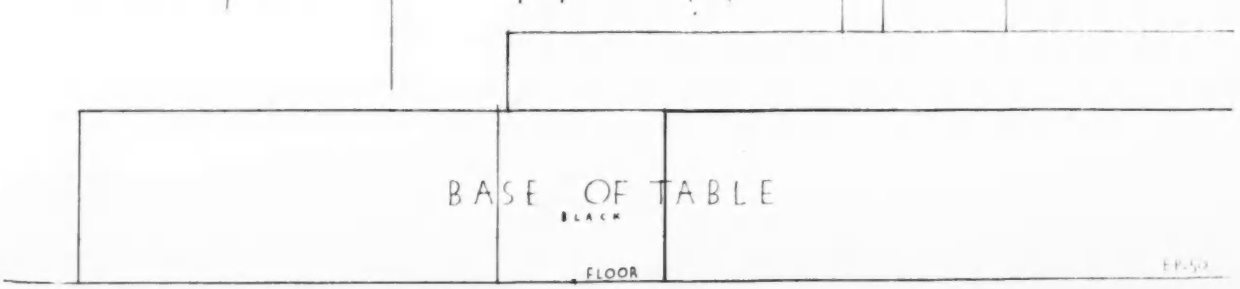
PHILIP EVANS PALMER, ARCHITECT











For photograph and a description, see following page.]



[*P. E. Palmer, Architect.*

LAMINATED DINING TABLE AND CHAIRS CASED IN PLYWOOD

DINING chairs with two legs each and a table with one central pedestal are shown in the photograph above and in the drawing reproduced to scale on the preceding page, which gives details one-sixteenth and half full size.

The chairs have each side pair of legs cased in ply, finished in sprayed-on cellulose lacquer of a silver colour, tinted with pale gold, while the upholstered seats and backs are covered in pale green calf.

The table, the top of which is in one piece of mahogany-faced laminated board, finished, like the built-up base, in black cellulose lacquer, is supported on a boxed-out central pedestal, containing the supports which hold the bearers for the top, the casing being finished in the same pale silver-gold cellulose lacquer as is used for the chairs. The ribbed corners of this pedestal were designed in keeping with an existing serving table treated in a similar manner.

It has been found unnecessary to move the chairs when sitting down to, or getting up from, the table, so that the absence of any form of "grip" to the low backs is not noticed.

PASSENGER LIFT CAGE

IN WALNUT AND SILVER, AT BECHSTEIN HALL, BROOK ST., W.



[*Sir John Burnet and Partners, Architects.*

THE CAGE, ILLUSTRATING THE CONCEALED LIGHTING

THE self-working lift in the new Bechstein Hall, 28 Brook Street, W.1, a photograph of which is reproduced above and a detail drawing to scale overleaf, provides accommodation for a maximum of eight passengers, and serves the basement and five upper floors.

The enclosure is of wrought iron, with hammered scrolls, painted in silver. The front and back of the cage are both formed of collapsible gates, this method of design having been adopted to simplify access to the showrooms and practice rooms which lie on opposite sides of the landings of the upper floors. These gates are also painted in silver.

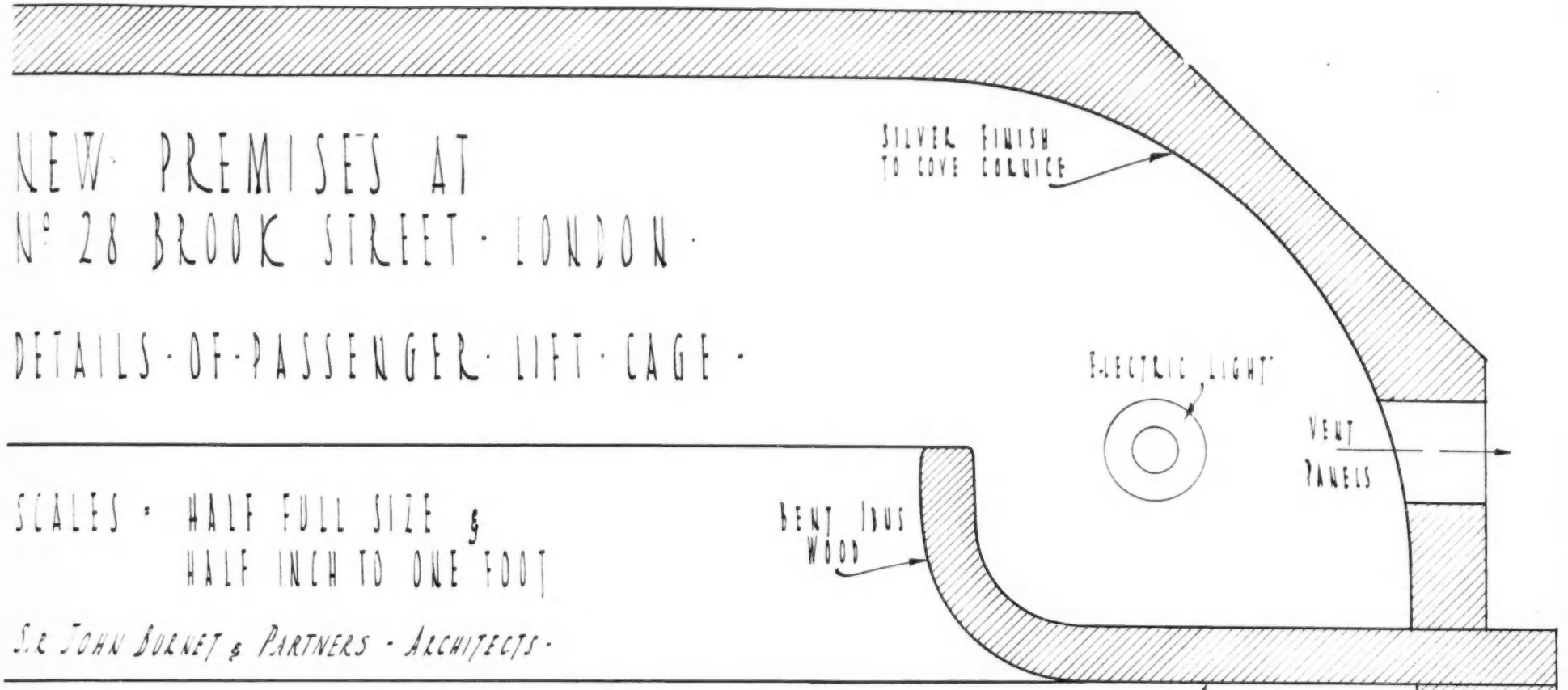
The inner lining is of walnut veneer, with coromandel skirting and surrounds to the two doors. The coved, silver-painted ceiling is illuminated by lighting recessed in the coves, a particularly attractive feature of the whole composition. Cork is used for the flooring: the centrepiece, cream, the inner strip, green, and the outer, black.

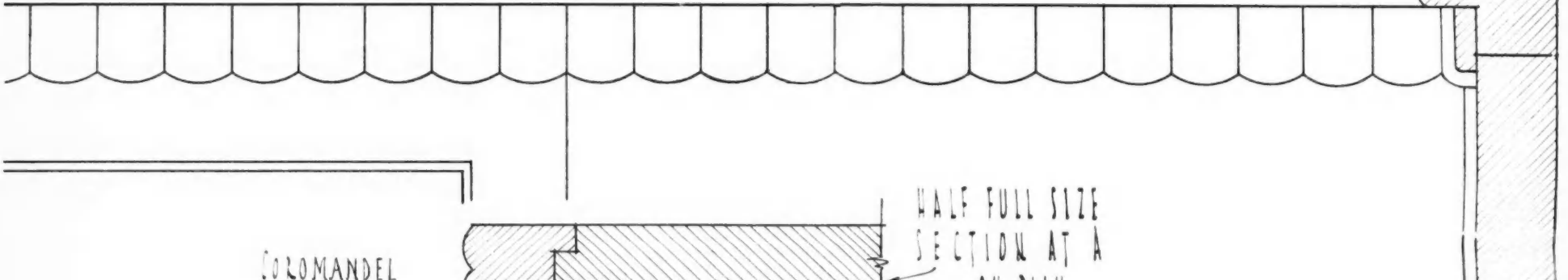
NEW PREMISES AT
Nº 28 BROOK STREET · LONDON ·

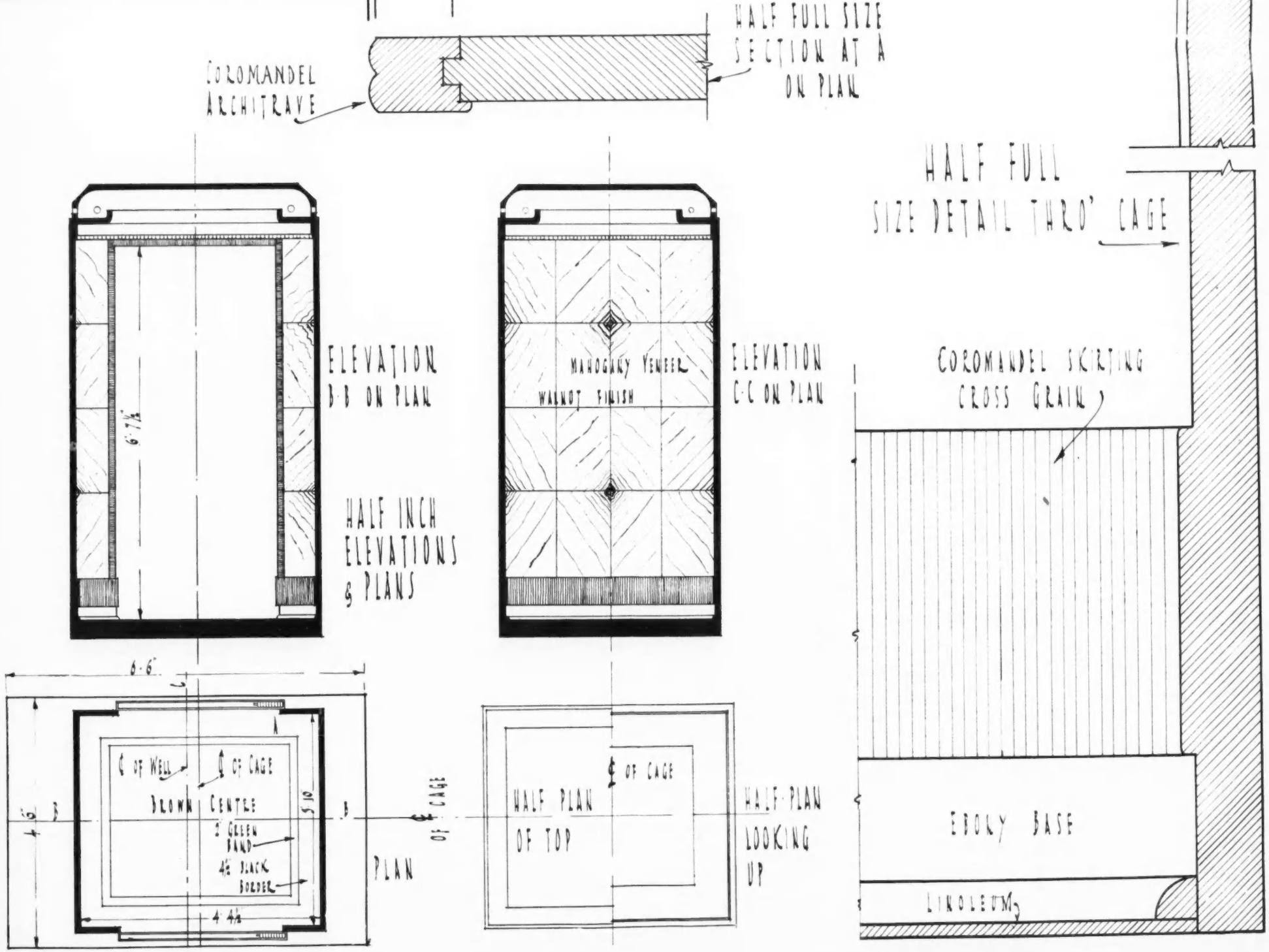
DETAILS · OF · PASSENGER · LIFT · CAGE ·

SCALES · HALF FULL SIZE &
HALF INCH TO ONE FOOT

S.e JOHN BURNET & PARTNERS · ARCHITECTS ·






COROMANDEL ARCHITRAVE
HALF FULL SIZE SECTION AT A ON PLAN
HALF FULL SIZE DETAIL THRO' CAGE
ELEVATION B·B ON PLAN
HALF INCH ELEVATIONS & PLANS
MAHOGANY VENEER WALNUT FINISH
ELEVATION C·C ON PLAN
COROMANDEL SKIRTING CROSS GRAIN
6·6"
℄ OF WELL
℄ OF CAGE
BROWN CENTRE
2 GREEN BAND
4½ BLACK BORDER
4·4½
PLAN
HALF PLAN OF TOP
HALF PLAN LOOKING UP
EBONY BASE
LINOLEUM