For light wells in blocks of flats the use of bricks that reflect light is necessary, but nothing can be more irritating to residents than a wall that glares back at them.

'Phorpres' White facing bricks, at one-eighth the cost of glazed bricks and only a little over half the cost of dead white bricks, solve the problem to a nicety.

A quarter-of-a-million 'Phorphres' white facing bricks were used for the light walls and areas of these Lowndes Square Flats. Architects: Messrs. Joseph. Contractors: Messrs. Higgs & Hill, Ltd.

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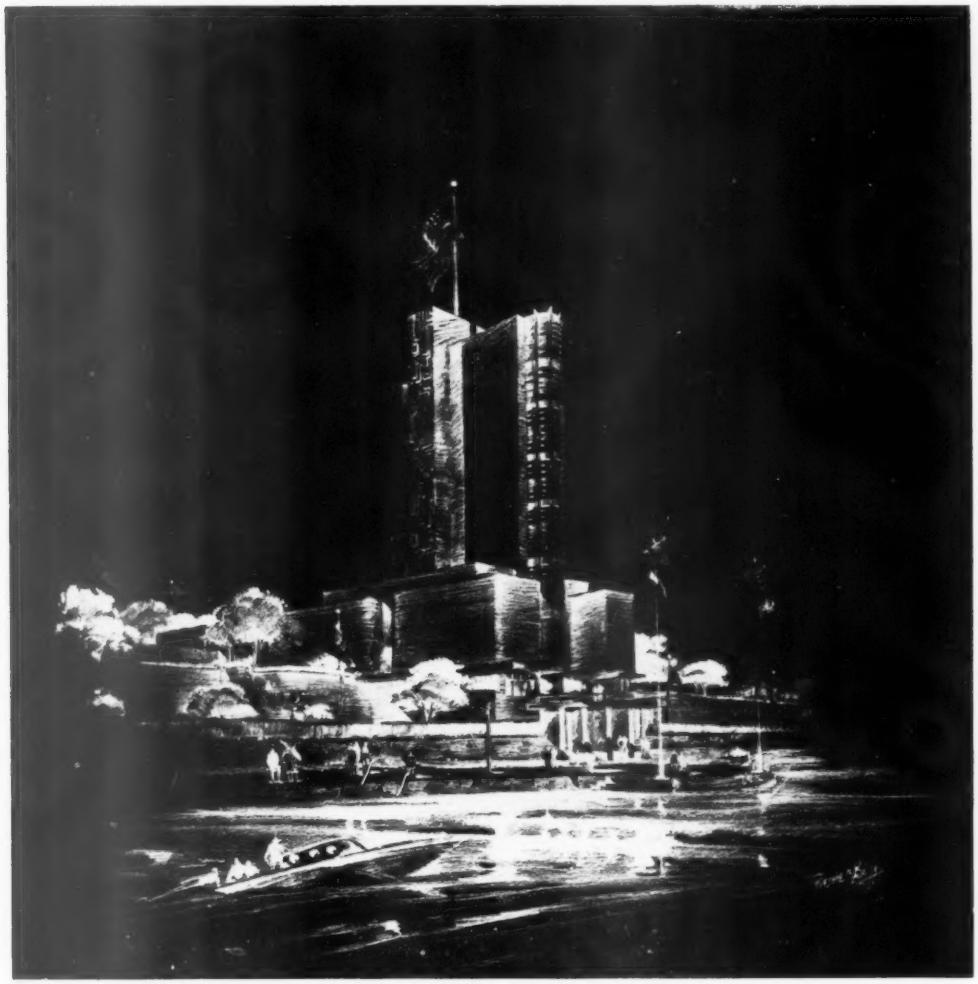
The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.

THURSDAY, April 15, 1937. NUMBER 2204 : VOLUME 85

PRINCIPAL CONTENTS

* *The Working Details are temporarily suspended until the conclusion of this series.*

PARIS EXHIBITION: U.S.A. PAVILION

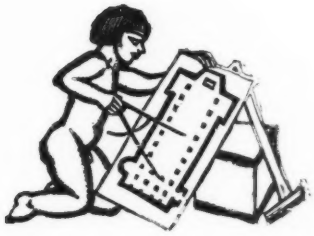


A DRAWING of the U.S.A. Pavilion as it will appear from the River Seine.

The merits of this building may possibly result from a determination to avoid the perils of unbridled individualism, its authorship being thus described: Paul Lester Wiener, Designer; Charles H. Higgins, Architect; Julian Clarence Levi, Consulting Architect; Paul Marozeau, Leo Mendelsohn and Louis Longuet, French Associated Architects.

THE NEW PRESIDENT OF THE R.I.B.A.

Professor H. S. Goodhart-Rendel, who has been elected President of the R.I.B.A., in succession to Mr. Percy Thomas, O.B.E.



RURAL BUILDING

"THE control of the external appearance of buildings is a first-class problem," said Mr. G. H. Jack at the R.I.B.A. on March 8. "It is not realized that while the Act offers powers of strict control, the authorities may please themselves whether they exercise it or not."

These sentences from a paper on the working of the advisory panels system are likely to make architects wonder whether anything worth calling an achievement can ever be gained by continuing present methods.

The control of the external appearance of buildings is, indeed, a first-class problem. But it is not the real problem, even in that portion of the country which lies outside towns and suburbs and which the Panel System was intended to help. The primary problem, emphasized by Mr. Pepler's paper read on the same night, is planning for the proper development of a whole district. Next is the need for the careful laying out of the various schemes within the district. Only at the last comes the need for raising standards of design in everything, not in buildings alone, that is needed in the carrying out of particular schemes.

The majority of those who have had any contact with the problems involved will probably maintain that the only drawback to taking the problems of extra-urban development in this order is that it is impossible to do so. And this argument has considerable force.

The authorities concerned are poor, their officials are few, not particularly highly paid and the amount of administrative work for which they are responsible is steadily increasing. In addition, both committees and their officials are untrained in questions of design, and have become accustomed to deplorable standards in new buildings. In fact, as with most of the public, an admiration for what is old and a desire not to "spoil" the countryside, is the nearest they come to having any appreciation of design.

Into this situation of complexity and unfortunate results, the C.P.R.E., the R.I.B.A., and other bodies plunged ten years ago with the sympathetic support of the Ministry of Health and the hope of making things better. A great many architects gave a lot of time to attending panel meetings, trying to get a reasonable decency of appearance in new buildings and trying to save such old buildings as could be repaired for an economical sum.

That the system has failed to do any measurable amount of good is owing to causes over which the volunteers had no control. Panels were things which the local authorities could use if they liked and not if they did not; and about two-thirds of them have not bothered. While maintaining that they could not afford an architect, many of the authorities still carried out a large amount of building work, which was put in the charge of some existing official—usually quite unqualified as an architect. And finally, the most strenuous reshaping of the appearance of individual houses made little improvement in the total effect of a dozen of every possible shape and size when strung out in ribbon development.

As long as these conditions continue the panels must represent hard work being almost entirely wasted.

Mr. Pepler, however, in his paper on the Town and Country Planning Act, 1932, mentioned that county councils, although not themselves entitled to prepare planning schemes, were in many cases giving active help in preparing joint schemes. In this co-operation there may lie a remedy for the worst features of rural building development, if the Ministry and interested societies give it sufficient support. If individual authorities cannot afford an architect, the constituent bodies of a joint planning committee might still employ a regional architect, either whole or part time. This officer could prepare, as several authorities have already, a series of standard designs for the locality which builders not wishing to employ an architect would be requested, and if necessary obliged, to adhere to very closely.

It must be admitted that all such systems of dictatorship in matters of design have grave possibilities of abuse. We have already seen that they can lead to the wholly untrained dictating to the very highly trained, while general standards remain as low as ever. But providing the prototype designs were very carefully prepared it is held that the general gain from regional architects would be immense in districts where it is essentially the pattern and effect of the buildings as a group, and not individual form, which determines merit in design.

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NOTES & TOPICS

TALKING OUT

THE art of talking out is one of those things which democracy has to put up with in this country, or so it is told, lest it may suffer worse. In the House of Commons last Friday this hypothetical worse beggared the imagination of those who had to listen to Mr. McEntee (16 minutes and not an architect) and Sir Robert Tasker (56 minutes and plainly feeling himself much an architect).

*

Sir Robert was difficult to hear at times. Not that it mattered. Sir Robert and Mr. McEntee were out to talk until 4 p.m., whatever their *obiter dicta* might seem like to those listening.

*

A few samples from Sir Robert :—

I suggest to hon. Members that neither Sir Christopher Wren nor Inigo Jones would have passed the R.I.B.A. Examination . . . .

I [a correspondent of Sir Robert] am a registered architect . . . member of a firm sixty years old . . . want to ease off. Yet my son aged 27 has been refused registration, presumably because he is not a Member of the R.I.B.A.

We have heard about creative art and I am tempted to ask whether the very best thing that could be produced in the way of creative art is to be found in the new headquarters of the Royal Institute of British Architects in Portland Place. There must be differences of opinion . . . I admire a Grecian temple . . . When I had to draw those temples again and again I learned one thing which is apparently not taught to-day, and that is, to have some sense of proportion. Modern architecture, as I see it, is largely composed of horizontal lines and vertical lines. Apparently it is the object of the schools to-day to teach a boy to use a T-square as a set-square, and that passes for architecture. To me the results are rather hideous.

*

The Commons listened and wondered. I cannot imagine what they thought. Sir Robert welcomed interruptions from those who had something to say. They passed the time, comments on them passed more, and those who wished to hear the Bill discussed were defeated by Parliamentary procedure. A measure designed eventually to make obligatory a reasonable minimum of professional training has been postponed, temporarily, by its natural opponents.

WEEK-ENDERS AND THE BISHOP

The Bishop of Chichester "cannot disguise his regret" at the way rich London or Sussex socialites (my word) have been buying labourers' cottages and driving the unfortunate countryman "away from his land and the home where he belongs." If this were the general rule, the Bishop and I would stand together, but I do not believe it happens—much.

*

The labourer pays a very low rent, his roof leaks, the walls and floors are damp and his landlord cannot or will not do anything in the way of repairs ; so the labourer moves to a council house or a jerry-built bungalow which may be an eyesore, but is at least waterproof and has a drainage system and a water supply. Less picturesque, admittedly, but healthier.

*

And the landlord sells his ruin to the first who will pay a hundred or two pounds at once and a further thousand or so in additions and improvements.

ARTISTS' CONGRESS

I recommend architects to go to No. 41 Grosvenor Square within the next fortnight, for two reasons. The first is that they will see one of the best and most comprehensive exhibitions of contemporary English painting that has been arranged for a very long time.

*

The second is this : The occasion of the exhibition is to mark the first British Artists' Congress, which is being held concurrently in the same building. One of the aims of the Congress is to inaugurate some kind of Trade Union movement amongst artists—including commercial artists. Artists have always suffered in society for being individualists, and any organization that succeeds in standing up for their rights—whether in regard to regularized pay, working hours (in the case of commercial artists) art education, exploitation by dealers or security of copyright—is welcome.

*

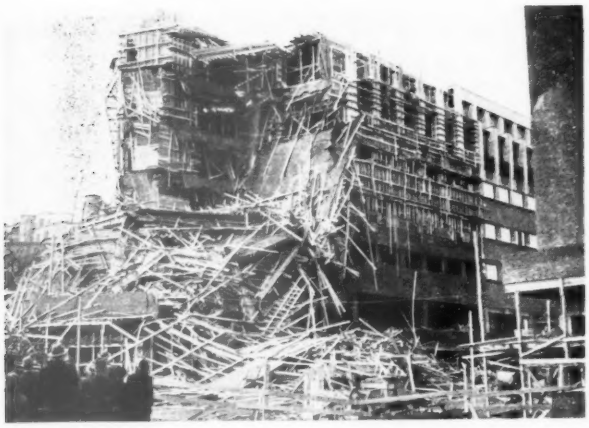
Two thousand works were sent to the exhibition that supports the congress, though there was space to hang only 800; and there they do hang (segregated into kinds for reasons of display, but submitted in amity) : the lions and the lambs : Abstractionists, constructionists, surrealists, impressionists, academicians. A fine gesture of unity.

NORWICH TOWN HALL

I drove up an unadvertised cul-de-sac in Norwich the other day, and as the bobby seemed to think it a crime rather than a misfortune, I am still feeling irritated with Norwich's lack of plan. All the same, Messrs. James and Pierce have helped to create one of the best building groups of a generation, and if it is too soon to speak of an English Stockholm there is every promise of something genuinely comparable ; though I could wish that, here and there, the detail had a little less of the romantic movement of the 'twenties.

*

The general proportions and the building's relationship



A seven-storey reinforced concrete office building in the centre of Oslo, after partial collapse. In spite of heavy protection the lower storey concreting was caught by frost in setting and collapsed some time after the shuttering had been struck.

to the old market place seemed almost perfect ; so did the colour—in which it differs, in my humble opinion, from Slough.

THE FEN FLOODS

It was left to a young and unknown Oliver Cromwell to bring Vermudjen over to cope with the Fen problem ; and this time it has been left to the *Daily Telegraph* to turn once again to Holland and do what ought to have been the obvious thing—ask an expert for his views.

*

The engineer for the reclamation of the Zuyder Zee has given the whole matter careful thought and has found that the only way really to stop the tide pushing up the Welland and the Witham and the Ouse is to build a great dam from Hunstanton to Boston. This would pass over the Lynn Deeps, but even so it would be child's play compared with reclamation of the Dutch polders.

*

The reclamation of the Wash has, of course been proposed before, but never, so far as I remember, by an expert of this standing. It has usually been turned down because we need land so much less than the Dutch—our dairy land being, so to speak, in Denmark.

*

However, if the Wash were reclaimed we could no doubt find a use for the resulting polders. One might, as a friend suggests, build *all* the Hundred New Towns *together*.

WORMS

If dealt with scientifically, reclaimed land is tremendously fertile. It has to be left for a few years while the salt disposes of itself and then train-loads of worms are rushed to the spot to break up the soil. Mr. Gordon Selfridge, I believe, has to do something similar to his roof-garden, although not of course, on such a scale. Buckets, one imagines, would serve his purpose.

DOROTHY SAYERS

More than one person has pointed out to me the uncanny accuracy with which Miss Sayers, in the "Nine Tailors," forecast the details of the Fen floods. She must be one of the most erudite of novelists and erudite in all sorts of extraordinary ways. The floods reminded me that I was in the "Sayers country" and also that I was near Blythburgh, where the nine tailors hang in the tower.

On Sunday, therefore, I introduced myself to an art which goes on, one cannot say quietly, but modestly from century to century in the villages of England; the great art of campanology. I am quite incompetent to write of Bobs and Grandsires, but I left the church tower suitably impressed.

*

The ringing of a peal is a very complicated mathematical sequence and a very fascinating one, but Fred and Dick,under the leadership of Mr.King the butcher, rang peal after peal without a hitch, and I don't think they knew that the sequence of figures existed at all; they had certainly never seen it set down.

*

This instinctive mathematics which undoubtedly exists in the yokel mind is interesting and has not been sufficiently noticed. For instance, in any village pub. they will play darts all evening; the score isn't mentioned, but there is never a hitch or a mistake of any kind whatever.

THE PENALTY OF PUBLICITY

Those who feel that high pressure personal publicity is a thing which architects might leave to others will probably be as charmed as I was by a publisher's story at lunch.

*

The publisher telephoned an architect for permission to illustrate a work by him. The architect replied that he would rather not have it published and, pressed for reasons, said that the building had already been illustrated twice ; and if people saw it again they would think that it was the only building he had ever done. And as it *was* the only building he had ever done, he didn't think he wanted it published again.

FOREIGN NEWS

The JOURNAL's influence, far flung if slow in the flinging, has reached Cyprus.

*

Enthusiastic over the JOURNAL's recent town planning competition, a local paper determined in March to put the story across, however lacking in town planning jargon the vernacular might be.

*

"A wrestling match," it informed its readers, "for the squaring and tracing of streets."

THE "NEWS-REVIEW" AND SIR EDWIN LUTYENS

For some months past some of my readers may have noticed that those twin followers of *Time*, *Cavalcade* and *News-Review*, have made it their speciality to deal with those in very high places. However, the last drop of juice having been squeezed, for the moment, from the orange of coronets and coronets-to-be the *News-Review* has fallen back on the professions and, still moving in the upper regions, has given us a whole page on Sir Edwin Lutyens. It must be a change for Sir Edwin, after so many years of *Country Life*.

*

Most of the more hoary jokes are here—the gramophone to make Landseer's lions purr, and so on ; though I missed the glass-case for the Crystal Palace and the pair of moustaches to turn the Duke of York's Column into a Kitchener memorial. But then Beverley Nichols used these up some ten years ago.

*

Then there is what Sherlock Holmes might call the Case of the Offended Vicereine. Sir Edwin wrote apologetically : "I wash your feet with my tears and dry them with my hair. True, I have very little hair, but then you have very little feet."

ASTRAGAL

NEWS

POINTS FROM THIS ISSUE

L.C.C. SCHEME CONFIRMED

The Ministry of Health has confirmed the £750,000 housing scheme at Stoke Newington proposed by the L.C.C. and opposed by the local Council and by residents. Working-class dwellings will be built on a 64-acre site, near Manor House Underground Station.

BUILDING TRADES CRUISE TO BALTIC

Two hundred and fifty members of the National Federation of Building Trades Employers and other members of the building industry are to take part in a "Building Trades Cruise" to the Baltic during the early summer. They will sail from Southampton on June 19, and, during the following 13 days, will visit Helsinki, Stockholm and Oslo.

During the voyage lectures on the uses and treatment of timber will be given by Mr. E. H. B. Boulton, technical director of the Timber Development Association, and at each port of call experts will go aboard to lecture or to show films dealing with forestry and the timber trade.

Members of the building industry and their friends wishing to take part in the cruise may obtain full information regarding it from Mr. C. H. J. Aldworth, the National Federation of Building Trades Employers, 13 Russell Square, W.C.1.

COMMUNITY CENTRES

Sir Kingsley Wood, addressing the annual New Estates Community Conference in London on April 9, said that the Physical Training and Recreation Bill now before Parliament would empower local authorities to provide or assist in providing community centres outside their own housing estates and also empower local education authorities to provide or help to provide physical and social activities for adults generally. Seventeen of the larger authorities had already provided community centres or assembly halls on their estates or had schemes in an advanced state of preparation. Many other authorities had assisted in the provision of centres by letting existing buildings on their housing estates to voluntary organizations at a low price and by reserving sites when planning their estates.

THE ARCHITECTS' DIARY

Thursday, April 15

IDEAL HOME EXHIBITION. *At Olympia. Until April 24. 10 a.m. to 10 p.m.*

CHADWICK TRUST. *At 90 Buckingham Palace Road, S.W.1. "The Plan and Equipment of Kitchen Offices in Hospitals and other Institutions." By R. Whitaker. 5.30 p.m.*

SOCIETY OF ANTIQUARIES. *Burlington House, W.1. "Certain English Military Effigies of the Fourteenth Century." By J. G. Mann. 8.30 p.m.*

INSTITUTION OF STRUCTURAL ENGINEERS. *Yorkshire Branch. At the Hotel Metropole, Leeds. "Soil Mechanics and Concrete Pile Driving." By M. J. McCarthy. 7 p.m.*

INSTITUTION OF CIVIL ENGINEERS, *Great George Street, S.W.1. "The Boulder Dam." By J. L. Savage. 6 p.m.*

ARCHITECTURAL ASSOCIATION, *36 Bedford Square, W.C. Annual Reception. 8.30 p.m.*

Friday, April 16

INSTITUTION OF STRUCTURAL ENGINEERS. *At the Institution of Civil Engineers, Great George Street, S.W.1. "Old Waterloo Bridge—Schemes for Reconditioning and Widening." By R. P. Mears. 6.30 p.m.*

GARDEN CITIES AND TOWN PLANNING ASSOCIATION. *At 13, Suffolk Street, S.W.1. Exhibition: "Satellite Towns." To be opened by Viscountess Rhondda at 3 p.m.*

Wednesday, April 21

ROYAL SOCIETY OF ARTS, *John Street, Adelphi, W.C. "Housing and Planning—English and American Compared." By Sir Raymond Unwin. 8.15 p.m.*

ST. PAUL'S ECCLESIOLOGICAL SOCIETY. *At 6 Queen Square, W.C. "Ely Cathedral." By H. W. Fincham. 8 p.m.*

Thursday, April 22

ASSOCIATION OF ARCHITECTS, SURVEYORS AND TECHNICAL ASSISTANTS. *Annual General Meeting. At the Friends' Meeting House, Euston Road, N.W. 7 p.m.*

INSTITUTION OF STRUCTURAL ENGINEERS. *At the Institution of Civil Engineers, Great George Street, S.W.1. "The Southampton Civic Centre." By E. Berry Webber. 6.30 p.m.*

THE LATE R. NEVILLE BROWN

Mr. R. Neville Brown, whose death was recorded in a recent issue of the JOURNAL, was born on June 30, 1903. He was educated at South Shields High School and at Rossall. He was articled for four years to Messrs. J. H. Morton and Son, F.R.I.B.A., South Shields, and during the period of his articles was a part-time student at the Armstrong College School of Architecture. On completion of his apprenticeship he was engaged in this same office as an architectural assistant.

Mr. Brown later gained extensive experience with Mr. F. Willey, F.R.I.B.A., Education Architect to Durham County Council, and also in His Majesty's Office of Works, and the Education Office, Newcastle-upon-Tyne.

He travelled extensively for the purpose of study and, from 1933 until his death, he was Lecturer in Town Planning and Assistant Master in Design in the School of Architecture, Armstrong College, University of Durham, and at the same time practised in partnership with Mr. G. R. Smith, F.R.I.B.A., of South Shields, who, jointly, were responsible for many important works on Tyneside.

His practical experience, his aptitude and natural gifts as a teacher, together with his extensive knowledge of, and enthusiasm for, his subject, contributed in no mean measure to the success of the Department of Town Planning at Armstrong College, where his loss is keenly felt.

Mr. Brown was interested in many organizations on Tyneside. He was a member of the Northumberland and Newcastle Society, Secretary of a Special Committee set up to deal with the Development of Waste Lands on Tyneside, and a member of the Council of the Northern Architectural Association.

CREMATORIUM AT CAMBRIDGE

As announced in our last issue, the Corporation of Cambridge invites architects who have an office within 150 miles from Cambridge, to submit designs for a crematorium in Fen Ditton Lane, Cambridge. Professor H. S. Goodhart-Rendel, F.R.I.B.A., is the assessor; and the following premiums are offered: £100, £60 and £40. The last day for questions is April 30, 1937; and date for submission of designs is June 30. Applications for conditions should be made to Mr. C. H. Kemp, Town Clerk, The Guildhall, Cambridge. (Deposit £1 1s.)

ANNOUNCEMENTS

Mr. Alec Owen, A.R.I.B.A., has been appointed a Senior Architectural Assistant in the Education Department, Leeds.

Messrs. Harris and Porter, Chartered Quantity Surveyors, have moved their offices to Adelphi Terrace House, No. 3 Robert Street, Adelphi, W.C.2.

PROGRESS IN TOWN PLANNING

Fifteen schemes under the Town and Country Planning Act—including one for the preservation of the historic central area of the City of York—have been approved by Sir Kingsley Wood, the Minister of Health, during the past month.

The areas affected include five of London's outer suburbs—Ealing (Northolt), Friern Barnet, Wembley, Caterham and Warlingham, Ham (Richmond); Coseley in the "Black Country"; Barry and Penarth in Wales: Aldeburgh, Woodbridge and Deben in Suffolk; Harwich, and part of Southend-on-Sea in Essex; the Beeston and Middleton district of Leeds; the City of York; and Blaydon-on-Tyne.

The schemes contain provisions settling the lines of future streets and street-widenings, segregating industrial, commercial, and residential buildings, controlling the number per acre and the appearance of new houses, reserving land for public open spaces and allotments, and generally empowering the responsible authority to preserve the amenities of the area.

Seventy-eight more schemes are at present under consideration by the Minister, and a further 140 have been adopted locally in draft and are now being considered by the authorities responsible, following representations from owners and other interested persons.

EXHIBITIONS

The outstanding exhibition at the moment is that of Picasso's recent work at Rosenberg and Helft's.

Picasso's greatness as a painter, quite apart from magnificent draughtsmanship and design, lies in an approach to his art that is always inquiring and inventing, and always changing—that only accepts in order to pass on again to some new form of expression. At this exhibition it will be noticed that many of his paintings are variations on the same theme. Numbers 5, 6, 11, 10, 19, 13, and 22 are all treatments of a reclining nude with backward-thrown head in which, in that order, the balance of colour and composition shifts as the figure resolves from something approaching naturalism to almost complete abstraction. And apart from the individual perfection of each of these paintings the successive treatments are of absorbing interest as a masterly exposition of composition and design, and in their persistent search of form and colour they show more clearly than any one picture could do Picasso's immense fertility of imagination. His colour has passed through many phases. At the moment it is violent with the intensity of stained glass, and there is something so savagely uncompromising in his work that to live at close quarters with some of these pictures, magnificent as they are, would be almost impossibly disquieting.

●

The London Gallery is rapidly becoming the liaison between young foreign painters and contemporary thought in this country. This is an important function in art and one which, at the moment, no other gallery attempts to fulfil. In the last few months this gallery has shown abstract work by Moholy-Nagy, and by young Belgian painters, and a wide collection of contemporary foreign work in the exhibition on the theme of musical instruments. Now we have Herbert Bayer, a pupil of Kandinsky, a member of the Bauhaus group, and a commercial artist whose work in that sphere, and as a direct painter, is highly original. His preoccupation with certain forms tends perhaps to limit his compositions, and particularly his plastics. His most successful works are "Grey Sails" (10), "Jacob's Ladder" (24), and some of the very surreal photographs, for in these he has escaped the inevitable emphasis of an artist whose work is primarily commercial.

●

In his exhibition at the Lefevre Galleries, Mark Gertler's painting shows a steady development from his work of a few years ago. His intense feeling for the surface texture of paint and for violent colour which was sometimes rather overpowering has never been allowed to disguise the fundamental solidity of his drawing. In his present work his colour, though sometimes very strong, is magnificent. The "Yellow Shawl" (17) is a particularly good example, while "The Balcony" (7), though quieter in tone, is equally characteristic of an exhibition which Aldous Huxley describes as "the happy consummation of a particular phase of the artist's activity."

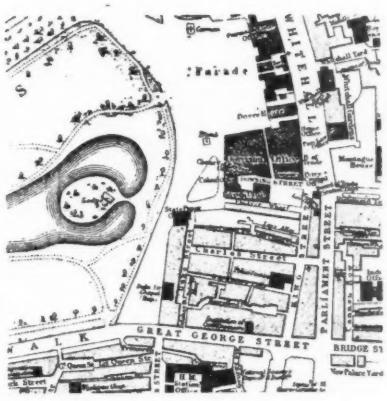
●

Recent works by Picasso. Rosenberg and Helft, 31 Bruton Street, W.1. Until April 30.

Paintings by Modigliani, Storran Gallery, 106 Brompton Road. Until April 30.

Recent Paintings by Mark Gertler. Lefevre Galleries, 1A King Street, St. James's. Until May 7.

Herbert Bayer. London Gallery, 28 Cork Street, W.1. Until May 1.



THE ROYAL GOLD MEDALLIST, 1937

[By T. F. Thompson]

SIR RAYMOND UNWIN—Royal Gold Medallist, 1937. That is an achievement of which this generation might well be proud. It signifies a recognition of the fact that good architecture is not necessarily represented by a superlatively well designed building in splendid isolation, but collectively, by the mean standard of building which a city, or even a civilization builds up to in the course of a decade or generation.

Clough Williams-Ellis in his delightful half length autobiography confirms this when he says—"I would rather a land in which there were no masterpieces, and yet nothing mean, than one in which I had to pay for a glittering aristocracy of architecture by enduring the welter of incompetence."

In this country to-day as fine architecture as any nation ever produced is being built. But only in sufficient quantity to make but little difference to the widespread architectural squalor of our cities, towns and villages.

This state of affairs must be altered within the next decade, or we shall deserve the wholesale destruction of ugliness which may descend upon us in more violent form. We must salvage beauty by the elimination of ugliness, or suffer the consequences of our neglect.

How is this salvaging to be done? It can be done by harnessing the whole architectural energy of the country. Let us make a 10 years' plan, at the end of which a trained architect will be able to walk through the streets of our great cities and hold his head up.

Yes, the architects are to blame; the architectural schools are to blame. They turn out on the whole good designers, but bad architects. Then what is an architect? An architect is a master builder, a chief artificer in the highest sense. If all the designers were architects they would know that modern society has little in common with the society of the seventeenth century. Inasmuch as society has changed, so must the methods of architectural practice.

They will either change remarkably during the next decade, or the profession will be completely submerged by commercialism. So long as civilization continues buildings will be a necessity of life, and some group of men will be the master builders. Will it be the architects we know to-day? Some of these are already even inquiring, through the columns of the daily press, as to the date of their interment. What could be more stupid or foolish? If bankers, building societies, estate agents, industrialists or politicians determine how we are to build, they will be the real architects; even though they may employ draughtsmen and engineers to give practical shape to their ideas (if not ideals), and stability to their buildings.

The result will be good architecture, mediocre architecture, or bad architecture—the architecture of truth or the architecture of falsehood, according to their success or failure. Our trouble today is that we are building down to an existing state of society, and not up to an ideal of society. Sir Raymond Unwin, the doyen of the modern Town Planners, did not sink so low. He has always been an idealist and always will be, and he has proved that idealism pays. He has proved that contemporary society can be made to play up to the tune if we have the proper machinery to educate that society to read the music. Finally, he has proved it by the permanent memorials to his genius which are upon the face of this land and throughout the civilized world—the all too few garden cities and garden villages. It has taken the world 40 years fully to appraise the worth of Unwin, during which time we have witnessed the playing down again of the ideal he preached to the lowest levels of human expression. Much of this is even the outward manifestation of what our untutored society is pleased officially to call "town planning." It is useless for architects to collapse in despair and say "we are finished." There is tremendous work to be done. The solution lies in establishing an entirely new standard for the material manifestations of our civilization. Overcrowded cities must be partially evacuated — we must "spread" ourselves; rehabilitate that which through ignorance has been laid waste; and develop into healthy organisms our declining market towns and villages.

The modern architect must study and master the existing state of society, master its needs, and plan for

The Royal Gold Medallist, 1937: Sir Raymond Unwin (from a portrait by Sir George Clausen, R.A.). The Medal was presented to Sir Raymond at a General Meeting of the R.I.B.A. on Monday last.

its future. At present we merely play up to the dictates of a society which is merely drifting and not swimming, however weakly, as is, for example, the much abused Russia.

Professor W. R. Lethaby used to say "the whole purpose of civilization is to build beautiful cities and to live in them beautifully." Are we building beautiful cities? Are we living in our cities beautifully? Look at our cities; read our newspapers; and we shall be provided with an answer according to our lights. Beautiful cities should represent the embodiment of great architecture, expressing a great civilization. By great architecture a generation of men give expression to the thought "this may not be what we are, but this is what we wish and hope to be." "Ah," you say, "is not that the architecture of falsehood and hypocrisy?" No! It is the architecture of truth, because all humanity is idealist, but is only weighed down by the victimization of circumstance. Remove the weight and it will bob up. The B.B.C. found that to be true in the field of music. True also, a vast majority of its audience still prefer "Gert and Daisy" to Mozart or Beethoven, but that does not pale the glory which is the B.B.C.'s for improving immeasurably the standard of public taste in music. This was done not by giving the public what it wanted, but what it was considered it ought to have, as a means of expressing in music the latent idealism of a great people.

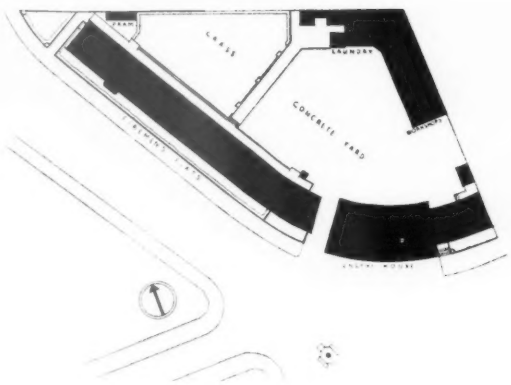
The modern town planner and architect must be trained to an awareness of the spirit of his own time; of its ideals and aspirations, rather than of its experiments and shortcomings. Build up to these and we shall produce great architecture. It should be evident to all that there is no higher right in our own society than the right of decent, fit and eventually beautiful shelter for all the activities of all the people. We all must be housed, for our business, our amusement and for our residence. Let us see that it is decently done. We all have to look upon the standard of one another's accomplishments in each of these fields, and we are uplifted or depressed inasmuch as they live up to or fall below the standards which we look for. This standard should be a collective standard rather than an isolated individualistic standard.

Edward D. Pierre, the American, shared Unwin's view when he said—"The Architect should be Master Architect of cities and not parts of cities." This is perfectly true if results are to be achieved, but we are content today to leave town planning to the engineer and the administrator. We are already complaining of the error of our ways, because we are becoming entangled in a morass of rules and regulations—the product of this type of mind. It is only the architectural mind which can plan and build beautiful cities, but that mind is not self-sufficient—it must express rather than dictate. We are on the threshold of our greatest opportunity, if only we will use it, after educating ourselves to do so—to the utmost advantage of the society we serve, and of which we form an inseparable and responsible part. We must resist by all means in our power the development that is bad in principle or in type, and encourage and make inevitable only that development which is in scale with the times.

The great professional institutions must unite in this movement, the great schools must play their part. Both have become mere smug guardians of income, and not of production. If they are wise both will alter their course before they come into sharp conflict as a result of over production, and an accumulation of personnel of the wrong type.

The purely propagandist societies may be relied upon to do their part, but in the past their efforts have been largely stultified because we are all working in opposite or nearly opposite directions, due in the main to the lack of planning, and to the necessity of meanwhile earning a livelihood out of that which comes most readily to hand. This is necessary; but we can never hope for any solution to our present muddles if we do not also remember, and work to, the things to which Sir Raymond Unwin has devoted his life.

HESTON AND ISLEWORTH CENTRAL FIRE STATION



SITE PLAN

DESIGNED

BY

J. G. CAREY

GENERAL PROBLEM—*Central fire and ambulance station for the borough of Heston and Isleworth, Middlesex. The accommodation includes an engine-room for five machines, garages and workshops, laundry, 60 ft. hose tower, gas chamber, and flats for twenty married and three single men. The station is designed to serve a population of 250,000, and was officially opened on March 20. Mr. H. G. Coulter, A.R.I.B.A., was the resident architect.*

SITE—*At the junction of London Road and Spring Grove Road.*

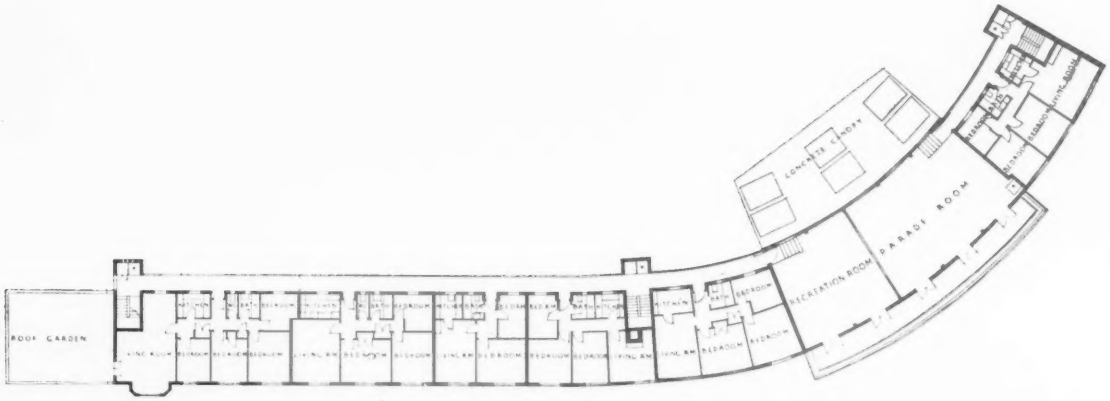
PLAN—*The major considerations influencing the plan were the adoption of the continuous duty system of service by the fire and ambulance brigades and the size and shape of the site. All the flats are entered from three staircases and balconies at the rear of the building. Each married man's flat consists of a living-room, kitchen, bathroom and two, three or four bedrooms. Living-rooms and principal bedrooms face south-west.*

CONSTRUCTION—*Walls and partitions are brick; floors and flat roofs concrete hollow tile, with the roofs finished in asphalte. The building is faced with brown and purple bricks with artificial stone dressings, and metal windows. Engine-house doors are teak.*

INTERNAL FINISHES—*The floor of the engine-house is finished in large cinnamon quarry tiles, with a tiled dado and the walls above in biscuit-coloured sand lime bricks. The floors of the watch-room, offices and recreation room are finished in Burmese pynkado; those of the living-rooms and bedrooms are wood; and those of the kitchens and bathrooms are finished in quarry tiles. The walls of the living-rooms and bedrooms are distempered; and the kitchens and bathrooms have white glazed tiled dados.*

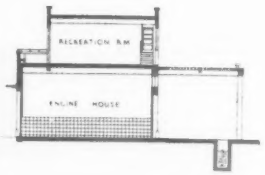
The photograph, taken looking north, shows part of the main front.

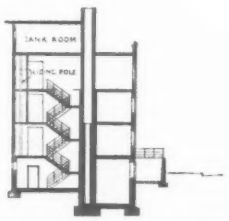
HESTON AND ISLEWORTH CENTRAL



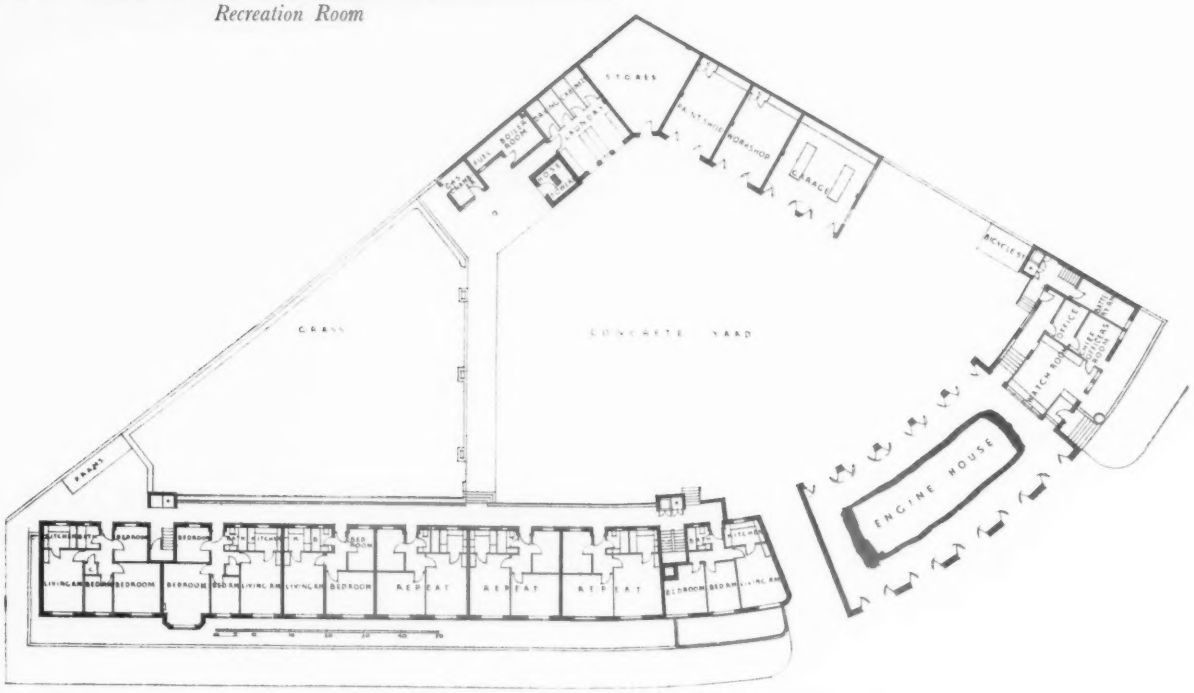
FIRST FLOOR PLAN

Recreation Room



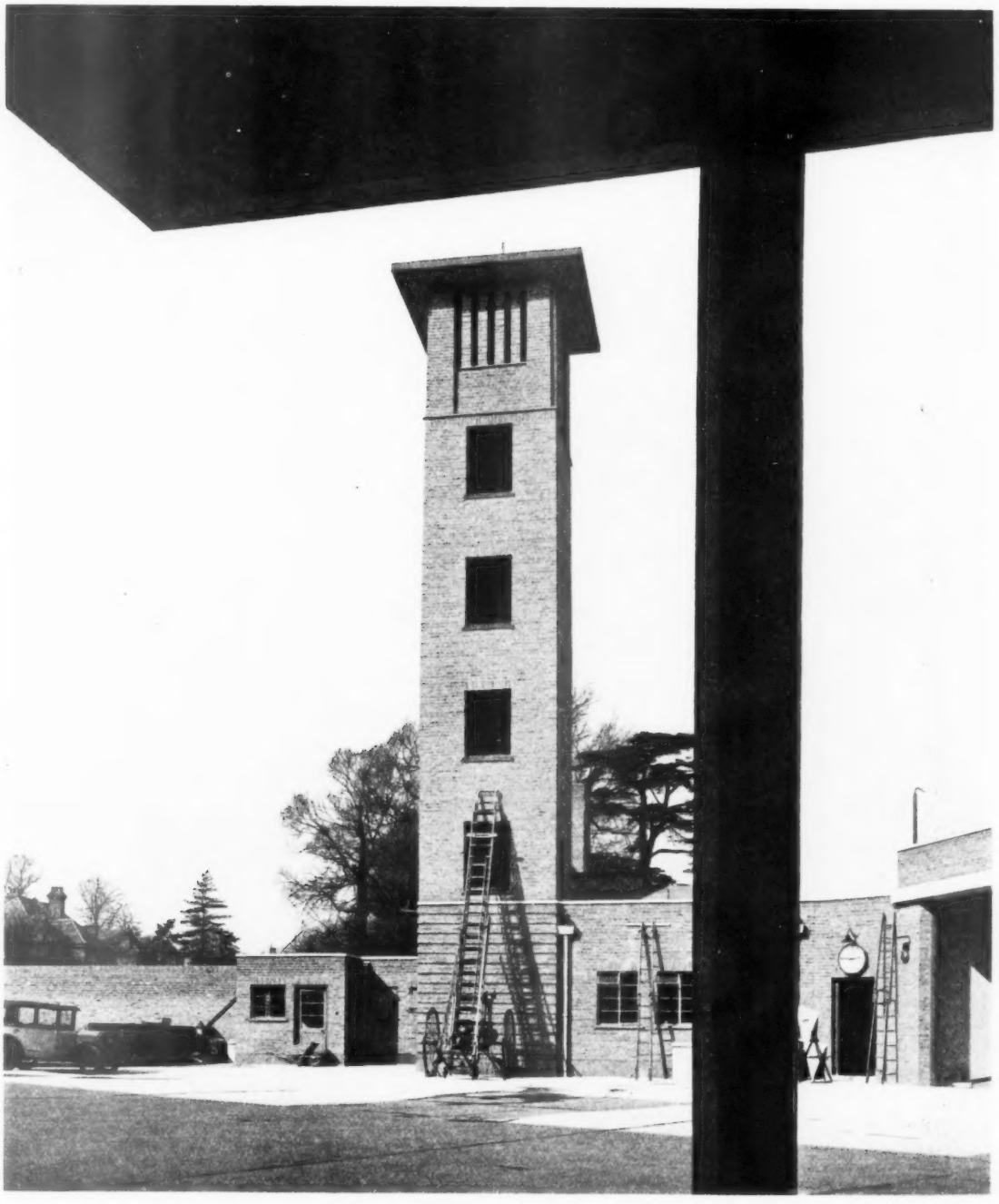


SECTIONS THROUGH ENGINE HOUSE; AND STAIRCASE AND BICYCLE SHED AT EAST END



GROUND FLOOR PLAN

FIRE STATION: DESIGNED BY J. G. CAREY



SERVICES—*The fire alarm system is controlled in the watch-room. Call bells are connected from the watch-room to each living quarter and to various other points in the building. This enables the duty man to call the whole brigade or individual fireman. At night, during an alarm, the lighting of the principal bedroom in each flat may be operated from the watch-room. The fire engines are started and the front doors of the engine-house are opened by electricity controlled also by the duty man in the watch-room. Central heating and hot water in both station and living quarters is by gravity feed coke boilers. Heating is by radiators in all the living-rooms and bedrooms; by floor panels in the engine-house; and by ceiling panels in the recreation room. In addition, gas fires are provided in the living and principal bedrooms. There are three electric service lifts adjoining the staircases.*

CONTRACT PRICE—*£30,155. Alarm system, separate contract, £6,279.*

The photograph is of the hose tower and is taken from beneath the canopy to the washing space at the rear of the engine-house.

HESTON AND ISLEWORTH CENTRAL FIRE STATION

The photographs show : top, left, the street entrance to the watch-room ; above, the canopy to the washing space at the rear of the engine-house : right, the street doors from the engine-house ; and two views in the watch-room.

For list of general and sub-contractors see page 668.

DESIGNED BY J. G. CAREY

REGISTRATION

DEBATE IN PARLIAMENT

In the House of Commons on Friday last the Architects' Registration Bill came up for discussion. After the debate, the Measure was "talked out." There is hence no chance of its becoming law this Session. On this and the two following pages we print our Parliamentary Correspondent's report of the debate.

MR. BOSSOM moved the second reading of the Bill, which, he said, was passed in the House of Lords without Amendment and without a division. The general public, when they heard the name of "architect," were of opinion that it indicated a person who had been trained in the subject of architecture, and they understood, when they were purchasing a house, for example, which was described as architect-designed, that it had been designed by such a person. It had been found by experience, however, that they did not recognize that the term "registered architect" was essential, and, therefore, this Bill had been promoted by the Registration Council in order to have the name changed to "architect."

Giving a history of the situation, Mr. Bossom said that for several years this matter was discussed, and in 1931 the Architects' (Registration) Bill was passed, establishing the fact that those who desired to call themselves registered architects must have their names upon a register. For two years after that time, those who had been architects or had practised that profession were entitled to go on to the register without examination, but after that period those who desired to use the name "registered architect" had to pass a qualifying examination. The Bill, which became an Act in 1931, established the Registration Council, and also a Board of Architectural Education. That board consisted of 75 members, four nominated by Universities, seven by the Society of Teachers, 19 by schools of architecture, seven by societies of teachers, 11 by non-architectural bodies, five by architectural bodies, and 24 registered persons nominated by the Council itself.

The present Bill was not an attempt to establish a monopoly of the practice of architecture for any body or any group of people. It permitted anyone to design or to supervise any form of construction; it in no way interfered with them; but, two years beyond the time when this Measure was put on the Statute Book, a person so acting would not be able to call himself or herself an architect without passing a qualifying examination. The Bill was not an attempt in any way to add to the costs of the public in connection with architectural undertakings; it was not an endeavour in any way to destroy the livelihood of any people. Many people who were employed by various local authorities carried out the supervision and control of construction work. Municipal engineers, medical officers and surveyors did that, and this Bill in no way affected them, except that it said that, after two years beyond the time when this Bill had become an Act, if they had not become registered they could not call themselves architects. They could call themselves medical officers, municipal engineers, surveyors, or anything of that sort, but they must not call themselves architects. In other words, they called themselves what they were.

Wide Support for Bill

The Bill was very widely supported. The first body supporting it was the Royal Institute of British Architects. Then there were the 67 provincial associations allied to the Royal Institute of British Architects, the Faculty of Architects and Surveyors, the Architectural Association (London), the Association of Architects and Surveyors and Technical Assistants, the representatives of the Council of the Unattached Architects, of which there were 3,000, and the greatest number was that of the Royal Institute of British Architects, an honoured organization in this country and one which had done service of the finest kind. But beyond these, the Bill was actively supported by the crafts that enable buildings to be constructed. The National Federation of Building Trade Operatives, representing something like 900,000 members, the National Federation of the Building Trades Employers, the London Master Builders, the Auctioneers, the Civil Engineers and Structural Engineers, and Surveyors' Institute—all those institutions were in no way opposing the Measure. Practically 90 per cent. of the profession in this country were supporting the Bill, and practically all of those who carried out the work designed by members of the profession were supporting the Bill.

"Not an Attempt to make Architecture an Exclusive Profession"

"The Bill" (continued the hon. member), "is not an attempt to make architecture an exclusive profession. Take London as an example. A boy can go through an elementary school and can gain a junior county scholarship or go through the general schooling course, right on, through a technical school: or he can go, for example, to the Regent Street Polytechnic, and by paying two guineas a year for the evening course over a period of six years he can complete the course that is necessary to qualify for the examination which entitled him to registration. The Registration Council, under the powers given to it by the Act of 1931, requires annual dues of 6s. 8d., a half of the total of which was to have been put aside to help necessitous students. But it was agreed by the Privy Council in 1932 that the Council should not spend all of this amount, but should set aside a part regularly and so accumulate a sum, which is now in the neighbourhood of £2,500, for the purpose of helping students over a wider area. The Royal Institute of British Architects alone has granted 31 scholarships.

"At this time 12 art schools, technical colleges or universities have been able to frame their curriculum and develop an examination, which has enabled the Registration Council to give them full permission to grant full approval to those who pass the course. I have alluded to the Regent Street Polytechnic, which allows a student to attend an evening course for six years at two guineas a year. The student may be working during the day in a builder's or architect's office and earning his living, and there are a great many men who have done that. I could cite the cases if desired. As to what is felt generally about the standard of the examination, let me state that last year, 1936, 750 evening students presented themselves for the Royal Institute of British Architects examination alone, irrespective of other bodies that conduct such examination.

"Let me deal with registration in this country and other countries. I say quite frankly that in this matter we are a long way behind. I have practised the profession in many lands, and I know whereof I speak. In five Dominions and Colonies registration is compulsory. In 41 out of 48 States of the United States it is compulsory. In a dozen countries of Europe it is compulsory. Certain criticisms have been made of the Bill by an organization, of which organization I believe the hon. Member for Holborn (Sir R. Tasker) was the chairman, and it has circulated a pamphlet which many Members have received. The first item in that paragraph to which I would refer is a statement with which we all agree, that the word 'architect' should be the one that is employed. Half-way down the page the pamphlet states that the Bill requires all architects to register. This is not the case; they are allowed to register if they wish to do so. The pamphlet uses the word required. The truth is that they are allowed to register.

"The pamphlet says that the Royal Institute of British Architects' circulars state that similar or more drastic legislation prevails in the United States. That is absolutely right. There, in very many States, an architect cannot practise at all unless registered. Registration is insisted upon as a State regulation. A man cannot practise, no matter what he may have done, unless he is registered. He must show that he has the required qualities. On page 4 the pamphlet says that this is a compelling Measure. It is not a compulsory Measure; it is a permissive Measure, and no one is compelled to register unless he or she wishes to do so, but if the Bill becomes law no one will be entitled to call himself or herself an architect without registering. A man cannot call himself a Member of Parliament unless he has been elected. Why should a man call himself an architect unless he has the qualifications necessary to make him an architect? On page 5, the pamphlet says that a man is compelled to pass an examination established by a certain body. Twelve art schools, technical colleges and universities have already established a standard of examination which has proved satisfactory. That shows it is not compulsory to pass the examination of one other special body. Again, it states at the bottom of page 5:

> 'The so-called recognized architectural schools cost the students 60 guineas a year or even more in fees alone.'

That may be correct if they go there, but they do not have to go there. At the Regent Street Polytechnic, to which I have already referred, the fees are £2 2s. a year, and the full course can be taken during the evenings, that is, for £12 12s. in six years. On page 9 it says:

> 'The Royal Institute of British Architects only represents a third of the architects' profession.'

"If the Royal Institute of British Architects with its 6,750 registered members only represents a third, the 1,200 members of the protesting body which is suggesting that the standard of education is too high represents only about 6 per cent. of the profession. This body which is objecting to this Measure was founded in 1925. The Royal Institute of British Architects was originally started in 1834.

"We are endeavouring to raise the level of our educational system everywhere, and not to lower it. Among the members of the opposing organization are very distinguished men indeed, personal friends of my own whom I admire tremendously, but if the standard of architectural educational requirements be lowered what is this body going to do about fees? It has not said a word about that. Does it propose that in the future it should send out men with a lower standard of education and charge the same fees as those which are now paid to men who have a very much higher standard of training? I do not believe the House is desirous of lowering the standard of education, yet this protesting body which asks for the rejection of the Bill appears to want to lower the standard of education but not to lower the fees.

The title "Architect"

"We have got to protect the word 'architect' for the benefit of the general public. This Bill only attempts to carry forward that principle. It will not stop anyone from practising archi-

tecture but, if they do not trouble within two years to qualify before the Registration Council, they cannot call themselves architects. If they are not accepted when they make application before the Registration Council they have a right of appeal to an admissions body and, if they do not succeed there, they can appeal again to an independent and non-architectural tribunal, so that they can get absolute freedom in this matter. But if they have failed to register within two years from the passing of this Bill they must pass an examination. I am authorized to say that the Registration Council is willing to accept any helpful Amendment. Considering that we spend £300,000,000 a year on building and architectural work, we are entitled to require those who call themselves architects to have a standard of education that is going to be a credit to our country."

Seconder of the Bill

Mr. Ammon, who seconded (in the place of Mr. G. Hicks, who was ill), said he did so from the point of view of the ordinary citizen, who was very much concerned about such an important matter as that of architecture, and the great part that it must play in the culture and education of our people. It had a great spiritual value upon the community. It was almost impossible to over-estimate the spiritual value of a beautiful building. In view of the growing standard of education and the fact that, to a large extent, the structure of the nation was being rebuilt, it was of increasing importance that those who were entrusted with the planning and elevation of our buildings should be equipped in every possible way, both educationally and by skilled training, to give of their very best. It was for that main reason that he supported the Bill. One had only to look around to see the extraordinary contrasts with regard to architecture in these days. One of the most wonderful sights to be seen was to stand on Westminster Bridge at dusk and observe the effect of some of the new architecture along the Embankment. They got a tremendous contrast if they went into the country and saw how the beautiful landscape had been defiled by ill-planned and badly constructed buildings, as a result of which, in a few years, slums would be spread throughout the length and breadth of the land. Slums were not only ugly and harmful but they had a bad moral effect upon the people who were compelled to dwell amid such surroundings. Unless something was done on the lines of the Bill this sort of thing was likely to be perpetuated.

One of the objections to the Bill had been that, to a certain extent, it was said to perpetuate something like class-distinction. It had been suggested by some people that it was expressed in the educational examination. That was absurd. The standard was simply that of matriculation or the general schools' certificate. It was almost impossible, nowadays, for anybody leaving school to obtain any position other than that of a general labourer, or even that, without the school-leaving certificate. That was the standard of education that was laid down in this Bill.

There was also the question of whether or not those who follow the profession should be drawn from one class. He was a member of some years' standing of the London Education Committee, and, naturally, he had been solicitous to see that, as far as possible, the door should be thrown wide open for boys from working-class and humble homes to enter the professions, believing that it was good for the professions that they should introduce new strains. It was a surprising thing that, of all the professions, there were more boys from the London institutes entering the profession of architect than any other profession. A large number of the boys who went through their ordinary evening institutes and attended classes for perfecting their training as architects came from working-class homes. This Bill carried forward a further stage what had already been accepted both in the Lords and in that House.

Mover of the Rejection

Sir Robert Tasker, in a speech of an hour's duration, moved the rejection. He said that he had been a member of the Architects' Registration Council ever since its inception. So far from it working smoothly he could assure the House that the meetings of that council were more like a bear garden than a meeting of professional men. It was untrue to say that 90 per cent. of the registered architects were ready to support the Bill. The Architects' Registration Council as such was never consulted about this Bill. The Council had experienced great difficulties in putting the Act into operation in the direction that it desired, namely, the promotion of architecture and the betterment of conditions. It passed the following resolution unanimously :—

> "That in view of the several ambiguities of the Act, which are calculated to embarrass the Architects' Registration Council of the United Kingdom and its committee in the proper and equitable administration of the Act, this council do now take action to draft and secure as soon as possible such amendment of the Act as may be deemed necessary."

Mr. Bossom : "Will the hon. Member kindly read the complete quotation? He has omitted certain words."

Sir R. Tasker : "I have read all except two words. Upon that resolution a committee of the Architects' Registration Council was set up. It proceeded to examine the anomalies and ambiguities of the Act and then suddenly it was resolved by a small section of the council, acting on that committee, that work for the time being should be suspended and that it would create a Parliamentary Committee. That Parliamentary Committee consisted of, I think, six members of the Royal Institute of British Architects, with the chairman and vice-chairman, one member of the Incorporated Association of Architects and Surveyors, and one representing unattached architects. When it met to consider the question of an amending Bill, the chairman seems to have promptly ruled : 'We are not here to discuss ambiguities. We are here to propose a Bill and send it up to the Registration Council.'

"When that suggestion was put forward by the chairman of the council we naturally wanted to know what was behind it. We tried by interrogation to know what the chairman of the Council and the chairman of the Parliamentary Committee had in mind, but we could get no information. Representatives of other bodies also made inquiries but they got no satisfaction. One member of the council having been deported from the Parliamentary Committee—"

Mr. Stephen : "Who was he?"

Sir R. Tasker : "I must refrain from giving names. One member having been deported from the committee, the first thing members of the Registration Council knew was that a Bill had been presented in another place by the Noble Lord purporting to come from the Architects' Registration Council. It is an astonishing suggestion that 90 per cent. of architects are in favour of the Bill."

Proceeding, Sir R. Tasker declared that the Bill was a sham. It was an attempt to get by dubious means the control by one body of the whole of the architectural profession. It was idle for anyone to say that it was not an attempt to create a monopoly. The intention was to create a monopoly.

"I regret to say" (continued Sir R. Tasker) "that it is true that there has been a good deal of ill-feeling between the Royal Institute of British Architects and the Incorporated Association of Architects and Surveyors. When I entered the profession, I thought the word architect was synonymous with 'gentleman,' but I have long since abandoned the idea that the two terms are synonymous. After more than 50 years' experience it hurts me to have to make an admission of that sort. I know that one of the finest gentlemen I ever met was a working stonemason. I know equally well that if the authors of this Bill had their way there would be a great deal of what hon. Members opposite would term 'the old school tie' feeling. One finds genius in a boy whether his father is a barrister or a butcher. The 1931 Bill was designed to assist such a boy by creating scholarships, but the effects on him if this Bill were passed would be dreadful. There was a time when a man was compelled to work his way through the shop, the quarry, the brick-yard, and so on, before he was allowed to occupy the great and exalted position of architect. Nowadays a man goes to the job with long flowing hair, runs his fingers through his hair, and talks about art. It is the practical man that we want—the practical genius.

Examinations

"I suggest to hon. Members that neither Sir Christopher Wren nor Inigo Jones would have passed the Royal Institute of British Architects examination. The Institute professes to attach great importance to examinations. What is the extraordinary importance attached to this remarkable examination? It is not necessary to pass an examination to become a licentiate or a fellow. If there are 3,262 who are fellows or licentiates and have never passed an examination, then I submit that the value of the examination has been grossly exaggerated.

"My hon. friend the Member for Maidstone himself had an experience which shows the value of the examination. He gave a gold medal at the Polytechnic in Regent Street for the best drawing. It was won by a young man who afterwards submitted himself for the Institute examination. *Inter alia* he had to send in a drawing to show that he really could draw, and he naturally thought that the drawing which had won the Bossom gold medal at the Polytechnic would be good enough. But it was not. It was rejected. He appealed to me as a member of the Registration Council and, greatly daring, I wrote to the Secretary of the Institute and related the circumstances. The reply was that the young man must send up another drawing. The young man was very angry, at which I was not surprised. He dashed off another drawing. I thought it was an insult to send that drawing up to the Institute. It passed. He rejoices now in being able to put the letters A.R.I.B.A. after his name. I do not give that young man's name because although this is a privileged place I do not seek to take advantage of that privilege, but there must be a record of the case on the files of the Institute."

Dealing with the subject of examination, Sir R. Tasker said that the candidates were largely the victims of caprice or perhaps the state of liver of the examiner. THE ARCHITECTS' JOURNAL for March 25 set out the position of affairs very clearly when it referred to the temptation of the Royal Institute to eliminate all examinations save its own, and said that this dispute must be settled with a justice that was beyond question. The opposition to the Bill was not due to any desire to belittle the Royal Institute of British Architects. That was the last thing in the world he wished to do. On more than one occasion he had paid tribute to the value of the work it had done, but he regretted that the members of it did not apparently take sufficient interest in it to do things in the way he would like.

Modern Architecture

Modern architecture was largely composed of horizontal lines and vertical lines. Apparently it was the object of the schools today to teach a boy to use a T-square as a set-square, and that passed for architecture. There was no proportion about it. The results were rather hideous.

If this Bill went through, the will of Parliament, as expressed in the Act of 1931, would be defeated, and the outlook would be perfectly hopeless. Parliament said, "You shall give 50 per cent. of the income for scholarships." Today that scholarship fund amounted to over £3,900. Posterity might be a very fine

thing, but during the few remaining years he had to live he wanted to see the great and glorious art of architecture advance; he did not want to see come into existence any institution which was going to diminish, deteriorate or take away any of those glorious traditions. It was because he felt that this Bill was not to the benefit of architecture, not to the benefit of his fellow-countrymen, that he had moved the Amendment.

Seconder of the Rejection

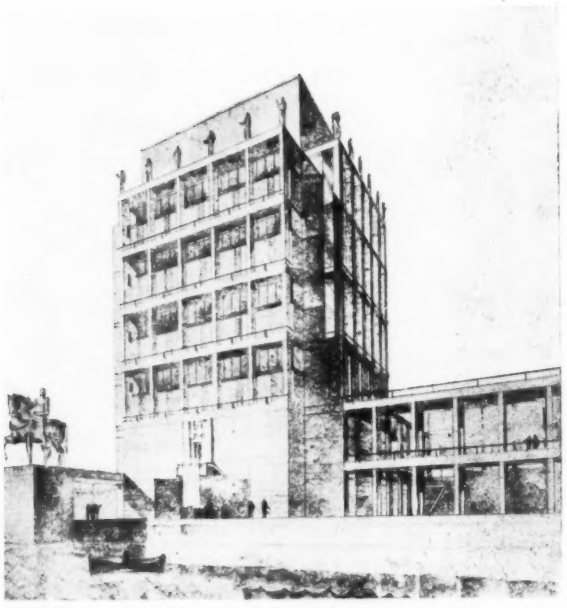
Mr. McEntee, who seconded, said that he was not satisfied with the way in which the existing law had been administered. The Council held an examination last year and, of 60 scholars who sat for the examination, 10 were selected for interviews. For some extraordinary reason it selected the one who got the highest and the second highest number of points in the examination, the one who got seventh and the one who got tenth, passing over the numbers 3, 4, 5, 6, 8 and 9. Number 3 was aged 21¾ years. His total examination marks were 323, the highest being 351 and the second highest 326. The one to whom he referred particularly, who was not given a scholarship, received 60 marks for drawing, which was very high up in the percentage of marks for drawing, and only 20 for design. He might be considered on design only as having failed, and in consequence of that there might be some reason for his rejection, but the one who was number 10 received only 276 marks as against 323, only 15 for drawing as against 60, and only 15 for design as against 20, yet he was passed and given a scholarship. This young man was aged 22¾ as against the other man's 21¾, so it was not on age, it was not on marks, it was not on drawing or design. On all these points he was well behind any of the other selected candidates for interviews.

Another point in respect of which scholarships were supposed to be given was that of need. The one who was rejected was the son of a widow in very poor circumstances who made tremendous efforts to give her son the education which enabled him to obtain these high marks. The one who was passed and was No. 10 on the list came from a family in very much better circumstances.

Sir John Withers: "Is there not a *viva voce* examination? In almost every scholarship examination the examiners see the boys and supplement the written questions with verbal questions, and that is part of the examination."

Mr. McEntee: "It is because I know that system and realize how vicious it is that I am objecting today. I happen to be a member of a society which is affiliated to the National Federation of Building Trade Operatives, and we, at any rate, do not support the Bill. I know of no organization affiliated to the Building Trade Operatives which has been asked for support in regard to the Bill. One of the objects of the Federation is to make it easier for poor boys whose parents are in a trade like my own, that of carpentry, or who are joiners, bricklayers, etc., to get into some of the professions associated with those trades. Nobody can argue that this Bill will make it easier, but everybody must know perfectly well that it will make it more difficult. It is one of the objects of the Bill to make it more difficult to enter the profession."

The claim made for the Bill was that it would introduce a higher standard into the architectural profession. It would do no such thing. There were many incompetent men who were practising as architects who if the Bill passed would be entitled to become registered, and they would be no more competent because of that registration than they were at the present time, unregistered. Any person who had, say, attached his name to half a dozen jerry-built houses and who could prove that he had been practising as an architect, would be entitled to claim registration, and, according to the words of the Bill, could not be refused. It was ridiculous to say that the standards and qualifications will be raised by the passing of the Bill.



A drawing of the Italian Pavilion, Paris Exhibition, as it will be seen from the River Seine.

By this time it was 4 p.m., the time for the House to rise, and the Bill was therefore "talked out."

R. I. B. A.

ANNUAL RECEPTION

The Council of the R.I.B.A. is to hold a reception on Friday, May 28, from 8.30 p.m. to 12.30 a.m.

Members and guests will be received by the President and Mrs. Percy Thomas in the Henry Florence Hall from 8.45 p.m. to 9.30 p.m., and light refreshments and music will be provided. There will be dancing from 11 p.m. to 12.30 a.m.

The price of the tickets will be 5s. with an additional charge of 5s. if it is desired to bring a guest. Those who intend to be present are particularly requested to submit their applications, together with their cheques, as soon as possible, and in any case not later than Friday, April 30.

EXHIBITION OF ARCHITECTS' WORKING DRAWINGS

An Exhibition of Architects' Working Drawings will be held at the R.I.B.A. from Tuesday, April 27, to Monday, May 3, inclusive.

The Exhibition will be open daily between the hours of 10 a.m. and 8 p.m. (Saturday, 10 a.m. and 5 p.m.). It will include drawings lent by: Mr. L. H. Keay, O.B.E., F.R.I.B.A., Director of Housing, Liverpool City Council (a Scheme of Flats erected in Liverpool); Mr. J. Wilson Paterson, C.V.O., M.B.E., F.S.A.Scot., F.R.I.B.A., Chief Architect, H.M. Office of Works, Scotland (Langholme Post Office, Dumfries); Messrs. Pierson and Wilson, A.A.I.A., of Washington, D.C., U.S.A. (Annexe to the Library of Congress, Washington, D.C., U.S.A.); Sir James West, O.B.E., F.R.I.B.A., Architect to H.M. Office of Works (the new "Gerrard" Telephone Exchange); Mr. E. P. Wheeler, F.R.I.B.A., Architect to the London County Council (the Fire Brigade Headquarters and Block Dwellings, Loraine Place, Holloway, London).

A special Students' Evening will be held at the Exhibition on Tuesday, April 27, 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.

EXAMINATIONS

Intermediate Examination

June 4, 5, 7, 8 and 10, 1937. (Last day for receiving applications: May 4, 1937.)

November 12, 13, 15, 16 and 18, 1937. (Last day for receiving applications: October 12, 1937.)

May 20, 21, 23, 24 and 26, 1938. (Last day for receiving applications: April 20, 1938.)

November 18, 19, 21, 22 and 24, 1938. (Last day for receiving applications: October 18, 1938.)

Final Examination

July 14, 15, 16, 17, 19, 20 and 22, 1937. (Last day for receiving applications: June 14, 1937.)

December 8, 9, 10, 11, 13, 14 and 16, 1937. (Last day for receiving applications: November 8, 1937.)

July 13, 14, 15, 16, 18, 19 and 21, 1938. (Last day for receiving applications: June 13, 1938.)

December 7, 8, 9, 10, 12, 13 and 15, 1938. (Last day for receiving applications: November 7, 1938.)

Special Final Examination

July 14, 15, 16, 17, 19 and 20, 1937. (Last day for receiving applications: June 14, 1937.)

December 8, 9, 10, 11, 13 and 14, 1937. (Last day for receiving applications: November 8, 1937.)

July 13, 14, 15, 16, 18 and 19, 1938. (Last day for receiving applications: June 13, 1938.)

December 7, 8, 9, 10, 12 and 13, 1938. (Last

day for receiving applications: November 7, 1938.)

Special Examination of Licentiates to Qualify as Fellows

April 19, 20, 21, 22 and 23, 1937. (Last day for receiving applications: February 19, 1937.)
October 25, 26, 27, 28 and 29, 1937. (Last day for receiving applications: August 25, 1937.)
April 25, 26, 27, 28 and 29, 1938. (Last day for receiving applications: February 25, 1938.)
October 17, 18, 19, 20 and 21, 1938. (Last day for receiving applications: August 17, 1938.)

Statutory Examination for District Surveyor and the Examination for Building Surveyor

May 5, 6 and 7, 1937. (Last day for receiving applications: April 5, 1937.)
October 6, 7 and 8, 1937. (Last day for receiving applications: September 7, 1937.)
May 4, 5 and 6, 1938. (Last day for receiving applications: April 4, 1938.)
October 5, 6 and 7, 1938. (Last day for receiving applications: September 5, 1938.)

SOCIETIES AND INSTITUTIONS

DEVON AND CORNWALL ARCHITECTURAL SOCIETY

At the annual general meeting of the above society, held at Exeter on April 3, the following officers were elected for the ensuing year:—President, Stanley Pool, A.R.I.B.A. (Truro); Vice-Presidents, J. C. C. Bruce, F.R.I.B.A. (Torquay), R. F. Wheatly, B.A., F.R.I.B.A. (Truro); Past President: E. Kemeys-Jenkin, F.R.I.B.A. (Exeter); Hon. Treasurer, John Bennett, F.R.I.B.A. (Exeter); Hon. Auditor, L. F. Tonar, L.R.I.B.A. (Exeter); Hon. Secretary, J. Challice, A.R.I.B.A. (Exeter); Assist. Hon. Sec., O. Parker, L.R.I.B.A. (Exeter).

The branches have elected the following members of Council for the ensuing year:—FELLOWS: *Exeter Branch*: A. H. Ough, F.R.I.B.A., R. M. Challice, H. M. R. Drury, A.R.I.B.A., G. S. Bridgman, A.R.I.B.A., A. Cunes, L.R.I.B.A., H. Alban Peters, A.R.I.B.A., H. V. de Courcy Hague, F.R.I.B.A., W. J. M. Thomasson, A.R.I.B.A., and W. E. Wolf, A.R.I.B.A. *Plymouth Branch*: A. S. Parker, F.R.I.B.A., E. Cannon, L.R.I.B.A., A. C. A. Norman, F.R.I.B.A., E. U. Channon, A.R.I.B.A., C. Lloyd Jones, L.R.I.B.A., P. M. Ware, A.R.I.B.A., and E. G. Catchpole, A.R.I.B.A. (*ex-officio*).

ASSOCIATES: *Exeter Branch*: Arthur Palfrey, P.A.S.I., P. G. Prewett, L.R.I.B.A., and L. A. J. Heywood (*ex officio*). *Plymouth Branch*: W. Halkerston, A.R.I.B.A.

The retiring president, Mr. E. Kemeys-Jenkin, F.R.I.B.A., in the course of his address, said: "There is no doubt that the greatest item of interest for architects during my term of office is the Architects' Registration Bill, which has passed the House of Lords without amendment, and is now before the House of Commons. As you all know, the Act of 1931 has been in operation for about five years. Under this Act 12,000 architects have been registered who can call themselves 'registered architects,' but there is nothing at present to prevent any person from describing himself publicly or privately as an architect. The new Bill prohibits the use of the term 'Architect' by any but architects on the register set up under the 1931 Act, but allows practising architects a further two years in which to apply for registration. After that time persons can only be admitted to the register who have passed one of the qualifying examinations.

"The object of the Bill is to protect the public from adventurers. Under the present law there is no guarantee that a person calling himself an architect is any way qualified for the work he undertakes. The effect of the Bill will be to place the architectural profession on a sound foundation, to secure adequate technical training for all members of the profession, and to provide the public with the protection to which they are entitled in a matter affecting the comfort and durability of the houses in which they have to live.

"Concerning architects only, there are also important changes to be made this year in the constitution and composition of the R.I.B.A. Council, Standing Committees, Executive Committee, and the Allied Societies' Conference, which will make these bodies more efficient instruments for the work which they have to perform, and will also give the provincial representatives on the Council more power in the working of the Institute than they have under the existing system.

"With the trend of legislation affecting planning and building as shown by the setting up of county and town regional planning committees, and with the activities of voluntary bodies like the Council for the Preservation of Rural England, the architect is fast following the medical man into the sphere of voluntary public usefulness, and I do not think that the public, generally, appreciates the great amount of voluntary work which architects are doing for the good of the community. I will give one example: Under the Devon Regional Town and Country Planning Committee, this society has set up two panels of architects, one for South Devon and one for East Devon. These panels have doubtful plans submitted to them by local authorities for approval and advice. To give you an idea of the amount of voluntary work this scheme involves, you must know that during the last nine months the panels have met once a week or once a fortnight and examined and reported on no less than 250 sets of drawings. The remaining areas of Devon are now coming into the scheme, and this will mean, of course, more regional planning committees, with the necessary additional panels of our members, and an enormous increase in the amount of voluntary work.

"This Society also has offered its services in an advisory capacity to the recently-formed Devonshire Playing Fields Association, a branch of the National Playing Fields Association which is working in conjunction with the King George the Fifth Memorial Fund Committee, to provide playing fields in town and country districts."

LIVERPOOL ARCHITECTURAL SOCIETY

The annual dinner of the above Society was held at Liverpool last week under the chairmanship of Mr. B. M. Ward, President.

Mr. Percy Thomas, proposing the toast of the "Society," said that we were at the beginning of an era of great national planning; of industrial redistribution; and, to a very large extent, of the rebuilding of many cities and towns. He did not think that these things were as far off as many people imagined, and, as indications of progress in this direction, he instanced the development of the trunk road system, which, he considered, would inevitably become a national scheme; and the development of great trading estates, of which there are at present two in course of construction in the country.

These signs showed that, slowly but surely, the outlook on national life was changing, and they justified the hope that we would live to see the dawn of a planned England—an England of orderly cities and of a countryside that was really preserved. The cost was going to be enormous, because we had left matters rather late, but he believed that, like all good planning, the imminent developments would pay for themselves through their efficiency.

In replying to the toast, Mr. B. M. Ward emphasized the necessity of uniformity in the profession and referred to the desirability of the Registration Bill now before Parliament. It was necessary, he said, that the public should recognize that the Society "spoke all together and represented the whole of the profession." But before that recognition could come it was essential that architects should take up the challenge and do all that was possible to educate the people to a deeper and more discerning interest in good architecture. They must try to show the community that planning was absolutely essential, that it was coming in any case and must be done by the right people.

This little island could not go on, as it had always done, blundering along in a haphazard way. He hoped we would always be a democracy, but we had certainly something to learn from the dictators of Europe in regard to planning. We should study what they did, and take the good out of it.

BIRMINGHAM AND FIVE COUNTIES ARCHITECTURAL ASSOCIATION

The following have been elected officers of the above Association for the ensuing year: Mr. S. N. Cooke, President; Mr. H. G. Wicks and Mr. S. J. Stainton, Vice-presidents; Mr. A. M. McKewan and Mr. C. E. M. Fillmore, Secretaries; Mr. G. S. Frazier, treasurer; and Mr. S. L. Whitehouse, Librarian.

CAMBRIDGE ARCHITECTS

At the annual general meeting of the Cambridge Chapter of the Essex, Cambs and Herts Society of Architects, the following officers were elected: Chairman, Mr. S. E. Urwin, A.R.I.B.A., Cambridge; Vice-chairman, Mr. R. D. Robson, A.R.I.B.A., March; Secretary, Mr. H. H. Parker, L.R.I.B.A., Cambridge; Treasurer, Mr. I. T. Sifton, A.R.I.B.A., Cambridge; Librarian, Mr. H. L. Mullet, M.A., L.R.I.B.A., Cambridge; Executive Committee, Mr. J. D. Bland, A.R.I.B.A., Cambridge, Mr. T. Fyfe, M.A., F.R.I.B.A., Cambridge, Mr. H. C. Hughes, M.A., F.R.I.B.A., Cambridge, Mr. N. T. Myers, F.R.I.B.A., Cambridge, Mr. T. F. Parker, L.R.I.B.A., Wisbech.

D.I.A.

The Design and Industries Association, pursuing its efforts to make shoppers design-conscious, has organized a selective exhibition of furnishings at Messrs. Furlongs showrooms in Powis Street, Woolwich. The firm has handed to the D.I.A. the whole of the selection, and the exhibits, which are divided into nine rooms, have been chosen as the best designed goods in stock. The exhibition was opened on April 9 by Lady Kemp. It will remain open until the end of the month.

INFORMATION SHEET
SUPPLEMENT

The Architects' Journal Library of Planned Information

RECENT developments have brought up for reconsideration the question of the looseness of Information Sheets.

When the series was first started, it was felt that readers of the Journal would have some grounds for complaint if in a feature that was clearly meant for it, no facilities for filing were provided: and the Sheets were therefore inserted loose in the paper.

This method has obvious advantages for filing, but it has also obvious disadvantages, which our readers have not been slow to point out.

As a permanent feature, loose inserts are a nuisance in a paper, since they have a way of dropping out in the street or the train, if not before they get into the reader's hands (we have periodical complaints that Information Sheets for such a week have not been delivered with the paper).

Or, what is nearly as bad, they have a way of sticking out slightly, and getting bent or torn.

Furthermore, those architects who collect the sheets, and there are a great many, are often human enough to delay the act of filing for several days after receiving their copies, in which time the sheets again have a good chance to commit literary hara-kiri.

For all these reasons, it has been decided to make an obvious improvement.

By binding in the Information Sheets in the Journal so that they cannot fall out, their powers of self-destruction will be curtailed. And to insure that they can be as readily filed as before, the pages are now being perforated.

INFORMATION SHEETS

496 Roofing Chimney Flashings

497 Approximate Estimating—XI

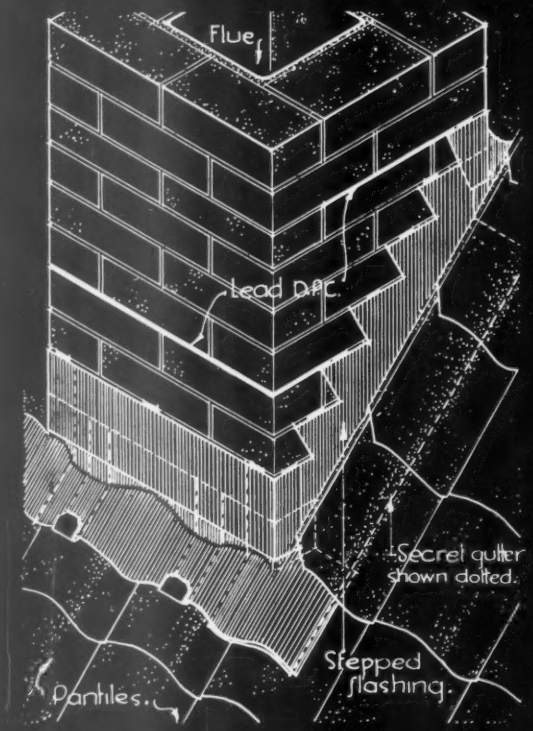
498 Roof Insulating Blocks

Sheets Issued since Index :

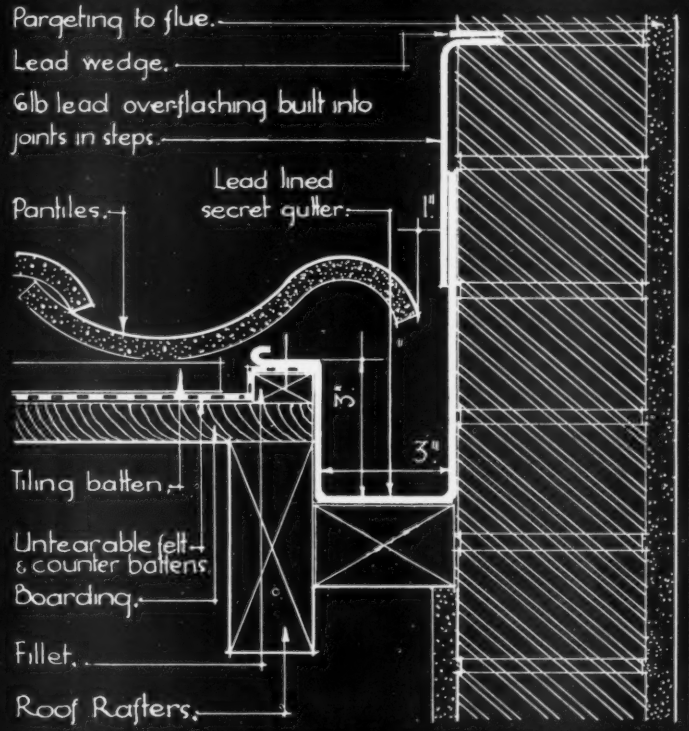
401 : Plumbing to Baths
402 : Waterproofing
403 : Asbestos-aluminium Foil—I
404 : Roofing
405 : Joinery
406 : Asbestos-aluminium Foil—II
407 : Roofing
408 : Joinery
409 : Rubber-faced Building Slabs
410 : Places of Public Entertainment—II
411 : Electric Switchgear
412 : Lead Soakers to Valleys
413 : Plumbing in Welded Copper Pipe
414 : Electric Switchgear
415 : Electric Switchgear
416 : Insulating Board
417 : Work on Glass
418 : Plumbing in Welded Copper Pipe
419 : Places of Public Entertainment—III
420 : Tentest Metal Cover Strip
421 : Wood Preservatives
422 : Welding Sheet Copper Work
423 : Garages and Drives—II
424 : Roof Glazing
425 : Places of Public Entertainment—IV
426 : Asbestos-cement Roofing Tiles
427 : Asbestos-cement Roofing Tiles
428 : Welding Sheet Copper Work
429 : Flat Roofing
430 : Asbestos-cement Roofing Tiles
431 : Automatic Boilers
432 : Plumbing
433 : Places of Public Entertainment—V
434 : Plumbing
435 : Lifts—I
436 : Lead Soakers to Hips
437 : Coloured Cement Renderings
438 : Wallboards
439 : Wall Finishes
440 : Roofing
441 : Sash Operating Gear
442 : Roofing
443 : Wallboards
444 : Rainwater Goods and Fittings—I
445 : Roofing
446 : Rainwater Goods and Fittings—II
447 : Bathroom Cabinets
448 : Roof Glazing
449 : Places of Public Entertainment—VI
450 : Telephone Cabinets
451 : Hardboard
452 : Escalators
453 : Automatic Boilers
454 : Places of Public Entertainment—VII
455 : Places of Public Entertainment—VIII
456 : Ellipses
457 : Roofing
458 : Sanitary Equipment
459 : Hoods and Canopies
460 : Expansion Joints
461 : Roof Pitches, etc.
462 : Gas Refrigerators—I
463 : Asbestos Cement Rubber Floor Tiles
464 : Approximate Estimating—I
465 : Gas Refrigerators—II
466 : Approximate Estimating—II
467 : Gas Refrigerators—III
468 : Approximate Estimating—III
469 : Gas Refrigerators—IV
470 : Stopstara Glazing Compound
471 : Gas Cookers
472 : Lead Insulation against X-Rays
473 : Electrical Equipment—I
474 : Asbestos-Cement Ventilating Ducts
475 : Asbestos-Cement Glazed Panels
476 : Approximate Estimating—IV
477 : Monel Metal Sink Units
478 : Approximate Estimating—V
479 : Roofing
480 : Approximate Estimating—VI
481 : Lead Flashings
482 : Approximate Estimating—VII
483 : Flue Linings
484 : Plumbing Systems
485 : Partition Blocks
486 : Elementary Schools—I
487 : Plumbing
488 : Approximate Estimating—VIII
489 : Sliding and Folding Windows
490 : Flue Linings
491 : Approximate Estimating IX
492 : Aluminium
493 : Construction of Stepped Balconies
494 : Approximate Estimating—X
495 : Sheet Steel Office Equipment

620. THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

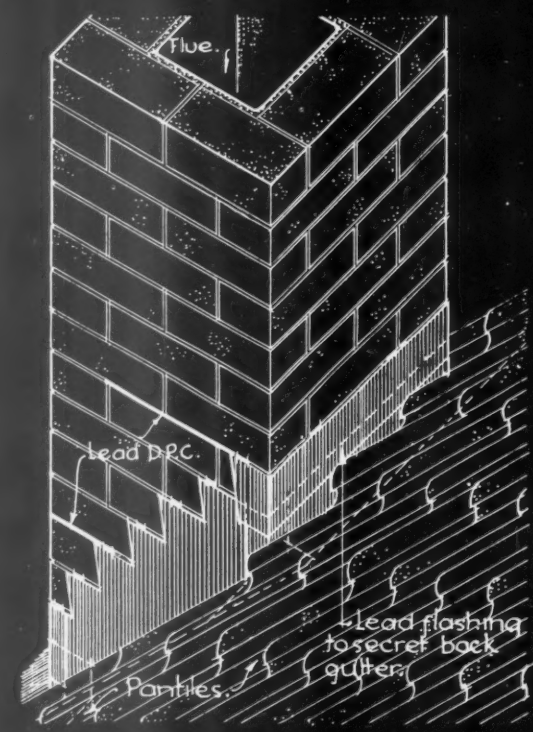
LEAD SECRET GUTTER FLASHING WHEN INTERLOCKING TILES OR PANTILES ARE USED



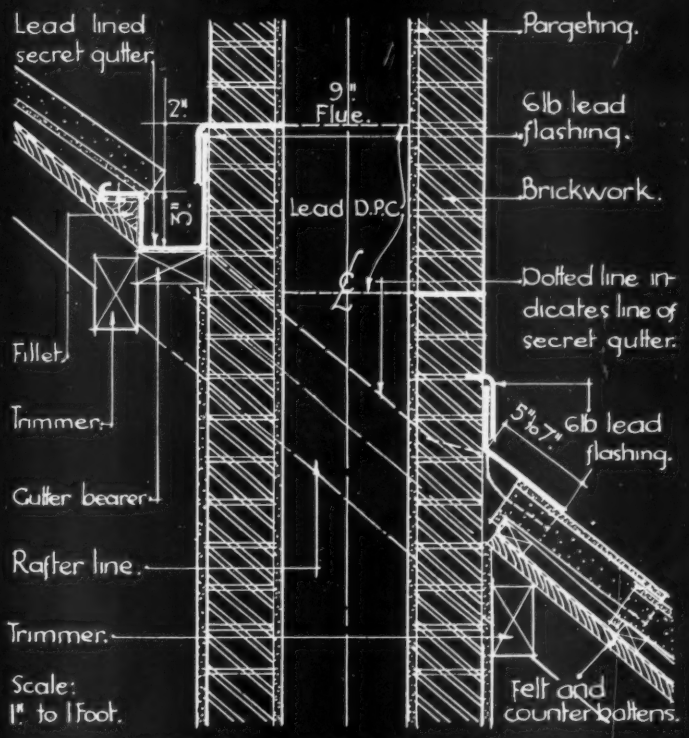
SKETCH OF STEPPED FLASHING & APRON



QUARTER FULL SIZE DETAIL TO SECRET GUTTER.



SKETCH SHOWING BACK FLASHING.



SECTION THROUGH CHIMNEY SHOWING SECRET GUTTER.

Information from Lead Industries Development Council.

INFORMATION SHEET: LEAD SECRET GUTTER FLASHING TO CHIMNEY: No 33

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1. Oscar A. Bayne

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 496 •

ROOFING—CHIMNEY FLASHINGS

Subject : Lead Secret Gutter Flashing to Chimney when Pantiles or Interlocking Tiles are used.

This Sheet shows the method of flashing and waterproofing chimneys when pantiles are used as the roof covering. The flashing in this case is by means of secret gutters, thus showing a minimum amount of lead.

Flashing to Sides :

As shown in the detail the lead is fixed to a fillet by means of tacks and dressed down into a secret gutter, formed with a gutter bearer and rafter, and up against the side of the chimney. A second piece of lead as overflashing is secured into the brick joints in steps, by means of lead wedges and turned down over the lead lining to the gutter. Where the width of the chimney is not a multiple of a pantile dimension, cut tiles are used, otherwise the width of the secret gutter is varied.

Flashing to Back :

Again the lead is lined round the tilting fillet over the gutter bearer and up the back of the chimney, being secured in position by tacking to the tilting fillet. A lead overflashing which is secured into the joints by means of lead wedges is then turned down over the lead lining.

Flashing to Front :

The lead apron is dressed on to the tiles and up against the front of the chimney, being kept in position by means of a bale tack, which may be either secured by nailing to a batten or fixed into a brick joint with a wedge. The overflashing is secured into a joint in the chimney by means of lead wedges and turned down over the apron.

Weight of Lead :

6-lb. lead, used in flashing of the type shown, is recommended, but 4-lb. has been used with satisfactory results.

Lapping :

The lead should be lapped at least 4 ins. at joints in all cases and the length of one piece of flashing should not exceed 7 ft.

Lead should be turned into brick joints at least 1¼ ins.

Protection of Lead :

It is generally recommended that lead be protected by a bituminous coating where it comes in contact with mortar.

Previous Sheets :

Previous Sheets dealing with flashing to chimneys are Nos. 283, 288, 324, 349 and 481.

Issued by : The Lead Industries Development Council.

Address: Rex House, 38 King William Street, London, E.C.4

Telephone : Mansion House 2855

37. THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

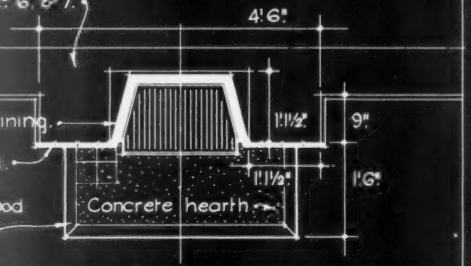
FIREPLACES AND CHIMNEY BREASTS.

PRICES ARE THOSE CURRENT DURING JANUARY, 1937.

APPROXIMATE ESTIMATING: The following are approximate prices for fireplaces and chimney breasts. Prices are for a medium sized job in the London area and include for overhead charges and profit.

TYPE A : £13:13:9. EACH.

Walls have been priced on Sheets Nº 6. & 7.



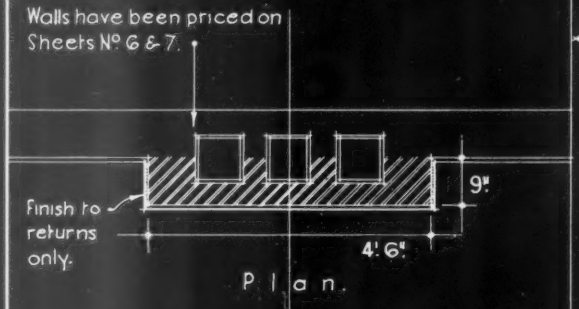
FIREPLACE ON SOLID FLOOR WITH FIREPLACE IN-TERIOR, MANTEL, SURROUND AND HEARTH, P.C. £10. AND FIXING. CONCRETE HEARTH, FLUE & CHIMNEY POT.

TO TYPE A,

ADD FOR :	each.
Fireplace on ground floor with fender walls	14/7.
ditto on wood joisted upper floors	16/8.

TYPE B : 6/7. PER FOOT RUN.

Walls have been priced on Sheets Nº 6 & 7.



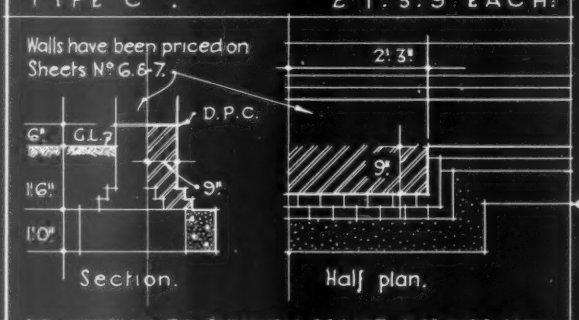
CHIMNEY BREAST 4'6" WIDE AND 9" PROJECTION IN FLETTON BRICKS AND WITH FINISHES TO RETURNS.

TO TYPE B,

ADD FOR :	PER FOOT RUN.
Chimney breast 4'6" wide and 9" projection in stock bricks	1/4.
Chimney breast 4'6" wide and 13½" projection in fletton bricks	2/11.
Chimney breast 4'6" wide and 13½" projection in stock bricks	4/11.
12" additional width to breast, 9" projection in fletton bricks	1/3½.
12" additional width to breast, 9" projection in stock bricks	1/7.
12" additional width to breast, 13½" projection in fletton bricks	1/11½.
12" additional width to breast, 13½" projection in stock bricks	2/4½.

TYPE C : £1:5:9 EACH.

Walls have been priced on Sheets Nº 6.& 7.



FOUNDATION TO CHIMNEY BREAST 4'6" WIDE AND 9" PROJECTION, INCLUDING DAMP-PROOF COURSE 6" ABOVE GROUND, STOCK BRICKWORK, EXCAVATION 2'6" DEEP AND 12" CONCRETE.

TO TYPE C,

ADD FOR :	each.
Foundations to breast, 13½" projection	12/10½.
12" additional width to breast, 9" projection	5/-
ditto, 13½" projection	7/6.
12" additional depth to each 12" in width of breast, 9" projection	1/11.
ditto 13½" projection	2/10.

Figures by Davis and Belfield, P.P.A.S.I., Chartered Quantity Surveyors.

INFORMATION SHEET : UNIT SYSTEM FOR APPROXIMATE ESTIMATING: B

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1. Olca. A. Bayne

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 497 •

APPROXIMATE ESTIMATING—XI

Subject : Unit System for Approximate Estimating

This series of Sheets, taken as a whole, forms a complete system for the preparation of detailed estimates. Alternatively, less detailed estimates can rapidly be made, merely by multiplying the areas or quantities of the different component parts of the building by the appropriate unit prices, varied by judgment alone.

For all normal estimates, and whenever time permits, account should be taken of the difference in cost of the various types of finish, etc., shown with each typical form of construction. These have been kept to a minimum for the sake of simplicity, but other materials, if the prices are known, may easily be compared.

The system is not intended to replace the complicated pricing data necessary for a very close estimate, but it should, in all cases, prove more accurate than cubing, and it should be found particularly useful in alteration work, or work where the price per foot cube is not well established. An additional advantage is that firm estimates obtained for lifts, plumbing or other services, fittings, etc., can be used in conjunction with this system much more readily than with the cubing method.

This Sheet deals with typical examples of fireplaces and chimney breasts. Prices for fireplaces include for fireplace interiors, hearths, surrounds, etc., and for flues and chimney pots, but not for any brickwork. Prices for chimney breasts and foundations include for the actual projection of brickwork, etc., only, and not for the wall, which should have been measured previously.

The measurements of a chimney breast should be the same as the height of the adjoining wall, commencing at damp-proof course level. Wall finishes should have been taken with the wall and the cost of finishes to the returns only have to be taken into account with the chimney breast. As these are in narrow widths they are largely labour items and are not greatly affected by the type of plaster used, etc. For the same reason the prices given are also approximately applicable to breasts projecting externally.

The example below gives the cost of two fireplaces, one p.c. £10 on ground floor with fender walls, and the other p.c. £10 on an upper joisted wood floor. Chimney breast 5′ 6″ wide and 13½″ projection with stock brick foundations and fletton brickwork elsewhere, two storeys high, totalling 19′ from damp-proof course to first floor ceiling. Foundations 3′ deep.

	£	s.	d.
Ground floor fireplace, Type " A," £13 13s. 9d. + 14 7 for fender-wall construction	14	8	4
First floor fireplace, Type " A," £13 13s. 9d. + 16 8 for wood joisted upper floor construction	14	10	5
Breast as Type " B " 6 7 + extra for 13½″ projection 2 11, + 1 11½ for 12″ additional width—19-ft. run at 11 5½	10	17	9
Foundation as Type " C " 25 9 + 12 10½ extra for breast 13½″ projection + 7 6 for 12″ additional width + 7 9½ extra for 6″ extra depth of foundations 5′ 6″ wide	2	13	11
	£42	10	5

Sheets Nos. 1-10 dealt with Ground Floors, Upper Floors, Roofs, Parapets and Eaves, Foundations, External and Internal Walls, Partitions, Doors, Windows and Staircases, and future Sheets will show the cost analysis of Chimney Stacks, Services, Drains, etc.

33.

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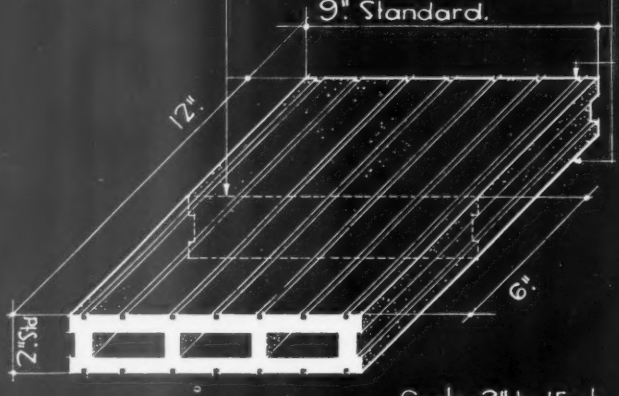
FOSALSIL ROOF INSULATING BLOCKS APPLIED TO SURFACES OF FLAT OR PITCHED ROOFS.

To eliminate cutting on the job, half blocks are obtainable, as indicated by dotted lines.

Keyed surfaces top and bottom.



Scale: 2" to 1 Foot.

STANDARD SIZE OF FOSALSIL INSULATION BLOCKS.

MEAN THERMAL CONDUCTIVITY.

From 0° to 400° F. 1·0 B.T.U. per square foot per hour per 1" thickness for 1° Fahrenheit temperature difference.

LINEAR EXPANSION.

Tests show a coefficient of expansion between 0° and 250° Centigrade of ·0000025. for Fosalsil.

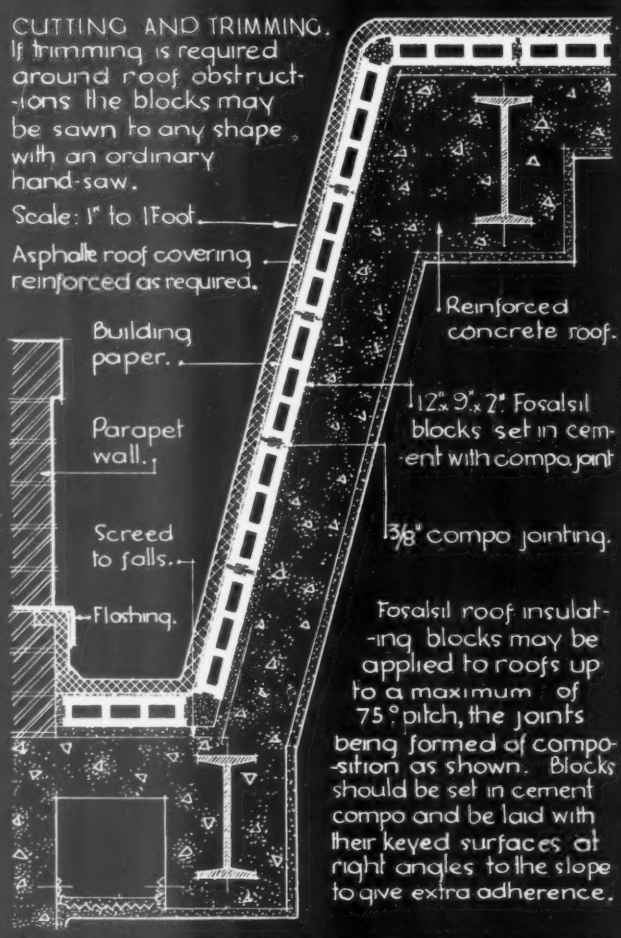
WEIGHT.

12" x 9" x 2" size block weighs 4½ lbs.
6" x 9" x 2" size block weighs 2¼ lbs.
Blocks weigh 36lbs per cubic foot.

CRUSHING STRENGTH.

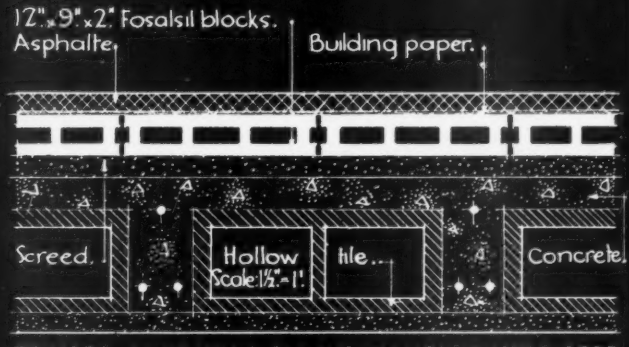
Fosalsil has a crushing strength of 987lbs/sq in.

CUTTING AND TRIMMING. If trimming is required around roof obstructions the blocks may be sawn to any shape with an ordinary hand-saw.

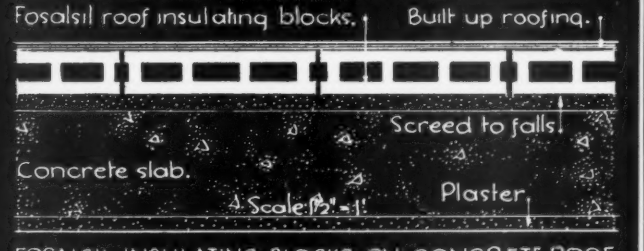


Fosalsil roof insulating blocks may be applied to roofs up to a maximum of 75° pitch, the joints being formed of composition as shown. Blocks should be set in cement compo and be laid with their keyed surfaces at right angles to the slope to give extra adherence.

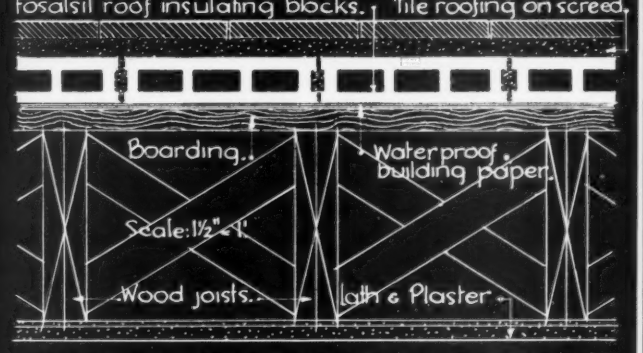
FOSALSIL INSULATING BLOCKS ON PITCHED CONCRETE ROOF.



FOSALSIL INSULATING BLOCKS ON HOLLOW TILE ROOF



FOSALSIL INSULATING BLOCKS ON CONCRETE ROOF.



FOSALSIL INSULATING BLOCKS ON A WOOD ROOF.

Information from Moler Products Ltd.

INFORMATION SHEET: FOSALSIL HOLLOW TILE ROOF INSULATION BLOCKS

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1.

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INFORMATION SHEET

• 498 •

ROOF INSULATING BLOCKS

Product : Fosalsil Roof Insulating Blocks

General :

This Sheet deals with the use of Fosalsil insulating roof blocks applied to the upper surfaces of flat or pitched roofs. Owing to the blocks being made from an absolutely inert raw material, and kiln-fired, the product eliminates any shrinkage, corrosion or movement in the finished roof, thus avoiding any chance of damage to the roof covering. Each unit is accurately made to shape and size and is mechanically strong. The various physical properties are given overleaf.

The drawings on the other side of this Sheet show details of applying Fosalsil insulating roof blocks to :—

1 : Pitched concrete roof with asphalte roof covering.

2 : Hollow tile flat roof with asphalte roof covering.

3 : Concrete slab flat roof covered with built-up roofing.

4 : Wood flat roof covered with tile roofing.

Construction :

The Fosalsil insulating roof blocks are (except on timber roofs) laid loose, but close together on cement screeding or laid loose on roof slabs and screeded over to falls.

When the blocks are to be covered with asphalte, a layer of building paper should be placed over the blocks to separate them from the asphalte.

In the case where Fosalsil roof insulating blocks are used on a flat timber roof, a layer of waterproof building paper is first laid on the boarding, the blocks are placed directly on this and finally the covering is superimposed. In the example shown on the other side of this Sheet, roof tiles have been set with screeding on top of the blocks.

Fixing on Pitched Roofs :

Fosalsil roof insulating blocks may be applied to roofs of varying pitches according to the type of roof covering. When placed on pitched roofs, the blocks should be laid with their keyed surfaces at right angles to the slope, thus giving a better key to the final roof covering as well as to the screeding, if this is applied to the blocks.

Cutting :

Though, as has been mentioned, small blocks are obtainable, the standard blocks may be cut to shape with an ordinary hand saw when required.

Thermal Conductivity :

The high temperature firing of the blocks during manufacture, together with the nature of the raw material, make them completely fireproof, and resistant to the passage of heat to a high degree.

The mean thermal conductivity of Fosalsil roof insulating blocks from 0° to 400° F. is 1.0 B.T.U. per sq. ft. per hour per 1 in. thickness for 1° F. temperature difference.

This heat resistance of the material ensures equable temperature within rooms insulated with Fosalsil, with consequent lower fuel consumption in winter and maintenance of cool conditions during summer. Furthermore, the linings remain free from condensation, even when the internal temperatures of the rooms are rapidly changed.

Sound Insulation :

Fosalsil insulating roof blocks increase the sound insulating value of a roof used for traffic. As a guide to the amount of sound insulation of the blocks between sound frequencies of 300 to 2,000 cycles per second, a double 2 ins. Fosalsil block partition has a loudness reduction factor of 48.5 decibels minimum (4½ ins. solid brickwork 38.5 decibels).

Linear Expansion :

As Fosalsil blocks do not expand or contract under extreme temperature conditions, there is no likelihood of the covering material, such as asphalte, cracking at angles, etc. Official laboratory tests show a co-efficient of expansion between 0° and 250° C. of .0000025 for Fosalsil blocks.

Size :

As mentioned and shown on the other side of this Sheet, the size of the blocks is standard, being 12″ × 9″ × 2″ (also half blocks 6″ × 9″ × 2″ are available to eliminate cutting on job).

Weights :

12″ × 9″ × 2″ size block, 4½ lbs.
6″ × 9″ × 2″ size block, 2¼ lbs.
Block weighs 36 lbs. per cubic foot.

Manufacturers : Moler Products, Limited
Address : 103 Kingsway, London, W.C.2
Telephone : Holborn 2961, 2

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SHOPS

Bibliography

[By Bryan Westwood and Norman Westwood]

Chemist's shop in Rotterdam. Fascia in opaque glass, stallboard of marble and steel lettering.

Cost

IN the course of these notes we have endeavoured to consider the problem of the small shop in all aspects of interest to the architect. We started with the question of siting in a wide sense, and gradually worked in greater detail to consideration of fixtures, equipment, and services, and finally the safeguarding of the finished work.

Until now we have not discussed cost, except in the schedule of floor and wall coverings. This omission is deliberate, because any estimate depends so greatly on the particular features of each problem. Generally speaking the shops we have described cost between £1,000 and £6,000. The whole question of what should be spent is not only bound up with the class of business to be conducted, but also with the length of lease available. The good-class shopkeeper aims at a minimum of 21 years if he is to justify the expenditure necessary to maintain a high standard of trade.

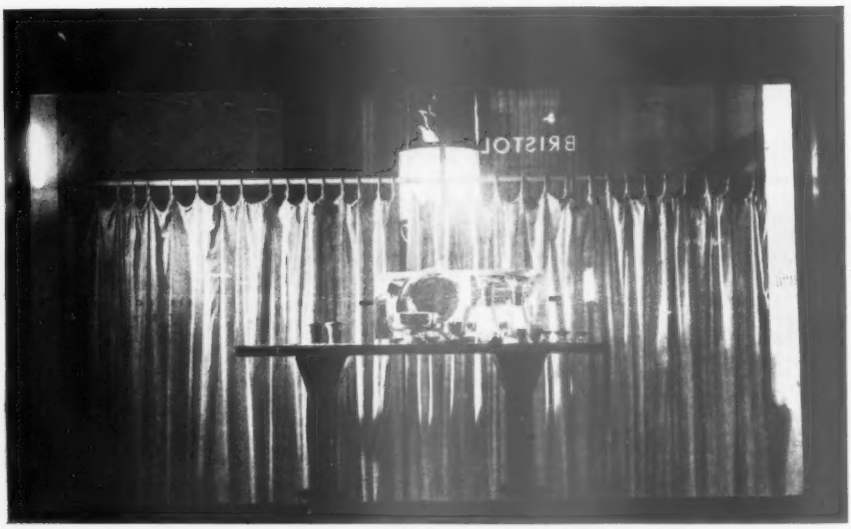
In the case of a short lease, upkeep is only of secondary importance, and cheap finishes are all that are required to give a smart appearance for a limited time. Distemper would be used instead of paint for ceilings and friezes, whereas in a permanent shop, paint well repays its extra cost, because it can be washed far more often than distemper, and looks better all the time.

Paper, produced by a photographic process, is a familiar substitute for veneers both on walls and fittings where permanence is not required.

Money can be saved on services ; the electrical connections can be run in lead-covered cable; heating by electricity which is low in first cost, but higher in running costs, becomes feasible; the installation of Lamson tubes would not be considered.

Some trades using space largely for showroom purposes without many fixtures can well afford to take on a shorter lease. Special fixtures have very little second-hand value and to all intents and purposes should be taken as completely written off at the end of period of the lease.

F



A silversmith's shop in Berlin, designed by Edouard Pfeiffer. Showing the use of curtains to form a background for a show-window. The table on which the silver is displayed is a permanent fixture.

Fixtures and fittings in tailors' and other heavily fixtured shops represent well over half the total cost of the shop, and in these cases a long lease is essential especially if the fixtures are purposely made. Standard fittings made by the shop-fitting firms are often not more than half the cost of those specially designed, but under present-day competitive conditions the better shopkeepers find it worth while to go to the extra expense, to give their shops their own special character.

All along we have emphasized the need for careful study of each particular shop and its trade. The futility of preconceived ideas is nowhere more apparent than in the shop, because the failure of a design to attract customers and keep the trade so brought, is measured directly in terms of cash. We can therefore end by expressing the hope that architects willing to approach these problems with an open mind may receive a greater proportion of the work to be done.

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(Section on Shops published in the *Architect and Building News*, February 10, 1933–April 21, 1933.)

A very informative series of articles dealing with the subject from every angle, concerning the planning of stores more than the small shop. Illustrated with many useful diagrams giving standard dimensions and regulations, etc.

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Ladenbau. Adolf Schumacher. Published by Julius Hoffmann, Stuttgart, 1934. (In German only.)

Probably the most comprehensive book on shops. 75 plates of details of construction connected with shops. Photographs of many examples both in Europe and America.

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Bauten des Einzelhandels. Dr. Louis Parnes. Published by Orell Füssli, Zurich, 1935. (In German only.)

A very thorough book on shops and stores, illustrated with photographs, plans, and sections, etc.

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Short general essay on the problem of designing small shops, with particular reference to the provision shops of the above society. Illustrated with plans and photographs showing the exceptionally good fittings used.

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Sixty-five pages of text discussing the treatment of the shopping street, methods of display of merchandise, advertisements and signs—the shop of the future. Illustrated with 84 diagrams and photographs.

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Principles of Modern Store Planning. Berwich Bramford. Copyright, Universal Shopfitting Correspondence School.

Small handbook particularly concerning fittings, giving all their necessary sizes, etc., for various trades.

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Seventy-three pages of text, working drawings of useful practical details.

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Sixty photographs of interiors and exteriors.

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Forty-eight photographs of shopfronts and interiors.

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SHOPS

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165 photographs, materials given for some examples.

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" Illumination Design Data 2F."

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Requirements of insurance companies as to placing of sprinklers, and general factors governing their installation in all kinds of buildings.

Shops Act, 1934. Published by H.M. Stationery Office.

Gives recommendations and requirements under the Act.

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The Layout and Design of Departmental Store Fittings in relation to their uses. Spedan Stedman. R.I.B.A. Journal, September 5, 1936.

A very good article discussing fixtures in general, with notes on all the various types. The placing of fixtures in relation to the circulation of the shop is stressed. Diagrams giving standard sizes, widths of gangways, etc.

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The Architectural Record, July, 1935.

Special articles on :—

The Retail Store. Frederic Arden Pawley.
The Apparel Store. Kenneth C. Welch.
The Drug Store. C. W. A. Woodburne.
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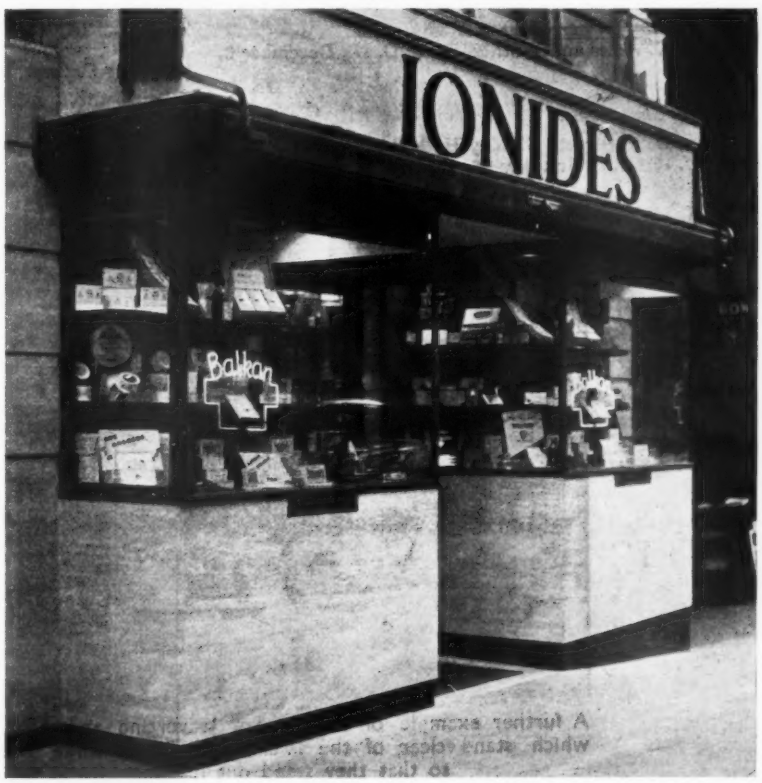
(2) December 7, 1928. " Some French Provincial Shops."

(3) August 2, 1929. " New Fronts for Old." (Berlin examples.)



Tobacconist's shop in St. James's Street by Messrs. Sage. Stallboard and fascia in buff travertine and plinth in black marble. Surrounds in bronze. Plate glass shelves and backs to showcases are in walnut veneer.

(4) August 9, 1929. "Le Chic Parisien."

(5) October 30, 1931. "Silent Salesmen." (Berlin examples.)

(6) November 13, 1931. "Shop Fronts Analysed." (Examples from Berlin and Düsseldorf.)

(7) "Shop Fronts Analysed: II." (Examples from Berlin and Düsseldorf.)

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Regent Street. Pakington and Enthoven. *A.J.*, July 16, 1936. (Counter details.)

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Simpson, Piccadilly. Joseph Emberton. *A.J.*, May 21, 1936.

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Store.

Peter Jones, Sloane Square. Slater and Moberly. Consulting architects: C. H. Reilly and W. Crabtree, *A. & B. N.*, June 16, 1936.

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Southgate. Adams, Holden and Pearson. *A. J.*, December 14, 1933.

Parkgate, Cheshire. J. S. Allen. *A. & B. N.*, November 29, 1935.

A further example of the use of travertine and bronze. The letters, which stand clear of the fascia, are fitted inside with electric lamps so that they stand out in silhouette at night.

LITERATURE

METROPOLIS

[*BY DENIS DOBSON*]

Metropolitan Man: The Future of the English. By Robert Sinclair. George Allen and Unwin, Limited. 10s. 6d.

THE dust-cover assures us that the author of this book surveys "every aspect of urban life from the counting house to the marriage bed." Respect for his ambition gives place to half-horrified admiration as one realizes that, to fit himself for this task, Mr. Sinclair has spent seven years browsing in a field of Blue Books, with results best testified by a list of references containing no less than 643 entries—mostly of a type calculated to repel the reader whose social curiosity is less robust than the author's. His thesis may be simply stated as being (1) London is the hub of the universe for 45 million people, and (2) view it from whatever angle you will, the Metropolis is in a pretty disgusting state. Mr. Sinclair does not devote much space or trouble to proof of his first assertion, and, though it would be indignantly and properly denied by more provincials than he imagines, it is true that much weight is, unfortunately, added to it by Sir Malcolm Stewart's Third Report on the Special Areas. (Greater London occupies 1/127th part of the area of Greater Britain: it contains one-fifth of the population and just under one-quarter of the rateable value.) Taking assertion No. (1) as proved, we pass on to the second, and here Mr. Sinclair does not ask us to take him on trust. From the torrent of facts and figures which beats down on his unfortunate head, the reader is lucky who can escape with any of his critical faculties intact. Mr. Sinclair evidently believes in cumulative effect, and is inclined to forget that the value of this method depends upon being able to persuade the reader before boring him.

Unfortunately, in this book the author seems to have fallen between two stools. It is not intended, he says, to be a vehicle of opinion. "What I think does not matter." (Such modesty is disarming.) "What I have collected in the way of ascertained facts does matter." But if, as these remarks suggest, his intention was to produce another Survey of London Life and Labour, he would have been, I think, both more readable and more convincing had he avoided the journalistic highlights, and chapter headings such as Stink and Darkness, the Lazar House, Monkey Hill. If, on the other hand, Mr. Sinclair meant his sub-title to be anything more than a phrase, he should have provided greater evidence of his sense of direction than can be derived from his unfailingly splenetic comments on the facts which he has collected. It seems hardly sufficient to leave his readers to deduce the future of their race from its murky present as he serves it up to them. As it is, one is left with the impression that in the author's view all attempts to better the state of London are so certainly ill-conceived and foredoomed to frustration as to make any constructive attitude superfluous. One is irresistibly reminded of Mr. T. S. Eliot's

> ". . . streets that follow like a tedious argument
> of insidious intent
> to lead you to an overwhelming question . . .
> Oh, do not ask 'What is it?'
> Let us go and make our visit."

A further criticism is that Mr. Sinclair has cast his net too wide. One can't survey every aspect of urban life in 323 pages, and at many points he seems to be treading ground which has already been well covered by those whose point of view is not unlike his own. For example, Dr. W. A. Robson, to name a writer mentioned by Mr. Sinclair himself, has in his "Development of Local Government" (1931) already dealt fully and far more satisfactorily with the point that existing local government boundaries and functions are, in many respects, archaic and not conducive to efficient administration.

When all this has been said, there is no doubt that Mr. Sinclair has performed an extremely valuable service in bringing together and sifting a mass of figures and other material previously only to be found in a vast number of reports and similar publications, and even then, in far too many cases, only in a highly misleading form. "The published accounts of our public authorities" (to use the author's term) sometimes fail to attain even the standard required of a company prospectus.

The chapter on housing conditions is Mr. Sinclair at his best, though the shameful story of the muddle and obstruction which stand in the way of all attempts to clean up London's slums makes unpleasant reading. If Census reports pour scorn on so meagre a standard as one-and-a-half persons per room (which was that adopted by THE ARCHITECTS' JOURNAL in its survey of October 26, 1933) what can be expected of ratepayers' associations and axe-grinding politicians? . . . The answer to that question cannot be printed here.

WHERE IS LONDON WALL?

London Wall Through Eighteen Centuries. By Walter G. Bell, F.S.A., F.R.A.S., F. Cottrill, M.A., and Charles Spon. Issued for The Council for Tower Hill Improvement. London: Simpkin Marshall, Ltd. Price 3s. 6d. net.

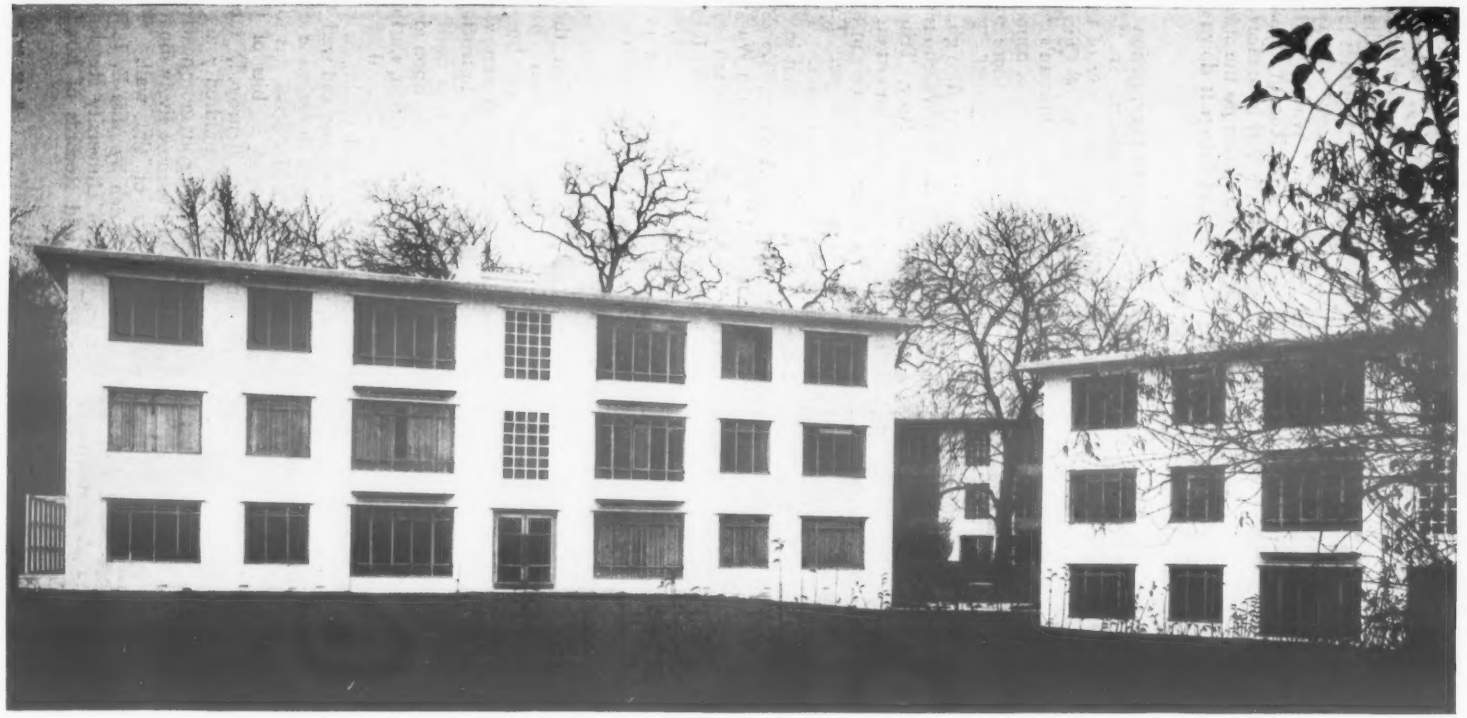
LONDON WALL is vestigial. Oddly enough, until this book was compiled there was no book published dealing with the wall alone. The authors have performed a valuable service in thus bringing their authoritative antiquarian knowledge together. Mr. Bell answers the question that few Londoners could answer to-day: "Where is London Wall?" Mr. Cottrill tells of the Roman Wall, Mr. Bell again of the wall in mediæval times and Mr. Spon takes up the story in Tudor times and brings it down to the present day.

Briefly, the answer to the question as to the wall's whereabouts is "In eight places." Nothing of any of the gates survives (the statue of Queen Elizabeth outside St. Dunstan's in the West, Fleet Street, used, of course, to stand on Ludgate), but there are substantial pieces of the wall itself. The biggest, 120 ft. long and 35 ft. high, is built into Barber's Bonded Warehouses, entered from Cooper's Row, Trinity Square. The next most important is preserved in a concrete chamber in the yard of the General Post Office. This is a fine piece of Roman work. The longest span in public view, that in the churchyard of St. Alphage, London Wall, is labelled "The Roman Wall of London," but in fact the Roman work here is covered with work of the Middle Ages. In the churchyard of St. Giles, Cripplegate, there is a stone bastion of the wall. And so we are taken step by step round the remains.

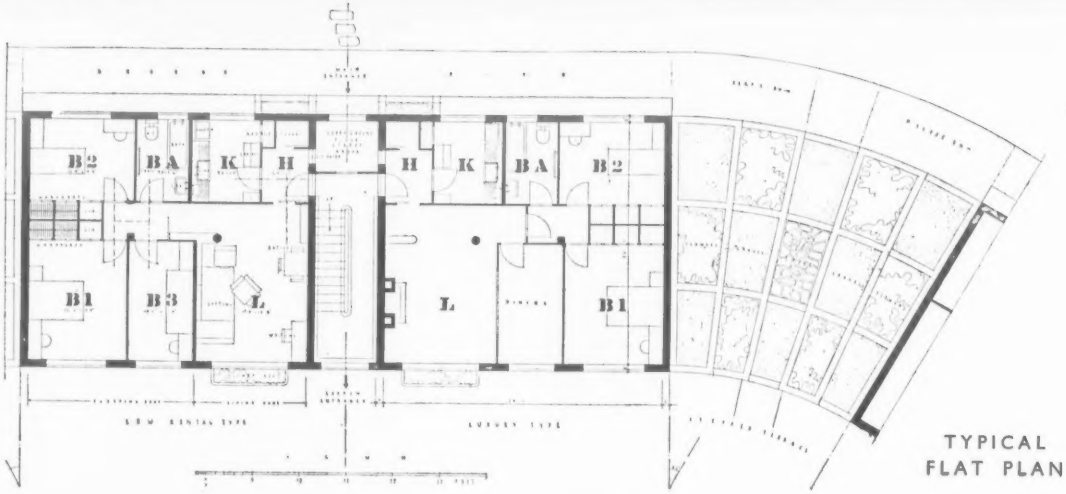
The other authors tell what there was of it, how it was used and kept, what events are bound up with its history, and, in somewhat surprising detail, what of destruction has happened to it since its military value was left behind. Mr. Spon gives a striking record of destruction, starting from the year 1660 when General Monk removed the posts and chains in the streets, unhinged the gates and wedged the portcullisses, thus making the city quite defenceless. Mr. Spon has four pages of a catalogue of bits of the wall removed and destroyed, more especially in the last hundred years or so, and a much shorter but more heartening mention of the more lively modern care for relics of the wall. The illustrations chosen by Miss E. Jeffries Davies, London University Reader in the History and Records of London, are excellent.

E. H. W. A.

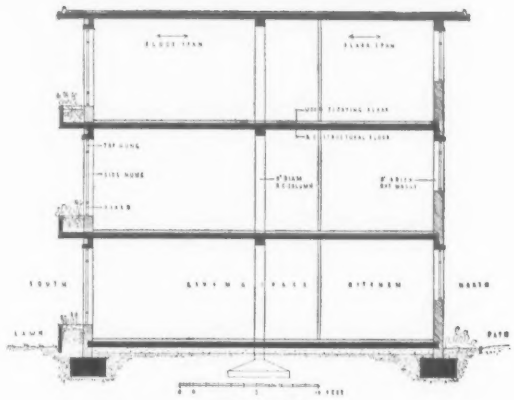
PARK COURT: BLOCK OF FLATS AT CRYSTAL PALACE



The photograph shows a view from the south. The plan is of two typical flats. The left-hand plan was the type originally designed. The right-hand plan shows the more luxurious type which was eventually built, as the owner changed his requirements after the scheme was started.



TYPICAL FLAT PLAN



SECTION

DESIGNED

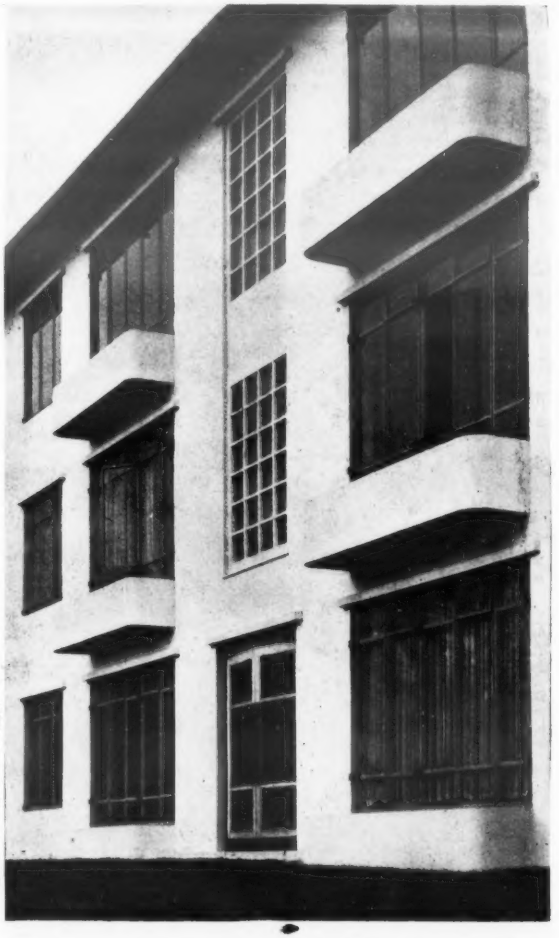
SECTION

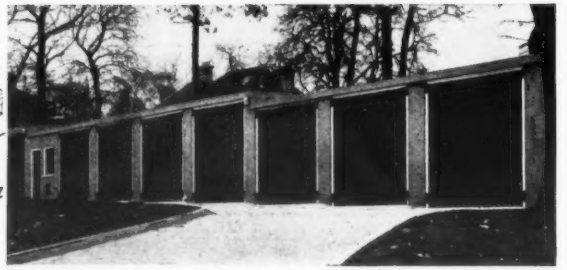
D E S I G N E D

B Y

F R E D E R I C K

G I B B E R D





SITE AND PLAN—*There are 54 flats in nine three-storey blocks. A belt of trees encircles the site. Between the blocks of flats is a chequered pattern of stone, gravel and beds for planting. As the access paths pass behind the blocks no visitors or tradesmen pass in front of the principal rooms.*

CONSTRUCTION—*Concrete spine, concrete and hollow tile structural floors and external walls of brick. The three ranges of blocks are painted in different colours. Noise transmission between floors has been eliminated by a double floor; a completely separate floor consisting of floor boards, battens and concrete loading slabs rests on rubber pads on the structural floor.*

The photographs show: above, a view from the south-west; right, door from staircase hall to the gardens; and the garages.

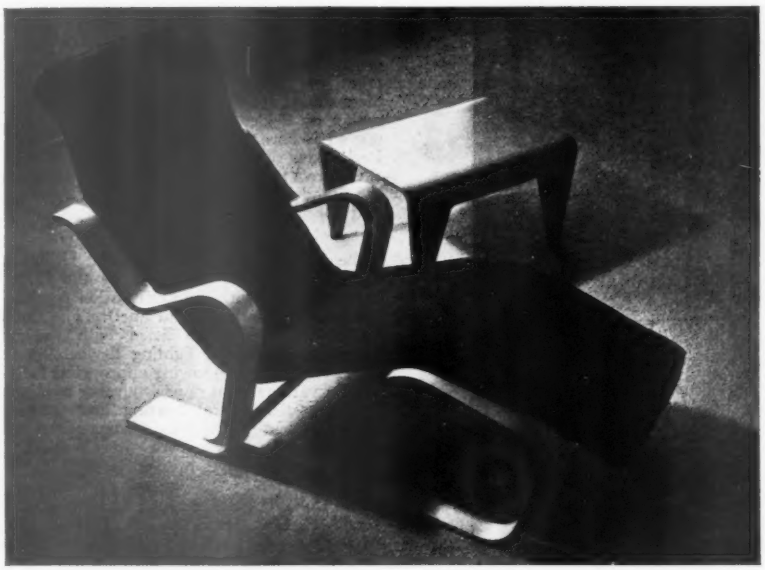
PARK COURT: FLATS AT CRYSTAL PALACE

DESIGNED BY FREDERICK GIBBERD

INTERNAL FINISHES—*Floors in the living zone are in polished oak in narrow widths; bedroom floors are in pine for carpeting. Kitchen and bathroom floors are in linoleum. In the staircase halls carpeting and composition dado are buff colour and the walls above are painted white. Ceilings and staircase soffits are painted: some in wedgwood blue and some in red ochre. The living room has a coal fire, and supplementary heating by a tubular electric element. Bedrooms have built-in electric fires and the dining room is provided with an electric plug or point.*

For list of general and sub-contractors see page 668.

The photographs show: top, the folding doors dividing the dining room from the living room: and a staircase and a living room.



TRADE NOTES

[*EDITED BY PHILIP SCHOLBERG*]

Full-Length Comfort

A NEW lounge chair, illustrated at the head of these notes, has just been designed by Marcel Breuer for Isokon. The frame is laminated, the seat is made of a single sheet of bent plywood, and a long loose sprung cushion tucks over both ends. The chair without fittings costs £4 17s. 6d., or £6 15s. with the cushion, though to this last figure must be added the cost of 2¼ yds. of 50-in. covering material: a further type in walnut or maple costs £1 more.

•

Of its comfort over a long period I can give no reliable information, but I have sat in one for some time trying (unsuccessfully) to find something to complain about, so the 700 square inches of supporting area may be assumed to do their job adequately. According to the manufacturers, the ordinary chair gives a supporting area of only about 250 square inches, and although I have never considered chair design in terms of pressure it seems possible to work out some quite diverting figures: a ten-stone man, for example, gives a pressure of only 3.2 ounces per square inch—unless my slide rule has betrayed me—hence the impression of extreme comfort.

•

Although very light, the chair seems quite strong enough for its job. There is plenty of spring in it, but this is naturally intended to be there, and heavy-weights, although they may produce a creak or two of protest, apparently can't break it.

•

The illustration also shows a small table made by the same firm from a single sheet of plywood cut to shape and bent in two places only. Three of these tables, arranged to nest inside each other, cost 3½ guineas, a price which seems to me rather high, though the manufacturers assure me that they would have to sell about eight times as many to reduce the price even by half a guinea, and I admit that my ideas are sometimes a shade optimistic when it comes to prices.

Testing Asphalte

The Building Research Station at Watford has already carried out a good deal of research on asphalte and other bituminous products, and the Natural Asphalte Mine-owners and Manufacturers Council is co-operating with them. Asphalte mastic roofings are under investigation at the moment, and an artificial weathering apparatus has been evolved for accelerated testing, and there is a photograph of it overleaf. The machine runs continuously over long periods without requiring attention and consists, essentially, of a continuous belt travelling round an enclosed rectangular path and supporting a series of trays, on which are placed the specimens under test. The specimens, as they travel round, are successively exposed to the action of heat, light, rain spray and freezing, and this cycle is repeated continuously at a rate which can be varied from ten to twenty complete cycles a day.

•

The apparatus is still in the trial stage, and B.R.S. are very properly reserved about its efficiency, saying only that "indications are promising." But it is hoped that it will "furnish a reliable means for assessing the weathering qualities of asphalte mastics." This reserve on the part of B.R.S. should not, I think, be taken to mean that testing of this kind is unreliable. Some form of accelerated testing is essential when the material under review is expected to go on doing its job for a number of years, for under natural conditions faults take an impossibly long time to develop. Laboratory apparatus, therefore, is made to reproduce, as nearly as possible, the natural conditions under which the material will be used, and these laboratory tests can generally be made to give pretty reliable results.

•

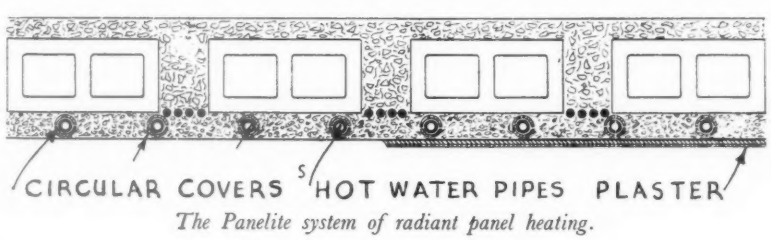
The Natural Asphalte people deserve some respect, I think, for organizing tests by an impartial body. B.R.S., naturally remembering that this country suffers from a law of libel, seldom damn any material beyond all hope of redemption, but they make no bones about saying what they think, and have, in the past, often blamed asphalte for various failures such as expansion cracks in concrete roofs. The Natural Asphalte people are obviously not looking for trouble, but the fact that they should virtually ask B.R.S. to make it for them seems to imply that they have a good deal of confidence in what they sell.

Panel Heating

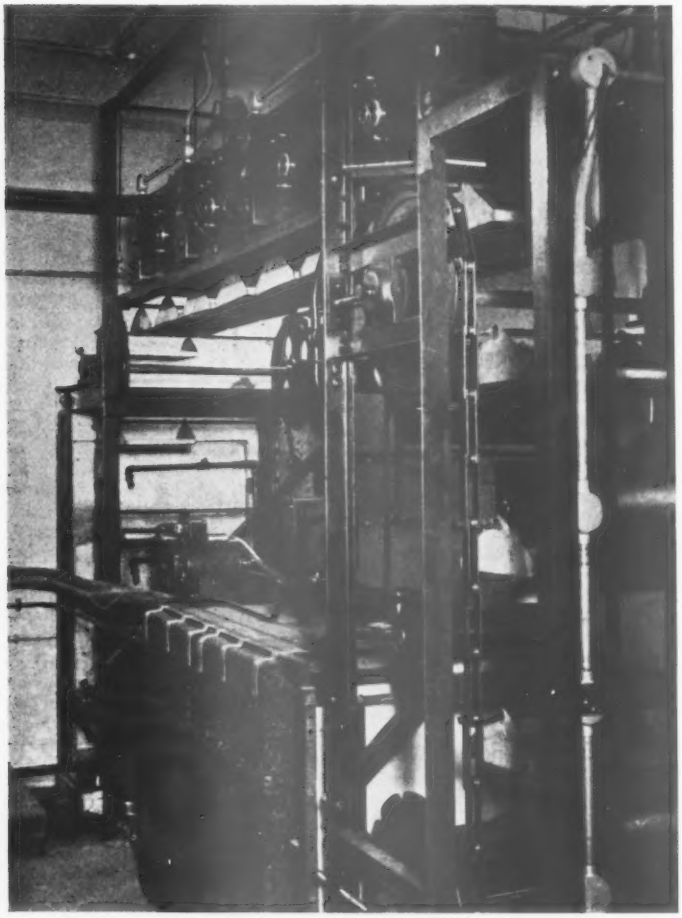
The problem of radiant panel heating has always been bound up with troubles due to expansion, and a lot of care has been taken to make certain, first of all, that the plaster finishing does not crack, and second, that the heating pipes themselves do not buckle and leak under the large expansion produced by the heating water. Benhams have now evolved a system, which they are marketing under the name of "Panelite," where these troubles seem to have been overcome in a remarkably simple way.

•

Briefly, the system is laid out in much the same way as before, the great difference being that instead of the coils being cast straight into the concrete, they are first of all covered with a longitudinally split casing which leaves a small annular space in which the coil is free to expand and contract. This gives two notable advantages: first of all the coils are easily accessible, for the lower half of the covering is immediately behind the plaster and there need be no hacking away of structural concrete; the coils themselves can also be run at a higher temperature than usual with no fear of cracks, and this should be



The Panelite system of radiant panel heating.



Artificial weathering apparatus for accelerated testing of asphalte mastic roofings. (Crown copyright.) See note on previous page.

particularly useful if the coils are to be used with a high temperature radiator system, for there will be no need for the stepping down of water temperatures with the additional complication of thermostats.

Change of Address and Name

The Tremens Ever-Float Company have changed their name to the "Ever-Float" Company, Ltd., and have moved to new offices at 160 Tottenham Court Road, London, W.1.

Addresses

The Isokon Furniture Company, Isokon Flats, Lawn Road, London, N.W.3.

The Natural Asphalte Mine-owners and Manufacturers Council, Terminal House, Grosvenor Gardens, London, S.W.1.

Benham and Sons, Ltd., 66 Wigmore Street, London, W.1.

BUILDING TRADES EXHIBITION, MANCHESTER

The fifteenth Manchester Building Trades Exhibition was opened in the City Hall, Deansgate, Manchester, on Tuesday of last week, and will close on Saturday next. Over eighty firms are exhibiting; below we print notices of some of the principal exhibits.

The Stand (No. 50) of the Accrington Brick and Tile Co., has been designed to show the effect of different varieties of "Nori" bricks. It is in the form of a tower, which rises from a display counter enclosed on three sides by low walls. The floor is covered with the firm's paving bricks. (See illustration on page 668).

●

A new steel reinforced asbestos roof decking called "Besdek" is shown by D. Anderson and Son, Ltd., on Stand No. 27. In addition all the brands of Red Hand roofing felts and damp-courses are on view, also models of "Macasfelt," "Thermotile," and other flat-roof coverings.

The display (Stand No. 97) of Brook Motors, Ltd., consists of a fully equipped mobile show van completely equipped with all the latest types of Brook motors and starting gear, including special types for the building trades, such as the surface-cooled motor, which is capable of working in bad conditions of dirt and moisture.

●

On the Stand (No. 25) of Brown and Tawse, Ltd., is a comprehensive display of the firm's products, including the "L.W." panel boards, suitable for panelling, flooring, concrete shuttering, sound and heat insulation, ceilings and other purposes.

The exhibit of the British Columbia Timber Commissioner is chiefly designed to show the uses of Western Red Cedar. It consists of various sections displaying the advantages of the timber as a wall covering. Sizes shown are ¾ by 8 Cedar bungalow siding and 2 by 8 Cedar Log Cabin Siding. Each section is covered by a small roof of Western Red Cedar shingles (wood tiles) demonstrating the correct method of laying them. The floor of the Stand is of Edgegrain Douglas Fir, scraped and polished.

●

The Stand (No. 80) of the Coal Utilization Council, has been organized by the Council in conjunction with the Combustion Appliance Makers' Association (Solid Fuel). The feature exhibit is a fireplace fitted with the new C.A.M.A. automatic lighting device. A fuel display is arranged showing appropriate fuels in use for various types of coal-burning appliances for domestic, central heating and industrial purposes; and photographs of some of the latest appliances are on view.

●

Colt Canadian Cedar Wood tiles are exhibited by W. H. Colt (London), Ltd., on their Stand in the Canadian section. These tiles (known in Canada as Shingles) are suitable for roofs and walls and their life is said to be 60 years.

●

The exhibits of John Ellis and Sons, Ltd., on Stand No. 61 comprise samples of the firm's reconstructed stone, pre-cast steps in granolithic, marble terrazzo, reconstructed granite, etc., and "Emalux" glazed wall finish.

●

The exhibit (Stand No. 23) of F. Hill and Sons, Ltd., includes "Stormproof" wooden windows, casements, etc. They are constructed by a patented method, and are claimed to be proof against the entry of rain, wind and dust. Also on view are the firm's flush doors, including "Aristocrat," "Trafford," and "Clymax," and Aeronautical plywood.

●

The exhibit of Henry Hope and Sons, Ltd. (Stand No. 46), consists of a representative range of the firm's standard metal windows and doors. Examples are shown of curved metal windows, windows with flyscreens for larders, kitchens, pantries, etc.; special standard windows for flats and rehousing schemes; sliding and folding windows and doors for sun parlours and open-air porches either for private houses, hospitals or schools. A full-size model is shown of steel door frames to replace the usual wooden architraves. Also steel subframes for closing cavities around windows in cavity walling. Other exhibits include pressed steel doors (as lately installed by this firm at the Liverpool University), standard lantern lights, etc.

●

The Stand (No. 32) of J. A. King & Co. is built of different types of their "Glas-crete" reinforced concrete and glass construction. The canopy and barrel roof are examples of "Glas-crete" double construction, which combines roof light and laylight. The soffit lenses on the underside are hermetically sealed giving sealed air pockets—perfect insulation against temperature changes and sound. The front elevation has "Glas-crete" reinforced concrete windows, and on the side elevations are double glass walls and partitions and solid glass bricks.

●

The Stand (No. 19) of Langley London, Ltd., has been designed by Mr. J. P. Tingay and displays Langley's clay roofing tiles, which are supplied in 60 different models and/or colours, including matt, glazed and sand-faced finishes. The principal exhibits are: Langley's C.D.N. roofing tiles, Beauvais roofing tiles, Sterreberg

interlocking pantiles, " D. & G " brand interlocking improved pantiles, and Cloister roofing tiles.

The main roof is covered with bluish green glazed C.D.N. tiles, whilst panels have been utilized to show various other colours and models. (see illustration on page 668).

•

The Stand (No. 51) of Edward Lloyd Wallboards Ltd. (whose name has just been changed to Lloyd Boards, Ltd.), has been designed to show the adaptability of Lloyd hardboards to curved surfaces. All counter tops are of Lloyd super hardboard, demonstrating the qualities of the board when used in positions requiring hard-wearing surfaces. The flooring is also carried out in Lloyd super hardboard and illustrates another use for these boards. A Lloyd-Kemsley flush door is used at the entrance to the office.

•

The chief feature of the exhibit of Donald MacPherson & Co., Ltd. (Stand No. 49), is a centre structure in the shape of a Chinese pagoda. Surrounding the pagoda are a number of posts, and these, along with the pagoda, are finished in a variety of bright colours from the range of " Synroz " synthetic enamels.

•

R. A. Milles, Ltd., are showing, on Stand No. 16, their Milles disappearing attic stairs, folding or single types, folding cupboard stairs, pole ladders " Saftyrung " of the iron rung and wooden rung types, pole extension ladders, patent extension ladders with " Saftyrung " spindles, etc.

•

The exhibits of Mirrlees, Bickerton and Day, Ltd. (Stand No. 63) consist of a Mirrlees-Combustioneer automatic stoker fitted to an " Eclipse " boiler. A portion of the boiler has been removed to show clearly the arrangement of the retort and firebed. While the smaller sizes are suitable for central heating boilers from about 170,000 to 1,500,000 B.T.U.'s output, the larger stokers are readily applied to vertical, locomotive type, or water-tube boilers, metallurgical furnaces, etc.

•

Information regarding the Portland cements marketed by Ribblesdale Cement, Ltd., is obtainable at their Stand, No. 45. The firm's cements include " Ribble " and " Velocrete."

•

On Stands Nos. 39 and 40, Turners Asbestos Cement Co., a branch of Turner and Newall, Ltd., are showing a particularly interesting range of products. Their stand is constructed so that the outside walls display many examples of the asbestos-cement roofings which are now used so extensively. Among the larger roofing tiles suitable for industrial purposes are shown the " Turnall " Trafford tiles and the " Everite " " Bigsix " asbestos-cement corrugated sheets. Both tiles are available in lengths from 4 ft. to 10 ft. rising by 6 ins. increments.

There are also shown examples of asbestos-cement slates, notably the " Poilite " Newtone Slate. This has a textured surface in a variety of colours and is being used extensively on housing estates at the present time.

The internal walls of this exhibit are devoted to the decorative wall coverings now made in asbestos-cement. " Turnall " glazed panels are shown and these are suitable for use in hotels, restaurants, cinemas and public buildings. For bathroom and lavatory decoration there are " Turnall " stipple glaze sheets and " Poilite " decorated sheets, and in addition, the new marbled-glaze sheeting.

There are also specimens of the " Everite " asbestos-cement pressure pipes.

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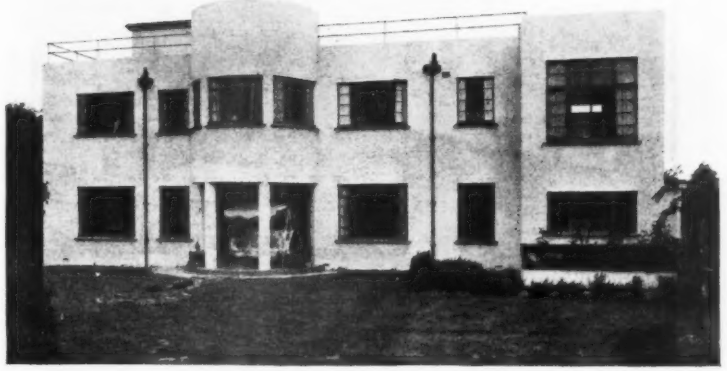
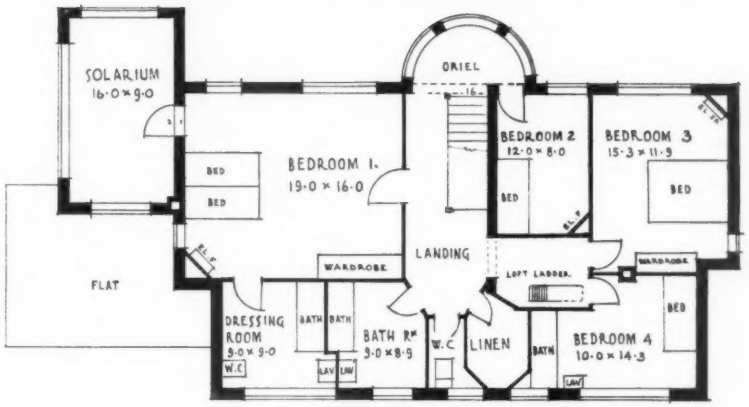
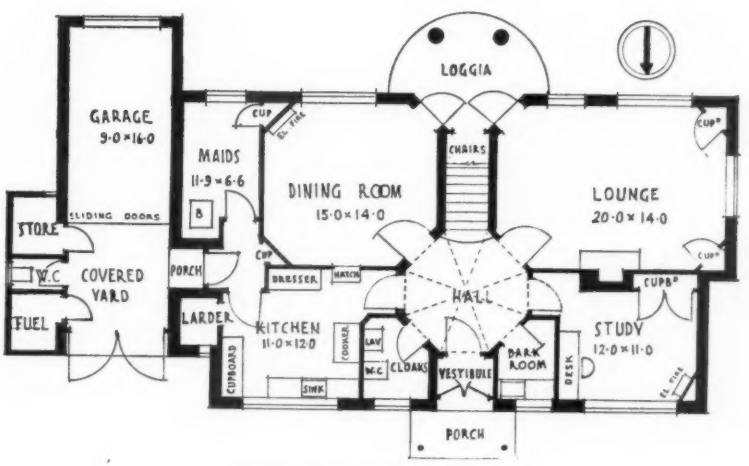
The Stand (No. 21) of Williams and Williams,

HOUSE AT GERRARDS CROSS





FIRST FLOOR PLAN



GROUND FLOOR PLAN

The walls are 11 in. cavity, rendered on the outside and finished a warm yellow colour. The roof is of asphalte, and metal casement windows are fitted. The woodwork and ironwork are finished externally in orange and green. The photograph shows the garden front.

DESIGNED BY E. R. BILL

The Stand of the Accrington Brick and Tile Co., at the Building Trades Exhibition, Manchester.

Ltd., is a representation of the latest advances in metal window design and construction. Included are horizontal-bar type windows and doors, "curved-on-plan" units, sliding and folding windows, various forms of coupling windows and doors, and examples from the firm's wide range of standard windows.

●

The Stand (No. 2) of Wood Products, Ltd., is faced with "Enso" boards and is designed to show the natural finish of the boards. The interior is lined with "Ensoflex," the one-piece flexible wallboard. The exhibit also comprises a number of the firm's other wood fibre boards.

●

The advantages of copper water service systems are demonstrated by the Yorkshire Copper Works, Ltd. (Stand No. 37), the makers of "Yorkshire" solid drawn (seamless) non-ferrous tubes and "Yorkshire" fittings.

●

The Stand (No. 66) of Zinc Alloy Rust Proofing Co., Ltd., shows examples of architectural ironwork rustproofed by the Sherardizing process. The Stand forms a Technical Information Bureau where visitors are able to obtain full particulars of the process, its cost, and details of the uses to which it can be put in the building trade. Zinc Alloy Rust Proofing Co., Ltd., do not manufacture architectural ironwork, but specialise in carrying out Sherardizing for the actual makers of such items as steel casements, metal trim, electrical conduit, iron door furniture, screws, nails, gate fittings, etc.

Manufacturers' Items

Granite chippings are now available in permanent colourings of red, white, blue, brown, green, yellow and black; size $\frac{3}{8}$ in.–$\frac{1}{4}$ in.

These Rainbow Chips, as they are called, are a product of the Penmaenmawr and Welsh Granite Company, Ltd., of Penmaenmawr, North Wales. The chippings are treated by special colour processes so that the most severe attacks of weather, chemical action and attrition will not remove their brilliant colours.

They are the result of long experiment with a view to finding a means of giving a distinctive colour to road material for pedestrian crossings, traffic lines and other safety markings on the roads.

As well as for roads, uses for Rainbow Chips include pebble dashing, garden paths, terraces, floorings and ornamental paving work.

The Rainbow Chips are packed in paper bags containing 1 cwt. each and the price is 15s. per cwt. delivered anywhere in Great Britain. Less discount of 33⅓ per cent. on all trade orders.

●

J. and E. Hall, Ltd., have just received an order for twelve escalators of 6,000 persons per hour capacity from Messrs. David Jones, Ltd., of Sydney, Australia, for their large department store.

●

We are informed by Horseley Bridge and Thomas Piggott, Ltd., of Tipton, that the Earl of Dudley has accepted the chairmanship of the company.

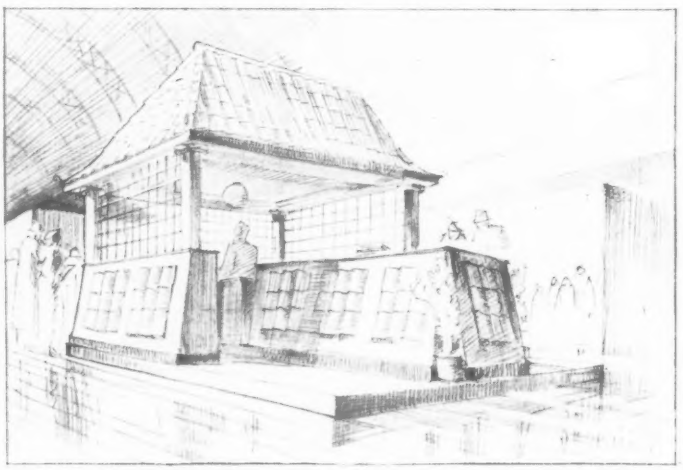
●

The works and goodwill of the Langloan Iron and Chemical Co., Ltd., have been purchased by Thos. W. Ward, Ltd., of Sheffield.

THE BUILDINGS ILLUSTRATED

CENTRAL FIRE STATION, ISLEWORTH (pages 641-644). The general contractors were E. D. Winn & Co., Ltd., and sub-contractors and suppliers included: Limmer and Trinidad Lake Asphalt Co., asphalt; British Reinforced Concrete, reinforced concrete; Henry C. Parker & Co., facing bricks; Brookes, Ltd., artificial stone; Powers and Deans Ransome's, Ltd., structural steel; A. E. Whitton & Co., wall and floor tiles; Lenscrete, Ltd., glass; Hollis Brothers, Ltd., woodblock flooring; Chace & Co., Ltd., central heating; Gas Light and Coke Co., gas fixtures; Ideal Boilers and Radiators, Ltd., boilers; G. N. Haden and Sons, Ltd., electric installation; Osler and Faraday, and Benjamin Electric, electric light fittings; Baldwins, Ltd., sanitary fittings; Yannedis, Ltd., door furniture and door-opening gear; Hollygrove Construction Works, metalwork; Shaplard and Petter, Ltd., flush doors; Rowley Galleries, furniture; Gents, Ltd., electric clocks; Shaw and Evans, Ltd., plumbing; Marryatt and Scott, Ltd., lifts.

PARK COURT, CRYSTAL PALACE (pages 662-664). The general contractors were G. Bollom and Sons, Ltd., and the



The Stand of Langley London Ltd., at the Building Trades Exhibition, Manchester.

sub-contractors and suppliers included: Windsor Floors, Ltd., reinforced concrete; Cement Marketing Co., Ltd., sand-lime bricks; British Doloment Co., Ltd., composition dadoes and floors; General Electrical Maintenance Co., electrical installations; Arthur Scull and Sons, Ltd., plumbing; Lenscrete, Ltd., special lenscrete windows; South Suburban Gas Co., Ltd., gas supply; Ragusa Asphalte Paving Co., Ltd., asphalt roofing; S. W. Farmer and Son, Ltd., staircase handrailing; C. and T. Painters, Ltd., decorations; F. Bowman Glassworks, Ltd., glazing; Nettlefold and Sons, Ltd., ironmongery; Williams and Williams, Ltd., metal windows; Vigers Bros., Ltd., wood flooring; MacAndrews and Forbes, Ltd., doors; Shanks & Co., Ltd., sanitary fittings; Easiwork, Ltd., kitchen fittings; Slate Slab Products, Ltd., surrounds for fireplaces and bath panels; H. W. Cullum & Co., Ltd., soundproof flooring; Osgood & Co., Ltd., tiling; R.I.W. Protective Products, Ltd., waterproofing; Carbo Plaster, Ltd., plastering; Civil Service Supply Association, furnishing for show flat; Wardle Engineering Co., Ltd., tubular heaters; Cellulin Flooring Co., rubber flooring; Fdk. Braby & Co., Ltd., wire larder shelves; Broad & Co., Ltd., cooker recess lining; Donald Macpherson & Co., oil paints and enamels; Joseph Freeman and Sons & Co., Ltd., "Cementone": Best and Lloyd, Ltd., special electric fittings; Trussed Concrete Steel Co., Ltd., Hy-rib to garages; C. Fowler, Ltd., house breaker; Kerner Greenwood & Co., Ltd., "Pudlo" brand waterproofer.

HOUSE AT GERRARD'S CROSS (page 667). The general contractors were Y. J. Lovell and Son, who were also responsible for the internal oak doors; and the principal sub-contractors and suppliers included: Crittall Manufacturing Co., Ltd., windows; Engert and Rolfe, asphalt roof; Turners Asbestos Cement Co. (Branch of Turner and Newall Ltd.), roof insulation.

THE WEEK'S BUILDING NEWS

SOUTH-WESTERN COUNTIES

CHELTENHAM. *Cinema.* Associated British Cinemas, Ltd., are preparing plans for the erection of a cinema on the site of Imperial Rooms, Cheltenham.

CHELTENHAM. *Flats.* Cheltenham Estates, Ltd., are to erect a block of flats in London Road, Charlton Kings, Gloucestershire.

HEREFORD. *Houses.* The Hereford Corporation has appointed Messrs. Nicholson and Scriven as architects for the erection of approximately 477 houses on the College Estate.

PLYMOUTH. *Car Park, etc.* The Plymouth Corporation is to layout Richmond Walk Improvement Scheme and provide a car park, gardens, boating lake, model yacht and paddling pools.

PLYMOUTH. *Elementary School.* The Plymouth Education Committee has obtained sanction to borrow £15,122 for the erection of an elementary school in York Street.

PLYMOUTH. *Houses, etc.* Plans passed by the Plymouth Corporation: 10 houses, Coombe Park Estate, Miss L. Cohen; 20 houses, Ladysmith Road, Mr. J. Rendle; 38 houses, Beacon Castle Estate, Western Builders; 22 houses, Taylor Woodrow Estates, St. Budeaux, Taylor Woodrow Estates, Ltd.; 155 bungalows, Chudleigh Road, Great Western Railway Co., and Mr. J. H. Maunder; 296 houses, 24 single room dwellings, 16 flats, Efford Housing Estate, for Housing Committee; motor showrooms and offices, Westwell Street, Messrs. Humm & Co.

TORQUAY. *Concert hall.* The Torquay Corporation has asked the borough engineer to prepare a plan with an estimate of the cost of a suitable concert hall of timber construction, with seating accommodation for 650 persons, to be erected on the Walls Hill site, Babbacombe.

TORQUAY. *Flats.* Mr. Oliver, architect, of Barnstaple, is to build 19 blocks of flats of eight flats to a block on the Rock End Estate, Torquay.

EASTERN COUNTIES

ESSEX. *Extensions.* The Essex Education Committee has approved plans for the enlargement of the Rainham Council Senior School, at an estimated cost of £12,045.

ESSEX. *Extensions.* The Essex Education Committee has purchased land for the enlargement of the Mid-Essex Technical College and School of Art, Chelmsford.

ESSEX. *Equipment.* The Essex Education Committee is to equip the South-West Essex Technical College, at an estimated cost of £50,000.

ESSEX. *Extensions.* The Essex C.C. has approved plans by the County Architect for the erection of a children's hospital at the Crowlands site, Chadwell Heath, with accommodation for 250 beds, but capable of expansion to accommodate 500 cases, at an estimated cost of £255,021.

ESSEX. *Treatment Centre.* The Essex C.C. has approved plans by the County Architect for the erection of a combined treatment centre at Hornchurch, at an estimated cost of £3,278.

FELIXSTOWE. *Reconstruction.* The Felixstowe U.D.C. is to reconstruct the pier pavilion and provide a new concert hall at a cost of £11,900.

SOUTHEND. *School.* The Southend Education Committee is to erect an elementary school in Carlton Avenue at a cost of £36,545.

MIDLAND COUNTIES

BIRMINGHAM. *Police station.* The Birmingham Corporation has acquired a site at Bordesley Green for the erection of a police station.

BIRMINGHAM. *Houses.* The Birmingham Corporation is to develop a portion of Lea Hall Estate, providing for the erection of 180 houses, at a cost of £57,968.

BIRMINGHAM. *Refuse Disposal.* The Birmingham Corporation is to extend the refuse disposal works at Tyseley, at a cost of £45,500.

BIRMINGHAM. *Extensions.* The Birmingham Corporation is to enlarge the Little Bromwich Hospital at a cost of £102,473.

BIRMINGHAM. *Welfare Centre.* The Birmingham Corporation is to erect a welfare centre in Brays Road, Sheldon.

CHESTERFIELD. *Central Baths.* The Chesterfield Corporation has asked Mr. A. J. Hope, architect, to prepare revised plans for the central baths at a cost of £39,500.

CHESTERFIELD. *Houses.* The Chesterfield Corporation is to erect houses at New Whittington and has appointed Messrs. Rollinson & Son, architects, to work in conjunction with the borough surveyor, in the preparation of the plans.

ISLE OF ELY. *School.* The Isle of Ely Education Committee is to erect an elementary school at Chatteris at a cost of £35,665.

KIDDERMINSTER. *Mental Institution.* The West Midlands Joint Board for the Mentally Defective is to purchase the Lea Castle Estate near Kidderminster for the erection of a mental institution.

NORTHAMPTON. *Shops and Offices.* The Northampton Corporation is to erect shops and offices at St. Giles Street, at a cost of £5,770.

WEST BROMWICH. *Extensions.* The West Bromwich Education Committee has appointed Mr. T. Spencer Wood as architect for the erection of new premises for the Kenrick Technical College.

NORTHERN COUNTIES

ACCRINGTON. *Employment Exchange.* H.M. Office of Works is to erect an employment exchange in Melbourne Street, Accrington.

BOLTON. *Houses, etc.* Plans passed by the Bolton Corporation: Eight houses, Long Lane, Messrs. Park & Co.; eight houses, Forest Road, Mr. F. Merrison; 22 houses, Moorside Avenue and Church Road, Mr. A. S. Woods; 14 houses, off Edge Hill Road, Mr. J. Unsworth; 60 flats, Crescent Road and Bradford Road, Housing Committee; technical college, Manchester Road, Education Committee.

HULL. *Houses.* Alexanders Land Co., Ltd., are to erect 181 houses off Southcoates Lane, Hull.

HULL. *Hospital.* The Hull Corporation has approved plans for the proposed new general hospital at Cottingham.

LANCASHIRE. *Extensions.* The Lancashire C.C. has obtained sanction to borrow £32,698 for extensions at Biddulph Orthopædic Hospital School.

LEEDS. *Cinema.* The Leeds Corporation Town Planning Committee has considered an application by Messrs. C. H. and F. Lax, for consent to the erection of a cinema on land at the junction of Roundhay Road and Easterley Road, and decided to visit the site.

LEEDS. *Central Ambulance Station, etc.* Leeds Corporation is to inspect suggested sites for the erection of a central ambulance station and laundry.

LEEDS. *Public House.* The Leeds Corporation has leased land at Eastgate to Messrs. W. Younger & Co., Ltd., for the erection of a public house.

LEEDS. *Extensions.* The Leeds Corporation has approved plans for extensions at Meanwood Park Colony.

MANCHESTER. *Clinic.* The Manchester Corporation is to erect a clinic at Sharston.

MANCHESTER. *Recreation Ground.* The Manchester Corporation is to lay out a recreation ground at Northern Etchells at a cost of £8,513.

MANCHESTER. *Rehousing.* The Manchester Corporation has acquired land for rehousing purposes at Red Bank, Cheetham.

MANCHESTER. *Libraries.* The Manchester Corporation is to select sites in the districts of Collyhurst, Rochdale Road and Harpurhey for the erection of branch libraries.

MANCHESTER. *Trolley Vehicle Depot.* The Manchester Corporation is to erect a trolley vehicle depot in Rochdale Road at a cost of £57,000.

MIDDLESBROUGH. *Extensions.* The Middlesbrough Education Committee is to enlarge the Kirby Secondary School at a cost of £11,191.

SHEFFIELD. *Houses, etc.* Plans passed by the Corporation: 20 houses, Loxley Road, Mr. H. Haywood; 57 houses, Barncliffe Crescent, Messrs. Simpson Bros. (Sheffield), Ltd.; 28 houses, Fife Street, Mr. F. Clifton; house, Dobcroft Close, Mr. F. R. Frost; 30 houses, Stephen Hill, Messrs. T. V. and W. L. Simpson; warehouse, Penistone Road, Messrs. J. H. Swift and Sons, Ltd.; nine houses, Harvey Clough Road, and 20 houses, Ledstone Road, Mr. C. W. Alflat; 54 houses, East Road, Madehurst Road and Warburton Road, Mr. G. R. Parkin; warehouse and offices, Shalesmoor and Matthew Street, Mr. J. Grocock; works and offices, Carwood Road, Messrs. G. E. Tupholme & Co.; 25 houses, Fife Street, Mr. F. Clifton; offices, Pond Hill, Messrs. G. Senior and Sons, Ltd.; 84 houses, Greenwood Road, Mr. A. J. Belton; factory, Rutland Road, Messrs. J. A. Chapman, Ltd.; cinema, Beck Road, J. F. Emery Film Circuit.

STOCKPORT. *Technical College.* The Stockport Education Committee is to erect workshops at the technical college at a cost of £15,400.

STRETFORD. *Houses.* The Stretford Corporation is to erect 206 houses on the Barton Road Housing 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	ABERDARE ...	S. Wales & M.	1 7	1 2½
A	Aberdeen ...	Scotland	1 7	1 2½
A_1	Abergavenny ...	S. Wales & M.	1 6½	1 2
A	Abingdon ...	S. Counties	1 5½	1 1½
A	Accrington ...	N.W. Counties	1 7	1 2½
A	Addlestone ...	S. Counties	1 6	1 1½
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_1	Appleby ...	N.W. Counties	1 5½	11½
A	Ashton-under-Lyne	N.W. Counties	1 7	1 2½
B	Aylesbury ...	S. Counties	1 5	1 0½
B	BANBURY ...	S. Counties	1 5	1 0½
B_1	Bangor ...	N.W. Counties	1 4½	1 0½
A	Barnard Castle	N.E. Counties	1 5½	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	Basingstoke ...	S.W. Counties	1 5	1 0½
A_1	Bath	S.W. Counties	1 6	1 1½
A	Batley ...	Yorkshire	1 7	1 2½
A	Bedford ...	E. Counties	1 6	1 1½
A_1	Berwick-on-Tweed	N.E. Coast	1 6	1 1½
A_2	Bewdley ...	Mid. Counties	1 6	1 1½
B	Bicester ...	S. Counties	1 5	1 0½
	Birkenhead ...	N.W. Counties	*1 8	1 3
A	Birmingham ...	Mid. Counties	1 7	1 2½
A_1	Bishop Auckland	N.E. Coast	1 6½	1 2
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	Bognor ...	S. Counties	1 5	1 0½
A	Bolton ...	N.W. Counties	1 7	1 2½
A_2	Boston ...	Mid. Counties	1 5½	1 1½
A_2	Bournemouth	S. Counties	1 6	1 1½
B_1	Bovey Tracey	S.W. Counties	1 4	1 0
A	Bradford ...	Yorkshire	1 7	1 2½
A_1	Brentwood ...	E. Counties	1 6½	1 2
A	Bridgend ...	S. Wales & M.	1 7	1 2½
B	Bridgwater ...	S.W. Counties	1 5	1 0½
A	Bridlington ...	Yorkshire	1 6½	1 2
A	Brighouse ...	Yorkshire	1 7	1 2½
A	Brighton ...	S. Counties	1 6	1 1½
A	Bristol	S.W. Counties	1 7	1 2½
B	Brixham ...	S.W. Counties	1 5	1 0½
A	Bromsgrove ...	Mid. Counties	1 7	1 2½
B	Bromyard ...	Mid. Counties	1 5	1 0½
A	Burnley ...	N.W. Counties	1 7	1 2½
A	Burnham ...	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 2
A_1	CAMBRIDGE...	E. Counties	1 6½	1 2
B_1	Canterbury ...	S. Counties	1 4½	1 0½
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	Carnarvon ...	N.W. Counties	1 5	1 0½
A_1	Carnforth ...	N.W. Counties	1 7	1 2½
A	Castleford ...	Yorkshire	1 7	1 2½
A_2	Chatham ...	S. Counties	1 6½	1 1½
A_2	Chelmsford ...	E. Counties	1 5½	1 1½
A_3	Cheltenham ...	S.W. Counties	1 5½	1 1½
A	Chester ...	N.W. Counties	1 7	1 2½
A	Chesterfield ...	Mid. Counties	1 7	1 2½
B	Chichester ...	S. Counties	1 5	1 0½
A	Chorley ...	N.W. Counties	1 7	1 2½
B_1	Cirencester ...	S. Counties	1 4½	1 0½
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_4	Colchester ...	E. Counties	1 6	1 1½
A_1	Colne	N.W. Counties	1 6½	1 2
A_1	Colwyn Bay ...	N.W. Counties	1 6	1 1½
A_1	Consett ...	N.E. Coast	1 6½	1 2
A_1	Conway ...	N.W. Counties	1 6	1 1½
A	Coventry ...	Mid. Counties	1 7	1 2½
A_1	Crewe	N.W. Counties	1 6	1 1½
A_2	Cumberland ...	N.W. Counties	1 5½	1 1½
A	DARLINGTON	N.E. Coast	1 7	1 2½
A	Darwen ...	N.W. Counties	1 7	1 2½
B_1	Deal	S. Counties	1 4½	1 0½
A_2	Denbigh ...	N.W. Counties	1 5½	1 1½
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_1	Dorchester ...	S.W. Counties	1 4½	1 0½
A_2	Driffield ...	Yorkshire	1 5½	1 1½
A_2	Droitwich ...	Mid. Counties	1 6	1 1½
A	Dudley ...	Mid. Counties	1 7	1 2½
A_2	Dumfries ...	Scotland	1 6	1 1½
A	Dundee ...	Scotland	1 7	1 2½
A	Durham ...	N.E. Coast	1 7	1 2½
A_2	EASTBOURNE	S. Counties	1 6	1 1½
A_1	Ebbw Vale ...	S. Wales & M.	1 6½	1 2
A	Edinburgh ...	Scotland	1 7	1 2½
A_2	Exeter ...	S.W. Counties	*1 6	1 1½
B	Exmouth ...	S.W. Counties	1 5	1 0½
A_2	FELIXSTOWE	E. Counties	1 5½	1 1½
A_2	Filey	Yorkshire	1 5½	1 1½
A	Fleetwood ...	N.W. Counties	1 7	1 2½
B_1	Folkestone ...	S. Counties	1 4½	1 0½
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	Gillingham ...	S. Counties	1 5	1 0½
A_1	Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6½	1 2
A	Glasgow ...	Scotland	1 7	1 2½
A_2	Gloucester ...	S.W. Counties	1 6	1 1½
A_2	Goole	Yorkshire	1 6	1 1½
A_2	Gosport ...	S. Counties	1 6	1 1½
A_2	Grantham ...	Mid. Counties	1 5½	1 1½
A_1	Gravesend ...	S. Counties	1 6½	1 2
A	Greenock ...	Scotland	*1 7	1 2½
A	Grimsby ...	Mid. Counties	1 7	1 2½
B	Guildford ...	S. Counties	1 5	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	Hastings ...	S. Counties	1 5	1 0½
A_2	Hatfield ...	S. Counties	1 6	1 1½
B	Hereford ...	S.W. Counties	1 5	1 0½
A_2	Hertford ...	E. Counties	1 6	1 1½
A	Heysham ...	N.W. Counties	1 7	1 2½
A	Howden ...	N.E. Coast	1 7	1 2½
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 6	1 1½
B_2	Isle of Wight ...	S. Counties	1 4	1 0
A	JARROW ...	N.E. Coast	1 7	1 2½
A	KEIGHLEY ...	Yorkshire	1 7	1 2½
A_2	Kendal ...	N.W. Counties	1 5½	1 1½
A_2	Keswick ...	N.W. Counties	1 5½	1 1½
A_1	Kettering ...	Mid. Counties	1 6½	1 2
A_2	Kidderminster	Mid. Counties	1 6	1 1½
B_1	King's Lynn ...	E. Counties	1 4½	1 0½
A	LANCASTER ...	N.W. Counties	1 7	1 2½
A_1	Leamington ...	Mid. Counties	1 6½	1 2
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	Lewes	S. Counties	1 5	1 0½
A_2	Lichfield ...	Mid. Counties	1 6	1 1½
A	Lincoln ...	Mid. Counties	1 7	1 2½
	Liverpool ...	N.W. Counties	*1 8½	1 3½
A_2	Llandudno ...	N.W. Counties	1 6	1 1½
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_1	Luton	E. Counties	1 6½	1 2
A	Lytham ...	N.W. Counties	1 7	1 2½
A_1	MACCLESFIELD	N.W. Counties	1 6½	1 2
A_2	Maidstone ...	S. Counties	1 5½	1 1½
A_2	Malvern ...	Mid. Counties	1 5½	1 1½
A	Manchester ...	N.W. Counties	1 7	1 2½
A	Mansfield ...	Mid. Counties	1 7	1 2½
B_1	Margate ...	S. Counties	1 4½	1 0½
A_2	Matlock ...	Mid. Counties	1 5½	1 1½
A_1	Merthyr ...	S. Wales & M.	1 6½	1 2
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
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 4	1 0
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	Northampton	Mid. Counties	1 7	1 2½
A	North Shields...	N.E. Coast	1 7	1 2½
A	North Staffs ...	Mid. Counties	1 7	1 2½
A_1	Norwich ...	E. Counties	1 6½	1 2
A	Nottingham ...	Mid. Counties	1 7	1 2½
A	Nuneaton ...	Mid. Counties	1 7	1 2½
A_2	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 1½
A_1	Oxford ...	S. Counties	1 6½	1 2
A	PAISLEY ...	Scotland	*1 7	1 2½
B_2	Pembroke ...	S. Wales & M.	1 3½	0 11½
A	Perth	Scotland	*1 7	1 2½
A_1	Peterborough ...	E. Counties	1 6½	1 2
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 2
A_2	Portsmouth ...	S. Counties	1 6	1 1½
A	Preston ...	N.W. Counties	1 7	1 2½
A	QUEENSFERRY	N.W. Counties	1 7	1 2½
A_2	READING ...	S. Counties	1 6½	1 2
B	Reigate ...	S. Counties	1 5½	1 1½
A_2	Retford ...	Mid. Counties	1 5½	1 1½
A_1	Rhondda Valley	S. Wales & M.	1 6½	1 2
A_2	Ripon	Yorkshire	1 5½	1 1½
A	Rochdale ...	N.W. Counties	1 7	1 2½
B	Rochester ...	S. Counties	1 5	1 0½
A_1	Ruabon ...	N.W. Counties	1 6½	1 2
A	Rugby ...	Mid. Counties	1 7	1 2½
A_2	Rugeley ...	Mid. Counties	1 6	1 1½
A	Runcorn ...	N.W. Counties	1 7	1 2½
A_2	ST ALBANS ...	E. Counties	1 6½	1 2
A	St. Helens ...	N.W. Counties	1 7	1 2½
B_2	Salisbury ...	S.W. Counties	1 3½	0 11½
A_1	Scarborough ...	Yorkshire	1 6½	1 2
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 6	1 1½
A_1	Solihull ...	Mid. Counties	1 6½	1 2
A_2	Southampton	S. Counties	1 6	1 1½
A_1	Southend-on-Sea	E. Counties	1 6½	1 2
A	Southport ...	N.W. Counties	1 7	1 2½
A	S. Shields ...	N.E. Coast	1 7	1 2½
A_1	Stafford ...	Mid. Counties	1 6½	1 2
A	Stirling ...	Scotland	1 7½	1 2½
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	Stroud ...	S.W. Counties	1 5	1 0½
A	Sunderland ...	N.E. Coast	1 7	1 2½
A	Swansea ...	S. Wales & M.	1 7	1 2½
A_2	Swindon ...	S.W. Counties	1 5½	1 1½
A_1	TAMWORTH ...	N.W. Counties	1 6½	1 2
B	Taunton ...	S.W. Counties	1 5	1 0½
A	Teesside Dist....	N.E. Counties	1 7	1 2½
A_2	Teignmouth ...	S.W. Coast	1 6	1 1½
A	Todmorden ...	Yorkshire	1 7	1 2½
A_1	Torquay ...	S.W. Counties	1 6½	1 2
B_2	Truro	S.W. Counties	1 4	1 0
A_2	Tunbridge Wells	S. Counties	1 5½	1 1½
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_1	Warwick ...	Mid. Counties	1 6½	1 2
A_1	Wellingborough	Mid. Counties	1 6½	1 2
A	West Bromwich	Mid. Counties	1 7	1 2½
A_2	Weston-s.-Mare	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	Winchester ...	S. Counties	1 5	1 0½
A_2	Windsor ...	S. Counties	1 6	1 1½
A	Wolverhampton	Mid. Counties	1 7	1 2½
A_2	Worcester ...	Mid. Counties	1 6	1 1½
A_2	Worksop ...	Yorkshire	1 5½	1 1½
A_1	Wrexham ...	N.W. Counties	1 6½	1 2
A_2	Wycombe ...	S. Counties	1 5½	1 1½
B	YARMOUTH	E. Counties	1 5	1 0½
B	Yeovil ...	S.W. Counties	1 5	1 0½
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. The rates of wages have been revised consequent upon the increase in wages which came into operation on February 1, together with all revisions following authorized annual regradings.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below 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	7½
Glazier	,,	1	8½
Slater	,,	1	8½
Scaffolder	,,	1	4½
Timberman	,,	1	4½
Navvy	,,	1	3½
General Labourer	,,	1	3½
Lorryman	,,	1	6½
Crane Driver	,,	1	7½
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	18	6
Hydrated Lime	,,	2	5	0
Portland Cement, in 4-ton lots (d/d site, including Paper Bags)	,,	1	19	0
Rapid Hardening Cement, in 4-ton lots (d/d site, including Paper Bags)	,,	2	5	0
White Portland Cement, in 1-ton lots	,,	8	15	0
Thames Ballast	per Y.C.		6	6
½" Crushed Ballast	,,		7	0
Building Sand	,,		7	6
Washed Sand	,,		8	6
2" Broken Brick	,,		8	0
½" ,, ,,	,,		10	3
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.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest Bends	,,	4	3	6	3
Single Junctions	,,	3	6	5	3
Double	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
½" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead Wool	lb.		6		—
Gaskin	,,		5		—

BRICKLAYER

		£	s.	d.
Flettons	per M.	2	12	0
Grooved do.	,,	2	14	0
Phorpres bricks	,,	2	15	0
,, Cellular bricks	,,	2	15	0
Stocks, 1st quality	,,	4	11	0
,, 2nd ,,	,,	4	2	6
Blue Bricks, Pressed	,,	8	14	0
,, Wirecuts	,,	7	12	6
,, Brindles	,,	7	0	0
,, Bullnose	,,	9	0	0
Red Sand-faced Facings	,,	6	18	6
Red Rubbers for Arches	,,	12	0	0
Multicoloured Facings	,,	7	10	0
Luton Facings	,,	7	10	0
Phorpres White Facings	,,	3	17	3
,, Rustic Facings	,,	3	12	3
Midhurst White Facings	,,	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	,,	21	0	0
Headers	,,	20	10	0
Bullnose	,,	27	10	0
Double Stretchers	,,	29	10	0
Double Headers	,,	26	10	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	7
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:		s.	d.
Portland stone, Whitbed	F.C.	4	4½
,, ,, Basebed	,,	4	7½
Bath stone	,,	2	10
York stone	,,	6	6
,, ,, 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.	28	17	6
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
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)		21	11	6
,, ,, green ,, ,,		24	7	4
Best machine roofing tiles ,, ,,		4	5	0
Best hand-made do. ,, ,,		4	17	6
Hips and valleys	each			9
,, hand-made	,,			9½
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
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, ½"	Sq.	18		6
,, ¾"	,,	1	1	6
,, 1"	,,	1	2	0
,, 1¼"	,,	1	5	0
,, 1½"	,,	1	10	0
Deal matchings, ½"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding, ½"	,,		16	0
,, 1"	,,		18	0
,, 1½"	,,	1	6	0
Plywood, per ft. sup. Thickness ½"				d.
Qualities A B BB				
Birch 60 × 48 4 2½ 2				8
Cheap Alder – 2 1½				–
Oregon Pine – 2½ –				–
Gaboon Mahogany 4 3½ –				–
Figured Oak 6½ 5 –				–
Scotch glue	lb.			8

Plywood, per ft. sup. Thickness	¼"			⅜"			½"			¾"		
Qualities	A	B	BB	A	B	BB	A	B	BB	A	B	BB
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch 60 × 48	4	2½	2	5	3	2½	7	5	4	8	6	5
Cheap Alder	–	2	1½	–	3½	2	–	–	–	–	–	–
Oregon Pine	–	2½	–	3	2½	–	4	3½	–	5	4½	–
Gaboon Mahogany	4	3½	–	5	4½	–	7	6½	–	8	7	–
Figured Oak	6½	5	–	7½	5½	–	10	8	–	1/-	9	–

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"–23" 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" M—½" 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 unions ,,	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	5	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	Per cent.		Per cent.
TUBES.			
Gas	68½	Galvanized gas	61½
Water	66½	,, water	55
Steam	63½	,, steam	50
FITTINGS.			
Gas	61½	Galvanized gas	55½
Water	58½	,, water	50
Steam	53½	,, steam	46½

		s.	d.
Rolled steel joists cut to length	cwt.	14	6
Mild steel reinforcing rods, ½"	,,	10	6
,, ,, ¾"	,,	10	3
,, ,, 1"	,,	10	0

SMITH AND FOUNDER—*continued*

		s.	d.
Mild steel reinforcing rods, 1¼"	cwt.	9	6
,, ,, 1½"	,,	9	6
,, ,, 1¾"	,,	9	6
,, ,, 2"	,,	9	6
,, ,, 2½" ,,	,,	9	6

Cast-iron rain-water pipes of ordinary thickness metal		4" s.	4" d.	4" s.	4" d.
		F.R.		8	10
Shoes	each	2	0	3	0
Anti-splash shoes	,,	4	6	8	0
Boots	,,	3	0	4	0
Bends	,,	2	7	3	9
,, with access door	,,		—	6	3
Heads	,,	4	0	5	0
Swan-necks up to 9" offsets	,,	3	9	6	0
Plinth bends, 4½" to 6"	,,	3	9	5	3
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		6
Stop ends	each		6		6
Angles	,,	1	7	1	11
Obtuse angles	,,	2	0	2	6
Outlets	,,	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	44	6	
,, drawn pipes	,,	42	6	
,, soil pipes	,,	45	6	
,, scrap	,,	32	0	
Solder, plumbers'	lb.			9
,, fine do.	,,		1	0
Copper, sheet	,,		1	2
,, tubes	,,		1	4½

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	18 9

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	0	0
Plaster, coarse	,,	2	15	0
,, fine	,,	4	7	6
Hydrated lime	,,	3	0	9
Sirapite	,,	3	6	0
Keene's cement	,,	5	0	0
Gothite plaster	,,	3	6	0
Pioneer plaster	,,	3	6	0
Thistle plaster	,,	3	6	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
,, rent	,,		3	9
Lath nails	lb.			3

GLAZIER

		s.	d.		s.	d.
Sheet glass, 24 oz., squares n/e 2 ft.	s. F.S.					2½
,, ,, 26 oz.	,, ,,					3½
Flemish, Arctic, Figures (white)*	,,					7½
Blazoned glasses	,,				2	6
Reeded: Cross Reeded	,,					11
Cathedral glass, white, double-rolled, plain, hammered, rimpled, waterwite	,,					6
Crown sheet glass (n/e 12" × 10")	,,				2	0
Flashed opals (white and coloured)	,,	1	0	and 2	0	
¼" rough cast; rolled plate	,,					10½
¼" wired cast; wired rolled	,,					11½
¼" Georgian wired cast	,,					1
¼" Polished plate, n/e 1 ft.	,,	†10	to	‡1	1	
,, ,, 2	,,	†1	2	,, ‡1	4	
,, ,, 4	,,	†2	3	,, ‡2	6	
,, ,, 8	,,	†2	9	,, ‡3	2	
,, ,, 20	,,	†3	1	,, ‡3	9	
,, ,, 45	,,	†3	3	,, ‡4	0	
,, ,, 100	,,	†4	0	,, ‡4	10	
Vita glass, sheet, n/e 1 ft.	,,				1	0
,, ,, ,, 2 ft.	,,				1	3
,, ,, ,, over 2 ft.	,,				1	9
,, ,, plate, n/e 1 ft.	,,				1	6
,, ,, ,, 2 ft.	,,				3	0
,, ,, ,, 5 ft.	,,				4	0
,, ,, ,, 7 ft.	,,				5	0
,, ,, ,, 15 ft.	,,				6	0
,, ,, ,, over 15 ft.	,,				7	6
"Calorex" sheet 21 oz., and 32 oz.	,,	2	6	and 3	6	
,, rough cast ¼" and ½"	,,		8½	,, 1	0	
Putty, linseed oil	lb.					3

* *Colours, 1d. F.S. extra.*

† *Ordinary glazing quality.* ‡ *Selected glazing quality.*

PAINTER

		£	s.	d.
White lead in 1 cwt. casks	cwt.	3	9	9
Linseed oil	gall.		3	0
Boiled oil	,,		3	3
Turpentine	,,		3	9
Patent knotting	,,		14	0
Distemper washable	cwt.	2	6	0
,, ordinary	,,	2	0	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	,,		7	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.	2	9
,, to reduce levels n/e 5' 0" deep and cart away	Y.C.	8	6
,, to form basement n/e 5' 0" and cart away	,,	9	0
,, ,, 10' 0" deep and cart away	,,	9	6
,, ,, 15' 0" deep and cart away	,,	10	0
If in stiff clay	add ,,		6
If in underpinning	,,	4	0
Planking and strutting to sides of excavation	F.S.	1	0
,, ,, to pier holes	,,		5
,, ,, to trenches	,,		5
,, ,, extra, only if left in	,,		3
Hardcore, filled in and rammed	Y.C.	10	0
Portland cement concrete in foundations (6–1)	,,	1	6	0
,, ,, (4–2–1)	,,	1	12	6
,, ,, underpinning	,,	1	16	0
Finishing surface of concrete, space face	Y.S.			7

DRAINLAYER

		4" s.	d.	6" s.	d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1	6	2	3
Extra, only for bends	Each	2	8	3	9
,, junctions	,,	3	9	4	6
Gullies and gratings	,,	16	8	18	0
Cast iron drains, and laying and jointing	F.R.	4	9	6	9
Extra, only for bends	Each	10	6	15	6

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	26	10	0
,, ,, in cement	,,	27	12	6
,, Stocks in cement	,,	34	0	0
,, Blues in cement	,,	50	0	0
Extra only for circular on plan	,,	2	0	0
,, backing to masonry	,,	1	10	0
,, rising on old walls	,,	2	0	0
,, underpinning	,,	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	,,			8
,, ,, ,, red brick facings and pointing	,,			11
,, ,, ,, blue brick facings and pointing	,,	1	4	
,, ,, ,, glazed brick facings and pointing	,,	3	6	
Tuck pointing	,,			7½
Weather pointing in cement	,,			3
Slate dampcourse	,,			10
Vertical dampcourse	,,	1	1	

ASPHALTER

		s.	d.
½" Horizontal dampcourse	Y.S.	4	9
½" Vertical dampcourse	,,	7	9
¾" paving or flat	,,	6	3
1" paving or flat	,,	7	6
1" × 6" skirting	F.R.	1	0
Angle fillet	,,		2½
Rounded angle	,,		2½
Cesspools	Each	5	6

MASON

	£	s.	d.
Portland stone, including all labour, hoisting, fixing and cleaning down, complete	F.C.	17	9
Bath stone and do., all as last	,,	13	6
Artificial stone and do.	,,	13	0
York stone templates, fixed complete	,,	10	6
,, thresholds	,,	13	6
,, sills	,,	1	0	6

SLATER AND TILER

	£	s.	d.
Slating, Bangor or equal to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	,,	3	7	0
Do., 24" × 12"	,,	3	17	0
Westmorland slating, laid with diminished courses	,,	6	0	0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course		3	0	0
Do., all as last, but of machine-made tiles	,,	2	16	0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	,,	2	16	0
,, ,, ,, ,, ,, ,, ,, (green)	,,	4	15	0

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	2	6
Shuttering to sides and soffits of beams	F.S.			7
,, to stanchions	,,			7
,, to staircases	,,		1	6
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	,,		4	6
,, ,, roofs	,,		6	6
,, ,, trusses	,,		7	6
,, ,, partitions	,,		8	6
⅞" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" ,, ,, ,, ,, ,,	,,	1	17	6
1½" ,, ,, ,, ,, ,,	,,	2	3	0
⅞" × 2" fir battening for Countess slating	,,		9	6
Do., for 4" gauge tiling	,,		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
,, ,, ,, 2 ,,	,,		2	9
,, ,, ,, 3 ,,	,,		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.	1	2	
1½" ,, ,, ,,	,,	1	6	
2" deal wrought rounded roll	F.R.			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	1	0
1¼" do.	,,	2	10	0
1½" do.	,,	2	17	0
1" deal moulded skirting fixed on, and including grounds plugged to wall	F.S		1	6
1½" do	,,		1	9

CARPENTER AND JOINER—*continued*

		s.	d.
1½" deal moulded sashes of average size	F.S.	1	9½
2" ,, ,, ,, ,,	,,	1	11½
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	,,	3	7
2" ,, ,, ,, ,,	,,	3	10
Extra only for moulded horns	Each		6
1½" deal four-panel square, both sides, door	F.S.	2	0
2" ,, ,, ,, ,,	,,	2	8
1⅛" ,, but moulded both sides	,,	2	4
2" ,, ,, ,, ,,	,,	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	0
4½" × 3½" ,, ,, ,, ,,	,,	1	4
1½" deal tongued and moulded window board, on and including deal bearers	F.S.	1	6
1½" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	2	6
1½" deal moulded wall strings	,,	2	1
1½" ,, outer strings	,,	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" ,, ,, ,,	,,	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	0
Do., pendants	,,	6	0

SMITH AND FOUNDER

		s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.	16	6
Riveted plate or compound girders, and hoisting and fixing in position	,,	1	0	6
Do., stanchions with riveted caps and bases and do.	,,	19	0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	,,	17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.		11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	6

PLUMBER

		£	s.	d.
Milled lead and labour in flats	cwt.	2	15	0
Do. in flashings	,,	2	18	0
Do. in covering to turrets	,,	3	4	0
Do. in soakers	,,	2	9	0
Labour to welted edge	F.R.			1½
Open copper nailing	,,			3
Close ,, ,,	,,			4

		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	4	1	8½	2	7	3	6	—	
Do. soil pipe and fixing with cast lead tacks	,,	—		—		—		—		—		—	
Extra, only to bends	Each	—		—		—		—		2	3	—	
Do. to stop ends	,,	6½		8		9		11		1	0	—	
Boiler screws and unions		3	3	3	9	5	0	8	0	—		—	
Lead traps		—		—		—		8	0	11	6	—	
Screw down bib valves	,,	6	9	9	6	11	0	—		—		—	
Do. stop cocks	,,	7	0	9	6	12	6	—		—		—	

		s.	d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1	0
Extra, only stop ends	Each	1	0
Do. angles	,,	1	6
Do. outlets	,,	2	9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1	2
Extra, only for shoes	Each	1	3
Do .for plain heads	,,	5	6

PLASTERER AND TILING

		s.	d.
Expanded metal lathing, small mesh	Y.S.	2	0
Do. in n/w to beams, stanchions, etc.	,,	2	9
Lathing with sawn laths to ceilings	,,	1	3
½" screeding in Portland cement and sand or tiling, wood block floor, etc.	,,	1	5
Do. vertical	,,	1	7
Rough render on walls	,,	1	2½
Render, float and set in lime and hair	,,	1	9
Render and set in Sirapite	,,	1	11
Render, backing in cement and sand, and set in Keene's cement	,,	2	9
Extra, only if on lathing	,,		4
Keene's cement angle and arris	F.R.		6
Arris	,,		1½
Rounded angle, small	,,		3
Plain cornices in plaster, including dubbing out, per 1" girth	,,		1½
1" granolithic pavings	Y.S.	3	6
1½" ,, ,, ,,	,,	4	6
6" × 6" white glazed wall tiling and fixing on prepared screed	,,	17	6
9" × 3" ,, ,, ,, ,,	,,	1	2	6
Extra, only for small quadrant angle	F.R.			8

GLAZIER

	s.	d.
21 oz. sheet glass and glazing with putty	F.S.		6½
26 oz. do. and do.	,,		7½
Flemish, Arctic Figured (white) and glazing with putty	,,	1	1
Cathedral glass and do.	,,	1	2
Glazing only, British polished plate	,,		7
Extra, only if in beds	,,		2
Washleather	F.R.		4

PAINTER

		s.	d.
Clearcolle and whiten ceilings	Y.S.		6
Do. and distemper walls	,,		9
Do. with washable distemper	,,	1	1
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	0
Hanging ordinary paper	from ,,	2	9