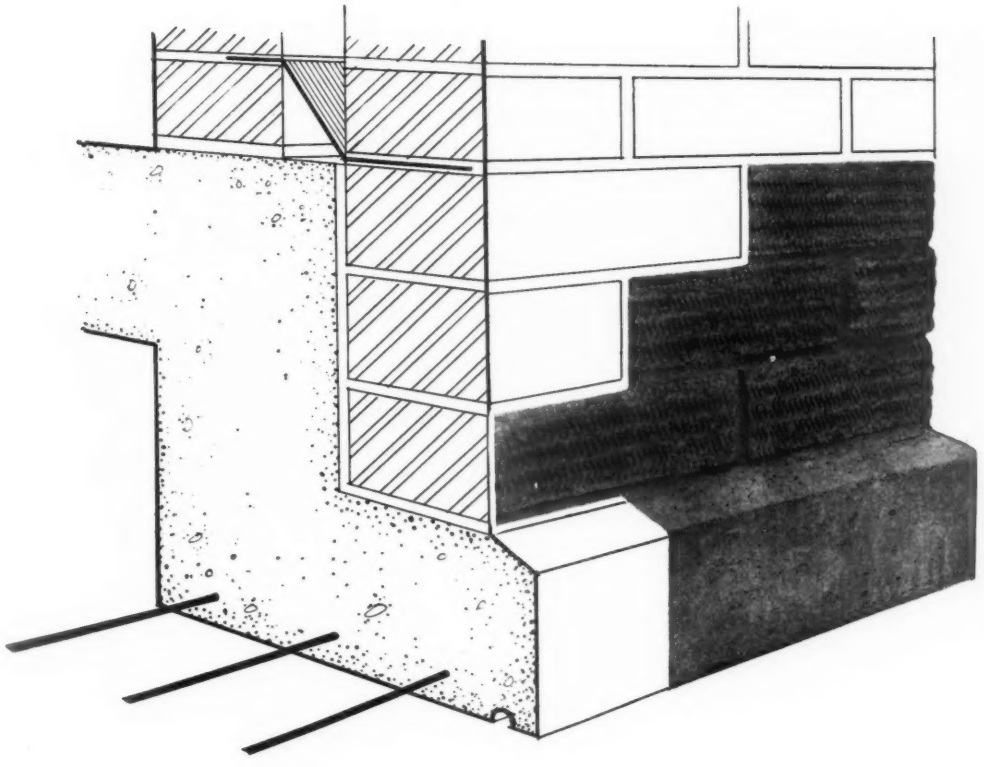

BUILDING IN 'PHORPRES' BRICKS

While most architectural authorities agree that solid brick construction is the most economical form for all buildings up to five or even six storeys, above that height a frame construction is often desirable. But the frame should be *designed for brickwork*. Here is a case where in a multi-storey building the wall beams were designed to take the 'Phorpres' Cavity wall at each floor level and the columns were designed within the wall thickness.

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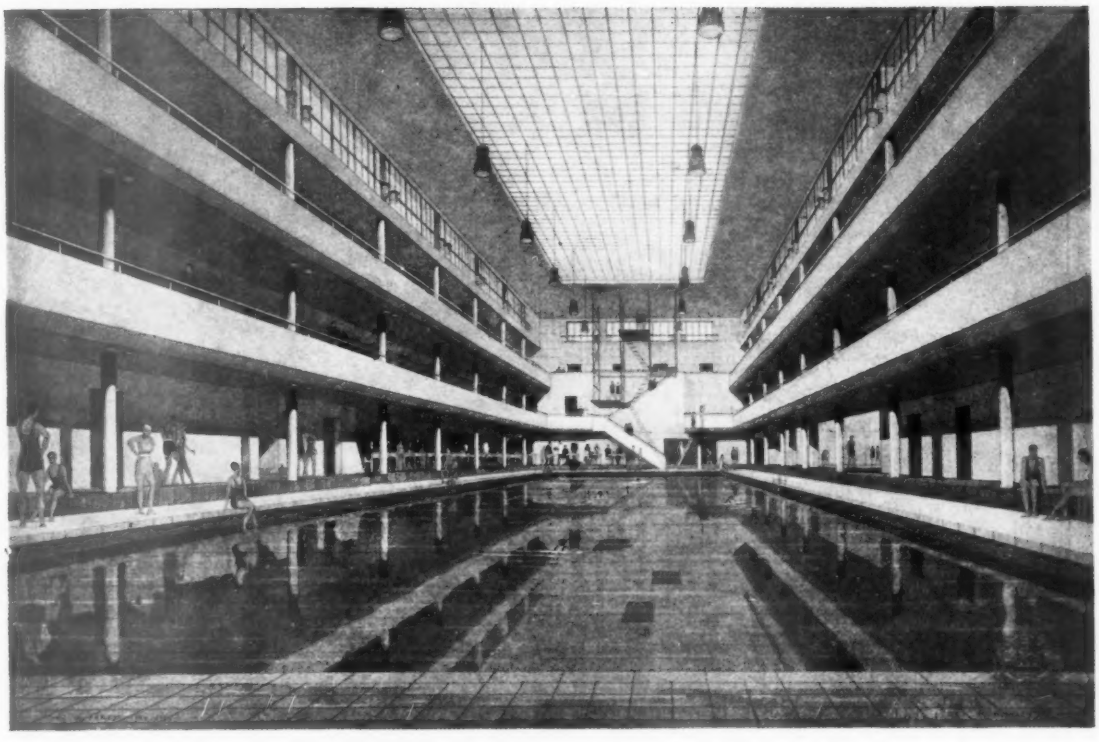
The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.

THURSDAY, NOVEMBER 17, 1938. NUMBER 2287 : VOLUME 88

PRINCIPAL CONTENTS

NEW BATHS FOR HOLBORN



A PERSPECTIVE of the main swimming bath of the Holborn Baths, work on which is to commence shortly. The architect is Mr. K. H. Wachter, whose design was placed first in an open competition held in 1936.

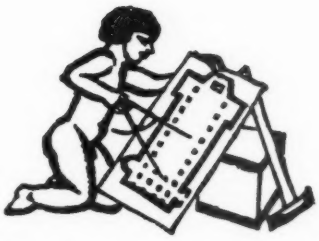
CENTRAL FEATURE, DESIGN SECTION, WOMAN'S FAIR

The central feature in the Design Section of the Woman's Fair and Exhibition at Olympia was the result of a competition organized by the Design and Industries Association and won by Mr. H. T. Cadbury Brown. The design is a geometrically arranged composition of spars and screens, held erect by wires fixed to the second floor balcony. This leaves the floor space completely free for circulation.

The screens are arranged so that the top ones are seen at eye level from the first floor, and the bottom one from under the balcony. In either case, the composition is complete although part of the design may be cut off from view.

The framework of shaped varnished pine spars 11 ins. by 4 ins. holds three curved screens on which are mounted greatly enlarged photographs. The sides of the raised lettering are yellow, and the undersides of the curved screens vermilion. The back of the lower screen is blue.

Further exhibits are illustrated on pages 790–792.



HEIL REILLY

PROFESSOR REILLY'S autobiography* recalls a great achievement. The dynamic history of the Liverpool School well deserves to be put on record, and this could not possibly be better done than by the man who made it. His own story, written in his own irresistible way, reveals so clearly that picturesque Renaissance character—buoyant, robust and "jolly"—which was the inspiration of his famous school.

No school of architecture can more justly be called famous. Liverpool was the first to give a full-time five-year course. In the early days, soon after Professor Reilly took it in hand in 1904, it led the campaign for "cleaner,' more straightforward, larger scale classic," and by 1914 the work of the school had profoundly influenced the course of English architecture. This classical clean-up may seem beside the point today, but in actual fact it meant something more fundamental than the mere refinement of classic detail : it involved a more imaginative and yet more logical approach to planning. The accepted classic terminology which controlled the Liverpool movement has proved to be excellent discipline for the freer large scale architecture which the schools teach today, and which, lacking the earlier classical experiment, would have been undeveloped in its essential logic, would have missed its instinctive sense of scale. It is interesting to notice that Professor Reilly, who continues to advance on a line parallel with his post-war students, talks affectionately of the progressive school of design as the "new grand manner, so much simpler and grander really than the old."

In 1913 Liverpool won the first British Prix de Rome, and between then and Reilly's retirement in 1931 it carried off more than half the possible Rome scholarships. After the war the fame of the school spread to America—so much so that the Federal Government, after some trouble on Ellis Island, was persuaded to issue a special waiver in favour of Liverpool students who came over to work for six months in New York.

In the States, Professor Reilly was, and is, a byword. In London, so near and yet so far, he is a kind of bogey man : Londoners refuse to believe that any kind of progressive movement can exist in the provinces. In his home town he never allowed himself to suffer the usual fate of the prophet : he knew and perfected the art of "getting away with it." There were those who called him a mere visionary, an advertiser ; or even, when they were angry, an *unscrupulous bounder*. But secretly they were forced to admire him because of his obviously genuine singleness of aim.

Reilly saw the school as a training ground not merely for architects, but for the inhabitants at large. Through the school he has done more than any man to arouse the interest of the intelligent citizen in his surroundings, to make him "architecture conscious."

In the years immediately preceding the war, Reilly was very much at the centre of the "ferment of ideas and enthusiasms" in the Liverpool he describes. As one of the founders of the Sandar arts and letters club and the Repertory theatre movement, he created in Liverpool a lively and highly individual cultural nucleus, with its focal point, of course, in the Liverpool School.

Probably his greatest achievement, for which he is not generally known, was his founding, with the financial aid of his "patron," Lord Leverhulme, of the chair of Civic Design—the first town-planning school in the country. Conceived as a climax to the architectural course, the Department of Civic Design, with "my old friend" Stanley Adshead as its chief and Patrick Abercrombie as assistant lecturer, was started in 1909, very soon after the first Town Planning Bill was introduced. It marked the beginning of an important change in outlook towards large scale planning. Reilly has always been conscious of the need for connecting the words architecture and town planning in the public mind.

The interesting point is that through his irrepressible personality, rather than through any special scholarliness (which he does not himself possess), Reilly succeeded in making architecture a force in the cultural life of the city. Liverpool, through architecture, acquired a social conscience: it learned that architecture was equally concerned with the building of a great cathedral, the clearing of slums, the planting of parks.

London has been scornful of the idea that personality can be of any significance in the teaching of architecture, but the impress that Reilly has made on the city of Liverpool and the consistent testimony of now distinguished men who once came under his spell, bear witness to the power that a man of great faith and character can have.

The moral sticks out a mile. If we would have a wider architecture, a sweeter public, less boneheaded City fathers, more regenerate business men, we must find successors to the great Professor, who will make the schools the rallying ground for local architectural propaganda. These successors must be men of savage passions and unbridled charm. Plain living and high thinking, in which so many of our contemporaries excel, can never be a substitute for pep and personality.

* *Scaffolding in the Sky :* a semi-architectural autobiography by C. H. Reilly. London : George Routledge & Sons. 12s. 6d.

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NOTES & TOPICS

ENGINEERS AGAIN

A FORTNIGHT ago I was kinder than I might have been to the first two parts of the report by the A.R.P. Committee of the Institution of Structural Engineers. Now Messrs. Chatley and Gutteridge have read a paper to the Society of Engineers. They evolve an elaborate formula for finding the terminal velocity of a bomb and admit that their equation can only be solved by "a tedious and approximate method." Nor do they have any special ideas of what you do with this figure if you can find it.

*

Their other ideas do not seem to be remarkably original—"all new buildings should be wholly of fire-resisting materials" . . . "all unnecessary furniture . . . should be dispensed with."

THE SOUTH BANK AT LAST

Eight years or so ago the offices of every architectural paper were thronged with peculiar people who all had ideas about the new Charing Cross Bridge. Since that time the mantle of Charing Cross has been transferred to the South Bank as a whole, schemes varying from the diversion of the Thames to the more possible suggestions of Mr. Spence-Sales and Mr. John Bland (*see* ARCHITECTS' JOURNAL for May 5 last and *Star*).

*

Now at last the L.C.C. is to seek compulsory land purchase powers. There seems to be still a certain amount of opposition from Jesus College, Oxford, the owners of some of the land needed, and, since even the Ecclesiastical Commissioners withdrew their opposition three years ago, it seems a little odd that a university body should be the only outstanding reactionary, though they have at least not allowed any new interests to be created on their land.

The most immediately eye-catching development will be an Embankment wall "extending to a point about 50 yds. down stream from the new Waterloo Bridge," and the County Hall FOOTWAY "extended to form a riverside promenade."

*

Traffic needs will be covered by a York Road widened to 70 ft., Waterloo Road goes up to 90 ft., with a roundabout at the York-Waterloo-Stamford Street crossing. And a new east-west road under Charing Cross railway bridge, and sundry widenings not easily explained without a map. All at a net cost of about a million and a-half. This isn't, obviously, anything like the complete solution of the problem, but once a start has been made the rest may follow.

STATISTIC

Mr. H. B. Lees-Smith, M.P., a former Cabinet Minister, has said that the $3\frac{1}{2}$ million houses built since the Armistice represent one-third of the total number of houses in the country.

*

No doubt this is true: it explains nearly everything we suffer from in the way of the spoliation of the country. But it does not justify it. In two decades the housing accommodation of the people has undergone by far the biggest revolution in its history. The industrial revolution of 100 years ago was nothing to it.

*

This being so, a Government that allows all this to happen without plan is merely repeating the errors of the last century, and can be said to have learnt nothing.

R.I.B.A. MEETINGS

As a postcript to my note last week on the first R.I.B.A. meeting of the new session, may I draw attention to the exceptional interest of the next two papers to be read: "Economics of the Building Industry: Achievements and Anomalies," by O. W. Roskill; and "The Next Twenty Years," by Prof. W. G. Holford.

*

We can all be presumed to know that the second will be stimulating, but I particularly mention the first as its rather forbidding title may put some people off. But it is a vitally important subject, discussed by someone who knows it inside out, and the dry straightforward title is only an indication that the R.I.B.A. has not fallen into the temptation of asking the speaker to "popularize" what should be taken seriously.

*

LIVERPOOL IN LONDON

DEAR SIR,

May I correct an error in your account last week of the Liverpool School of Architecture Society's supper on October 27? You describe the society as the "Liverpool (in London) School of Architecture Society." Actually it exists for all former students of the school and its membership is not confined to London members only, as your description suggests.

Yours faithfully,

P. J. MARSHALL,
Hon. Secretary.

*

The Leeds (in London) Architectural Society's Supper (?) is described, I understand, on p. 788.

For demolition

PRESERVATION AND VIGILANCE

The two pictures reproduced here both show buildings of high architectural merit that are soon to be pulled down. Euston Crescent has to go to make way for the new Euston Station, no doubt to the regret of the Railway Company. Exeter Market Hall is to be demolished by the City Council to make way for a new Town Hall, apparently with no regret, for the Council is said to have expressed the opinion that the Market Hall has no architectural value. It is also said that the new building is to be built in a Gothic style to *match the Cathedral*.

*

So far as the preservation of good classical buildings goes, and the education of the public (and City Councillors) in their appreciation, the Georgian Group can be relied upon to continue the work it has so excellently begun. But the style of the new building raises the question of another need—the same need that President Goodhart-Rendel discussed at the R.I.B.A. last week.

*

If, he said in effect, what is good and old cannot be saved—and there are often good reasons why it cannot—there should be modern enthusiasts equivalent to the Georgian Group to see that what is built in its place is as good of its kind : to see that twentieth-century town-halls are not made to "match" fourteenth-century cathedrals.

*

A vigilance committee to do this work was what the President demanded. He pointed out that nowadays, as it is nobody's business to inquire, the design of even an important building is not revealed until it is too late for criticism to produce modification.

*

The need for such a vigilance committee is obvious. Last week, noting the President's observation that its members would have to be outside the profession, I asked where we would find them.

*

Ideally, of course, the leaders of the Georgian Group, as public-spirited citizens of taste who already have the habit, as it were, of going about with their eyes open, should extend their activities in this more positive direction, but I wish I had confidence that Lord Derwent, Baroness D'Erlanger, Mr. Robert Byron, Mr. Christopher Hussey, and their intelligent friends even wanted a frankly contemporary style of architecture—let alone admitted that one might already exist. But perhaps that is because these gentlemen believe that modern architecture is still limited by that functionalist creed that was not even the whole story in the nineteen-twenties. Mr. Clive Bell appeared to be suffering from this delusion in a curiously uninformed article that he contributed to last week's *New Statesman*.

*

Only one suitable name springs to mind—that of Professor Reilly—as a judge of architecture with no axe to grind in whom the public could put absolute faith. Other Professors live less in the contemporary world. I do not know of any architectural critics with reputations as such. This business of picking a team is going to be a perplexing one—even if it has its points as a pastime.

CHESTNUT

I am told by Mr. Scholberg, whose chit-chat you may have noticed from time to time at the other end of this JOURNAL, that the story I published last week about the thahsands of 'undredths to be found in an inch is about as hoary in the engineering world as the one about the forgotten staircase is in the architectural.

*

This I take to be mere professional jealousy. Mr. Scholberg has indicated from time to time that it would be a better thing for this JOURNAL if *his* Trade Notes occupied the position of *my* column, and *my* column the position of *his* notes. He bases his view, he says, not merely on a sure sense of values, but on the feeling that it would be a better thing for the paper if the apologies I constantly have to make were less prominently displayed.

ASTRAGAL

NEWS

POINTS FROM THIS ISSUE

SOUTH BANK IMPROVEMENT SCHEME

It has long been recognized that the section of the South Bank of the Thames between Westminster and Waterloo Bridges is overdue for redevelopment. The L.C.C. decided that adequate control over redevelopment of the area could be exercised only if the freehold interests were vested in a single owner and it obtained powers in the London County Council (General Powers) Act, 1935, to acquire itself the freehold and leasehold interests in much of the necessary land.

The Highways Committee, at a full meeting of the L.C.C., on Tuesday, recommended the Council to seek Parliamentary powers to acquire further land compulsorily, and to carry out the necessary works for a major scheme of improvement of this section of the South Bank of the River Thames.

The scheme of redevelopment, which has been approved by the Minister of Transport, has been designed so that it will not preclude the construction of a Charing Cross Bridge in the future. The chief features of the scheme are :—

(i) The construction of an embankment wall, in continuation of that in front of the County Hall, to a point some 50 yds. below Waterloo Bridge, and the provision of an open space, 100 ft. wide, beside the river. The footway in front of County Hall will be extended to form a riverside promenade.

(ii) Two roads—Belvedere Road and Jenkins Street—will be widened to 50 ft., and the former will be diverted to bring it into line with Commercial Road, passing under Waterloo Road by a new bridge. York Road will be widened to 70 ft. Waterloo Bridge Approach will be re-aligned with the new Waterloo Bridge, to provide a better vista, and will be widened to 90 ft.

(iii) A new road will be constructed, parallel with the Thames, adjacent to the proposed open space, and other new roads will connect this with Belvedere Road.

(iv) A roundabout will be made at the junction of Waterloo Road, York Road and Stamford Street.

(v) Nearly 2,000 people will need to be rehoused, at a cost of approximately £300,000.

The estimated net expenditure involved is £1,629,000. Grant from the Road Fund in respect of certain of the works will be at the rate of 60 per cent. The scheme will, however, involve a commitment for the Council of approximately £1,250,000. This will not represent a wholly additional liability on the county rate, as part of the property required has already been purchased by the Council.

The Committee states that, in preparing proposals for replanning an area of such extent and importance, it has been very conscious of the need for obtaining well-proportioned blocks of buildings, arranged in such manner as to take advantage of the opportunity presented by the rebuilding of Waterloo Bridge and the recent building development adjacent to the area. The scheme is in general accord with the broad lines of the architectural treatment advised, and it expresses the hope that, within the framework provided, redevelopment will take the form of well-designed buildings of a scale and character not out of keeping with the County Hall and its extension.

THE ARCHITECTS' DIARY

Thursday, November 17

WOMAN'S FAIR AND EXHIBITION. *At Olympia. Until November 26. 10 a.m. till 10 p.m.*

ARTS AND CRAFTS EXHIBITION. *At the Royal Academy, Piccadilly, W.1. Until December 3.*

INSTITUTION OF STRUCTURAL ENGINEERS. *Yorkshire Branch. At the Hotel Metropole, Leeds. "Plastics in Structural Engineering." By C. D. Philippe. 7 p.m.*

HOUSING CENTRE, 13 *Suffolk Street, S.W.1. Octavia Hill Centenary Exhibition. Until December 22.*

SOCIETY OF ANTIQUARIES, *Burlington House, W.1. "Further Excavations at Kusura." By Winifred Lamb. 8.30 p.m.*

PUBLIC HEALTH SERVICES CONGRESS AND EXHIBITION. *At the Royal Agricultural Hall, N. Until November 19.*

Friday, November 18

TOWN PLANNING INSTITUTE. *At the Central Hall, W.C.1. Presidential Address. By J. E. Acfield. 6 p.m.*

ABERDEEN SOCIETY OF ARCHITECTS (Associates' and Students' Section). *At Gray's School of Art, Aberdeen. Lecture by Raymond Walker. 7.30 p.m.*

LONDON SOCIETY. *At 18 John Street, Adelphi, W.C.2. "Wren's London and Ours." By Ronald P. Jones. 5 p.m.*

Saturday, November 19

A.A.S.T.A. *Visit to the new Finsbury Health Centre. 2.15 p.m.*

Monday, November 21

R.I.B.A., 66 *Portland Place, W.1. "Economics of the Building Industry: Achievements and Anomalies." By Oliver W. Roskill. 8 p.m.*

DESIGN AND INDUSTRIES ASSOCIATION. *At Bristol University. "The Empire Exhibition, Glasgow, 1938." By Alister G. Macdonald. 8 p.m.*

Tuesday, November 22

ARCHITECTURE CLUB. *Supper-discussion at the Charing Cross Hotel, W.C. Subject: "Does Architecture Thrive Under a Dictator?" 7.45 p.m.*

DESIGN AND INDUSTRIES ASSOCIATION. *Annual Dinner. At Grosvenor House, Park Lane, W.1. 7.30 for 8 p.m.*

HOUSING CENTRE, 13 *Suffolk Street, S.W.1. Tuesday Lunches: "Some Aspects of Rural Housing." By V. Malcomson. 1 p.m.*

UNIVERSITY OF LONDON. *Third of four lectures on "London Place Names and London History." By E. Jeffries Davis. 8.15 p.m.*

ARCHITECTS' LEFT BOOK CLUB GROUP. *At 113 High Holborn, W.C.1. Open discussion: "Architecture and Politics." 6.30 p.m.*

Wednesday, November 23

ROYAL SOCIETY OF ARTS, 18 *John Street, W.C.2. "The Container Testing Laboratory." By J. Chaplin, assisted by J. Latham and C. B. Pettifor. 8.15 p.m.*

L.C.C. CENTRAL SCHOOL OF ARTS AND CRAFTS. *Southampton Row, W.C.1. "The Parthenon, Athens." By Sir Banister Fletcher. 8 p.m.*

At the same meeting the Housing and Public Health Committee reported that 771,759 houses and flats were built in the Greater London area between 1919 and the end of March, 1938. Of these, the L.C.C. had provided 76,877, other local authorities 76,311, and private enterprise 618,571 (houses of all classes). The number of dwellings erected by local authorities in 1937 was slightly more than in 1936, and by private enterprise nearly 10,000 less.

SIR CHARLES BRESSEY ON EMBANKMENTS

Sir Charles Bressey, President of the Chartered Surveyors' Institution, in his inaugural address to the Institution on Monday last, discussed the recommendations made in the Highway Development Survey Report. Dealing with Embankments, he said : "The Thames Embankments deserve special mention, not merely because of the pleasure they afford as a promenade, but also because of their outstanding advantages from a traffic standpoint, inasmuch as the presence of the river along one flank relieves the route from intersecting streets and frontage development. The Victoria Embankment, which now terminates in the east at Blackfriars, would be extended to the Tower if the City Loopway scheme, described in the Report, were carried out. From the Tower a new route would be opened out into Whitechapel at a point east of Gardiner's Corner, where incessant congestion now prevails. Traffic that now blocks the approaches to the Mansion House would be deflected to the riverside route. Turning to the opposite point of the compass, the Chelsea Embankment should be widened and continued to Putney Bridge. Thanks to these two embankment extensions London would be able to boast of the priceless advantage of a riverside promenade stretching for nearly eight miles from Putney to the Tower."

SOUTH WALES INSTITUTE OF ARCHITECTS

Under the auspices of the South Wales Institute of Architects (Central Branch) and the Institute of Builders, Mr. R. A. H. Livett, A.R.I.B.A., gave a lecture entitled "Housing in an Industrial City" at the lecture theatre, Engineers' Institute, Park Place, Cardiff, on Wednesday, November 9.

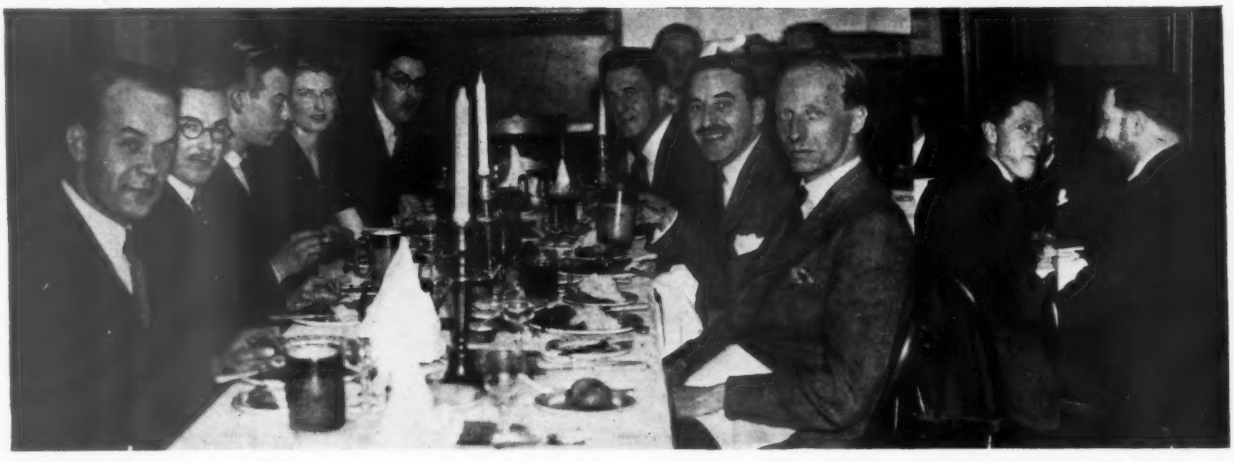
Mr. Livett dealt with the problem of the slums, their clearance and the various methods of rehousing. He considered the precautions which it is possible to take in order to prevent the creation of new slums, such precautions including not only the provision of well-planned estates with well-designed buildings, but also the inauguration of a sound system of house management.

In connection with the provision of blocks of flats, Mr. Livett dealt with the problems of refuse disposal and of lifts, and with regard to cottage estates, he referred to the importance of planning on a large scale, with provision for adequate schools, churches, shopping and community centres, together with proper facilities for organized games.

L.I.L.A.S.

The inaugural dinner of the newly-formed Leeds in London Architectural Society was held at the Cheshire Cheese, Fleet Street, E.C., on Thursday last. Mr. Raymond Walker presided, and about thirty members and guests were present. Several letters

Photographs taken at the inaugural dinner of the Leeds in London Architectural Society : Right (reading from left to right), Messrs. Richard Thompson (Secretary), Raymond Walker, R. Loveless and Miss Richards (Treasurer). Below, left side of table, Messrs. Taber, Reekie, Webster, Miss Weston, and Mr. Antrum. Right side of table (foreground to background), Messrs. Watson, Shepherd and Gutteridge. On the extreme right are Messrs. Edward Carter and Myerscough-Walker.



of congratulation on the formation of the society were read out by the chairman, including one from Mr. J. S. Allen, head of the Leeds School of Architecture, in which he stated :—

" I would like to take this opportunity of wishing the society every possible success, and to congratulate those of you who have taken an active part in its formation. I foresee this society being of the greatest help, particularly to old students of the school who may obtain posts in London or the home counties. I have felt for some time the need for some such society, where a student who, on taking a post in London after graduation here, would feel he would be sure to find friends in the Metropolis. In addition, of course, the society will be able to look after the other interests of Leeds students in the London area, and to further the interests of architecture generally."

The secretary is Mr. Richard Thompson, of 8 The Drive, Walthamstow, London, E.17.

INSTITUTE OF WELDING

At the annual dinner of the Institute of Welding, held recently at Grosvenor House, W.1, Sir Frank Smith, secretary of the Royal Society, in proposing the toast of the Institute, said : " The last few years have seen a tremendous increase in the welding industry. I believe that today welding is commonly used in over 200 different industries. It has been calculated also, I take no responsibility for the exact figure, that nearly 500,000,000 cub. ft. of oxygen is used each year in this country in welding plant and that the amount of wire used for welds would girdle the equator several times. In general engineering, in shipbuilding, in railway and carriage works and in structural engineering, welding is playing a more and more prominent part.

" The growth of welding all over the world has depended largely on the application of scientific knowledge. The recent reorganization of your Institute and the interest of your members in research, which is vouched for by the fact that the Department of Scientific and Industrial Research is able to make a substantial contribution to your research fund, which I am glad to note you are using for the active pursuit of a co-ordinated plan of research, is ample evidence that the British branch of the industry is alive to the importance of research.

" In fact, I believe it is not too much to say that the recognition of the need for the application of scientific knowledge has done more than anything else to bind your industry together and to give it that unity of purpose which is essential for progress. The welding process has advantages which make it essential under modern industrial conditions. In many cases it makes a saving of material of from 10 to even 20 per cent. possible. It enables construction to be lighter and at the same time stronger. It speeds up construction and gives greater flexibility in design. In a word, it enables the most to be got out of many of the new materials which the science of metallurgy is producing today."

In responding to the toast, Sir William Larke (the president) stated that the past year had witnessed a great extension in the application of welding to metal construction of all kinds ; but there was an ever-increasing demand on the part of the engineering industries for still wider applications. The Institute had made substantial progress ; its membership had increased by nearly 25 per cent., and had reached a total of 1,300 members. This, however, was not yet representative of either the importance or the wide distribution of the interest in welding throughout the country. The demand for the formation of new local branches and discussion centres was such that special provision had been made in the organization by the appointment of an assistant secretary charged with this work.

He himself believed that welding gave such a potential extension to the science of design and the art of construction as to be likely ultimately to produce a revolution in the efficient use of the metals used in constructional work. At the same time he pointed out that the various fields of application involved in many cases the solution of new problems, metallurgical as well as mechanical.

A new handbook on the design of welded structures was now in the press, and would shortly be published by the Institute. He hoped that the handbook would be the forerunner of many others, each designed to provide the correct procedure for the application of welding to the different fields of engineering and manufacture.

THE LATE ANDREW MATHER

It is with deep regret we record the death of Mr. Andrew Mather, F.R.I.B.A., F.I.A.A., A.I.STRUCT.E. He was 47 years of age.

Mr. Mather, as cinema architect for Mr. Oscar Deutsch, was responsible for the design of more than 30 Odeon cinemas, mostly in the southern counties and three in Scotland. His work also included the old Capitol Cinema in the Haymarket, the Leicester Square Theatre, the Empress Theatre, Brixton, the Automobile Association building in New Coventry Street, and various blocks of offices and shops. He was elected a Fellow of the R.I.B.A. in 1934.

EXHIBITIONS

[*By D. COSENS*]

THE recently-opened Nicholson Gallery in St. James's Place has started off well with an exhibition by Frank Dobson. This began with the

studies for the mural for the Canadian Pavilion at the Glasgow Exhibition, and to these have now been added a number of his terracottas and some of his designs for textiles. In an age when sculpture has degenerated into haphazard ornament for our more opulent public buildings, or detailed memorials to questionable victories, and when it is possible to search the galleries of London for weeks on end without coming across a single contemporary carving of any higher standard, one would go a long way to see anything by Mr. Dobson. As a carver and as a draughtsman he always commands respect ; as a modeller he excels. He has the exact feeling for the plastic qualities of his material, and its limitations are his strength. For in these small groups he never over-reaches himself ; the figures are taut, compact and solidly three-dimensional—complete from any viewpoint. His grouping is nearly always felicitous, and his simplifications invariably aid the rhythm of his design. And, surely, Mr. Dobson has found a new solution for the convention of the portrait bust, usually so unhappily cut off somewhere near the shoulder line, in his completely successful arrangement of the folded arms of the model as a solid base for the head and shoulders, so that there is no weakness and no arbitrary break.

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" La Flèche d'Or " at Tooth's Gallery is, as usual, an extremely interesting and well-chosen exhibition. It covers a little of the same ground as the show at the Lefevre, but there is less contemporary work. Here there is another fine Picasso, " Saltimbanques au Chien," Bonnard at his best, a Derain which, like all his recent work, cannot be compared with his earlier painting at the Lefevre, and a particularly lovely Cézanne, " Sous Bois." This and Degas's magnificent pastel, " La Femme au Tub " are astonishing *tours de force*—" Sous Bois " for its simultaneous transparency and solidity and the differentiation of planes through colour alone, and the Degas for its superb drawing. Rouault, Sisley and Corot are each, in less degree, amongst the high lights of this collection.

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Terracottas, Drawings and Textiles, by Frank Dobson. Nicholson Gallery, 45 St. James's Place. Until November 19.

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" La Flèche d'Or." Tooth's Galleries, 155 New Bond Street. Until November 26.

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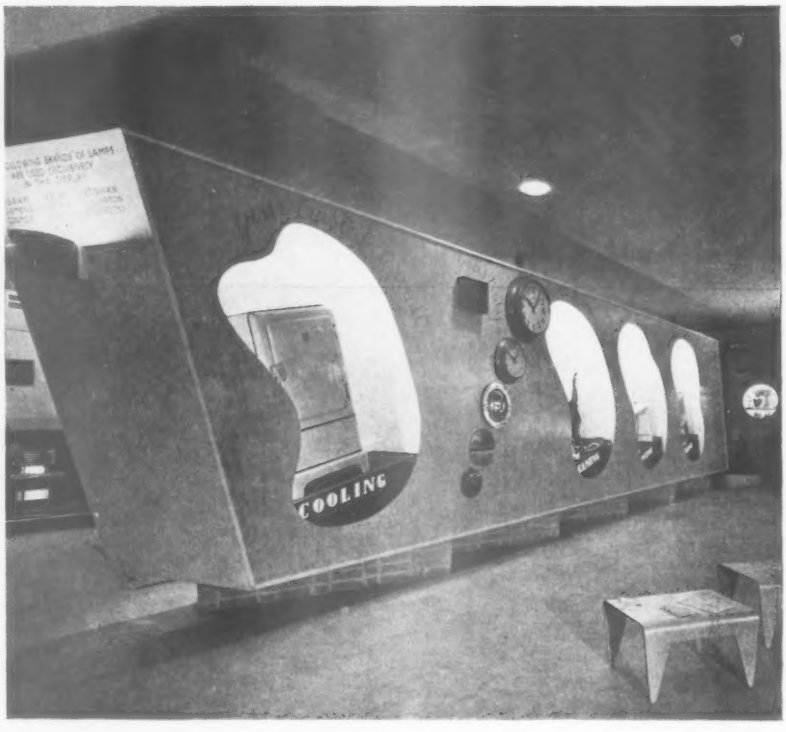
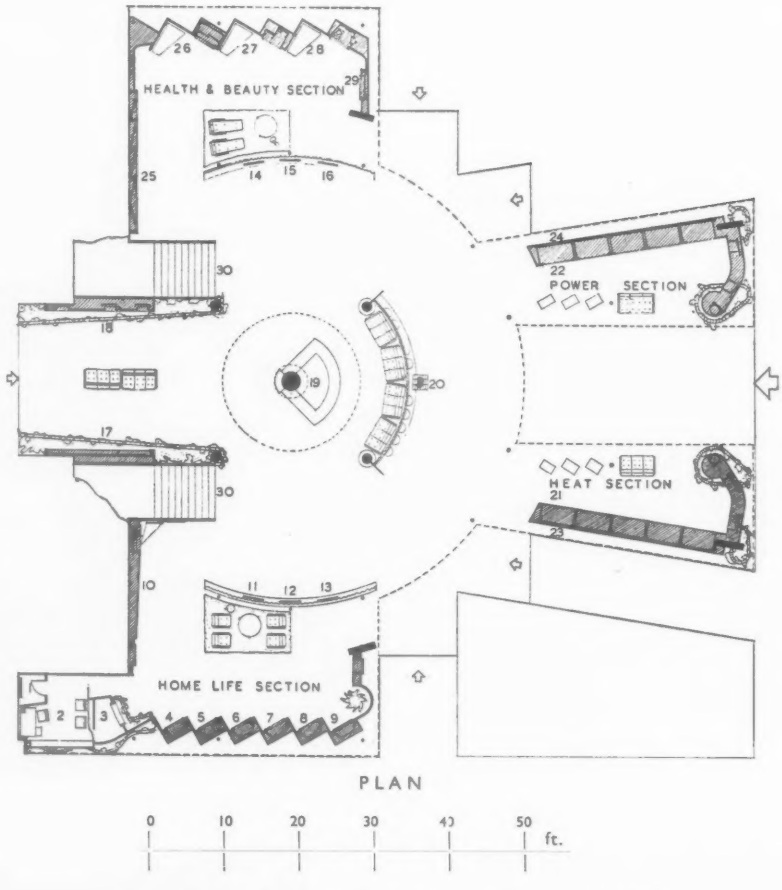
On this and the facing page are photographs and a layout plan of the joint exhibit of the British Electrical Development Association and the London Electricity Supply Association at the Woman's Fair and Exhibition, now being held at Olympia. The architect for the exhibit is Mr. Raymond McGrath. The planning of the exhibit was dictated by its position at the focal point of the exhibition, under the large statue of Venus and at the converging point of six avenues and two staircases. The disposition originally consisted of four separate stands round the base of the statue, but by collaboration with the exhibition authorities it was found possible to link up the four separate stands under one roof and, by only allowing the steel supports for the statue to come through this roof, to utilize the central space as an Electrical Information Bureau.

By reflooring the whole of this space, a greater sense of continuity is obtained.

ELECTRICAL SECTION,





Above, display of power equipment, power section (22 on plan).

WOMAN'S FAIR: DESIGNED BY RAYMOND McGRATH

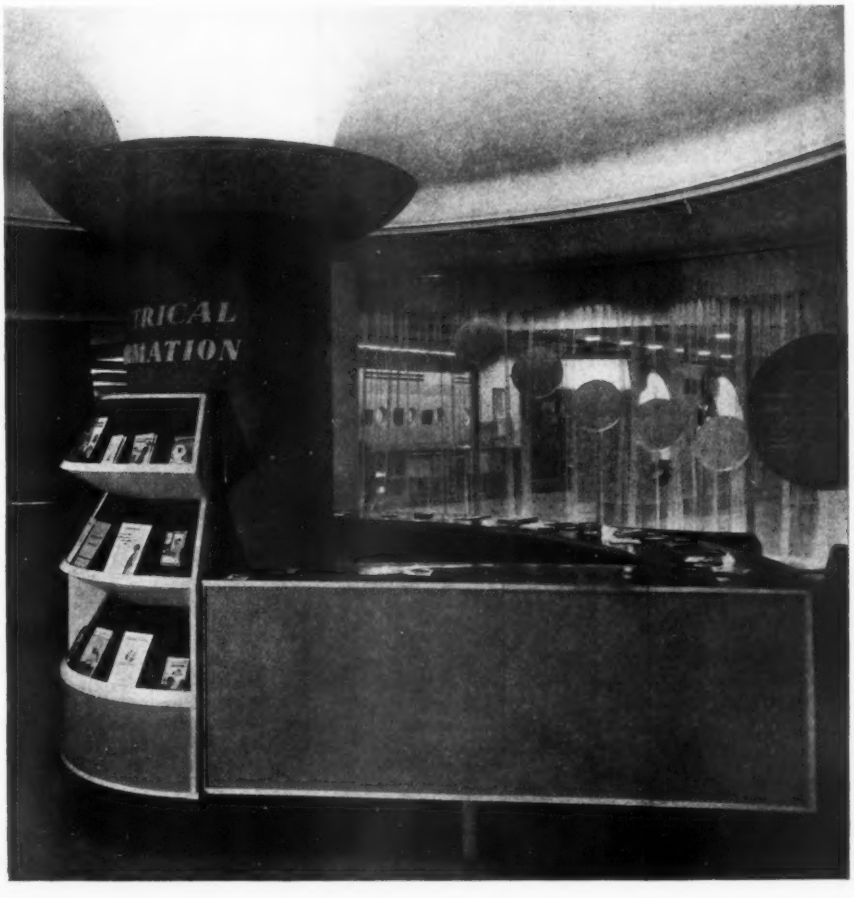
Above, view of six models in the Home Life Section (4–9 on plan). Below, electrical information bureau (19 on plan).

KEY TO PLAN

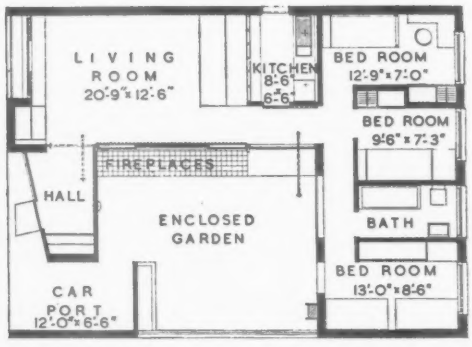
1. Switch Room and Sound Equipment.
2. Office.
3. Puppet Show.
4. Models of Living Room.
5. ,, Dining Room.
6. ,, Bedroom.
7. ,, Kitchen.
8. ,, Bathroom.
9. ,, Laundry.
10. "Better Light."
11. "Heat."
12. "Power."
13. "Light."
14. "Economy."
15. "Freedom."
16. "Utility."

(10–16: Symbolic paintings by Hans Aufseeser)

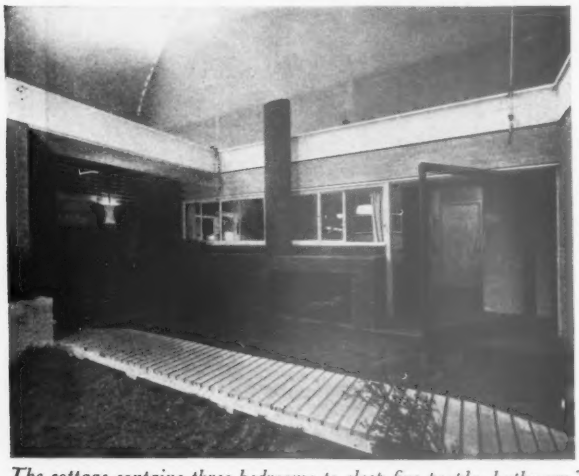
17. "The Creation of Electricity."
18. "London's Electricity" Map.
19. Electrical Information Bureau.
20. "Everything at Your Fingertips."
21. Display of Heating Equipment.
22. Display of Power Equipment.
23. "How Your Hot Water is Obtained."
24. "How Your House is Wired."
25. "Women Who Electrify."
26. "Sunlight Treatment."
27. "Curative Treatment."
28. "Beauty Treatment."
29. "Electricity Lengthens Your Life Line."
30. Stairs to Gallery of Grand Hall.



WEEK-END COTTAGE, WOMAN'S FAIR



DESIGNED BY CLIVE ENTWISTLE IN COLLABORATION WITH LE CORBUSIER



The cottage contains three bedrooms to sleep five people, bathroom, living-room with log fire, kitchen, garage, patio. A garden within the house, but open to the sky, has also a log fireplace. Brick walls, white sashes, flowers in windows and on roof; floors of golden brown brick; indoor walls washed with light colours.

Top, a general view; left, the enclosed garden; right, the living room.

R.I.B.A.

THE NEXT MEETING

On Monday next, November 21, at 8 p.m., Mr. Oliver W. Roskill is to deliver a lecture on "Economics of the Building Industry—Achievements and Anomalies."

COUNCIL MEETING

Notes from the minutes of the Council:—

The Elmes Fund.—Mr. Duncan Campbell (F.) was re-appointed to represent the R.I.B.A. on the Trustees of the Elmes Fund for a further period of three years.

Exhibition of Water-Colours by the late Sir Guy Dawber.—The suggestion that an exhibition of the late Sir Guy Dawber's water-colours should be held in the reception room in June, 1939, was approved.

The Fellowship.—The Council, by a unanimous vote, elected the following architect to the Fellowship under the powers defined in the Supplemental Charter of 1925—Mr. Arthur James Marshall (L.) (Johannesburg).

Reinstatements.—The following ex-members were reinstated: As Fellows: Messrs. James Burford, Montagu Ashley Hall, and Frank Reginald Gould Wills. As Associates: Messrs. Albert Edward Bullock, Alexander George Morris, and Thomas Ridge. As Licentiates: Messrs. Stanley Bradley, Harold Burgess, Arthur Charles Duggan, Arthur Ernest Hughes, John Richard Mewton, Ernest Albert Newton, Blunden Shadbolt, and Frederick Thomas Smith.

Transfer to the Retired Members Class.—The following members were transferred to the Retired Members Class:—As Retired Fellows: Messrs. William Henry Dashwood Caple, Alfred Henry Hart, Robert Robertson, and Hugh Stammers Tiffin. As Retired Associate: Mr. Samuel Charles Brittingham.

Resignations.—The following resignations were accepted with regret: Messrs. Harry Tom Boden Spencer (A.), and Walter Harry Woods (retired L.).

ELECTION OF MEMBERS

The following members have been elected:—(*Overseas*) As Fellow (1).—Mr. Samuel Simon Reuben (Bombay).

As Associates (2).—Messrs. Jan Hendrik Charles Hofmeyr (Liverpool School of Architecture, University of Liverpool) (Johannesburg), and Clifford Raphael Kallenbach (Johannesburg).

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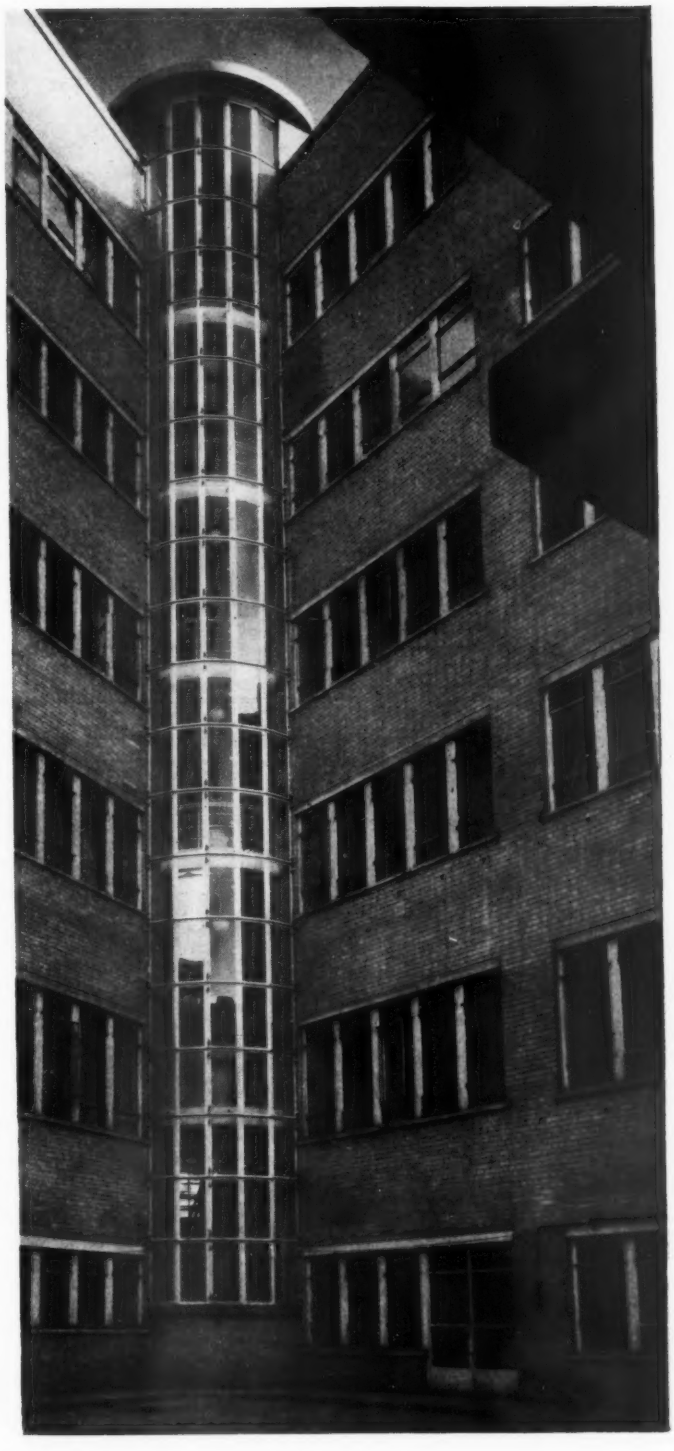
CITY AND GUILDS OF LONDON ART SCHOOL

The City and Guilds of London Art School offers facilities to architects and architectural students who wish to gain some practical knowledge of, and do studies in, modelling, carving, sculpture, lettering, etching, and decorative painting. Special stress is laid on the relation of these to buildings, and on the just application of ornament to modern structure. A number of prizes and travelling scholarships are given for work of real merit. The fees are 10s. a term.

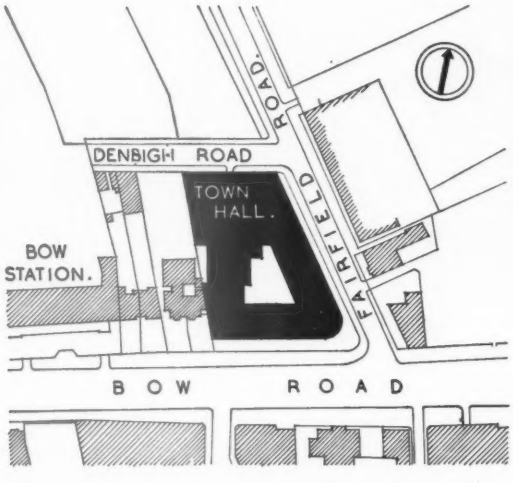
Further information may be obtained from the Registrar at 124 Kennington Park Road, S.E.11.

NEW TOWN HALL, POPLAR



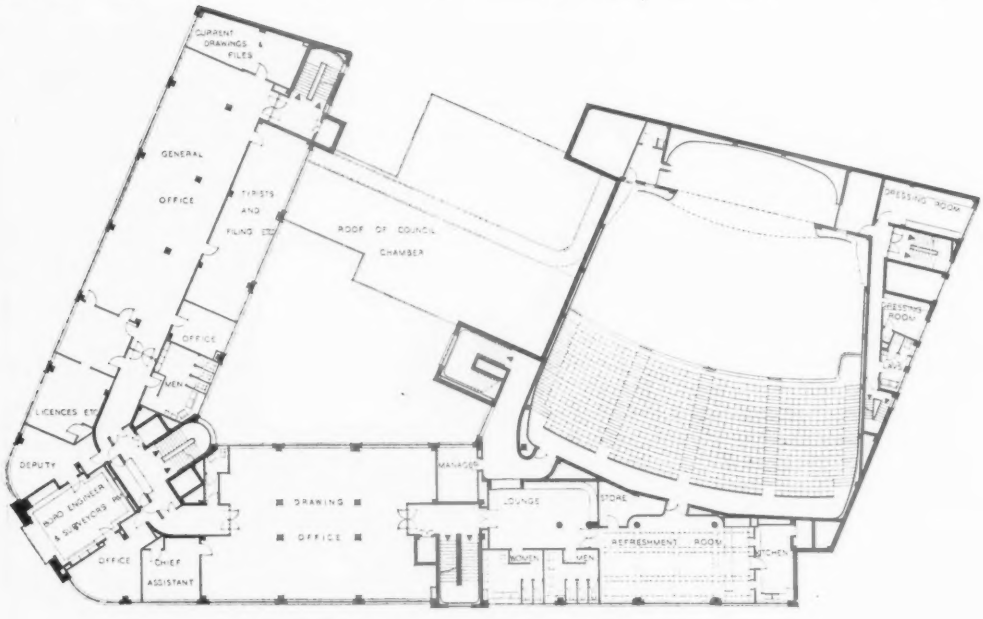
CONSTRUCTION—*Steel-framed with hollow tile floors. Reinforced concrete staircases and balustrades, and external walls, where stone-faced. The 3½ ins. thick Portland stone slabs, with ½-in. waterproofed backing being cramped with metal anchors to dovetailed slots cast in the 5 ins. thick concrete wall. As permanent shuttering these walls were backed with 2-ins. insulating material and plastered. Roofs are asphalted and covered with cellular concrete and white cement rendering divided into squares. The basement is asphalt tanked with "stockinged" stanchions, the reinforced concrete retaining walls being asphalted externally.*

Above, a general view from the corner of Bow Road and Fairfield Road; right, staircase window in courtyard.

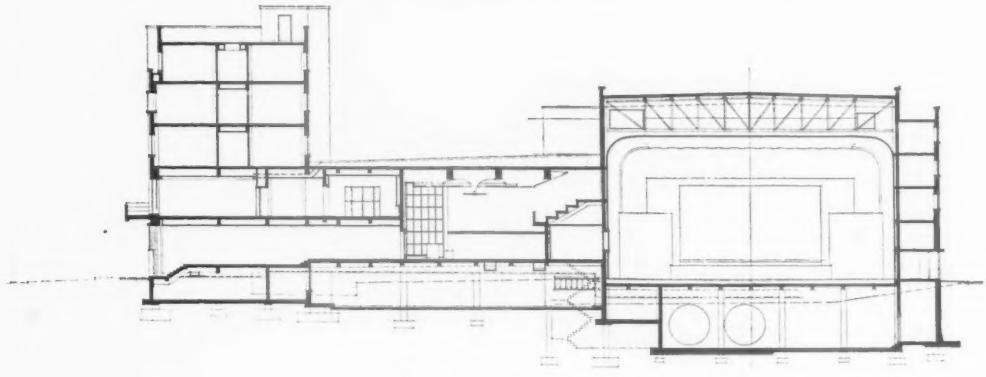


DESIGNED BY CULPIN AND SON

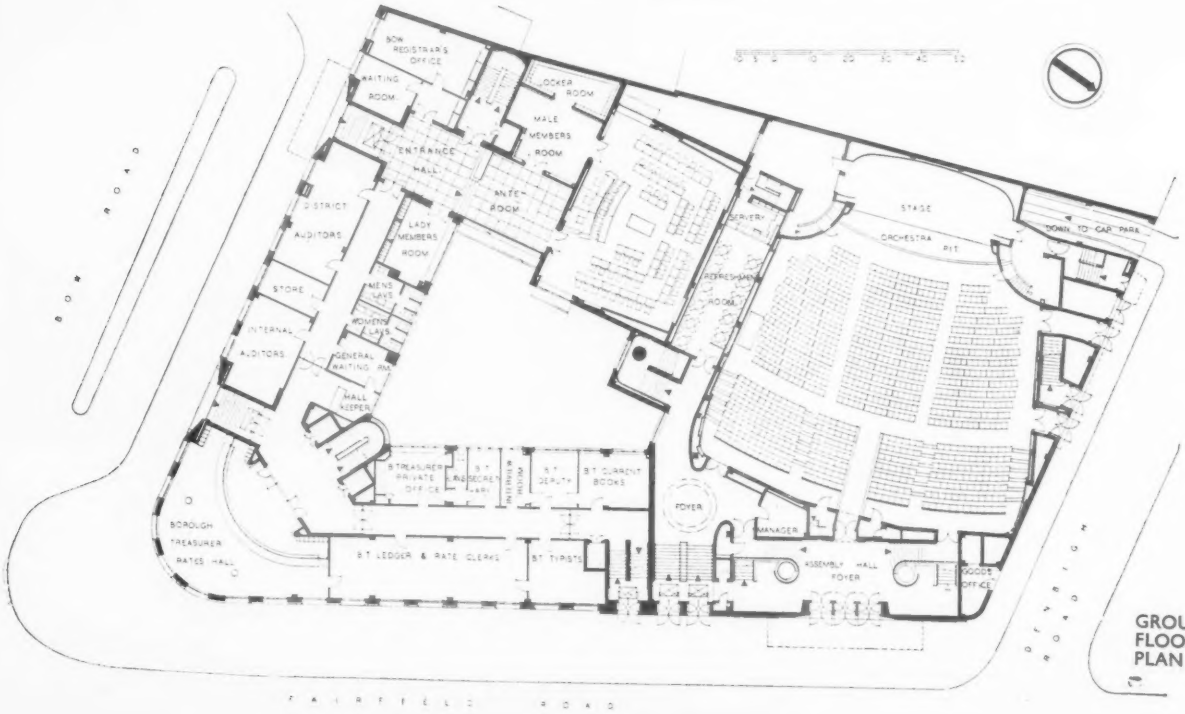
NEW TOWN HALL, POPLAR:



SECOND FLOOR PLAN

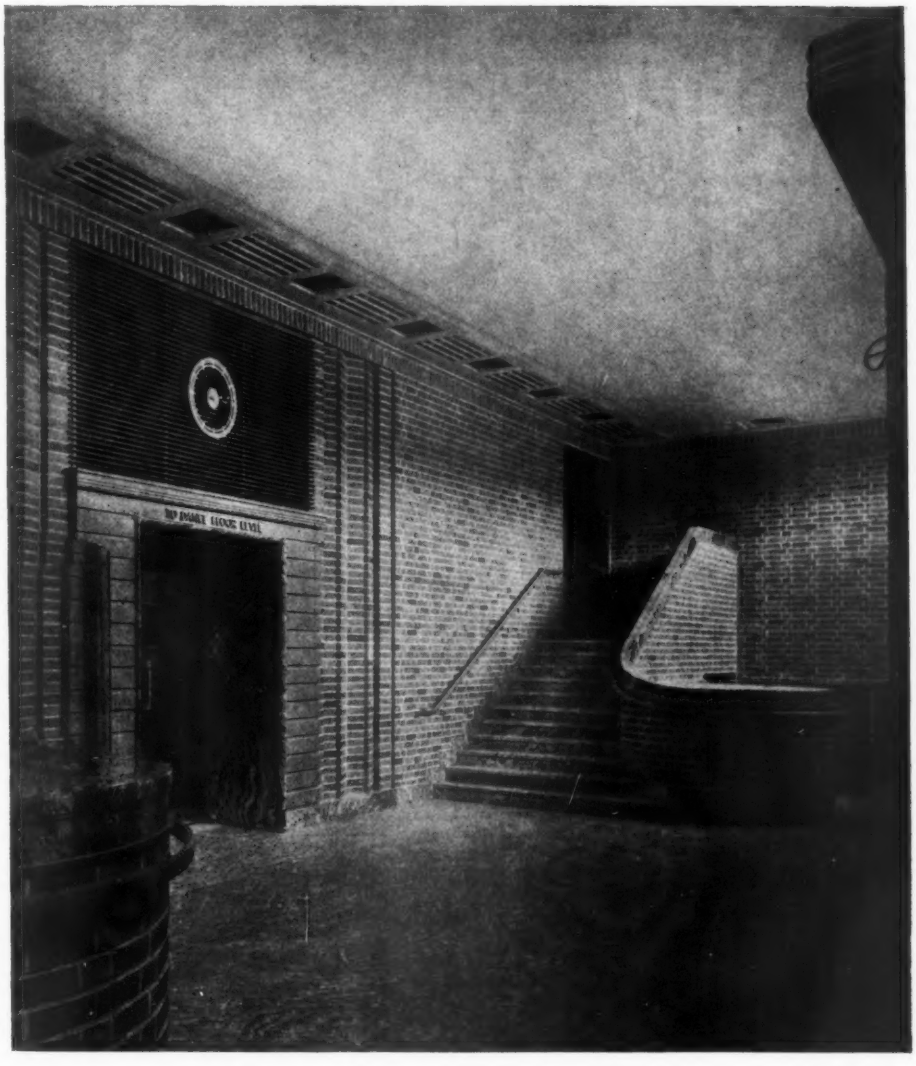


SECTION



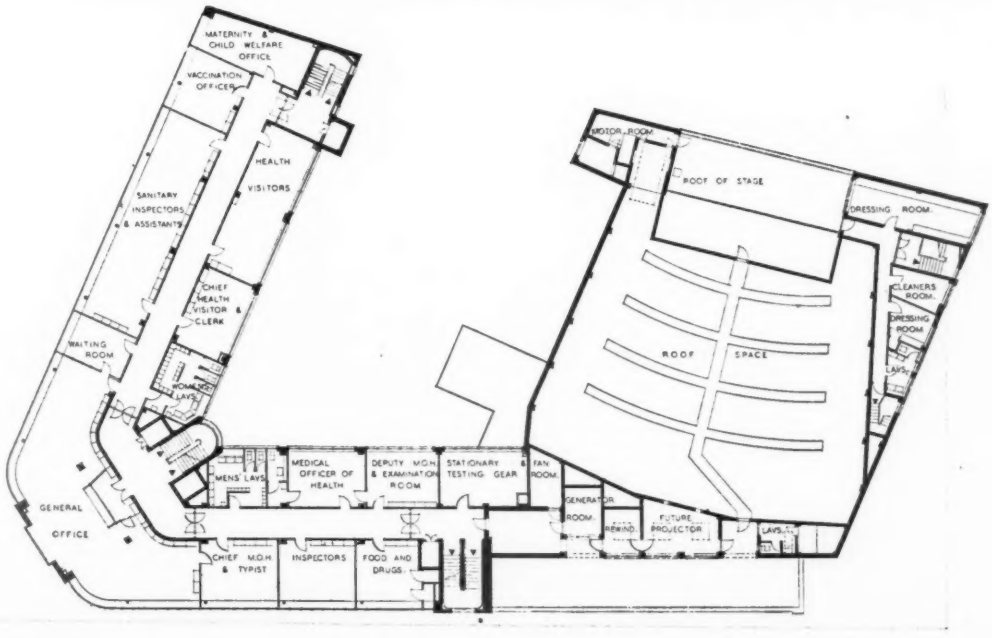
GROUND FLOOR PLAN

DESIGNED BY CULPIN AND SON



EXTERNAL TREATMENT — *The building has a plinth of pre-cast terrazzo slabs, the piers between the ground floor windows and the splayed reveals on either side of the two main entrance doors being faced with Swedish green marble. The first, second and third floors are faced with Portland stone, the piers between the windows on these floors, the pier terminating the Bow Road elevation, the top floor which is set back, and the tower are faced in grey-brown bricks 1½ in. thick laid five courses to the foot, with the wide joints deeply weather-struck. The upper part of the assembly hall block is set back on the Fairfield Road front and is, like the Denbigh Road front, faced with similar bricks 2⅝ ins. thick. The stone work, terrazzo, etc., are fixed with the joints running through (not bonded), and the vertical joints are determined by the setting out of the plan in 3 ft. divisions throughout. Below the tower the curved parapet wall over the rates hall has, in relief, five sculptured figures, executed by David Evans. Above the civic entrance is a cantilevered concrete balcony decorated in ceramic mosaics, also from the designs of David Evans. The courtyard elevations have a plinth of golden colour bricks with cream sand-limes above.*

The photograph is of the foyer to the assembly hall.



THIRD FLOOR PLAN

NEW TOWN HALL, POPLAR:

INTERIOR FINISH — *Council Chamber: desks are movable to permit of re-arrangement; floor, grey close-carpeting; walls, rear wall behind dais, flush panelled floor to ceiling with bird's-eye maple; other walls, dado-flush panelled Indian laurel above walnut skirting; continuous vent grille in silver bronze; walls above covered grey-fawn tapestry, with secret fixing, over acoustic felt; cork faced panel is provided for drawings; ceiling, circular recess with extract grille surrounded by flush porthole lights for direct lighting; central plaster pendant brought down to carry glass lighting dish; curtains, off-white with outline design of ships loom-tufted in vivid red; doors, covered red leather; fittings, mayor's dais, walnut; desks and central table tops, cream-grey morocco.*

Assembly Hall: designed primarily as a theatre and not a dance hall; locking sprung dance floor with maple flooring. (A removable drugget is provided.) The rear part of the ground floor is stepped, and has natural hair carpet. The gallery is similarly covered. Walls, dado to tops of doors, solid English oak planks stained medium-brown colour. A continuous louvred ventilator grille in polished high copper content bronze, and embodying secondary lighting fittings and exit signs, forms capping to dado. Above, the walls are covered with asbestos spray, pale peach colour. Between the assembly hall and the refreshment room is a decorative screen in sand-blasted and etched glass, illuminated through its edges. It depicts Father Thames and the emblems of the three parishes in the borough. This was designed by W. D. Suddaby and C. E. Fryer. Stage, proscenium curtains are specially woven to a rich copper colour; stage draperies are grey. The lettering over the doorways, etc., has been specially chosen to harmonize with the interior treatment of the building.

Left, two views in the assembly hall; below, ante room to council chamber.

DESIGNED BY CULPIN AND SON

Top, Council Chamber. Furniture is walnut; councillors' chairs, covered in red morocco; Above, the three committee rooms, which can be thrown into one.

The general contractors were Gee Walker and Slater, Ltd. For list of the specialists and sub-contractors *see page 814.*

LETTERS

J. H. F. FILDES (J. & E. Hall)
A. B. READ (Director of Design, Lighting Centre)
PHILIP SCHOLBERG
"EXCELSIOR"

Escalators

SIR,—We are exceedingly interested to see in THE ARCHITECTS' JOURNAL for October 27 the article under the heading, "Keep Moving," dealing with the subject of escalators in general, and referring specifically to the new booklet on escalators of which we sent you a copy recently.

As regards the two queries which are raised, the writer of the article is quite correct in his assumption that the speed at which escalators run is limited by the elderly, and this applies particularly in department stores. On the London Underground Railways high-speed escalators are often slowed down during the day-time, when they are mainly used by shoppers, among whom are many elderly people and others who, although younger, are not accustomed to escalators. During the business rush hours they are speeded up, not only to facilitate dealing with the increased traffic, but because the people who then use them are, in general, well accustomed to that mode of travel and do not mind the higher speed.

As regards the light ray control which makes the escalator run at half-speed when no passengers are actually on it, the saving of power secured by the incorporation of this device is, as the writer of your article surmises, negligible, but other benefits are conferred, the most important of which is the saving in wear and tear on the escalator itself, while in addition there is the question of silence. Our escalators are exceptionally quiet, but no escalator is or can be made absolutely silent in operation. At half speed the amount of noise is reduced to practically nothing, and the saving in wear and tear means that quiet running will be maintained over a lengthened period, since escalators, like any other moving mechanical appliance, tend to get noisy as wear takes place. It may be suggested that it would be better still to stop the escalator altogether when no passengers were on it. This is, unfortunately, impracticable, because passengers, seeing the escalator stationary, conclude it is not working and will not walk on to it.

We should like, in conclusion, to mention two other matters. It is not correct to say that the escalators supplied to Bentalls, were the first to be installed in a department store in this country. There were several prior installations. Bentalls was the first department store designed specifically as an "escalator store." In all previous instances it was merely a case of single escalators being installed in buildings not originally designed to accommodate this method of vertical transportation. Another point to which we consider it advisable to call attention is that the wording of the article is such that any one reading it might be led to believe that the escalators at Olympia and Earls Court were supplied and installed by us, whereas actually the Olympia escalator was built by Waygood-Otis, and the Earls Court escalators by the Express Lift Co. As we do not wish to take any credit to which we are not entitled, we should be glad if you could see your way to make some mention of this fact.

J. H. F. FILDES
(J. & E. HALL)

The Lighting Centre

SIR,—Mr. Philip Scholberg's notes on the extensions and alterations to the Lighting Centre were critical but encouraging.

The problem of displaying lighting fittings and lighting effects is a very difficult one, and I am glad to see that Mr. Scholberg has admitted that this difficulty has not only been tackled vigorously, but has been practically solved. His description will, I hope, encourage architects and others to come and see what we have done. In any case, there is something fascinating about twiddling switches and seeing things happen, and I hope people will come and play !

I am sorry the idea of painting conduit should have been taken so seriously. Frankly, the idea was taken from a very fine newspaper building in Rotterdam where, against a very simple background, the conduit and other services exposed throughout the building, all look very gay. I was prompted to paint the conduits in the Industrial Showroom merely to add to the cheerfulness of the room, with no thought of pursuing the idea too seriously. I seem to remember too, seeing in exhibitions of contemporary design, staged by architects, wall decorations of coloured tube that were no more stimulating. More important still, the painting of these conduits has had the desired effect—to draw attention to a superb example of surface conduit work.

Thank you for including such an excellent criticism in your JOURNAL.

A. B. READ

Mr. Scholberg writes: I should like to make it quite clear that I do not disapprove of the idea of painting exposed conduit ; my point is that it *should* be painted but that the colours chosen should conform to a definite scheme depending on what the conduit is carrying. In the Rotterdam building where "the conduit *and other services* all looked very gay," I would hazard a guess that all exposed pipes are either painted the same colour, or that, if different colours are used, the same pipes are the same colour throughout the building, so that the maintenance hands can spot what they are looking for without a sheaf of blue prints. I am sure that they cannot be painted in different colours for purely æsthetic reasons. So when Mr. Read runs three parallel lines of exposed conduit across his basement ceiling and paints the centre one a lovely pink and the outer ones a middle blue it seems to me to be asking for trouble. As a showroom idea yes, but in the factory, no. So I still think Mr. Read's salesmen should continue to praise the idea but should also start drawing attention to its probable snags.

School Training Pupilage

SIR,—During the last two weeks, correspondents have weighed the pros and cons of school training *versus* the system of pupilage. I should like to point out, however, that the real problem of the young architect is that of finding a suitable employer. Although assistants may have spent a considerable amount of time and money on acquiring accurate knowledge, a great number are doomed to frustration due to the fact that many employers simply do not use the brains of their staff for which they have paid.

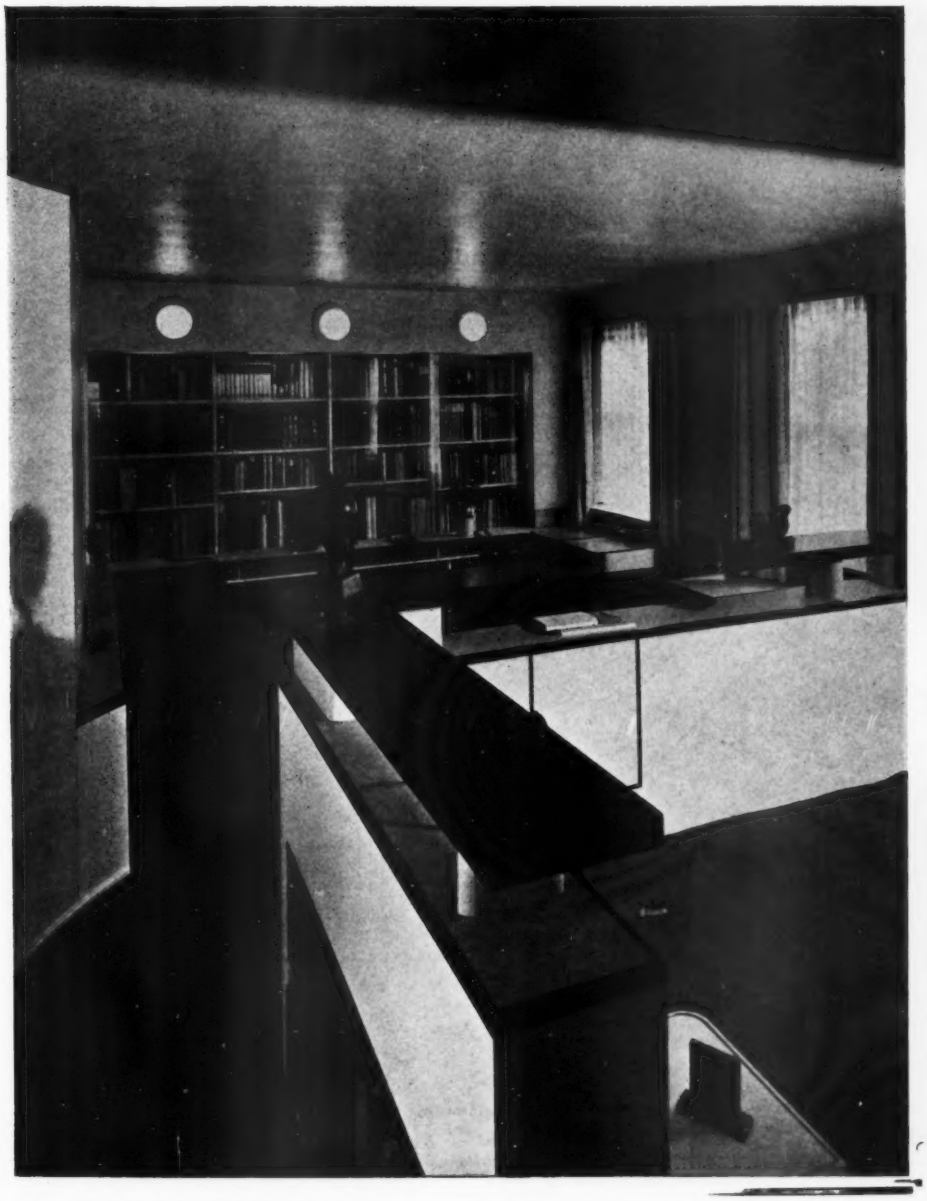
Imagine the chagrin of the young assistant who really wants to succeed on his own merits on finding that his new employer looks upon, say, reinforced concrete other than for lintels as "new-fangled," and forces his poor assistant to draw out designs (courtesy title) against which every fibre of his being rebels. Of course, the obvious answer is that the assistant should look before he leaps, but in the vast majority of cases he cannot know anything of the man for whom he proposes to work and has to take the position on speculation.

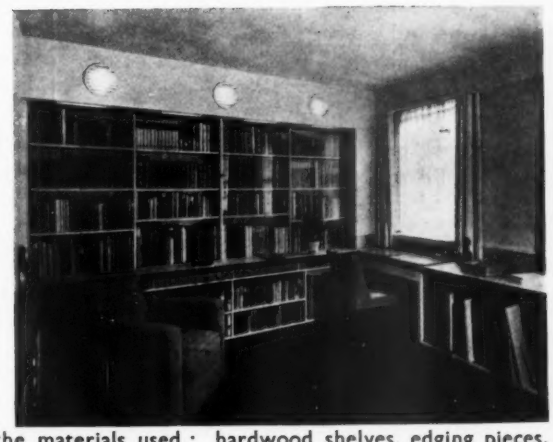
If an assistant has gone to the trouble to learn the correct way to design and construct, the employer, often a man who was trained in the happy-go-lucky methods of pre-war days, should at least in his own interests hear the proposals of a person who has been trained to use modern methods and materials in the manner called for by the client. After all, he has to pay his assistant, even if he does not use him.

"EXCELSIOR"

WORKING DETAILS : 701

RECONSTRUCTED INTERIOR • SMITH SQUARE, WESTMINSTER, S.W. • PAKINGTON & ENTHOVEN

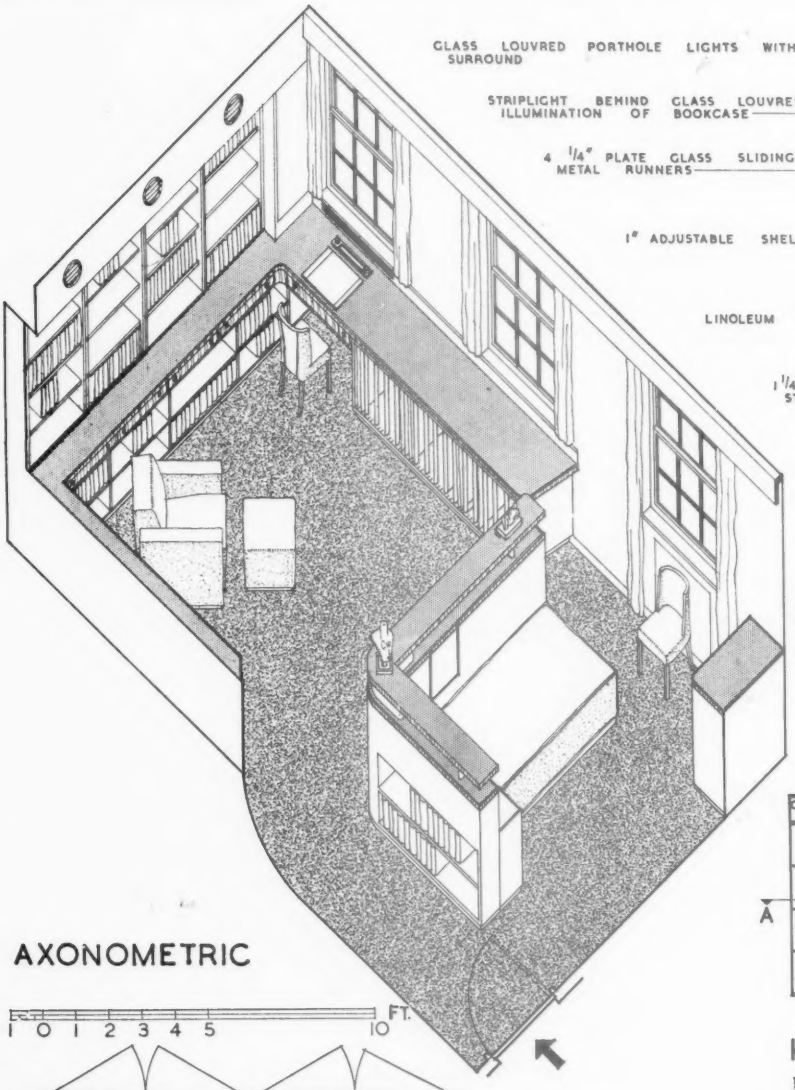




Two second-floor rooms, which were too small to be used separately as study and dressing-room, were thrown together. The study portion was required to be fitted to house a small but valuable collection of books, sculpture and pictures. Racks with adjustable hardwood uprights are provided under the writing-table extension. The dressing-room portion is screened off by a bookcase and cupboard fitment. A folding flap for meals in bed and an adjustable reading lamp are incorporated in the fitment. A cupboard recessed in the wall is fitted up with sliding trays and shelves for clothes and includes a sliding metal box for soiled linen. The following are the materials used : hardwood shelves, edging pieces, etc., Bombay rosewood, wax polished ; woodwork generally, pine, painted in with the walls and ceiling : off-white, flat finish ; desk tops, etc., covered in rubber linoleum, stained to match pigskin folios ; skirting, recessed plinth faced in nigger rubber linoleum to match carpeting ; curtains, off-white in heavy silk ; bed-spread and chair covers, tomato red.

WORKING DETAILS : 702

RECONSTRUCTED INTERIOR • SMITH SQUARE, WESTMINSTER, S.W. • PAKINGTON & ENTHOVEN



AXONOMETRIC

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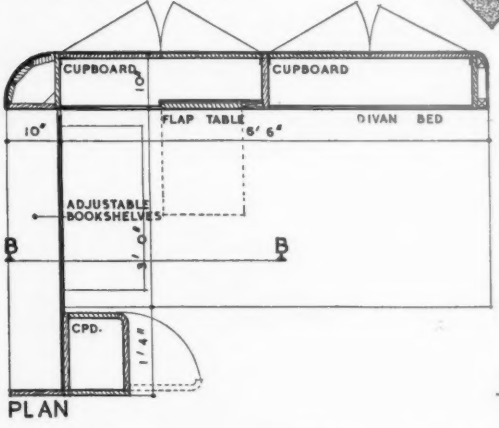
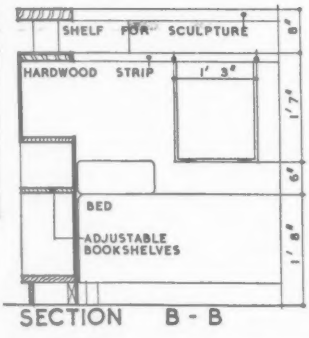
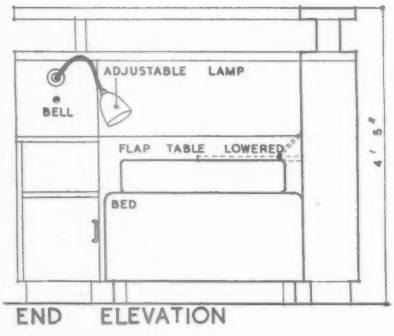


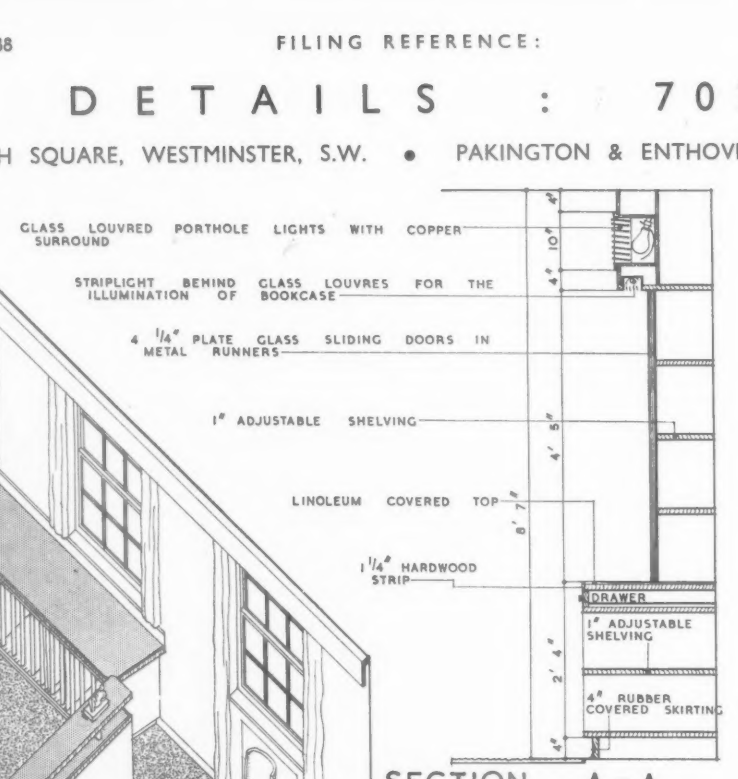
PLAN



SECTION B - B

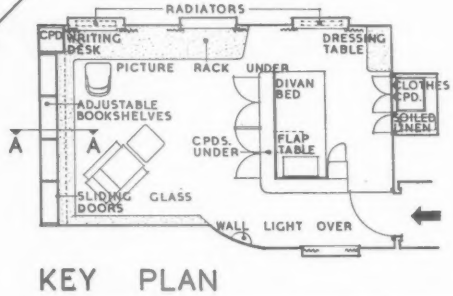


END ELEVATION



SECTION A - A SHOWING METHOD OF LIGHTING

1 0 1 2 3 4 5 FT.



KEY PLAN

5 0 5 10 15 20 FT

DETAILS OF DIVAN FITTING 1 0 1 2 3 4 5 FT.

Axonometric and details of the interior illustrated overleaf.

The Architects' Journal Library of Planned Information

INFORMATION SHEET

SUPPLEMENT

SHEETS IN THIS ISSUE

679 Plumbing

680 Aluminium

In order that readers may preserve their Information Sheets, specially designed loose-leaf binders are available. The covers are of stiff board bound in "Rexine" with patent binding clip. Price 2s. 6d. each post free.

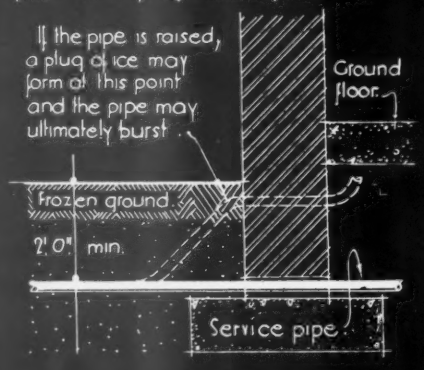
Sheets issued since index :

601 : Sanitary Equipment
602 : Enamel Paints
603 : Hot Water Boilers—III
604 : Gas Cookers
605 : Insulation and Protection of Buildings
606 : Heating Equipment
607 : The Equipment of Buildings
608 : Water Heating
609 : Fireplaces
610 : Weatherings—I
611 : Fire Protection and Insulation
612 : Glass Masonry
613 : Roofing
614 : Central Heating
615 : Heating : Open Fires
616 : External Renderings
617 : Kitchen Equipment
618 : Roof and Pavement Lights
619 : Glass Walls, Windows, Screens, and Partitions
620 : Weatherings—II
621 : Sanitary Equipment
622 : The Insulation of Boiler Bases
623 : Brickwork
624 : Metal Trim
625 : Kitchen Equipment
626 : Weatherings—III
627 : Sound Insulation
628 : Fireclay Sinks
629 : Plumbing
630 : Central Heating
631 : Kitchen Equipment
632 : Doors and Door Gear
633 : Sanitary Equipment
634 : Weatherings—IV
635 : Kitchen Equipment
636 : Doors and Door Gear
637 : Electrical Equipment, Lighting
638 : Elementary Schools—VII
639 : Electrical Equipment, Lighting
640 : Roofing
641 : Sliding Gear
642 : Glazing
643 : Glazing
644 : Elementary Schools—VIII
645 : Metal Curtain Rails
646 : Plumbing
647 : Veneers
648 : U.S.A. Plumbing—V
649 : U.S.A. Plumbing—VI
650 : Ventilation of Factories and Workshops—I
651 : School Cloakrooms (Boys)
652 : U.S.A. Plumbing—VII
653 : Plumbing
654 : U.S.A. Plumbing—VIII
655 : School Cloakrooms (Girls)
656 : Ventilation of Factories and Workshops—II
657 : Floor Construction
658 : Partitions
659 : Equipment
660 : Asbestos-Cement Decorated Sheets
661 : Aluminium
662 : Sound Resistance
663 : Building Equipment
664 : Sheet Lead Work
665 : Building Equipment
666 : Sound Insulation
667 : A.R.P.
668 : Aerodromes
669 : Aluminium
670 : Metal Trim
671 : Rainwater Gutters
672 : Waterproofing
673 : Aluminium
674 : Roof Insulation
675 : Furniture
676 : Ventilation of Factories and Workshops—III
677 : Oil Paint
678 : Ventilation of Factories and Workshops—IV

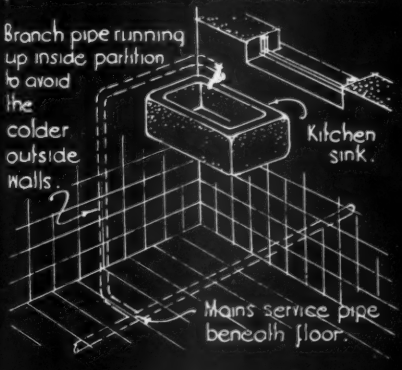
816. THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

DIAGRAMS SHOWING METHODS OF PROTECTING SERVICE PIPES FROM THE EFFECTS OF FROST :

(a.) Entry of rising main.

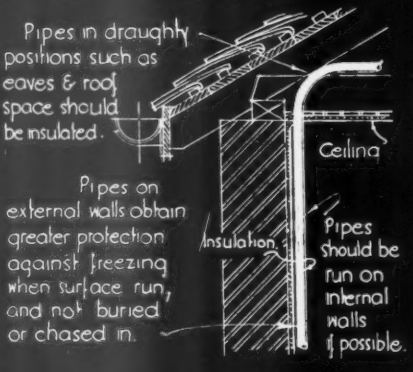


(b.) Mains branch to kitchen sink.

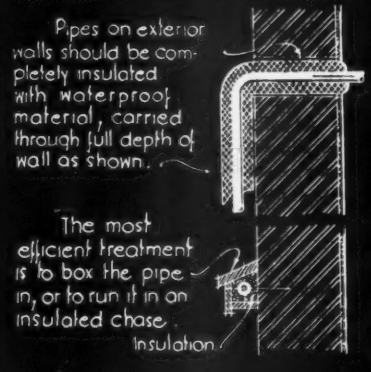


(c.) Position of rising main.

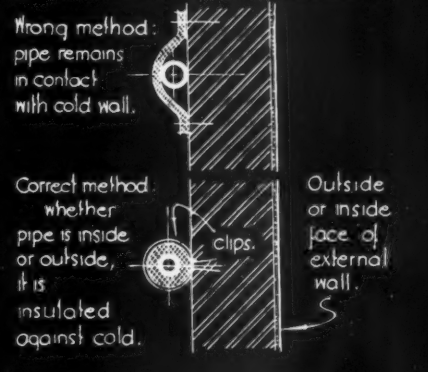
(d.) Pipes on external walls.



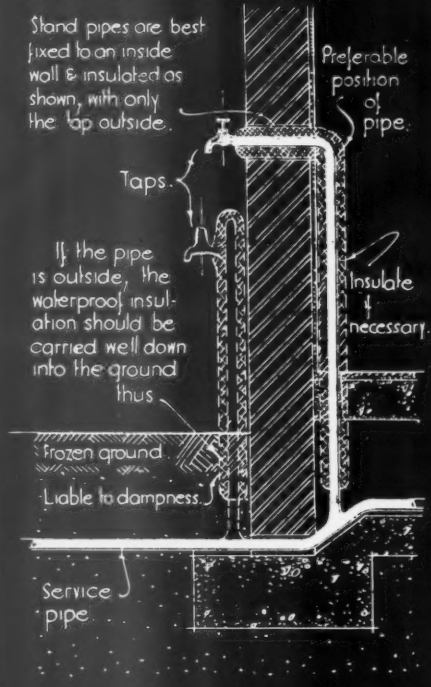
(e.) Pipes on exterior wall faces.



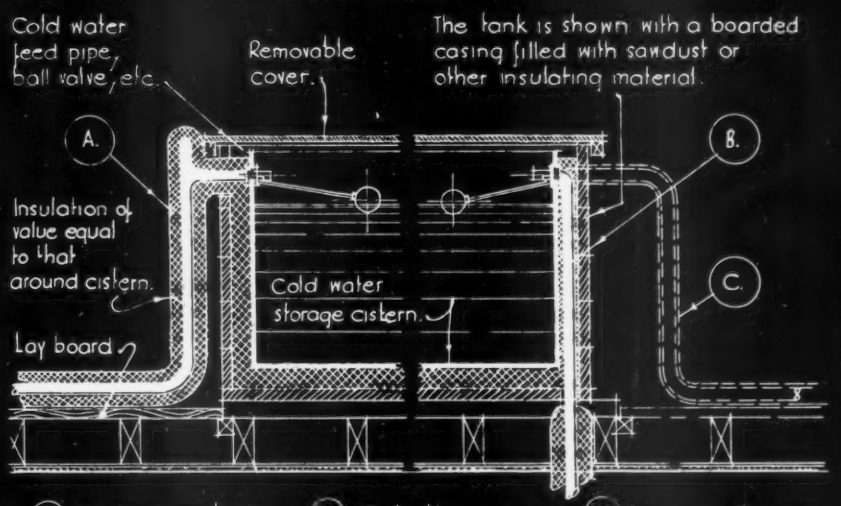
(f.) Method of applying insulation.



(g.) Protection of stand pipes.



(h.) Insulation of the feed pipes to cold water storage cisterns :



(A.) The feed pipe should be separately, completely and equally insulated as shown. An extra boxing may be provided on the pipe side of the cistern-casing if desired.

(B.) Protection is inadequate if the feed pipe is boxed in the same casing as that surrounding the cistern. The effective insulation may be reduced by more than half.

(C.) Freezing in the feed pipe is commonly caused by less complete lagging than is provided around the cistern. The smaller volume of water in the pipe tends to freeze more quickly.

Information from Lead Industries Development Council.

INFORMATION SHEET : THE PROTECTION OF LEAD PIPES FROM FROST DAMAGE : No. 53.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1 • Oliver A. Bayne.

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 679 •

PLUMBING

Subject : The Protection of Pipes from Frost

General :

This Sheet sets out a number of the common details of plumbing work where precautions should be taken to prevent the water freezing in the pipes causing stoppage in the supply and usually damage to the pipe.

General Layout of Pipes :

Special protective measures can be largely avoided if the layout is such that all pipes are situated in the warmer parts of the building or well below ground level. In America where the climate is more severe than in this country this method is consistently adopted, and it would be equally advantageous to do so in this country. It should perhaps be pointed out that there is usually little difference in the length of pipe used in the two systems, internal and external.

Frost Action :

On freezing, water expands in volume by approximately one-tenth of its bulk and it is this factor which causes the damage to and bursting of exposed water pipes in severe weather. The formation of ice in a pipe rarely takes place simultaneously throughout the length of the pipe ; it usually preceeds progressively from the coldest point towards the warmer. If ice formation begins at the closed end of a pipe of which the other end is open and unobstructed, it is possible for freezing to continue steadily towards the open end without materially increasing the pressure on the walls of the pipe. Such a pipe may be repeatedly frozen solid without serious risk of fracture since the small increase in pressure may be accommodated by the "stretch" of the pipe. If, however, the freezing begins at the open end a plug is formed, and as the water cools towards the closed end, pressure is built up in the pipe, which will ultimately cause bursting, no matter what the material or thickness of the pipe.

In normal domestic practice the main in the street acts as the open end or relief valve so that a burst is never likely to occur between the freezing point and the main. There is, however, danger of damage occurring on the draw-off side of the freezing point since all branches are closed by taps or ball valves.

For this reason particular care should be taken where the pipe enters the house : see diagrams a. and c.

Diagrams A and C :

It is generally considered in this country that a pipe buried 2 ft. deep in ordinary streets or garden ground is below the limit of frost action, even in severe weather. If, however, it is allowed to rise and pass through the external wall of the house only a few inches below ground level a plug of ice may be formed at that point. In the case of a pipe passing over a series of windows or into and out of buildings, there is more than one point likely to freeze and form a plug at a comparatively early stage. In all such cases relatively high pressures likely to damage the pipe will be built up as freezing proceeds from the plug towards the dead end.

Diagram B :

Common custom in England is to run the rising main up the outside wall so as to give a direct connection to the kitchen tap. This wall is obviously cold, and it is far better practice to run the riser up an internal wall, preferably on a chimney. No more pipe is required for this, apart from a short extra length needed to connect the kitchen tap as shown in the diagram.

Diagrams D and H :

The most vulnerable position for a pipe in a house of normal type occurs at the point where it is carried up the outer wall and passes unprotected close to an open eaves, where it is exposed to continual draughts. Pipes should never be placed in such a position.

Pipes serving a storage tank in an open or draughty roof space should be wrapped throughout their length and it is desirable that the tank itself should be protected.

Diagrams E and F :

Pipes run on external walls should be preferably wrapped in insulating material and boxed in with a wood casing ; when this is not possible a more generous wrapping should be provided. Wrappings should be taken fully around the pipe so that the pipe is insulated from the cold wall surface as well as from the outer air.

It is essential that all insulating coverings should either themselves be waterproof or covered on the outside with a complete waterproofing, since if an insulating medium absorbs moisture, its value will be largely destroyed. Where pipes on an external wall are turned through that wall into the building, it is advisable to carry the insulation through the wall also, to avoid having a short length of pipe in direct contact with cold masonry.

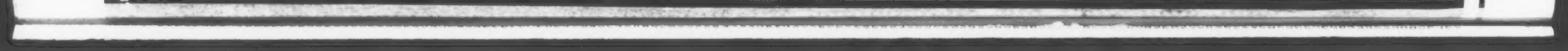
Diagram G :

Since stand pipes and hose connections are usually taken direct off the main supply, it is common practice to make the branch connection outside, running the stand pipe up externally. Wherever possible, this arrangement should be avoided, and the branch connection made after the supply pipe has entered the house, so that the whole branch except the tap is within the building.

Issued by : The Lead Industries Development Council

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

Telephone : Mansion House 2855



THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

SPECIFICATIONS FOR PAINTING VARIOUS SURFACES WITH PAINT MIXED FROM •NORAL• ALUMINIUM PASTE :

(The pigment consists of minute, flat thin flakes of pure aluminium, and may be applied by any recognized method).

PREPARATION OF SURFACES :

(a.) STEEL : Oil or grease should be removed with mineral solvent; mill scale, rust, dirt, etc. with wire brush, sand blast or scraper. If previously painted, bare spots to be touched up with a good rust inhibiting priming coat.

(b.) WOOD : If previously painted, blistered & loosely adhering paint should be removed. Remove dust, & fill all holes & cracks with putty. If work previously painted has a high gloss finish, the surface should be flatted.

(c.) BRICK, PLASTER, CONCRETE : loose paint, dirt, etc. to be removed.

(d.) SURFACES SUBJECT TO HEAT : to be specially cleaned. Adherence improved by roughened surface.

APPLICATION OF PAINT :

The aluminium paint may be applied by brush or it may be sprayed. All final brush strokes should be in the same direction.

Excessive brushing will cause darkening and streaking. If the paint is sprayed, thinners not in excess of 10% of the total paint volume may be added.

Only sufficient pressure to obtain adequate atomization should be used, and excessive pressures are to be avoided.

CLASSES OF ALUMINIUM PAINT :

(A) Aluminium pigment in short oil oleo-resinous vehicle.

(B) Aluminium pigment in long oil oleoresinous vehicle.

(C) Aluminium pigment in very long oil oleoresinous vehicle.

(D) Aluminium pigment in oil modified synthetic resin vehicle.

(E) Aluminium pigment in a free flowing highly volatile vehicle suitable for application to surfaces subject to high temperatures.

(F) Aluminium pigment in bituminous vehicles.

(G) Aluminium pigment in nitro-cellulose vehicles.

	MATERIAL TO BE PAINTED.	SPECIAL PRIMING COAT. (Not aluminium.)	FIRST COAT ⊗	SUBSEQUENT COATS.	TYPE OF ALUMINIUM PAINT.
EXTERIOR WORK.	1. STEEL new work.	Rust inhibiting primer.	Aluminium paint (Standard grade Noral paste pigment).	One further finishing coat of aluminium paint or undercoating & finishing coat of paint to shade.	Paint B, or under severe exposure conditions, paint D.
	2. STEEL repaint.	Rust inhibiting primer on bare spots.	Aluminium paint (Standard grade Noral paste pigment).	As above.	Paint C.
	3. WOOD new work.	•	Aluminium paint (Standard grade Noral paste pigment), or special priming paint incorporating Noral aluminium paste pigment.	One finishing coat of aluminium paint or undercoat & finishing coat of paint to shade.	Paints B, F or G.
	4. WOOD repaint.	•	One coat aluminium paint.	If aluminium finish is not desired, one coat of undercoating & one of finishing paint to shade.	Paint B or G.
	5. BRICK, PLASTER & CONCRETE.	•	One coat aluminium paint.	One further coat aluminium paint or undercoating & finishing coat to desired shade.	Paint A or B.
INTERIOR WORK.	6. STEEL.	Rust inhibiting primer, if specified.	One coat aluminium paint.	One further finishing coat of aluminium paint or undercoating and finishing coat of paint to shade.	Paint B.
	7. WOOD.	•	One coat aluminium paint.	One coat of aluminium paint or undercoating and finishing coat of paint to shade.	Paint A or G.
	8. BRICK, PLASTER & CONCRETE.	•	One coat aluminium paint.	If finish other than aluminium is desired, undercoating and finishing coat to shade.	Paint A or G.
	9. GENERAL WORK.	•	One coat aluminium paint.	Undercoating & finish to desired shade.	Paint B or G.
	10. Severe conditions, as acid fumes, high humidity.	Rust inhibiting primer (if steel).	One coat aluminium paint.	One coat aluminium paint.	Paint D or F.
	11. HOT SURFACES. ✳	•	One coat aluminium paint.	• • •	Paint E.

⊗ A period of at least twenty-four hours drying time should elapse before applying another coat.

✳ Aluminium paint is not recommended for hot surfaces exposed to the weather.

Information from the Northern Aluminium Company Limited.

INFORMATION SHEET : ALUMINIUM Nº 9 : ALUMINIUM PAINT SPECIFICATIONS

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

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 680 •

ALUMINIUM

Subject : Aluminium Paint

General :

This is the ninth of a series of Sheets dealing with the architectural uses of aluminium, and sets out typical specifications for painting various surfaces with paint pigmented by Noral Aluminium Paste.

Production :

Noral aluminium pigment in paste form is manufactured by a patented process in which the flakes of pure aluminium are developed in a mixture of mineral spirit which constitutes the liquid content of the paste. Formed by this method, the flakes are finer and more uniform than those in dry bronze powder pigment, whilst at the same time they retain equally well their lustre and leafing characteristics.

For the actual production of paint, the paste form of aluminium has the advantage of the absence of dust with consequent reduction of waste and dangers of contamination and explosion. The paint, furthermore, is free from entrapped air, and may be applied promptly without risk of air bubbles in the dried film. Mixing and stirring times are shorter, while the fact that paste bulks less than powder enables the use of smaller and more easily handled and distributed containers.

Characteristics :

(*a*) *Leafing*.—When the paint is brushed or sprayed on any surface such as wood, metal, concrete, etc., the minute metallic flakes rise to the surface of the paint coating to form an orientated leafed film. It is due to the overlapping property of the flakes that aluminium paint gains much of its durability and moisture-resisting qualities, its power to reflect light and heat, its resistance to smoke and fumes and its opacity.

(*b*) *Reflectivity*.—An aluminium painted surface reflects between 60 and 70 per cent. of the total light falling upon it, and over 90 per cent. of the infra-red rays. This attribute makes the paint very suitable as a coating on oil and gas storage equipment, while the resultant low emissivity of this aluminium paint enables the heat dissipation from such heated surfaces as furnaces and pipes to be reduced to a minimum.

(*c*) *Durability*.—The durability of a varnish film is largely dependant upon the amount of sunlight to which the surface is submitted, the light rays having an adverse effect upon the resistance of the oxidized drying oils in the film.

An aluminium paint film withstands to a very high degree the destructive light rays, since a metal shield is formed to protect the underlying varnish film, and the high opacity of this metal coating reduces to a minimum the penetration of the light rays. In addition, because of the leafing action of the flakes, the successive parallel layers throughout the vehicle give continuous protection as the surface slowly weathers away.

(*d*) *Moisture Resistance*.—The metal-sheath effect of the paint is an important factor in its resistance to the penetration of moisture. Extensive tests using steel panels with and without priming coats of other pigment paints have revealed no signs of rust after several years' exposure. As a primer on wood surfaces, aluminium paint is elastic enough to follow the wide surface changes that occur with external temperature variations, and thereby retards the passage of moisture into and out of the timber. Tests made with exposed wood panels have shown considerably higher moisture proofing efficiency percentages in panels primed with aluminium paint, owing to the sealing of the timber capillaries by the pigment particles.

(*e*) *Opacity*.—The fineness of the metal flakes in Noral Paste pigment is such that over 97 per cent. will pass through a 300 mesh BSS screen when washed with mineral spirit. The opacity of one coat of the paint is equal to that of a number of coats of most other paints.

(*f*) *Covering Capacity and Weight*.—The covering power of a given quantity of paint made from Noral paste is from 10 to 20 per cent. more than that of an equal quantity of paint prepared from aluminium powder. One gallon will cover approximately 800 to 1,000 sq. ft., dependent upon the smoothness and absorption of the surface to which it is applied. A saving in weight over other paints is also effected. Paint made from Noral paste weighs approximately 10 lbs. per gallon. Lead or leaded paints weigh between 20 and 30 lbs. per gallon.

General Considerations :

Surfaces to be painted should be dry and the usual precautions regarding exterior painting in wet weather should be observed. In the case of wood or other absorbent surfaces, no painting should be done within 24 hours after rain. The paint should, if brushed, be applied in a free flowing coat, cross brushed and laid off evenly. Excessive brushing should be avoided.

Mixing :

The paint may be supplied in double containers, in separate packages of vehicle and pigment for mixing on the job. It is recommended that this method should be adopted. Alternatively, the paint should be applied as soon as possible after the ready mixed material is received from the manufacturer, as the leafing properties of aluminium paint are impaired by standing for long periods.

Tinting :

Interior decorating effects are possible by using the paste in conjunction with other pigment tinters. The inclusion of such tinters disturbs the completely leafed film, and a "shot" effect is obtained. Only strong, bright pigments should be used with the paste, and it is recommended that such paints be used for interior decoration only.

Maintenance :

Aluminium paint prepared from the paste affords considerable resistance to smoke and fumes, and may be washed and rubbed over in the event of an accumulation of dirt without affecting the uniformity of the paint film. The inclusion of mild alkali such as sodium borate in the washing water is in no way detrimental.

Cost :

The actual cost per yard of painted surface is dependent upon the accessibility and method of application, number of coats, etc.

Previous Sheets :

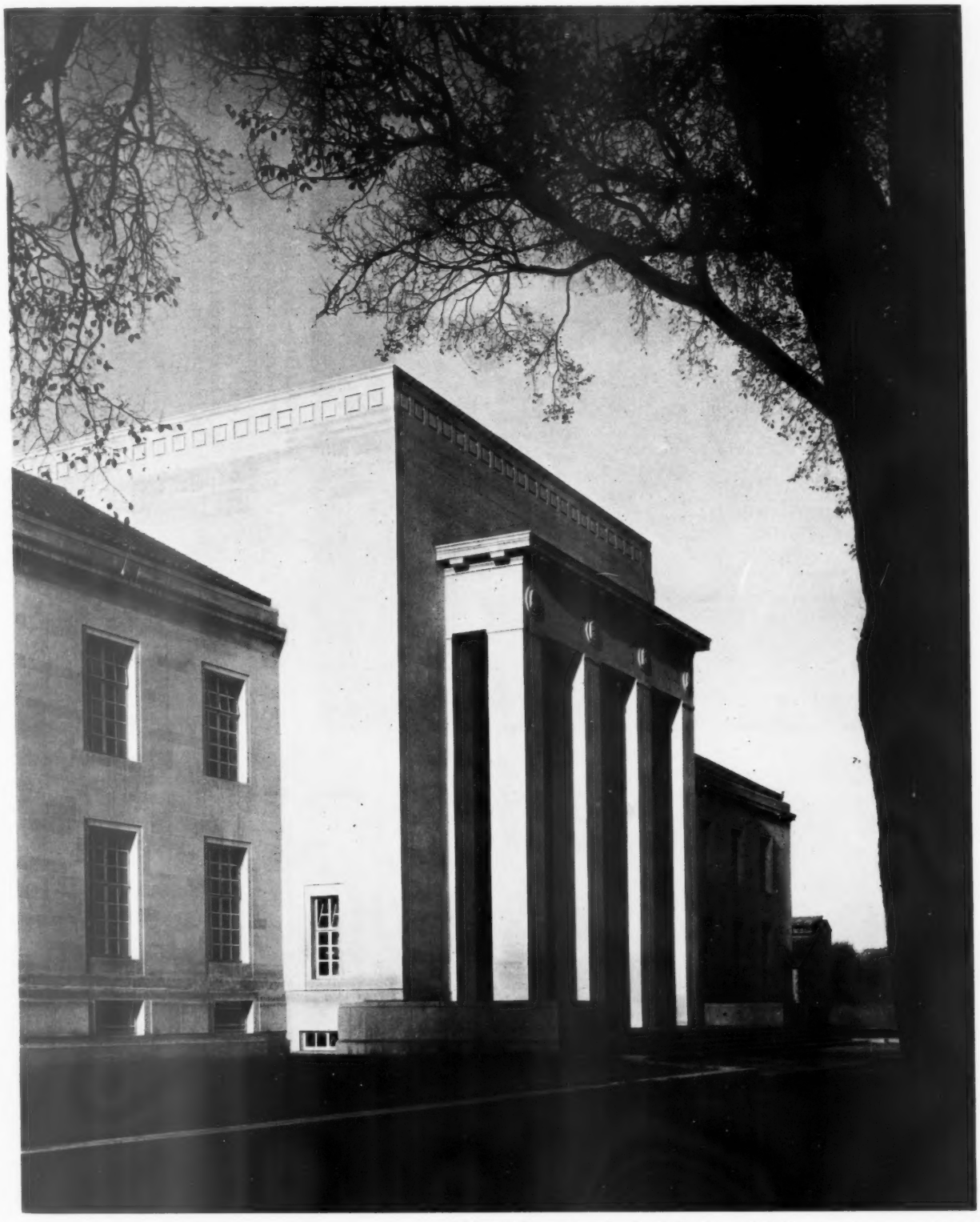
Previous sheets of this series dealing with the architectural uses of Aluminium were Nos. 492, 501, 504, 505, 510, 661, 669 and 673.

Issued by : The Northern Aluminium Co., Ltd.

Address : Bush House, Aldwych, London, W.C.2

Telephone : Temple Bar 8844

TEMPLE OF PEACE AND HEALTH, CARDIFF



DESIGNED BY

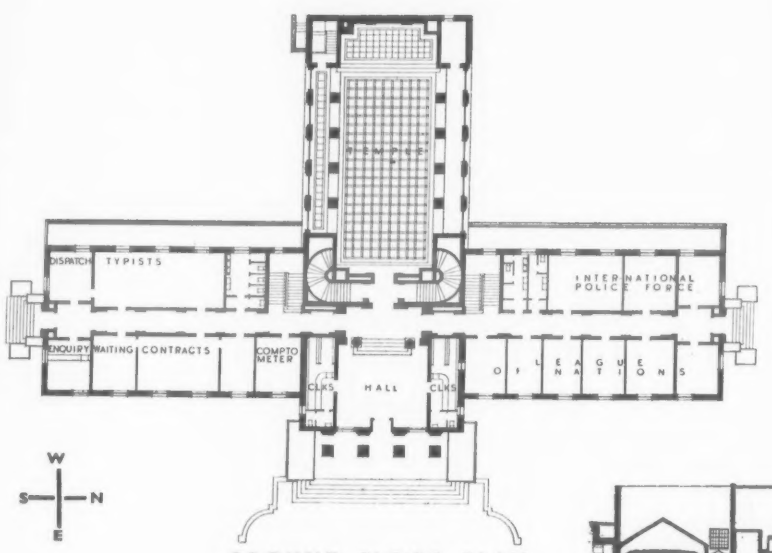
PERCY THOMAS

This building, given by Lord Davies and built on a site presented by the Cardiff Corporation in Cathays Park, is to be officially opened at the end of this month. Above, the main entrance, King Edward Avenue. On the frieze above the columns are four discs bearing the Arms of England, Ireland, Scotland and Wales.

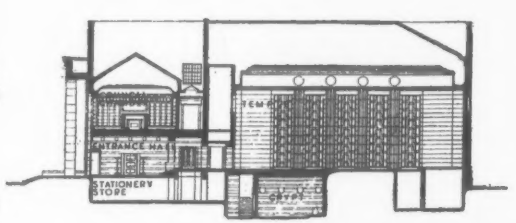
E

TEMPLE OF PEACE AND HEALTH, CARDIFF: DESIGNED BY PERCY THOMAS

FIRST FLOOR PLAN



GROUND FLOOR PLAN



SECTION

GENERAL PROBLEM—*The problem which the architect was called upon to solve was to design a building which would not only provide accommodation for the Memorial Association Headquarters and the League of Nations Union, but would also contain a Temple of Justice. It was the promoter's wish that, as the two main ideas underlying the above institutions are peace and health, he desired these ideas expressed in the design.*

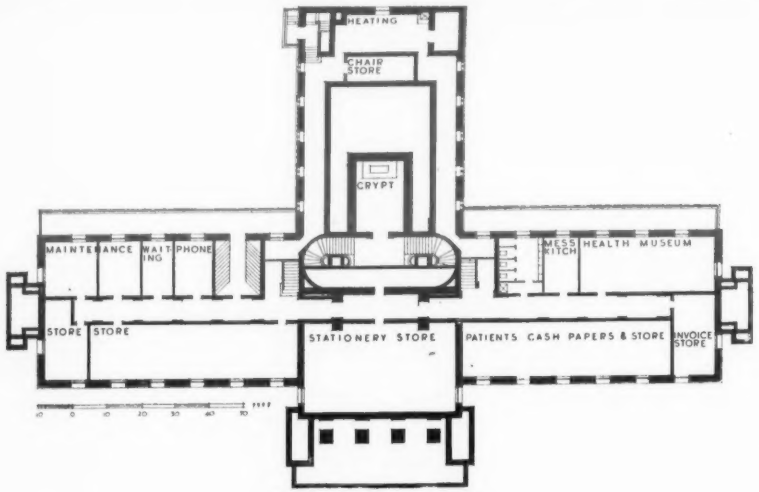
PLAN—*Externally, it was felt that whilst the building should be one complete unit, the two sections of the building—the Temple and the Memorial offices—should be expressed separately. This has been achieved by a T-shaped plan. The Temple, which forms the centre portion, is carried up higher than the two wings.*

EXTERNAL FINISHES—*The whole of the exterior is carried out in Portland stone, and the roofs of the two wings are covered in dark red Italian pattern tiles.*

Above, a view from the south-west showing, on the left, the projecting Temple of Peace.

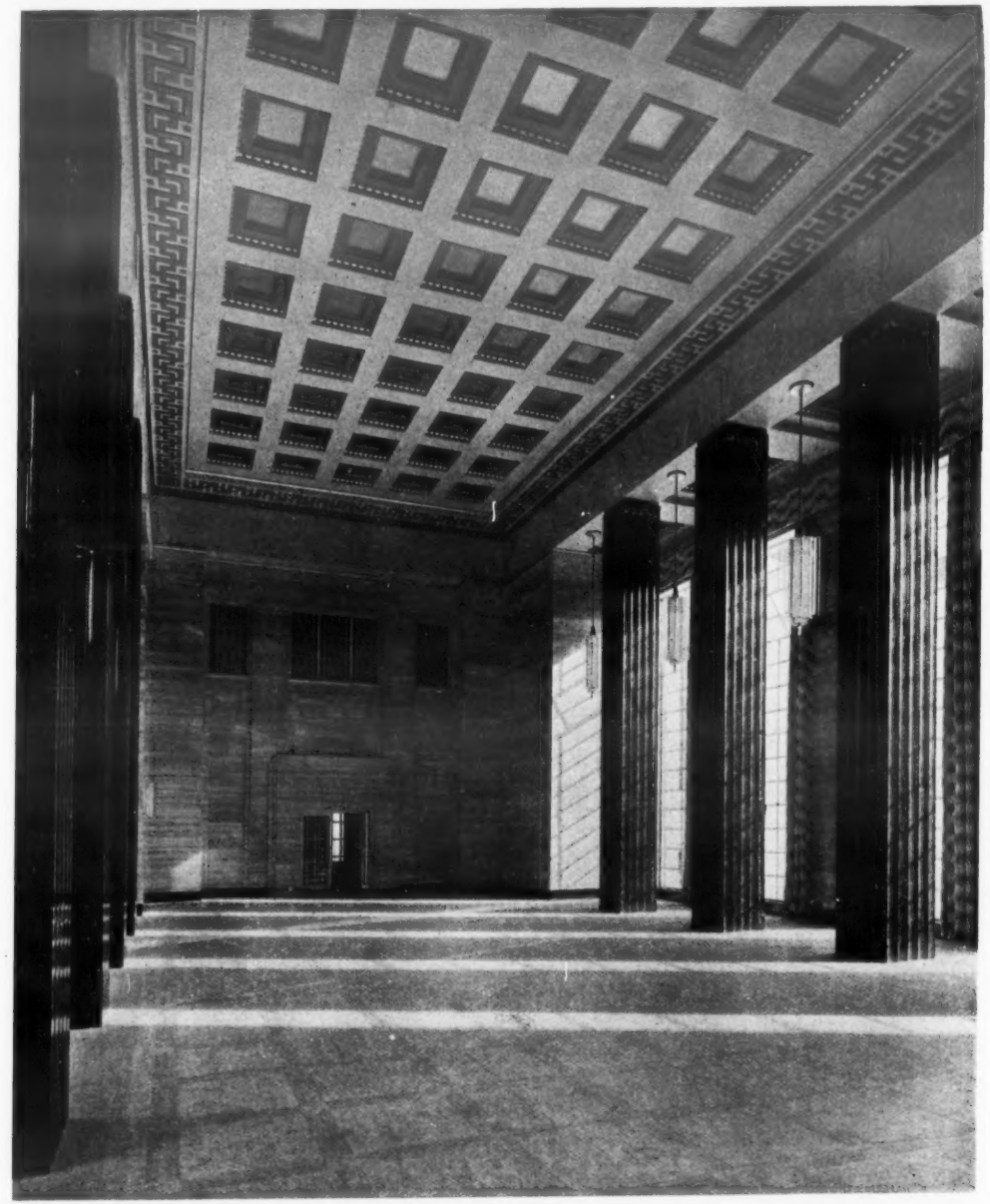
SECTION

Above, a view from the south-west showing, on the left, the projecting Temple of Peace.



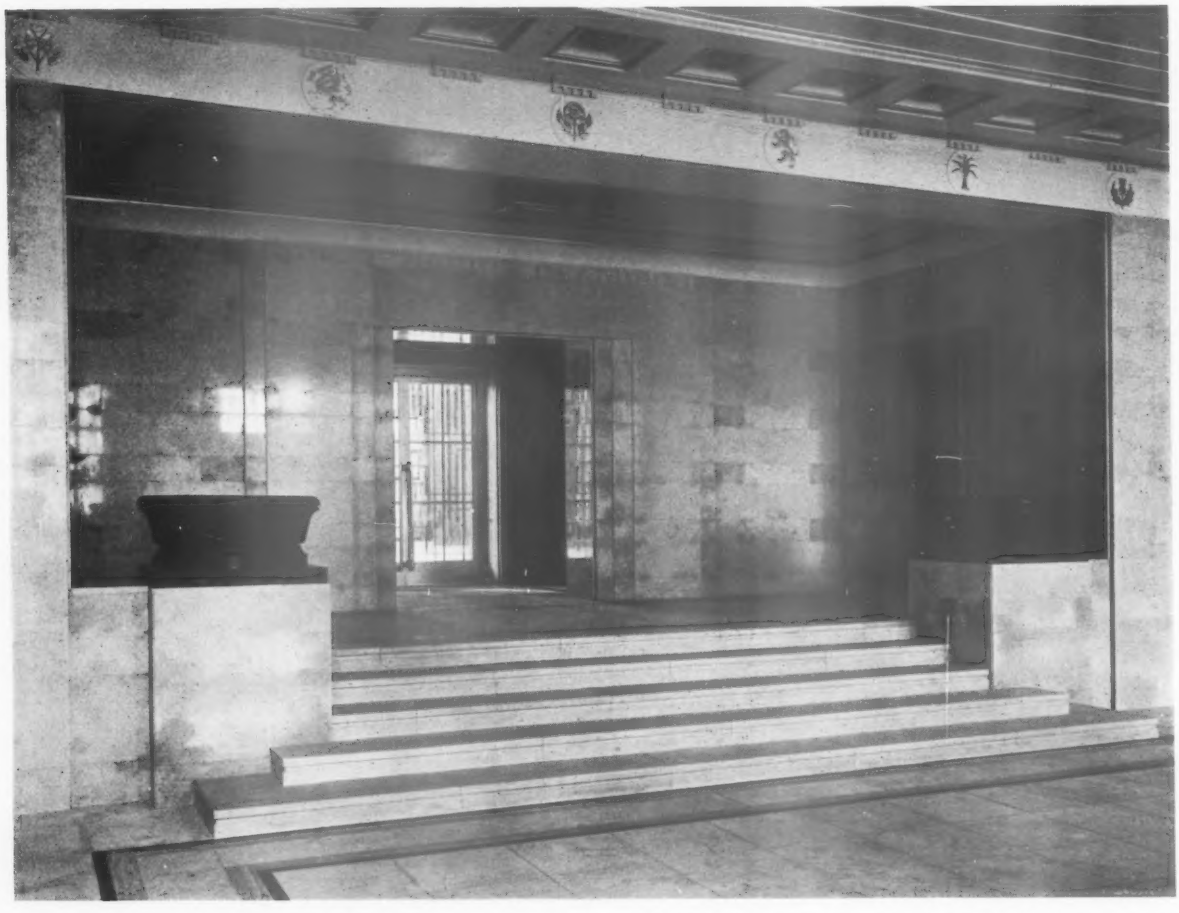
BASEMENT PLAN

INTERNAL FINISHES—*Memorial Offices : the walls of the entrance hall are lined with Larrys Mouchette marble, and the floor is covered with Mereuil marble with a border of golden travertine and black. The ceiling of the entrance hall is coloured dark cream and picked out in gold and the frieze contains British national emblems. The Temple : the eight square columns forming the side aisles are in fluted black and gold marble. The floor of the Temple is covered in Roman travertine divided into squares with golden travertine, and the walls are lined with a dove-grey Trani Mirabelle marble. The coffered ceiling is richly coloured in grey, emerald green, and gold, and the large windows which come right down to the floor upon either side of the Temple are provided with specially designed heavy woven curtains to harmonize with the general colour scheme.*



Above, the Temple of Peace ; permanent seating in the form of walnut benches is being designed to occupy the floor space. Left, a view from the south-east.

TEMPLE OF PEACE AND HEALTH, CARDIFF



DESIGNED BY

PERCY THOMAS

INTERNAL FINISHES *(contd.)—The crypt, which has been designed to receive the Welsh National Book of Remembrance, has a vaulted roof constructed of Bath stone. There is a carved frieze round the wall containing shields representing the counties of Wales, picked out in heraldic colours. The doorway to the crypt is fitted with a massive bronze grille, and at the end of the crypt is a black marble pedestal upon which will be placed the Book of Remembrance. A concealed light in the vaulted roof illuminates the book itself.*

HEATING—*The Temple is heated entirely by invisible panels buried in the floor and in the marble walls.*

COST—*£62,000, excluding furniture and equipment.*

Above, the entrance hall leading up to the office corridor level; the steps are in travertine marble and are flanked by two marble vases. Below, left, the Council Chamber; right, the crypt.

The general contractors were E. Turner and Sons, Ltd.; for list of sub-contractors, see page 815.

R.I.B.A. EXAMINATIONS

Alternative Problems in Design

FOLLOWING is a list of the alternative problems in design for the year ending December 31, 1939. Copies of the list may be obtained free on application at the R.I.B.A. :—

Instructions to Candidates

The drawings, which should preferably be on uniform sheets of paper of not less than Imperial size, must be sent to the Secretary of the Board of Architectural Education, Royal Institute of British Architects, 66 Portland Place, London, W.1, on or immediately before the dates specified below.

Each set of drawings must be signed in ink by the author and must bear his full name and address and the name of the school, if any, in which the drawings have been prepared.

All designs, whether done in a school or not, must be accompanied by a declaration from the student that the design is his own work, and that the drawings have been wholly executed by him. In the preparation of the design the student may profit by advice.

Drawings for subjects (*a*) are to have the shadows projected at an angle of 45 deg. in line, monochrome or colour. Drawings for subjects (*b*) are to be finished as working drawings. Lettering on all drawings must be of a clear, scholarly and unaffected character. Prints of drawings are not submissible.

After a design has been approved it may be re-submitted together with the specified working drawings on one of the two published dates for the receipt of drawings immediately following the date on which the design was submitted.

All candidates taking the Final Examination will be required to include in the four Testimonies of Study for which they must secure approval before being admitted to the examination, at least one constructional subject (working drawings of an approved design), and one problem involving an acoustical treatment. In addition, considerations of common-sense acoustics as they apply in ordinary modern design must not be ignored in any Final Examination Testimony of Study. Where a reverberation table is asked for it should be as complete as possible and the reverberation formula should be quoted. Acoustic diagrams showing the reflection of sound beams should be to a scale of one-eighth of an inch to a foot. The two subjects set for 1939 which may be treated acoustically are Problems Nos. 32 and 35. The two subjects which may be treated acoustically may be submitted *on any of the published dates* for receiving Problems in Design in any particular year, *provided that they are treated acoustically*. Candidates treating a Problem in Design acoustically must submit the acoustical calculations, etc., when they first submit the design. A list of articles and books on the subject of acoustics to guide candidates in obtaining the necessary information may be obtained free on application to the Secretary, R.I.B.A. Design subjects taken from one year's list may not be submitted in any subsequent year.

Drawings which have been submitted by candidates and rejected by the examiners may not be revised and re-submitted.

A set of approved Final Examination Testimonies of Study has been deposited in the R.I.B.A. Reference Library for the information and guidance of students.

DATES FOR THE SUBMISSION OF DESIGNS IN 1939

Subject No. 31	February 28
Subject No. 32	April 28
Subject No. 33	June 30
Subject No. 34	August 31
Subject No. 35	October 31
Subject No. 36	December 29

No. 31

(*a*) *A Hotel in the Lake District.*—A private estate of great natural beauty in the Lake District has been acquired for the erection of a high-class holiday hotel.

The property stands at the head of one of the larger lakes in a valley belonging to the National Trust. Great care must be taken that the design of the new building is appropriate to its surroundings, and the use of local materials is suggested.

The site is well wooded, and has a fall of 1 in 30 down to the lake, which lies to the west of it. It is approached from the main road, which runs between the site and the lake. The accommodation required is as follows :—

30 double bedrooms, each with private bathroom ; 15 single bedrooms, with lavatory basins ; 5 bathrooms and w.c.s adjoining the above ; service rooms for bedroom floors ; lounge opening on to terrace overlooking lake ; writing room ; dining room to seat 150 ; kitchen department, all services and stores ; sun room or loggia ; small library ; bar ; reception and manager's office ; entrance hall ; cloakrooms ; luggage room ; stairs and lifts ; large garage, repair shops and petrol pumps ; workshop, boiler-house and fuel stores ; accommodation for manager and female staff of 20 living in hotel ; accommodation for six male staff over outbuildings.

Drawings required : Plans, sections and elevations, sufficient to explain the whole scheme, $\frac{1}{16}$-in. scale ; block plan, $\frac{1}{32}$-in. scale, showing hotel, outbuildings and surroundings ; detail $\frac{1}{2}$-in. scale of an important feature.

(*b*) *Working Drawings for a Hotel in the Lake District.*—The design for the hotel may, after it has been approved, be re-submitted, with the addition of a complete set of $\frac{1}{8}$-in. scale working drawings, as issued to the contractor, together with one sheet of $\frac{1}{2}$-in. scale constructional details.

Notes of the materials proposed must be indicated on the drawings.

No. 32

In accordance with "Instructions to Candidates" this problem may be treated acoustically.

(*a*) *A Technical School in a Provincial Town.*—The site selected for this building has a frontage of 300 ft. on the south side of an important thoroughfare ; it has a depth of 500 ft., with minor roads on each side.

The boundary at the rear of the site is built up, but the adjoining owners have no rights of light. The site is level.

It may be assumed that the usual public services, sewers, etc., are available in all of the roads which adjoin the site ; the building line is set back 20 ft. from the main and side roads.

The accommodation required is as set forth in the following schedule ; it is not necessary to indicate furniture and equipment, but the rooms should be so planned and lighted as to be suitable for their respective purposes. Minor variations from the areas indicated will be permitted.

The classrooms and drawing offices should be so planned that they are reasonably accessible from the various workshops and laboratories, but the workshops and gymnasium should be so located that no disturbance shall be caused to the work carried out in the remainder of the school, and it is suggested that they be planned in a separate block.

General Accommodation :—

Principal's room	300	ft. super.
Clerks' office	400	,,
Store for stationery	200	,,
Staff room—men	400	,,
Staff room—women	200	,,
Students' common room	500	,,
Library and reading room	800	,,
Refectory	1,000	,,
Kitchens, etc., for above.		
Gymnasium	2,000	,,
Dressing rooms (two, each for 30 students and with separate showers, etc.).		
Assembly hall to seat 500 persons, with stage : the hall to be designed for use for prize - givings, musical, dramatic and cinema performances, dances and examinations. There should be two dressing rooms and a property room.		
First aid and medical inspection room	200	ft. super
Flat for resident caretaker : living room, 3 bedrooms and usual offices.		
Parking space for about 20 cars and covered sheds for 100 cycles.		
Lavatory and cloakroom accommodation for staff and students, suitably arranged to meet the needs of planning.		
Rooms for cleaners (women) and maintenance staff (men).		
Heating chamber.		

Teaching rooms :—

Classrooms (two) each	400	,,
Classrooms (four) each	600	,,
Classrooms (two) each	800	,,
Lecture room to seat 150, with stepped seating and demonstration bench.		
Laboratory (combined chemistry and physics)	800	,,
Prep. room and store	200	,,
Laboratory (engineering)	800	,,
Drawing offices (two) each	600	,,
Cookery room	600	,,
Larder and stores	200	,,
Laundry	400	,,
Needlework room	600	,,
Art room	600	,,
Art room	400	,,

Workshops :—

Woodwork shop	800	,,
Timber store	200	,,
Engineering workshop	800	,,
Store	200	,,
Plumbing and gas-fitting workshop	800	,,
Store	200	,,
Sheet metal workshop	800	,,
Store	200	,,

Drawings required :—

Plans, sections and elevations to $\frac{1}{16}$-in. scale to illustrate the whole scheme.

$\frac{1}{2}$-in. scale detail of an important feature.

Acoustics :—

Candidates who desire to treat this subject as their specific acoustic subject must indicate in a note the general provisions they propose to make against noise transmission. They must, in addition, submit a reverberation table for the Assembly Hall, which shall provide the reverberation period which is considered desirable for this type of building.

(*b*) *Working Drawings for a Technical School in a Provincial Town.*—The design for a Technical School may, after it has been approved, be re-submitted with the addition of the following :—

$\frac{1}{32}$-in. scale site plan, showing drainage.

$\frac{1}{8}$-in. scale plans, sections and elevations of the main block.

One sheet of $\frac{1}{2}$-in. scale details of part of the main block.

No. 33

(*a*) *A Child Welfare Clinic.*—A Clinic for Maternity and Child Welfare is to be built on a corner site in a new housing area, as shown on the diagram (Fig. 1).

The site is level and all services are available in the adjoining roads.

The building, in which will be given pre-natal advice and instruction in the care and treatment of children, will be used jointly by the health and education authorities, and the accommodation is to be allocated to each of these services respectively.

Accommodation :—

(1) Heating chamber.
(2) Entrance hall.
(3) Office for records, with, if possible, enquiry hatches to both waiting halls and entrance hall — 150 sq. ft.
(4) Nurses' retiring room — 150 sq. ft.
(5) Kitchen—for preparing teas and light refreshments — 150 sq. ft.
(6) Male and female staff lavatories, with 1 basin and 1 w.c. in each.

School Side.

(7) Waiting hall with external entrance — 650 sq. ft.
(8) Treatment room with sink, communicating with (7) — 260 sq. ft.
(9) Doctor's room, communicating with (8) — 150 sq. ft.
(10) Dressing room, communicating with (8) and (9) — 75 sq. ft.
(11) Two dentists' rooms, adjoining (7) — each 200 sq. ft.
(12) Recovery room adjoining (11) with sink and external exit — 150 sq. ft.
(13) Boys' lavatory, preferably with external entrance, with 2 w.c.s and a 2-stall urinal
(14) Female lavatory, with 2 w.c.s and 2 basins.
(15) Perambulator shelters for 20 perambulators.

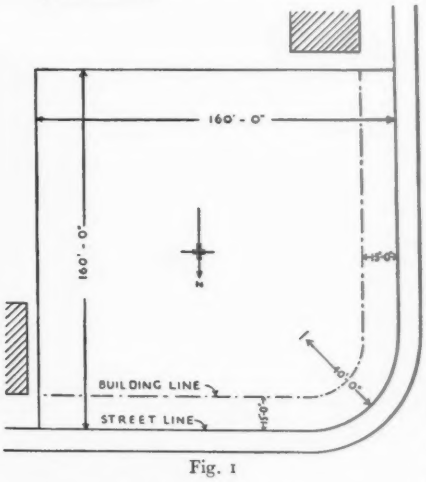


Fig. 1

Maternity and Child Welfare Side :—

(16) Waiting hall, with external entrance — 650 sq. ft.
(17) Weighing room, with sink, communicating with (16), and having three curtained dressing cubicles — 350 sq. ft.
(18) Doctor's room, communicating with (17) — 150 sq. ft.
(19) Lecture and demonstration room, with sink and gas-cooker — 350 sq. ft.
(20) Nursery — 350 sq. ft.
(21) Cot room — 200 sq. ft.
(22) Isolation room, with external entrance, for interviews with persons who have been in contact with infectious disease — 75 sq. ft.
(23) Lavatory for women and infants, with 2 w.c.s and 2 basins.
(24) Perambulator shelters for 30 perambulators.

The waiting halls are to adjoin and to be separated by a folding partition, so that they may be used together as a public hall for social functions, when not in use by the clinic.

The dentists' rooms will be approached from the waiting hall (7), but these rooms and the recovery room must be so designed as to defend the waiting hall from the transmission of noises from them.

The ground outside the nursery should be laid out as a lawn for an infants' playground.

Drawings required :—

Plans, two sections, two elevations, ⅛-in. scale.

(*b*) *Working Drawings for a Child Welfare Clinic.*—The design for a child welfare clinic may, after it has been approved, be re-submitted with the addition of complete working drawings, consisting of plans, elevations and sections to ¼-in. scale, and a ½-in. scale detail of an important portion of the building.

No. 34

(*a*) *A Youth Hostel.*—A hostel to accommodate up to 60 members is to be built for the Youth Hostels Association in a moorland district.

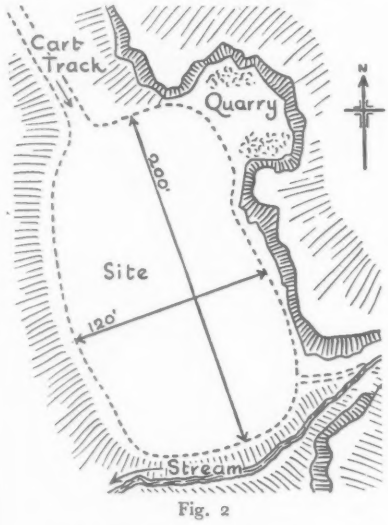


Fig. 2

The *site* is a platform, grassy and roughly level, about ½ acre in extent (*see* Fig. 2). To the west and south-west the ground falls away sharply with a fine view across a broad valley ; to the east there is high moorland with a gritstone escarpment, and a small disused quarry lies immediately to the north-east of the site. A stream (which can be dammed higher up to provide a water supply) flows down past the south side of the site. Approach is by a rough cart track ending at the north-west corner of the site. It is proposed that the external walls should be built of gritstone-rubble, of which there is a large dump at the quarry. A proportion of the stone is in blocks of considerable size, suitable for dressing as lintels, posts, etc. All other materials must be led to the site in farm-carts or light lorries. The site is exposed to strong winds and driving rain, against which the design and construction must give adequate protection.

The hostel will be run by a married couple as wardens resident all the year round. Members are normally admitted to the hostel only between 5 p.m. and 10 a.m. ; they are expected to share in the work of cleaning, washing-up, etc., but usually have some free time for recreation, enjoyment of the view, etc., during the evening. Economy in both building and running costs is very important.

The *accommodation required* (part of which should be planned on two floors) is as follows :—

Entrance hall, with a long bench for removing dirty boots.

Wardens' office, with an enquiry hatch opening to the entrance hall at which members are "booked in," provisions sold, etc.

Common room, not less than 600 sq. ft., planned to provide a large fireside circle and convenient space for dining tables, and equipped with ample crockery cupboards.

A smaller *sitting room* and an open *loggia* or view-porch, both with a west aspect, are desirable, but not essential. If a sitting room is not provided, the common room should be increased in size.

Kitchen quarters, communicating directly with the common room, must provide convenient space for (*a*) cooking by the wardens for members and for themselves ; (*b*) cooking for themselves by members ; and (*c*) washing-up by members under the wardens' supervision. There must be two separate kitchens for the cooking. The pantry for washing-up may be either a third room or combined with one of the kitchens ; it ought to have generous sink and drainer-board equipment. A roomy wardens' larder and plenty of shelves and cupboards for pans, brushes, stores, etc., are required.

Wardens' quarters, self-contained, and near the wardens' kitchen, consisting of a living room, a bedroom (both with fireplaces) and a w.c.-lavatory (bath optional).

Bedrooms for members must be separate as between men and women. For each sex there must be a principal bedroom for 12 to 16 persons. The remainder of the beds to be planned in smaller bedrooms, which can be allocated to either men or women as required. Beds are of two-decker type. All bedrooms ought to give from 220 to 250 cu. ft. per person, and have either fireplaces or some form of central heating and ventilators. Some of the bedrooms, including the principal women's bedroom (and the women's lavatory), must be on the first floor.

Lavatories for each sex, with not less than 4 wash-basins, 4 w.c.s and 1 shower-bath (cold only) in each (2 urinal stalls may be substituted for 1 men's w.c.). In addition, one or two bathrooms may be provided in which hot baths can be had by members for a small extra payment.

Cloakroom(s), *drying room(s)* and *blanket store(s)* of ample size, with suitable heating.

Boiler room, ample *fuel store(s)* for coal, coke and wood, and a *lamp room*—all conveniently related to the wardens' kitchen.

Cycle shed (for up to 30 cycles, including tandems) and *paraffin store*, with outside approach. Ample rainwater storage. Drainage to a septic tank.

Reference—R.I.B.A. Journal, June 26, 1937 : article on "Youth Hostels."

Drawings required :—

Plans, elevations and sections to ¼-in. scale, sufficient to illustrate the design fully. Elevation to ½-in. scale of a principal part of the building.

(*b*) *Working Drawings for a Youth Hostel.*—The design for a youth hostel may, after it has been approved, be re-submitted with the addition of part ground floor plan to ½-in. scale, together with a full section through a principal part ; the object of both plan and section being to illustrate the masonry technique employed, and illustrate also the weatherproofing for walls, roof, windows, etc.

No. 35

In accordance with "Instructions to Candidates" this problem may be treated acoustically.

(*a*) *Municipal Offices in a Small Town :—*

Site—

The site, which is level, is as shown by diagram (Fig. 3).

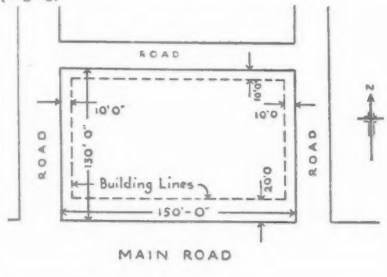


Fig. 3

Accommodation—

The following rooms are required of approximately the size indicated :

(*a*) *Council suite.*

	sq. ft.
(1) Council chamber	1,500
(2) Committee room No. 1	600
(3) Committee room No. 2	400
(4) Committee room No. 3	400
(5) Deputation room	200
(6) Mayor's parlour with lavatory	300
(7) Members' room (male)	300

	sq. ft.
(8) Members' room (female) ..	150
(9) Waiting room	150
(10) Members' lavatory (male).	
(11) Members' lavatory (female).	
(b) Town Clerk's Department.	
(1) Town clerk's room	400
(2) Assistant Town Clerk's room ..	200
(3) General office	400
(4) Conveyancing room	200
(5) Typists	200
(6) Spare	150
(c) Medical Officer of Health.	
(1) Medical Officer of Health private	400
(2) Assistant Medical Officer of Health	200
(3) General office	300
(4) Sanitary inspectors	200
(5) Health visitors	250
(6) Typists	150
(7) Spare	150
(d) Education Department.	
(1) Education General Office ..	250
(2) Education secretary	150
(e) Accountant's Department.	
(1) Accountant's private	400
(2) General office	450
(3) Rates office	500
(4) Internal audit	200
(5) Costing clerk	150
(6) Typists	150
(7) Spare	150
(f) Surveyor's Department.	
(1) Surveyor's private	400
(2) Assistant surveyor	200
(3) General office	400
(4) Drawing office	800
(5) Building inspector	200
(6) Plan room	100
(7) Typists	150
(8) Spare	150
(g) Weights and Measures.	
(1) Two rooms, each	200

(h) Caretaker.

Living room, scullery, larder, store, bath, w.c. and 2 bedrooms.

(i) Miscellaneous.

(1) Two strong rooms, 100 sq. ft. each, for each of departments (*b*), (*e*) and (*f*). One should be in the basement and one adjacent to the department.

(2) Boiler-house and fuel store.

(3) Male and female staff lavatories.

(4) Telephone room.

(5) Enquiry office near main entrance.

(6) Cleaner's room on each floor.

The council suite should be on the first floor. The town clerk's department should be adjoining. The accountant's department should be on the ground floor, with the rates office easily accessible by the public.

The acoustics of the council chamber should be carefully considered.

Drawings required :—

Plan of each floor, three elevations, two sections, $\frac{1}{16}$-in. scale. Portion of front elevation, $\frac{1}{2}$-in. scale.

Acoustics.

All candidates taking this subject must envisage a reasonable acoustic treatment of the council chamber, avoiding dangerous shapes on plan and on section, and must locate it on a quiet part of the site. Candidates taking this as their specific acoustic subject must, in addition, illustrate the absorbing treatment and submit a reverberation table for the council chamber showing a desirable reverberation period.

(b) Working Drawings for Municipal Offices in a Small Town.—The design for Municipal Offices may, after it has been approved, be re-submitted with the addition of complete working drawings to $\frac{1}{8}$-in. scale and working drawings of the council chamber to $\frac{1}{2}$-in. scale.

No. 36

(a) A Housing Scheme.—A Rural District Council propose to erect 50 cottages for rural workers as an extension of an old Somerset village which is a notable example of traditional building in local sandstone. For reasons of economy it is not thought practicable to build in stone, but the council desires the new cottages to harmonize as far as possible with the existing buildings.

A piped water supply, electricity and main drainage are available, but no gas.

The site of 5½ acres is a rectangular field 550 ft. by 436 ft., with its longer side having frontage, facing south, to an unclassified public highway. On each side of the site, also facing the highway, is a row of old cottages.

The ground rises 10 ft. from the road to the northern boundary at an even slope. The main sewer is approximately 8 ft. below the road level.

Ten cottages are to have parlours and all cottages are to be provided with a living room, scullery, 3 bedrooms and a bath, also adequate accommodation for the storage of food, fuel, garden tools, etc., suitable for rural workers.

No house should have a floor area less than 750 sq. ft., measured on both floors within the external walls.

A children's playground or green of ½ acre is to be planned within the housing site.

Drawings required :—

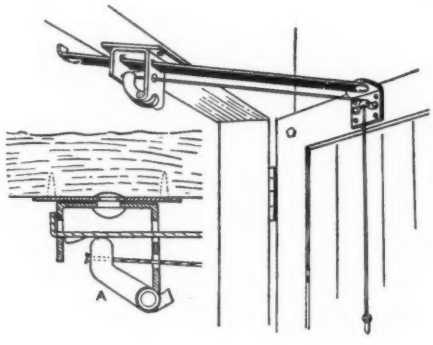
(1) Lay out plan to 1-500th scale, showing buildings (in block), roads, paths, playground, etc.

(2) $\frac{1}{8}$-in. scale plans, showing each variation in type, with elevations and sections sufficient to illustrate the scheme.

(b) Working Drawings for a Housing Scheme.—The design for a housing scheme may, after it has been approved, be re-submitted with the addition of :—

(1) Complete working drawings to $\frac{1}{8}$-in. scale, together with $\frac{1}{2}$-in. scale details showing construction.

(2) Drainage plan of the whole scheme to 1-500th scale, showing direction and size of drains. Surface water drains to be in a separate system.



TRADE NOTES

[*By PHILIP SCHOLBERG*]

Door Stops

THE sketch at the head of these notes shows an improved version of the Crompton door stop, and it seems a sensible solution to a not too easy problem. The simplest way, of course, is to hinge a 2-ft. batten to the door so that it hangs downwards and acts as a sprag when the door is opened. (By doors I mean here such things as garage and shed doors, not internal work.) When it is necessary to shut the door the batten is lifted and can be held to the door by an ordinary turnbuckle so that it is out of the way and will not fall down and jam. This method works well enough with a gravel surface, but on concrete it is not too good, for the foot of the batten gradually becomes rounded and will not hold, added to which there is a certain loss of space through the batten sticking out into the drive.

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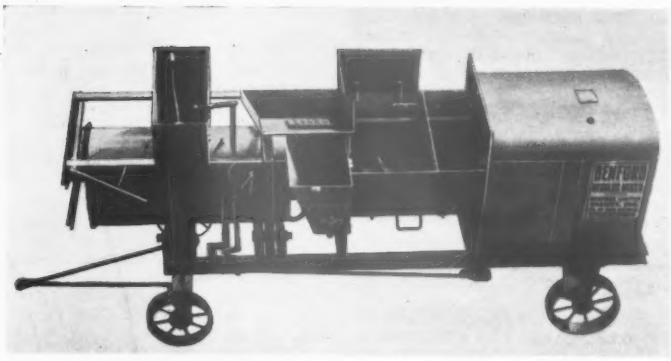
A locking device which is fixed to the top of the door has therefore certain advantages, and this Crompton effort seems simple and neat. The arm fixed to the door slides in a bracket on the lintel and a trigger locks the door as soon as it has opened fully. When the door is to be shut the trigger is lifted by a pull cord.—(*Thomas Crompton and Sons, Ltd., Ashton-in-Makerfield, Wigan.*)

Continuous Concrete Mixing

Provided that he can organize the work properly, there is much to be said, from the builder's point of view, for a concrete mixer which will deliver a continuous supply instead of the usual barrow loads every so often, and for this reason it seems that the new Regulus mixer recently introduced by Benfords, of Warwick, may well become popular, for, in relation to the area it occupies on the site, and the horse-power required to drive it, it produces roughly twice as much concrete per hour, and also needs less attention. While it is obviously all to the good when the architect knows something about the builder's job, it might be thought that the mixing of concrete was a matter which might well be left to the builder to decide, but this particular mixer has certain advantages which make it interesting for the architect. The chief of these is that the mix is kept constant within narrow limits, and that this is done automatically and is not dependent on strict supervision of the workmen. In the ordinary mixer every hopperfull which goes into the drum has to be properly gauged, and anyone who has watched a concrete mixer being worked knows that this is not always done as well as it should be. That workmen cannot always be trusted to keep to the specified mix is more or less proved by the fact that at least one firm makes a practice of supplying renderings in bags with the cement and sand all ready mixed. While straightforward concrete may not be so sensitive to small changes in composition, there is a growing habit of specifying the high grade concretes, in which the mix really does



The new Regulus machine (see note below).

make a difference, and any machine which will reduce the possibility of human error is therefore an advantage.

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The new Regulus machine is a German design which is now being made in this country. It was very widely used, I understand, during the building of the German *autobahnen*, and was evolved mainly for this purpose. This particular job involved a maximum of production in a short time, and the majority of the labour available was unskilled or semi-skilled, while the keep-moving technique was adopted, large machines advancing steadily across almost virgin country and leaving a complete road behind them. The Regulus fulfills all these demands. The photograph on this page gives an idea of the general arrangement, and it can be seen that there is a long feed screw (much the same as one finds in many automatic stokers) running down the long axis of the machine. This screw feeds the sand and aggregate, the proportions of the two being determined by the position of the division plate which can be seen in the picture ; when a ballast of ready mixed sand and aggregate is used this plate is removed. The feed screw for the cement runs transversely above the aggregate screw. In operation it is only necessary to keep the feed screws covered with the appropriate material and the machine does the rest, independent tests having shown that the proportions of cement, sand and aggregate are kept accurate to within 1 per cent. The speed of the aggregate screw remains constant and the cement ratio is varied by altering the speed of the cement screw. Water is added automatically in the mixing drum. It should be realized that, instead of the gauged materials being dumped into the drum in an almost unmixed state, as they are with the ordinary batch type mixer, they are here fed into the drum in a continuous flow of partly dry mixed materials. The output of the model illustrated is approximately 10 cub. yds. per hour, but larger models are available with outputs up to 400 cub. yds. a day.—(*Benford, Ltd., Warwick.*)

A Magnesite Code of Practice

During the last thirty or forty years magnesite composition has become a very popular material for floors and dadoes. But there must be many architects who look upon it as an unreliable material, largely because there has been a lot of price cutting in this branch of the industry. It may be accepted that magnesite flooring will provide a perfectly sound job provided the work is properly done by experienced firms, but there has so far been no accepted criterion by which the architect could specify a certain quality. Price cutting was therefore inevitable. Various flooring firms have seen the error of this way, and the Jointless Flooring (Oxychloride) Association has been formed, members of which undertake to do all their work in accordance with the Association's code of practice. This code* was evolved after a series of tests carried out by the Building Research Station, and covers such things as subfloors, methods of mixing and laying, and the testing of mixes, while the British Standards Institution has at the same time evolved a standard specification for the materials themselves. All you have to do, therefore, is to specify materials to B.S.S. 776 and workmanship to the B.I.N.C. Code of Practice. This clearing up of the position is a very sensible piece of work. Maybe it ought to have been done some time ago, but the fact remains that it is a good deal better late than never.—(*The Jointless Flooring (Oxychloride) Association, 69 Cannon Street, London, E.C.4.*)

Panel Warming for Hospitals

I have just come across a very interesting example of co-operation between users and manufacturers which might well be copied by other branches of the industry. Early last year a Ministry of Health Committee on Hospital Costs suggested that further information was needed on the advantages and costs of invisible panel warming systems as compared with radiators. The Central Bureau of Hospital Information undertook this further investigation jointly with the Invisible Panel Warming Association, and a report has now been prepared by Mr. Harold Temple.

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During the investigation forty-two hospitals were visited, and it was found that the system was, in general, popular, while the absence of exposed pipes and radiators definitely lessened the amount of cleaning necessary, while in some hospitals the cost of periodic redecoration was also reduced. Nowhere had any repairs to the panels been necessary. In twenty-seven hospitals the condition of the plaster was perfect, in eleven there were "very faint, hardly visible cracks," while in four there were "slight cracks." No statement on fuel costs is made, as no hospitals kept separate records of the fuel used for different purposes ; the report points out with some justice, however, that "tests on other buildings have shown substantial savings, and there appears to be no logical reason why in hospitals the same economy should not be secured." It is perhaps worth mentioning that the report does not deal with the question of applied panels consisting of a flat plate with passages for hot water on the back, but is concerned only with pipes embedded in the ceiling (or ceilings and walls), the installations being anything up to twelve years old.

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From the report also emerges the fact that this form of heating may have a very definite therapeutic value, for infectious diseases are often transmitted by air currents, and, since ceiling panels do not produce convection currents, this danger may be largely reduced. That this is not mere theory is borne out by a letter from a medical superintendent (printed in full in an appendix) in which it is stated that panel warming definitely reduces the incidence of infectious diseases. This remark may sound somewhat sweeping, but at the hospital in question two out of six villas are equipped with panel heating. During an influenza epidemic it was found that, while there were isolated cases in the panel-heated villas, in the other villas, which were equally warm, cases went down at the rate of eight or ten a day. An additional advantage, of course, is that plenty of ventilation can be obtained while the heat can be kept constant.

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The report is clearly set out, and contains a copy of the questions asked and a list of the hospitals visited. Copies of the report can be obtained from the Central Bureau of Hospital Information or from the Invisible Panel Warming Association.

* *Code of Practice for the laying of Magnesite Composition Flooring and Dadoes.* (London, Building Industries National Council. Price 1s. 3d.)

THE BUILDINGS ILLUSTRATED

NEW TOWN HALL, POPLAR (pages 793-797). Architects : Culpin and Son. The general contractors were Gee, Walker and Slater, Ltd., who were also responsible for the excavation, foundations, dampcourses, plumbing, plaster and joinery. Consultants and artists : Rees J. Williams, structural ; Robert Illingworth, M.I.MECH.E., electrical ; Donald Evans, sculpture ; J. Roger Preston and Partners, heating and ventilation ; Hope Bagenal, A.R.I.B.A., acoustics ; Dearle and Henderson, quantity surveyors. The subcontractors and suppliers included : Works Department, demolition ; Excel Asphalte Co., asphalt ; Diespeker & Co., reinforced concrete, fireproof construction, patent flooring, stair treads ; H. C. Parker & Co., brown-grey facing bricks ; Kentish White Brick Co., sand limes (bricks) ; Hunziker (Gt. Britain), Ltd., buff plinth (bricks) ; Frank Mortimer, Ltd., and Malcolm McLeod & Co., Ltd., artificial stone ; Matthew T. Shaw & Co., Ltd., structural steel ; Chas. Walker & Co., Bryon & Co., Ltd., and Carter & Co., Ltd., tiles ; Christiani and Neilson, cellular concrete finish (special roofings) ; G. R. Speaker & Co., "Eonit" partitions ; London Sand Blast Decorative Glass Works, Ltd., decorative glass ; A. Goldstein & Co., Ltd., ordinary glass ; Morris-Singer Co., cast lead, and bronze doors ; J. F. Ebner & Co., and Noel Wood Mosaic, woodblock flooring ; Donald Smith & Co., Ltd., central heating and ventilation ; General Electric Co., Ltd., boilers ; Electrical Installations, Ltd., electric wiring ; C. Harvey & Co., Harcourts, Ltd., and Troughton & Young, Ltd., electric light fixtures ; L. G. Hawkins & Co., Ltd., electric fires ; Adamzes, Ltd., sanitary fittings ; A. Johnson & Co., Ltd., stainless steel and sanitary fittings ; Yannedis, Ltd., James Gibbons, Ltd., and Dryad Metal Works, Ltd., door furniture ; Crittall, Manufacturing Co., Ltd., casements ; G.P.O. and Dictograph Telephones, Ltd., telephones ;

Bolton Gate Co., folding gates ; Dennison, Kett & Co., Ltd., rolling shutters ; Ratner Safe Co., Ltd., safe doors ; S. W. Farmer and Son, Ltd., iron staircase ; Accordo Blinds, Ltd., sunblinds ; G. Jackson and Sons, Ltd., decorative plaster ; Garton and Thorne, Ltd., C. Harvey & Co., and James Gibbons, metalwork ; J. P. White and Sons, Ltd., and Bath Cabinet Makers Co., Ltd., panelling ; Anselm Odling & Co., Ltd., external stonework ; Fenning & Co., Ltd., internal stonework; Carter & Co., Ltd., faience to entrance hall, also mosaic to balcony ; Gordon Russell, Ltd., textiles ; Peter Jones, Ltd., Sidney Laughton, Ltd., and Pixtons, Ltd., carpets ; H. H. Martyn & Co., Ltd., and Gordon Russell, Ltd., furniture ; Harris and Sheldon, Ltd., illuminated map case ; Roneo, Ltd., office fittings ; G. A. Harvey, Ltd., cloakroom fittings ; Marryat and Scott, Ltd., lifts ; Ferranti & Co., Ltd., clocks ; Dale's, signs in cast bronze and cut plastics ; Imperial Sign Co., signs ; Suddaby and Fryer, decorative glass panel, mural panel in Mayor's parlour.

TEMPLE OF PEACE AND HEALTH, CARDIFF (pages 807-810). Architect : Percy Thomas. The general contractors were E. Turner and Sons, Ltd., and the sub-contractors and suppliers included : Western Trinidad Lake Asphalte Co., Ltd., asphalt work ; Penarth Concrete Co., Ltd., concrete stairs ; Connies and Meadon, Ltd., constructional steelwork ; Trussed Concrete Steel Co., Ltd., steel reinforcement for stairs ; Kleine Co., Ltd., floors ; J. G. Proger and Sons, Ltd., heating ; John Williams and Sons (Cardiff), Ltd., steel windows ; Booth and Bomford, Ltd., electrical installation ; Finnis and Ruault, roof tiling ; H. H. Martyn & Co., Ltd., fibrous plasterwork, etc. ; Express Lift Co., Ltd., lift ; John Stubbs (Marble and Quartzite), Ltd., marble work to entrance ; Williams and Borgars, Ltd., sanitary goods ; May Acoustics, Ltd., acoustic felt ; Carter & Co., Ltd., tiles, etc. ; Pilkington Bros., Ltd., etched glass ; Bristow, Wadley & Co., Ltd., patent glazing ; James Gibbons, Ltd., door furniture, locks, etc. ; Armstrong Cork Co., Ltd., cork tiles ; Venesta, Ltd., flush doors ; Hollis Bros., Ltd., wood block flooring ; Bromsgrove Guild, Ltd., balustrading and handrails ; Marble Mosaic Co., Ltd., terrazzo work to staircases, etc. ; Bath and Cabinet Makers Co., Ltd., panelling and fittings to Council Chamber ; Korkoid Decorative Floors, Korkoid flooring.

LAW REPORT

ALLEGED INTERFERENCE WITH HEDGES

Bassett v. *Young.—Chancery Division. Before Mr. Justice Bennett*

THIS action involved a question whether, under the circumstances revealed, hedges or a post and wire fence formed the true boundary between owners of adjoining estates.

Col. T. P. Bassett, who in 1933 purchased Chilcomb Manor, near Winchester, contended that the centre of hedges dividing his land from that of Mr. C. Young, the adjoining owner, was the true boundary, and not a post and wire fence as alleged by Mr. Young. Col. Bassett and Mr. Young both purchased on the auction particulars.

Col. Bassett's case was that the hedges were shown on the ordnance survey as dividing the properties and not the fences. He complained that Mr. Young had wholly destroyed one hedge and partly destroyed the other, with the result that plaintiff's kitchen garden and orchard had been deprived of seclusion and protection from the winds.

Col. Bassett now sought an injunction restraining Mr. Young from interfering with so much of the hedges as were planted on his land and damages for alleged wrongful interference with plaintiff's hedges.

Mr. Young's defence was a denial that he had committed any wrongful acts, a plea that the fences were the true boundary, that it was not the custom of the county for a live hedge to form a party boundary and, in the alternative, that the cutting down of the hedges in question caused no appreciable damage to plaintiff's kitchen garden and orchard.

His lordship, after hearing a mass of evidence, said he came to the conclusion that it was the intention of the parties that the boundary should not be the centre of the hedges, but the post and wire fence, which was there at the date of the grant, and had been there prior to the auction sale. Looking at the plans on the deeds further convinced him that the wire fence was intended to be the boundary between plaintiff's land and that of the defendant. Under these circumstances, the plaintiff's action failed, and it would be dismissed with costs.

THE WEEK'S BUILDING NEWS

LONDON

BECONTREE. *Houses.* The L.C.C. is to erect further houses at Becontree, at a cost of £38,580.

ENFIELD. *School Enlargement.* The Enfield U.D.C. is to enlarge the Brimsdown School at a cost of £14,600.

ST. MARYLEBONE. *Housing.* The L.C.C. is to erect dwellings in the Boscobel Street areas, St. Marylebone, at a cost of £76,000.

ST. PANCRAS. *Housing.* The L.C.C. is to erect dwellings in the Coburg Street area, St. Pancras, at a cost of £36,000.

STEPNEY. *Housing.* The Stepney B.C. is to erect further dwellings on the Market site, at a cost of £8,636.

STOKE NEWINGTON. *School.* The L.C.C. is to erect an elementary school on the Abney Park site, Stoke Newington, to accommodate 484 junior boys, 484 junior girls, and 448 infants.

STOKE NEWINGTON. *Housing.* The L.C.C. is to develop a new housing estate in Seven Sisters Road, Stoke Newington, provision being made for 1,660 dwellings at a cost of £1,000,000.

PROVINCES

BIRKENHEAD. *Houses.* Plans passed by the Birkenhead Corporation : 42 houses, Barnsdale Avenue, Thingwall.

BLYTH. *Houses.* The Blyth Corporation is to erect 78 houses on the Plessy Estate at a cost of £30,114, and 58 on the Hodgson Road Estate at £21,085.

COCKERMOUTH. *Houses.* The Cockermouth U.D.C. is to erect 50 houses on the Windmill Estate, at a cost of £22,925.

DROITWICH. *Houses.* The Droitwich Corporation is to erect 70 houses on the Garden Estate, at a cost of £27,253.

MANCHESTER. *College Extensions.* The Manchester Corporation has obtained sanction to borrow £372,648 for extensions at the College of Technology.

MORPETH. *Houses.* The Morpeth R.D.C. is to erect 154 houses at Widdrington, at a cost of £63,072.

OUNDLE. *Houses.* The Oundle and Thrapston R.D.C. is to erect 76 houses at Clapthorn, Kings Cliffe and Ringstead, at a cost of £26,051.

OXTED. *School.* The Surrey Education Committee is to erect a central school for 280 children at Oxted.

PORTSMOUTH. *School.* The Portsmouth Education Committee is to erect a school in the West Cosham area at a cost of £14,343.

RADIPOLE. *School.* The Weymouth Education Committee is to erect an elementary school at Radipole.

ROCHESTER. *School.* The Rochester Education Committee is to erect a senior girls' school on the Frindsbury site at a cost of £44,334.

SALFORD. *School.* The Salford Education Committee is to erect an elementary school in Lancaster Road, Pendleton, at a cost of £27,700.

SALFORD. *School.* The Salford Education Committee is to erect a junior school in Sussex Street, Lower Broughton, at a cost of £18,900.

SHEFFIELD. *Houses, etc.* Plans passed by the Sheffield Corporation : 102 houses, Woodhouse Estate, Estates Committee ; 66 houses, Foxwood Avenue, etc., Hallewell Estates, Ltd. ; 78 flats, restaurant, etc., Fulwood Road, Mr. A. Krausz ; 68 flats, Clarkehouse Road, Mr. H. Glass ; 20 flats, Greenhill Avenue, The J. G. Graves Charitable Trust ; 12 houses, Swanbourne Road, M. J. Gleeson, Ltd. ; 22 houses, Norton Park View, Mr. A. G. Redmile ; 12 houses, Hunter's Lane, J. and H. Wheen.

SHIFNAL. *Houses, etc.* The Shifnal R.D.C. is to erect 79 houses and eight bungalows at Albrighton, at a cost of £37,100.

SHIPLEY. *Houses.* Plans passed by the Shipley U.D.C. : 26 houses, Wrose Mount, Walton and Brown.

SMETHWICK. *Houses.* The Smethwick Corporation is to erect 38 houses in Abbey Road.

SOUTHGATE. *Crematorium.* The Southgate Burial Board is to provide a crematorium in the burial ground at Southgate, at a cost of £19,150.

STAINES. *School.* The Middlesex Education Committee is to erect an elementary school at Staines, at a cost of £70,777.

STAVELEY. *Houses.* The Staveley U.D.C. is to erect 88 houses on the Norbriggs Estate, at a cost of £31,350.

STOKE-ON-TRENT. *Houses.* Plans passed by the Stoke-on-Trent Corporation : Eight houses, off Newcastle Road, for Mr. G. E. Tilstone ; 30 houses, Willow Drive, Blurton, for Mr. F. C. Gibson ; 36 houses, off Whieldon Road, Fenton, for Mr. A. Bates ; 16 houses, Hillside estate, Normacot, for Messrs. David & Co.

STRETFORD. *Fire Station.* The Stretford Corporation has approved plans of the central fire station, at a cost of £28,226.

SUNDERLAND. *School.* The Sunderland Education Committee is to erect a technical school in Villiers Street, at a cost of £57,476.

TODMORDEN. *Houses.* The Todmorden R.D.C. is to erect 56 houses on the Heptonstall estate, at a cost of £24,865.

TOTTINGTON. *School.* The Lancashire Education Committee is to erect a senior school at Tottington, at a cost of £22,658.

TUNSTALL. *Houses.* Plans passed at Tunstall : 10 houses, Mellor Street, for Mr. H. Burton ; 76 houses, Turnhurst Road, Packmoor, for Mr. C. Sutton.

WHETSTONE. *School.* The Westminster Diocesan Schools Commission is to erect an elementary school for about 250 senior children at Whetstone, Middlesex.

WOMBWELL. *Houses.* The Wombwell U.D.C. is to erect 74 houses on the Jump estate, at a cost of £27,737.

WORCESTER. *Police Headquarters.* The Worcester Corporation is to erect police and fire brigade headquarters, at a cost of £79,000.

WORKINGTON. *Houses.* The Workington Corporation is to erect 24 houses on the Westfield Estate.

WORKINGTON. *Gymnasium, etc.* The Workington Corporation has approved plans for providing a gymnasium and extension and re-arrangement of the dressing accommodation at the public baths and a bowling green on the Salterbeck Estate, at a cost of £11,500.

YEOVIL. *Houses.* The Yeovil Corporation is to erect 60 houses on the St. Michaels estate, at a cost of £22,800.

Copies of the loose supplement containing the labour rates for the principal towns and districts throughout the country can be obtained from the JOURNAL, price 2d. to cover postage.

PRICES

The complete series of prices consists of four sections, one section being published each week in the following order :—

1. Current Market Prices of Materials, Part I. (published last week)
2. Current Market Prices of Materials, Part II.
3. Current Prices for Measured Work, Part I.
4. A. — Current Prices for Measured Work, Part II.
   B — Prices for Approximate Estimates.

IMMEDIATELY below, Messrs. Davis and Belfield mention the principal changes which have occurred in the last month. Similar notes, and the deductions that may be drawn from them, will be published on this page each month.

NOTES ON PRICE CHANGES

Prices generally remain at about the same level. Such changes as have occurred are marked as indicated below.

O. A. DAVIS, F.S.I.

PART 2

Prices vary according to quality and quantity ordered.

Those given below are average market prices and include delivery in the London area, except where otherwise stated, but do not include overhead charges and profit.

CURRENT MARKET PRICES OF MATERIALS

BY DAVIS AND BELFIELD

JOINER

Prices are for standards in one delivery; when less than a standard is required, or special lengths, add £1 per standard

Joinery Timber

			Per standard £ s. d.	Per foot cube s. d.
● 3″ × 9″	Scantling	2nd Archangel	42 0 0	5 1¼
● 3″ × 9″	,,	3rd ,, ...	27 10 0	3 4
● 2″ × 9″	,,	2nd ,, ...	47 10 0	5 9¼
● 2″ × 9″	,,	3rd ,, ...	28 0 0	3 4¼
● 3″ × 8″	,,	2nd ,, ...	33 0 0	4 0
● 3″ × 8″	,,	3rd ,, ...	24 10 0	2 11¼
● 2″ × 8″	,,	2nd ,, ...	35 0 0	4 3
● 2″ × 8″	,,	3rd ,, ...	24 10 0	2 11¾
● 3″ × 7″	,,	2nd ,, ...	32 10 0	3 11½
● 3″ × 7″	,,	3rd ,, ...	23 10 0	2 10¼
● 2″ × 7″	,,	2nd ,, ...	35 0 0	4 3
● 2″ × 7″	,,	3rd ,, ...	23 0 0	2 9¼
● 2″ × 6″	,,	u/s ,, ...	22 0 0	2 8
● 1½″ × 11″	,,	3rd ,, ...	38 10 0	4 8
● 1½″ × 9″	,,	u/s ,, ...	34 10 0	4 2¼
● 1″ × 9″	,,	2nd ,, ...	47 10 0	5 9¼
● 1″ × 9″	,,	3rd ,, ...	35 0 0	4 3
● 1″ × 11″	,,	2nd ,, ...	50 0 0	6 0¾
● 1″ × 11″	,,	3rd ,, ...	39 10 0	4 9¾
● 1¼″ × 9″	,,	2nd ,, ...	47 10 0	5 9½
● 1¼″ × 9″	,,	3rd ,, ...	35 10 0	4 3½
● 1¼″ × 11″	,,	2nd ,, ...	50 0 0	6 0¾
● 1¼″ × 11″	,,	3rd ,, ...	41 0 0	4 11¾

JOINER—(*continued*)

Flooring

		⅞″	1″	1¼″
Yellow deal, plain edge in batten widths ..	per square	19/9	22/6	28/6
Ditto, T. & G.	per square	20/3	23/–	29/–
● T. & G. rift sawn B.C. pine in 4″ widths ..	per square		30/–	
● T. & G. random grain, in 4″ widths	per square		18/6	

Wall Linings

Deal Match Boarding :—		
1″ × 6″ T.G.B.	per square	24/–
1″ × 4½″ T.G.V.	per square	28/6
¾″ × 6″ T.G.B.	per square	19/–
¾″ × 4½″ T.G.V.	per square	18/6
● ⅝″ × 6″ T.G.B.	per square	15/9
● ⅝″ × 4½″ T.G.V.	per square	15/6
½″ × 4½″ T.G.V.	per square	12/–
Asbestos-Cement :—		
5/32″ Semi-compressed flat building sheets, grey	per yard super	1/3¾
3/16″ Ditto	per yard super	1/4½
¼″ Ditto	per yard super	1/11
¼″ Metal reinforced flat building sheets	per yard super	3/4

Prices are for orders of less than 1 ton.

● **Items marked thus have risen since October 20.**

CURRENT PRICES

BY DAVIS AND BELFIELD

JOINER AND STEEL AND IRONWORKER

JOINER—(*continued*)

Wall Boards :—

Asbestos-cement wall board (in sheets 8′ 0″ × 4′ 0″ only) under 5,000 feet super	per foot super			–/2¾
Asbestos-cement stipple glazed sheets (in sheets 8′ 0″ × 4′ 0″ only)	per yard super			7/6
Ditto, plain white glazed sheets (in sheets 8′ 0″ × 4′ 0″ only) ..	per yard super			8/6
Marble glazed sheets (in sheets 8′ 0″ × 4′ 0″ and 4′ 0″ × 4′ 0″)	per yard super			7/6

	300 yards	300–1,000 yards	1,000–2,000 yards	Over 2,000 yards
½″ Fibre board ..	2/–	1/10½	1/9	1/7

		25-75 yards	150–300 yards	Over 600 yards
⅜″ Fireproof plaster board	per yard super	2/2	1/10	1/6
¼″ Ditto	per yard super	2/–	1/8	1/4
Joint tape (approx. 250 feet run)	per roll ..		..	1/6
Joint filler	per lb. ..		..	–/4

Plywoods :—

	4 m/m	5 m/m	6 m/m	9 m/m	15 m/m
Birch (A) per square	18/9	23/6	—	37/–	—
„ (B) per square	15/6	—	21/–	30/6	43/–
Japanese figured oak (A.A.) per square	33/6	—	39/3	65/–	—
Austrian oak, figured one side, plain oak reverse (A.A.) per square	—	—	86/3	92/6	—
Australian walnut, finely figured one side (boards 72″ × 36″) per square			¼″ 67/6	⅜″ 85/–	
Sycamore, figured one side (ditto) per square			75/–	85/–	
Honduras mahogany, figured one side (ditto) per square			75/–	—	
Honduras mahogany, finely figured (boards 84″ × 36″) per square			125/–	—	

Prices are for complete bundles.

Blockboards :—

Alder :—

Thickness		Boards 60″ × 183″	Boards 72″ × 183″
½″	per square	59/3	59/3
⅝″	per square	66/3	66/3
¾″	per square	72/6	72/6
⅞″	per square	79/–	79/–
1″	per square	85/6	85/6
1¼″	per square	99/6	99/6
1½″	per square	114/6	114/6
1¾″	per square	128/–	128/–

Birch :—

Thickness		Boards 60″ × 84″ & 54″ × 72″	Boards 60″ × 140″
½″	per square	43/9	47/3
⅝″	per square	50/–	54/–
¾″	per square	55/3	59/6
⅞″	per square	60/–	64/–
1″	per square	67/6	72/3

Prices are for complete bundles.

Hardwoods

Joinery Quality.

English oak	per foot cube	15/–
American oak (plain)	per foot cube	10/–
„ „ (quartered)	per foot cube	12/–
Australian Silky Oak (plain) ..	per foot cube	11/–
„ „ „ (quartered) ..	per foot cube	12/6
Walnut, European	per foot cube	18/–
Teak, Rangoon	per foot cube	15/–
„ African	per foot cube	12/–

JOINER—(*continued*)

Mahogany, Honduras	per foot cube	13/6
American whitewood	per foot cube	9/–
Birch	per foot cube	8/–
Cedar (aromatic)	per foot cube	16/–
Japanese oak (plain)	per foot cube	10/–
„ „ (quartered)	per foot cube	12/–
Austrian oak (plain)	per foot cube	10/6
„ „ (quartered)	per foot cube	14/–

Sundries

Slaters or sarking felt	per yard run	–/6
Roofing felt	per yard run	–/8
Bituminous hair felt	per roll	33/–
All rolls 25 yards long by 32″ wide.		
Cork slabs, 1″ thick (3′ 0″ × 1′ 0″)	per foot super	–/4½
„ 2″ thick (3′ 0″ × 1′ 0″)	per foot super	–/8
Slagwool	per cwt. (approx.)	12/–
Building paper in rolls of 100 yards, 1-ply, 60″ wide (B.I.80 and L.G.I.80)	per roll	67/6
Ditto, 2-ply, 60″ wide (B.I.80)	per roll	135/–
Ditto, 2-ply, 60″ wide (B.I.20)	per roll	202/6
"Cabots" Quilt :—(Ex Works Twelve roll lots delivered carr. free.)		
Double ply .. per roll 42/–	per half roll	23/6
All rolls 28 yards long by 36″ wide. Special terms for quantities.		
Cut steel clasp nails, 1″ per cwt. 30/6	4″ per cwt.	21/6
„ „ floor brads, 2″ „ 20/9	3″ per cwt.	19/9
Bright oval wire nails 1″ „ 32/9	4″ per cwt.	21/6
Scotch glue	per cwt.	65/–

Floor Clips :—

		£	s.	d.
One leg floor clip	per 1,000	8	8	0
2″ short leg floor clip	per 1,000	8	8	0
2″ Regular floor clip	per 1,000	8	15	0
3″ „ „	per 1,000	9	0	0
2″ Regular ceiling clip	per 1,000	8	15	0
Single leg ceiling clip (7½″)	per 1,000	10	10	0

Special terms for quantities.

STEEL AND IRONWORKER

Steelwork

		£	s.	d.
Basis price for rolled steel joists sections 5″ × 3″ to 16″ × 6″, in 10 ft. to 50 ft. lengths	per ton	13	0	0
Extras on above for :—				
9″ × 7″ Section	per ton	0	5	0
4″ × 3″, 5″ × 2½″, 10″ × 8″, 12″ × 8″, 14″ × 8″ and 16″ × 8″ to 20″ × 7½″ sections inclusive	per ton	0	10	0
3″ × 1½″, 3″ × 3″, 4″ × 1¾″, 4¾″ × 1¾″ and 24″ × 7½″ sections	per ton	1	0	0
Channels, angles and tees	per ton	14	0	0
Mild steel plates	per ton	14	0	0
Screw bolts	per ton	35	0	0

Fabricated Steelwork

		£	s.	d.
Joists cut and fitted	per ton	17	0	0
Stanchions, ordinary sections with riveted caps and bases	per ton	20	0	0
Stanchions, compound	per ton	23	0	0
Plate girders	per ton	25	0	0
Framed roof trusses, 25′ 0″ span	per ton	25	0	0
„ „ „ 60′ 0″ span ..	per ton	23	0	0

Prices ex stock are higher, and definite quotations should be obtained.

Prime Galvanized Corrugated Iron Sheets

(Ex London Stocks)

	10 cwt. lots £ s. d.	Less quantity £ s. d.
4 to 9 fts. 18 or 20 gauge, 8/3″ corrugations .. .. .. per ton	20 0 0	21 0 0
10 fts. 18 or 20 gauge, 8/3″ corrugations	20 10 0	21 10 0
4 to 9 fts. 22 or 24 gauge, 8/3″ corrugations .. .. .. per ton	20 10 0	21 10 0
10 fts. 22 or 24 gauge, 8/3″ corrugations	21 0 0	22 0 0
4 to 8 fts. 26 gauge, 8/3″ corrugations ..	21 15 0	22 15 0
9 fts. 26 gauge, 8/3″ corrugations ..	22 5 0	23 5 0
10 fts. 26 gauge, 8/3″ corrugations ..	22 15 0	23 15 0

CURRENT PRICES

BY DAVIS AND BELFIELD

PLASTERER, PLUMBER AND INTERNAL PLUMBER

PLASTERER

Plaster and Cement

		1-ton loads	5-ton loads
Sirapite (coarse)	per ton	70/–	64/–
„ (fine)	per ton	78/–	—
Victorite No. 1	per ton	85/–	78/6 } 6-ton
„ No. 2 or non sweat	per ton	80/–	73/6 } loads
Thistle (browning, haired and pink finish)	per ton	70/–	64/–
Thistle (fine)	per ton	78/–	—
Pink plaster	per ton	66/–	—
White plaster	per ton	78/–	—
Keene's pink	per ton	112/6	—
Keene's white	per ton	117/6	—
Super Carbo	per ton	—	47/6 } 4-ton
Carbo-setting	per ton	—	57/6 } loads

1 ton upwards

	£ s. d.
Cullamix No. 2 cream (rendering mixture) per ton	5 10 0
„ No. 3 cream „ „ per ton	5 10 0
Snowcrete mixture „ „ per ton	5 5 0

Sundries

		Less than 150 yds.	Less than 300 yds.	Over 300 yds.
Sharp washed sand	per yard cube		8/9	
Cow hair	per cwt.		40/–	
Goat's hair	per cwt.		55/–	
$\frac{1}{16}$″ laths	per bundle		2/–	
$\frac{1}{4}$″ laths	per bundle		2/4½	
Expanded metal lathing, 9′ 0″ × 2′ 0″ $\frac{3}{8}$″ mesh × 26 gauge	per yard super		–/11	
Lath nails (galvanized) 1½″ × 14 gauge	per cwt.		48/6	
„ (bright wire) „ „	per cwt.		27/–	
¾″ Plaster board	per yard super	1/–	–/11	–/10
1½″ Galvanized nails	per lb.		–/5	
Scrim cloth in 100-yard rolls	per roll		2/3	

Wall Tiles

Commercial quality.	
Ivory, white, etc., glazed 6″ × 6″ × $\frac{3}{8}$″	per yard super 9/9
Angle beads (1½″ wide)	per yard run 1/2¾
„ „ (1″ „)	per yard run –/10
Rounded edge tiles	per yard run 2/6½
Coloured enamelled bright glazed, 6″ × 6″ × $\frac{3}{8}$″	per yard super 14/3
Angle beads (1½″ wide)	per yard run 1/4¾
„ „ (1″ „)	per yard run –/11¼
Rounded edge tiles	per yard run 2/7
Eggshell gloss enamelled, 6″ × 6″ × $\frac{3}{8}$″	per yard super 15/–
Angle beads (1½″ wide)	per yard run 1/7½
„ „ (1″ „)	per yard run 1/0¾
Rounded edge tiles	per yard run 2/8½

PLUMBER

Lead

● 3½ lbs. and upwards milled sheet lead in quantities of 5 cwts. and upwards	per cwt. 24/6
Add if cut to sizes	per cwt. 3/–
Lead ternary alloy, No. 2 quality extra over sheet lead	per cwt. 7/–
● Allowance for old lead delivered to merchant	per cwt. 15/–

Cast Iron Rainwater Goods (Painted or Unpainted)

The following prices for rainwater pipes and gutters are subject to 20 per cent. trade discount, and the prices of the fittings are subject to 5 per cent. and 20 per cent. trade discount.

Rainwater Pipes

	2″	2½″	3″	3½″	4″	4½″	5″	6″
Round pipes per yard	2/8½	2/9¾	3/7¾	4/0¾	4/9½	6/1¾	7/2¼	9/2
Shorts, 2′ 0″, 3′ 0″ and 4′ 0″ extra per yard	–/3¾	–/3¾	–/3¾	–/3¾	–/3¾	–/5	–/5	–/5
Bends each	1/9	2/–	2/6	3/–	3/7	5/–	6/6	8/5
Offsets, 4½″ and 6″ projection each	2/2	2/8	3/–	3/5	4/4	6/3	7/6	9/10
Offsets, 9″ projection each	2/10	3/2	3/9	4/8	5/7	7/6	8/10	11/2
Branches, single each	2/7	3/1	3/9	4/4	5/3	7/6	8/5	13/1
Shoes each	1/6	1/9	2/–	2/8	3/–	4/4	5/5	7/6

PLUMBER—(*continued*)

Square and rectangular pipes.

3″ × 3″	per yard 6/9¼
3½″ × 3½″	per yard 8/4
4″ × 2″ or 2½″	per yard 7/4¾
4″ × 3″	per yard 7/4¾
4″ × 4″	per yard 9/0¾
4½″ × 3″	per yard 8/5¼
5″ × 3″ or 3½″	per yard 9/7

Gutters

	3″	3½″	4″	4½″	5″	6″
Half round gutters per yard	1/9¼	2/1	2/1	2/2¼	2/4¾	3/7¾
Shorts 2′ 0″, 3′ 0″ and 4′ 0″ extra per yard	–/2½	–/2½	–/2½	–/2½	–/3¾	–/3¾
Angles and nozzle pieces each	1/5	1/7	1/9	2/–	2/2	3/1
Stop ends each	–/5	–/5	–/7½	–/9	–/10½	1/–
Ogee gutters per yard	2/1	2/3½	2/4¾	2/6	2/9¾	3/10¼
Straight back and shorts 2′ 0″, 3′ 0″ and 4′ 0″ extra per yard	–/2½	–/2½	–/2½	–/2½	–/3¾	–/3¾
Angles and nozzle pieces each	1/11	1/11	2/–	2/4	2/8	3/3
Stop ends each	–/6	–/7½	–/9	–/10½	1/–	1/3

Mild Steel Rainwater Goods

The following prices are subject to 12½ per cent. trade discount.

24 Gauge rainwater slip jointed pipes.

	2″	2½″	3″	3½″	4″
Galvanized round pipes with ears per 6′ 0″	2/7½	3/1½	3/9	4/3	4/9
Painted round pipes with ears per 6′ 0″	2/7½	3/–	3/4½	3/10½	4/3
Painted or galvanized short lengths with ears, extra each	–/6	–/6	–/6	–/6	–/6

18 Gauge Gutters.

	3″	3½″	4″	4½″	5″	6″
Galvanized half round gutters per 6′ 0″	2/–	2/3	2/4½	2/9	3/–	3/7½
Painted half round gutters per 6′ 0″	1/6	1/9	2/–	2/3	2/6	3/–
Painted or galvanized short lengths extra each	–/3	–/3	–/3	–/3	–/3	–/3

Asbestos-Cement Rainwater Goods

The following prices are subject to 10 per cent. trade discount.

Rainwater pipes.

Prices are for 6′ 0″ lengths, and 10′ 0″ lengths in 2″, 2½″ and 3″ diameters. Short lengths up to 2′ 0″ are charged as one yard. From 2′ 0″ to 4′ 0″ charged as 1½ yards. From 4′ 0″ to 6′ 0″ charged as 2 yards. Over 6′ 0″ charged as 10′ 0″.

Round pipes.

2″	per yard run 1/10
2½″	per yard run 2/0¾
3″	per yard run 2/5½
3½″	per yard run 2/11¼
4″	per yard run 3/4¾
4½″	per yard run 4/10¼
5″	per yard run 5/9½
6″	per yard run 7/1¾

Gutters.

Short lengths of gutter up to 2′ 0″ charged as 1 yard; from 2′ 0″ to 4′ 0″ as 1½ yards, and over 4′ 0″ as 2 yards.

	3″	4″	4½″	5″	6″	8″
Half round gutters per yard run	1/3¾	1/6¾	1/7¾	1/11	2/8	3/3½
Ogee gutters per yard run	—	1/11	2/0¾	2/5¾	3/0¼	3/11¼

INTERNAL PLUMBER

● Lead pipe in coils, 5 cwts. and upwards	per cwt. 24/–
● Lead soil pipe	per cwt. 27/–
Add if ribbon marked	per cwt. –/3
Lead ternary alloy, No. 2 quality extra over lead pipe	per cwt. 7/–
Plumber's solder	per cwt. 85/–
Tinman's solder	per cwt. 111/–

Drawn lead traps with brass screw eye, 6 lbs.

	1″	1¼″	1½″	2″
S. trap each	1/7	1/9	2/2	3/2
P. trap each	1/4	1/6	1/10	2/7
Extra for 3″ deep seal each	–/6	–/6	–/6	–/6

● Items marked thus have risen since October 20.

CURRENT PRICES

INTERNAL PLUMBER

BY DAVIS AND BELFIELD

INTERNAL PLUMBER—(*continued*)

Screwed and Socketed Steel Tubes and Fittings for Gas, Water and Steam, etc.

Tubes.

		½″	¾″	1″	1¼″	1½″	2″
Tubes 2 ft. long and over	per ft.	–/5½	–/6¾	–/9¼	1/1	1/4½	1/10
Pieces 12″ to 23½″ long	each	1/1	1/5	1/11	2/8	3/4	4/9
Bends	each	–/11	1/2	1/7½	2/7½	3/2	5/2
Fittings.							
Elbows, square ..	each	1/1	1/3	1/6	2/2	2/7	4/3
Elbows, round ..	each	1/2	1/5	1/8	2/4	2/10	4/8
Tees	each	1/3	1/7	1/10	2/6	3/1	5/1
Crosses	each	2/9	3/3	4/1	5/6	6/7	10/6
Sockets, plain ..	each	–/4	–/5	–/6	–/8	–/10½	1/3
Sockets, diminished	each	–/6	–/7	–/9	1/–	1/4	2/–
Flanges	each	1/–	1/2	1/4	1/9	2/–	2/9
Caps	each	–/5	–/6	–/8	1/–	1/3	2/–
Plugs	each	–/4	–/5	–/6	–/8	–/10	1/3

Fittings and flanges and tubes ordered in long random lengths are subject to the following trade discounts :—

	Tubes	Fittings	Flanges
Gas	62½%	53¾%	57½%
Water	58½%	50%	52½%
Steam	56¼%	46¼%	47½%
Galvanized gas	53¾%	46¼%	47½%
,, water	48¾%	42½%	42½%
,, steam ..	43¾%	38¾%	37½%

Brasswork. Best Quality

		½″	¾″	1″
● Chromium plated screw-down bibcocks, screwed for iron ..	per dozen	38/–	62/–	109/–
● Ditto, with screw ferrule	per dozen	47/3	74/–	116/–
● Ditto, with capstan head lettered, screwed for iron ..	per dozen	44/6	66/–	118/9
● Ditto, with screw ferrule	per dozen	53/9	86/–	137/–

		Brass Screwdown Stop Cocks with Unions both Ends	Brass Screwdown Stop Cocks with Screwed Ends	Brass Screwdown Stop Cocks with Male Screwed End and Iron Unions
● ½″	per dozen	41/9	47/3	38/6
● ¾″	per dozen	65/9	71/6	59/6
● 1″	per dozen	99/–	107/3	92/3
● 1¼″	each	14/–	14/9	13/3
● 1½″	each	22/6	23/6	20/9
● 2″	each	43/9	45/3	41/9

		½″	¾″	1″
● Portsmouth pattern ball valve for low pressure, screwed for iron ..	each	4/3	6/–	12/5
● Ditto, with flynut and union ..	each	4/8	6/10	14/–
● High pressure ditto, screwed for iron	each	3/11	6/–	12/5
● Ditto, with flynut and union ..	each	4/8	6/10	14/–

		2″	2½″	3″	4″
● Socket thimble sloping shoulder	per dozen	11/–	14/3	16/10	24/6

		1½″	2″	2½″	3″
● Flanged ferrule thimble ..	per dozen	8/–	9/9	14/9	17/5

		½″	¾″	1″	1¼″	1½″	2″
● Union joints for lead and iron ..	per dozen	8/3	11/3	15/5	28/2	46/9	101/2
● Single nut short boiler screws ..	per dozen	6/6	9/9	15/9	23/–	36/3	66/–
● Double nut boiler screws	per dozen	9/–	10/6	16/6	24/9	47/6	75/9
● Belfast sink wastes stamped brass with brass plug diameter of outlet 2″	per dozen						19/10

Galvanized Mild Steel Open Top Cisterns riveted with internal angle iron at top and corner plates

The following prices are subject to 15% and 20% trade discount :—

		14-gauge			12-gauge			¼″ plate			⅜″ plate		
		£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
50 gallon capacity	each	2	5	11	2	14	5	3	1	7	7	0	8
100 ,,	each	3	8	9	4	2	11	4	16	9	9	10	8
200 ,,	each	6	6	9	6	19	5	7	18	3	13	1	0
500 ,,	each	12	6	0	13	16	1	15	16	3	22	6	9
1,000 ,,	each		—		21	9	4	24	19	5	34	15	4

INTERNAL PLUMBER—(*continued*)

Galvanized Hot Water Tanks, fitted with handhole cover.

The following prices are subject to 15% and 20% trade discount :—

Capacity		16-gauge tested to a pressure of 1 lb. per sq. inch = 1½ ft. head of water			14-gauge tested to a pressure of 3 lbs. per sq. inch = 4½ ft. head of water			12-gauge tested to a pressure of 7½ lbs. per sq. inch = 10 ft. head of water			¼″ plate tested to a pressure of 10 lbs. per sq. inch = 15 ft. head of water		
		£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
20 gallons	each	2	0	3	2	3	11	2	7	8	2	12	9
40 ,,	each				3	1	7	3	9	0	3	16	8
					Tested to a pressure of 5 lbs. per sq. inch = 7½ ft. head of water						Tested to a pressure of 7½ lbs. per sq. inch = 10 ft. head of water		
60 ,,	each				4	19	3				5	5	5
80 ,,	each										7	5	7
100 ,,	each										8	4	5

Screwed flanges or bosses

½″	¾″	1″	1¼″	1½″	1¾″	2″	2½″	
1/8	2/–	2/4	2/11	3/4	3/9	4/8	6/9	Extra per flange or boss.
2½″	3″	3½″	4″	4½″	5″	6″		
8/4	14/3	16/9	19/3	26/11	30/1	45/1		

Galvanized Hot Water Cylinders, Mild Steel Riveted throughout, without Manhole, with usual number of flanges

The following prices are subject to 15% and 20% trade discount :—

Capacity		16-gauge tested to 5 lbs. pressure = 10 ft. head of water			14-gauge tested to 15 lbs. pressure = 30 ft. head of water			12-gauge tested to 20 lbs. pressure = 40 ft. head of water			¼″ plate tested to 25 lbs. pressure = 50 ft. head of water		
		£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
20 gallons	each	1	18	7	2	2	8	2	8	4	2	15	4
40 ,,	each	2	10	11	2	16	8	3	6	1	3	15	0
65 ,,	each				4	8	7	5	1	8	5	16	1
75 ,,	each				5	1	7	5	15	0	6	11	4
85 ,,	each							6	10	8	7	11	9
100 ,,	each										8	2	5

Cast Iron Soil Pipes and Connections, L.C.C. $\frac{3}{16}$″ metal.

The following prices for soil pipes are subject to 20% trade discount, and the prices of the fittings are subject to 20% and 5% trade discount.

	2″	2½″	3″	3½″	4″	5″ ¼″ metal	6″ ¼″ metal
Minimum weights in lbs. per 6′ 0″ length	24	30	35	41	46	78	92
Pipes coated or uncoated per yard run	3/10½	4/0¾	4/5¾	5/–	5/8½	11/8	14/0¾
Double sockets extra each	–/11¼	–/11¼	–/11¼	–/11¼	–/11¼	1/0½	1/0½
Short lengths extra 2′, 3′ and 4′ per yard run	–/3¾	–/3¾	–/3¾	–/3¾	–/3¾	–/5	–/5
Single spigot branch cast on pipe .. .. each	4/3	4/5	4/7	4/9	4/11	7/6	9/3
Single socket branch cast on pipe .. .. each	10/9	11/–	11/3	11/6	11/9	16/–	19/–
Bends, standard angles each	3/1	3/5	3/9	4/8	5/3	9/4	12/9
Large radius bends each	4/–	4/4	5/–	6/–	7/–	13/–	16/9
Inspection bends raised flange door, 4 gunmetal bolts .. .. each	16/1	16/11	17/9	18/8	19/3	31/10	36/6
Swannecks 4½″ and 6″ projection .. .. each	3/9	4/4	5/11	6/10	7/11	14/11	20/1
9″ ditto .. .. each	5/–	5/7	6/10	7/11	9/4	17/1	22/10
12″ ditto .. .. each	5/11	6/10	7/11	9/8	10/7	19/1	27/1
Single branch with two sockets. T pieces. T pieces diminishing two sockets, inverted two sockets.	3/9	4/8	5/7	6/6 each	7/6	15/10	21/8
Parallel branch pieces not exceeding 6″ centres. Y pieces. Anti-syphon branches with curved arm.	4/10	5/11	6/10	7/11 each	8/11	—	—
Double branch pieces, three sockets .. .. each	5/11	7/–	7/11	9/–	10/3	20/3	27/3
Inspection branch pieces double oval access door, 2 gunmetal screws each	12/11	14/–	14/11	16/6	17/9	29/2	36/2
Long branch pieces each	5/–	6/–	7/3	8/6	9/9	19/–	25/–

CURRENT PRICES

BY DAVIS AND BELFIELD

COPPERSMITH AND ZINCWORKER, GLAZIER AND PAINTER

COPPERSMITH AND ZINC WORKER

Copper

Hot rolled copper sheeting in 1 cwt. lots, all gauges to 24 wire gauge	per lb.	–/9½
• Copper tube, seamless solid drawn	per lb.	1/1½
Copper wire, 10 and 12 gauge	per lb.	–/9¼
Copper nails, 1″ and up	per lb.	–/10½

Fittings for Copper Tubes

Compression Type:	½″	¾″	1″	1¼″	1½″	2″	2½″
Straight coupling each	1/1½	1/4¾	2/0¾	2/8	3/9¾	5/7¾	14/–
Obtuse elbow each	1/10½	2/2½	3/3	4/1½	7/1¼	10/5¾	—
Tees each	2/1½	2/5½	4/–	5/9½	9/3	13/1½	19/3½
Crosses each	3/–	3/4¾	5/2¼	6/3¾	10/11¼	15/3	26/4¾
Reducing coupling each	—	1/4¾	2/0¾	2/8	3/9¾	5/7¾	14/–
Bends each	1/7¼	1/11¼	2/11	3/8¾	6/7¼	9/10¾	14/1
Brass stop cocks each	3/11½	5/10¾	8/7½	15/11¾	22/3¾	37/8¾	—

Extra for Polishing 25%; Chromium plating 50%; Nickel plating and polishing 50%.

Capillary Type

Straight coupling each	–/7½	–/10½	1/3¾	1/8½	2/3¾	3/4½	5/9
45° elbow each	1/3¾	1/8½	2/4½	3/2	4/9	7/1½	11/1
Tees each	1/5½	1/7¾	2/8	3/11½	5/7¼	8/3¾	12/8
Crosses each	1/10½	2/0½	3/4½	4/9	7/2¼	10/6	18/2½
Reducing coupling each	—	–/6¼	–/8¾	1/0¾	1/7	2/9¼	4/4½
Bends each	1/7	1/11	2/9¼	3/9½	5/11¼	8/3¾	11/10½
Pillar tap connection each	1/–	1/5½					

Extra for Polishing 15%; Chromium plating 40%; Nickel plating 27½%.

Zinc

		Quantities of less than 3 cwts.	Quantities of more than 3 cwts.	Quantities of more than 5 cwts.
Sheet zinc, 10 gauge and up	per cwt.	33/6	33/–	32/6
			5 sheets and under	12 sheets
• 8 gauge zinc safe hole perforated sheets, size 8′ 0″ × 3′ 0″	per sheet		4/11½	4/2½
• 7 gauge ditto	per sheet		4/4½	3/9
• 6 gauge ditto	per sheet		3/11	3/4¾

GLAZIER

Sheet Glass cut to size (ordinary glazing quality)

		In squares not exceeding 2 ft.	4 ft.	5 ft.	Over 6 ft.
18 oz. clear sheet	per foot super	–/2½	–/2¾	–/3	–/3¼
24 oz. ditto	per foot super	–/2¾	–/3¾	–/4	–/4⅜
32 oz. ditto	per foot super	–/4	–/5⅞	–/6⅞	–/7⅞
Obscured sheet glass net extra		–/1½	–/1½	–/1½	–/1½
⅛″ figured rolled glass, white	per foot super	–/6½			
⅛″ ditto, normal tints	per foot super	–/9½			
Hammered, double rolled, Cathedral white	per foot super	–/6			
Ditto, normal tints	per foot super	–/8½			

Thick Drawn Sheet Glass cut to size

		In squares not exceeding 1 ft.	2 ft.	3 ft.	4 ft.	6 ft.	8 ft.
3/16″ thick	per foot super	–/9	–/11	1/–	1/2	1/3	1/4
¼″ thick	per foot super	–/11	1/–	1/3	1/5	1/7	1/9
		In squares not exceeding 12 ft.	20 ft.	45 ft.	65 ft.	90 ft.	100 ft.
3/16″ thick	per foot super	1/6	1/7	1/9	—	—	—
¼″ thick	per foot super	1/10	2/2	2/4	2/8	3/–	3/–

For selected glazing quality add 10 per cent. to the above prices.

British or Foreign Polished Plate Glass cut to size

Ordinary ¼″ Substance In Plates not exceeding		Glazing for Glazing Purposes	Selected Glazing Quality	Silvering Quality
1 ft. super	per foot super	1/–	1/3	1/7
2 ,,	per foot super	1/4	1/6	1/10
3 ,,	per foot super	1/10	2/1	2/6
4 ,,	per foot super	2/6	2/9	3/2
6 ,,	per foot super	2/10	3/–	3/6
8 ,,	per foot super	2/11	3/4	3/8
12 ,,	per foot super	3/1	3/8	3/11
20 ,,	per foot super	3/1	3/9	4/1
45 ,,	per foot super	3/3	4/–	4/4
65 ,,	per foot super	3/7	4/3	4/11

GLAZIER—(*continued*)

British or Foreign Polished Plate Glass cut to size—(contd.)

Ordinary ¼″ Substance In Plates not exceeding		Glazing for Glazing Purposes	Selected Glazing Quality	Silvering Quality
90 ft. super	per foot super	3/11	4/8	5/1
100 ,,	per foot super	4/–	4/10	5/4

Plates exceeding 100 ft. super or 160 in. long or 104 in. wide at higher prices.

The usual thickness of polished plate glass is about ¼″, but if required of special thickness for glazing purposes add to the above for :—

		Plates up to and including 4 ft. super	All plates over 4 ft. super
⅛″ to 5/32″	per foot super	–/2	–/4
⅛″ to 3/16″ exact	per foot super	–/2	–/3
5/16″	per foot super	No extra	–/1½
¼″ bare	per foot super	,,	–/1¾
¼″ exact	per foot super	–/2	–/2
5/16″ to ⅜″	per foot super	No extra	–/4½
⅜″ exact	per foot super	–/2	–/6

Special quotations should be obtained for other qualities and thicker substances.

Silvering

		Ordinary Quality on Polished Plate, Thick Drawn Sheet, Patent Sheet and Plain Sheet	On Embossed or Decorative Work
12 ft. super or 90 in. long	per ft. super	9d.	1/4
20 ft. ,, or 100 in. long	per ft. super	10d.	1/4
45 ft. super } or 110 in. long	per ft. super	1/–	1/5
50 ft. ,, } or 110 in. long	per ft. super	1/0½	1/6
55 ft. ,, } or 120 in. long	per ft. super	1/1	1/6½
60 ft. ,, } or 120 in. long	per ft. super	1/1½	1/7
65 ft. ,, } or 130 in. long	per ft. super	1/2	1/8
70 ft. ,, } or 130 in. long	per ft. super	1/3	1/9½
75 ft. ,, } or 140 in. long	per ft. super	1/4	1/11
80 ft. ,, } or 140 in. long	per ft. super	1/5	2/0½
85 ft. ,, } or 150 in. long	per ft. super	1/8	2/5
90 ft. ,, } or 150 in. long	per ft. super	1/11	2/9½
95 ft. ,, } or 160 in. long	per ft. super	2/2	3/2
100 ft. ,, } or 160 in. long	per ft. super	2/5	3/8

For silvering on fluted sheet, figured rolled and cathedral, add 4d. a foot to the prices set out in the first column for polished plate, etc.

Silvering bent glass, double or more, according to bend.

For plates over 100 ft. super, add 3d. per ft. super for every 5 ft. or part of same.

Plates over 160 in. long at special rates.

Stripping for re-silvering, add 8d. per ft. super.

Wired Glass Cut to Sizes

¼-in. Georgian rough cast per ft. super 10d.

	In squares not exceeding 1 ft.	2 ft.	3 ft.	4 ft.
¼-in. Georgian polished plate per ft. super	2/6	2/8	2/10	3/2
	8 ft.	12 ft.	20 ft.	30 ft.
¼-in. Georgian polished plate per ft. super	3/8	3/10	4/2	4/6

Supplied in sizes up to 110 in. long and up to 36 in. wide.

For cutting to allow for wires in adjacent pieces to be "lined up," add 4d. per foot super.

PAINTER

White ceiling distemper	per cwt.	11/6
Washable distemper	per cwt.	60/–
Petrifying liquid	per gallon	4/6
Ready mixed white lead paint (best) 5-cwt. lots, in 14 lb. tins	per cwt.	69/–
White enamel	per gallon	25/–
Aluminium paint	per gallon	20/–
Stiff white lead, genuine English stack process, 1-ton lots, in 1-cwt. kegs	per cwt.	49/3
Driers	per cwt.	36/–
Linseed oil raw (5-gallon drums)	per gallon	3/–
,, boiled ,, ,,	per gallon	3/3
French polish	per gallon	11/6
Knotting	per gallon	16/–
Oil stain	per gallon	12/–
Varnish, oak	per gallon	10/–
,, copal	per gallon	16/–
,, flat	per gallon	20/–
Turpentine, genuine American, 5-gallon lots	per gallon	3/3
Creosote, 1-gallon lots	per gallon	1/4
Putty	per cwt.	13/–
Size	per firkin	3/6
Best English quality gold leaf, 23 carat	per book	2/4½
Extra thick, ditto	per book	3/6

• Items marked thus have risen since October 20.