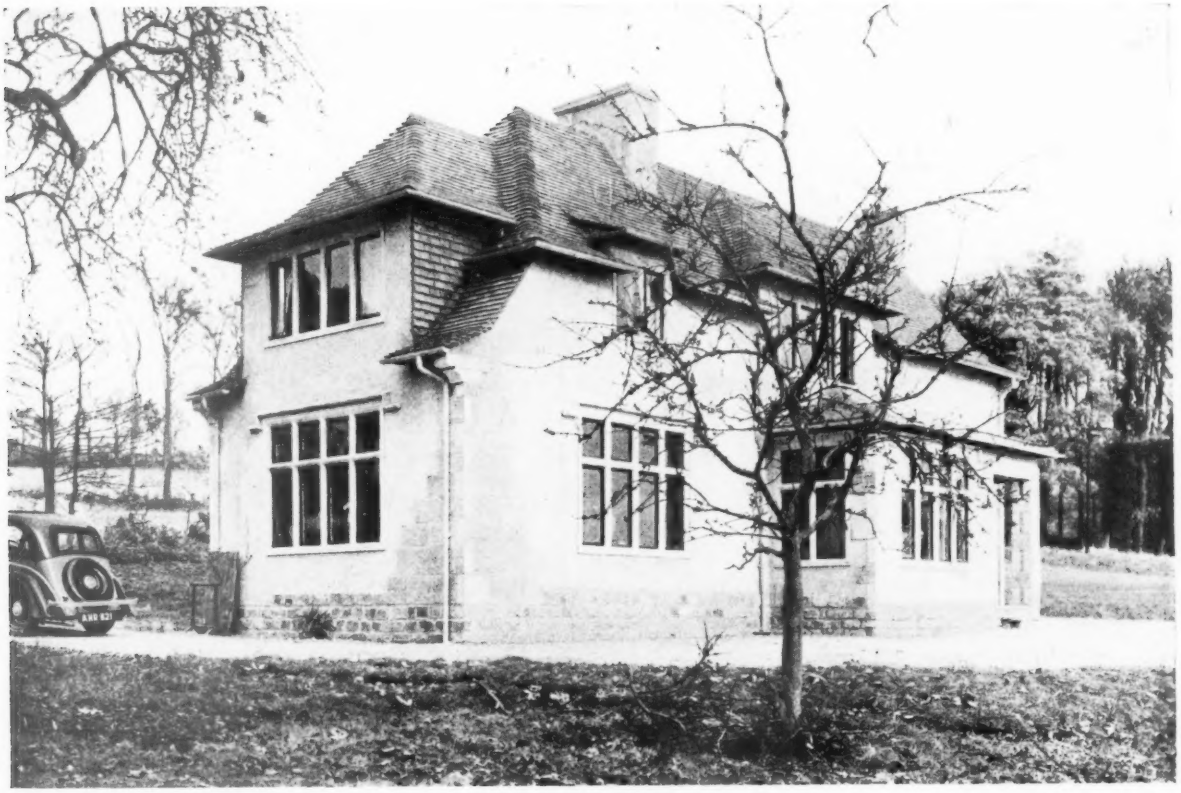


Bannerdown Estate, Batheaston, Bath. Architect: Edward Procter. Contractors: T. & E. Best.

'Phorpres' Cellular bricks were specified for the 11" cavity walls with roughcast facing

"As the position was very exposed we were anxious to get a warm and water-tight wall and you will be interested to learn that we are very pleased indeed with the results which we have obtained. Most definitely we can say that the house is warmer and drier than could be obtained with the ordinary solid brick and we are convinced that the Cellular bricks give a very high insulating value which is very pronounced in the summer"

PHORPRES
(four times pressed)

LONDON BRICK COMPANY LIMITED

HEAD OFFICE: AFRICA HOUSE, KINGSWAY, W.C.2. TELEPHONE: HOLBORN 8282

BIRMINGHAM DISTRICT OFFICE: PRUDENTIAL BLGS., ST. PHILIP'S PLACE, BIRMINGHAM, 3. TEL.: COLMORE 4142

D

THE ARCHITECTS' JOURNAL

THURSDAY, April 8, 1937. NUMBER 2203 : VOLUME 85

THE ARCHITECTS' JOURNAL, WITH WHICH IS INCORPORATED THE BUILDERS' JOURNAL AND THE ARCHITECTURAL ENGINEER, IS PUBLISHED EVERY THURSDAY BY THE ARCHITECTURAL PRESS (PUBLISHERS OF THE ARCHITECTS' JOURNAL, THE ARCHITECTURAL REVIEW, SPECIFICATION, AND WHO'S WHO IN ARCHITECTURE) FROM 9 QUEEN ANNE'S GATE, WESTMINSTER, S.W.1

THE ANNUAL SUBSCRIPTION RATES ARE AS FOLLOWS :
BY POST IN THE UNITED KINGDOM £1 3 10
BY POST TO CANADA £1 3 10
BY POST ELSEWHERE ABROAD £1 8 6
SPECIAL COMBINED RATE FOR SUBSCRIBERS TAKING BOTH THE ARCHITECTURAL REVIEW AND THE ARCHITECTS' JOURNAL : INLAND £2 6s. ; ABROAD £2 10s.
SUBSCRIPTIONS MAY BE BOOKED AT ALL NEWSAGENTS

SINGLE COPIES, SIXPENCE ; POST FREE, EIGHTPENCE. SPECIAL NUMBERS ARE INCLUDED IN SUBSCRIPTION ; SINGLE COPIES, ONE SHILLING ; POST FREE, 1s. 3d. BACK NUMBERS MORE THAN TWELVE MONTHS OLD (WHEN AVAILABLE), DOUBLE PRICE

SUBSCRIBERS CAN HAVE THEIR VOLUMES BOUND COMPLETE WITH INDEX, IN CLOTH CASES, AT A COST OF 10s. EACH. CARRIAGE 1s. EXTRA

9 Queen Anne's Gate, Westminster, London, S.W.1
TELEPHONE : WHITEHALL 9212-7 (OWN EXCHANGE)
TELEGRAPHIC ADDRESS : BUILDABLE, PARL., LONDON

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.

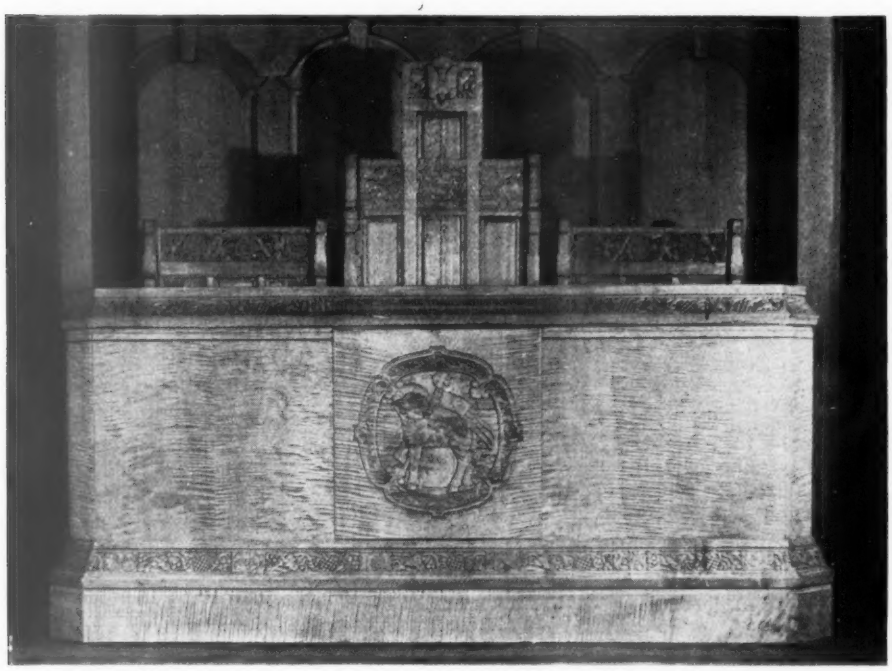
PRINCIPAL CONTENTS

	PAGE
Stevenson Memorial Church, Glasgow	587
Escalator and Entrance at Olympia. By Joseph Emberton	588
This Week's Leading Article	589
Notes and Topics *Astragal's notes on current events*	590
The Architects' Diary	592
R.I.B.A.	593
Leamington Spa Competition	595
Physical Training Centre Competition, Manchester	598
Letters from Readers	600
Garage at Olympia. By Joseph Emberton	601
Information Sheets *Construction of Stepped Balconies (493)* *Approximate Estimating—X (494)* *Sheet Steel Office Equipment (495)*	607
*Shops : XVII *By Bryan and Norman Westwood*	615
Literature	619
Offices for the Slough U.D.C. By C. H. James and S. Rowland Pierce	620
Trade Notes *Edited by Philip Scholberg*	625
Ideal Home Exhibition	626
Law Report	628
The Week's Building News	629
Rates of Wages	630
Current Prices	631

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

STEVENSON MEMORIAL CHURCH, GLASGOW

PRESENTATION BY SIR JOHN REITH

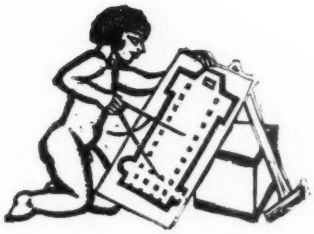


SIR JOHN REITH, Director-General of the B.B.C., has presented to the Stevenson Memorial Church, Belmont Street, Glasgow, a Communion table and chairs in memory of his mother and father. They are illustrated on this page.

The table is of sycamore and the chairs are of oak. They were designed by Alfred G. Lochhead, A.R.I.B.A., of Glasgow.

ESCALATOR AND ENTRANCE AT OLYMPIA, W.

This escalator and entrance are among the new improvements made at Olympia, W., until April 24 the venue of the Ideal Home Exhibition. The escalator serves all the galleries in the Empire Hall, and the entrance faces Addison Road Station. To the right of this entrance and adjacent to Olympia a new garage, accommodating 1,200 cars, and claimed to be the largest in Europe, has just been completed for the owners of Olympia. This garage and the interior of the new entrance hall are illustrated on pages 601-606. The architect is Joseph Emberton.



THE OTHER COMPLAINTS

ON March 25 the JOURNAL attempted to summarize the differences between the Architects' Registration Council and the Incorporated Association of Architects and Surveyors which had caused the latter to send to Members of Parliament a memorandum petitioning against the passing, in its present form, of the Amending Bill which is now before the Commons.

The JOURNAL stated that the central and vital objection of the I.A.A.S. appeared to be that its examination had been refused recognition as qualifying for admission to the Register through R.I.B.A. influence ; that it had, in fact, been unfairly rejected.

In a letter published elsewhere in this issue the I.A.A.S. states its general agreementwith our statement. The I.A.A.S. secretary, Major Athoe, points out that the I.A.A.S. does not seek any reduction in the standard of qualifying examinations, and deplores any future snobbery in the profession which might arise from varying standards of qualification.

But Major Athoe goes on to claim that the faults in the principal Act and its working are not negligible but valid and important, and are fully set out in the I.A.A.S. memorandum.

It is therefore in those statements in the memorandum that do not deal with qualifications for recognition that architects must seek the remaining I.A.A.S. objections.

The first complaint appears to be that the R.I.B.A. and its officers are making considerable efforts to secure the passing of the present Bill, and invites the public to draw from this the conclusion that the R.I.B.A. is trying to create a professional monopoly. This surely cannot be called a valid complaint. To whom can the Registration Council appeal for support in progressive measures if not to the principal professional society ? And if this society responds with more determination than the rest, the remedy would appear to most architects to lie elsewhere than in a slackening of R.I.B.A. assistance.

Next, the I.A.A.S. seems to complain that the disciplinary control of the Council over those on its Register is far from strict enough. Few architects will dispute this point. But when it is remembered that at present the Council can only punish unprofessional conduct by withdrawal of permission to use the title "Registered Architect," a Bill which will prevent those who behave improperly from calling themselves architects of any kind will seem one of the best ways of tightening up this control.

The remaining objections of the I.A.A.S. would appear to fall into two groups : that the Registration Council has refused to amend the principal Act before promoting the present Bill, and, in repetition of earlier allegations, that the R.I.B.A. has unfairly dominated the various committees of the Council.

The memorandum does not describe in any detail the points in the principal Act which might well be remedied. It merely mentions that the Council had unanimously decided that in certain particulars the Act might be improved. The profession in general will probably be prepared to believe that the Council and the I.A.A.S. know best in this matter; that the Act of 1931 does need some amending. But it is also probable that the whole profession feels that the primary drawback to the present Act is that the Council do not at present control the profession. Once they do, such a sustained and intelligent criticism will be directed upon the Act and its administration by the Council that any faults in the principal Act will be remedied in a remarkably short time. Architects want the Council to set up a uniform and reasonable standard for qualifying examinations and to enforce with absolute fearlessness and full publicity a reasonable code of practice. These ambitions are modest, but their achievement depends upon the passing of the present Bill.

The final complaints of the I.A.A.S. memorandum seem more difficult to understand except under the general allegation that the R.I.B.A. is too prominently represented in the affairs of the Registration Council. This attitude will probably appear unreasonable to most architects. That the principal schools are staffed by R.I.B.A. members and provincial societies allied to it is the result of the efforts of the Institute to improve the profession during a whole century and cannot well be held to be a fault.

It does not therefore appear that the I.A.A.S. memorandum reveals any important difference between itself and the Council save that of a qualifying examination. And with a possible solution to that difference the JOURNAL has already dealt.

The Architects' Journal
Westminster, S.W.1
Telephones: Whitehall
9212-7
Telegrams
Buildable
Parl
London

NOTES & TOPICS

BOARD OF EDUCATION

I HAVE been glancing through the 1936 Exam. papers for "Art" subjects, as set by the B.O.E. They're a bit incredible, or would be if one wasn't inured to this sort of thing. Take, for instance, the "Figure Composition." The examinee was introduced to the plan and elevation of a "small room used by individuals broadcasting from a wireless station" and asked to "decorate the entire room in a stimulating manner."

*

So far so, more or less, good. Then come the doors and dado which were to be "painted any colour the candidate prefers." Above the dado were to be six figures and "these should be rather under life-size." This in a room 10 feet by 15 feet.

*

In the embroidery exam.: "Make a design suitable for the seat and back of a modern tubular, bent-steel chair. It is to be one of a set of four in which the designs are different but in harmony with one another." This seems to be a gallant attempt to reconcile the economic philosophies of the two William Morris's.

IDEAL HOME

Terrified by the preliminary press boostings, I went along to Olympia last week expecting a positive riot of red, white and blue splashed over anything and everything; but although a few people have done really silly things in the name of "colourful loyalty," most of the exhibitors have been, on the whole, fairly reasonable.

*

The Main Hall is especially encouraging to anybody who believes that a plan can be some use to an exhibition, for limitations in colour and height give an impression of unity that every other exhibition in this country seems to lack. And this impression is agreeably strengthened by the view from the gallery, for the roofs of all the stands, instead of showing strips of muslin, cleats, odd lengths of wallboard, and all the jumble that seems inseparable from quick temporary work, have been covered over with strips of uniformly coloured canvas—another example of Mr. Jeffcott's firmness in making the manufacturers do what they ought, but almost certainly don't want to do.

BURFORD AND THE AIR MINISTRY

I suppose that Burford in Oxfordshire really does rank amongst the four or five finest English towns. It has an almost perfect main street, as everyone knows; and Sheep Street, too, is as good in its way. The town is not less lovely to my mind because it lacks any "museum pieces" in architecture; what is more important is that it is also completely free from any eyesore, has so far escaped the handweaving and pewter racket that invaded Broadway and Chipping Campden, and has a genuine agricultural-social life of its own.

*

Not less important are the surroundings. On Monday I took the high road over the hills to Stow, that road that runs where the Saxons made it, along the ridge, with English hedges defining the curves of the land on either side and clumps of English elms marking the run of the hollows. This week the earth was golden and the hedges were bright crimson.

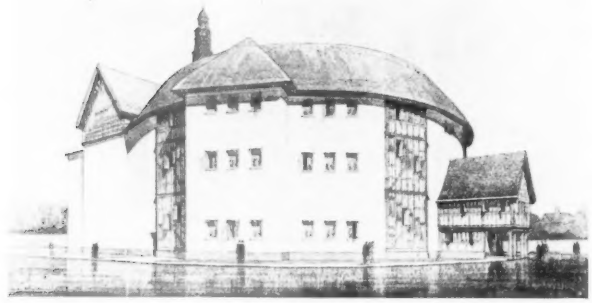
*

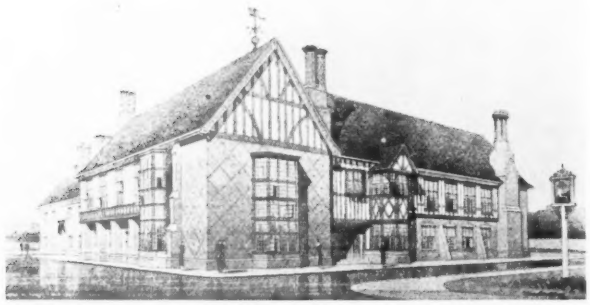
Just where the road rises out of Burford and one can begin to look down on the spire and back to where the town climbs the hill *they are beginning to build an aerodrome.*

*

I have criticized the more sentimental preservationists in my time; but this time we are together. I cannot believe that strategic requirements call for an aerodrome exactly at that spot.

A progress photograph of the Paris Exhibition as seen from the Eiffel Tower.





The designs, by Kenneth M. B. Cross, for the proposed rebuilding of Shakespeare's old Globe Theatre and the Mermaid Tavern on a site on the south bank of the Thames, in connection with the scheme of the Globe-Mermaid Association of England and America.

BATH

I followed the limestone belt south-west to Bath by a complicated route of my own that, road surfaces excepted, gives me sixty or seventy miles of country almost exactly as it must have been at the end of the eighteenth century. The biggest trees may not be in quite the same places and of course, here and there, there were some telegraph poles, but it was the sort of road that makes one wonder what all this "save the countryside" fuss is about—until I remembered Burford.

*

Bath I had not seen for two or three years. The Wood Brothers' scheme wears extraordinarily well; Gay Street and the Circus still a little small in scale (it was George Selwyn, I think, who compared the latter to the Colosseum turned inside out), but the Crescents—Royal and Lansdowne—magnificently arrogant and exquisitely urbane. It is odd that there should be an outcry against monotony whenever there is an attempt to introduce uniformity into modern housing; nearly all the great English eccentrics, aggressively individualistic every one of them, owned a terrace house at Bath, and were content with painted front doors and sunblinds as the outward expression of their taste. Inside—well, the insides are now in the "V. and A.," the Wallace Collection and the antique shops.

*

I suppose I ought to say more about Bath but, eighteenth century fashion, I spent the morning and half the afternoon in a coffee-house talking politics and regretting the Augustan age. It was Sacheverell Sitwell, was it not, who put down his recreation in "Who's Who" as "regretting the Bourbons"? It was all very pleasant and it meant that I did my last hundred miles over the Mendips and the Quantocks on empty roads by the light of my head-lamps; very twentieth century and very pleasant.

SHAKESPEAREAN APPRECIATION

The English-speaking peoples have found nowadays that they agree about a lot of things; which is a hopeful sign in a bad world, and comes to mind in remembering great things like the Pilgrim Trust and the Stratford Theatre.

*

The latter, as a really successful joint endeavour, naturally made us hope for more.

*

The more, however, now looks like arriving, still concerning Shakespeare; and somehow it does not seem quite so heartening as we hoped.

*

The Globe-Mermaid Association, of the U.S.A. and Britain, wants to rebuild the Globe Theatre and Mermaid Tavern; and designs have been prepared.

*

It is perhaps ungracious to be upset by the proposals. If so, I am ungracious. With certain modifications the Globe is to be an exact reproduction of the original Globe—but merely twice the size. It is to be thatched like its forebear (with reinforced concrete under). The Mermaid is to be Elizabethan with genuine half-timbering. Nor will this international memorial to a great man and a great age stop there.

*

An Elizabethan barge will be provided to convey visitors across the river.

QUIS CUSTODIET?

The title is inevitable, for this particular story is about a Medical Officer of Health near Newcastle-on-Tyne who condemned as insanitary not only his own house, but most of his neighbours' as well. The street, incidentally, was called Sinker's Row, which seems peculiarly appropriate, as the M.O.H.'s piano had disappeared twice through the floor and the roof wasn't much good with rain.

*

And the really noble part of the whole story is that all his neighbours will be rehoused by the Council, but that M.O.H. will not, for the Government grant applies only to houses of a certain type which is much too small to be of any use to him.

MORE DISTINGUISHED FOREIGNERS

So seldom can the R.I.B.A. Library have been caught napping in the matter of scholarship that Mr. Carter will, I am sure, take it as a compliment that I have to make the most of the opportunity he has given me: it is the first and probably the last. Here, then, is a quotation from the *R.I.B.A. Journal*: "*An interesting alteration to an existing office building: by Umbau and Erweiterung.*"

*

There are some distinguished foreign architects already practising in Britain; so it is possible that before long we may also be able to welcome Messrs. Alteration and Extension.

ASTRAGAL

NEWS

POINTS FROM THIS ISSUE

Two competition results 594

A correspondent suggests that the Panel System to secure minor improvements in appearance, has resulted in houses with grave faults in planning 600

"For shop protection a screen of armour plate glass inside the ordinary plate would be very effective, as it would not be seen until the outer sheet were broken" .. 616

"A self-contained 'weathermaker' has recently been marketed" .. 625

THE ARCHITECTS' DIARY

Thursday, April 8

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

R.I.B.A. EXHIBITION OF BRITISH ARCHITECTURE. *At the Derby Art Gallery. Until April 13.*

INSTITUTION OF STRUCTURAL ENGINEERS. *At the Institution of Civil Engineers, Great George Street, S.W.1. "Some Portal Frame Bridges in Oxfordshire." By J. J. Leeming. 6.30 p.m.*

BUILDING TRADES EXHIBITION. *Manchester. Until April 17.*

SOCIETY OF ANTIQUARIES. *Burlington House, W.1. "A Saxon Urn from Lincolnshire." By J. N. Myres. 8.30 p.m.*

Friday, April 9

INSTITUTION OF STRUCTURAL ENGINEERS. *Western Counties Branch. At the Merchant Venturers' Technical College, Bristol. "Co-operation between the Architect and the Engineer." By J. Addison. 7.15 p.m.*

Monday, April 12

R.I.B.A., 66 *Portland Place, W.1. Presentation of the Royal Gold Medal to Sir Raymond Unwin. 8.30 p.m.*

Tuesday, April 13

INSTITUTION OF STRUCTURAL ENGINEERS. *Annual Dinner. At the Dorchester Hotel, W.1. 7.30 p.m.*

R.I.B.A., 66 *Portland Place, W.1. Dance. 9 p.m.*

SOCIETY OF CHEMICAL INDUSTRY. *At Burlington House, W.1. "The Use of Rubber in Road and Building Construction." By B. D. Porritt. 8 p.m.*

Wednesday, April 14

INSTITUTION OF STRUCTURAL ENGINEERS. *Scottish Branch. At 129 Bath Street, Glasgow. "The Erection of Some Steel Bridges." By J. F. Pain. 7 p.m.*

INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS. *London and Home Counties Branch. At 43 Grosvenor Place, S.W. "A London Member Visits other Countries." By B. G. Abrahams. 7 p.m.*

CIVIC CENTRE, NEWPORT

The Ministry of Health has approved Newport's Civic Centre scheme. The architect is Mr. T. Cecil Howitt, whose design was placed first in a competition held last year.

ARCHITECT FOR THE NEW PAISLEY HOSPITAL

The Public Health Committee of the Paisley Town Council has recommended the Council to appoint Mr. T. S. Tait as architect for the new maternity hospital which it is proposed to build on a site close to the recently opened Infectious Diseases Hospital, the architects for which were Messrs. John Burnet, Tait and Lorne.

TEAM VALLEY TRADING ESTATE

Colonel K. C. Appleyard, chairman of North-Eastern Trading Estates, Ltd., addressing the Manchester Rotary Club on April 1, said that 27 factories had been let on the Team Valley Trading Estate, established by the Government under powers of the Commissioner for Special Areas. That figure showed an increase of nine factories since the last announcement in mid-February, and the North-Eastern Trading Estates, Ltd., were now committed to an expenditure of nearly £750,000 for development work and building of factories.

TOWN PLAN FOR DUBLIN

The following resolution was passed at a general meeting of the Royal Institute of the Architects of Ireland, held in Dublin last week: "This general meeting of the Royal Institute of the Architects of Ireland, having heard from our representatives—appointed by the Council at the request of the Town Planning Committee of the Corporation of Dublin to attend a meeting of the Committee held on March 2—a report of the proceedings at that meeting, endorse the views of our representatives expressed at, and subsequent to, the meeting. We are unanimously of opinion that, if the Corporation deem it necessary to employ a non-national as a consultant in the preparation of a town-planning scheme for Dublin, to which view we do not necessarily subscribe, an architect or architects, possessing town-planning qualifications and practising in the Saorstat, should be appointed to act as co-consultant with such non-national, to ensure that the requirements of local conditions and of Saorstat legislation shall receive the special consideration which the circumstances clearly necessitate."

A progress photograph of Dagenham Municipal Buildings. Architect, E. Berry Webber.

EDINBURGH ARCHITECTURAL ASSOCIATION

At the seventy-ninth annual general meeting of the above Association, held last week, Mr. W. J. Walker Todd, F.R.I.B.A., was re-elected president, with Messrs. J. R. M'Kay, A.R.I.B.A., and L. G. Thomson, A.R.I.B.A., as vice-presidents.

ANNOUNCEMENT

Mr. Edward Donati, A.R.I.B.A., has commenced practice at 1 Bancks Street, Minehead (Telephone No.: Minehead 497), where he will be pleased to receive trade catalogues.

GENERAL POSITION IN THE BUILDING INDUSTRY

"The satisfactory position of the building industry has been fully maintained, allowing for normal seasonal influences," states the current issue of "The Building Industries Survey," "and the increase in activity in the spring may be expected to attain its usual dimensions.

"The declining tendency of the value of plans passed by 146 provincial urban authorities for dwelling-houses continues, especially in the South of England. Total activity, however, is well maintained, owing to increased construction for local authorities, and this factor will be of increasing importance as building under the 1935 Housing Act gets under way and activity under the 1930 Act approaches its peak.

"The high level of activity in industrial and commercial building continues, and the building plan statistics indicate a further advance. Re-armament will be an increasingly important factor, owing both to direct expenditure on building by the Government and to the erection of new factories and extensions for firms receiving Government contracts. The estimates make provision for an expenditure out of the votes for works, buildings and lands of the defence departments during 1937 of £41 millions, as compared with last year's total (including supplementary estimates) of £17 millions.

"The position of public works contracting is more favourable than at the beginning of any year since 1931. Loan sanctions have shown steady increases, and a number of large schemes commenced last year will be in a more active stage. Some of

the constructional work in connection with the defence measures may be undertaken by public works contractors, and some may entail constructional engineering work.

"The outlook for the materials industries, especially those catering for the larger structures, continues to be favourable. In some cases requirements arising from factory construction, public works activity and works in connection with the defence programme will converge, and in these cases total demand may reach a very high level.

"Pressure on steel supplies, especially of structural descriptions, has increased further, and re-rollers have in some cases been forced to curtail their output of structural sections, with a prospect of further curtailment. A growing shortage of scrap and pig iron is experienced, and efforts are being made to increase imports of pig iron and crude steel, while the British Iron and Steel Federation has set up machinery to distribute the available supply of scrap among the various concerns. Consumers have also been notified that steel prices will be advanced by an unspecified amount as from June 1."

CREMATORIUM COMPETITION

The Corporation of Cambridge invites architects who have an office within 150 miles of Cambridge to submit designs for a crematorium in open competition. Applications for conditions should be made to Mr. C. H. Kemp, Town Clerk, The Guildhall, Cambridge. Deposit £1 1s. Professor H. S. Goodhart-Rendel, F.R.I.B.A., is the assessor.

ARCHITECTURAL EDUCATION IN GERMANY

The paper by Dr. Fritz Curtis on "Architectural Education in Germany," which was reported in our last issue, was read at a meeting of the Architectural Society of the Liverpool University School of Architecture, and not, as stated, at a meeting of the Liverpool Architectural Society.

EXHIBITIONS

Jongkind's painting is very little known in this country, and so the exhibition at Tooth's, covering pretty well the whole range of his life, is of more than usual interest. His work, like that of Boudin, forms a link between the Barbizon school of Corot, and the Impressionists, and Boudin's influence is unmistakable, particularly in such early examples as the "Sortie de Port." This was painted in 1866. Beside it hangs the lovely "Boulevard de Port-Royal, Paris," painted in 1877, in which Jongkind's painting has developed further towards the impressionism which so profoundly influenced Monet, Sisley, and Pissarro.

*

The temptations of fashionable portrait painting have led many a great painter to a dead-end, where one slick likeness after another takes the place of any experiment in the translation of individual character. Without suggesting that Anthony Devas has yet reached this impasse, it would seem from an examination of his work that success has come to him rather too soon, and that the insidious poison of the commissioned portrait may kill what is very obviously the work of a young painter of more than ordinary promise, and of considerable achievement. His pen and wash drawings, some of his interiors, and his direct portrait of Anthony Ayscough (No. 30), show how good a painter he can be.

D. C.

Jongkind. Tooth's Galleries, 155 New Bond Street. Until April 10.

Paintings and drawings by Anthony Devas, Wildenstein Galleries, 147 New Bond Street. Until April 14.

"The Golden Hall of Homage": the main hall at Olympia, W., where the Ideal Home Exhibition is now being held. At the far end is a statue, fifteen feet high, of H.M. the King. The statue is the work of Sir William Reid Dick, R.A.

R. I. B. A.

ROYAL GOLD MEDAL

The Royal Gold Medal for the promotion of architecture will be presented to Sir Raymond Unwin, PP.R.I.B.A., at a meeting of the R.I.B.A., on Monday next, at 8.30 p.m.

THE HONITON COMPETITION

The following notice has been issued by the R.I.B.A.: "Members of the Institute and of its Allied Societies must not take part in the competition for the design of houses for the Honiton Borough Council."

MAINTENANCE SCHOLARSHIPS IN ARCHITECTURE

The Royal Institute of British Architects offers for award in July, 1937, the following Maintenance Scholarships in Architecture, tenable from October 1, 1937:—

A. An R.I.B.A. Maintenance Scholarship of a maximum value of £70 per annum.

B. Three Houston Maintenance Scholarships of a maximum value of £100 per annum each.
(The Houston Maintenance Scholarships are for the purpose of providing educational and maintenance allowances for the sons of architects and artists who may be, or at the time of their death were, in impecunious circumstances, whether such architects or artists are alive or dead.)

C. The Artists' General Benevolent Institution Maintenance Scholarship of a maximum value of £100 per annum.
(The Artists' General Benevolent Institution Maintenance Scholarship is open only to orphans or sons or daughters of an architect or artist.)

D. The Ralph Knott Memorial Maintenance Scholarship of a maximum value of £45 per annum (tenable only at the School of Architecture, The Architectural Association, London).

The scholarships will be tenable in the first instance for one year and renewable for two further periods of one year each. They are intended to enable promising students, whose parents or guardians have not the necessary means, to attend approved courses at the Schools of Architecture recognized for exemption from the R.I.B.A. examinations. Students already taking such a course are also eligible to apply for a scholarship. The scholarships are available for students residing in Great Britain.

The value of the scholarships, up to the limits stated, will depend on the financial circumstances of the parents or guardians of the candidate. The parents or guardians

will be required to furnish particulars on the proper form, of their financial position.

Particulars and forms of application may be obtained, free, on application to the Secretary to the Board of Architectural Education, R.I.B.A., 66 Portland Place, London, W.1. The closing date for the receipt of applications, duly completed, is May 22, 1937.

COUNCIL MEETING

Following are some notes from a recent meeting of the Council of the Institute.

R.I.B.A. Architecture Bronze Medals : Professor R. A. Cordingley, M.A. (F), was appointed to represent the R.I.B.A. on the Jury for the award of the Medal in the area of the Liverpool Architectural Society. Mr. Stephen Welsh, M.A. (F), was appointed to represent the R.I.B.A. on the Jury for the award of the medal in the area of the Nottingham, Derby and Lincoln Architectural Society.

Professional Classes Aid Council : Mr. Austin Blomfield, M.A. (A), was nominated to represent the R.I.B.A. on the Professional Classes Aid Council in succession to Mr. Arthur J. Davis (F).

The Empire Forestry Association : Mr. P. J. Waldram (L) was appointed to represent the R.I.B.A. on the Empire Forestry Association in succession to the late Mr. H. D. Searles-Wood.

Joint Committee of the Architectural Profession and the Electric Lamp Manufacturers' Association : Mr. Walter Goodesmith (A) was appointed as a member of the Joint Committee of the Architectural Profession and the Electric Lamp Manufacturers' Association in place of Mr. L. W. Thornton White.

British Standards Institution Technical Committee CH/16, Dustbins and Storage Containers : The Science Standing Committee reported that Mr. Colin Dixon (Student) had been appointed to represent the R.I.B.A. on the British Standards Institution Technical Committee CH/16, Dustbins and Storage Containers, in place of Mr. Godfrey Samuel, who was unable to undertake the representation.

Plumbing Trades National Apprenticeship Council : Mr. A. H. Barnes (F) was appointed as the R.I.B.A. representative on the Plumbing Trades National Apprenticeship Council in place of the late Mr. H. D. Searles-Wood.

Displays of Contemporary Industrial Art : Mr. R. A. Duncan (A) was appointed to represent and give evidence on behalf of the R.I.B.A., at the enquiry into the provision made by museums in London and in the provinces for Industrial Art, and in particular into the question of displays of contemporary Industrial Art, which is being conducted by the Council for Art and Industry.

Annual Award for Brick Buildings of Merit : The Hon. Humphrey Pakington (F) (Chairman of the Art Standing Committee) was appointed to serve on the Jury appointed by the Tylers and Bricklayers Company for the award of gold and silver medals for brick buildings of merit.

Junior Members Committee : Mr. John Brandon-Jones (A) was appointed to fill the vacancy on the Junior Members Committee caused by the resignation of Mrs. Janet Pott.

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. Guy St. John Makin (Adelaide) (Past-President of the Royal Australian Institute of Architects).

Re-instatement : The following ex-members were reinstated : As Fellows, Messrs. Harold Baily and Harold Guy Holt ; as Associate, Mr. Alec Nisbet.

Resignations : The following resignations were accepted with regret : Messrs. Gerald McMichael (A), Wilfrid Patterson Riddle (L), Arthur Hadley Fagg (RETD.L), Henry Whitehead Featherstone (RETD.L) and Benjamin Robert Irvin (RETD.L).

Transfer to the Retired Members Class : The following members were transferred to the Retired Members Class : As Retired Associate, Mr. Victor Bosher ; as Retired Licentiate, Mr. James Alexander.

TWO COMPETITION RESULTS

LEAMINGTON SPA

Mr. R. Norman MacKellar, F.R.I.B.A., the assessor of the competition for new Police and Fire Brigade Headquarters for the Royal Borough of Leamington Spa, has made his award as follows :

Design placed first (Premium £150) : S. N. Cooke, W. N. Twist, R. Dickinson and H. Locksley Hare (Birmingham).

Design placed second (£100) : G. Hunt While and A. Ledoyen (Birmingham).

Design placed third (£70) : Nicol and Nicol and Thomas (Birmingham).

The designs submitted by the following architects were commended : A. W. Soden and Partners (Coventry) ; Hickton and Madeley (Walsall and Wolverhampton) ; Gateley and Parsons (Birmingham) ; Philip B. Herbert and Philip Skelcher (Birmingham).

The competition was limited to architects in the area of the Birmingham and Five Counties Architectural Association.

The twenty-five designs submitted will be exhibited in the Winter Hall, Royal Pump Room, Leamington Spa, from Monday, April 12, to Saturday, April 17, inclusive, between the hours of 9 a.m. and 6 p.m.

PHYSICAL TRAINING CENTRE

The award of the assessors (Messrs. W. A. Johnson, F.R.I.B.A., Francis Jones, F.R.I.B.A., and Professor R. A. Cordingley, F.R.I.B.A.) in the competition, promoted by the Management of the Manchester Building Trades Exhibition, for a physical training centre, is as follows :

Design placed first (£75) : Peter Cooke, of 16 Albany Road, Bexhill-on-Sea.

Design placed second (£50) : Jack Hollingworth Napper, of 3 Carisbrooke Avenue, Cottingham, E. Yorks.

Design placed third (£25) : Thomas E. Richards, of 61 South Molton Street, London, W.1.

Highly Commended : W. G. Thornley, of "Arnside," Stockport Road, Hyde, Cheshire.

Seventy designs were submitted.

LEAMINGTON SPA COMPETITION

THE WINNERS' REPORT

Following are some extracts from the winners' report.

Very careful consideration has been given to the existing ground and to the disposition of the various buildings on the site in order to take advantage of the levels and at the same time to provide as large as possible a yard for fire drill.

The main entrance to the Court block is placed in Warwick Street, and by forming the forecourt at the existing ground level it is only necessary to go up 5 ft. to be on the general floor level of the Court. A separate entrance leading off the main vestibule provides access to the public gallery, while the magistrates' private entrance is placed in Dale Street, giving direct access to their retiring room and lavatories.

The main entrance to the Police Station is placed in Grove Street at pavement level, and immediately opposite is the charge room. A subsidiary entrance is provided from the yard which serves the charge room and the parade room. The decontamination rooms are entered direct from the yard. A secondary entrance to the Police Station, which will also serve the weights and measures offices, is placed in Dale Street, while the workshop to the latter may also be entered from the road for the convenience of heavy machines, etc.

On the first floor are planned the recreation rooms, mess room, lavatories, etc., and the rooms for the chief constable, inspectors and detectives face Warwick Street. The record and filing room is conveniently placed near the staircase to be easily accessible from both floors.

The post-mortem, mortuary, etc., together with dog kennels, are placed in a self-contained block with private yard adjacent to the police building.

The garage for police cars and ambulances is placed facing Grove Street, and gives direct access to the street.

The fire station is placed in Dale Street, this being the most convenient position for access north and south to the centre of the town. The fire escape is accommodated in the engine room, the watch room and chief officers' room adjoining, while over these rooms are the battery and hose and uniform drying rooms. The workshop and various stores also adjoin the engine room, and a glazed canopy projecting 30 ft. is provided to the latter for washing purposes. The hose tower is arranged in an isolated position.

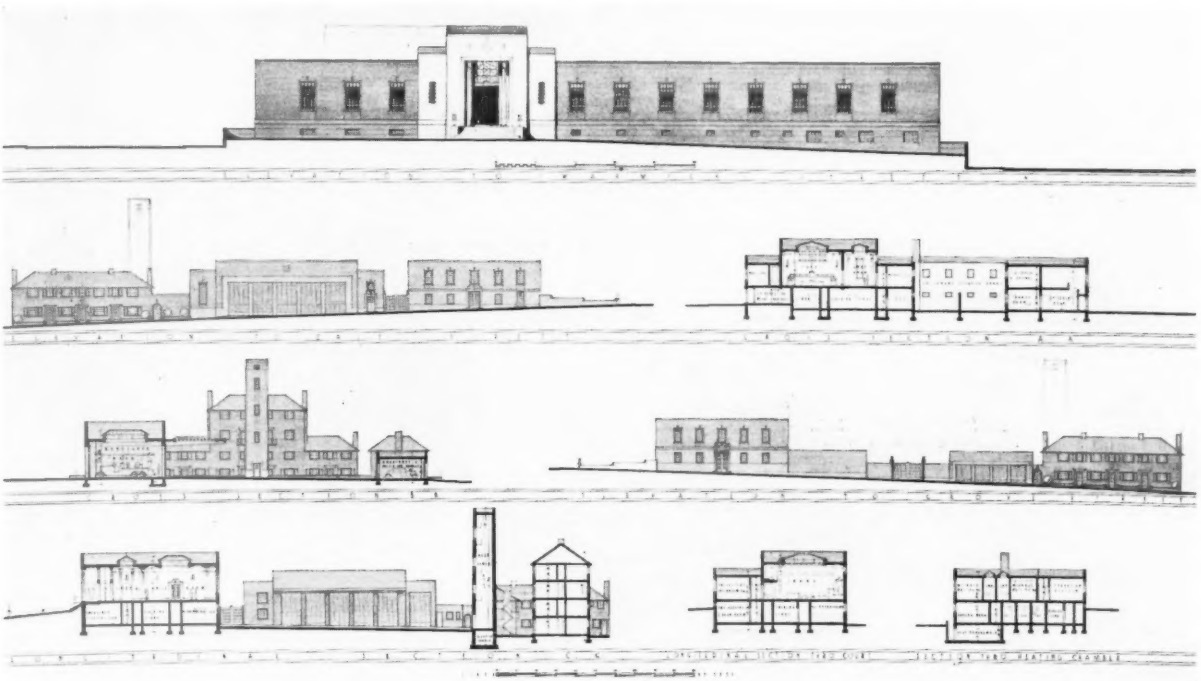
The drill yard has a clear open space of 135 ft. by 105 ft., and a return way for engines provided from Grove Street. The levels of this have been arranged to give the minimum amount of slope possible.

The firemen's houses are grouped at the south end of the site and arranged to form a small housing unit detached from the drill yard. Separate access is provided to the houses from Grove Street and Dale Street, in addition to the drill yard.

Eight houses are shown, and in the centre block facing the drill yard are four maisonettes, the top two of which are approached by an outside

LEAMINGTON SPA COMPETITION

POLICE AND FIRE BRIGADE HEADQUARTERS



staircase and provided with a goods lift. The open space between the houses and the drill yard would be laid out with turf and paths.

The heating chamber and fuel store are placed under a portion of the police building, well situated to serve both the police building and the fire station.

Materials

The facings to walls would be executed in a thin silver grey facing brick with Portland stone plinth and dressings.

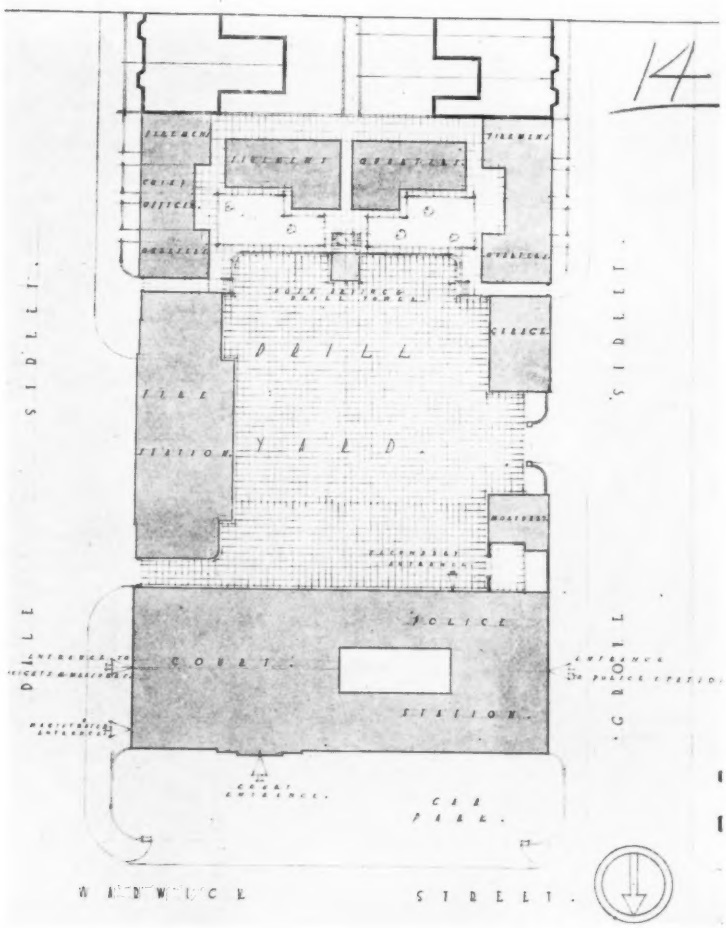
Floors in general would be in hard wood blocks, the police entrance hall and ante-room in marble with marble dado.

The Court would have a panelled dado, 4 ft. high, and also panelling behind the magistrates' bench.

The fire engine house would have faience walls and floor of terrazzo tiles.

The garage, etc., would have a 5 ft. glazed brick dado and struck brickwork above.

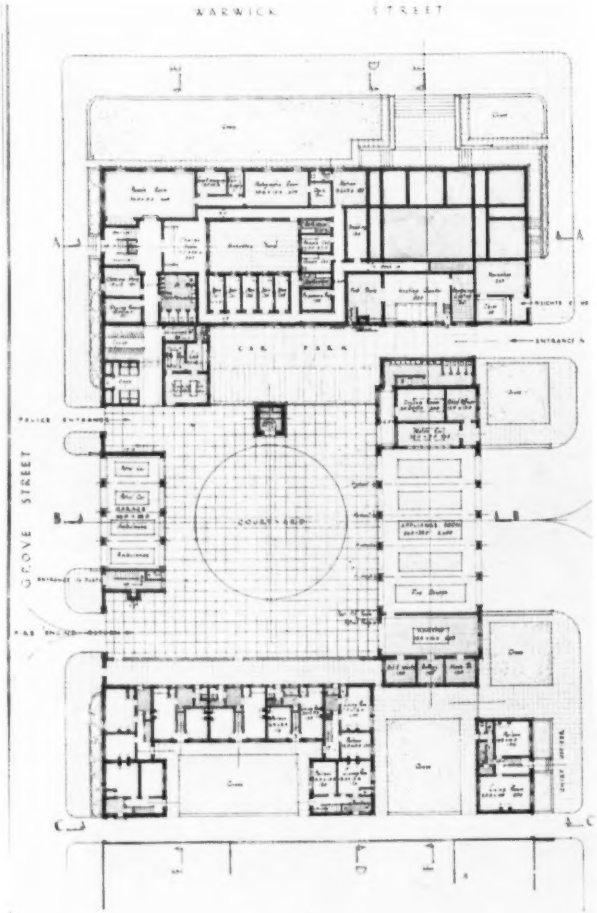
The total estimate of the cost is £53,424.



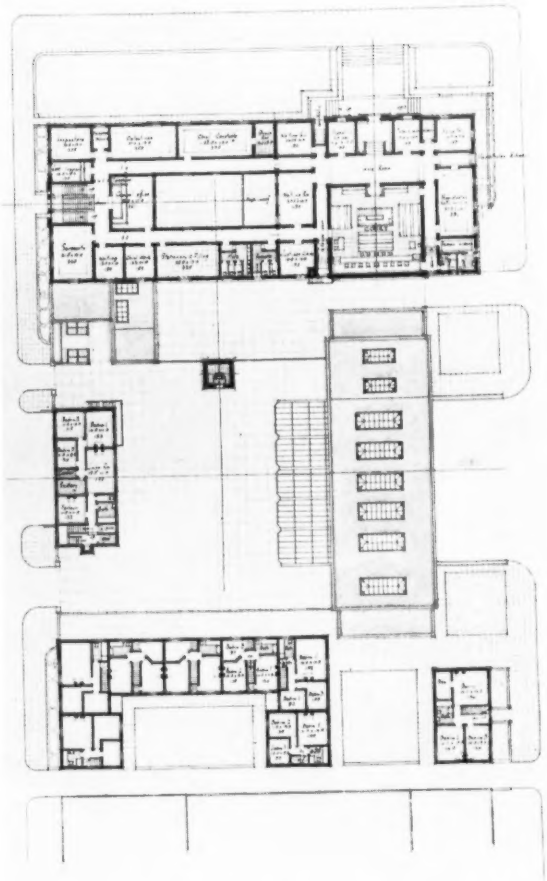
DESIGN PLACED FIRST: BY COOKE, TWIST, DICKINSON AND HARE

COMPETITION FOR POLICE AND FIRE BRIGADE HEADQUARTERS, LEAMINGTON SPA

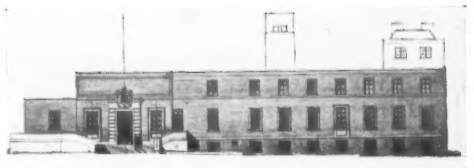
ABOVE: DESIGN PLACED FIRST: BY COOKE, TWIST, DICKINSON AND HARE



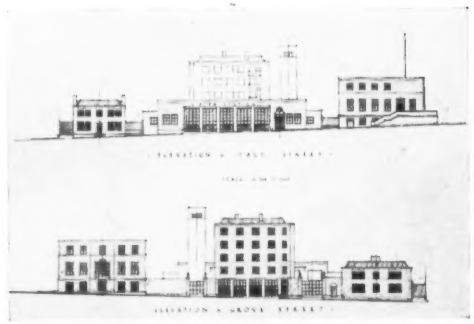
GROUND FLOOR & LOWER GROUND FLOOR



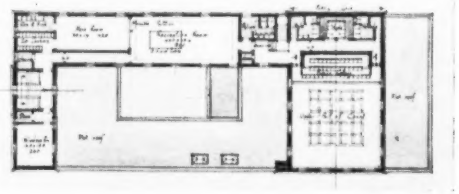
FIRST FLOOR & UPPER GROUND FLOOR



Elevation to Warwick Street



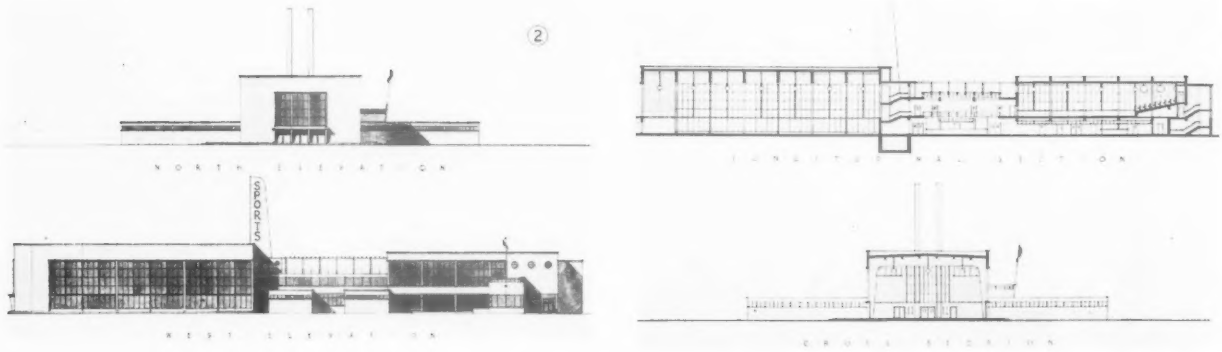
Elevations to Dale Street (top) and Grove Street



First Floor Plan of Court and Police Station

DESIGN PLACED SECOND: BY G. HUNT WHILE AND A. LEDOYEN

COMPETITION FOR PHYSICAL TRAINING CENTRE FOR THE



SUMMARY OF THE WINNER'S REPORT

Although the site is "roomy" I consider an easy and direct circulation with plenty of light and good ventilation of primary importance. The units of the building are arranged to harmonize as nearly as possible with the average sequence of actions of members, their friends and visitors. The café is placed near the main entrance with a south-westerly aspect to catch the afternoon and evening sun; and as an extension of the entrance hall to form a rendezvous where appropriate literature could be at hand. The administration and medical officers' departments are placed in direct communication with the active part of the building and visitors or intending members.

The inner hall and gallery are in the centre of the whole scheme, with which the changing rooms, attendants, drill hall, gymnasium, special and club rooms and instructors' rooms are directly connected. The double cross-shaped plan arose out of the desirability for cross lighting and ventilation, and made it possible to dispense with undesirable passages. The changing rooms are planned to allow the maximum number of people to change in the shortest time with as little cross traffic as possible.

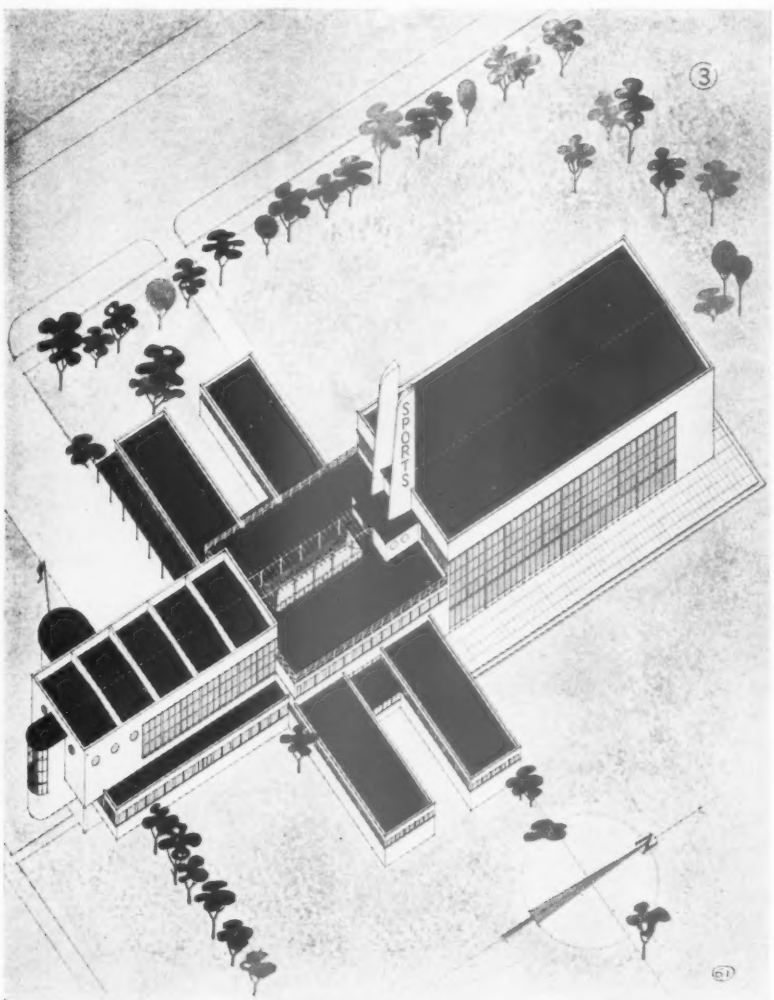
Although the sun deck is not asked for its provision seems a valuable asset to such a building and also provides views of the playing fields, open-air drill ground and through the windows into the drill hall and gymnasium.

The building is designed mainly in reinforced concrete with steel framing in the drill hall and gymnasium, hollow tile floors and roofs and steel-framed windows. The external finish is of non-crazing cement and the walls areas divided into bays by expansion joints. The interiors of the drill hall, gymnasium, entrance and inner halls, and café are lined with sound-absorbing building boards; other walls and ceilings of painted plaster in gay colours. Lavatories and changing rooms have tiled dadoes. The drill hall and gymnasium floors are Columbian pine boarding on wood joists and sleeper walls and the changing room and lavatory floors are of magnesite jointless flooring, all other floors being of wood blocks. The lower portion of the drill hall windows is raised vertically with counterweights to give free access to the open-air drill ground.

No artificial ventilation is considered necessary with such an open arrangement of units.

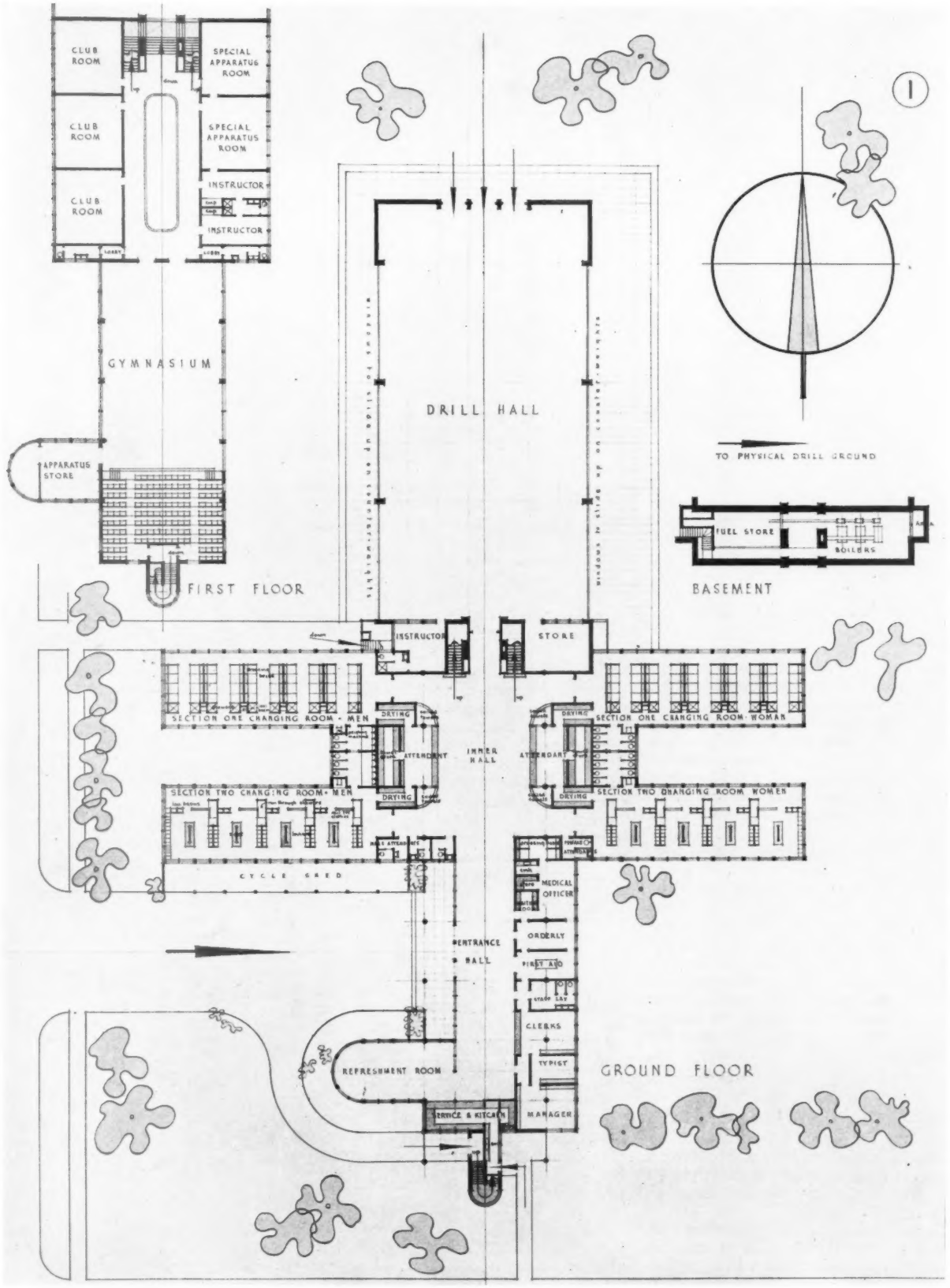
Artificial lighting is by electricity generally, with suspended globes in the drill hall and high up and well protected units in the gymnasium. Heating is by accelerated low pressure hot-water radiators and solid fuel boilers.

The approach to the spectators' gallery is placed as near as possible to the main entrance. Lavatories and cloak rooms are provided on a half landing. The gallery is arranged in such a way as to provide the best view of a display.



DESIGN PLACED FIRST: BY PETER COOKE

MANAGEMENT, MANCHESTER BUILDING TRADES EXHIBITION



LETTERS FROM READERS

G. B. J. ATHOE (Secretary of the Incorporated Association of Architects and Surveyors)

JOHN CUNNINGHAM

ASHER B. GAVRONSKY

MICHAEL TAPPER, F.R.I.B.A.

Registration

SIR,—I should like to congratulate you on the excellent leading article which appeared in THE ARCHITECTS' JOURNAL for March 25. It seems to me on the whole a very fair presentation of the case, although there are one or two statements from which, with my inside knowledge of the facts, I am compelled to dissent.

However, the dominating factor in the matter, as you rightly point out, is the question of examinations. Here I would assure you with all the emphasis at my command that the I.A.A.S. does not seek, nor has ever sought, to reduce the standards of qualification. For this reason—although I am naturally unable at the moment to refer it to my own Council—I feel confident that your proposal for a uniform examination for recognition is in principle one which would meet with their acceptance.

You will, however, forgive me if I am unable to agree with you that the remaining defects of the principal Act to which the I.A.A.S. have drawn attention are "minor blemishes." I hesitate to take up the space in your columns that would be necessary to enumerate these, but they are fully stated in our Memorandum to Members of Parliament. Careful consideration of this document would, I believe, lead to the conviction that our criticisms of the administration are valid and important.

The I.A.A.S. has always agreed with the principle of Registration. All that we seek is that Registration should be effected with justice to members of the profession irrespective of the professional body to which they belong.

You express, I feel sure, the feelings of most members of the profession when, in your final paragraph, you deprecate the continuance of a Register divided by snobbery and a sense of unfair discrimination.

G. B. J. ATHOE

SIR,—Anent the leading article in your issue for March 25, one is surprised to find a professional journal printing a page of somewhat biased comment on an issue at the very moment at which it is *sub judice*.

In an opening phrase you opine that most architects may wish to hear no more of registration and a little further you state that public opinion seems very favourable to the present legislation. Based then on the assumption that possibly fifty per cent. of architects are knowledgably concerned with the present Bill, it will be generally agreed that not more than one in a thousand of the public has any interest, and that that particular one is probably endeavouring to distinguish between architects who are registered, chartered, incorporated or B.Arch'ed.

If then, as a consequence of the present measure succeeding, the I.A.A.S. becomes "inevitably extinct," we may justly assume that the Register, by becoming the paramount body and a State instrument, will clarify the situation and that the R.I.B.A., recognizing this, will feel obliged also to go into honourable dissolution. Or would the fact that it is "ten times as old as the other society" (actually less than nine) preclude its thus logically concluding the simplification of architectural politics to the public? Your suggestion of the Registration Council holding and assessing the examination would further render all non-State architectural bodies redundant.

The implication of your concluding note regarding snobbery is not quite clear. The competent architectural practitioner is rarely guilty of it and it usually seems confined to the more theoretical of our younger architectural intelligentsia, heavily weighted with learning, with a faint aura from the blue blood of the profession, and it is not unknown in the rarefied atmosphere of architectural journalism.

JOHN CUNNINGHAM

The Panel System

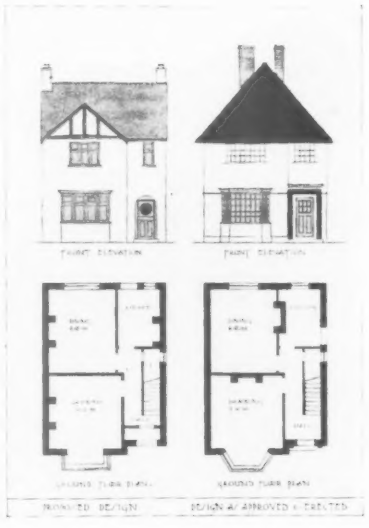
SIR,—I have just been reading the article in the *R.I.B.A. Journal* regarding the "Advisory Panels System" in relation to the external appearance of buildings. The idea is an admirable one, and has no doubt averted many æsthetic tragedies.

But why is it that the aims so hopefully expounded, particularly as regards the æsthetic control of architecture (or should I say "building"), bear such poor fruit?

Judging by the illustrations of the article, the Advisory Panel is quick in "spotting winners," but what does it give us instead?

Let me quote just one example (the illustrations of which I am enclosing): the original "bungaloid growth" is, to put it colloquially, pretty foul, but the dining and living rooms are at least liveable in.

The amended design will never be scheduled as an "ancient monument" either, but the plan has been altered as



well, putting the fireplaces in the worst possible positions, with "draught lines" making them well-nigh unusable. The only reason being apparently to get the chimneys more central—to suit the altered roof—to suit the *amended* design!

ASHER B. GAVRONSKY

Kensal House

SIR,—On page 453 of your issue for March 18 you make mention of Kensal House, Ladbroke Grove, and you state that I was consultant in connection with this building.

The credit for this building is due to Messrs. Maxwell Fry, Robert Atkinson, C. H. James, G. Wornum and Miss Elizabeth Denby. I personally merely acted as Liaison Officer between this body and the Capitol Housing Association.

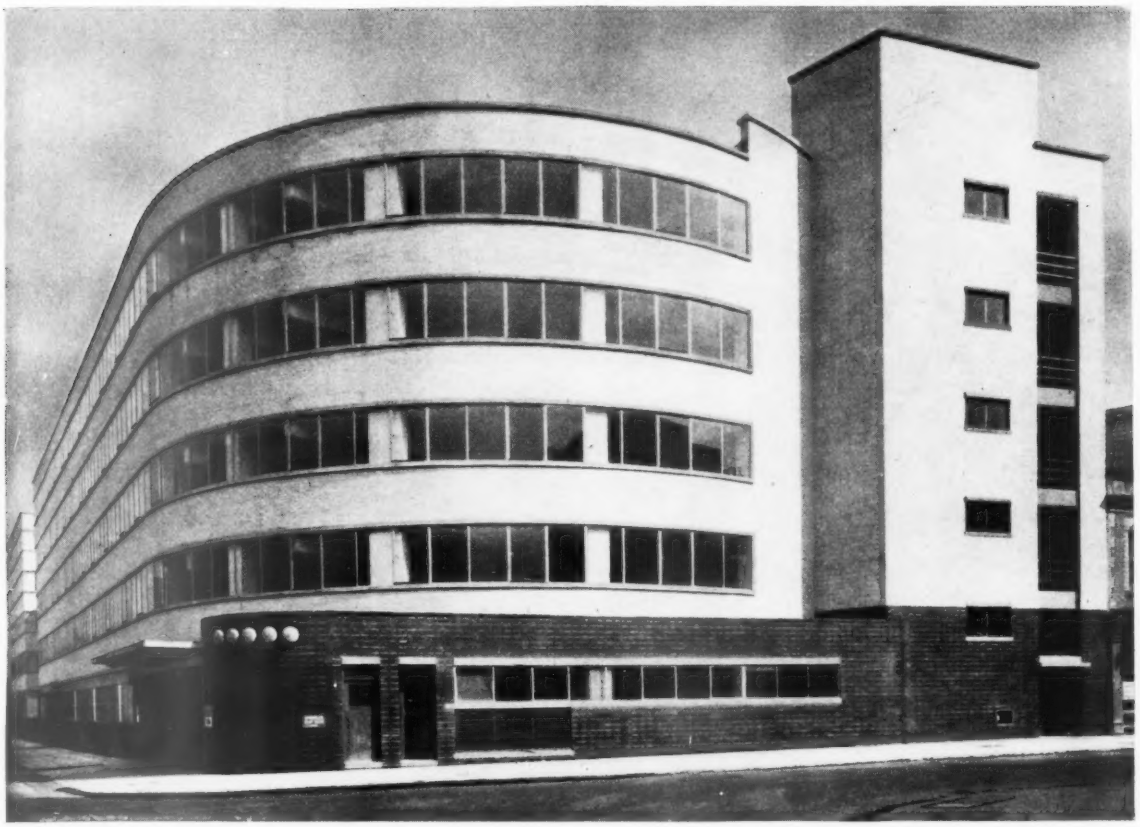
MICHAEL TAPPER

Changes of Address

Messrs. Spencer Silcock and Herbert Thearle have moved their offices to No. 66 Rodney Street, Liverpool, 1. Telephone: Royal 4733. The work which they have already undertaken in association with Mr. Leonard Barnish will be completed at a joint office at No. 58 Rodney Street.

Mr. Richard G. Cox, L.R.I.B.A., has moved his office to Nos. 3 and 5 Maddox Street, W.1. Telephone: Mayfair 6197.

GARAGE AT OLYMPIA, W.



DESIGNED BY

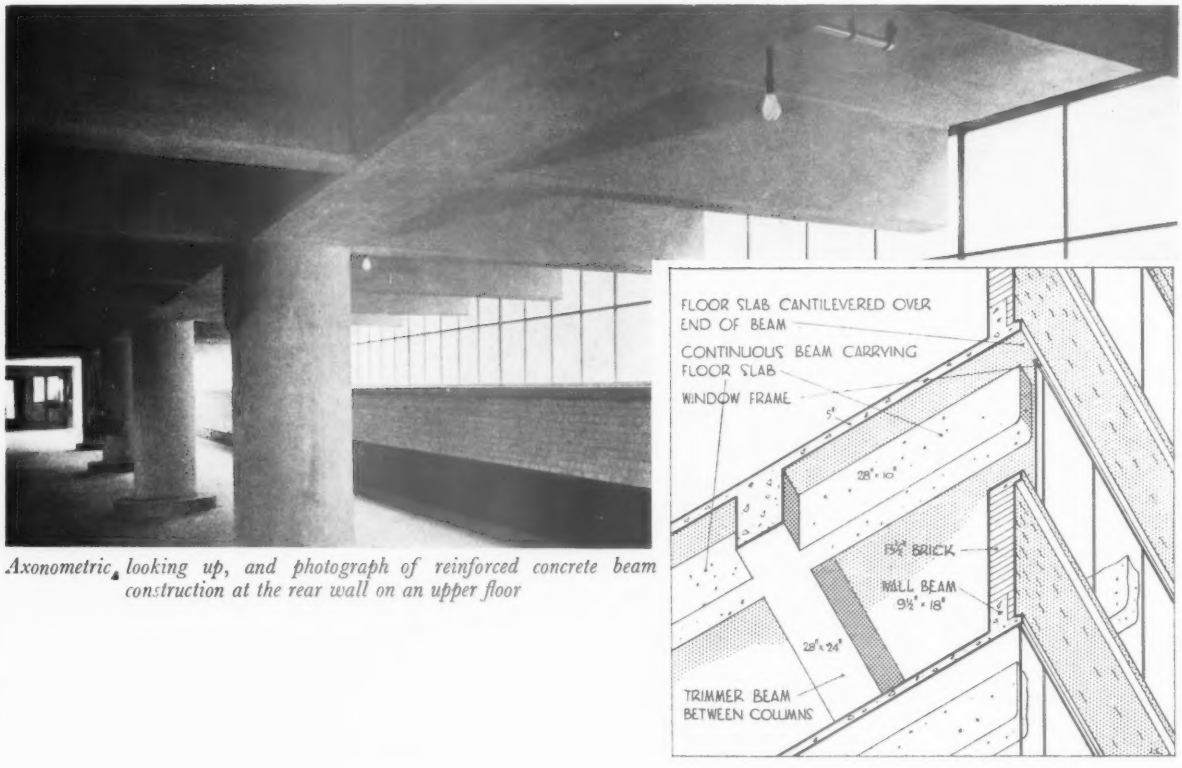
JOSEPH EMBERTON

GENERAL—*Garage at Olympia, housing 1,200 cars. It is claimed to be the largest in Europe. There are ten garaging floors, each half a storey high. Visitors can have their cars serviced, repaired or decarbonized while touring an exhibition in Olympia, and there is a room for chauffeurs, equipped with telephone and loudspeaker to recall them to the garage. Cars can be telephoned for from inside Olympia, from which a direct entrance to the garage is provided. Passenger lifts communicate with the parking floors. A beam of light 8 ft. 4 ins. above floor level controls the height of cars. Should luggage on a car exceed this height the beam will ring an alarm bell and operate red stop lights, and traffic will stop until the threat of a jam is removed. The London County Council town-planning requirements limited the height of the building.*

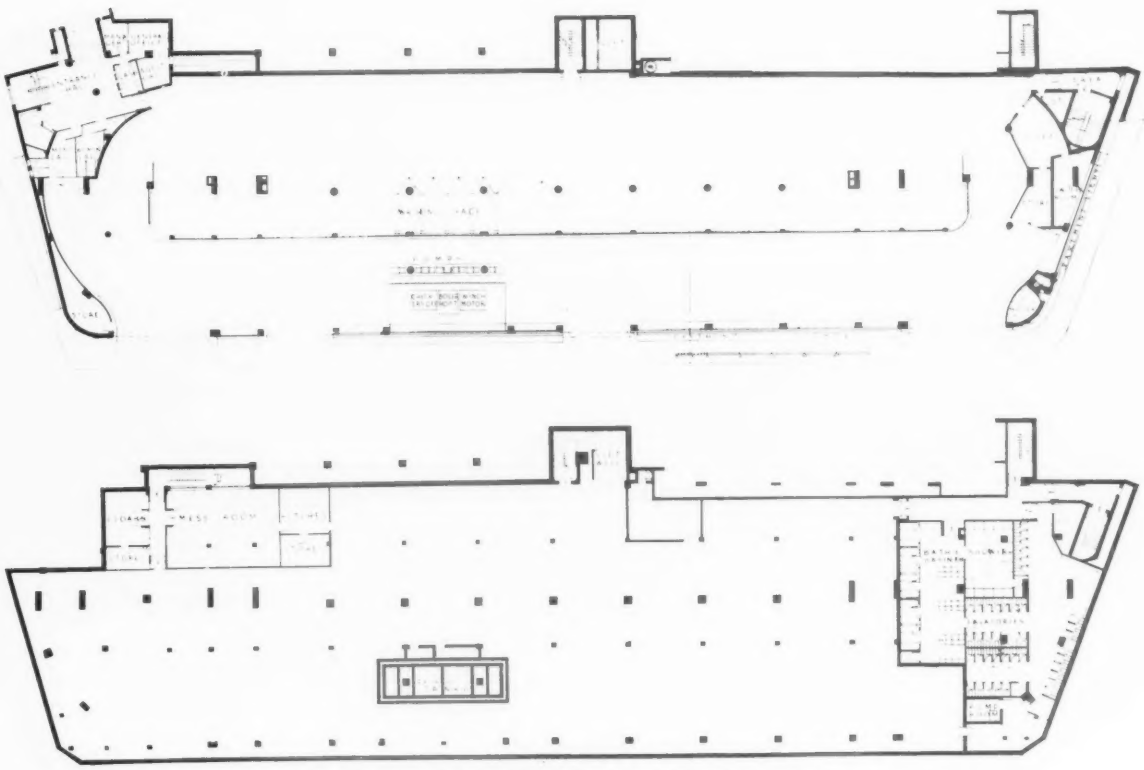
CONSTRUCTION—*Reinforced concrete, with panelled walls of white bricks. The floors are specially treated to make them hard and dust-resisting. The horizontal windows are separated only by the turned up concrete beam, faced with bricks. Windows are steel. The walls and ceilings of the garage are of concrete as left from the shuttering. The entrance halls are panelled with teak plywood.*

The photographs show two views of the exterior taken from opposite directions.

GARAGE AT OLYMPIA, W.:

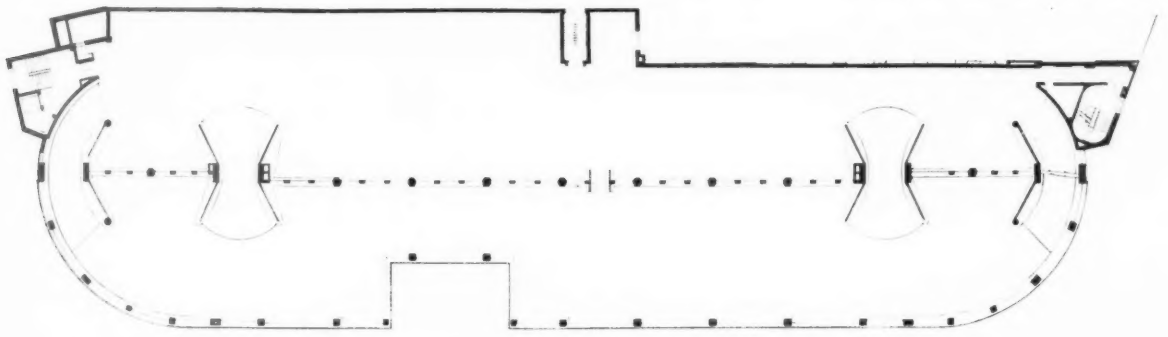


Axonometric, looking up, and photograph of reinforced concrete beam construction at the rear wall on an upper floor



GROUND AND BASEMENT FLOOR PLANS

DESIGNED BY JOSEPH EMBERTON

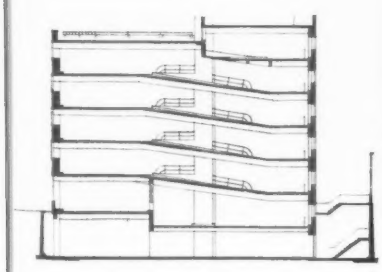


TYPICAL UPPER FLOOR PLAN

SITE.—*The site is long and narrow—too narrow to garage motor-cars economically. This was overcome to some extent by cantilevering the first floor at the rear over the Olympia Grand Hall yard space. The extraordinarily rapid egress of patrons from the exhibition buildings on such occasions as the Military tournament and the circus and the narrowness of the site determined the disposition of the ramps on either end of the building, thus enabling one-way traffic to be used during the passing in and out of desultory traffic, but making it possible to use all the ramps for egress during peak periods.*

PLAN.—*The basement, to comply with the L.C.C. requirements regarding garaging of cars, is used for other purposes:—as a storeroom for the considerable amount of standfitting stock which the Olympia Co. always hold, and for extensive lavatories for troops, artists and workmen on such occasions as the Military tournament and the circus.*

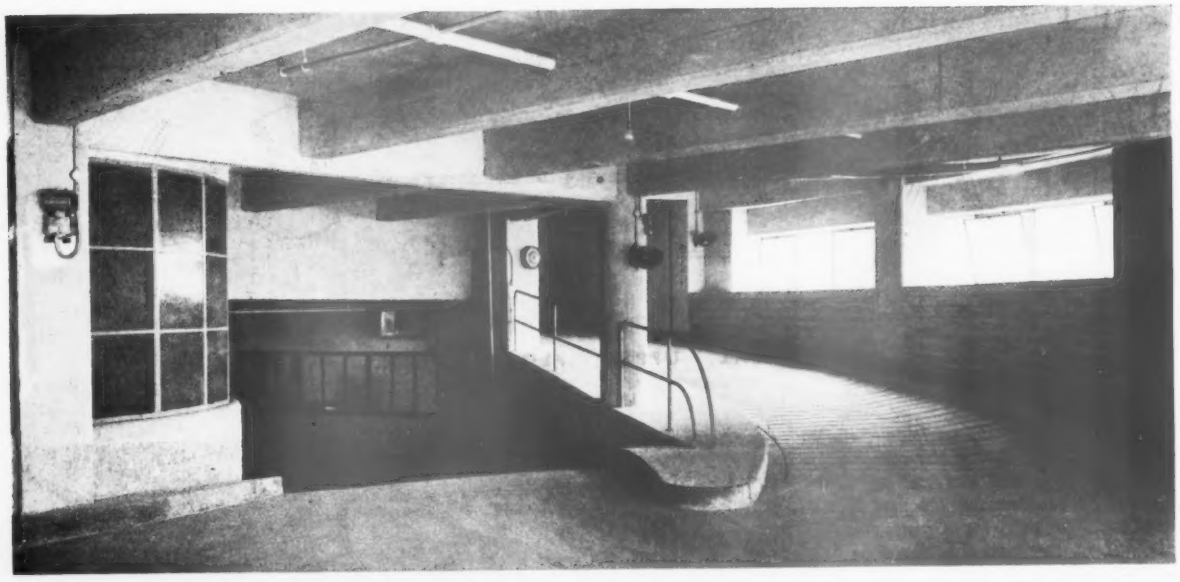
SERVICES.—*Ventilation of each of the upper floors is by centrifugal fans and of the ground floor by ducts carried up to the roof, and fitted with fans. Heating is by a gas boiler which heats coils distributed over each floor, and over which air is circulated by means of electric fans.*

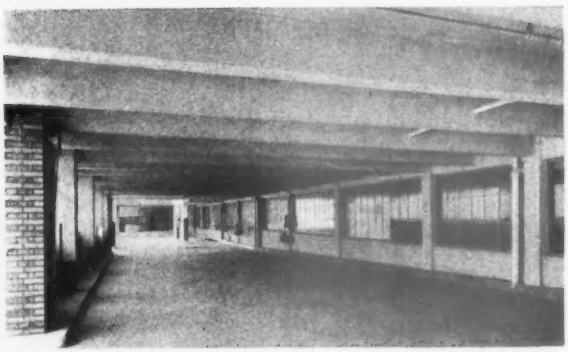


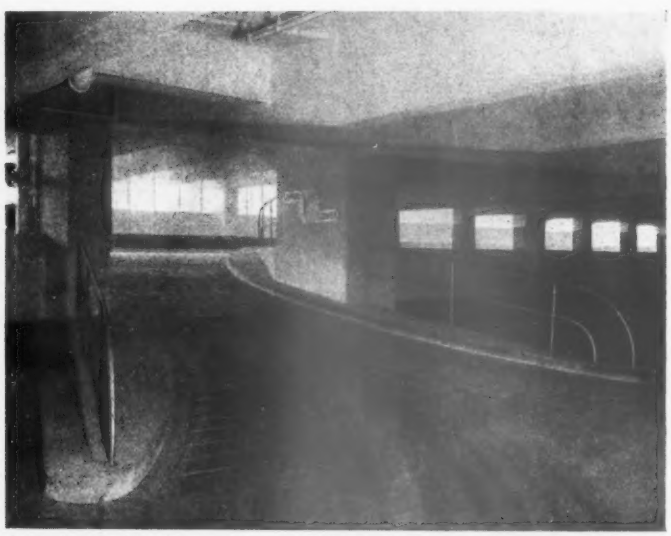
SECTION

The photograph shows the beam construction at the front at first floor level.

GARAGE AT OLYMPIA, W.:

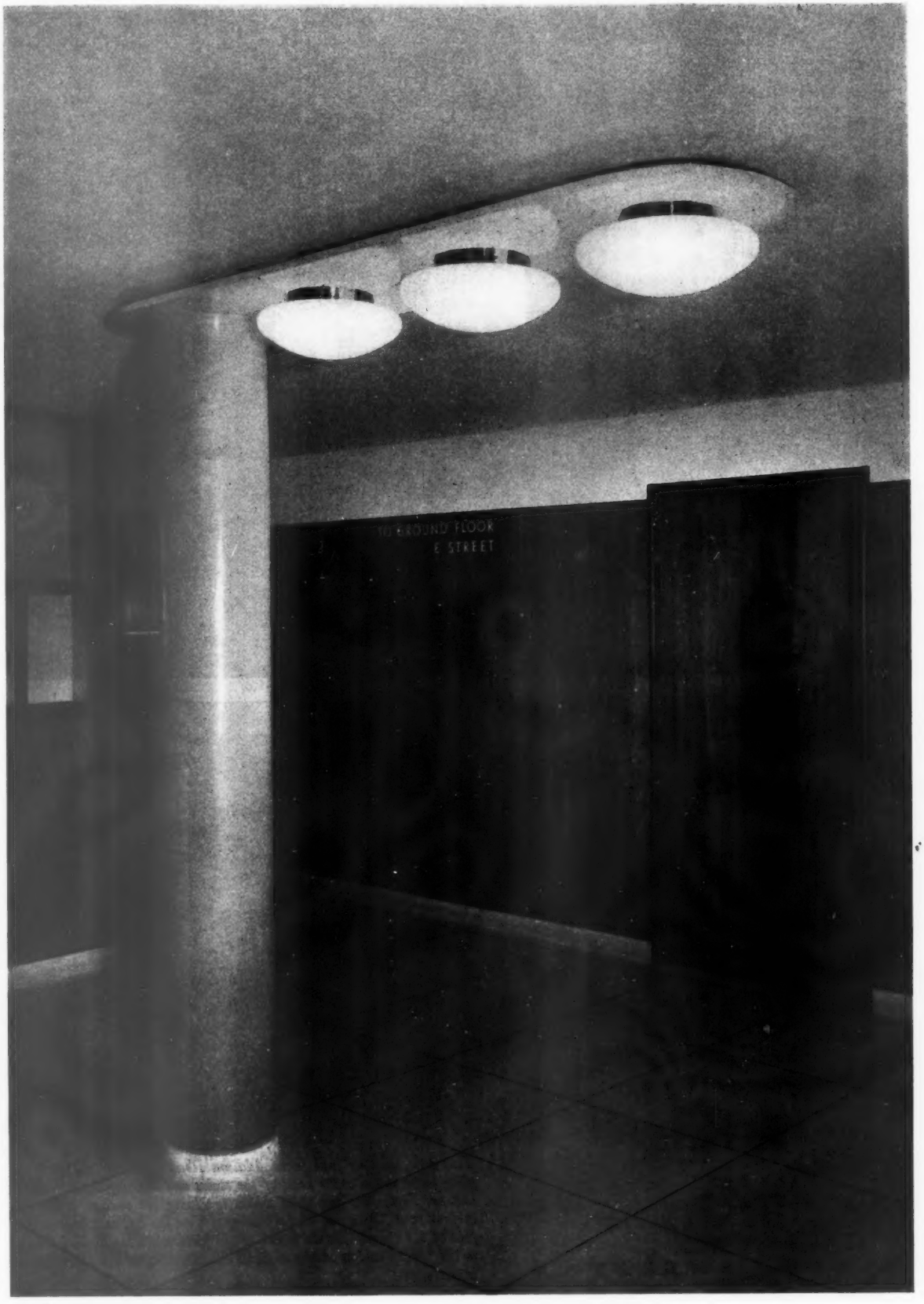




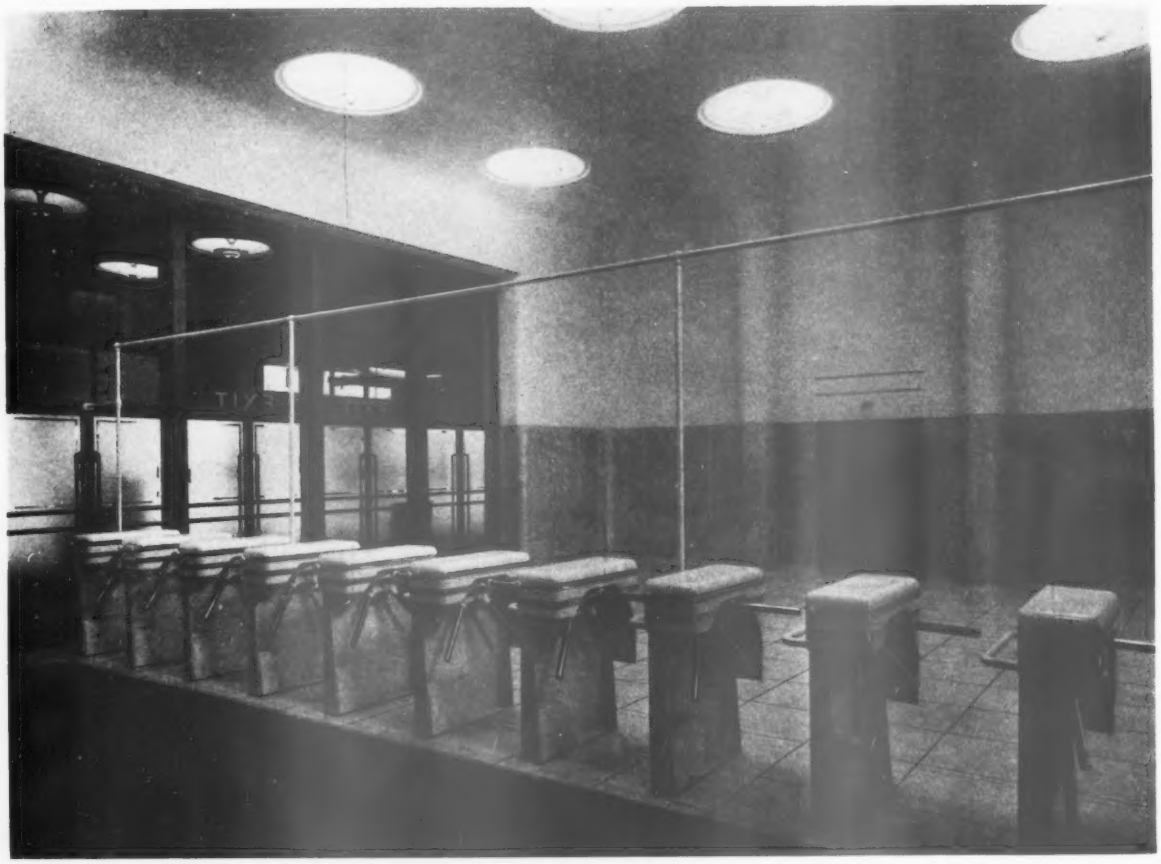


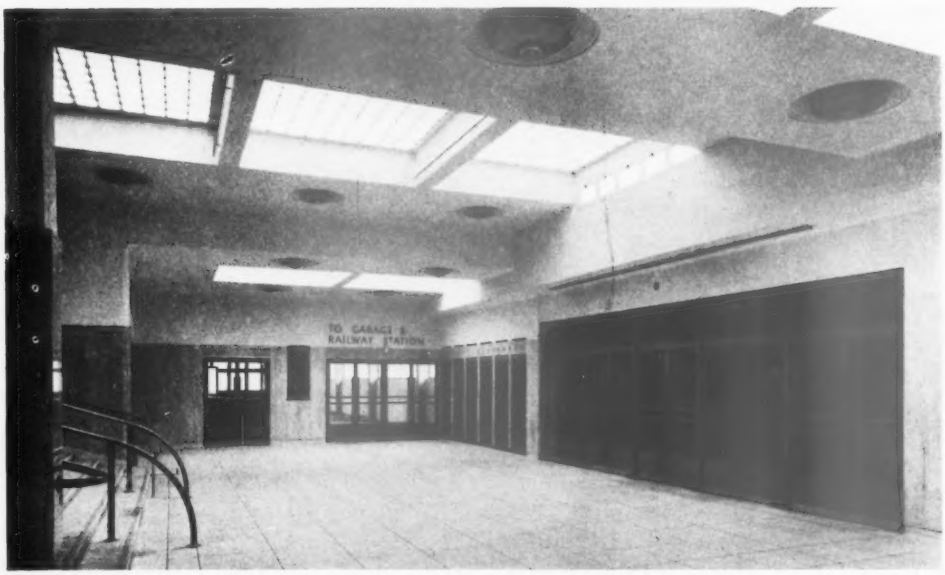
The photographs show : top, one of the ramps at street level leading down to the lower ground floor and up to the first ; centre, the petrol station at street level and a typical upper floor ; above, a view of one of the ramps to the upper first floor ; right, looking along the upper level on the third floor. The photograph on the facing page is of the light fittings in the entrance hall of the garage. *For list of general and sub-contractors see page 628.*

DESIGNED BY JOSEPH EMBERTON



ENTRANCE HALL, OLYMPIA, W.





This new entrance hall faces Addison Road Station. Above is a photograph taken at the head of the stairs and showing the turnstiles and the horizontal rod upon which are hung the various prices of admission to Olympia. The photograph on the left is taken at the foot of the stairs. In the centre of the picture are the doors leading to the garage and to Addison Road Station and, on the right, those to the street.

DESIGNED BY

JOSEPH EMBERTON

INFORMATION SHEET
SUPPLEMENT

The Architects' Journal Library of Planned Information

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

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

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

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

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

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

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

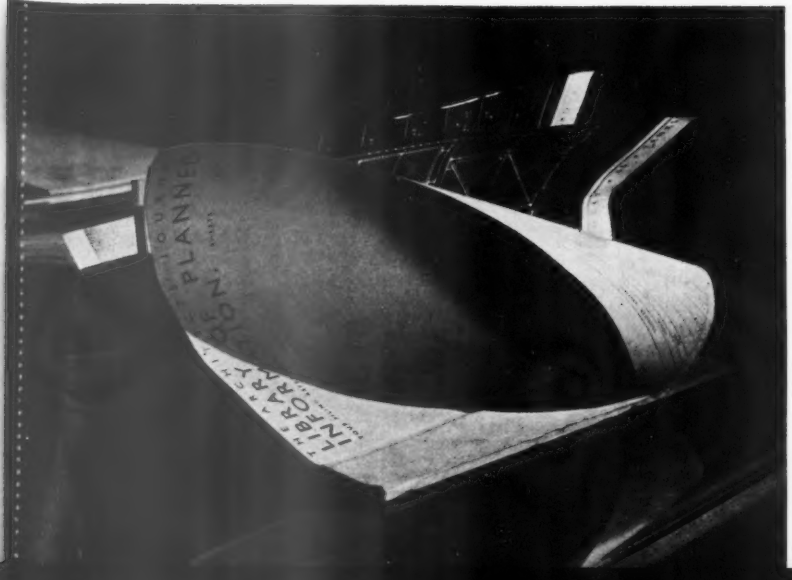
By binding in the Information Sheets in the Journal so that they cannot fall out, their powers of self-destruction will be curtailed. And to insure that they can be as readily filed as before, the pages are now being perforated.

INFORMATION SHEETS

493 Construction of Stepped Balconies

494 Approximate Estimating—X

495 Sheet Steel Office Equipment



G

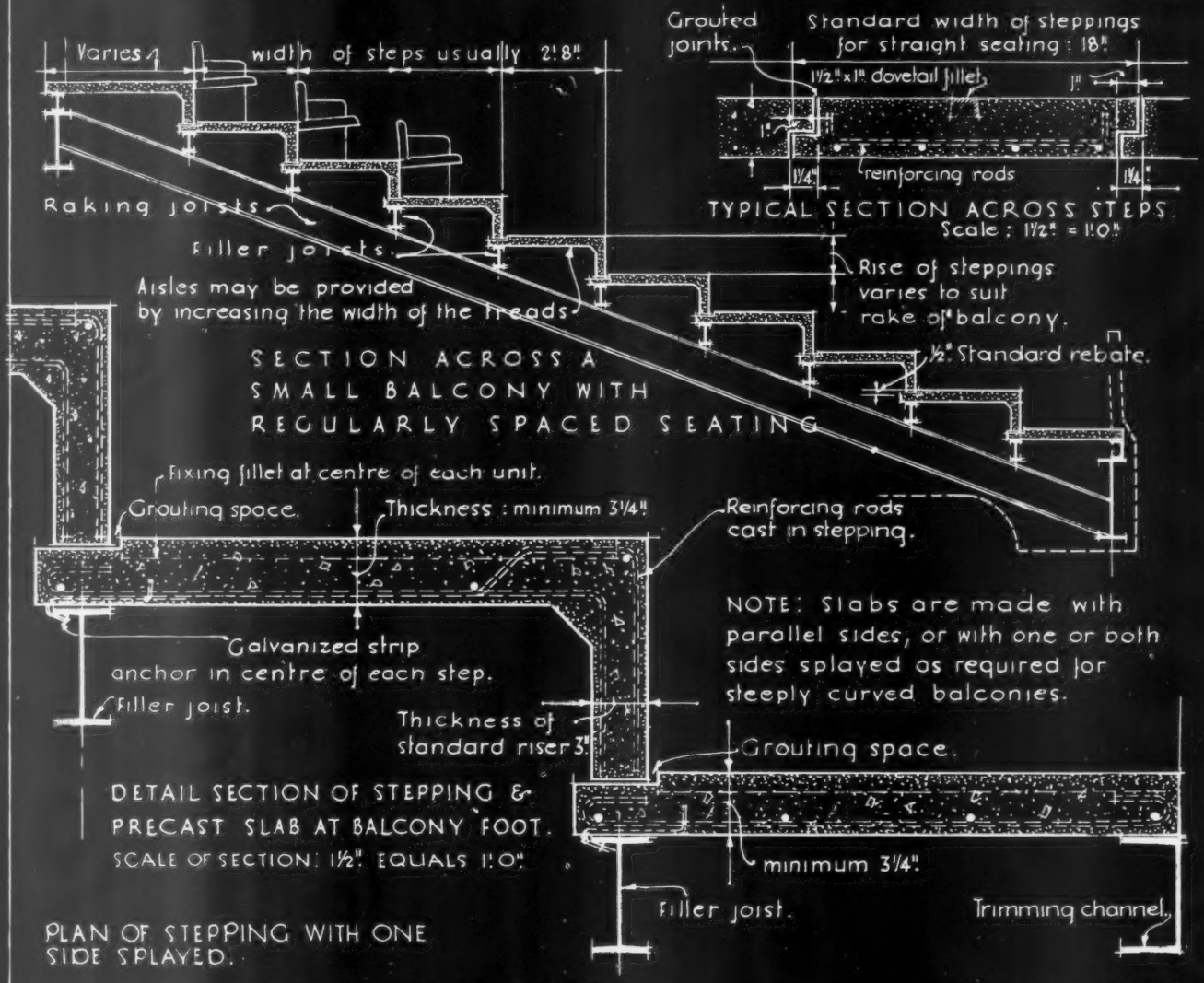
Sheets Issued since Index :

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

627.

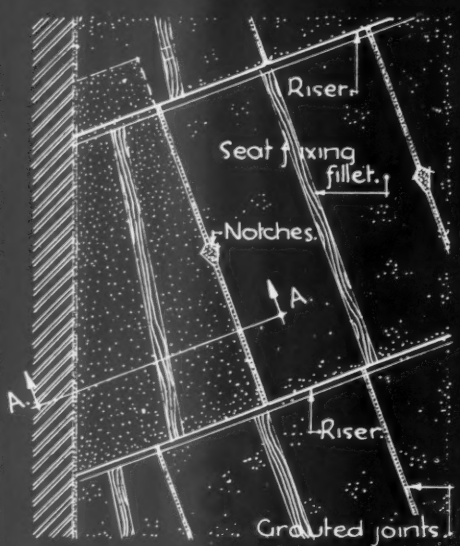
THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

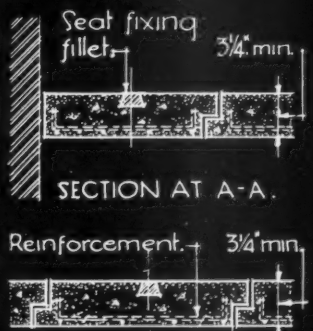
TYPICAL ARRANGEMENT & DETAILS OF STEGWART PRECAST BALCONY STEPPINGS.



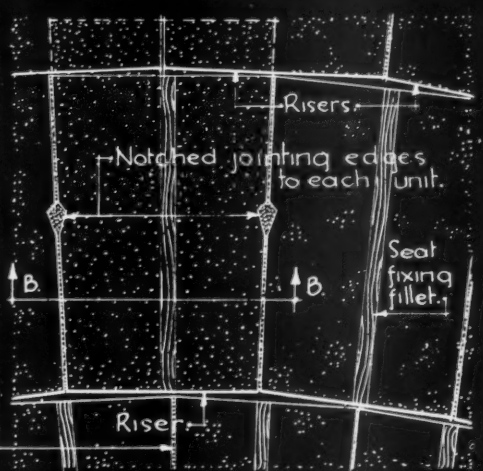
DETAIL SECTION OF STEPPING & PRECAST SLAB AT BALCONY FOOT.
SCALE OF SECTION: 1½" EQUALS 1'0"

PLAN OF STEPPING WITH ONE SIDE SPLAYED.





SCALE: For plans and sections 1" = 1'0"



PLAN OF DOUBLE SPLAYED STEPPING FOR STEEPLY CURVED WORK.

Information from Stegwart Fireproof Floor Co Ltd.

INFORMATION SHEET: PRECAST CONCRETE BALCONY STEPPINGS.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1.

INFORMATION SHEET • 493 • CONSTRUCTION OF STEPPED BALCONIES

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 493 •

CONSTRUCTION OF STEPPED BALCONIES

Product : Siegwart Precast Balcony Steppings

General :

This Sheet deals with precast reinforced concrete units for stepped balcony construction, and shows typical plans and sections of the various types of unit manufactured. The length and height of the steps are variable over a wide range to suit the rake of the balcony, the type of seating to be used, and the provision of aisles, gangways, etc. The thickness of the riser is normally 3 in. and of the tread 3¼ ins., but these sizes may be varied to suit spans, loading conditions, etc. The average width of the steppings is 18 ins., and all units are reinforced.

Speed :

The steppings are cast by the makers, while the steel is being fabricated, so avoiding delay in building. The steelwork can be covered with steppings as soon as it is erected, and the complete absence of shuttering facilitates the work of other trades.

Support :

The units are supported on steel filler joists carried by the rakers.

Anchorage :

The standard method of anchoring the steps and slabs to the filler joists is by means of a galvanized metal strip cast centrally in the underside of each unit. After placing in position, the back end of this strip is bent downwards around the upper flange of the joist, as shown in the typical section.

Types of units :

For straight balconies, the units are cast with parallel sides, but for seating steeply curved on plan the sides of the steppings are given an equal splay to suit the curvature desired. Special units, handed as required, are made for the sides of all curved balconies, these having only one edge splayed as shown.

For the foot of the balcony, precast slabs are used, and these may have parallel or splayed sides as described for the ordinary steppings.

Jointing :

Each side of all units, excepting those at the side walls, is rebated to interlock with its neighbour. The upper half of each rebate is also provided with a notch, and when the units are placed in position, a space of not less than ¼ in., automatically remains between the upper adjoining surfaces for the grouting.

The back end of each stepping is also given a ½ in. rebate to receive the riser of the next tier, and this joint is also grouted up after tiers are in position.

Wood fillets :

A dovetailed wood fillet, 1½ in. by 1 in., is cast in the upper surface of each step unit and slab to take the floor finish or the seats.

If the seating is to be screwed direct to the fillets, these are left flush, but when flooring is to be superimposed, the fillets are left slightly protruding. It is usual to run one fillet centrally in each step, but one or more fillets may be run across the step if necessary.

Manufacturers : Siegwart Fireproof Floor Co., Ltd.
Address : Thanet House, 231 Strand, London, W.C.2
Telephone : Central 4894

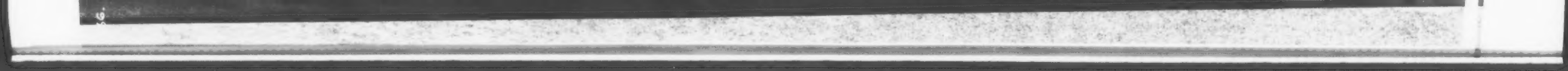
Birmingham : Winchester House, Victoria Square
Telephone : Birmingham, Midland 1664

Manchester : Millgate Buildings, 18 Long Millgate
Telephone : Manchester, Blackfriars 3033

Glasgow : 121 St. Vincent Street
Telephone : Central 7277

Belfast : c/o Robert Kirk, Ltd., Exchange Street
Telephone : Belfast 24681

Leicester : Enderby
Telephone : Narborough, Leicester 67



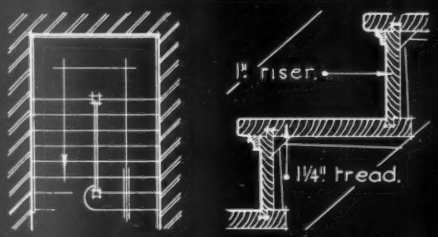
THE ARCHITECTS JOURNAL LIBRARY OF PLANNED INFORMATION

STAIRCASES..

PRICES ARE THOSE CURRENT DURING JANUARY, 1937.

APPROXIMATE ESTIMATING: The following are approximate prices for staircases. Prices are for a medium sized job in the London area and in-clude for overhead charges and profit.

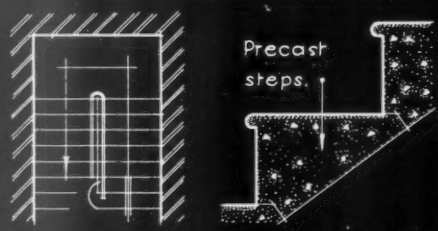
TYPE A : £23 : 10 : 0.



DEAL STAIRCASE 3' 0" WIDE AND 9' 0" HIGH WITH 1¼" TREADS AND 1" RISERS, HALF SPACE LANDING, 4" x 4" NEWELS, 1" x 1" BALUSTERS PAINTED, AND OAK HANDRAIL.

TO TYPE A, ADD FOR:	£.	S.	D.
Deal staircase painted, 3' 6" wide	2	0	0.
Oak staircase lightly wax polished, 3' 0" wide	20	15	0.
ditto 3' 6" wide	24	10	0.
12" additional height of deal staircase, 3' 0" wide	1	16	6.
ditto 3' 6" wide	1	19	4.
12" additional height of oak staircase, 3' 0" wide	3	8	6.
ditto 3' 6" wide	3	14	0.

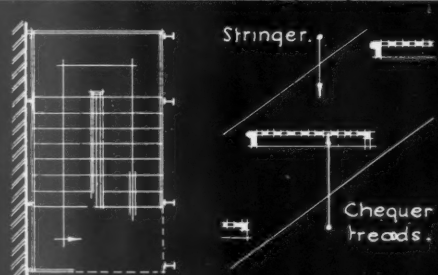
TYPE B : £32 : 15 : 0.



PRECAST CONCRETE STAIRCASE 3' 0" WIDE AND 9' 0" HIGH WITH HALF SPACE LANDING, ALL FINISHED WITH GRANOLITHIC SPRINKLED WITH CARBORUNDUM AND WITH PLAIN IRON BALUSTRADING PAINTED.

TO TYPE B, ADD FOR:	£.	S.	D.
Staircase with granolithic finish, 3' 6" wide	2	10	0.
Staircase with terrazzo finish, 3' 0" wide	35	5	0.
ditto 3' 6" wide	40	10	0.
12" additional height of staircase with granolithic finish, 3' 0" wide	2	16	9.
ditto 3' 6" wide	3	0	4.
12" additional height of staircase with terrazzo finish, 3' 0" wide	6	2	3.
ditto 3' 6" wide	6	10	0.

TYPE C : £40 : 5 : 0.



IRON STAIRCASE 3' 0" WIDE AND 9' 0" HIGH WITH CHEQUER LANDINGS & TREADS (NO RISERS) AND PLAIN IRON BALUSTRADING, PAINTED.

TO TYPE C, ADD FOR:	£.	S.	D.
Staircase without risers, 3' 6" wide	7	0	0.
Staircase with risers, 3' 0" wide	3	5	0.
ditto 3' 6" wide	10	10	0.
12" additional height of staircase without risers, 3' 0" wide	2	4	6.
ditto 3' 6" wide	2	17	0.
12" additional height of staircase with risers, 3' 0" wide	2	12	6.
ditto 3' 6" wide	3	5	8.

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

INFORMATION SHEET : UNIT SYSTEM FOR APPROXIMATE ESTIMATING: IC
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1. Oscar A. Bayne

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 494 •

APPROXIMATE ESTIMATING—X

Subject : Unit System for Approximate Estimating.

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

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

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

This Sheet deals with typical examples of staircases, including landings, balustrades, handrails, plastering to soffits, painting, etc. Appropriate finishes have been allowed with each type of staircase, e.g., a more expensive balustrade has been allowed for the terrazzo finished staircase than for the granolithic finished staircase.

The cost of a staircase does not vary in direct proportion to the total height ; as for instance the cost of newels, landings, etc., will not be changed by minor variations in the height of each storey.

As an example, the cost of a concrete staircase 3 ft. 6 ins. wide, finished with terrazzo, for three storeys, totalling 33 ft. high, would be worked out as follows :—

	£	s.	d.
Cost of concrete staircase one storey high as Type B ...	32	15	0
Extra for staircase being 3 ft. 6 ins. wide and finished with terrazzo	40	10	0
Extra cost of each storey being 11 ft. 0 ins. in lieu of 9 ft. high	13	0	0
Cost of one storey ...	£86	5	0
Cost of three storeys ...	£258	15	0

Sheets Nos. 1 to 9 dealt with Ground Floors, Upper Floors, Roofs, Parapets and Eaves, Foundations, External and Internal Walls, Partitions, Doors and Windows, and future Sheets will show the cost analysis of Fireplaces, Breast and Stacks, Services, etc.

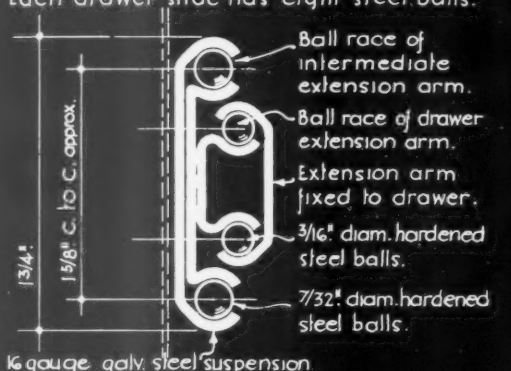
618

618

THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION.

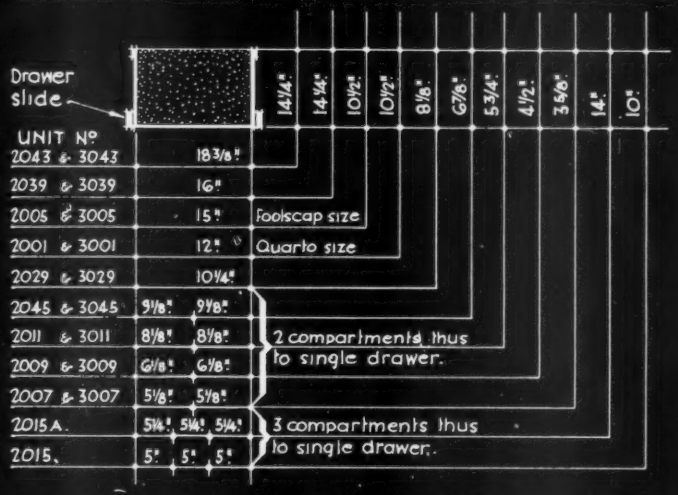
RONEO SHEET STEEL FILING CABINETS. (Line Nos. 2000 & 3000, see also description overleaf.)

FULL SIZE TYPICAL VERTICAL SECTION OF BALL BEARING DRAWER SUSPENSION SLIDE. Each drawer slide has eight steel balls.



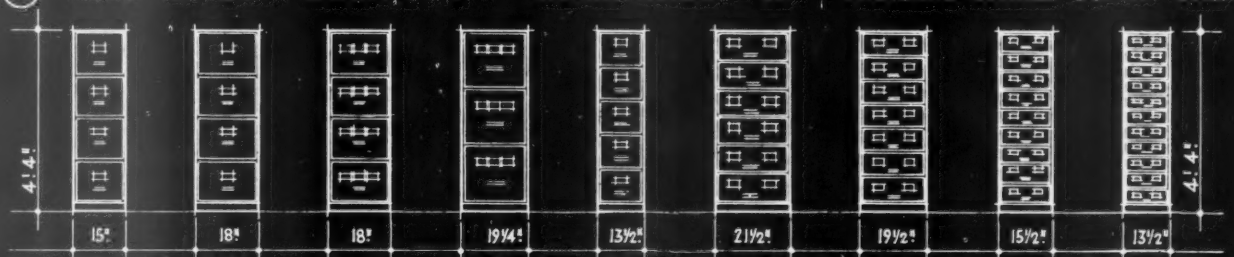
GRADES: Slides to Line 3000 are ungalvanised but all slides have extension stops & buffers.

DIAGRAMMATIC CROSS SECTION OF DRAWER SHOWING RANGE OF SIZES AVAILABLE (Internal dimensions)

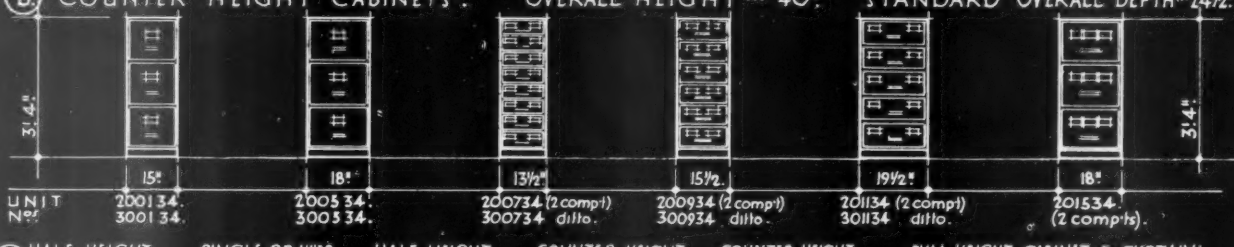


DIAGRAMMATIC ELEVATIONS SHOWING OVERALL WIDTHS & DRAWER VARIATIONS OF CABINET UNITS.
CONSTRUCTION: All types of cabinet are composed entirely of cold rolled, close annealed sheet steel, hydraulically stretched and flattened. Scale: 1" to 4'0"

(A) FULL HEIGHT CABINETS: OVERALL HEIGHT ... 52" STANDARD OVERALL DEPTH ... 24½"

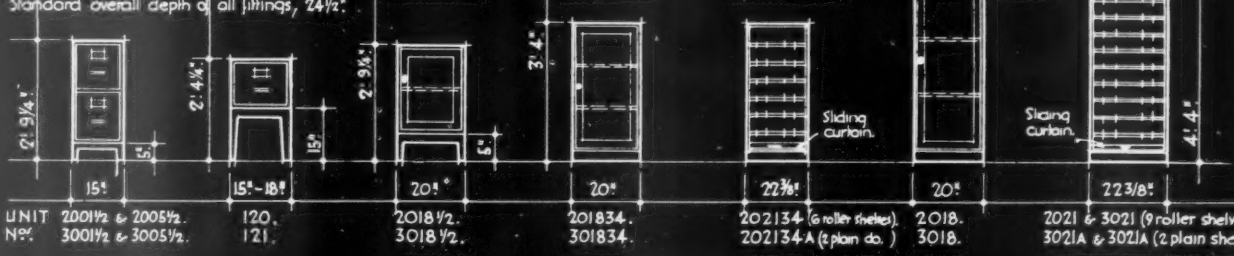


(B) COUNTER HEIGHT CABINETS: OVERALL HEIGHT ... 40" STANDARD OVERALL DEPTH ... 24½"



(C) HALF HEIGHT CABINET. SINGLE DRAWER CABINET. HALF HEIGHT CUPBOARD. COUNTER HEIGHT CUPBOARD. COUNTER HEIGHT CURTAIN UNIT. FULL HEIGHT CABINET & CURTAIN UNIT.

Standard overall depth of all fittings, 24½".



Information from Roneo Limited.

INFORMATION SHEET: SHEET STEEL EQUIPMENT: No. 1: FILING CABINETS
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1. Olga A. Bayne.

THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 495 •

SHEET STEEL OFFICE EQUIPMENT

Product : Roneo Steel Filing Cabinets.

General :

This is the first of a series of Sheets dealing with Roneo sheet steel office equipment, and sets out various types of filing cabinets.

Construction and finish :

The cabinets are constructed of cold-rolled, close-annealed, hydraulically stretched and flattened pressed sheet steel standard parts, each part being dipped in enamel which is baked on before assembly to ensure a rust-proof finish. Parts requiring a high-grade finish are sprayed with an extra coat of enamel. The standard colour is olive green, but any colour, or a stippled finish, can be supplied.

Drawer suspension slides

Each drawer of the cabinet is supported on two suspension arms of 16 g. steel with eight hardened steel ball bearings to each arm. The arms are accurately made to prevent side or vertical play. The only points of contact are between the steel balls and the grooved steel ball races, thus reducing friction and wear to a minimum.

Automatic-lock :

The filing cabinets described on this Sheet are provided with an automatic locking device operating on all drawers.

Grades :

This Sheet describes two grades of cabinet, the 2000 type, and the 3000 type. Cabinets are designed so that any number may be bolted together in a row, the cabinets having finished sides so that no side panels are required. The finish is a high-grade stove enamel, and the usual colour is olive green with gold lining, but other finishes are available (see paragraph on Construction and Finish). The automatic lock is standard, and each drawer has an individual catch to prevent rebounding if the drawer is pushed in violently.

The 3000 type cabinets are similar to the 2000 type, but are finished with only one coat of stove enamel, and are supplied only in olive green. The side panels are finished, and do not require separate end panels. The ball-bearing suspension slides are not galvanized on the 3000 type cabinets.

The following table gives particulars of the cabinets obtainable in each of the types :—

TYPES 2000 and 3000

Unit No.	Outside dimensions excluding panels			Inside dimensions of compartments			To take folders or papers exclusive of tabs			Remarks
	Width	Height	Depth	Width	Height	Depth	Width	Height	Filing space	
	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	
†2000*, 2001*	15	52	24½	12	10½	22½	11¾	9½	90	†4 single drawers
†200034*, 200134*	15	40	24½	12	10½	22½	11¾	9½	67½	†3 single drawers
†2000½*, 2001½*	15	28¼	24½	12	10½	22½	11¾	9½	45	†2 single drawers
†2004*, 2005*	18	52	24½	15	10½	22½	14¾	9½	90	†4 single drawers
†200434*, 200534*	18	40	24½	15	10½	22½	14¾	9½	67½	†3 single drawers
†2004½*, 2005½*	18	28¼	24½	15	10½	22½	14¾	9½	45	†2 single drawers
†2014, 2015	18	52	24½	5	10	22½	4¾	9½	270	†4 triple compartment drawers
201534	18	40	24½	5	10	22½	4¾	9½	202½	3 triple compartment drawers
2015A	19¼	52	24½	5¼	14	22½	5	13½	202½	3 triple compartment drawers
2029*	13¼	52	24½	10⅛	8⅛	22½	10	7½	112½	5 single drawers
2045*	21⅛	52	24½	9⅛	6⅞	22	9	6	264	6 double compartment drawers
2011*	19⅛	52	24½	8⅛	5⅞	21⅝	8	5	303	7 double compartment drawers
201134*	19⅛	40	24½	8⅛	5⅞	21⅝	8	5	216¼	5 double compartment drawers
2009*	15⅛	52	24½	6⅛	4⅞	21⅝	6	4	387	9 double compartment drawers
200934*	15⅛	40	24½	6⅛	4⅞	21⅝	6	4	258	6 double compartment drawers
2007*	13⅛	52	24½	5⅛	3⅞	21⅝	5	3	473	11 double compartment drawers
200734*	13⅛	40	24½	5⅛	3⅞	21⅝	5	3	344	8 double compartment drawers
2043*	21⅛	52	24½	18⅜	14¼	22½	18	13¾	67½	3 single drawers
2039*	19¼	52	24½	16	14¼	22½	15¾	13¾	67½	3 single drawers
Cupboards with door :										
2018*	20	52	24½	19¾	47	22½	—	—	—	2 adjustable shelves
201834*	20	40	24½	19¾	35	22½	—	—	—	2 adjustable shelves
2018½*	20	28¼	24½	19¾	23⅛	22½	—	—	—	1 adjustable shelf
Cupboards with roller curtain :										
2021	22⅜	52	24½	20¼	44¼	21	—	—	—	9 roller shelves
2021A	22⅜	52	24½	20¼	44¼	21	—	—	—	2 plain shelves
202134	22⅜	40	24½	20¼	32¼	21	—	—	—	6 roller shelves
202134A	22⅜	40	24½	20¼	32⅜	21	—	—	—	2 plain shelves

Notes.—Those cabinets marked * are also obtainable in the 3000 type.
Those cabinets marked † are not fitted with automatic lock.

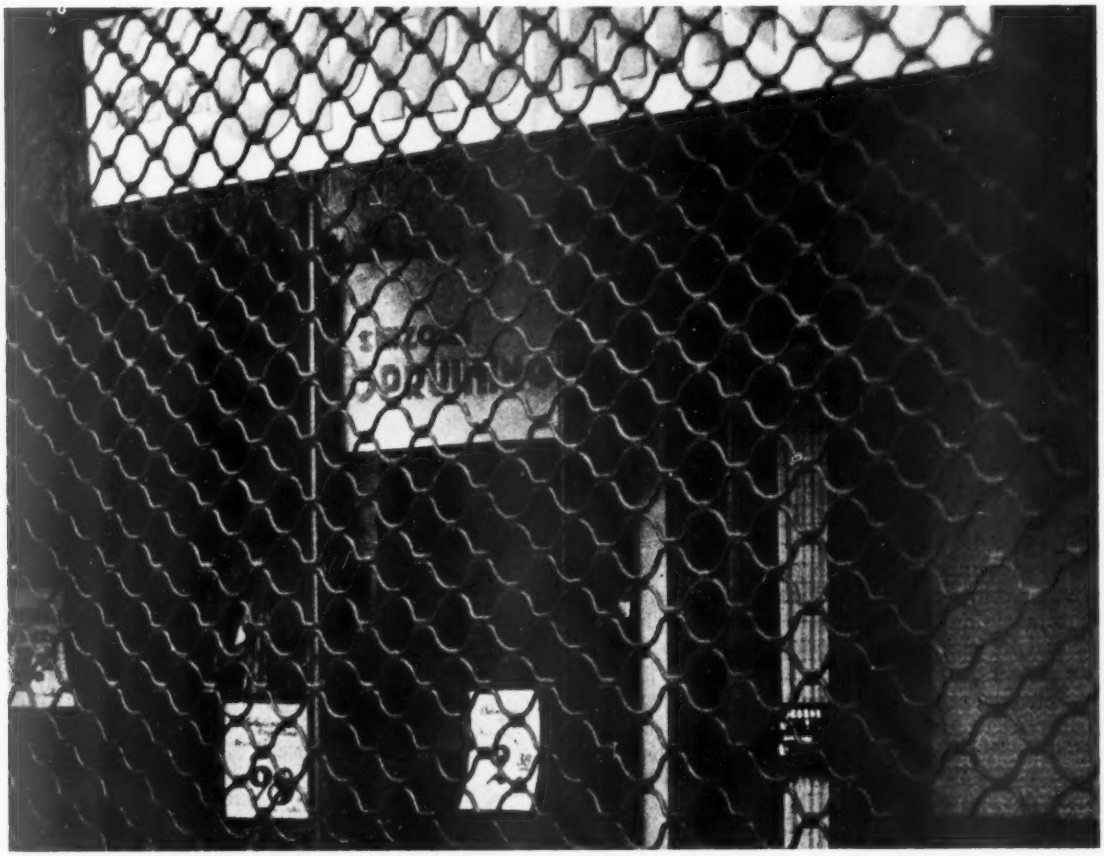
Manufacturers : Roneo Limited
Address (Head Office) : 17 Southampton Row, London, W.C.1
Telephone : Holborn 7622

The Architects' Journal Library of Planning

SHOPS

Protection

[By Bryan Westwood and Norman Westwood]



Grille of painted iron link at The Hague : a form of protection now becoming common in this country.

(1) *Burglar Alarms*

PROTECTION in the form of electrical circuits is sometimes undertaken for small shops. There are two types : (*a*) open circuit and (*b*) closed circuit.

In type (*a*) the alarm is operated by contacts placed under mats or in doors which when actuated complete the circuit and operate alarm bells or switch on floodlights. Owing to the difficulty of concealing contacts this system is limited in its scope, but is comparatively cheap.

Type (*b*) depends on the intruder breaking an electrical circuit and so setting relays in action which in turn operate the alarm. Under this system concealed wires can be incorporated in floors and panelling of doors, etc., and so provide a far more effective safeguard, but obviously at a greater cost. Such a system would only be applied to small shops dealing in particularly valuable goods.

Both systems should be worked from primary batteries as mains operation can be put out of action merely by drawing the fuses, which might be done by any assistant in the shop.

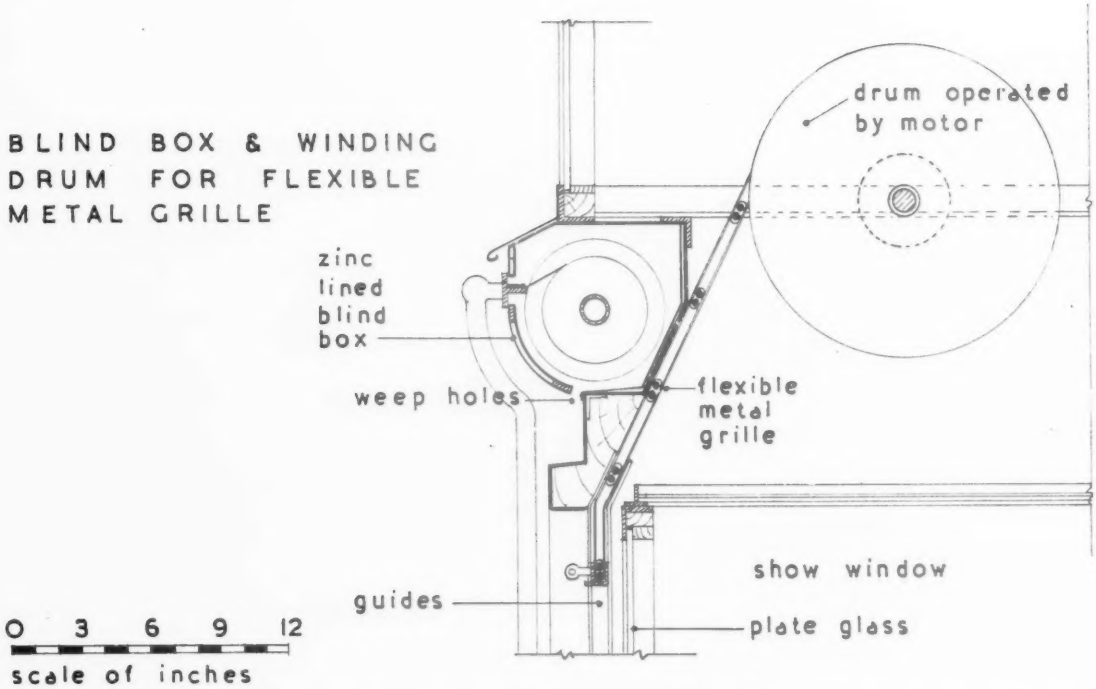
This kind of work is, of course, carried out by specialist firms.

(2) *Window Grilles*

Window grilles to jewellers' shops are a common sight, but the prevalence of "smash and grab" raids has made protection more important than ever before.

To combat this danger it is not so necessary to provide a strong protective grille as one which takes time to remove.

It has been found that a light grille inside the window is quite effective because the glass has to be broken first. Further, these can be fitted with an automatic locking device which prevents their removal until the glass is actually removed from the frame. Such devices obviously cannot be applied to exterior grilles, but the greatest protection is afforded by the whole front being



covered with an external grille and the more vulnerable points protected from inside as well.

Removable grilles must have very strong vertical runners and horizontal bars securely anchored into them. The locking device should be automatic and the premises can be further protected by electrical contacts incorporated in the locks and connected to alarms.

When not in use grilles can be drawn up behind the pelmet or lowered behind the stallboard. It is important that guides, etc., should run very easily or employees are liable to neglect such devices sooner or later.

Where necessary the grille can be entirely removable. This is done where only one of a series of windows requires protection.

Similar methods can be applied to the protection of doors and fanlights and laylights, and unsightly bars can be avoided during business hours.

(3) *Armour Plate Glass*

It has been suggested that an inner window of armour plate glass suspended inside the ordinary window would answer the purpose, as such glass is very difficult to break, and being behind the ordinary glass it would be far more difficult to deal with, and, furthermore, would not be seen until the first glass was broken. Being practically invisible, glass of this kind would have the advantage that it need not be movable.

(4) *Bars*

Fixed guard bars are frequently used for shop protection and should be wherever possible fixed on the inside as the present-day burglar has equipment of a nature that makes the cutting of guard bars the matter of minutes only.

They should never be spaced more than 5 in. apart, centre to centre, and anything above 3 ft. long should have a flat tie bar or bars, as otherwise the bars can be spread sufficiently to gain access. The bars should never be less than $\frac{5}{8}$ in. thick. Again, when possible the bars and the tie bars should be firmly housed into the window surrounds rather than just screwed on. In conjunction with iron bars it is a practice of some firms to cover the doors and windows with wood shutters, covered with sheet iron. This has not been found effective unless iron of $\frac{1}{8}$ in. or thicker is used.

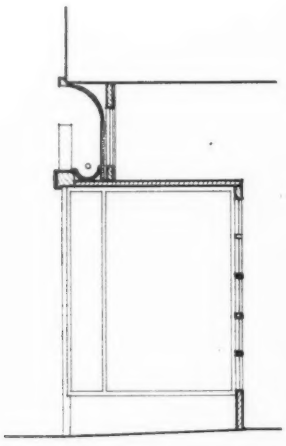
(5) *Locks*

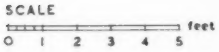
An important point to remember is that the strength of the striking plate and not the lock is the factor determining security. For this reason insurance companies often insist on steel striking plates 10 in. long, which are thus large enough to provide space for several fixing screws.

Shop at The Hague : another type of painted ironwork grille.

SHOPS

SHOWROOMS, SOUTH AUDLEY STREET, W. • *By Laszlo Hoenig*



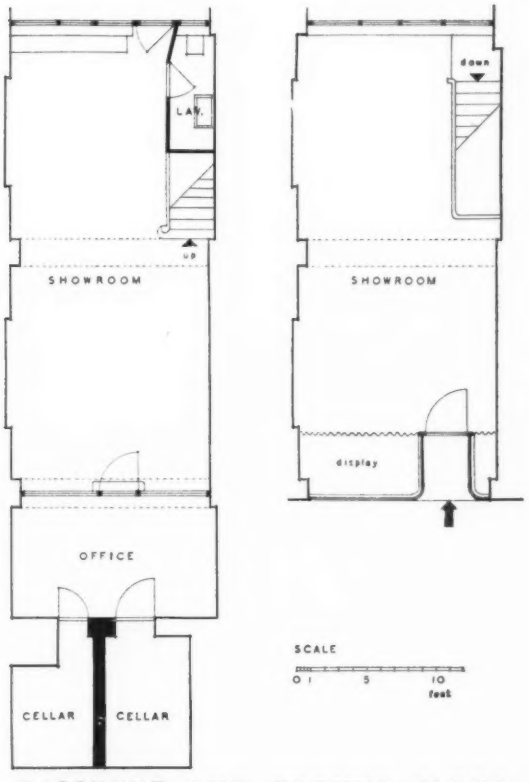


SECTION

The shopfront is set in a Portland stone surround, with stallboard and threshold in travertine marble. The window and door frames, and all other surrounds, have a satin copper finish, and the glazing bars to the entrance door are in Staybrite steel.

The lettering is also in Staybrite steel, with the sides of the letters sprayed blue. The background to the lettering is in sheet metal, also sprayed blue.

Internally, there are two large showrooms, one on the ground floor with a staircase leading to another in the basement. The walls of the showrooms are finished simply in plaster for the exhibition of the furniture.



BASEMENT AND GROUND FLOOR

In the case of rim locks cranked steel bands are sometimes fitted extending well above and below the lock and striking box, thus giving proper fixing.

There is no doubt that mortice deadlocks are the most effective way of locking a shop and preferably, for two reasons, the lock should be capable of operation from outside only: (1) It makes all the levers effective as the key is only inserted one way. (2) Where other exits are adequately protected, should there be collusion and a thief be introduced before closing time he is locked in.

(6) *Locking Bars*

Locking bars of various kinds are fitted behind doors to give additional strength. The usual bar is merely a ½-in. rod fitted into slots in the jambs. Angle bars can be used where the jambs are not wide enough to take a circular section, the vertical side of the angle only being inserted. Special malleable or wrought iron plates can be used to take the ends of the bar and the door when closed covers the fixing screws.

Staples and bars and shackles of padlocks must be tough enough to withstand breakage, but also case-hardened to be proof against filing or cutting.

Protection against Fire

(1) *Sprinklers.*—Protection of this kind is not usually undertaken in the small shop, but where shops form the ground floor of large buildings so protected they are usually installed.

Their effectiveness depends not only on soaking the burning material but also on the fact that atmosphere charged with sufficient water vapour will not support combustion.

The nozzles, or "heads" as they are called, are so designed that when the temperature of the surrounding air reaches a predetermined maximum the fusing of a link releases a high pressure jet of water which strikes a serrated metal rose and is spread over a large area in a fine spray. Generally more damage is done by the water than the fire, and the familiar "Sprinkler Stop Valve" outside is to enable the water to be cut off as soon as possible.

The placing of sprinkler heads is governed rigidly by the Fire Offices Committee set up by the insurance companies, and these restrictions are shown in tabular form in the "Rules of the Fire Offices Committee for Automatic Sprinkler Installations."

(2) *Emergency Switches.*—All the neon signs on the premises must be controlled by a single accessible external fireman's switch.

Silversmith's Shop, The Hague. The front is in polished teak and bronze.

L I T E R A T U R E

SCENERY—BUT ONLY SCENERY

[*BY THOMAS SHARP*]

The Preservation of our Scenery. By Vaughan Cornish. Cambridge University Press. Price 7s. 6d.

SHOULD one review a book that one thinks feeble, or indifferent? It is so pleasant to praise: so barren to condemn. To damn in a few sentences, after an hour's reading, a book which may have taken months or years to write, makes one feel miserable. Is it not better, as well as easier, to leave it unnoticed? Probably it is. Yet the publisher and the author ask for publicity: the reader, who is also a potential buyer, seeks an opinion (or he would not read reviews, nor the editor print them). So the reviewer has got to accept the responsibilities of his job, and perform the unpleasant task as well as the pleasant.

This is the sort of book which raises these thoughts. Not that it represents years of strenuous research or hard thinking. It is made up of half-a-dozen addresses which Dr. Cornish has delivered before various societies during the last eight years. And it has to an extreme degree the usual faults of such books. It is scrappy, and yet is full of the most tiresome repetitions. Time and time again one comes upon passages repeated almost word for word for the third or fourth time. At seven-and-sixpence for 88 pages a book without this fault would be an expensive morsel, but with the help of a conscientious blue pencil this book could have been reduced to a quarter of its present size. Merely as a piece of book-making it has little to commend it.

As a contribution to its subject it is curiously sterile. Preserve, preserve, preserve. That is Dr. Cornish's aim. He advocates the establishment of National Parks, and the preservation of a continuous strip of open land along the coast. Both are desirable objects, but as measures even of preservation they are, to say the least, somewhat inadequate. As for the large vision of improvement and development which made, for instance, Professor Stapledon's recent book, "The Land," so inspiring and valuable, Dr. Cornish has none. His concern with scenery is almost wholly pictorial, and it is curiously dry, precious and academic (as are his descriptions of it). Of the countryside as the scene of economic and social activity, Dr. Cornish has little or nothing to say.

Nor has he much to say about buildings in the countryside, though his one short discussion of them aptly illustrates his attitude of mind. "It is fortunately no longer necessary," he says, "to wait for the growth of creepers to subdue the tone of staring walls, for under the guidance of architects of the modern school, villas and cottages are being erected in brick and tile of a tone which takes its place quietly in the landscape, and the lines of roof and gable in these twentieth-century buildings are relieved from rigidity not by the limitations of handicraft but by the touch of artistry. . . . The dominant types of good village architecture were laid down in Tudor times."

No: this is not a book which one can recommend to anyone seriously concerned for the future of the English countryside.

HOSPITALS

First Report of the Departmental Committee on the Cost of Hospitals and Other Buildings. London: H.M. Stationery Office. Price 1s. 3d.

THE Departmental Committee on the Cost of Hospitals and Other Public Buildings, appointed by the Minister of Health in 1933, issued recently its first report. This it names "The Acute General Hospital," meaning a hospital designed and equipped for first class medical and surgical work, and intended for patients whose condition, whether it be acute or chronic, calls for active medical or surgical treatment.

The Committee has found that it is not practicable to express its standards in terms of cost, and it therefore advises as to what would be regarded as reasonable requirements. Discussing the formulation of a building scheme, the report says, "If satisfactory results are to be obtained without unnecessary expenditure, it is essential that the whole project should receive full and careful preliminary study. The particular requirements of each section must first be carefully formulated. . . . For the production of a well-conceived scheme the closest collaboration of medical, nursing, administrative, architectural and engineering advisers will be necessary, and, if possible, their combined advice should be obtained even before the site is selected. This collaboration should continue throughout all the subsequent stages."

Detailed observations on site and general layout and accommodation are offered, in the course of which the committee suggests that the standard ward unit should contain 30 beds, of which four should be in one-bed rooms. It is impressed by the marked tendency to depart from large wards which has become evident in recent years, and the replacement of the main ward by two or more smaller wards, it says, is well worthy of consideration. The longitudinal arrangement of beds in a large ward, it is added, should be regarded as still on its trial. "We look on it as an interesting innovation which, so far as can be seen at present, does not appear likely to affect constructional costs materially."

Among the special departments, the X-Ray department, it is urged, is not suitable for the application of standards. The plant should be decided upon before the building is planned, and it is sound policy to provide space somewhat in excess of initial requirements and to plan in such a way as to facilitate future extension. Similar observations are offered on the department for massage, electrical and light treatment, and the like.

The provision of one kitchen to serve both patients and staff is recommended. Staff dining rooms should be near the main kitchen. In nurses' dining rooms enough space should be provided to permit the use of small tables.

While there are some useful alternatives to traditional methods of construction, the report proceeds, there is no new material or method of general application that is likely to lead to a substantial saving in cost, and careful designing with due regard to economy in material and avoidance of elaborate architectural detail offers the best means of reducing cost. No saving is likely to result from the adoption of a flat roof. For heating, radiators should be regarded as standard practice for the present, since "the use of panels is a comparatively recent development in heating and there is insufficient evidence as to the cost of their upkeep and maintenance." Although the capital cost is definitely higher, a central boiler house is more economical in operation and more convenient than a series of independent boiler chambers for individual blocks or groups of blocks.

Members of the committee include Mr. Adam Maitland, chairman, Mr. A. Strachan Bennion, F.S.I., M.I.STRUCT.E., Mr. J. Kirkland, O.B.E., F.R.I.B.A., Mr. L. G. Pearson, F.R.I.B.A., and Mr. A. Scott, M.B.E., F.R.I.B.A., M.I.STRUCT.E., and among those who gave evidence were Mr. C. E. Elcock, F.R.I.B.A., for the R.I.B.A., Mr. John Wilson, F.R.I.B.A., chief architect to the Department of Health for Scotland, Sir Herbert H. Humphries, C.B.E., M.INST.C.E., L.R.I.B.A., City Engineer and Surveyor, Birmingham, for the Association of Municipal Corporations, Mr. G. S. Widdows, F.R.I.B.A., County Architect, Derbyshire County Council, for the County Councils Association, Mr. D. E. Turner, L.R.I.B.A., Chief Officer of Works, Birmingham Mental Hospitals, for the Mental Hospitals Association, Mr. Douglas H. Green. O.B.E., B.SC., A.C.G.I., A.M.INST.C.E., as a member of the council of the Reinforced Concrete Association, Mr. E. W. Butler, O.B.E., Chief Structural Engineer in the Architects Division of H.M. Office of Works, Mr. F. R. Hiorns, F.S.A., F.R.I.B.A., an Assistant Architect of the London County Council, and Mr. A. R. Myers, O.B.E., F.S.I., A.R.I.B.A., a Senior Architect in the Architects Division of H.M. Office of Works.

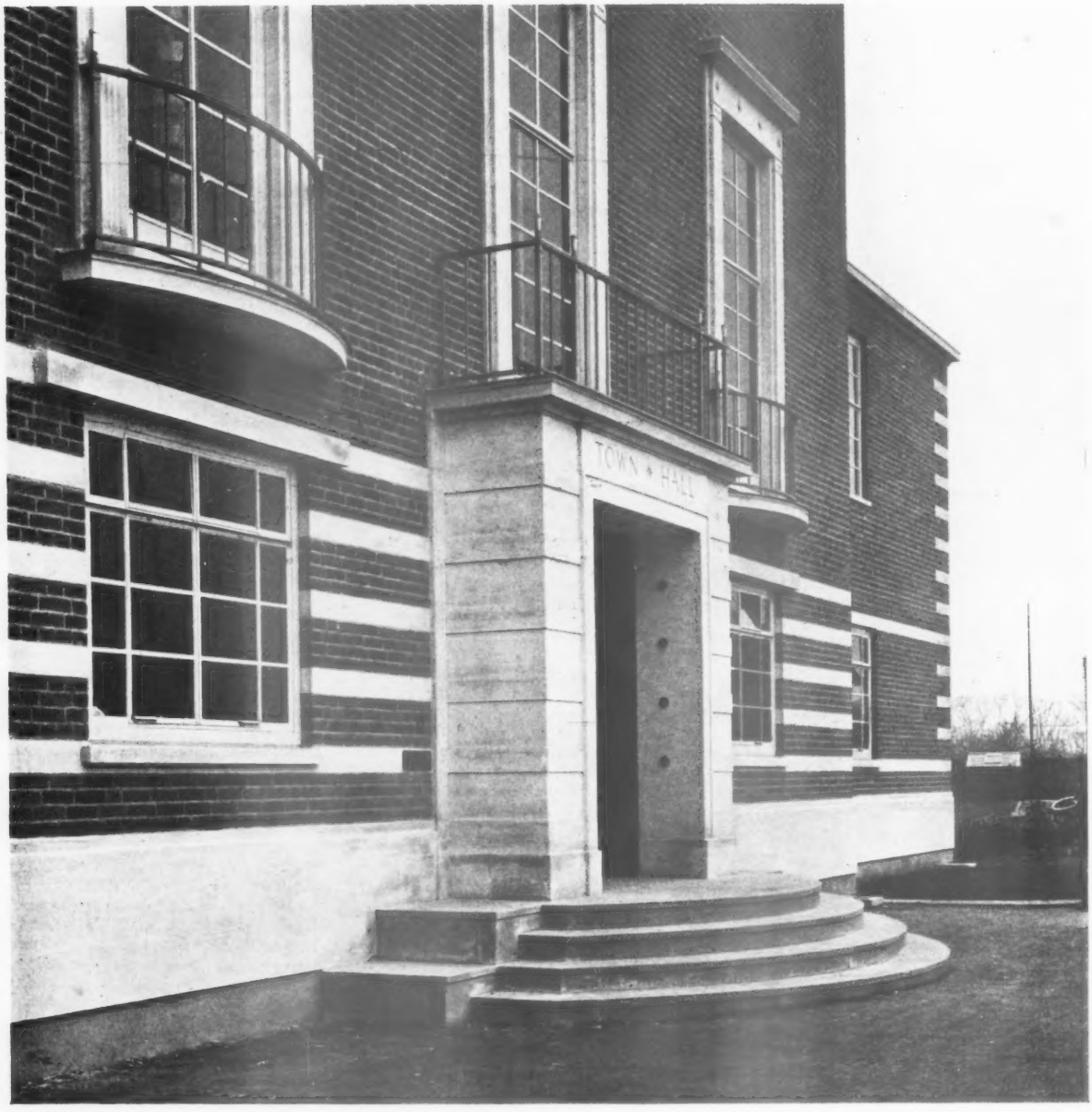
E.H.W.A.

Publications Received

The Land of Wales. By Eiluned and Peter Lewis. Batsfords. Price 7s. 6d.

Slating and Tiling. By J. Millar. English Universities Press. Price 5s.

OFFICES FOR THE SLOUGH U.D.C.:



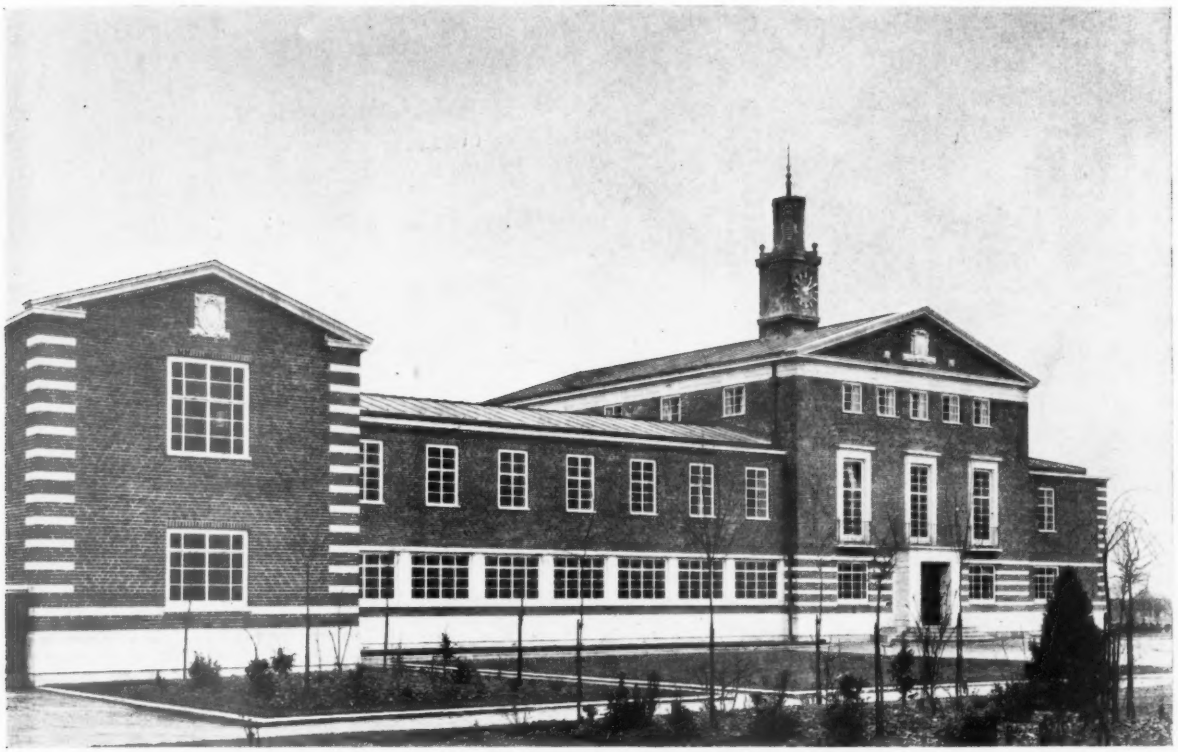
GENERAL—*The design is the outcome of an open competition held in 1934. Some 200 designs were submitted, and the architects' scheme was placed first by the assessor, Professor H. S. Goodhart-Rendel. The building was officially opened on Wednesday of last week.*

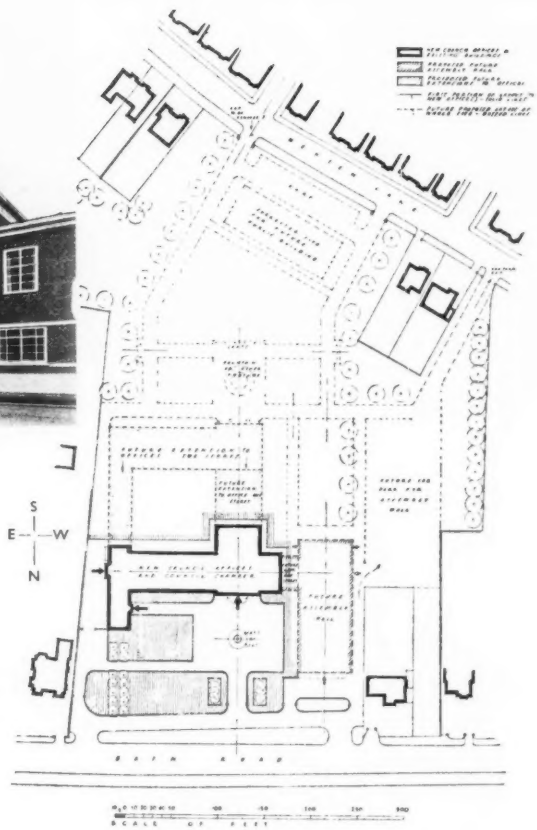
PROBLEM—*Municipal offices for an Urban District Council containing four departments. This stipulation naturally implied a two-storey building, with the engineer's and accountant's departments most accessible to the public on the ground floor, and the departments of the clerk to the council and the medical officer of health on the first floor.*

CONSTRUCTION AND ELEVATIONAL TREATMENT—*Walls are 14 in. solid brickwork, faced with multi-coloured bricks from the Newbury district, with dressings of Gloucestershire (Nailsworth) stone. Basement walls are of concrete; and the floors are of hollow tile construction, with no steel beams except under the council chamber. Internal partitions are of pumice block, the corridor walls being in 9 in. brickwork. Steel windows are set in wood frames, and the balconies are of wrought iron. The roof and flèche are covered with sheet copper, and the flag mast is of spun concrete with a bronze finial.*

Above is a detail of the main entrance.

BY C. H. JAMES AND S. ROWLAND PIERCE

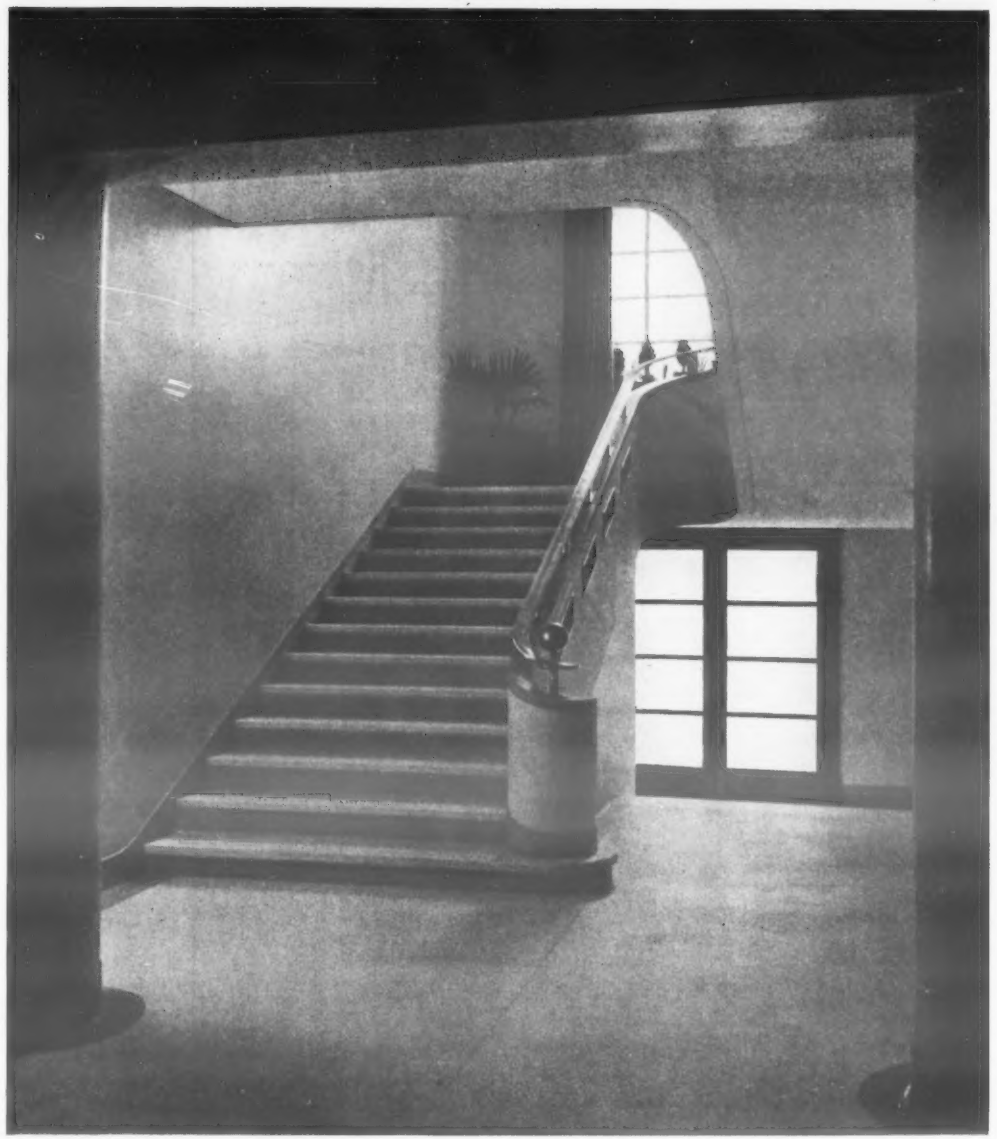




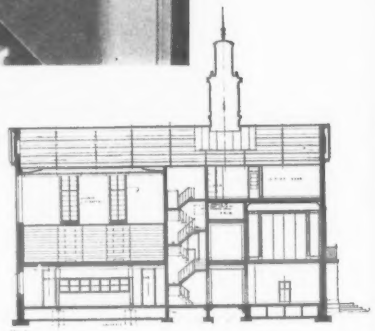
SITE—*The site (see site plan on right) was large and inexpensive, thus making possible a good open plan, with ample room for future extensions and the planning of an assembly hall not yet built. The building is set well back from the Bath Road to minimise noise, to provide ample parking space, and to allow for a good stretch of greensward.*

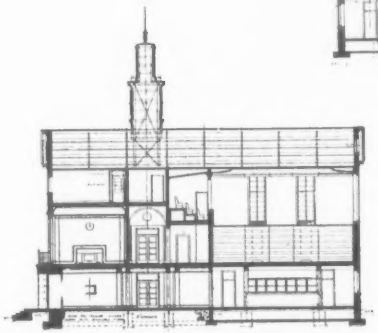
The photographs show two views of the main front.

OFFICES FOR THE SLOUGH U.D.C.: BY C. H. JAMES AND S. ROWLAND PIERCE

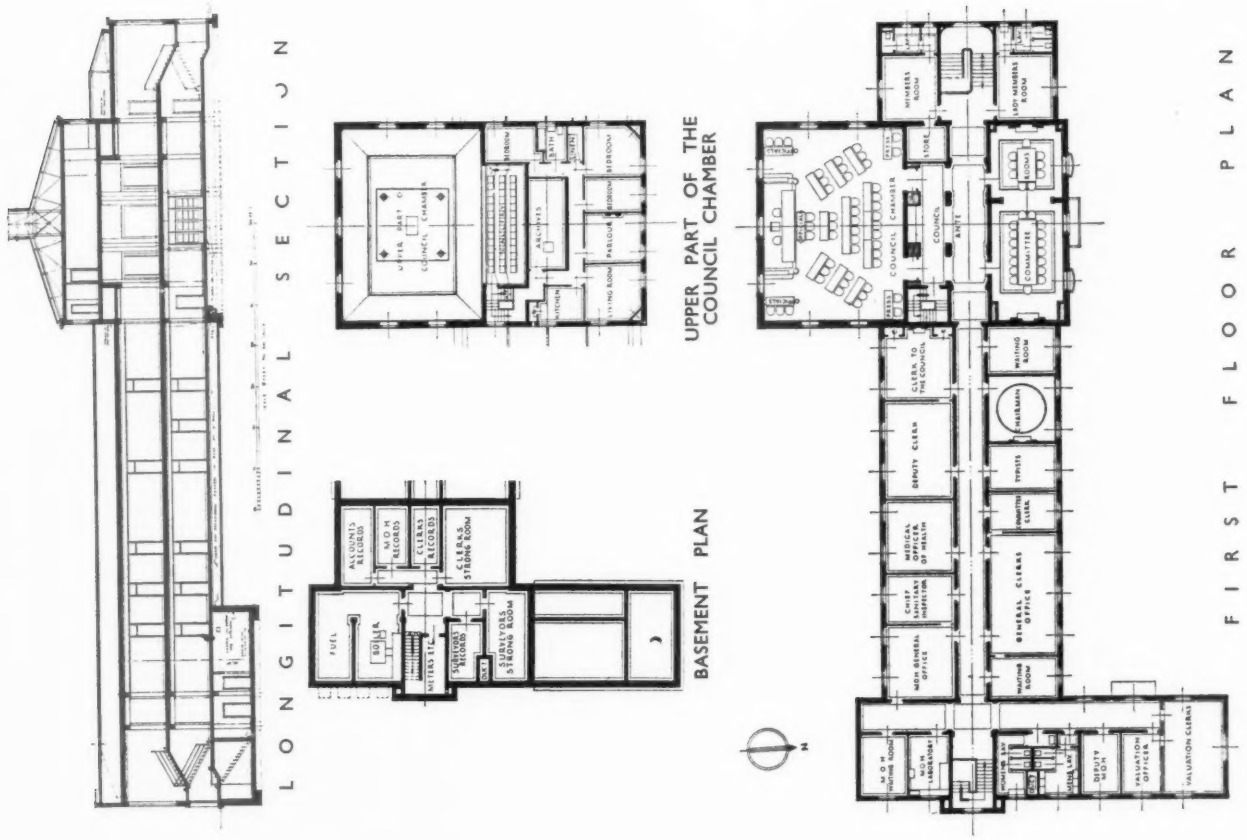


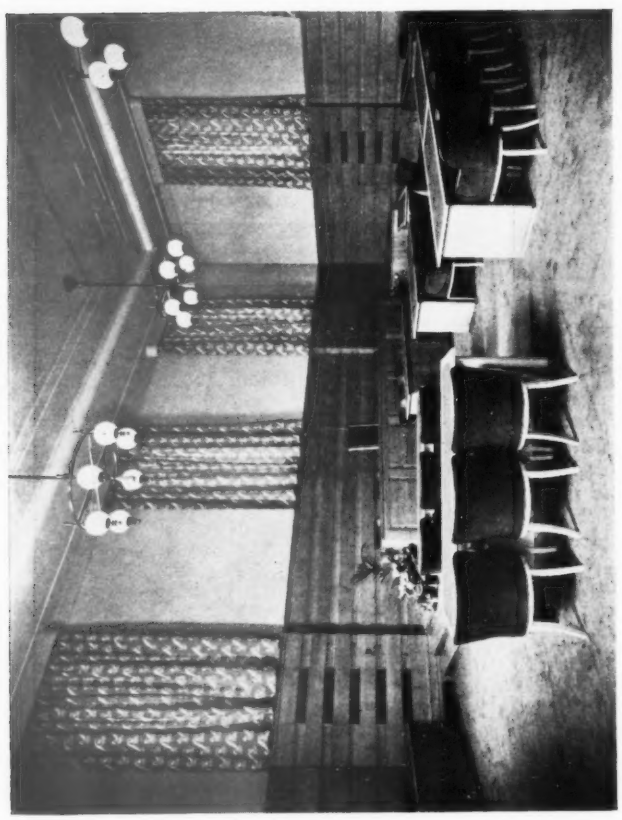
CROSS SECTIONS





The photographs show two views of the principal staircase.





The Council Chamber.

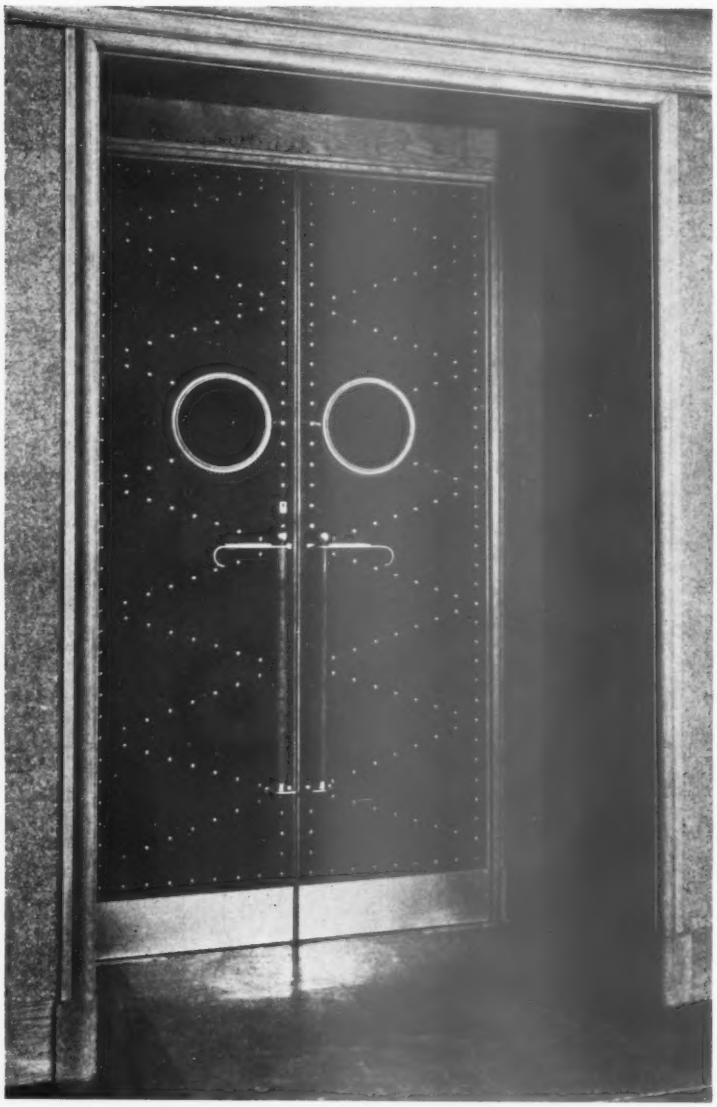
OFFICES FOR THE SLOUGH U.D.C.

DESIGNED BY

C. H. JAMES

AND

S. ROWLAND PIERCE



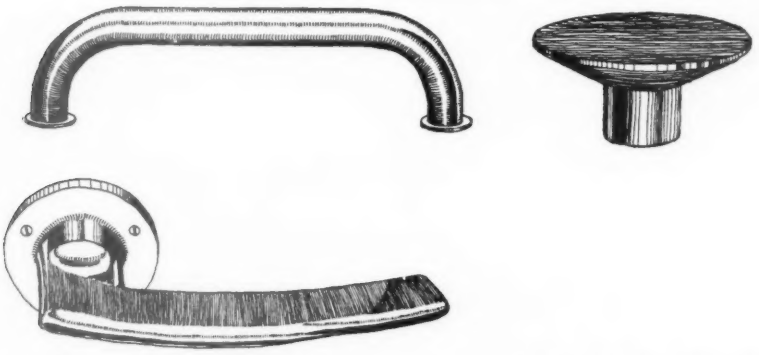
FINISHES—*Offices generally are finished temporarily with ordinary washable distemper. The office floors are covered with linoleum; and the corridors and chiefs' rooms with cork tiles. The staircases, entrance hall and council ante-room are sprayed with special textured paint. The council chamber is panelled to about the height of 10 ft. in solid English oak (with some cork tile on the back wall) with acoustic plaster over. The decorated ceiling is in fibrous plaster; and chairs and tables are in English oak, covered with morocco leather. The floor is covered with a heavy grey-brown carpet, and there are specially woven curtains in which red is the predominant colour. The committee rooms are flush panelled in veneered English oak, with teak strip floors. There are marble surrounds to the electric fires. The curtains are in brown, beige and red, with loose dark-grey carpets. Chairs and tables are in oak, the former covered with beige morocco. The chairman's room is flush panelled in veneered Australian walnut, with Australian walnut furniture, and chairs upholstered and the desks covered with jade green morocco.*

HEATING—*Heating is by low-pressure hot water, accelerated by pump, with a magazine boiler burning small anthracite. The hospital type radiators are generally exposed.*

COST—*Total inclusive cost: £30,000.*

The photographs show: above, doors to the council chamber; right, the committee room; and the east staircase.

For list of general and sub-contractors, see page 629.



TRADE NOTES

[EDITED BY PHILIP SCHOLBERG]

Ironmongery

FOR some years now the Dryad people at Leicester have been turning out very pleasant and simply-designed door furniture and general ironmongery. Their new catalogue shows that they are going on in much the same spirit, and not being led away after the false gods of applied moderne. Among the lever handles, there is a new curved design, shown in the sketch at the head of these notes, which sells at 9s. 6d. a pair in bright or satin chromium plate, or 8s. 6d. in B.M.A. finish, or at 2s. 6d. extra for Doverite plastic finish in any colour.

•

There are also one or two new designs among the pull handles, both for doors and for drawers, the simple loop illustrated above costing only 20s. a dozen in bright or satin chromium, and the circular knob, also shown in the sketch, costs 12s. a dozen in the same finish. The three examples quoted are only a personal preference, and there are plenty of other designs at equally reasonable prices for people who have different ideas. The general standard of design is remarkably high, as I have already suggested, and anybody who designs for ordinary people as opposed to the purpose made group ought to be able to find something suitable without any great trouble.

Armaments Abroad

Shortly after Sir Thomas Inskip's recent announcement that, armaments being so very necessary, we must expect a good deal of delay in the delivery of structural steelwork, I happened to catch sight of a news paragraph in a German architectural weekly headed "No more steel for housing schemes." With a good deal of pain and grief, and a great deal more dictionary, I have made a rough translation, and my version of the note reads as follows:—"Because of the shortage of iron and steel, a fair amount of current building work has been unduly delayed, and on January 12 the Prussian Minister of Finance issued the following decree. In view of the considerable demand for single family houses, and in order to make certain of reasonably prompt delivery of materials, all supplies must be ordered through the Control Board for the Supply of Raw Materials, which is responsible for keeping the Four-Year Plan up to schedule. In the near future supplies of iron and steel for building purposes will be available in limited quantities only, and this ruling should therefore be kept clearly in mind when preparing specifications."

•

So it would seem that the German architect is rather worse off than we are, for there is, as yet, no need for us to order steel through a Government department (probably being compelled to give good and sufficient reasons for needing it). The German seems to have a genius for developing synthetic products, but where does one start to find a steel substitute? Marie Antoinette, you remember, seemed to think that *brioches* were quite good enough in a bread-shortage, but architects are expected to be made of sterner stuff, or else, perhaps, her fate may overtake them.

Make Your Own Weather

Anybody who has ever worked in a building with a properly installed and efficient air-conditioning plant would obviously like to spend all the rest of his time in an equally efficient atmosphere, but, unfortunately, what is possible in a large job is not always as easy in a small shop, a house, or even one room in an ordinary building. As I remarked in these Notes some weeks ago, there have been rumours of a small central air conditioning plant, suitable for small houses, to be made in America by Chrysler, but of this no trustworthy information is available.

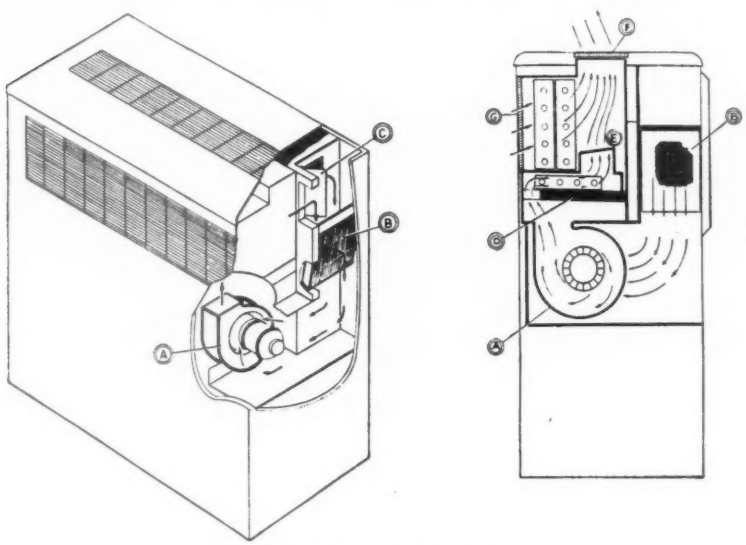
•

There are, of course, plenty of devices for pushing air out of a room, for pulling it in, for heating and circulating it once it's inside, and even for filtering it on the way in, but none of these get anywhere near to air-conditioning in the true sense of the term, and most of them are only makeshifts, though they are generally quite good at the job they set out to do. Recently, however, Carriers have marketed a self-contained "weathermaker," which is reasonably portable and which can be used in any room where there is an electric power point. And it gives real air-conditioning, in that it filters the incoming air, brings it to the right humidity, heats it or cools it as necessary, and discharges it upwards into the room so that there are no unpleasant draughts.

•

The section and the cut-away drawing show, in a simplified form, the path of the air through the machine. Primary air is drawn through the renewable "throw-away" filter B into the high pressure fan A, whence it passes through the sound silencer D into the ejector nozzles E, which then induce a secondary current of room air to flow inwards through the grille G, the two supplies being discharged into the room at a slight forward angle through the grille F. There is also an adjustable damper (C in the cut-away sketch) by means of which the supply to the blower can be adjusted to give all outside air, a mixture of outside and room air, or all room air. Heating or cooling, and the necessary humidifying is carried out during the passage of the air from G and E to the outlet grille F.

There are, naturally, the usual thermostats



Diagrams of the Carrier "Weathermaker."

and hygrostats to make certain that the air temperatures and humidities are kept constant, and there is thus a good deal of machinery to be tucked away in a small space which finally measures only 40½ ins. high, 30 ins. wide and 18 ins. from front to back. A good deal of trouble has been taken to make the unit as silent as possible, and it gives out only a subdued hum which seems to be a good deal less than the noise made by the average refrigerator. Fixing is quite simple, the only work necessary being a certain amount of cutting away for a duct to the outside air.

•

Two models are available, the air-cooled and the water-cooled. Both have a heating capacity of 1¾ kilowatts, and the water-cooled model has a cooling capacity of 8,850 B.T.U.s an hour, about 800 more than the air-cooled type. These two models cost 99 guineas, and there is also a third, at 88 guineas, which does not heat or humidify. These prices include installation, "except under abnormal conditions." This, I take it, means a particularly long or complicated supply duct.

Plumbing Problems

My fan mail for last week contained an extract from the minutes of the Research Section of the fifty-fourth annual convention of the National Association of Master Plumbers, held at the Hotel Statler, Buffalo.

•

QUESTION. "I think that a number of communities have the trap in the basement wall, and this is going into disuse. It is being taken out of the ordinance. Is there any particular need for it? What is your opinion . . . unless connected to the sewer?"

•

Ignorance forbids me to answer a question of such obscurity. If pressed, I could only reply "If so . . . keep your trap shut."

Addresses:

The Dryad Metal Works, 40-42 Sauvey Gate, Leicester.

Carrier Weathermakers, Ltd., 27 Conduit Street, London, W.1.

IDEAL HOME EXHIBITION

On Tuesday of last week the Duke and Duchess of Gloucester opened the twenty-first "Daily Mail" Ideal Home Exhibition at Olympia, Kensington, W. The Exhibition will remain open until April 24 between the hours of 10 a.m. and 10 p.m.

More than 500 firms are exhibiting their products; below we print notices of some of the principal exhibits.

Allied Ironfounders, Ltd., display, on Stand 471, a selection of the production of their Scottish group of companies. This display includes: gas, electric and heat storage cookers; Allustre cast-iron enamelled fireplaces, rain-water goods, pillar boxes and baths.

•

Stand 41, Coal Utilisation Council and the Combustion Appliance Makers' Association (Solid Fuel), is a collective exhibit of modern labour-saving domestic heating appliances using coal, coke, anthracite or low volatile solid fuels. Included are: open fire (automatically lit), closed stoves, cookers, hot water boilers and central heating equipment. These appliances are demonstrated under fire, and literature and solid fuels are displayed. In addition to the Association exhibits, the following firms are represented by individual exhibits: Ashwell and Nesbit, Ltd., Leicester; Candy & Co., Ltd., Newton Abbot; Richard Crittall & Co., Ltd., London; Mirrlees, Bickerton and Day, Ltd., Stockport; Charles Portway and Son, Halstead; Riley Stoker Co., Ltd., London; Allan Ure & Co., Ltd., Glasgow.

•

"Nevastane sinks and cupboardettes" are shown by Benham and Sons, Ltd., on their Stand in "Staybrite Street." Also on view is the recently marketed "Nevastane cup and plate rack."

•

Boulton and Paul, Ltd., are showing, on Stand 131, typical examples of their sunshine rooms and garden shelters.

•

On Stands 88 and 89 Bratt Colbran, Ltd., are showing their latest designs of high-grade fireplaces, including the Heaped Fire, with one of these demonstrated in action. They also have on view a number of their electric radiators.

•

Modern domestic and industrial applications of aluminium and its alloys are demonstrated by the British Aluminium Co., Ltd., on Stand 455.

•

A comprehensive selection of the "Devon" fires, in faience, tiles and red brick is shown by Candy & Co., Ltd., on Stand 67.

•

Automatic solid fuel burners for heating boilers and automatic solid fuel magazine boilers are exhibited by Cerac, Ltd., on Stand 82.

•

Catesby's, specialists in floor coverings of all kinds, are showing, on Stand 51, their new planned cork lino floors.

•

A full range of "Claygate" brick fireplaces comprises the exhibit of Claygate Brickfields, Ltd., on Stand 114.

•

W. H. Colt (London), Ltd., display, on Stand 139, their Colt Canadian Cedar Wood Tiles for roofs and walls. These are claimed to be economical, durable and easy to lay. The minimum life is said to be 60 years.

•

Crane, Ltd., are again exhibiting, on Stand 113, examples of their boilers and radiators for central heating and hot water supply. The "Carlton" and "Whitehall" heating boilers are shown together with the "Ipswich" and "Regent" domestic hot water boilers.

•

Dunlop Rubber Co., Ltd., are exhibiting, on Stand 436, their Dunlopillo carpet underlay and stair pads, Dunlopillo loose cushions and a new range of covered cushions.

•

On the Stand, 104, of the Eagle Range and Grate Co., Ltd., is a comprehensive display of Eagle combination grates and gas coke grates. Various types of large scale cooking apparatus are shown in actual operation.

•

The full range of products marketed by Electrolux, Ltd., is shown on their three stands, 19, 95 and 274.

•

The display (Stand 84) of Smith and Wellstood, Ltd. (Esse Cooker Co.), includes the Esse heating stoves for solid fuel, Bandera, Diamond, New Bonnybridge boilers, etc.

•

"Super Interoven" and "Selfix Interoven" convertible cooking and heating stoves for economical cooking and hot water supply are specially featured by the Interoven Stove Co., Ltd., on Stand 91.

•

As in previous years, Firth-Vickers Stainless Steels, Ltd., manufacturers of "Staybrite" steel, have gathered round them in "Staybrite Street" the leading fabricators of articles made from the steel. The main grouping of the exhibits under the auspices of Firth-Vickers are on the Stands organized by Selfridge & Co., Ltd., and London Metal Warehouses, Ltd.

There is an information bureau where enquirers may obtain details on all subjects appertaining to the manufacture and use of articles made from the various stainless and heat-resisting steels made by the Firth-Vickers organization.

•

The "Elf" gas cooker, the "Kabineat" all-porcelain enclosed gas cooker, folding table top cookers, etc., are exhibited by Sidney Flavel & Co., Ltd., on Stand 103.

•

A complete range of Frigidaire household cabinets is shown by Frigidaire, Ltd., on Stand 92. It is claimed that every 1937 Frigidaire conforms to each and all of the five basic standards for refrigerator buying: 1, low operating costs; 2, safer food protection; 3, faster freezing; 4, more usability; 5, five-year protection plan.

•

The exhibit of W. H. Gaze and Sons, Ltd., on Stand 142, comprises miniatures of their well-known tennis hard courts.

•

Ideal Boilers and Radiators, Ltd., are showing, on Stand 66, their boilers and radiators for central heating, Ideal domestic boilers for hot water supply and Ideal gas boilers.

•

An arrangement of modern bedroom furniture is shown by Julié Jacob, Ltd., on Stand 35. A particular feature of the display is the "Curzon" dressing table.

•

John Laing and Son, Ltd., exhibit, in the National Hall, a "Malvern K" 3-bedroomed house, designed by Arthur W. Kenyon, F.R.I.B.A. It is carried out in multi-coloured rustic facing bricks with a tiled roof. The cost of this type of house is £1,095.

•

Disappearing loft ladders, with novel methods of counter-balance, obviating the use of weights, together with fire-escape ladders, extending ladders and household steps, are exhibited by Loft Ladders, Ltd., on Stand 117.

•

The chief exhibit on the Stand, 87, of Mitchell, Russell & Co., Ltd., is the "Courier" stove, which, it is stated, will consume any solid fuel and will provide 24 hours' warmth for 5d.

•

The Stand, 119, of Pilkington Bros., Ltd., is almost entirely devoted to the display of "Vitrolite" glass for wall linings. Various treatments suggesting its application to the walls of a bathroom, lounge and kitchen are also shown.

•

PhurnoD natural smokeless coal for all types of hot-water boilers, central heating plants, slow combustion stoves and automatic domestic stokers is shown by Powell Duffryn Associated Collieries, Ltd., on Stand 79.

•

Radiation, Ltd., have arranged, on Stand 57,

a comprehensive display of Regulo-controlled New World gas cookers, "High Beam" gas fires, gas radiators, gas-operated hot water apparatus, etc.

●

The exhibit, Stand 58, of Arthur Sanderson and Sons, Ltd., comprises a number of bays and cubicles which show complete decorative schemes representing as nearly as possible actual rooms.

●

"Permutit" (T.M.) water softeners are exhibited by United Water Softeners, Ltd., on Stand 71. The range of models exhibited is claimed to cater for every home and income—from the "Midget" selling at only 25s., with a capacity of ten gallons between regenerations, to the largest automatically controlled model at £240, with a 4,500 gallon capacity.

●

Zeros refrigerators—an Ismay product—shown on the stand (74) of Zeros (Sales), Ltd., are claimed to be the only electrically-operated refrigerators on the market without moving parts.

DAMP WALLS

IN a talk at the Building Centre given in connection with the Science and Building Exhibition arranged by the Department of Scientific and Industrial Research, Mr. R. Fitzmaurice, of the Building Research Station, dealt with the subject of damp walls concerning which the present season had brought a heavy crop of enquiries to the Station. The problem, he said, was more difficult than that of strength in buildings, or even fire resistance, because so many factors were involved in it. There was first the average rainfall in the particular locality, which might vary in the British Isles from 30 ins. to 200 ins. a year, to be taken into account. It would be possible to take the contours of rainfall over the country and to say that a 9-in. brick wall unrendered would be good enough for say 30-in. contours, and so on. But this would not end the matter because every seven years or so there might be a specially wet winter such as the present one, or that of 1929–1930, when reports of failures due to damp simply poured into the Building Research Station. It was also necessary to take into account the severity of exposure of various buildings to rain driven by the wind. Where there was a lack of shelter, as in the end house of a terrace, more care had to be exercised in the choice of materials and methods of construction to keep out damp, than in less exposed situations. In the present state of knowledge he thought the safest course in an area of fairly heavy rainfall would be to look round and see what local builders had been in the habit of doing for past years.

He then dealt with the question of the design of the building itself. "Very often the client," Mr. Fitzmaurice said, "has a firm idea of the type of building which he wants; he may want a house in the Georgian manner, or in his own peculiar manner, or something extremely modern. The architectural style of the house has a bearing on the problem, and the important question is whether or not there is shelter at the top of the wall. With a pitched roof, a generous overhang at the eaves, and not too severe exposure, the wall will be very considerably sheltered; a much lower quantity of rain will fall on the wall than in the case of a building not so favoured. The lesson to be learned from that is that where there is not shelter at the top of the wall it is necessary to be much more careful; there is much more likelihood of trouble. The extreme modern tendency is to abolish almost all excrescences and to have an absolutely plain box. It is much more difficult to keep the wet out of the vertical walls of these plain boxes, because they have no shelter at the top. The style of the building does definitely influence the construction and materials which should be used for the walls from the point of view of keeping the wet out."

Discussing the manner in which materials used in building affect the problem of keeping out the wet, Mr. Fitzmaurice pointed out that the majority of traditional walling materials have a porous structure. He explained how water was sucked into a brick by capillary action rapidly at first and then much more slowly, the rate varying widely for different varieties of brick.

It might be taken as axiomatic, he said, that if sufficient rain was blown into contact with a brick wall for a sufficient time, sooner or later the inside of the wall must get wet. Hence one did not find people experimenting with solid brickwork untreated in any way on the Cornish coast, and even along the South coast it was very rare to see solid brick walls unrendered or unpainted and if one did see facing brickwork, probably there was a cavity wall behind.

It might be argued then that the best thing to do was to use a dense material which would not let the rain through at all as an alternative to porous brick. The matter was not quite so simple as that, however, because not only had the bricks to be taken into account, but the joints between them. The problem of the mortar joint, he thought, was the worst that had to be faced. Dense mortar and dense brick or stone might be used and yet the wet would come through because it was extraordinarily difficult to obtain a perfect bond between mortar and brick. "If we take a fairly strong cement mortar, with well chosen sand and with cement in the ratio of 3 : 1, and made up some specimens in the laboratory, they will be almost absolutely impervious. Sandwich that wet mortar between two bricks which may be of low porosity, but which have some porosity, and they will start to draw the moisture from the wet mortar and we shall not have the same mortar at all. Then there is the serious fact that these mortars tend to shrink as they dry out. They must start life wet, and they must attain a drier condition afterwards. In that drying process the mortars shrink, and that leads to the formation of fine channels between the bricks and the mortar. These fine channels are microscopic, and probably cannot be detected by examining the face of the wall, but yet they exist.

"We have made a number of tests at the Building Research Station," Mr. Fitzmaurice continued, "on walls built with various mortars, using a number of different kinds of brick. We test them by having a perforated pipe along the top, which allows a film of water to trickle down the wall. That is probably a more severe condition than usually obtains, but we have the astounding result that in the case of a 9-in. brick wall, carefully constructed, with almost every mortar and with a number of hand-made, sand-faced bricks, the water trickles through at the back in something less than five minutes in quite an appreciable number of places. That is evidence of the existence of these small channels which are formed between the brick and the mortar. It is not very much use taking an undue amount of care to use very impervious bricks if these channels are going to be formed between brick and mortar which will let the wet through so quickly."

There was thus the apparent anomaly that water was more liable to go quickly through a dense, non-absorptive brick or other wall unit than through a porous one. The explanation, Mr. Fitzmaurice suggested, was that when rain was blown against the porous wall it was absorbed uniformly all over the surface of the wall, and when it stopped raining evaporation took place from the wet brickwork and the water came out again, so that as long as the rain did not continue until the wall was wet through everything was all right. On the other hand with a dense brick or stone wall, natural or artificial, the rain, instead of being absorbed started to run down the wall so that a continuous film of water was formed on its face which might turn in and run right through in fine channels between the brick and mortar and appear very rapidly on the inside. In the same way rainwater ran as a film over a mackintosh worn in the wet and was absorbed in a great coat. The wearer might be perfectly dry in the mackintosh, but woebetide him if the mackintosh had any cracks or holes because rain would pour through these immediately. The idea of applying rendering to a brick wall really involved putting a mackintosh on it, which sounded a perfectly reasonable thing to do. Most of the renderings used since the war were dense and very impervious. "Unfortunately," Mr. Fitzmaurice continued, "in addition to being dense they have been very prone to shrinkage cracking in particular, and when there are cracks in this very dense, impervious surface, the water which is running down the surface in a continuous film turns in through the crack and wets the wall behind, soaking into the wall behind the rendering; and, when a spell of fine weather follows the rain, evaporation is prevented, or at any rate enormously slowed down, by the dense rendering, and so the wall lies water-logged behind the rendering until more rain comes along and makes the position at times worse than if there had been no rendering at all."

The work which had been done at the Building Research Station on rendering seemed to suggest that the solution of the problems of both cracking and rain exclusion lay in using rendering of a more porous texture—in abandoning the mackintosh and putting on a great coat. A heavy squall of rain instead of forming a continuous film of water over the wall would be absorbed into the surface. The surface would hold the water during the squall and when fine weather came evaporation would take place. In leaving the subject of rendering, Mr. Fitzmaurice said that "there has been a vicious tradition in the industry that because it is to be covered up with a rendering any old brick will do. There never was a worse fallacy. Bricks, as is well known, vary enormously in their content of soluble salts, principally sulphates, which originate during the manufacture and firing of the brick. It is safe to say, I think, that the best brick, other things being equal, is the one with the lowest content of readily soluble sulphate. It is characteristic of cement renderings at any rate, and probably of the more porous lime-cement renderings as well, that they are vulnerable to attack by sulphates in the presence of moisture, under really damp conditions; and therefore, if you cover up a brick which is full of sulphates with a rendering, the two are going to quarrel. A very large number of failures from this cause have been brought to the notice of the Building Research Station, usually in the complete failure of the rendering, and it is very troublesome in such cases to know what to do with it after it has failed. I would emphasize, therefore, that a job which is going to be rendered is one which demands the utmost circumspection in the choice of brick to go under the rendering, or else the utmost care in seeing that water does not have access to the wall behind the rendering, because these troubles with sulphates occur only when moisture has access to the wall."

In dealing with cavity walls, Mr. Fitzmaurice emphasized the importance of the cavity being continuous, and the avoidance of mortar droppings or anything else in the cavity which might form a bridge of a fine porous structure which might conduct moisture from the outside cavity wall to the inside. There are people who said, Mr. Fitzmaurice continued—and they became very indignant if you did not agree with them—that the only satisfactory cavity wall was the one which was filled, and the filling advocated was usually asphalt or some bituminous preparation which was poured in as the work went up, or waterproofed cement mortar. Asphalt, he thought, might give a perfectly watertight wall if the job was carefully carried out, but he believed there was much the same risk of a capillary bridge with an asphalt filled cavity as there was with an empty cavity. He had never felt happy about the use of waterproof cement mortar, and in two cases which he had seen it had given the most shockingly damp houses he had ever been in. The question he would put to those who advocated the use of waterproof cement mortars was this: "Does the addition of the waterproofer appreciably reduce the likelihood of shrinkage of the mortar. It is necessary to use a strong cement mortar; to be impervious it has to be strong. That, however, is very liable to shrink, and cracks

are formed which provide a perfect capillary channel from outside to inside."

"There is another family of wallings," Mr. Fitzmaurice continued, "which are solid in the sense that they are made up of blocks which are not separated by any cavity, the hollow clay unit. It is curious that in this country this type of unit is not very extensively used, but so far as I can make out it is almost universal on the Continent, or at any rate in Central Europe, for domestic work. The German type of block is used very much in South Germany and in the Rhineland, and within a radius of 100 miles or so of the factory where these blocks are made they have almost swept the field.

"There are several convenient features about this type of block. The largest block is of such a size that it is conveniently handled by the bricklayer with one hand. It has a rather nice ridge at the top which the bricklayer can hold very conveniently. In effect, it gives a perfect capillary break right along at every horizontal joint. In laying the walls out they 'batter' the ends of the blocks, and there is a good capillary break in the mortar joint. We tested a wall of these blocks at the Building Research Station, and it was far and away the best of any of the solid walls which we have ever tested there. The wet came through a 14-in. brick wall in a dozen or more places inside half an hour, but at the end of six or seven hours it had not come through this wall of blocks at any place. The wall was built carefully, but without any special care. I imagine very much the same effect is obtained with the American units. The makers have exploited the possibilities of the shape of the unit, and I hope we shall see the same sort of thing in this country, because it does away with the possibility of bad workmanship and accident; it is almost fool-proof, and that is what we want."

In conclusion, Mr. Fitzmaurice dealt with the special difficulties in dealing with window frames and parapets. In the case of window frames, he stressed the danger of using plastic fillings which would not remain plastic for all time, in inaccessible places. The parapet, he considered, introduced a very difficult problem since it got wet from both sides, and since it was difficult to get a coping which would not crack. Personally, he favoured the use of two damp-courses in parapets in spite of the seemingly high expense. Similarly he advocated a damp-course in chimney stacks where not only do the bricks suck in water but gravity makes it go down the stack.

LAW REPORT

CONTRACTORS' CLAIM

A. Jackaman and Son, Ltd. v. *Airports, Ltd.*—*Court of Appeal. Before Lords Justices Greer and Greene*

A DISPUTE between A. Jackaman and Son, Ltd., builders and contractors, of Slough, who constructed Gatwick Airport, and the owners of the property, Airports, Ltd., concerning the price to be paid for it, involving the allegation that it was much too high, was the subject of this application by Airports, Ltd.

Sir Patrick Hastings, K.C., for the latter company, said they were appealing from an order of Mr. Justice Lewis in chambers, directing that judgment should be entered for Jackamans for £15,840, and they were asking for leave to defend the action as to the balance so that they could reopen the whole matter. Jackamans by their writ claimed £46,190 for work and labour done at the airport. Their total claim was for £129,204, but the defendants had paid £83,000 on account. The plaintiffs got leave to sign judgment for £15,840, and the defendants got leave to defend in respect of £30,350.

The history of the airport was interesting, said Sir Patrick. Some people named Jackaman bought some land at Gatwick on which they proposed to build an aerodrome, and a company was formed by members of the Jackaman family. But that scheme came to nothing and defendant company was formed, which bought the land. A son of Mr. Jackaman, the head of the plaintiff company, became joint managing director. They both knew the nature of the ground and what was needed for the building of an aerodrome on it. The plaintiff company, being asked for a preliminary estimate, gave a figure of £47,000. They did the work, but in the result that figure was increased to £129,000.

The defendant company's answer to the claim was that a great deal of the work done was unnecessary and unauthorized, and they wanted to see how much of the work ought to be paid for.

An affidavit by Mr. S. A. Gordon, secretary of the defendant company, was read by Sir Patrick. In it he alleged that the sum claimed was excessive and they asked that the plaintiff company should prove that the amount was accurate and that the work done was authorized. With regard to the terminal building the affidavit said that in their final claim in October, 1936, the plaintiffs claimed £47,000, which exceeded the estimated price by approximately £21,000, and the defendant company asserted that that figure represented work and labour which was excessive, unnecessary, and unauthorized.

What they complained about, said Sir Patrick, was that they had not got leave to defend with regard to that £21,000, and they said that they had already paid all that was due, and possibly more.

Mr. John Morris, K.C., for Jackaman and Son, said their account for the work and labour was sent in great particularity to the defendant company in October last and they did nothing at all in regard to it. His clients had been kept out of that large sum for a long time.

Lord Justice Greene: "The effect of the judgment is that the defendant company would never be able to investigate any of the cost items."

Mr. Morris: "They had the fullest opportunity of investigating all the items before the writ was issued. It would seem that they stopped paying after they had paid the £83,000 for some other reason."

Lord Justice Greer, giving judgment, said that in the case of every item to which their attention had been called an arguable defence was raised in Mr. Gordon's affidavit. The defendant company did not say that they were bound to succeed, but that they had an arguable case which they were entitled to have tried. That case was that the various items which they disputed were not within the original contract. He therefore thought that Mr. Justice Lewis's decision must be reversed and there must be leave to defend with reference to the balance of the sum now claimed.

Lord Justice Greene agreed.

HOUSING

RURAL WORKERS' HOMES

The Minister of Health, Sir Kingsley Wood, has now available some publicity material for use in making more fully known the advantages of the Housing (Rural Workers) Acts. Under these Acts generous grants are available for the purpose of bringing rural workers' cottages up to modern standards of comfort and convenience. This is in full accordance with the Government's policy that no rural cottage should be needlessly demolished if it can be sufficiently improved by reconditioning or adaptation.

The publicity material now available consists of a poster, a folder and a booklet. It is expected that before long the poster will be seen in every place to which country people resort, while thousands of copies of the folder will be distributed by local authorities among those likely to be interested. The booklet will be issued to all who ask for more detailed information; it describes the remedies for defects which may occur in old cottages, and explains how to apply for grants and loans.

HOUSING — SCOTLAND: CONTROL OF OVERCROWDING

The first order bringing into full operation in any place in Scotland the provisions of the Housing (Scotland) Act, 1935, for the control of overcrowding has just been issued by the Department of Health for Scotland. The order applies to the Dysart Ward of Kirkcaldy and fixes May 15, 1937, as the "Appointed Day" for the ward.

Before the appointed day can be fixed for any locality, the Department of Health has to be satisfied that the greater part of the additional housing accommodation shown by the overcrowding survey to be required in the locality has been provided. The Town Council of Kirkcaldy has complied with the requirements in regard to Dysart Ward.

After the appointed day, in terms of the Act, it will be a punishable offence for an occupier to overcrowd a house. The Act, however, contains certain safeguards to meet the difficulties of sitting tenants. Broadly speaking, the occupier of a house which is overcrowded on the appointed day or which becomes overcrowded after that day merely by reason of the increasing age of children is safeguarded from prosecution unless he refuses alternative accommodation offered to him or fails to secure the removal from the house of a person, not being a member of his family, whose removal is reasonably practicable.

There is protection also of certain owner-occupiers against the consequences of overcrowding their houses if they can show that the acceptance of other accommodation and the disposal of their houses would cause them serious hardship. In addition, temporary overcrowding is permitted for a period not exceeding sixteen days caused by the residence of persons to whom accommodation is given otherwise than for gain; for example, to members of the family home on holiday, or to persons brought in to help in times of sickness.

Another important provision which comes into force in a locality after the appointed day affects landlords. It will be a duty of the landlord, before letting a house, to furnish the prospective tenant with a written statement of the permitted number of persons in relation to the house and to obtain a written acknowledgment of the statement. The landlord is bound to produce the acknowledgment to the local authority on demand, and will be liable to a fine if he fails to comply with these requirements.

Dysart is the only place in Scotland so far to which these provisions for the control of overcrowding are to apply.

THE BUILDINGS ILLUSTRATED

OLYMPIA GARAGE (pages 601-606). — The general contractors were John Mowlem & Co., Ltd., and the principal sub-contractors and suppliers included: Goodman Price, Ltd., demolition contractors; Trussed Concrete Steel Co., reinforced concrete work; Burn Brothers, drainage; Plastona, Ltd., "Perfloor" paving; S. F. Bowser, Ltd., petrol pumps; Steel Barrel Co., Ltd., petrol tanks; Fredk. Braby, Ltd.,

steel cisterns ; Haskins, Ltd., steel shutters ; J. A. King & Co., Ltd., pavement lights ; Waygood-Otis, Ltd., goods lift and passenger lifts ; J. Starkie Gardner, Ltd., lavatory doors and partitions ; Doulton, Ltd., sanitary fittings ; Crittall Manufacturing Co., windows ; D. Burkle and Son and Bostwick Gate and Shutter Co., panelling ; H. and C. Davis, iron staircase ; Pearce Signs, Ltd., box signs ; Rapid Flooring Co., Ltd., precast reinforced concrete floors ; Hunziker, Ltd., bricks ; B. French, electric warning signal ; Simplex Conduits, switchgear, etc. ; J. H. Nicholson, heating ; Town Gas Boilers, boilers.

OFFICES FOR SLOUGH U.D.C. (pages 620-624).—The general contractors were H. Tyson Chambers, Ltd., who were also responsible for the excavation, foundations, dampcourses and plumbing. The principal sub-contractors and suppliers included : Twisteel, Ltd., reinforcing steel ; Diespeker & Co., Ltd., reinforced concrete, floors and staircases ; J. C. Blair, stone carver ; E. Sargent and Sons, stone mason ; Aston Construction Co., Ltd., structural steel ; L. Carter and Son, Ltd., special roofing ; McNeill & Co., "Insulcrete" blocks ; London Sand Blast & Decorative Glass Works, Ltd., decorative glass ; Haywards, Ltd., pavement lights ; J. L. Emms, Ltd., cast lead ; Stevens and Adams, Ltd., hardwood flooring ; R.I.W. Protective Products, Ltd., waterproofing materials ; J. Wontner-Smith, Gray & Co., Ltd., central heating, Council Chamber ventilation, and water softening plant ; Bratt Colbran, Ltd., coal fires and fire mantels ; Lumby, Ltd., boilers ; W. G. Bedford, Ltd., electric wiring and bells ; Hume, Atkins & Co., Ltd., and Troughton and Young, Ltd., electric light fixtures ; Synchronome Co., Ltd., electric clocks ; John Bolding and Sons, Ltd., and Broad & Co., Ltd., sanitary fittings ; Marble Mosaic Co., Ltd., terrazzo floors and stairs ; N. F. Ramsay & Co., Ltd., ironmongery and door furniture ; C. E. Welstead, Ltd., steel windows and doors and window furniture ; G.P.O., telephones ; Milners Safe Co., Ltd., strong room ; Light Steelwork (1925), Ltd., iron balustrades to staircases ; Birmingham Guild, Ltd., and Austin Crompton Roberts, ornamental bronze work ; May Acoustics, Ltd., acoustic plaster ; Frederick Tibbenham, Ltd., joinery ; J. P. White and Sons, Ltd., panelling ; Bellman, Ivey and Carter, scagliola columns ; Fenning & Co., Ltd., tablet in marble ; Conway & Co. and Matthews, wall tiling ; Gordon Russell, Ltd., textiles (curtains) ; J. Isaacs, Ltd., linoleum and carpets ; E. Munday, Ltd., and Daymonds, Ltd., lettering and signs ; Heal and Son, Ltd., J. P. White and Sons, Ltd., Gordon Russell, Ltd., and Frederick Tibbenham, Ltd., furniture ; Tyzack, Ltd., general office furniture ; Slough Furniture Galleries, steel furniture ; Bennett Furnishing Co., Ltd., gallery seating ; Kandya Brothers, dresser ; Hume Pipe and Concrete Construction, Ltd., concrete mast ; London Spray and Brush Painting Co., Ltd., Astropol wall finish ; Nobel Chemical Finishes, Ltd., and George & Co., paint ; R. Y. Ames, facing bricks ; Nailsworth Stone Co., stone ; J. C. Blair, stone carver ; John Elbo, Ltd., cork flooring ; James Walker, Ltd., decorative plaster ; Parks Department, U.D.C., shrubs and trees.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICT (15 miles radius)

ENFIELD. *Pavilions, etc.* The Enfield U.D.C. is to erect pavilions, park-keeper's cottage and conveniences, and complete the lay-out of the Enfield playing fields, at a cost of £44,500.

ENFIELD. *Houses.* Plans passed by the Enfield U.D.C. : 12 houses, 95 and 113-119 Vera Avenue, New Ideal Homesteads ; five houses, Falcon Crescent, Messrs. Hamilton, Son and Campion ; eight houses, Bincote Road, Messrs. Geo. Wimpey & Co. ; 42 houses, Tysoe Avenue, Mr. A. E. Wright.

FINCHLEY. *Mortuary.* The Finchley Corporation is to erect a mortuary in North Circular Road, at a cost of £2,900.

HAMMERSMITH. *Town Hall.* The Hammersmith B.C. is to proceed with the erection of a new town hall on Riverside Gardens estate, at an estimated cost of £200,000, and has authorised the architect, Mr. E. Berry Webber, A.R.I.B.A., to proceed with the preparation of more detailed plans.

HENDON. *Elementary School.* The Hendon Education Committee is to provide a new public elementary school for about 400 children at Dole Street.

ILFORD. *Flats.* Messrs. Marshall and Tweedy are to erect a block of 40 flats at Cranbrook Road, Ilford.

ILFORD. *Elementary Schools.* The Ilford Education Committee has purchased sites at Fairlop Road and Harewood Drive, for the erection of elementary schools.

ILFORD. *Houses, etc.* Plans passed by the Ilford Corporation : 63 houses, Herent Drive, Messrs. Lord and Mellodew, Ltd. ; 52 houses, Arandora Crescent, and 20 houses, Palma Gardens, Messrs. P. Triplete, Ltd. ; 36 houses, Blackbush Avenue, and six houses, Norbury Gardens, Mr. J. Giles ; 75 houses, Hanover Gardens, Davis Estates, Ltd.

ST. PANCRAS. *Child Welfare.* The St. Pancras B.C. is to provide a maternity and child welfare centre on the Raglan Street site, at an estimated cost of £6,000, and appointed Mr. A. J. Thomas as architect.

TOTTENHAM. *Housing Scheme.* The Tottenham Corporation has purchased various sites for housing purposes, at a cost of £25,420.

WOOD GREEN. *School.* The Wood Green Education Committee has approved plans for the erection of a school for 850 at White Hart Lane.

SOUTHERN COUNTIES

EASTBOURNE. *Police Premises.* The Eastbourne Corporation has obtained sanction to borrow £26,910 for the erection of police premises in Grove Road.

GUILDFORD. *Extensions.* The Guildford Corporation is to extend the power station at a cost of £79,500.

HITCHIN. *Open-air Swimming Pool.* The Hitchin U.D.C. is to construct an open-air swimming pool, at a cost of £15,500.

MIDDLESEX. *Factories.* The Guildhall Development Company has acquired an area of land at Brentford End, Middlesex, for the purpose of the erection of factories.

MIDDLESEX. *Cinemas, etc.* The Middlesex C.C. Entertainments Committee has approved the following plans : (*a*) Proposed Cinema, Staines Road, Sunbury, new premises. (*b*) Proposed Oldfield Hotel, Greenford, new premises. (*c*) Proposed Rayners Hotel, Harrow Garden Village, new premises. (*d*) Savoy Cinema, Uxbridge, structural alterations. (*e*) South Ruislip Legion Club, revised plans of alterations. (*f*) Proposed Cinema, Hanworth Road, Hanworth, revised plans of new premises. (*g*) Proposed Cinema, Manor House, Harrow, revised plans of new premises. (*h*) Proposed Corner House P.H., Edgware, new premises. (*i*) Proposed Green Man P.H., Stanmore, new premises.

WORTHING. *Houses.* Plans passed by the Worthing Corporation : Five houses, Findon Road, Messrs. J. Rawlinson and Son ; eight houses, Arlington Avenue and Aldsworth Avenue, Messrs. Carwood, Ltd. ; six houses, Ashfold Avenue, Mr. J. E. Lund ; 24 houses, Jupp's Lane, Messrs. Wignall and Ainsworth ; 20 houses, Cedar Avenue, Willmore Phillips, Ltd. ; 28 houses, adjoining Stone Lane, Messrs. Sands & Co.

EASTERN COUNTIES

CHELMSFORD. *Schools.* The Chelmsford Education Committee has approved the plans for the proposed Moulsham Council Schools to accommodate 360 senior boys, 360 senior girls 300 junior boys, 300 junior girls and 240 infants (including 40 babies), together with a caretaker's house, at a cost of £92,514.

CHELMSFORD. *Houses, etc.* Plans passed by the Chelmsford Corporation : Six houses, Highfield Road, Messrs. Tyler and Dobie ; seven houses, Kingston Crescent, Essex C.C. ; canteen and recreation centre, Mill Lane, off Rectory Lane, Hoffmann Manufacturing Co., Ltd. ; 10 houses, Moulsham Drive, Mr. W. J. Aldred ; 50 houses, New Road, off Broomfield Road, Mr. W. J. Wade.

BARKING. *Fire Brigade Headquarters.* The Barking Corporation has obtained sanction for a loan of £18,155 for the erection of a fire brigade headquarters in Alfred Way.

IPSWICH. *Homes.* The King George Memorial Committee is to erect memorial homes in Cliff Lane, Ipswich.

MIDLAND COUNTIES

NORTHANTS. *Police Houses.* The Northants C.C. has purchased sites at Brigstock, King's Sutton, Spratton and Walgrave for the erection of police houses.

NORTHANTS. *Technical Institute.* The Northants Education Committee has purchased land in Queen Street, Wellingborough, for the erection of a technical institute.

STOKE-ON-TRENT. *Houses.* The Stoke-on-Trent Corporation has approved a lay-out plan submitted by Mr. A. Glyn Sherwin, in connection with the offer by Messrs. G. and J. Seddon, Ltd., to erect houses at Eaves Lane, Bucknall, for sale to the Corporation at an inclusive price per house, showing proposals for the erection of 142 houses on the site. Messrs. Seddon are to erect the houses at the inclusive price of £375 per house (A3 type) and £400 per house (A4 type).

STOKE-ON-TRENT. *Houses.* Plans passed by the Stoke-on-Trent Corporation : Eight houses, Hollybush Farm estate, Fenton, for Mr. F. Shenton ; 12 houses, off Grove Road, Fenton, for Mr. J. B. Thompson ; 16 houses, Highfield Avenue, Normacot, for Messrs. Russell and Walker ; 32 houses, North Street, for Messrs. Holloway & Co.

STOKE-ON-TRENT. *Houses.* The Stoke-on-Trent Corporation is to erect 64 houses on the Cornhill estate.

SUTTON COLDFIELD. *Police Station, etc.* The Sutton Coldfield Corporation has chosen the Rookery site, Lichfield Road, for the erection of a new police station and court house.

SUTTON COLDFIELD. *Houses.* Plans passed by the Sutton Coldfield Corporation : 10 houses, Banners Gate Road, Mr. G. E. Clarke ; six houses, Corbridge Road, Mr. R. W. Stanton ; six houses, Clarence Gardens, Mr. A. Robinson ; eight houses, Eachelhurst Road, Derby County Estates, Ltd. ; six houses, Geo. Frederick Road, Messrs. L. Fletcher, Ltd. ; six houses, Geo. Frederick Road, Mr. E. F. Scott ; squash courts, Highbridge Road, Mr. E. H. Shirley ; 10 houses, Melrose Avenue, Messrs. F. T. Matthew, Ltd. ; 38 houses, off Orphanage Road, B.P. Housing, Ltd. ; six houses, Whitehouse Common Road, Mr. R. Burfell.

TUNSTALL. *Houses.* Plans passed at Tunstall : 36 houses, Huntilee Road, for Mr. W. Durose ; 74 houses, off Ridge Road, for Mr. G. L. D. Bates.

WALES

SWANSEA. *School.* The Swansea Education Committee has obtained sanction to borrow £27,668 for school buildings on the Gors site.

RATES OF WAGES

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

			I. s. d.	II. s. d.
A	ABERDARE ...	S. Wales & M.	1 7	1 2½
A	Aberdeen ...	Scotland	1 7	1 2½
A_1	Abergavenny ...	S. Wales & M.	1 6½	1 2
A_2	Abingdon ...	S. Counties	1 5½	1 1½
A	Accrington ...	N.W. Counties	1 7	1 2½
A_2	Addlestone ...	S. Counties	1 6	1 1½
A	Adlington ...	N.W. Counties	1 7	1 2½
A	Airdrie ...	Scotland	*1 7	1 2½
C	Aldeburgh ...	E. Counties	1 3	11½
A	Altrincham ...	N.W. Counties	1 7	1 2½
F_2	Appleby ...	N.W. Counties	1 3½	11½
A	Ashton-under-Lyne	N.W. Counties	1 7	1 2½
B	Aylesbury ...	S. Counties	1 5	1 0½
B	BANBURY ...	S. Counties	1 5	1 0½
F_1	Bangor ...	N.W. Counties	1 4½	1 0½
A_2	Barnard Castle	N.E. Coast	1 5½	1 1½
A	Barnsley ...	Yorkshire	1 7	1 2½
B	Barnstaple ...	S.W. Counties	1 5	1 0½
A	Barrow ...	N.W. Counties	1 7	1 2½
A	Barry	S. Wales & M.	1 7	1 2½
B	Basingstoke ...	S.W. Counties	1 5	1 0½
A_2	Bath	S.W. Counties	1 6	1 1½
A	Batley ...	Yorkshire	1 7	1 2½
A_2	Bedford ...	E. Counties	1 6	1 1½
A_2	Berwick-on-Tweed	N.E. Coast	1 6	1 1½
A_2	Bewdley ...	Mid. Counties	1 6	1 1½
B	Bicester ...	S. Counties	1 5	1 0½
	Birkenhead ...	N.W. Counties	*1 8	1 3
A	Birmingham ...	Mid. Counties	1 7	1 2½
A_1	Bishop Auckland	N.E. Coast	1 6½	1 2
A	Blackburn ...	N.W. Counties	1 7	1 2½
A	Blackpool ...	N.W. Counties	1 7	1 2½
A	Blyth	N.E. Coast	1 7	1 2½
B	Bognor ...	S. Counties	1 5	1 0½
A	Bolton ...	N.W. Counties	1 7	1 2½
A_2	Boston ...	Mid. Counties	1 5½	1 1½
A_2	Bournemouth	S. Counties	1 6	1 1½
B_2	Bovey Tracey	S.W. Counties	1 4	1 0
A	Bradford ...	Yorkshire	1 7	1 2½
A_1	Brentwood ...	E. Counties	1 6½	1 2
A	Bridgend ...	S. Wales & M.	1 7	1 2½
B	Bridgwater ...	S.W. Counties	1 5	1 0½
A	Bridlington ...	Yorkshire	1 6½	1 2
A	Brighouse ...	Yorkshire	1 7	1 2½
A	Brighton ...	S. Counties	1 6	1 1½
A	Bristol ...	S.W. Counties	1 7	1 2½
B	Brixham ...	S.W. Counties	1 5	1 0½
A	Bromsgrove ...	Mid. Counties	1 7	1 2½
B	Bromyard ...	Mid. Counties	1 5	1 0½
A	Burnley ...	N.W. Counties	1 7	1 2½
A	Burslem ...	Mid. Counties	1 7	1 2½
A	Burton-on-Trent	Mid. Counties	1 7	1 2½
A	Bury	N.W. Counties	1 7	1 2½
A_1	Buxton ...	N.W. Counties	1 6½	1 2
A_1	CAMBRIDGE...	E. Counties	1 6½	1 2
B_1	Canterbury ...	S. Counties	1 4½	1 0½
A	Cardiff ...	S. Wales & M.	1 7	1 2½
A	Carlisle ...	N.W. Counties	1 7	1 2½
B	Carmarthen ...	S. Wales & M.	1 5	1 0½
B	Carnarvon ...	N.W. Counties	1 5	1 0½
A_1	Carnforth ...	N.W. Counties	1 7	1 2½
A	Castleford ...	Yorkshire	1 7	1 2½
A_2	Chatham ...	S. Counties	1 5½	1 1½
A_2	Chelmsford ...	E. Counties	1 5½	1 1½
A_3	Cheltenham ...	S.W. Counties	1 5½	1 1½
A	Chester ...	N.W. Counties	1 7	1 2½
A	Chesterfield ...	Mid. Counties	1 7	1 2½
B	Chichester ...	S. Counties	1 5	1 0½
A	Chorley ...	N.W. Counties	1 7	1 2½
B_1	Cirencester ...	S. Counties	1 4½	1 0½
A	Clitheroe ...	N.W. Counties	1 7	1 2½
A	Clydebank ...	Scotland	1 7	1 2½
A	Coalville ...	Mid. Counties	1 7	1 2½
A_2	Colchester ...	E. Counties	1 6	1 1½
A_1	Colne	N.W. Counties	1 6½	1 2
A_2	Colwyn Bay ...	N.W. Counties	1 6	1 1½
A_1	Consett ...	N.E. Coast	1 6½	1 2
A_2	Conway ...	N.W. Counties	1 6	1 1½
A	Coventry ...	Mid. Counties	1 7	1 2½
A_2	Crewe	N.W. Counties	1 6	1 1½
A_2	Cumberland ...	N.W. Counties	1 5½	1 1½
A	DARLINGTON	N.E. Coast	1 7	1 2½
A	Darwen ...	N.W. Counties	1 7	1 2½
B_1	Deal	S. Counties	1 4½	1 0½
A_2	Denbigh ...	N.W. Counties	1 5½	1 1½
A	Derby	Mid. Counties	1 7	1 2½
A	Dewsbury ...	Yorkshire	1 7	1 2½
B	Didcot ...	S. Counties	1 5	1 0½
A	Doncaster ...	Yorkshire	1 7	1 2½
B_1	Dorchester ...	S.W. Counties	1 4½	1 0½
A_3	Driffield ...	Yorkshire	1 5½	1 1½
A_2	Droitwich ...	Mid. Counties	1 6	1 1½
A	Dudley ...	Mid. Counties	1 7	1 2½
A_2	Dumfries ...	Scotland	1 6	1 1½
A	Dundee ...	Scotland	1 7	1 2½
A	Durham ...	N.E. Coast	1 7	1 2½
A_2	EASTBOURNE ...	S. Counties	1 6	1 1½
A_1	Ebbw Vale ...	S. Wales & M.	1 6½	1 2
A	Edinburgh ...	Scotland	1 7	1 2½
A_2	Exeter ...	S.W. Counties	*1 6	1 1½
B	Exmouth ...	S.W. Counties	1 5	1 0½
A_2	FELIXSTOWE	E. Counties	1 5½	1 1½
A_2	Filey	Yorkshire	1 5½	1 1½
A	Fleetwood ...	N.W. Counties	1 7	1 2½
B_1	Folkestone ...	S. Counties	1 4½	1 0½
A	Frodsham ...	N.W. Counties	1 7	1 2½
B_2	Frome ...	S.W. Counties	1 4	1 0
A	GATESHEAD	N.E. Coast	1 7	1 2½
B	Gillingham ...	S. Counties	1 5	1 0½
A_1	Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6½	1 2
A	Glasgow ...	Scotland	1 7	1 2½
A_2	Gloucester ...	S.W. Counties	1 6	1 1½
A_2	Goole	Yorkshire	1 6	1 1½
A_2	Gosport ...	S. Counties	1 6	1 1½
A_2	Grantham ...	Mid. Counties	1 5½	1 1½
A_1	Gravesend ...	S. Counties	1 6½	1 2
A	Greenock ...	Scotland	*1 7	1 2½
A	Grimsby ...	Mid. Counties	1 7	1 2½
B	Guildford ...	S. Counties	1 5	1 0½
A	HALIFAX ...	Yorkshire	1 7	1 2½
A	Hanley ...	Mid. Counties	1 7	1 2½
A	Harrogate ...	Yorkshire	1 7	1 2½
A	Hartlepools ...	N.E. Coast	1 7	1 2½
B	Harwich ...	E. Counties	1 5	1 0½
B	Hastings ...	S. Counties	1 5	1 0½
A_2	Hatfield ...	S. Counties	1 6	1 1½
B	Hereford ...	S.W. Counties	1 5	1 0½
A	Hertford ...	E. Counties	1 6	1 1½
A	Heysham ...	N.W. Counties	1 7	1 2½
A	Howden ...	N.E. Coast	1 7	1 2½
A	Huddersfield ...	Yorkshire	1 7	1 2½
A	Hull	Yorkshire	1 7	1 2½
A	ILKLEY ...	Yorkshire	1 7	1 2½
A	Immingham ...	Mid. Counties	1 7	1 2½
A_2	Ipswich ...	E. Counties	1 6	1 1½
B_2	Isle of Wight ...	S. Counties	1 4	1 0
A	JARROW ...	N.E. Coast	1 7	1 2½
A	KEIGHLEY ...	Yorkshire	1 7	1 2½
A_2	Kendal ...	N.W. Counties	1 5½	1 1½
A_2	Keswick ...	N.W. Counties	1 5½	1 1½
A_1	Kettering ...	Mid. Counties	1 6½	1 2
A_2	Kidderminster	Mid. Counties	1 6	1 1½
B_1	King's Lynn ...	E. Counties	1 4½	1 0½
A	LANCASTER ...	N.W. Counties	1 7	1 2½
A_1	Leamington ...	Mid. Counties	1 6½	1 2
A	Leeds	Yorkshire	1 7	1 2½
A	Leek	Mid. Counties	1 7	1 2½
A	Leicester ...	Mid. Counties	1 7	1 2½
A	Leigh	N.W. Counties	1 7	1 2½
B	Lewes	S. Counties	1 5	1 0½
A_2	Lichfield ...	Mid. Counties	1 6	1 1½
A	Lincoln ...	Mid. Counties	1 7	1 2½
	Liverpool ...	N.W. Counties	*1 8½	1 3½
A_2	Llandudno ...	N.W. Counties	1 6	1 1½
A	Llanelly ...	S. Wales & M.	1 7	1 2½
	London (12-miles radius)		1 8½	1 3½
	Do. (12-15 miles radius)		1 8	1 3
A	Long Eaton ...	Mid. Counties	1 7	1 2½
A	Loughborough ...	Mid. Counties	1 7	1 2½
A_1	Luton	E. Counties	1 6½	1 2
A	Lytham ...	N.W. Counties	1 7	1 2½
A	MACCLESFIELD	N.W. Counties	1 6½	1 2
A_2	Maidstone ...	S. Counties	1 5½	1 1½
A_2	Malvern ...	Mid. Counties	1 5½	1 1½
A	Manchester ...	N.W. Counties	1 7	1 2½
A	Mansfield ...	Mid. Counties	1 7	1 2½
B_1	Margate ...	S. Counties	1 4½	1 0½
A_2	Matlock ...	Mid. Counties	1 5½	1 1½
A_2	Merthyr ...	S. Wales & M.	1 6½	1 2
A	Middlesbrough	N.E. Coast	1 7	1 2½
A_2	Middlewich	N.W. Counties	1 6	1 1½
B_2	Minehead ...	S.W. Counties	1 4	1 0
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 4	1 0
A	Morecambe ...	N.W. Counties	1 7	1 2½
A_2	NANTWICH ...	N.W. Counties	1 6	1 1½
A	Neath ...	S. Wales & M.	1 7	1 2½
A	Nelson ...	N.W. Counties	1 7	1 2½
A	Newcastle ...	N.E. Coast	1 7	1 2½
A	Newport ...	S. Wales & M.	1 7	1 2½
A	Normanton ...	Yorkshire	1 7	1 2½
A	Northampton	Mid. Counties	1 7	1 2½
A	North Shields...	N.E. Coast	1 7	1 2½
A	North Staffs ...	Mid. Counties	1 7	1 2½
A_1	Norwich ...	E. Counties	1 6½	1 2
A	Nottingham ...	Mid. Counties	1 7	1 2½
A	Nuneaton ...	Mid. Counties	1 7	1 2½
A_2	OAKHAM ...	Mid. Counties	1 5½	1 1½
A	Oldham ...	N.W. Counties	1 7	1 2½
A_2	Oswestry ...	N.W. Counties	1 5½	1 1½
A_1	Oxford ...	S. Counties	1 6½	1 2
A	PAISLEY ...	Scotland	*1 7	1 2½
B_2	Pembroke ...	S. Wales & M.	1 3½	0 11½
A	Perth	Scotland	*1 7	1 2½
A_1	Peterborough...	E. Counties	1 6½	1 2
A	Plymouth ...	S.W. Counties	*1 7	1 2½
A	Pontefract ...	Yorkshire	1 7	1 2½
A_1	Pontypridd ...	S. Wales & M.	1 6½	1 2
A_2	Portsmouth ...	S. Counties	1 6	1 1½
A	Preston ...	N.W. Counties	1 7	1 2½
A	QUEENSFERRY	N.W. Counties	1 7	1 2½
A_2	READING ...	S. Counties	1 6½	1 2
B	Reigate ...	S. Counties	1 5½	1 1½
A_2	Retford ...	Mid. Counties	1 5½	1 1½
A_1	Rhondda Valley	S. Wales & M.	1 6½	1 2
A_2	Ripon	Yorkshire	1 5½	1 1½
A	Rochdale ...	N.W. Counties	1 7	1 2½
B	Rochester ...	S. Counties	1 5	1 0½
A_1	Ruabon ...	N.W. Counties	1 6½	1 2
A	Rugby ...	Mid. Counties	1 7	1 2½
A_2	Rugeley ...	Mid. Counties	1 6	1 1½
A	Runcorn ...	N.W. Counties	1 7	1 2½
A_1	ST ALBANS ...	E. Counties	1 6½	1 2
A	St. Helens ...	N.W. Counties	1 7	1 2½
B_2	Salisbury ...	S.W. Counties	1 3½	0 11½
A_1	Scarborough ...	Yorkshire	1 6½	1 2
A	Scunthorpe ...	Mid. Counties	1 7	1 2½
A	Sheffield ...	Yorkshire	1 7	1 2½
A	Shipley ...	Yorkshire	1 7	1 2½
A_2	Shrewsbury ...	Mid. Counties	1 6	1 1½
A_2	Skipton ...	Yorkshire	1 6	1 1½
A_2	Slough ...	S. Counties	1 6	1 1½
A_1	Solihull ...	Mid. Counties	1 6½	1 2
A_2	Southampton ...	S. Counties	1 6	1 1½
A_1	Southend-on-Sea	E. Counties	1 6½	1 2
A	Southport ...	N.W. Counties	1 7	1 2½
A	S. Shields ...	N.E. Coast	1 7	1 2½
A_1	Stafford ...	Mid. Counties	1 6½	1 2
A	Stirling ...	Scotland	1 7½	1 2½
A	Stockport ...	N.W. Counties	1 7	1 2½
A	Stockton-on-Tees	N.E. Coast	1 7	1 2½
A	Stoke-on-Trent	Mid. Counties	1 7	1 2½
B	Stroud ...	S.W. Counties	1 5	1 0½
A	Sunderland ...	N.E. Coast	1 7	1 2½
A	Swansea ...	S. Wales & M.	1 7	1 2½
A_2	Swindon ...	S.W. Counties	1 5½	1 1½
A_1	TAMWORTH ...	N.W. Counties	1 6½	1 2
B	Taunton ...	S.W. Counties	1 5	1 0½
A	Teesside Dist....	N.E. Counties	1 7	1 2½
A_2	Teignmouth ...	S.W. Coast	1 6	1 1½
A	Todmorden ...	Yorkshire	1 7	1 2½
A_1	Torquay ...	S.W. Counties	1 6½	1 2
B_2	Truro	S.W. Counties	1 4	1 0
A_2	Tunbridge Wells	S. Counties	1 5½	1 1½
A	Tunstall ...	Mid. Counties	1 7	1 2½
A	Tyne District	N.E. Coast	1 7	1 2½
A	WAKEFIELD	Yorkshire	1 7	1 2½
A	Walsall ...	Mid. Counties	1 7	1 2½
A	Warrington ...	N.W. Counties	1 7	1 2½
A_1	Warwick ...	Mid. Counties	1 6½	1 2
A_1	Wellingborough	Mid. Counties	1 6½	1 2
A	West Bromwich	Mid. Counties	1 7	1 2½
A_2	Weston-s.-Mare	W. Counties	1 6	1 1½
A_2	Whitby ...	Yorkshire	1 6	1 1½
A	Widnes ...	N.W. Counties	1 7	1 2½
A	Wigan ...	N.W. Counties	1 7	1 2½
B	Winchester ...	S. Counties	1 5	1 0½
A_2	Windsor ...	S. Counties	1 6	1 1½
A	Wolverhampton	Mid. Counties	1 7	1 2½
A_2	Worcester ...	Mid. Counties	1 6	1 1½
A_2	Worksop ...	Yorkshire	1 5½	1 1½
A_1	Wrexham ...	N.W. Counties	1 6½	1 2
A_2	Wycombe ...	S. Counties	1 5½	1 1½
B	YARMOUTH	E. Counties	1 5	1 0½
B	Yeovil ...	S.W. Counties	1 5	1 0½
A	York	Yorkshire	1 7	1 2½

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request. The rates of wages have been revised consequent upon the increase in wages which came into operation on February 1, together with all revisions following authorised annual regradings.

CURRENT PRICES

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

WAGES

		s.	d.
Bricklayer	per hour	1	8½
Carpenter	,,	1	8½
Joiner	,,	1	8½
Machinist	,,	1	9½
Mason (Banker)	,,	1	8½
,, (Fixer)	,,	1	9½
Plumber	,,	1	8½
Painter	,,	1	7½
Paperhanger	,,	1	7½
Glazier	,,	1	8½
Slater	,,	1	8½
Scaffolder	,,	1	4½
Timberman	,,	1	4½
Navvy	,,	1	3½
General Labourer	,,	1	3½
Lorryman	,,	1	6½
Crane Driver	,,	1	7½
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	18	6
Hydrated Lime	,,	2	5	0
Portland Cement, in 4-ton lots (d/d site, including Paper Bags)	,,	1	19	0
Rapid Hardening Cement, in 4-ton lots (d/d site, including Paper Bags)	,,	2	5	0
White Portland Cement, in 1-ton lots	,,	8	15	0
Thames Ballast	per Y.C.		6	6
¾" Crushed Ballast	,,		7	0
Building Sand	,,		7	6
Washed Sand	,,		8	6
2" Broken Brick	,,		8	0
¾" ,, ,,	,,		10	3
Pan Breeze	,,		6	6
Coke Breeze	,,		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	,,	3	6	5	3
Rest Bends	,,	4	3	6	3
Single Junctions	,,	3	6	5	3
Double	,,	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	,,	4	6	6	6
Channel tapers	,,	2	9	4	0
Yard gullies	,,	6	9	8	9
Interceptors	,,	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
Lead Wool	lb.		6		—
Gaskin	,,		5		—

BRICKLAYER

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

MASON

The following d/d F.O.R. at Nine Elms:		s.	d.
Portland stone, Whitbed	F.C.	4	4½
,, ,, Basebed	,,	4	7½
Bath stone	,,	2	10
York stone	,,	6	6
,, ,, Sawn templates	,,	7	6
,, ,, Paving, 2"	F.S.	1	8
,, ,, ,, 3"	,,	2	6

SLATER AND TILER

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

		£	s.	d.
24" × 12" Duchesses	per M.	28	17	6
22" × 12" Marchionesses	,,	24	10	0
20" × 10" Countesses	,,	19	5	0
18" × 10" Viscountesses	,,	15	10	0
18" × 9" Ladies	,,	13	17	6
Westmorland green (random sizes)	per ton	8	10	0
Old Delabole slates d/d in full truck loads to Nine Elms Station:				
20" × 10" medium grey	per 1,000 (actual)	21	11	6
,, ,, green	,, ,,	24	7	4
Best machine roofing tiles	,, ,,	4	5	0
Best hand-made do.	,, ,,	4	17	6
Hips and valleys	each			9
,, hand-made	,,			9½
Nails, compo	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	,, ,,			5
,, ,, 2nds	,, ,,			4
Mahogany, Honduras	,, ,,		1	3
,, African	,, ,,		1	1
,, Cuban	,, ,,		2	6
Oak, plain American	,, ,,		1	0
,, Figured ,,	,, ,,		1	3
,, plain Japanese	,, ,,		1	2
,, Figured ,,	,, ,,		1	5
,, Austrian wainscot	,, ,,		1	6
,, English	,, ,,		1	11
Pine, Yellow	,, ,,		1	0
,, Oregon	,, ,,			4
,, British Columbian	,, ,,			4
Teak, Moulmein	,, ,,		1	3
,, Burma	,, ,,		1	2
Walnut, American	,, ,,		2	3
,, French	,, ,,		2	3
Whitewood, American	,, ,,		1	1
Deal floorings, ¾"	Sq.		18	6
,, 1"	,,	1	1	6
,, 1¼"	,,	1	2	0
,, 1½"	,,	1	5	0
,, 1¾"	,,	1	10	0
Deal matchings, ¾"	,,		14	0
,, 1"	,,		15	6
,, 1¼"	,,	1	4	0
Rough boarding, ¾"	,,		16	0
,, 1"	,,		18	0
,, 1¼"	,,	1	6	0

Plywood, per ft. sup. Thickness	¼"	⅜"	½"	¾"	¾"	⅜"	½"	¾"
Qualities	A B BB	A B BB	A B BB	A B BB	A B BB	A B BB	A B BB	A B BB
	d. d. d.	d. d. d.	d. d. d.	d. d. d.	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch 60 × 48	4 2½ 2	5 3 2½	6 4 3	7 5 4	8 6 5	9 7 6	10 8 7	12 10 8
Cheap Alder	– 2 1½	– 3½ 2	– 4½ 3	– – –	– – –	– – –	– – –	– – –
Oregon Pine	– 2½ –	3 2½ –	4 3½ –	5 4½ –	6 5½ –	7 6½ –	8 7½ –	9 8½ –
Gaboon Mahogany	4 3½ –	5 4½ –	7 6½ –	8 7 –	9 8 –	10 9 –	11 10 –	13 12 –
Figured Oak	6½ 5 –	7½ 5½ –	10 8 –	1/– 9 –	1/1 10 –	1/2 11 –	1/4 1/– –	1/6 1/2 –

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings

(The following are the standard list prices from which should be deducted the various percentages as set forth below.)

	¼"	⅜"	½"	¾"	1"
Tubes 2'–14' long per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23" long each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long ,,	11	1/3	2/2	2/10	5/3
,, ,, 3" M—½" long ,,	8	10	1/5	1/11	3/6
Bends ,,	8	11	1/7½	2/7½	5/2
Springs not socketed ,,	5	7	1/1½	1/11½	3/11
Socket unions ,,	2/–	3/–	5/6	6/9	10/–
Elbows, square ,,	10	1/1	1/6	2/2	4/3
Tees ,,	1/–	1/3	1/10	2/6	5/1
Crosses ,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples ,,	3	4	6	8	1/3
Diminished sockets ,,	4	6	9	1/–	2/–
Flanges ,,	9	1/–	1/4	1/9	2/9
Caps ,,	3½	5	8	1/–	2/–
Backnuts ,,	2	3	5	6	1/1
Iron main cocks ,,	1/6	2/3	4/2	5/4	11/6
,, with brass plugs ,,	—	4/–	7/6	10/–	21/–

		1¼"	1½"	2"
Tubes 2'–14' long per ft. run		1/1	1/10	2/10
Pieces, 12"–23" long	each	1/11	2/8	4/9
,, 3"–11½" long	,,	1/8	3/–	5/6
Long screws, 12"–23½" long	,,	2/10	5/3	8/–
,, ,, 3" M—½" long	,,	2/–	3/6	5/6
Bends	,,	2/7½	5/2	8/–
Springs not socketed	,,	1/11½	3/11	6/–
Socket unions	,,	6/9	10/–	15/–
Elbows, square	,,	2/2	4/3	6/6
Tees	,,	2/6	5/1	7/6
Crosses	,,	5/6	10/6	15/–
Plain sockets and nipples	,,	8	1/3	1/9
Diminished sockets	,,	1/–	2/–	3/–
Flanges	,,	1/9	2/9	4/3
Caps	,,	1/–	2/–	3/–
Backnuts	,,	6	1/1	1/8
Iron main cocks	,,	5/4	11/6	16/–
,, with brass plugs	,,	10/–	21/–	30/–

Discounts	TUBES. Per cent.		Per cent.
Gas	68½	Galvanized gas	61½
Water	66½	,, water	55
Steam	63½	,, steam	50
	FITTINGS.		
Gas	61½	Galvanized gas	55½
Water	58½	,, water	50
Steam	53½	,, steam	46½

		s.	d.
Rolled steel joists cut to length	cwt.	14	6
Mild steel reinforcing rods, ¾"	,,	10	6
,, ,, ½"	,,	10	3
,, ,, ⅜"	,,	10	0

SMITH AND FOUNDER—*continued*

		s.	d.
Mild steel reinforcing rods, ¼"	cwt.	9	6
,, ,, ⅜" ,,	,,	9	6
,, ,, ½" ,,	,,	9	6
,, ,, ¾" ,,	,,	9	6
,, ,, 1¼" ,,	,,	9	6

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

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	44	6	
,, drawn pipes	,,	42	6	
,, soil pipes	,,	45	6	
,, scrap	,,	32	0	
Solder, plumbers'	lb.		9	
,, fine do.	,,	1	0	
Copper, sheet	,,	1	2	
,, tubes	,,	1	1½	

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

PLASTERER

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

GLAZIER

	s.	d.	s.	d.
Sheet glass, 24 oz., squares n/e 2 ft.			F.S.	2½
,, ,, 26 oz. ,, ,,	,,			3½
Flemish, Arctic, Figures (white)*	,,			7½
Blazoned glasses	,,		2	6
Reeded: Cross Reeded	,,			11
Cathedral glass, white, double-rolled, plain, hammered, rimpled, waterwite	,,			6
Crown sheet glass (n/e 12" × 10")	,,		2	0
Flashed opals (white and coloured)	,,	1	0 and 2	0
¼" rough cast; rolled plate	,,			6
¼" wired cast; wired rolled	,,			10½
¼" Georgian wired cast	,,			11½
¼" Polished plate, n/e 1 ft.	,,	†10 to ‡1		1
,, ,, 2	,,	†1 2 ,, ‡1		4
,, ,, 4	,,	†2 3 ,, ‡2		6
,, ,, 8	,,	†2 9 ,, ‡3		2
,, ,, 20	,,	†3 1 ,, ‡3		9
,, ,, 45	,,	†3 3 ,, ‡4		0
,, ,, 100	,,	†4 0 ,, ‡4		10
Vita glass, sheet, n/e 1 ft.	,,			1
,, ,, ,, 2 ft.	,,			3
,, ,, ,, over 2 ft.	,,			1
,, ,, plate, n/e 1 ft.	,,			9
,, ,, ,, 2 ft.	,,			1
,, ,, ,, 5 ft.	,,			3
,, ,, ,, 7 ft.	,,			4
,, ,, ,, 15 ft.	,,			5
,, ,, ,, over 15 ft.	,,			6
"Calorex" sheet 21 oz., and 32 oz.	,,	2	6 and 3	0
,, rough cast ¼" and ⅜"	,,		8½ ,, 1	6
Putty, linseed oil	lb.			3

* *Colours, 1d. F.S. extra.*
† *Ordinary glazing quality.* ‡ *Selected glazing quality.*

PAINTER

		£	s.	d.
White lead in 1 cwt. casks	cwt.	3	9	9
Linseed oil	gall.		3	0
Boiled oil	,,		3	3
Turpentine	,,		3	9
Patent knotting	,,		14	0
Distemper washable	cwt.	2	6	0
,, ordinary	,,	2	0	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

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

EXCAVATOR AND CONCRETOR		s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.	2	9
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	8	6
" to form basement n/e 5' 0" and cart away	"	9	0
" " 10' 0" deep and cart away	"	9	6
" " 15' 0" deep and cart away	"	10	0
If in stiff clay	add		6
If in underpinning	"	4	0
Planking and strutting to sides of excavation	F.S.	1	0
" " to pier holes	"		5
" " to trenches	"		5
" " extra, only if left in	"		3
Hardcore, filled in and rammed	Y.C.	10	0
Portland cement concrete in foundations (6–1)	"	1	6	0
" " (4–2–1)	"	1	12	6
" " underpinning	"	1	16	0
Finishing surface of concrete, space face	Y.S.			7

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

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

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

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

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

CARPENTER AND JOINER		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	2	6
Shuttering to sides and soffits of beams	F.S.			7
" to stanchions	"			7
" to staircases	"		1	6
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	"		4	6
" " roofs	"		6	6
" " trusses	"		7	6
" " partitions	"		8	6
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" " " " " "	"	1	17	6
1¼" " " " " "	"	2	3	0
4" × 2" fir battening for Countess slating	"		9	6
Do., for 4" gauge tiling	"		11	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
" " " 2 "	"		2	9
" " " 3 "	"		3	3
Stout herringbone strutting to 9" joists	F.R.			10½
1" deal gutter boards and bearers	F.S.		1	2
1¼" " " "	"		1	6
2" deal wrought rounded roll	F.R.			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	1	0
1¼" do.	"	2	10	0
1½" do.	"	2	17	0
1" deal moulded skirting fixed on, and including grounds plugged to wall	F.S		1	6
1½" do.	"		1	9

CARPENTER AND JOINER—*continued*		s.	d.
1¼" deal moulded sashes of average size	F.S.	1	9½
2" " " " " "	"	1	11½
1¼" deal cased frames double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ¾" parting beads, and with brass faced axle pulleys, etc., fixed complete	"	3	7
2" " " " " "	"	3	10
Extra only for moulded horns	Each		6
1¼" deal four-panel square, both sides, door	F.S.	2	0
2" " " " " "	"	2	8
1¼" " but moulded both sides	"	2	4
2" " " " " "	"	3	0
4" × 3" deal, rebated and moulded frames	F.R.	1	0
4½" × 3½" " " "	"	1	4
1¼" deal tongued and moulded window board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	2	6
1¼" deal moulded wall strings	"	2	1
1¼" " outer strings	"	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1½" × 1½" " " "	"	2	9
3" × 3" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	6	8
Do., pendants	"	6	0

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

PLUMBER		£	s.	d.
Milled lead and labour in flats	cwt.	2	15	0
Do. in flashings	"	2	18	6
Do. in covering to turrets	"	3	4	0
Do. in soakers	"	2	9	9
Labour to welted edge	F.R.			3½
Open copper nailing	"			3
Close " "	"			4

		½" s.	d.	¾" s.	d.	1" s.	d.	1¼" s.	d.	2" s.	d.	4" s.	d.
Lead service pipe and fixing with pipe hooks	F.R.	1	2	1	4	1	8½	2	7	3	6	—	—
Do. soil pipe and fixing with cast lead tacks	"	—		—		—		—		—		7	3
Extra, only to bends	Each	—		—		—		—		2	3	7	6
Do. to stop ends	"	6½		8		9		11		1	0	—	
Boiler screws and unions		3	3	3	9	5	0	8	0	—		—	
Lead traps		—		—		—		8	0	11	6	—	
Screw down bib valves	"	6	9	9	6	11	0	—		—		—	
Do. stop cocks	"	7	0	9	6	12	6	—		—		—	

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

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

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

PAINTER		s.	d.
Clearcolle and whiten ceilings	Y.S.		6
Do. and distemper walls	"		9
Do. with washable distemper	"	1	1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3	3
Do. on woodwork	"	3	6
Do. on steelwork	"	3	0
Do. and brush grain and twice varnish	"	5	6
Stain and twice varnish woodwork	"	1	11
Stain and wax polish woodwork	"	4	6
French polishing	F.S.	1	2
Stripping off old paper	Piece	2	0
Hanging ordinary paper	from "	2	9