House at Epsom. Architects : Seth-Smith, Munro & Matthew.

THE ARCHITECTS' JOURNAL

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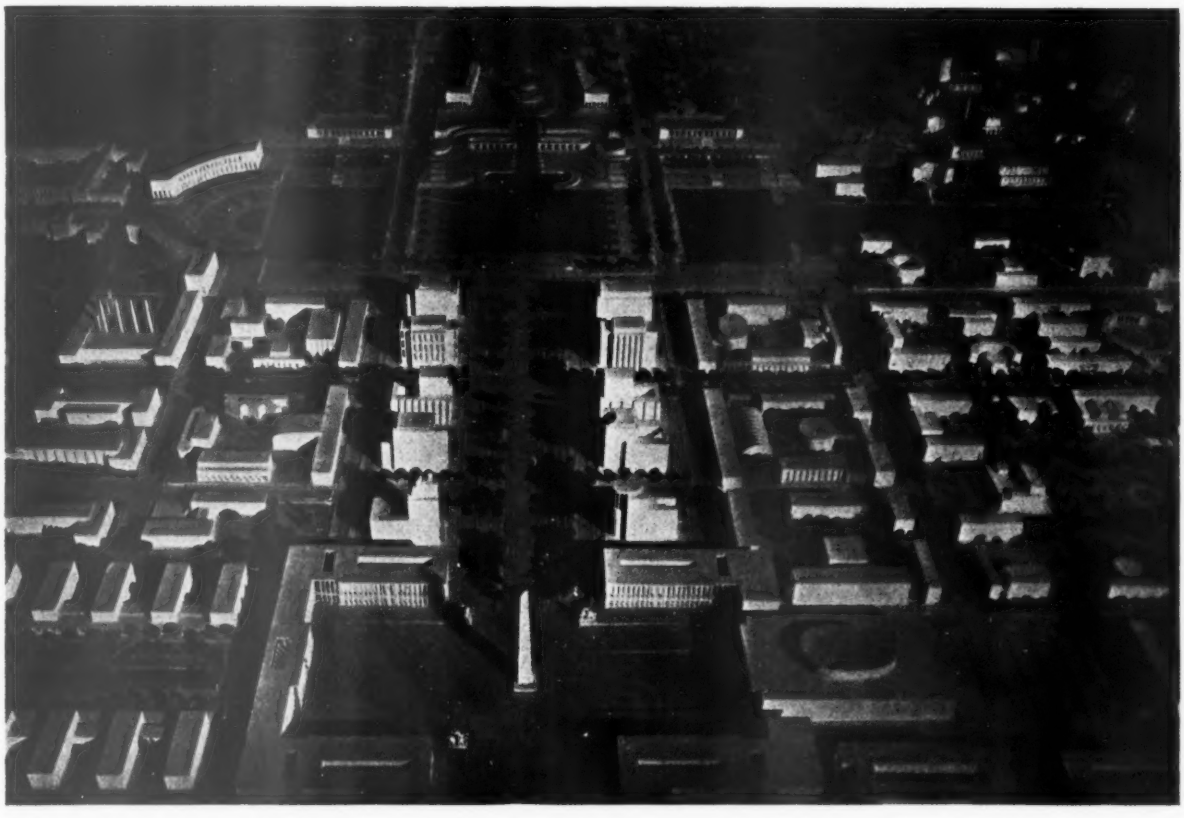
The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.

THURSDAY, APRIL 27, 1939 NUMBER 2310 : VOLUME 89

PRINCIPAL CONTENTS

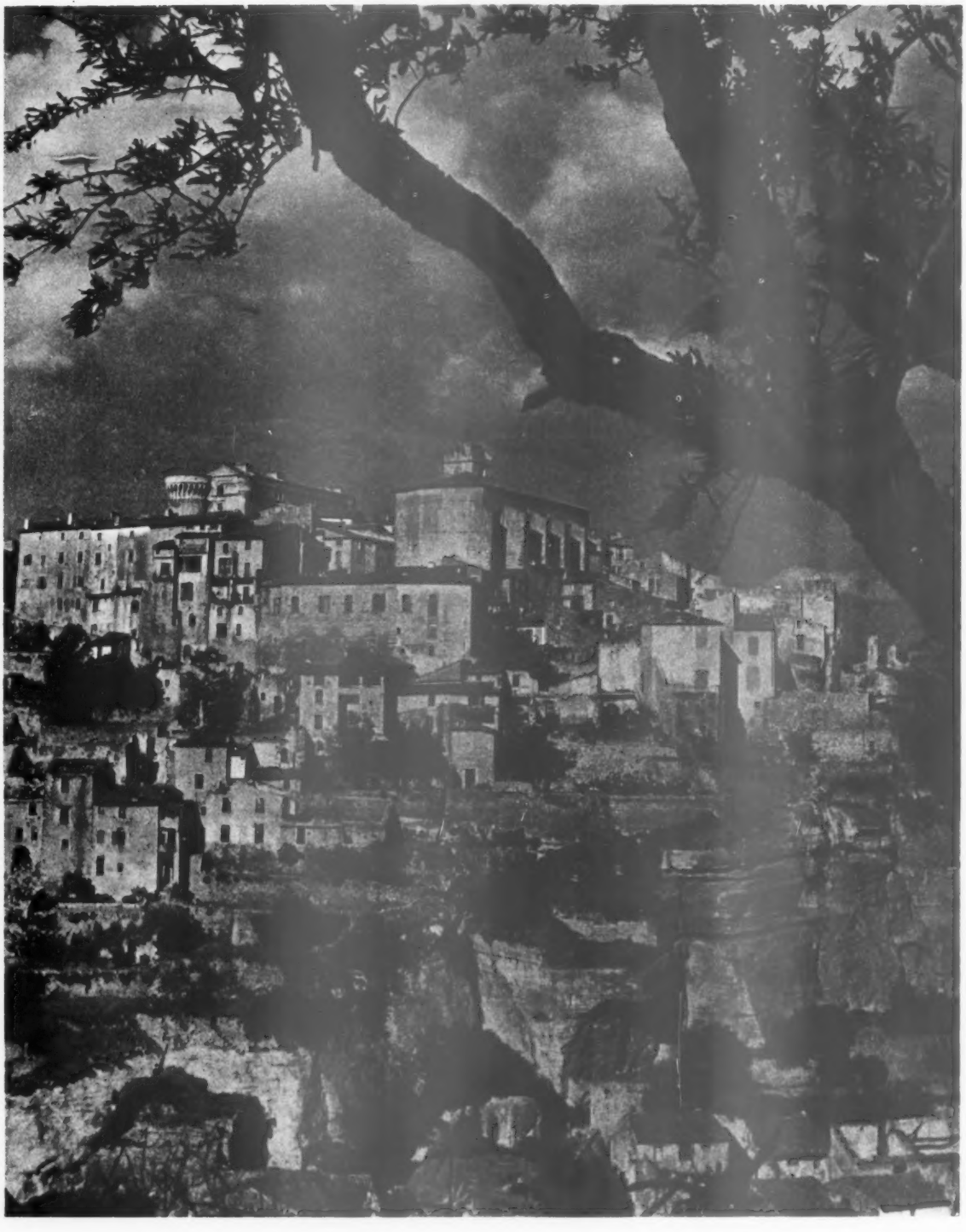
THE 1942 ROME INTERNATIONAL EXHIBITION



Signor Mussolini, speaking in Rome last Thursday, said that the energies of the whole nation would be concentrated during the next three years on the task of making the 1942 exhibition worthy of Rome and of Fascist Italy. Already 15,000 workmen were busy on the site. All the nations of the world had been invited. Italy's share would include buildings of the proportions of St. Peter's and the Colosseum, which would remain as permanent memorials of the Fascist era throughout the ages.

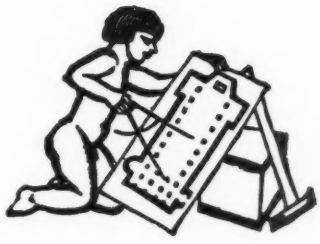
He went on to describe the exhibition, which he said was intended to be an epitome of the efforts of all civilized peoples for progress. He described the great arch of aluminium more than 300 ft. high, which is to span the centre of the exhibition and which is evidently conceived as a permanent monument, to be as characteristic of Fascist Rome as the Eiffel Tower is of modern Paris.

Above is an aerial view of the layout reproduced from "Rassegna di Architettura."



TWELFTH-CENTURY ABBEY

The Abbey of Sénanque, built in 1148, at Gordes, Vaucluse, near Avignon.



HALF-TIME SCORES

ARCHITECTURE, largely unknown to itself, has become involved during the past month in an affair part beauty competition and part appeal to the electorate.

How a standoffish association of producers has slid into a situation so dangerous and democratic has been explained several times (and is again explained this week) in the columns of *Astragal*. Everyone reads *Astragal* and is therefore familiar with past events. Here it is only necessary to emphasize what unexpected consequences can follow unexciting beginnings.

When Mr. Goodhart-Rendel suggested in November that it would be nice to have a Board of Censors who might constructively criticize forthcoming attractions before their general release, he cannot have expected he was starting a straw ballot to choose the Building of the Decade. Yet that is what is now taking place. The directors and producers of our special form of public entertainment are as touchy as any other kind of artist and high feelings cannot be avoided. The JOURNAL can now but remind them of their duty to their public, ask them to be brave and state emphatically that when (Lord Derwent instigating) it began its part in this affair it did not foresee the present outcome.

The chain of events, once begun, developed a totalitarian dynamic. The history of another artistic industry has proved to us that it is essential that any Board of Censors should have the confidence of the producers. The same industry has also shown us that the best way to ensure this is for the producers to appoint their own censors before anyone else has the chance to do so for them. (That the censors should also have the confidence of the public is also preferable though, of course, not so vital.)

It was with the lessons of this parallel case firmly stamped in its mind that the JOURNAL asked architects to put forward their own candidates for Mr. Goodhart-Rendel's Board. The producers responded in a manner beyond praise. There was no pettiness of spirit to be found in the nomination of Lord Beaver-Brook and Commander C. B. Fry, no trade interest in the choice of Lord Harewood, Mr. William Hickey, Mr. Paul Robeson or Miss Rebecca West.

The sixty-three men and women in whose opinion on architecture the profession was prepared to have confidence are all well known and must represent as many shades of educated public opinion as any section of the producers could desire.

But sixty-three is too large a number for a Board of Censors or hanging committee. And by asking each of the sixty-three to list the six recent British buildings which he or she thought of greatest architectural merit one could reasonably count on the question of *censors* or *no censors* being considerably simplified.

Possible results were several. The sixty-three nominees might plump for 378 separate and distinct buildings which would show that no consensus of educated lay opinion was possible on what is or is not good architecture. Or the votes might be cast for buildings so low in the profession's estimation that it would fight to the last ditch before again appealing to the electorate.

With more optimism it was hoped that the votes would prove that responsible public opinion could be adequately represented on a board of much less than sixty-three. And in any case the results were bound to be exciting and a guide to what well-known people hoped to see in forthcoming productions.

The results of the voting so far (as regards those buildings which have received more than one vote) are shown elsewhere in this issue ; and they are, the JOURNAL thinks, exciting.

Catholicity of taste—a most desirable quality—is shown in the lists and even in a single list. But far and away more significant is the order of general approval established by the votes up to date. Of the first seven :—

Peter Jones (Crabtree and Slater and Moberly ; Professor Reilly, consultant) comes first with 14 votes. *Battersea Power Station* (Sir Giles Gilbert Scott) has 10 votes. *Underground Headquarters* (Adams, Holden and Pearson), 9. *Bexhill Pavilion* (Mendelsohn and Chermayeff), 8. *The Penguin Pool* (Tecton), 6. *House at Halland* (Serge Chermayeff), and *Finsbury Health Centre* (Tecton), 5.

There is still time for the order of the field to change. Stifling their natural feelings as their own choice (or entrant) moves back a little, architects will no doubt await the outcome with the keenest interest. A good deal may depend on it for all of us.

The Architects' Journal
Westminster, S.W.1
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NOTES & TOPICS

*

1, R.I.B.A. President Goodhart-Rendel demanded a vigilance committee to vet designs for important buildings. 2, Astragal said committee consisting of whom? Architects ineligible; live-wire laymen, such as Georgian Group? 3, Georgian Group chairman Lord Derwent said difficult to vet modern buildings until some sort of standard established. He would accept for standard: B.B.C., Imperial Airways, Scarborough Hospital, Radio City, Battersea Power Station, Underground Building, R.A.F. aerodromes. 4, Astragal, puzzled, said: would this standard satisfy other eminent laymen. Decided to find out. Invited readers to nominate for vigilance committee laymen in whom they would have confidence. 5, readers sent in names of 61 men, 2 women. 6, *A.J.* Editor, at Astragal's request, asked above 63 for six recent buildings they approved of.

*

First of all, any enquiry of this sort invariably re
haut monde. Re
rrespondenc

VIGILANCE COMMITTEE

I COMMENTED last week on the fact that people—even people of known discrimination—appear, to judge from the lists already received, to like simultaneously buildings that possess what one would have thought to be quite incompatible qualities. This fact suggests that even people of taste do not look at buildings objectively but like them because of some association or fleeting impression, or for what one might call literary reasons. And this is borne out by the first two of this week's lists, which are both by painters: people who are trained to use their eyes. Their lists, which follow, are a model of consistency compared with most of those received.

*

John Piper likes:

Peter Jones's store (Crabtree and Slater and Moberly; with Professor Reilly), Kensal House flats (Maxwell Fry and others), Zoo buildings by Tecton, Bexhill Pavilion (Mendelsohn and Chermayeff), the restoration of West Dean Church (Frederick Etchells), and Arnos Grove Underground station (S. A. Heaps, Adams, Holden and Pearson, consultants).

*

Richard Wyndham likes:

Peter Jones's store, Chermayeff's house in Sussex, Wembley swimming pool (Sir Owen Williams), Number 32 Newton Road, Bayswater (Denys Lasdun), "except for crazy pavement", the *Daily Express* building (H. O. Ellis and Clarke) "outside only", and Wells Coates's flats in Palace Gate.

*

To two artists one can add two critics: first, Raymond Mortimer of the *New Statesman*, who, perhaps through an anxiety not to be partisan, sends a list that is as miscellaneous as any:

Tecton's Zoo buildings, the Y.W.C.A., Great Russell Street (Sir Edwin Lutyens), Arnos Grove Underground station, the Guinness factory at Park Royal (Sir Giles Gilbert Scott), Messrs. Gibb and Low's house near Nettlebed, and "a Corbusier house on the outskirts of Paris."

*

The other critic is Charles Marriot of *The Times*. His letter, as well as his list, is as interesting as one would expect, so I quote the letter in full:

Evidently a selection by 'architectural merit' might be either by formal qualities alone or else by formal qualities in relation to purpose, practical requirements, position, time of day, and probabilities of the future. By formal qualities alone I might make a different selection, but by what I believe to be the more important standard suggested above, and allowing for lapses of memory, I should name the following as the six buildings completed in England during the last few years which have the greatest architectural merit. What they, or some of them, lack in purely formal qualities—Freemasons' Hospital, for instance, strikes me as the wrong colour for the form of its masses—they make up for in the larger series of relationships indicated:

London Transport Headquarters (Adams, Holden and Pearson); Bexhill Pavilion; Freemasons' Hospital (Burnet, Tait and Lorne); Chelsea Bridge (E. P. Wheeler); Peter Jones's shop; Finsbury Health Centre (Tecton).

*

If I may intrude my own views, I would say how gratifying it is to find Chelsea Bridge selected at last—one of the really few good things official architecture has done.

*

Finally, the Stage is represented by Charles Laughton, who sends the following list:

Battersea Power Station (Sir Giles Scott), London University (Charles Holden), Penguin Pond (Tecton), Shakespeare Memorial Theatre (Scott, Chesterton and Shepheard), Scarborough Hospital (Wallace Marchment), and Guinness Factory "as seen from Western Avenue".

*

Finally, I must make a correction. Last week the Berlei Factory was attributed to Sir John Brown and A. E. Henson only. Mr. W. David Hartley was joint architect for this factory, and I apologize for omitting his name.

A.R.P. AND THE NEXT THREE MONTHS

Three big developments in A.R.P. have occurred in the last ten days. Local authorities have been asked to give their A.R.P. schemes precedence over all other work; Sir John Anderson has rejected the proposals for strong centralized shelters in Finsbury; and the Government has announced a general policy of reliance on the Anderson steel shelter and strengthened basements.

*

So now is a very good time to try to get rid of some of the confusion that has arisen over shelters.

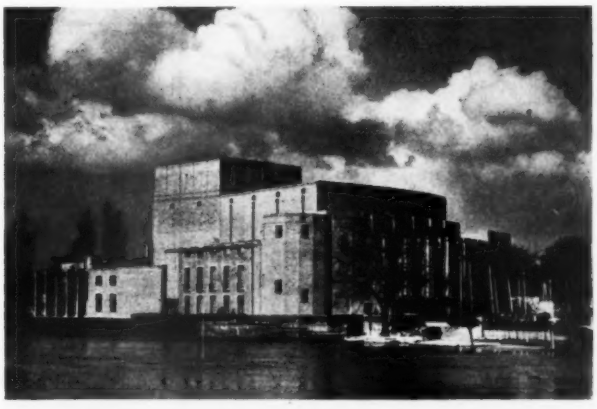
*

Arguments over *bomb-proof* versus *blast and splinter-proof* shelters and all the other types of trench, tunnel, strutted basement and surface shelters has given us all a mental picture of a kind of shelter multiplication-table: 2 trenches = 1 strutted basement; 2 basements = 1 surface shelter, and so on. We should recollect, finally, that this is nonsense.

*

Shelters are wholly a problem of cost. Cost of construction, primarily, and cost of the time we sit in them to a lesser degree. Once the public has faced this—no doubt

Left : Chosen by Mr. John Piper — Restoration of West Dean Church, by Frederick Etchells. Right : Chosen by Mr. Charles Laughton — Shakespeare Theatre, by Scott, Chesterton and Shepherd..



Chosen by Mr. Charles Marriott—Finsbury Health Centre, by Tecton.

Other Buildings chosen are shown on p. 681.

Chosen by Mr. Raymond Mortimer—House near Nettlebed, by Gibb and Low.

it must be put to them delicately—they ought to see that no A.R.P. scheme for an urban area can be effectively prepared without a careful preliminary survey of the area. When the A.R.P. planners know the proportion of buildings to open space, position of services, dangers from canals and so on, they can pass to assessing the *degree of additional protection* which the area should have provided for it.

*

Geographical position and density of buildings and population are primary factors in assessing additional protection ; the nature of the occupations in various sections of and buildings in the area is another. When this degree of protection is decided (and it will control the size of the fire-fighting and rescue services as well as strength of shelters) the A.R.P. planners can move on to considering the number, distribution and most suitable types of shelter *for each particular section of their area.*

*

Till this stage is reached arguments of trench *v.* " deep " shelters are merely arguments of niblick *v.* putter.

OFFICIAL CAREER

In the handsome red and gold book which the Middlesex County Council has produced to mark its Jubilee, there is a section called " Careers and Professions in the County Service."

*

Naturally my eye wandered to Architecture, p. 217, and I turned it up : and was left, after reading this summary of the work of one of our largest official departments, with the strong impression that the only man who had a career in it was the County Architect—a superman who is assisted by " a staff of technical assistants and draughtsmen."

*

There is no mention of the three Divisions of this department, of the three Assistant Architects of whom one, Mr. W. H. Burchett of " Schools," presides over about sixty men, half of them being members of the R.I.B.A.

STORY OF A HANDBOOK

On February 16 I reported an exchange in the Commons at Question-Time on February 2, between Miss Irene Ward and the Lord Privy Seal :

Miss Ward asked when the handbook on structural A.R.P. in buildings (on which a Committee of Architects and Engineers began work in 1935) might be expected to appear. Sir John Anderson replied :

" I presume my hon. Friend is referring to the revised version of Handbook No. 5. The revised text is virtually completed, and there will be no delay in publication."

*

Everyone realises that two and a half months is virtually no delay in Departmental circles. But it is now said that this ill-starred publication has been overtaken by the Civil Defence Bill, if not by time, and is now to undergo another transformation into a handbook of technical data on shelter design. No date for publication has been announced.

STAY NORTH, YOUNG MAN

The West Yorkshire Society's annual general meeting reinforces my advice. Secretary Norval R. Paxton said that " no members are unemployed, and press advertisements for assistants produce only one or two replies, mainly from people wanting a change." Mr. R. A. H. Livett suggested that War Office demands for technical men might have something to do with it. Well ?

ASTRAGAL

NEWS

POINTS FROM THIS ISSUE

ON THE AIR

The B.B.C. announces that the following broadcasts will shortly be included in the programmes :—

Built to Last : Bristol : West, May 1 : Regional, May 2. The second talk in the series "Built to Last," dealing with the preservation in the important cities of the West Country of buildings of outstanding historical or architectural interest, will be broadcast on May 1 in the Western and on May 2 in the Regional programme. The talk will deal with Bristol, and Mr. John Betjeman will interview representatives of the city's policy and ordinary citizens living in it. Bristol is particularly anxious at this moment to increase its measures for such preservation.

For the Connoisseur : Northern Ireland : May 2. Connoisseurs of various kinds in Northern Ireland have repeatedly urged the need for a special programme of their own. In response to this demand, therefore, a new programme is to be started on May 2 called "For the Connoisseur." It will be a miscellany of arts, crafts and sciences with a topical bias ; this will include extracts of outstanding modern poetry and prose, talks by and about painters and sculptors, goldsmiths and silversmiths, archæologists and architects, and their work.

The House and the Man : John Opie : West, May 10 : Regional, May 11. "John Opie at Harmony Cot" will be the subject of a broadcast in the series "The House and the Man" in the Western programme on May 10 and in the Regional programme on May 11. John Opie, the one painter of undisputed genius whom Cornwall has produced, was born at the little hamlet of Trevellas in May, 1761. Harmony Cot is still occupied by the last representatives of the artist's family.

THE ARCHITECTS' DIARY

Thursday, April 27

HOUSING CENTRE, 13 *Suffolk Street, S.W.1. Camps Exhibition. Until May 6. 10 a.m. to 5 p.m. Saturdays : 10 a.m. to 12 noon.*

IDEAL HOME EXHIBITION. *At Earls Court. Until May 6.*

BUILDING TRADES EXHIBITION, *City Hall, Deansgate, Manchester. Until April 29.*

INSTITUTION OF STRUCTURAL ENGINEERS. *South Wales and Monmouthshire Branch. At the Institute of Engineers, Cardiff. Ordinary Meeting. 7 p.m.*

Friday, April 28

TOWN PLANNING INSTITUTE. *At Caxton Hall, Caxton Street, S.W.1. "The Location and Design of Housing Estates." By S. Pointon Taylor. 6 p.m.*

INSTITUTION OF STRUCTURAL ENGINEERS, *Western Counties Branch. At the Merchant Venturers' Technical College, Bristol. Annual Business Meeting. 7.15 p.m.*

LONDON SOCIETY. *Visit to the Old Churches at Perivale and Greenford. Depart Lancaster House at 2 p.m.*

Monday, May 1

ARCHITECTS' BENEVOLENT SOCIETY. *At 66 Portland Place, W.1. Annual General Meeting. 5 p.m.*

ARCHITECTURE CLUB. *Dinner to be held at the Savoy Hotel. Brief commentary on the work of Frank Lloyd Wright. Speakers : F. J. Carter and John Summerson. 7.15 for 7.45 p.m.*

Tuesday, May 2

HOUSING CENTRE. *Lecture : "The Landlord and Tenants Act." By Ambrose Appelbe. 1 p.m.*

COUNCIL FOR THE PRESERVATION OF RURAL ENGLAND. *At 66 Portland Place, W.1. Annual General Meeting. 2.45 p.m.*

SULGRAVE MANOR BOARD'S WATSON LECTURES. *At 66 Portland Place, W.1. First of a series of four lectures by Frank Lloyd Wright on "Organic Architecture." I : "The Idea."* 5.30 *p.m.*

NEW FEATURE IN PRICES

THE JOURNAL *will introduce on May 25 a new development in its PRICES, and one which has not before been attempted in architectural and building journals.*

This innovation affects the "Current Prices for Measured Work" and consists in giving prices for "Materials Only" as well as combined prices for materials and labour.

As in previous issues, prices will be given for work executed complete, including overhead charges and profit (but printed in heavier type), and the new prices (shown in italicised type) will give cost of materials including a proportion of the overhead charges and profit. These "Materials Only" prices are based on the Current Market Prices for Materials (for which new quotations are obtained each month and the prices revised accordingly) with an addition of 10 per cent.

The JOURNAL *believes that architects as well as builders and quantity surveyors will appreciate the importance of the new development. As two prices are given, one for the Labour and Materials and the other for Materials only, the amount allowed for Labour only (including a proportion of overhead charges and profit) can easily be calculated for any item, and the estimator is thus in a position to judge to what extent the measured rate prices given in the* JOURNAL *should be varied to meet the conditions affecting a particular job.*

NEW YORK WORLD'S FAIR, 1939

The ceremony of inauguration of the British Pavilion at the New York World's Fair will take place on Friday, May 12, which will be designated "United Kingdom Day." If any members of the R.I.B.A. propose to be in New York on that day, and wish to be present at the ceremony, they should send to the Secretary of the R.I.B.A. their names and addresses in New York in order that invitations may be sent to them direct from the British Pavilion.

R.I.B.A. COUNCIL ELECTIONS

The following members of the A.A.S.T.A. have been nominated as candidates in the forthcoming elections for the Council of the R.I.B.A. :

Associates : *R. D. Manning* (Assistant, Schools Section, Middlesex County Council, ex-Member Salaried Members Committee, Author of various articles on the organisation of public offices), *Mr. John Pinckheard* (Assistant, London County Council, Member R.I.B.A. A.R.P. Committee, part author A.A.S.T.A. Report on Air Raid Shelters). Licentiate : *Mr. C. B. Parkes* (Assistant Architect to Bournville Village Trust, Member of Council and Hon. Sec. Town Planning Committee, Birmingham Allied Society) (also nominated by R.I.B.A. Council).

It will be noted that only three members of the A.A.S.T.A. have been nominated, although there are vacancies for six Fellows, three Associates and one Licentiate. In last year's Council Elections a number of salaried men, both principals and assistants, stood for election, some securing very few votes, their support being entirely local. The result was that the salaried man's vote was split, and only a few salaried members, and no assistants, were elected. Efforts are now being made by the Association by which it is hoped that this year it might be possible, beforehand, to reach agreements with other salaried architects, principals and assistants, whereby only a limited and selected list of candidates representing salaried architects will stand for election.

THE REIMANN SCHOOL

An open discussion meeting was held at the Reimann School on April 19 on the theme, "Interior Design : Its Teaching and Practice." Mr. F. R. Yerbury presided.

The occasion marked the inauguration of the Reimann School of Interior Design's series of "visitors' lectures" in which a panel of well-known experts in various related subjects will supplement the normal full-time instructions of Mr. Duncan Miller, head of the department, assisted by Mr. Eastland Fortey.

Mr. Duncan Miller outlined his policy and the objects and methods of the course, which he had roughly classified in three sections—the first purely technical, the teaching of drawing ; secondly, learning what to draw ; and, thirdly, learning how furniture, etc., is made, and such practical work as the composition of fabrics paint, etc. He stressed the importance of practical work, in common with the remainder of Reimann training, in preparing students for posts in the offices of architects, interior decorators or in shops rather than aiming primarily at the production of consultants or free-lance practitioners. There was also the essential psychology of dealing with clients.

He announced the date of the first supplementary lecture as May 17.

NEWS IN BRIEF

● The foundation stone of the proposed new Abbey Church at Prinknash, Gloucester, will be laid on May 3. The monks themselves are building it. The architect is Mr. H. S. Goodhart-Rendel, P.R.I.B.A.

● During the past six months there has been assembled at the Tate Gallery, for purposes of record, a collection of photographs of mural paintings carried out in Great Britain since the war. A selection of these, together with a few preliminary sketches, will be shown in an exhibition which will open at the Gallery on Thursday, May 25, and continue for a month.

● The Manchester Education Committee offers a limited number of Scholarships and Exhibitions tenable in any one of the three

Vigilance Committee

SCORE BOARD

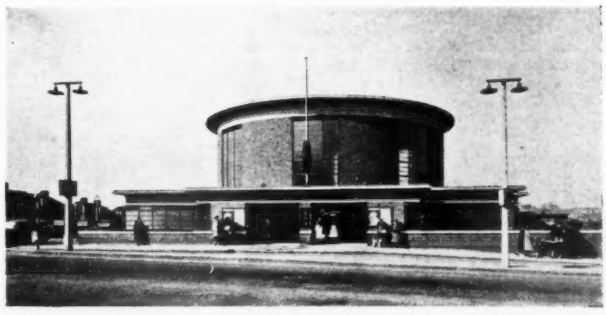
SOME months ago Mr. Goodhart-Rendel lamented the absence of a Vigilance Committee of laymen who could criticize designs for prominent buildings before they were built.

After an exchange of views between Astragal and Lord Derwent about whether the members of the Georgian Group had the qualifications needed for such a Vigilance Committee, readers of the JOURNAL *were asked to name well-known laymen in whose taste on architecture they would have confidence. Sixty-three people were nominated and were asked to name six recent buildings which they considered of merit, and during the last weeks Astragal has quoted a number of the lists sent in.*

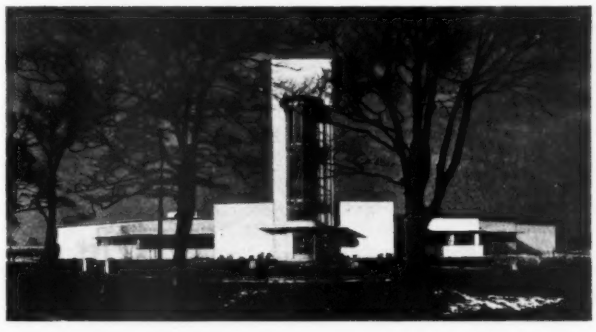
In order to show clearly which recent English buildings are most widely approved of, the following statistical summary has been made of the lists so far received :—

BUILDING AND ARCHITECT	VOTES
Peter Jones, Sloane Square (*Crabtree and Slater and Moberly ; Prof. C. H. Reilly, consultant*)	14
Battersea Power Station (*Sir Giles Gilbert Scott and Dr. S. Pierce*) ..	10
St. James' Park Tube Station (*Adams, Holden and Pearson*)	9
De La Warr Pavilion, Bexhill (*Mendelsohn and Chermayeff*)	8
Penguin Pond, Zoo (*Tecton*)	6
Finsbury Health Centre (*Tecton*) ; House at Halland (*Serge Chermayeff*)	5
Curzon Cinema (*Sir John Burnet, Tait and Lorne*) ; Giraffe House, Whipsnade (*Tecton*) ; Highpoint, Highgate (*Tecton*) ; London University (*Charles Holden*)	4
Avenue Close, Avenue Road (*Stanley Hall and Easton and Robertson*) ; "Cedars," Highgate (*Tecton*) ; House at Paddington (*Denys Lasdun*)	3
Bush House (*Helmle and Corbett*) ; Campion Hall, Oxford (*Sir Edwin Lutyens*) ; Elephant House, Whipsnade (*Tecton*) ; Empire Pool, Wembley (*Sir Owen Williams*) ; I.C.I. Laboratories, Blackley (*Serge Chermayeff*) ; Kensal House, Ladbroke Grove (*E. Maxwell Fry, Robert Atkinson, C. H. James, G. Grey Wornum, and Miss Elizabeth Denby*) ; Peckham Health Centre (*Sir Owen Williams*) ; Royal Institute of British Architects (*G. Grey Wornum*) ; Royal Masonic Hospital, Ravenscourt Park (*Sir John Burnet, Tait and Lorne*) ; Shakespeare Memorial Theatre (*Scott, Chesterton and Shepherd*) ; Shell-Mex House (*Messrs. Joseph*) ; Simpson's Shop, Piccadilly (*Joseph Emberton*) ; Village College, Impington (*Gropius and Fry*) ; West Dean Church, Sussex (restoration) (*Frederick Etchells*) ; Zoo Buildings, Regent's Park and Whipsnade (*Tecton*)	2

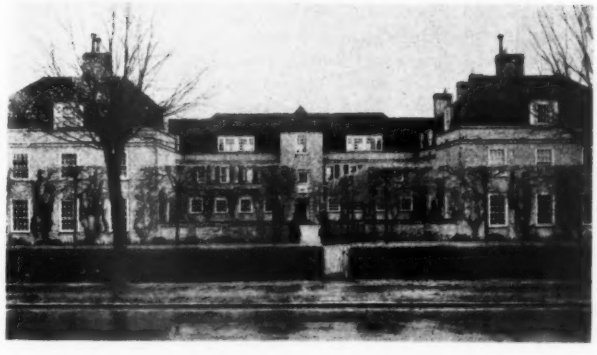
→ and Other Selections



Chosen by Mr. John Piper and Mr. Raymond Mortimer — Arnos Grove Station, by S. A. Heaps. Adams, Holden and Pearson, consultants.



Chosen by Mr. Anthony Bertram — Pithead Baths at Polkemmet, by the architects to the Miners' Welfare Committee.



Chosen by Lord Harewood — Botanical Institute near Cambridge, by P. Morley Horder.

Chosen by Mr. Peter Fleetwood-Hesketh — House at Chalfont St. Giles, by Mendelsohn and Chermayeff.

Chosen by Lord Harewood— New Bridge at Peterborough.

years' Full-time Day Courses leading to the degree of Bachelor of Technical Science (B.Sc. Tech.) at the Municipal College of Technology (Faculty of Technology in the University of Manchester). Forms of application and all information may be obtained by written application to the Registrar, College of Technology, Manchester, 1. Completed forms of application must be received on or before June 20, 1939.

LETTERS

OBSERVER

W. G. MADDISON

W. G. LELY

The Press and Architecture

SIR,—All architects are accustomed to the ignoring of themselves and their achievements in the lay press (except sometimes in the gossip columns), and have come to be a little pleased nowadays if these papers even go so far as to mention the builders' name. But now, in dealing with an important new building, the London press are content to mention only some of the workmen who built it. Of course, it was entirely proper that that should be done, and also that the hospital porter should be mentioned. Still, it seemed a little remarkable that *The Times*, in its column-and-three-quarter report of the opening of the new Westminster Hospital by the King last week, should not have found space for a line about the architects. The *Daily Telegraph* has one of its headlines, "Latest Ideas in Planning," but no mention of the planners. Even the *News-Chronicle*, which has recently shown a more enlightened conception of the architect's connection with modern architecture than its contemporaries, has no mention of the architects of this building, although it heads its report "World's Finest Hospital." It is the same with the other London papers that I have noticed.

I do not suppose that Messrs. Adams, Holden and Pearson, and particularly Mr. Pearson, who has put all his expert hospital knowledge and rare architectural feeling into this great building—he is at present in a nursing home recovering from a pleurisy attack—will be particularly concerned about this omission. But it is surely remarkable in 1939 that our chief newspapers should still publish descriptions of important buildings and think the name of the architects unworthy of mention.

OBSERVER

London.

"The Walkers"

SIR,—I am sure that most of your readers must have enjoyed reading the interesting correspondence kindly supplied by the Walker brothers, but I think that their possibilities are wasted in such channels. I suggest that the JOURNAL should reserve a page each week which would be headed "For Walkers and Toddlers," and then they would be able to discuss matters of importance to architects such as hyphens, tailors and club life. I am certain that this page would have a great appeal, particularly to your lady readers and Astragal.

In the meantime, less of the Walkers, please.

W. G. MADDISON

London.

Misuse of the name "Teak"

SIR,—My attention has been called to the item "Teak, African," under "Current Prices" on page 511 of your issue for March 23, and I trust that you will allow me to point out that the name "African Teak" is inaccurate and misleading, inasmuch as "Teak" is the proper name of the timber of the species *Tectona grandis* and of that timber only, while the timber sometimes miscalled "African Teak" is of the species *Chlorophora excelsa*, and its proper name is Iroko, under which it is well known and usually dealt in. I would add that, commercially speaking, teak, *Tectona grandis*, grows only in Burma, India, Siam, French Indo-China and Java, and not at all in Africa.

For some years past, with the full approval of the Indian and Burma Governments, the five leading shippers of teak from Burma, who advertise in your pages under the unofficial name "The Burma Teak Shippers," and on whose behalf I write, have been combating the misappropriation of the name "Teak" to timbers of other species. Their efforts have been attended by a large measure of success and, in the case of the misnomer, "African Teak," they have secured its abandonment by most of the leading merchants in the U.K. Such misnomers, however, die hard and this particular name still occasionally crops up, but I feel sure that you would wish, in view of the above explanation, to avoid its appearance in your columns.

W. G. LELY

London.

THE NEW

DESIGNED BY

View from the Corner of Page Street (left) and Dean Lyle Street.

GENERAL—*This hospital was opened by H.M. The King on Thursday last. Requirements included accommodation for 400 patients, provision for 43 private patients on one self-contained floor, and a vertically arranged out-patients' department—various treatments being each confined to one floor.*

WESTMINSTER HOSPITAL

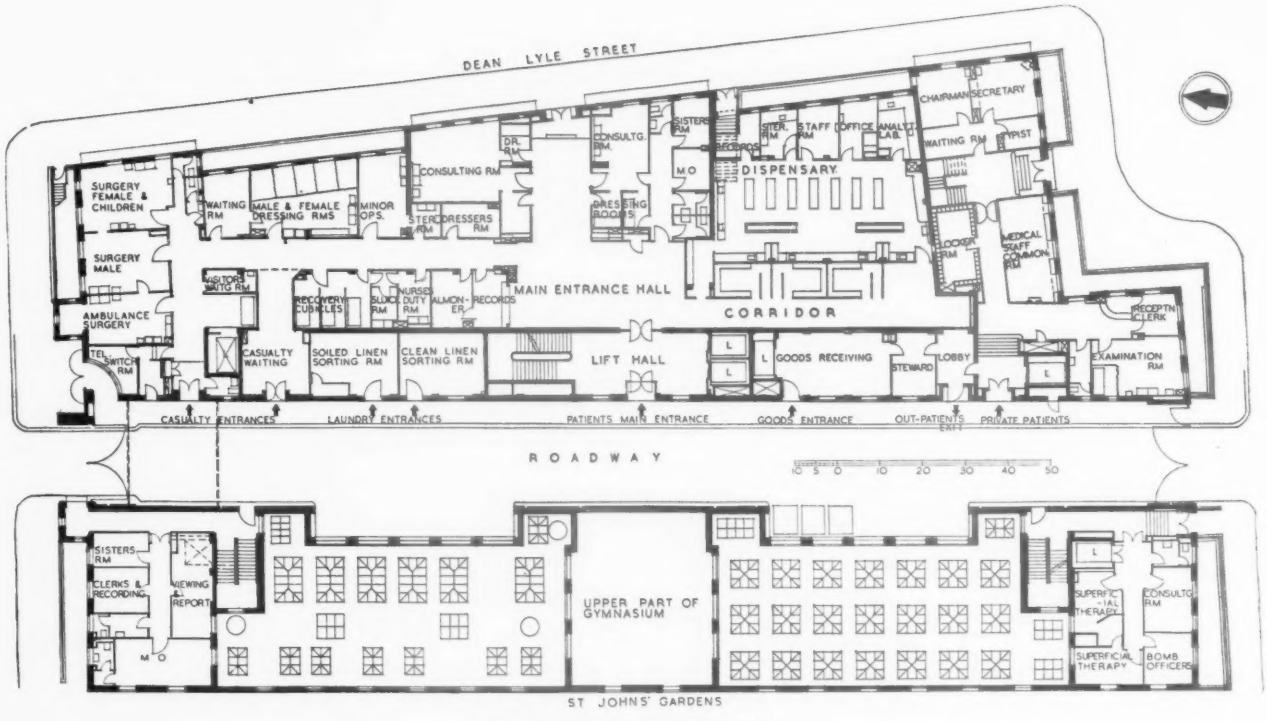
ADAMS, HOLDEN AND PEARSON

The Dean Lyle Street front.

SITE—*Long and narrow between Horseferry Road and Page Street, overlooking St. John's Gardens on the west. The building has a 25-ft. covered roadway for one-way traffic running from north to south; this was necessitated by the Ribbon Development Act of 1935. All entrances are arranged on the east side of this roadway.*

CONSTRUCTION AND EXTERNAL FINISHES—*Steel framed, with 14-in. brick external walls faced with Sussex stocks, and Portland stone strings and copings. Internal partitions, solid brick and patent blocks. The three top floors are solid concrete, while the rest are of patent hollow tiles. All floors are acoustically treated, and the windows are side-hung metal casements.*

TYPICAL FLOOR PLAN



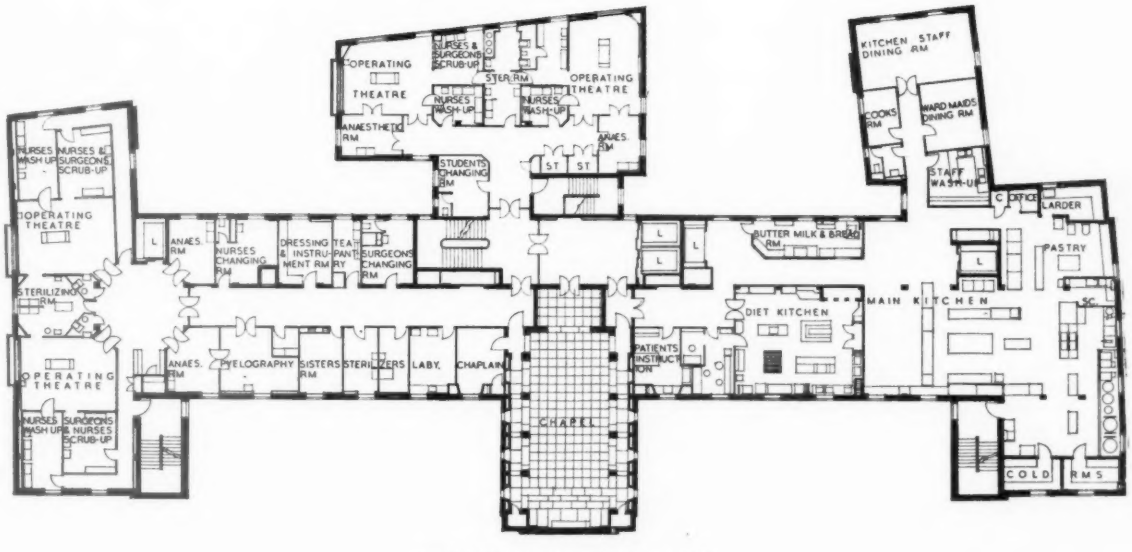
GROUND FLOOR PLAN

PLAN—*The form of the plan is dictated by the three units which are placed on each floor, one at north end, one at south end, and the other centrally facing St. John's Gardens. This latter unit gave a chance of embodying a certain number of parallel bed wards in the scheme, with windows one side only. The lift services are of special importance in this hospital for reasons given above, and the number of lifts is as follows : Operating theatres lift ; private patients lift ; two main lifts for outpatients and staff in the centre of the building; a large service lift to take three trolleys at a time.*

Five floors of general wards in three units on each floor lead to his subdivision.

WESTMINSTER HOSPITAL • BY ADAMS, HOLDEN AND PEARSON

Elevation to St. John's Gardens.



SEVENTH FLOOR PLAN

WESTMINSTER HOSPITAL • BY ADAMS, HOLDEN AND PEARSON

Looking from the nurses' and surgeons' scrub-up into an operation theatre, seventh floor. The corridor, left, enables surgeons and nurses to obtain access to and from the scrub-up and lobby to the sterilizing room without going through the theatre. It also enables foreign visiting surgeons and students to watch an operation from outside the theatre. The operation table is lit by day from a large double window to the right of the photograph and at night by spotlights in the ceiling which throw a shadowless light over the table. Between the double windows is a dark blind to exclude daylight.

A three-bed ward on the sixth floor.

The private patients' waiting-room, sixth floor.

INTERNAL FINISHES—*Walls generally are plastered and painted, except where tiled in kitchens, sluice-rooms, etc. Floors are of teak in all wards, patent cork with a maple margin to main corridors and Biancola in the operating theatre. The main staircase has patent cork and Biancola margins and skirtings and a solid teak balustrade.*

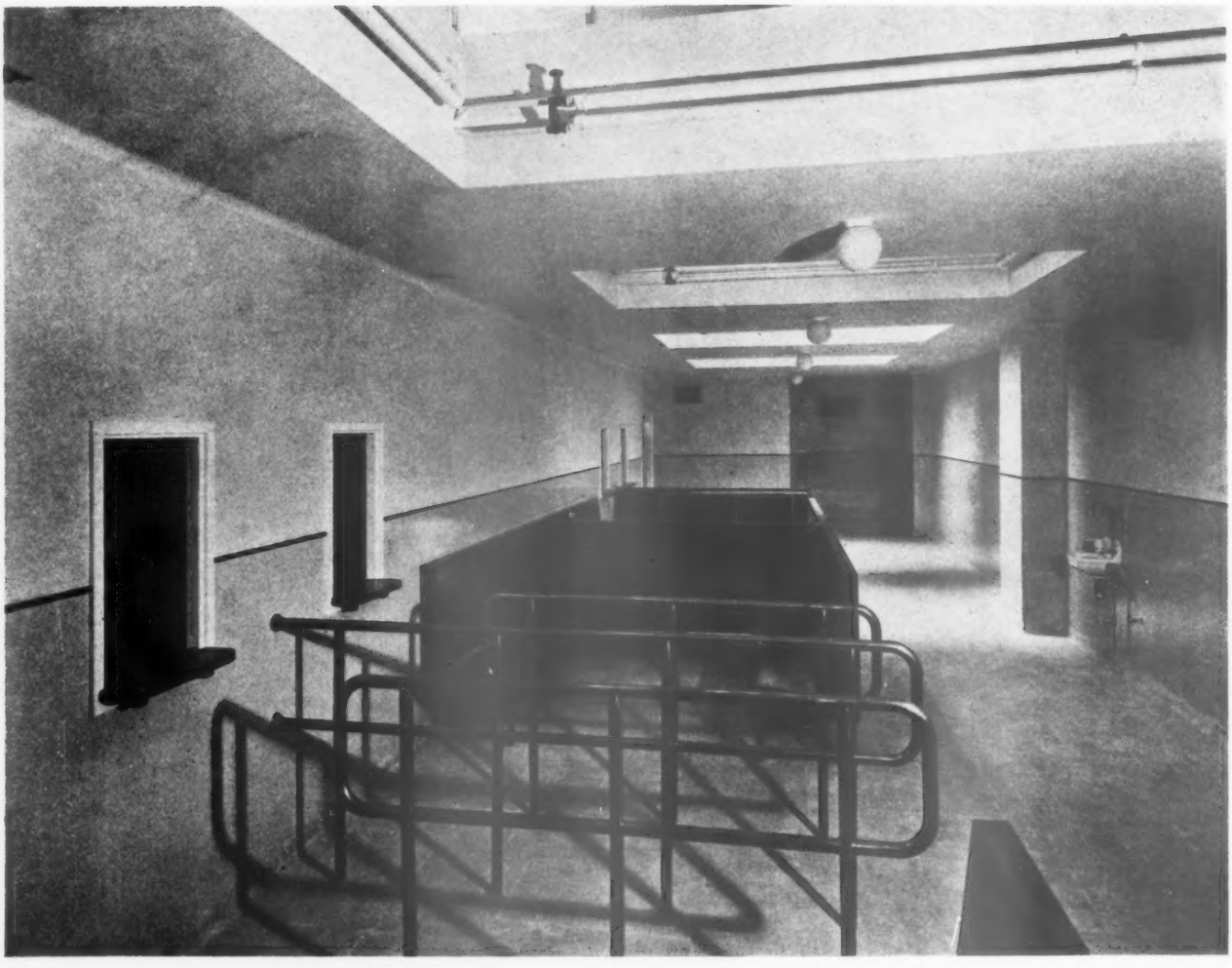
SERVICES—*All wards are fitted with gas-fires in addition to radiators, and the chapel has a special floor-heating system.*

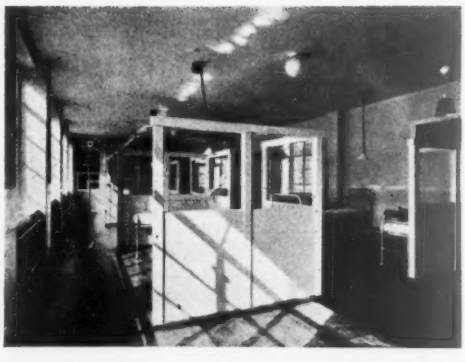
The general contractors were Holloway Bros. (London), Ltd.; for list of sub-contractors and suppliers, see page 709.

WESTMINSTER HOSPITAL • BY ADAMS, HOLDEN AND PEARSON

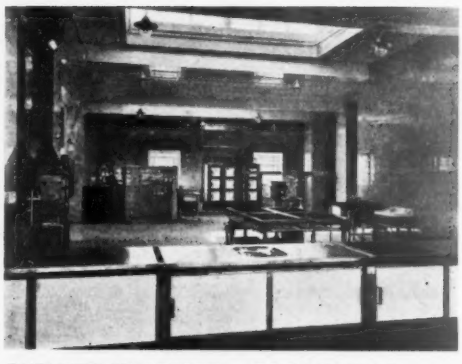
The chapel on the seventh floor.

WESTMINSTER HOSPITAL • BY ADAMS, HOLDEN AND PEARSON





Waiting hall to dispensary. Seating is provided for patients, who circulate through the bronze barriers, and obtain their medicine through the vertically pivot-hung hatches. Prescriptions are delivered to the dispensary from all parts of the hospital by pneumatic tubes.



Twelve-bed observation ward for children, second floor.

Main kitchen on the seventh floor.

WESTMINSTER HOSPITAL • BY ADAMS, HOLDEN AND PEARSON

R.I.B.A.

RAILWAY STATIONS

"Railway Stations" was the subject of a paper read by Professor A. E. Richardson at a meeting of the R.I.B.A., on Monday last. In the first part of his paper, Professor Richardson discussed railway architecture in England, on the Continent and in America. The latter part of the paper was devoted to the railway stations of the future. He said :

To visualize the requirements of an ideal station requires several flights of imagination. Everything is nebulous—traffic, type of trains, system of haulage, even sites may be questioned.

It would, therefore, be unwise to plan for more than fifty years ahead ; the fact that the oldest stations have served for a hundred years is a tribute to Victorian foresight. The problem today, however, is a totally different one.

It can be assumed that two types of great scale stations will be required—A, the through type, ten miles beyond the centre of a city ; B, the terminal type, corresponding in principle to those existing. The through terminals of all the trunk lines, ten miles out, would be connected by a ceinture line corresponding to the periphery of the Green Belt. Certain through trains would by-pass London, Central London's long distance needs would be served by remodelled termini, the entire suburban system in all directions up to fifty miles from London being reorganized.

There can be no doubt of the fact that we are at the dawn of a new period in railroad organization. Electric and other traction, shorter trains, higher speeds are among presaged things. The

difficulties to be overcome in the design of terminals are those concerning the segregation of parcel from passenger traffic, the avoidance of delays in making up trains, cleaning coaches and clearing platforms.

It is an axiom that the disposition of the railroad tracks determines the planning of a terminal station and ordains the character of the design. The engineers in days of the road, therefore, are in control. The architect is the man in reserve, who may or may not impose his will on the project and co-ordinate the various elements into something reasonable.

It is significant that from the inception of railways in this country, the promoters have sought for and obtained the best available advice from the R.I.B.A. The stations planned and built for London's tubes, particularly those "overground," leave nothing to be desired.

I propose to direct attention to the terminal stations of the future which should be adequate for all reasonable demands, including holiday and evacuation traffic.

Is it too daring to suggest that the arrival platforms should be placed below those allocated for departure? This system would mean a double concourse with separate accommodation for cabs, omnibuses and private vehicles. It would imply the provision of sidings and cleaning bays for coaches not too far removed from the terminal. In point of fact, these sidings could be planned as an extension of the lines of arrival. Ramps or even giant lifts could be introduced to feed the departure platforms with trains made up to suit the exigencies of traffic. Such a scheme would imply the provision of inclined roads and cross unders, a branch of design which belongs almost entirely to the province of railroad engineering. Now, while it is true that the by-passing of a great city under some circumstances is desirable, it is equally essential to continue the system of the main line terminus for long distance traffic.

I suggest for discussion that the rail head of a great trunk line should be planned on two or more levels, with the various tracks arranged to meet traffic needs for fifty years ahead. We can assume that the engineers have drawn up their scheme, that they have allowed ample space in front for the double or triple concourse. They have reserved space for working the station and for the offices of station officials and staff. In their wisdom they have decided against the proposal to house the major portion of the company's clerical staff in a block of offices forming part of the station. The directors also have voted against the erection of a giant hotel or any other buildings whatsoever which would impair the effective working or has the appearance of the terminal.

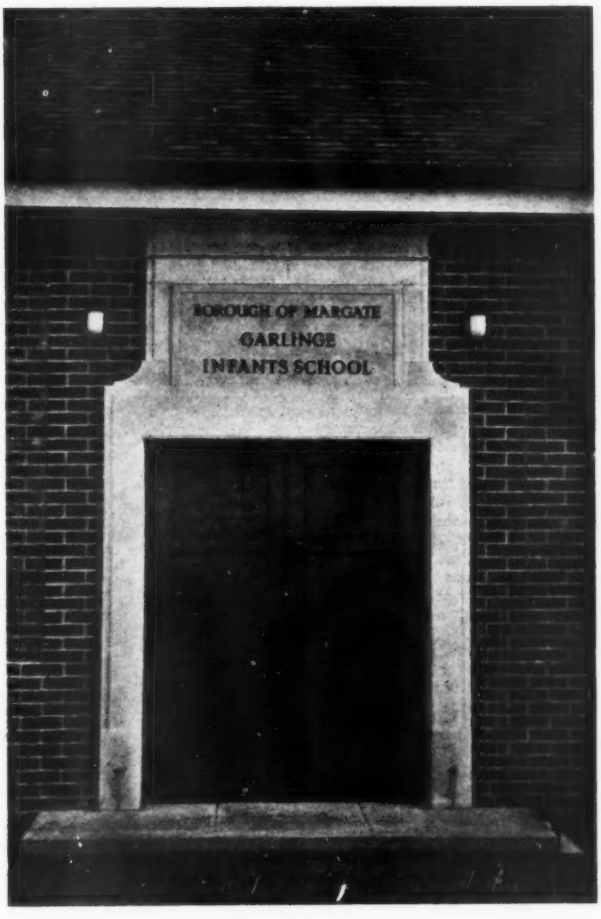
The directors in their wisdom have also determined to erect a building which will not only express the purpose for which it is erected, but will be an example of good civics. Advertisements are to be banned, the entourage in front is to be laid out as a public garden, and all approaches have been schemed in connection with the town planning authorities and the police. Public enthusiasm for the project has been prepared by intelligent propaganda, and the promised contribution of great architecture has been acclaimed by the R.I.B.A.

The selected architect—I ban competitions for taste—is invited to devise the buildings which will frame the rail heads and the platforms; to scheme the treatment of each concourse, to collaborate with the railway structural engineers on the design of the longitudinal roofs and to lay out the entourage. On the architect's advice the company should decide to house their clerical workers twenty miles out of London, and to build modern offices in proximity to the housing estate. It might be argued, "Why dress the façade of the new station with six or seven floors of offices and waste our substance in transporting thousands of clerks forty miles a day; a few hundred telephones will do all that is required." I would be fortunate if the "Clearing House" could be moved into the outer suburbs at the same time.

The problem before the architect therefore calls for a simple rendering, one not cut up into statements of parts, but presenting a theme of unified dignity. Debarred from the use of orders or scenic embellishments, profiting by egregious experimental failures elsewhere, the architect should proceed to dramatize the

SCHOOL, GARLINGE

BY E. ARNOLD PERRIN



The main entrance.

GENERAL—*The local authority required accommodation for 200 children and 50 babies, the design to conform with the Board of Education's new recommendations.*

SITE—*On high ground and adjacent to the existing junior school.*

CONSTRUCTION—*External walls 11 in. cavity brickwork; internal partitions mainly brick; the pitched roofs are covered with plain tiles, while the flats over the corridors, etc., are finished with asphalte on felt and boarding. The floor over the basement heating chamber is of reinforced fireproof concrete.*

EXTERNAL FINISHES—*All external walls are faced with standard multi-coloured red facing bricks with cream gauged mortar pointing. The copings to the assembly hall and the surround to the main entrance is of Portland stone, while all windows are metal in wood surrounds.*

INTERNAL FINISHES—*Walls generally are plastered, those in the lavatories and offices having glazed brick dadoes, the remainder being finished with washable distemper. Oak-block floors in the assembly hall and infants' classrooms, cork tiles in the babies' room, jarrah blocks in all corridors, staff rooms and stores, asphalte in the children's cloakrooms, lavatories and offices, and tiles in the staff cloakrooms and lavatories. All wood block floors are polished.*

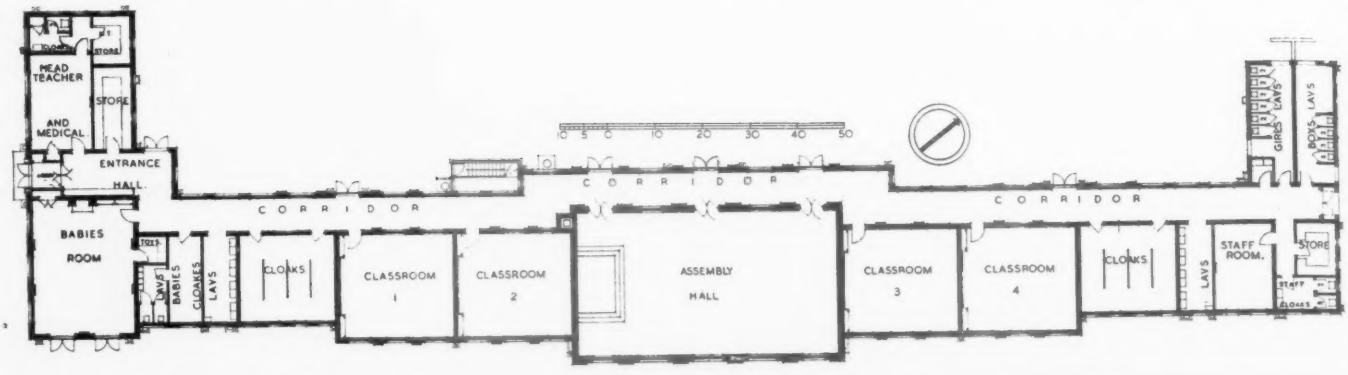
SERVICES—*Heating is by an accelerated low-pressure hot water coil system, and hot water is obtained from a coke-fired boiler in the basement. Gas fires are provided in the medical and staff rooms, and a coal fire in the babies' room.*

COST—*11s. per foot cube. Contract price, £13,371.*

The general contractors were Ward, Barton & Co., Ltd.; for list of sub-contractors and suppliers, *see page 709.*

SCHOOL AT GARLINGE

DESIGNED BY E. ARNOLD PERREN



conditions. In a word, he must make the most of the breadth and the height, impart rhythm to the openings, arrange suitable contrasts, accents and articulations in direct and harmonious sequence with the ordered plan.

The building as shown on the finished drawings to be exhibited in the Henry Florence Hall must be schemed to build well and to stand the test of platform criticism. So much for externals. The scheme as a scheme should include such innovations as a public advertisement room where goods could be advertised from a projector, a cinema, a museum and well-stocked library, an arcade of small shops, as well as a buffet and a restaurant. The directors should bear in mind the services of a chef of unblemished reputation. The rest of the scheme can also be visualized, particularly the glass booking offices, the enquiry rooms, writing places, cloak rooms and toilet saloons.

In collaboration with the engineers, the architect should control the choice of material. Concrete and steel should be subordinated to their rightful structural purposes, paintwork should be eliminated, horizontal surfaces should be covered with copper and provided with proper gutters. My description reads like an unattractive specification, so I will conclude.

Right, from the east; centre, assembly hall; bottom, typical classroom.

CAMPS

During the Committee stage of the Camps Bill, Mr. Noel Baker asked the Government to give serious consideration to the plea that there should be on the board of management of the statutory companies who are to build the camps a representative of the National Trust, the Council for the Preservation of Rural England, and similar organizations in England and Scotland, to ensure that the amenities of the countryside were not endangered by the building of the camps.

Mr. A. C. Bossom supported this plea, as did other members.

Mr. Bernays said that the Ministry of Health fully appreciated the importance of amenities. The real safeguard lay in proper administration. A town-planner had been consulted about every site, and none had been chosen without the agreement of a town-planner. The fact that all plans had to be submitted to the Minister ensured that they were subjected to a thorough examination by the qualified architects of the Ministry. In practice, this meant that the chief architect of the Department, who had on his staff a number of architects and others, specialists in planning work, would make himself responsible for all these matters.

Mr. Mander moved an amendment that no camp should be constructed unless an architect experienced in planning work had been employed in connection with it.

Mr. Elliot said that the recognized companies had been in consultation with the R.I.B.A. and had been furnished with a panel of some 40–50 architects who the Institute considered suitable for the work. It was proposed to select architects to plan and supervise the construction of camps.

The amendment was withdrawn.

WORKING DETAILS : 745

SHOP • BUCHANAN STREET, GLASGOW • . DUNCAN MILLER

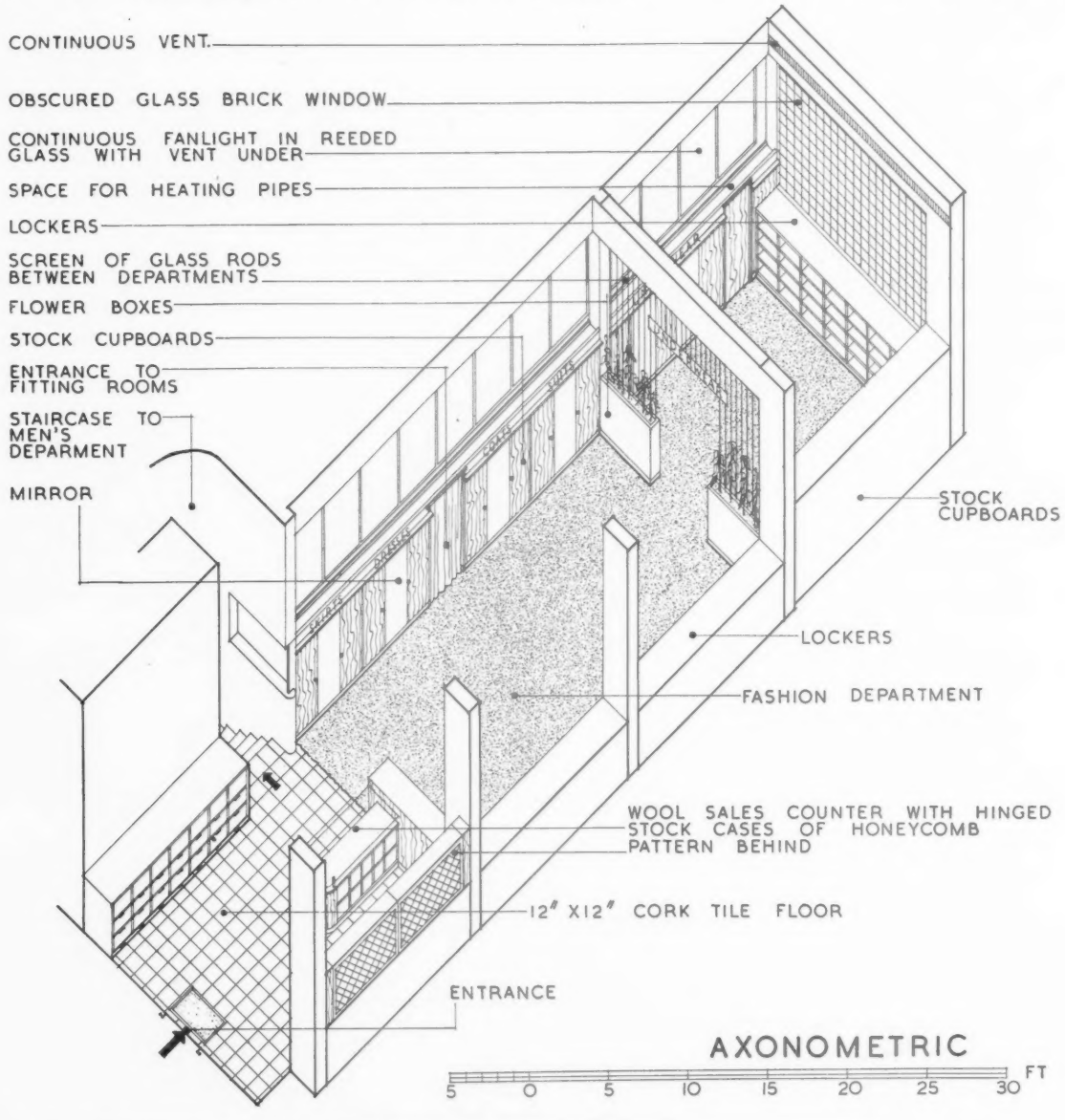
This is the interior of the shop illustrated in THE ARCHITECTS' JOURNAL for April 20, 1939 (Working Details Nos. 743 and 744). The departments are planned in order of use : Thus the wool section, subject to a heavy traffic of small sales, is placed in front of the shop, behind it the general sales section and, beyond, the underwear department. The fitting rooms are entered off the general sales section. The wall giving on to a side street is almost entirely glazed, natural-lighted positions for display being thus provided both inside and out; while the end wall abutting the goods-yard at the back is constructed in obscured glass bricks.

The photograph above shows a general view of the showroom, and right, a view of the wool sales counter.

Details are shown overleaf.

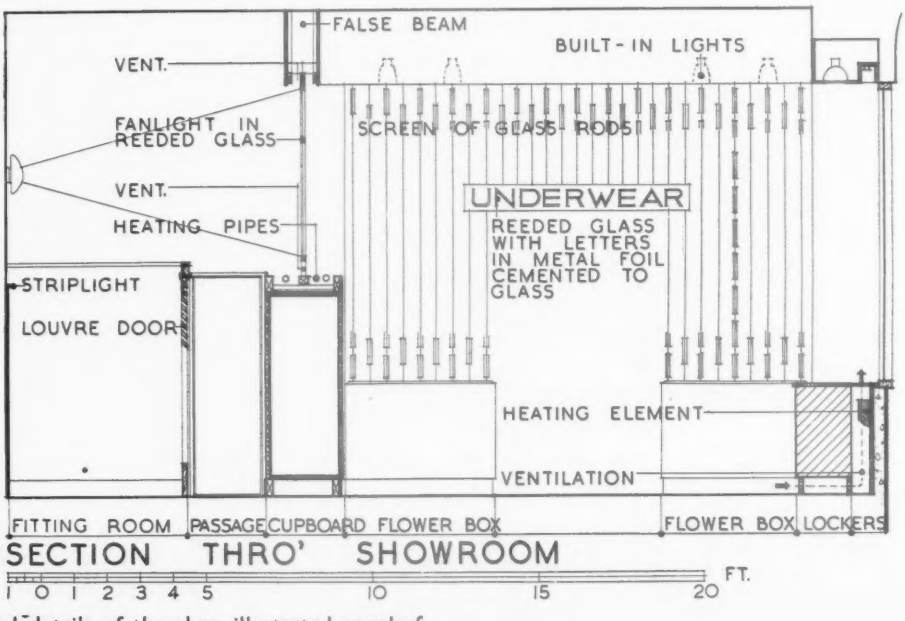
WORKING DETAILS : 746

SHOP • BUCHANAN STREET, GLASGOW • J. DUNCAN MILLER



AXONOMETRIC

5 0 5 10 15 20 25 30 FT



SECTION THRO' SHOWROOM

1 0 1 2 3 4 5 10 15 20 FT.

Axonometric and details of the shop illustrated overleaf.

The Architects' Journal Library of Planned Information

INFORMATION SHEET

SUPPLEMENT

SHEETS IN THIS ISSUE

725 Sanitary Fittings

726 Metalwork

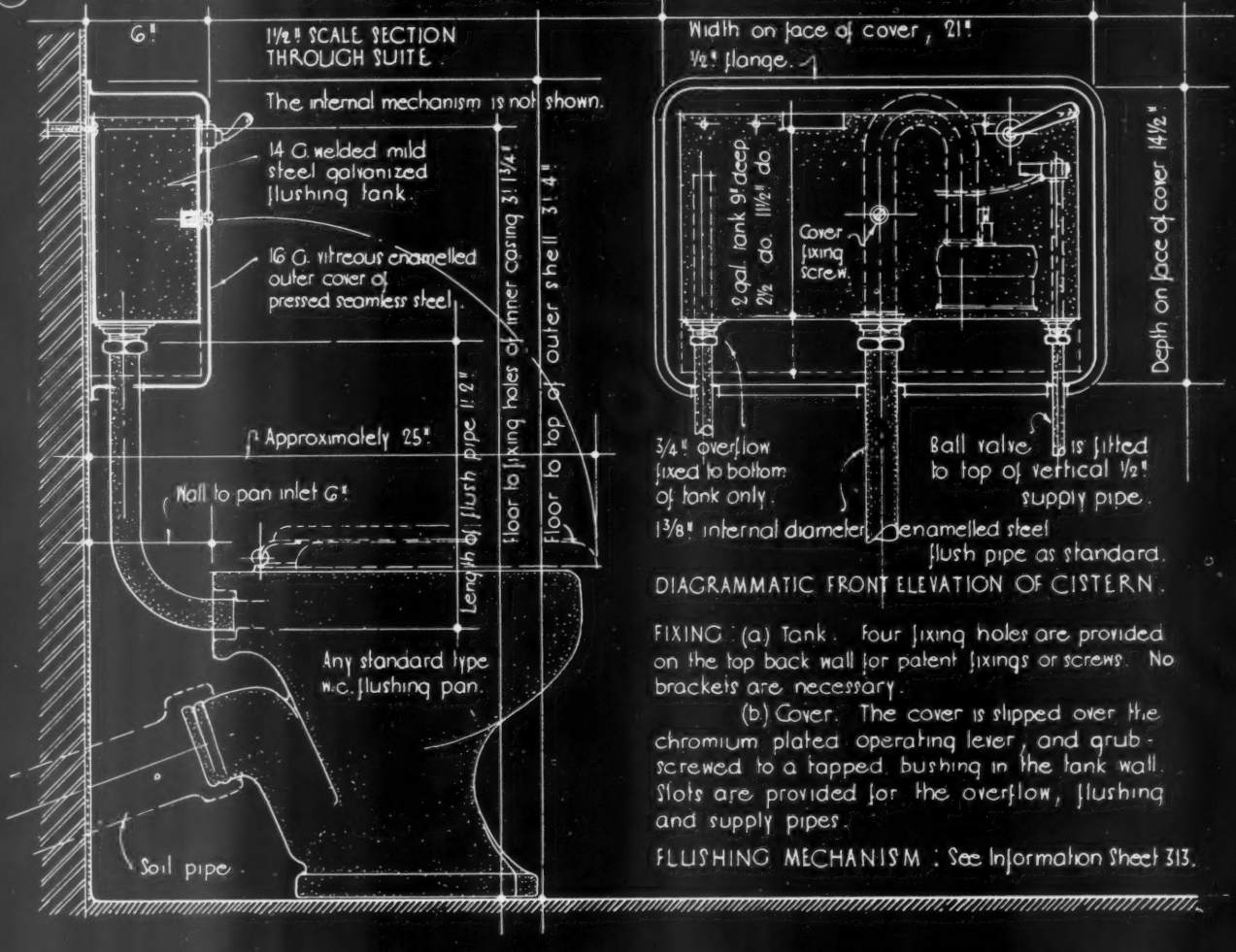
All the Information Sheets published in The Architects' Journal Library of Planned Information since the inception of the series to the end of 1938 have been reprinted and are available in the four volumes illustrated here. Price 21s. each.

Sheets issued since index :

701 : Tile Hanging
702 (420 revised) : Fixing Insulating Board
703 : Sheet Metals
704 : Plan Elements
705 : Metal Work
706 : Plan Elements
707 : Furniture Layout
708 : Plan Elements
709 : Flue Construction
710 : Natural Lighting
711 : Glass and Glazing
712 (109 revised) : Quarry Tiles
713 : Glass and Glazing
714 : Metalwork
715 (106 revised) : Hot Water Radiators (Pressed Steel)
716 : Furniture Layout
717 : Metalwork
718 : Flooring Materials
719 : Plumbing
720 : Water Heating
721 : Wall Facing Materials and Wallboards
722 : Roofing
723 : Metalwork
724 : Timber Construction

THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

(A.) ARRANGEMENT OF THE FORDHAM PANEL TYPE EXPOSED LOW LEVEL CISTERN.



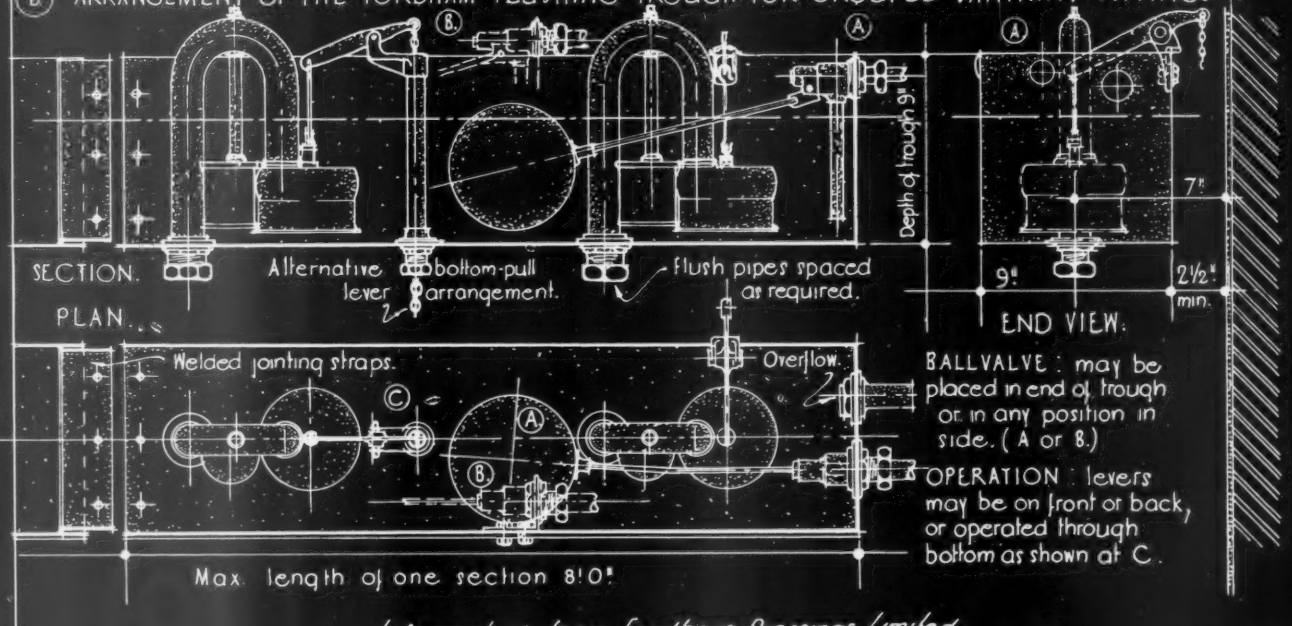
DIAGRAMMATIC FRONT ELEVATION OF CISTERN.

FIXING: (a.) Tank. Four fixing holes are provided on the top back wall for patent fixings or screws. No brackets are necessary.

(b.) Cover. The cover is slipped over the chromium plated operating lever, and grub-screwed to a tapped bushing in the tank wall. Slots are provided for the overflow, flushing and supply pipes.

FLUSHING MECHANISM: See Information Sheet 313.

(B.) ARRANGEMENT OF THE FORDHAM FLUSHING TROUGH FOR GROUPED SANITARY FITTINGS



BALLVALVE: may be placed in end of trough or in any position in side. (A or B.)

OPERATION: levers may be on front or back, or operated through bottom as shown at C.

Information from Fordham Pressings Limited.

INFORMATION SHEET: WELDED MILD STEEL FLUSHING CISTERNS & TROUGHS

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

• 725 •

SANITARY FITTINGS

Subject : Steel Flushing Cisterns

General :

The cisterns illustrated on this Sheet are of welded steel plate construction. Both types are lidless, although the superimposed cover of the low level type serves this function. Neither type is suitable for concealed fixing, examples of pressed steel cisterns for this purpose being shown on Sheet No. 313.

Mechanism :

Both the models operate on the syphonic principle and syphons are of bent tube construction with expanded joints. The plungers have a stroke of $1\frac{7}{8}$ in. only.

Models :

(a) *Panel Type Low Level Cistern.* The flushing mechanism of this model is specially designed to be accommodated in the shallowest possible space without loss of working efficiency. The cistern fittings are of solid copper and brass, no solder or composition metal being used. Operation is almost silent.

The syphon is of drawn copper with metal to metal expanded joints, and complies with the Metropolitan Water Board regulations and the new by-laws.

A bottom feed ball valve and a bottom overflow are fitted and the ball is solderless copper. The operating lever is chromium plated.

The inner tank is constructed of 14-gauge mild steel with welded corners, heavily galvanized after manufacture. The outer casing is a seamless 16-gauge steel pressing, vitreous enamelled in white or any other desired colour. The flush pipe is vitreous enamelled to match.

Brackets are not required for the fixing of the inner tank. Four holes are provided on the back for direct screwing to the wall, and the outer shell is then slipped over the operating lever and attached by means of a central screw. This screw has a large slot, so that a coin may be used for the removal of the cover when necessary. When screwed on, the cover is rigidly held flush against the wall.

When erected, the cistern projects only 6 in. from the face of the wall and the absence of mouldings allows easy cleaning and prevents the collection of dust.

Either a two-gallon, two-and-a-half- or three-gallon tank can be accommodated within the standard outer casing, the connector capping nuts of the flush, overflow and inlet pipes being slightly exposed when the larger sizes are used.

This cistern does not project over the w.c. pan in a manner that prevents the seat and cover from remaining in the "up" position when lifted and yet the overall projection of the w.c. pan from the wall is 24 in. only.

(b) *Flushing Troughs.* These are designed for high level fixing on brackets or cantilevers over a range of sanitary appliances which require individual flushing.

The flushing mechanism is an adaptation of the Fordham standard syphon and consists of heavily galvanized steel construction actuated by brass levers. Operation is silent and positive, a $1\frac{1}{2}$-in. downward movement of the pull chain effecting an immediate, powerful and full capacity flush at any point irrespective of the level of the water in the trough, provided there is sufficient water for the syphons to work.

A separate flushing unit, with flush measuring device and operating chain, is provided for each sanitary fitting spaced along the trough to suit the spacing of the fittings served.

The maximum length of any one section is 8 ft., but the overall length of the trough can be increased indefinitely by bolting on further sections. The joints between sections are formed by internal straps welded on one side, so that a single row of bolts is visible at each joint.

The trough sections are constructed of $\frac{1}{8}$-in. thick heavily galvanized steel plate, of box shape 9 in. square, with welded corners.

The single 1-in. overflow pipe can be placed anywhere in the ends, front or back of the trough. The $\frac{3}{4}$-in. ball valve likewise can be placed at either end, or by means of a bracket anywhere in the length of the trough. Troughs can be supplied with the capacity of flush at each point adjusted to 2, $2\frac{1}{2}$ or 3 gallons.

The position of the operating levers should be specified as these can be at the front or the back, or, if chain guides are required, the neatest and most satisfactory method is for the chain to be taken through the bottom of the trough and the guide tube screwed directly on to the bottom. One bracket or holderbat only is then required at the lower end of the guide tube.

Manufacturers : Fordham Pressings Limited

Address : Melbourne Works, Dudley Road, Wolverhampton

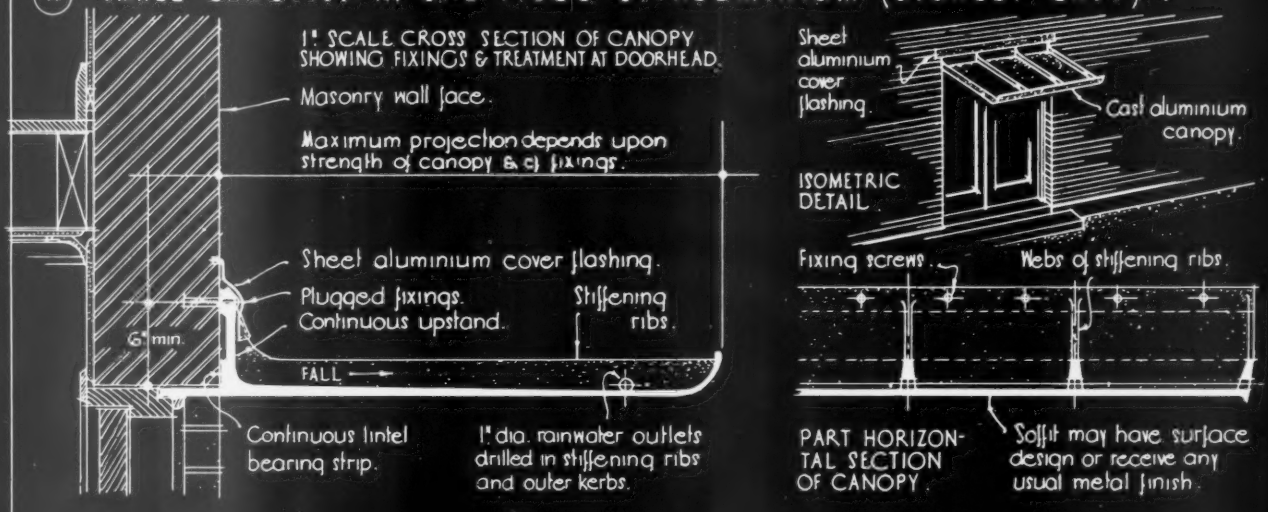
Telephone : 20196 Wolverhampton

857.

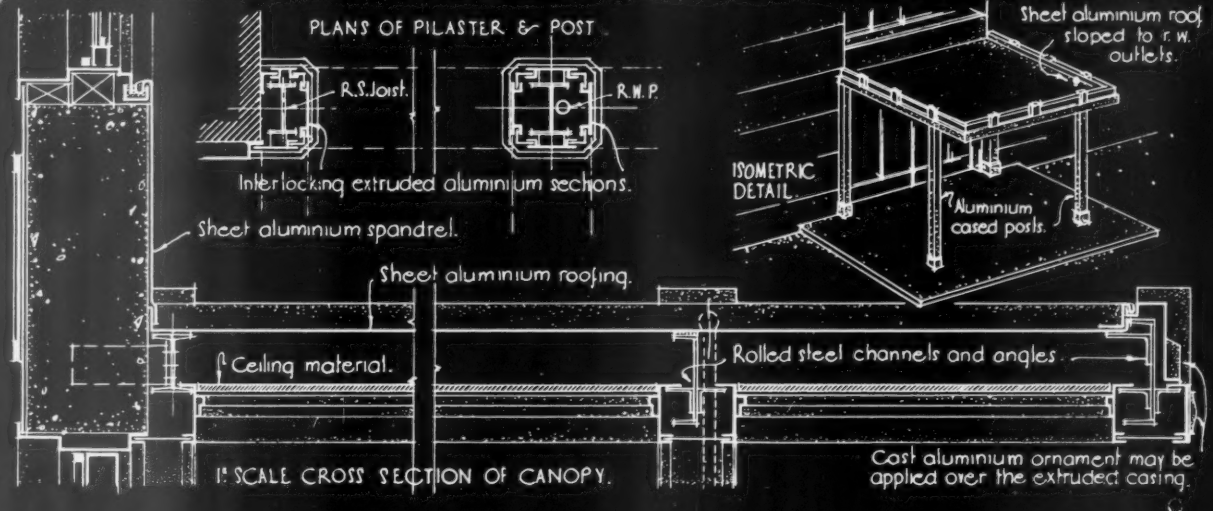
857

THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

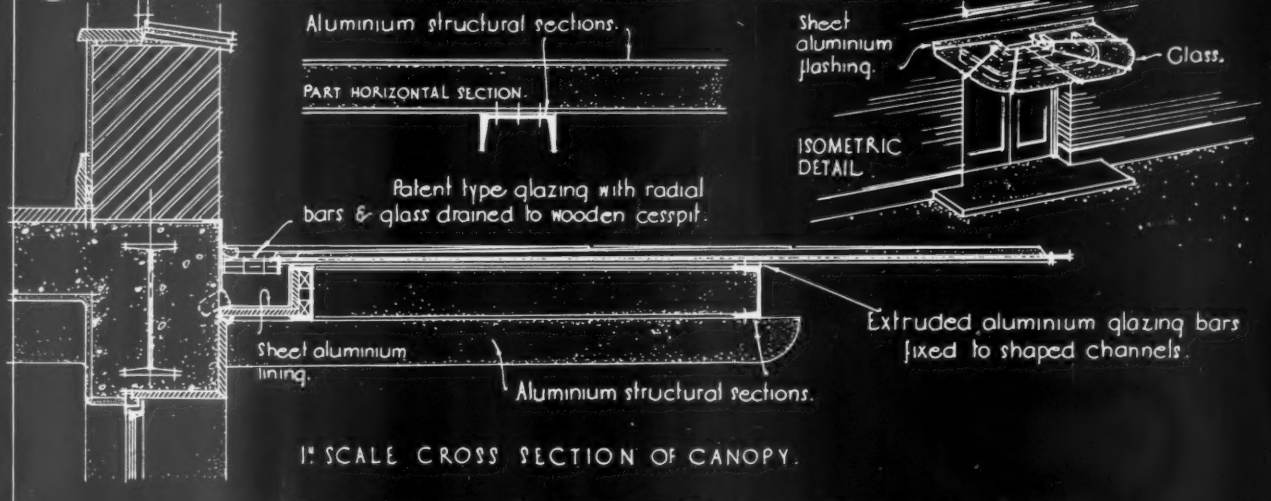
(A) SMALL CANOPIES IN ONE PIECE OF ALUMINIUM (USUALLY CAST):



(B) TYPICAL LARGE CANOPY WITH STEEL COLUMNS & SKELETON FRAMING CASED WITH ALUMINIUM



(C) CANOPIES FORMED WITH EXPOSED STRUCTURAL ALUMINIUM SHAPES AND GLASS



Information from the Northern Aluminium Company Limited.

INFORMATION SHEET: ALUMINIUM Nº 14: TYPES OF ALUMINIUM CANOPIES.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1.

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 726 •

METALWORK

Subject : Aluminium Canopies

Fabrication :

The method of fabrication of the aluminium controls to a large extent the type, size and design of the canopy which can be constructed. It is essential that the characteristics of each method should be considered before the general design is determined. Alternatively, if the size and purpose of the canopy are decided by the particular requirements, these factors will usually restrict the choice of fabrication.

The influence of the method of fabrication on aluminium work has been described in previous Sheets and more particularly in Sheets Nos. 669 (Spandrels) and 714 (Pier Casings). The following notes, however, provide some guide to the effects of fabrication and the scope of decorative work.

(i) *Light gauge sheet :* This is obtainable in almost any size (see Sheet No. 492) in a variety of gauges. It should be solidly backed throughout and is suitable only to receive surface decoration such as sand-blasting, etching, anodising and light incised work. If a suitable backing is provided, recessed bas-relief work may be carried out by hammering.

(ii) *Heavy-gauge sheet :* This is obtainable in large sizes (see Sheet No. 492). It has a reasonably flat surface as rolled, but can be supplied specially flat if necessary. It is suitable for any of the usual surface finishes, deep incised work, bas-relief work (by hand) and hammering.

(iii) *Extruded work :* Each unit is limited in width to not more than 12 ins. but may be of any length ; units may be of almost any section shape, but this shape cannot be varied in the length of the unit, and each unit must be straight. Extruded sections are capable of being handworked, however, so that modification of the section shape may be made if required and units may be bent provided the section shape is suitable.

(iv) *Cast work :* Aluminium is suitable for all varieties of casting technique. The designs may be of any complexity, solid or pierced, and may be combined with extruded work, if desired.

Economy of Construction :

Example (A) shows a small canopy formed of a single aluminium casting in conjunction with light gauge sheet. Although this form of fabrication lends itself to elaborate designs of almost any size and shape, economy usually demands that the advantages of smallness, simplicity and delicacy of line should be strictly retained. Castings of this nature, however, would be quite economical when a quantity identical in design could be used.

Example (B) indicates the methods of constructing large, free-standing canopies in which the stresses are borne by standard steel skeleton framing members, the aluminium being hung to them.

Aluminium casing members extruded from the same die should be used in as many positions as possible if the greatest economy is to be achieved. Thus the casings around the beams, pilasters, fascia and posts may be of identical profile and dimensions as shown. The various members are best assembled by the interlocking principle, the flanges of the steelwork being used for blocking out and suspension purposes.

Example (C) indicates the use of aluminium structural shapes. These are available in all the usual sections and sizes, and in various strengths to suit conditions. (See later Sheets of this series.) Structural calculations should be made for this work in the same way as when the cantilever is of other metals. Steel members may be used if the strictest economy is necessary, these being entirely wrapped with welded or screwed sheet aluminium of light gauge. (See Sheet No. 686.)

Fixings :

Screw heads for face screwing may be countersunk, flush, or they may project and may be of any shape and size. Screw heads may be finished with the same surface as the adjoining metal (e.g. sand-blasted, anodised, etc.), but it is seldom satisfactory to attempt secret face screwing by grinding down the head after fixing. It is particularly difficult with anodised work, because the anodising is carried out before assembly and no grinding or cutting should be done after anodising.

Aluminium wood screws, grub screws and rivets for metal to metal fixings are available in all standard sizes. Aluminium structural shapes may be riveted or welded, but if these are to be anodically treated, special precautions must be taken to avoid discoloration of welded joints.

Contact with other materials :

Precautions should be taken wherever aluminium adjoins other metals or materials containing cement or lime, to ensure that direct contact is not made, owing to the danger of electrolytic or chemical action. (See Sheets Nos. 669 and 686.) This is particularly important in building-in structural members of aluminium and in making connections to steelwork.

Finishes :

The surface finishes which may be used on cast and extruded aluminium have been described briefly on Sheet No. 505 (No. 4 of this series) ; in addition to these finishes, great variety in surface texture is possible, in cast aluminium work, by the normal technique of casting.

Previous Sheets :

Previous Sheets of this series are :—
No. 492 : Sheet, plate and coil sizes
No. 501 : Working, joining and bending
No. 504 : Basic and special extruded shapes
No. 505 : Typical extruded sections
No. 506 : Typical extruded sections
No. 661 : Casement window sections
No. 669 : Window spandrels and cills
No. 673 : Handrails and railings
No. 680 : Aluminium paint
No. 686 : Cast and extruded grilles
No. 714 : External pier casings
No. 717 : Aluminium wall facings
No. 723 : Aluminium wall facings

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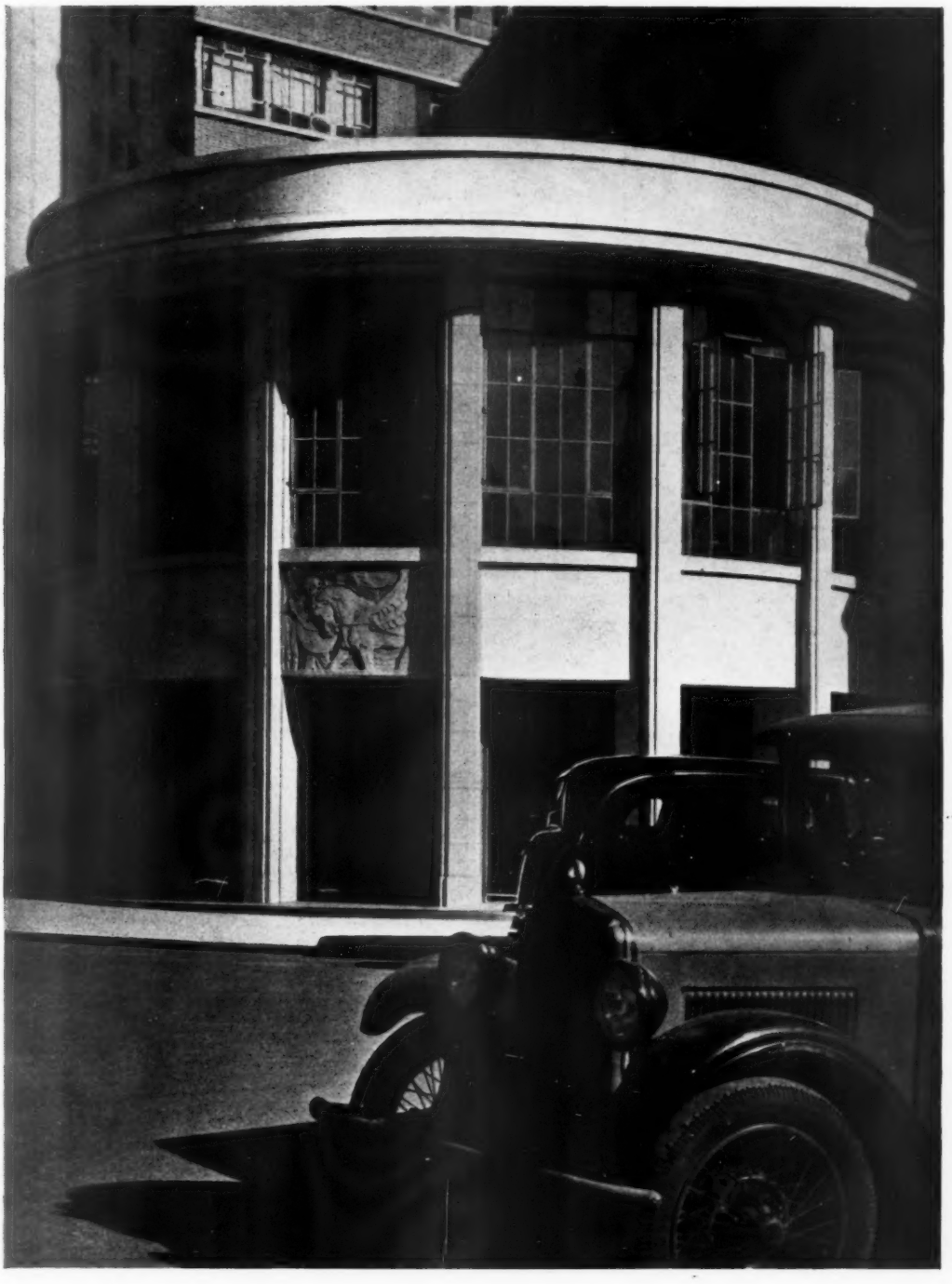
Address: Bush House, Aldwych, London, W.C.2

Telephone : Temple Bar 8844

CLELAND HOUSE, WESTMINSTER

BY T. P. BENNETT AND SON

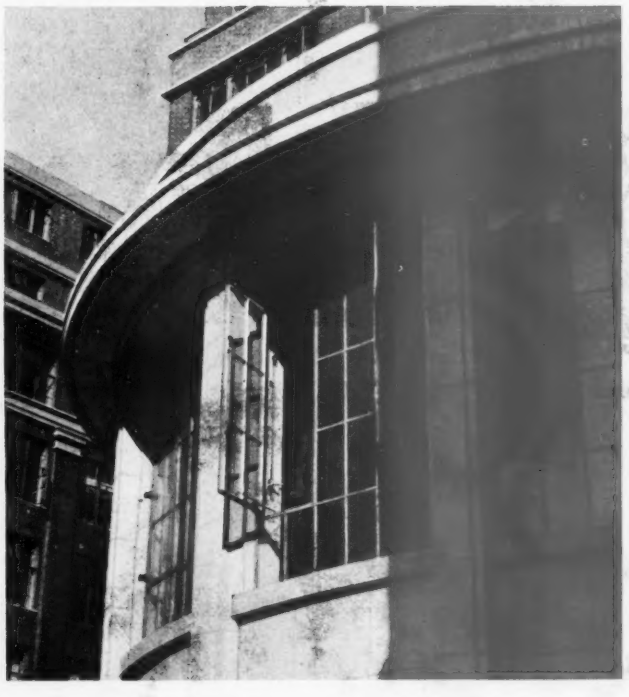


PROBLEM—*The clients required a block of offices with good natural lighting, a portion of the space flanking the entrance hall to be reserved for shops, the remainder of the ground floor for a petrol-filling station, garage, and fuel-delivery facilities to the basement boilers.*

SITE—*On a difficult island site fronting Page Street, this nine-storey building with approximately 110,000 sq. ft. of lettable area was planned to meet the required building lines laid down by the Westminster City (Millbank) Improvement Act, 1929.*

CONSTRUCTION AND EXTERNAL FINISHES—*Reinforced concrete frame on pile foundations, faced with brickwork and precast terrazzo, the heads and cills of windows being rendered and painted with concrete paint. The floors are of R.C. hollow blocks, except for the solid concrete first floor over the garage. The steel windows have mullions at 6-ft. centres for office sub-division purposes.*

Above, the main entrance in Page Street.



PLAN—*The main semi-circular entrance gives approach to a central naturally-lighted entrance hall, on the right and left of which are placed the lift and staircase lobbies. Overhead, each upper floor is planned with a central corridor running completely round the open court, terminating in the lift lobbies at each end, thus leaving all office-space with good natural lighting.*

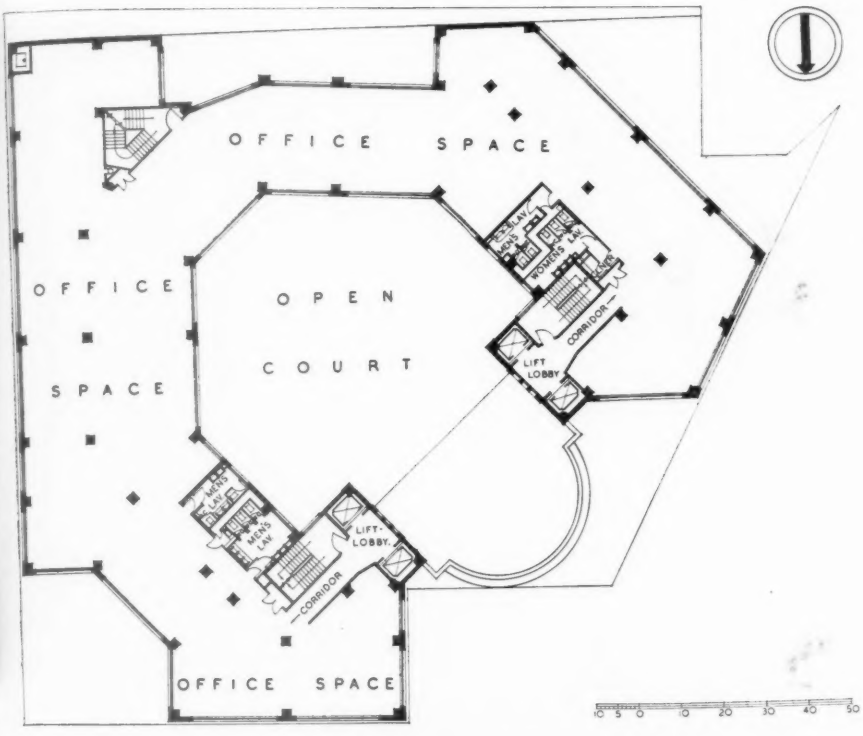
INTERNAL FINISHES—*The entrance hall and lift lobbies are floored with precast terrazzo with brass dividing strips, and the walls are panelled in walnut. Lavatories are also finished with terrazzo on floors and walls.*

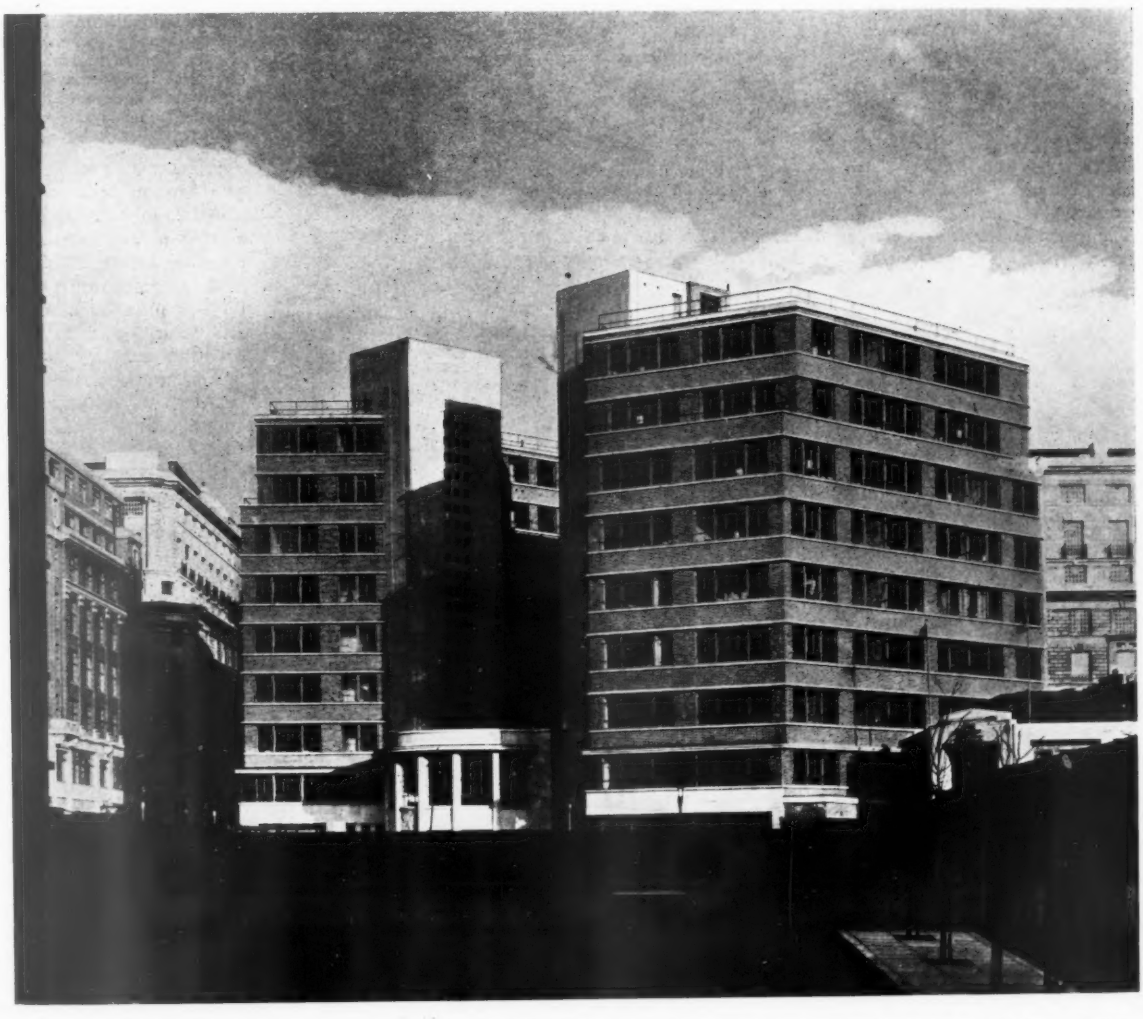
SERVICES—*Heating is by means of low-pressure hot water radiators, and the building is served with treated water from an artesian well. The lifts are arranged as a pair in each tower, one of each pair being a 500 ft. per minute gearless machine, and the other a 200 ft. per minute dual control geared machine, all having a complete automatic door operation.*

Above, details of the entrance front; that on the right (top) shows a decorative panel by Mr. Gilbert Bayes.

CLELAND HOUSE, WESTMINSTER • BY T. P. BENNETT AND SON

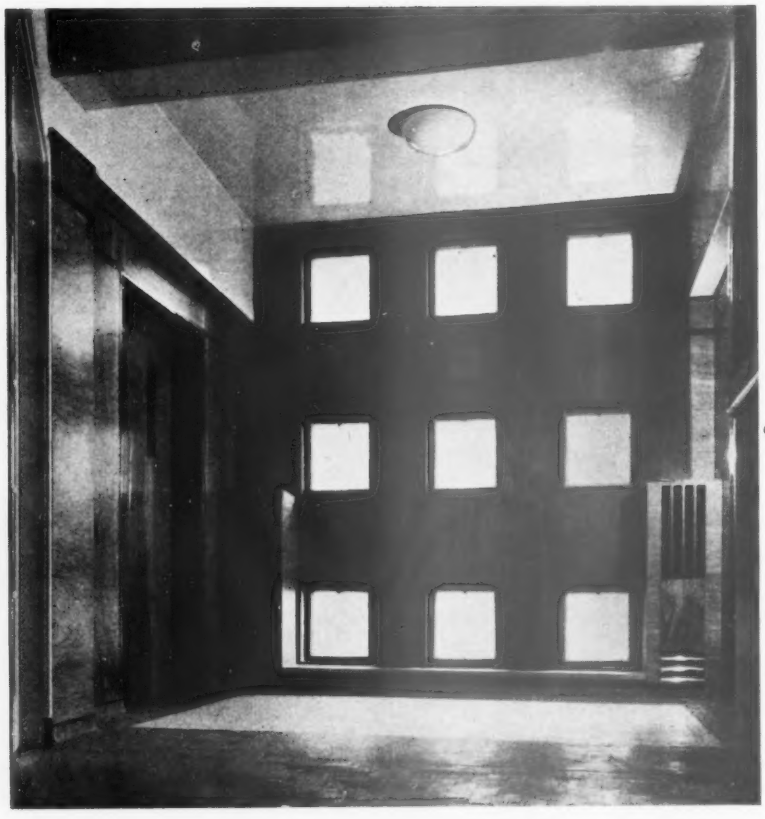
TYPICAL FLOOR PLAN





A general view showing the main entrance flanked by the lift towers. The square openings light the lift lobbies on each floor. One of these is shown on the following page.

CLELAND HOUSE, WESTMINSTER • BY T. P. BENNETT AND SON



Above, a typical lift lobby. The square openings in the far wall light the lobby from one of the two lift towers shown in the photograph on the preceding page. Below, the entrance hall, looking towards the main doors.
The general contractors were Sir Robert McAlpine and Sons, Ltd.; for list of the sub-contractors and suppliers see page 709.

CLELAND HOUSE, WESTMINSTER
BY T. P. BENNETT AND SON

THE COST OF LAND

BY PHILIP H. MASSEY
B.Sc.(Econ.), F.R.Econ.S.

The author discusses the question of land costs and the rating system, with particular reference to a recent book on the subject by the Secretary of the United Committee for the Taxation of Land Values. Some salient points in the existing rating system are dealt with in the first part of the article.

EVERY human activity is affected by the cost of land. In the introduction (by Mr. R. R. Stokes, M.P.) to *Why Rents and Rates are High** this story is told :

> Asked if he would prefer all the money in the world or all the land, a prominent banker once replied without a moment's hesitation selecting all the money : when his questioner pointed out that he, the questioner, would then have all the land and demand all the money back before the banker could even stand up, the latter was not quite so sure he had chosen rightly.

Architects and planners have the problem of land costs brought before them in every aspect of their work. All too often the location and layout of a housing estate, a bridge, a town hall, a whole community, is determined not by the physical characteristics of alternative sites and the needs of the community, but by the relative *costs* of *possible* sites. Not infrequently, schemes have to be abandoned owing to the impossibility of obtaining any suitable site at a price which the promoters (whether a company, a local authority, or a private individual) are prepared to pay.

The natural tendency of the technician who is frustrated in his desire to assist in any scheme for the building of houses or other works, by the difficulty or cost of obtaining the necessary land, is to condemn the landowner whose demands stand in his way. In Mr. Madsen's view, the rating laws, not the landowners who take advantage of them, should be condemned.

Before considering Mr. Madsen's book in any detail it will be well to summarize very briefly some essential points in the existing rating system, and some of its effects.

---

* *Why Rents and Rates are High.* Compiled and annotated by A. W. Madsen, B.SC. Forewords by the Rt. Hon. C. R. Attlee, M.P., the Rt. Hon. Sir Archibald Sinclair, Bart., M.P., and Sir John J. Withers, C.B.E., M.P. Introduction by R. R. Stokes, M.P. Published by the United Committee for the Taxation of Land Values. Price 1s. net (paper covers) and 2s. net (cloth bound).

THE RATING SYSTEM

Local rates are based upon the rateable values of real property, and are levied upon the *occupier* (except in certain cases which need not concern us here). *It follows that if there is no occupier then no rates are payable.* [" Legal possession does not of itself constitute an occupation. The owner of a vacant house is in possession, and may maintain trespass against anyone who invades it, but so long as he leaves it vacant he is not rateable for it as an occupier." (R. *v.* St. Pancras, 1877.)]

Net annual value is defined as :

The rent at which the hereditament might reasonably be expected to let from year to year if the tenant undertook to pay all usual tenant's rates and taxes and tithe rent-charge, if any, and to bear the cost of the repairs and insurance and the other expenses, if any, necessary to maintain the hereditament in a state to command that rent.

It follows that an occupier who improves the buildings on his site has his rates increased, and an occupier who lets his buildings fall into bad repair has his rates reduced, while, as already noted, a landowner who makes no use at all of his site pays no rates for it.

Agricultural land and agricultural buildings are entirely exempt from rates.

In the case of "industrial and freight transport hereditaments" the rateable value is one-quarter of the net annual value. (For shops and offices, as well as houses, the rateable value is the *whole* net annual value.)

WHY RENTS AND RATES ARE HIGH

The case against the present rating system, and in favour of the taxation and rating of land values, is based upon the view of land value as a community value. That land value is a community value is nowhere more clearly expressed, says Mr. Madsen, than in the advertisements of those who have land for sale.

He quotes the following :

Most suitably situated for residential purposes. Close to the railway with rapid transit to the City and West End. Frequent service of buses to Charing Cross and Victoria. Gently undulating ground. Good air at an altitude of 277 feet above sea level. Access to drainage, gas and water and electric mains, all ready to be tapped. A public park to be laid out by the local Council and new broad town planning roads. And other facilities including the main railway line to King's Cross with its station at Oakleigh.

Every one of these advantages, he points out, is derived either from nature or the community. In allowing community-created values to go to private persons, we deprive ourselves of a rightful source of revenue and the bill has to be met by other forms of taxation which he considers pernicious—above all by the levying of rates on houses and other buildings and improvements.

Special attention is paid to three of the outstanding effects of the present rating system :

1. That vacant land being held for a rise in capital value is exempt from local taxation, although it may later be sold for thousands of pounds per acre ;

2. That when land is bought by a public authority for development such as housing or bridges, the value of neighbouring land is immediately increased, so that when a further piece of land is required a still higher price has to be paid ;

3. That there is often a very wide difference between the capitalized rateable value of a piece of land and the price for which it is sold. (Note : This arises partly from the total derating of agricultural land and buildings and the exemption of vacant properties, and partly from the fact that the sale of land is often the preliminary to its being put to a new use.)

Mr. Madsen's book contains 600 examples, taken from all parts of the country, of increases in land values, designed to show the harmful effects of the existing rating system upon efforts to improve the welfare of the community — upon housing and slum clearance, the building of hospitals and schools, bridges, street widenings, new roads, playing fields, open spaces and beauty spots, etc.

EXAMPLES OF LAND COSTS

The examples serve to bring out these points in concrete form.

Here are some of the most significant examples—not necessarily those involving the largest sums of money :

LONDON — Four County Council purchases of land for housing :

Bellingham, price £50,339, rateable value previously £490 ;
Roehampton, price £120,000, rateable value previously £951 ;
Becontree, price £295,544, rateable value previously £3,590 ;
St. Helier, price £369,943, rateable value previously £2,274.

Nine purchases of land for parks :

Total purchase price, £107,868 ; previous rateable value, £988.

Five areas cleared and redeveloped by the Council—figures of capital cost per *dwelling*, showing the proportions represented by the cost of the land :

Estate	Buildings	Site	Total
A	£435	£122	£557
B	£456	£126	£582
C	£425	£198	£623
D	£570	£361	£931
E	£573	£375	£948

•

CAMBERWELL—" Land in Camberwell costing £45,000 an acre was referred to by the Mayor, Councillor James Clark, at a meeting in the Town Hall of adult and youth organizations within the borough. He said that the tremendous cost of land made it imperative that some way other than playing fields should be explored to carry out the National Fitness Campaign in their Borough." (Quoted from *South London Observer*.)

•

FULHAM—Two pieces of land, area nearly a third of an acre, in Fulham Palace Road, acquired for rehousing. Price £5,200, equal to £15,000 an acre.

Twenty-two flats erected. Site cost per flat £236 ; 3s. 7d. a week rent to meet land cost (on 4 per cent. basis).

•

FOUNDLING HOSPITAL SITE—Whole site of 56 acres bought for £6,500 in 1741, sold for £1,650,000 in 1925.

Northern area of 3½ acres priced at £186,000 in 1934. £53,143 an acre.

•

ELEPHANT AND CASTLE—" Eight streets converge at the Elephant and Castle, where congestion presents a serious traffic problem. The surrounding property consists mostly of old, dilapidated structures. It was proposed under provision of the London County Council (Improvements) Bill, 1930, to clear away many of these buildings and carry out a great scheme of street widening. The cost ? . . . on reconstruction, £512,000 ; for acquiring the necessary land and easements, £1,458,000.

" Compensation was to cost nearly three times as much as the work of all the men engaged, all the construction and all the materials required. The scheme was cut out of the Bill."

•

CHARING CROSS BRIDGE — 1930 scheme : Estimated cost, £16,865,000 ; £11,126,000 for land purchase, easement and permanent rights, £5,739,000 for the actual bridge, its approaches, demolition and rebuilding, etc. Scheme abandoned.

Latest scheme, for combined road and rail bridge and consequential street widenings extending to Elephant and Castle on the south and to Euston–Marylebone Road on the north : Total net cost of an adequate scheme would be £32,500,000, of which about £28,000,000 would be compensation for property-owners.

Further point : " The anticipation of these schemes being carried out immediately stimulates speculation in the value of all the land that may possibly be affected by them, with the result that normal development is held up and the cost of the improvement if made is increased."

•

KINGSWAY—History of a site :

1887. Sold to investor at 1½d. a square foot.

1896. Recorded in wife's legacy at 10d. a square foot.

1900. Sold to a syndicate at 2s. a square foot.

1902. After about 10d. per square foot had been spent on streets, sold to speculator at 4s. 6d. a square foot.

1903. Sold at 6s. 8d. a square foot.

1904. Prospective builder paid 7s. 3d.

•

AROUND LONDON, RAILWAYS AND THE GREEN BELT — From evidence of Mr. Frank Pick to Royal Commission on the Location of Industry :

"He suggested that a problem which deserved consideration was the application 'to public purposes' of increased land values resulting from speculation in and around London. The value of land was doubled and quadrupled by the first hint of railway development. He told the Commission of a North London farm which had been bought at £130 an acre and resold at £1,000 an acre when a railway was projected. 'There are at the present time,' he said, 'gross cases of profiteering in land speculation. Some of these cases are disgraceful.' When the Morden–Edgware Tube was extended from Hampstead to Golders Green, land there belonging to the Ecclesiastical Commissioners was multiplied in value six or seven times. The scheduling of land for the green belt created a value to adjacent property which the L.C.C. or the local authority should to some extent recover. Speculation which at present was following the green belt was 'simply shocking.'"

•

MANCHESTER—Council acquired a further 824 acres for "rounding off" the Wythenshawe estate and making it a complete unit. Price £218,000, equal to £264 per acre, whereas the first purchase of land at Wythenshawe was at £80 per acre.

"The Special Committee in its report on the estate pointed out that the development which has already been carried out, at the cost of more than £3,250,000, *has been reflected in the land values of privately-owned lands at Wythenshawe*, and that the longer the purchase of the further lands (viz., the 824 acres) was delayed the greater would be the cost of acquisition."

•

STOKE-ON-TRENT — Examples of prices of land acquired for municipal purposes since 1920 :

24 sites, total price £17,350, previous rateable value nil.

Kingsfield, Basford : purchase price £431 per acre, previous assessment 25s. per acre.

Acres Wood Lane, Burslem : purchase price £415 per acre, previous assessment 49s. per acre.

BRISTOL—Three purchases of land for housing :

Sea Mills, price £28,050, rateable value previously £67.

Shirehampton, price £24,600, rateable value previously £78.

Southmead, price £54,016, rateable value previously £128.

Total area, 651 acres ; total purchase price, £106,666, equal to £164 per acre and 390 times the value on which rates had been paid.

•

NEWCASTLE — Examples of prices and rateable values :

Byker Recreation Ground, price £5,750, previous rateable value £13 10s.

Walker Estate housing site, price £2,590, previous rateable value £2.

Delaval Farm housing site, price £6,696, previous rateable value £11.

High Heaton housing site, price £70,000, previous rateable value £243.

Gallowgate site for markets, 1,237 square yards, price £10,000 (£39,126 per acre), previous rateable value £83.

•

GLASGOW—During the years 1918 to 1928 the Corporation paid £950,734 for 2,698½ acres acquired for municipal housing schemes. Of these 2,698½ acres, the land which had been on the valuation roll comprised 1,878 acres. The price of that land was £729,000, its previous rateable value £6,657.

Cost of sites purchased from 1918 to May, 1932, included :

£1,080,139 for housing ;

£791,626 for streets and sewers ;

£137,205 for parks ;

£916,808 for electricity, gas, transport and water.

The grand total was £3,059,979.

•

SOUTHSEA — House and approximately 4 acres, rateable value £309, realized £25,000. Since then 38 flats and 17 lock-ups erected, rateable value now £2,367.

•

BOURNEMOUTH — "Days when land in Bournemouth's most central area sold for £5 an acre were recalled by Alderman J. R. Edgecombe, Deputy-Mayor, at the annual luncheon of the Hants, Wilts and Dorset Branch of the Incorporated Society of Auctioneers and Landed Property Agents, in Bournemouth. In 1895 land could be bought at £5 an acre, and forty years later the same land was worth £5,000 an acre, whilst in the entertainments' centre, in Westover Road, many plots had been sold at £180,000 an acre, and the frontages to those plots were measured to the very inch." (Quoted from *Bournemouth Times*.)

•

SHANKLIN, ISLE OF WIGHT — 1¼ mile foreshore leased to the Council at nominal rent. Lease was to expire in April, 1938. *Daily Telegraph* stated : "After that date the purchaser will be able to do what he wishes with the sands. He may even prevent people going on them."

Offer of £15,000 refused. "Compulsory powers were not exercised and the Council faced the position of the shore being sold over their heads at auction. The district valuer and the trustees of the estate conducted negotiations with the result that on January 12, 1937, the Council resolved to pay the sum of £31,000, members realizing they were in a dilemma and 'had to make the best of a bad bargain.'"

•

DARLINGTON—370 acres to be purchased for aerodrome. Price has been fixed at £17,800. Farm land with no rateable value.

•

LOUGHBOROUGH — Site of 300 square yards sold to Council, to accommodate a governor station, at 6s. 6d. a yard, equal to £1,573 per acre. "Waste ground," exempt from rating.

•

RICHMOND, SURREY—Site of 383 square yards in the heart of the trading section of Richmond sold for £6,025. The property was a slum area. Price equal to £76,000 an acre.

•

WORTHING—2·65 acres (of agricultural land, exempt from rating) acquired for an infants' school for £4,000 : "When the school is built and furnished, one can divide the £4,000 by the number of desks, thereby to show the site value per desk."

•

AIRDRIE, LANARKSHIRE — Derelict works site of 10 acres sold for figure believed to be in the region of £6,000 : "The chief factor in this price was the water rights that go with the land, which was the reason that Messrs. —— had bought the site."

•

WOOLER, NORTHUMBERLAND—Park with bathing pool and playground wanted. Owner of a suitable site demanded £4,500. Valuer to the Council valued it at £850. Negotiations abandoned.

•

EDWINSTOWE, NOTTINGHAMSHIRE — Village inn, together with land, fetched £10,000 : "This was ten times the amount it could have been

HOUSE AT MINNIS BAY

DESIGNED BY F. RISDON AND P. CORNU

GENERAL—*The client's requirements included a six-bedroom holiday house of brick with a flat roof and large window areas.*

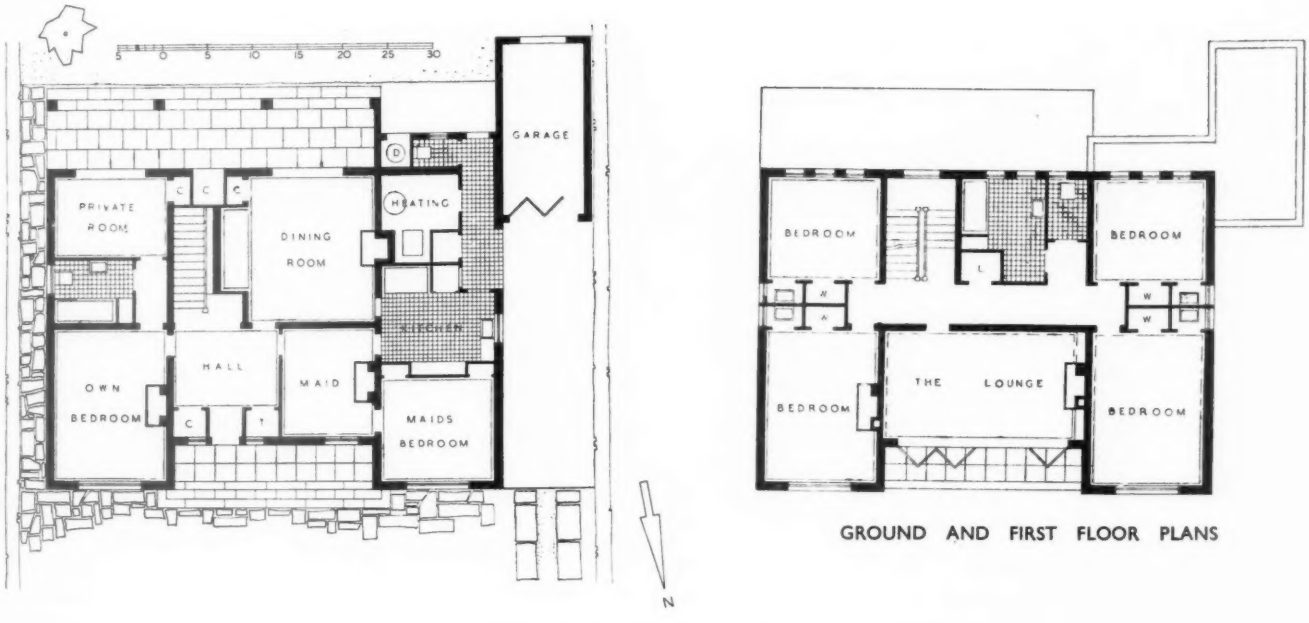
SITE—*On a level site 60 ft. wide near the edge of the cliffs on the East Coast and approached by a cliff road to the north. The house is planned to obtain a pleasant prospect overlooking the sea.*

CONSTRUCTION—*External walls of 11 in. cavity brickwork, internal partitions 9 in. brick and hollow blocks. The floors and roof are timber, the roof terrace and loggia being roofed with reinforced concrete slabs.*

EXTERNAL FINISHES—*All external walls faced with hand-made, sand-faced bricks, with flush joints and finished with 3 in. stone copings. The metal windows in wood frames have stone surrounds, and the terraces and paths are paved with York stone. The roof and balcony are paved with patent composition roofing.*

COST—*£3,200.*

The general contractors were Messrs. G. H. Pettman, Ltd. ; for list of sub-contractors and suppliers see page 709.



GROUND AND FIRST FLOOR PLANS

bought for two or three years ago. The explanation is that an adjoining coal-field is being developed, and a pit has been sunk near Edwinstowe."

•

PRINCES RISBOROUGH, BUCKINGHAMSHIRE—Nearly eight acres of additional land adjoining the Council school wanted for children's playground. Price £950. Land was agricultural, so exempt from rates.

•

PENTIRE HEAD, CORNWALL — Bought for £7,500. Assessments prior to derating : 256 acres of land, £28 ; farmhouse, £19 ; cottage, £3 ; agricultural buildings, £3 ; total, £53. After derating : total, £22.

MATLOCK, LOVERS' WALKS — Purchased in 1927 for £1,350. Offered to Council in 1936 for £4,474. Arbiter awarded £2,890.

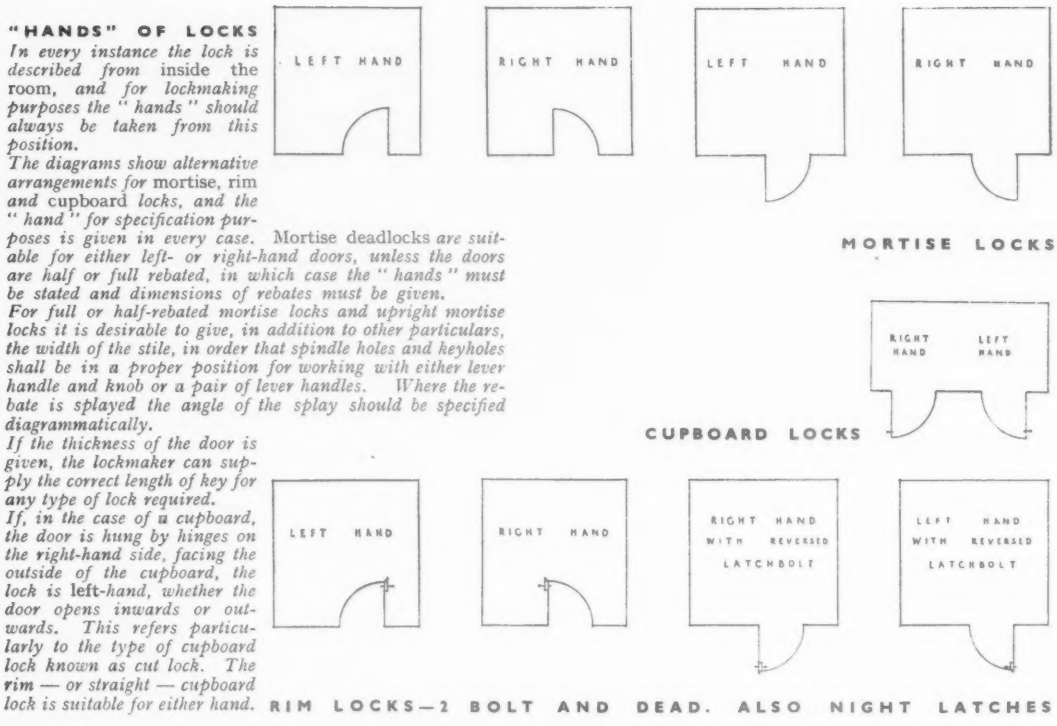
•

FOXEARTH (HALSTEAD), ESSEX—Two borehole sites acquired ; prices paid were £11 10s. for 36 square feet and 5s. for 6 square feet—equal to £13,900 and £1,800 per acre respectively.

ROADS

The effect of road construction and other public undertakings upon the values of adjacent land is brought out in numerous examples. The following calculation of the effect of road-construction on land values in Middlesex is of especial interest.

Speaking on a resolution in the Council (November 28, 1930) which noted the fact " that enhanced values and additional revenues now accrue to private landowners in consequence of public enterprise and expenditure," Councillor Boggon of Finchley referred to the triennial report of the County Council Chairman, which showed that 70 miles of roads had been constructed since 1920, costing £6,097,331 in public money. " Let us," he said, " look at a few facts in connection with that 70 miles of arterial roads. We have given to the owners of the land abutting on the roads 369,600 feet of frontage on each side of the road. Reckon that at the low estimate of £2 10s. and you will find that the ratepayers and taxpayers combined have made a free gift of £1,848,000 to the lucky landowners in respect of road-making charges, but even that figure fades into insignificance compared with the value we give to adjacent land. At a conservative estimate the value of land is affected to at least a depth of 880 yards on each side of the road. This land was, until the making of the road, simply agricultural, at a possible value of £50 an acre. This now jumps as eligible building land to an average of £300 to £400 an acre. I know of land which



"Hands" of locks, reproduced from "Specification, 1939."

has gone even higher in price, and I know of land which fetched £20 a foot frontage, land which was agricultural a few months ago. In this 70 miles of arterial roads we have an acreage of 44,800, giving an enhanced value of, say, £13,440,000. Add your frontage gift, and here you have a solid gift of £15,000,000 given by public money to people who have done nothing whatever for the gift."

EDUCATION AND HOUSING

Separate sections of Mr. Madsen's book are devoted to the costs of land for education and housing. He shows that for 290 acres of agricultural or vacant land compulsorily acquired under Board of Education authority during the years 1934 to 1937 landowners received £218,477. For 35,000 acres of land in England and Wales outside London acquired for housing during the five years ended March 31, 1938, about £8,000,000 had been paid. Much of this was agricultural land. Mr. Madsen gives also the vast amounts of money paid in housing subsidies: "How different the situation would have been," he comments, "if rates and taxes had been levied on the value of land, and taken off houses, we leave to the imagination."

THE RATING OF LAND VALUES

This, then, is Mr. Madsen's solution. Taxation on production and exchange should be repealed, houses and other buildings and improvements should be relieved from local rates, and public revenue should be derived from taxation on the value of land.

In support of this thesis he gives us:

(1) The examples from which a selection has been taken above;

(2) An extremely interesting account of land value taxation in practice in other countries;

(3) A list of 222 Local Authorities which since 1919 have passed resolutions calling for the Rating of Land Values.

A final section gives "Both Sides of the Argument," with comments by the author. Here the economic case is argued.

The appearance of this book is very welcome, particularly in view of the efforts of the London County Council to obtain powers for the rating of site values in London. It is worthy of close study by all those who are concerned with land costs. Directly or indirectly, that means every one of us. Whether we are converted to Mr. Madsen's beliefs or not, the evidence which he presents is of the greatest value, for the questions of land costs and of taxation lie at the roots of all projects of social improvement.

BOOKS

SPECIFICATION 1939

Specification, 1939. Edited by F. R. S. Yorke, A.R.I.B.A. Architectural Press. London. Price 10s. 6d.

NINE hundred and forty-five pages this year, and even this number is surprisingly low in view of the astonishing amount of information Mr. Yorke has managed to include between the pleasant—though one fears but temporarily — pale bluish linen covers of the 1939 edition.

As usual, considerable revisions have been made: new specification clauses have been added and others amended; much matter has been compressed, and tables and diagrams continue to replace articles and long descriptive notes. The manufacturer who regards a photograph of a building containing some of his products as the last word in advertising is now, happily, almost non-existent, but many still seem shy over the matter of prices.

Among the more important new subjects which have been added are Local Heating Systems, Anchorage to Concrete, Steel Equipment, and—as might be expected—A.R.P., illustrated notes on the structural aspects of which, though naturally not completely exhaustive, should at least enable any architect to satisfy his

Model of Nursery School, by Ealing School of Art, at request of Board of Education for Glasgow Exhibition, 1938. From "The Craft of Model Making."

clients that he is fully conversant with all the needs of twentieth-century buildings. G.B.H.

MODEL PRINCIPLES

The Craft of Model Making. By Thomas Bayley, R.B.A., A.R.C.A. Dryad Press. Leicester. Price 10s. 6d.

IT would appear that this book was intended primarily for the teaching profession. Model-making is a big subject since the models themselves may be for any number of different purposes — architectural, filmic, display, constructional, decorative, or merely toy—and their methods of manufacture naturally depend on their eventual functions.

Mr. Bayley, who, amongst other things, is an instructor of modelling at Ealing School of Art, obviously knows his subject all the way from initial conception to final titivation, and it is therefore a pity that he has not developed his theme at greater length. Though several aspects of the question are well and truly discussed, the surface of others is but lightly brushed; ultimate complications, such as the two specialized lighting circuits included, seem somewhat isolationist, while the diagrams illustrating the various types of brick bond are devoid of any dimensions. Either the reader knows about these things already, in which case the sketches are superfluous, or else he knows nothing and needs to be told all.

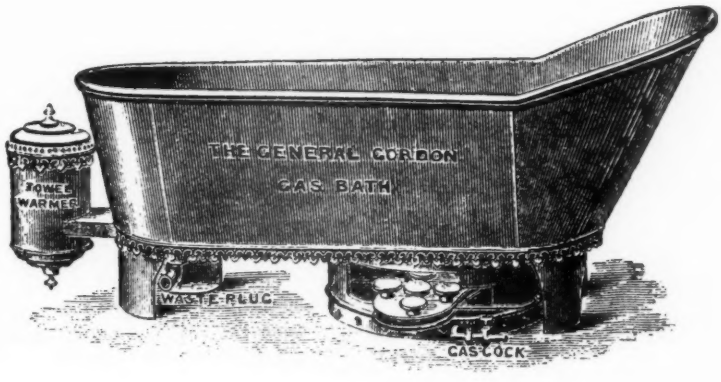
The book as it stands is a rather confused mixture of bright ideas, methods of construction, and clearly drawn diagrams, and although the photographs of finished models will be of little value, except as an incentive to would-be constructors, they do illustrate the able versatility of Mr. Bayley and his own pupils.

G.B.H.

BOOKS RECEIVED

City of Birmingham Handbook, 1939. By L. W. Faulkner.

Sculpture of To-day. By Stanley Casson. The Studio. Price 7s. 6d. (10s. 6d. cloth).



TRADE NOTES

[*By PHILIP SCHOLBERG*]

Water Heating

THE drawing at the head of these notes shows the "General Gordon" bath, one of the earliest efforts by Ewarts to heat water in bulk by gas. Like seccotine and petrol, the word "geyser" is now in such common use that very few people realize that it was first applied to water heaters by Mr. George Ewart some 75 years ago. This firm also made the original Califont—a water heater which we now refer to as the instantaneous multi-point type. Since these early days Ewarts have gone on making water heaters of all types and in their present range one finds multi and single point heaters finished with a good enamel and chromium-plated finish, so that they may be used even in the best of bathrooms without looking at all out of place. I have, however, a foolish affection for the "General Gordon" model shown in a recent news sheet by this firm, for it belongs so perfectly to its period, and the towel warmer (which had its own water jacket connected to the hot water of the bath) seems the last word in luxury.

From time to time both this JOURNAL and the *Architectural Review* have illustrated building equipment of 50 or more years ago. Many of the older established manufacturers still have copies of their early catalogues, and some of them maintain museums of their original models. Could not somebody organize a display, either of these early devices if enough of them could be found, or alternatively of large photostat reproductions of early catalogue pages? Mr. Yerbury could do it in Bond Street, or Mr. Montgomery might find it a good sideshow at the next Building Exhibition. I know that many manufacturers are a little shy of this sort of display, but I cannot feel that they are right. Any firm which was making geysers 75 years ago must either be dead or it must be making very good geysers now.—(*Ewart and Son, Ltd., 346 Euston Road, London, N.W.1.*)

Random Slating

As a roofing material it is probable that slate has for some years been gradually losing ground, possibly because the quarry owners are too modest and do not do a great deal of advertising. Anybody looking at a list of current prices and seeing slates listed under Ladies or Countesses cannot be bothered to spend a great deal of time working out what all these sizes

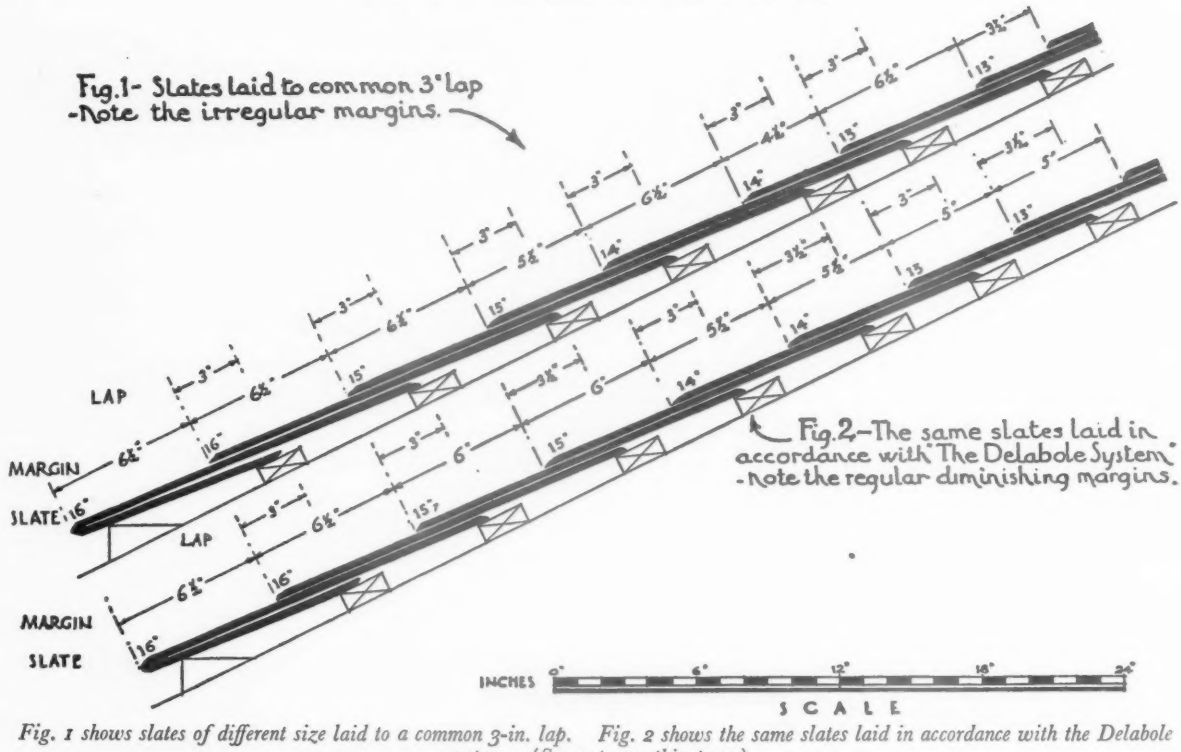


Fig. 1 shows slates of different size laid to a common 3-in. lap. Fig. 2 shows the same slates laid in accordance with the Delabole system. (See note on this page.)

mean, and it is very much easier to give up the unequal struggle and use a different material altogether. Setchell and Sons have now made an effort to revive random slating in diminishing courses. This method is really the most logical way of applying slates, for normal production methods automatically produce different sizes and the purchase of random slates does away with all the extra cost of picking over and marketing standard sizes. To many people, too, random slates in diminishing courses look better than a standard size all over, but there has not so far been any recognized method for calculating laps and margins, and the whole subject is virtually ignored in building text-books. Reference to Fig. 1 at the top of this page shows slates of different size laid to a common 3-in. lap, and it will be seen that the margins (the distance from the tail of any slate to the tail of the course immediately above it) do not diminish in any logical sequence and, in fact, occasionally increase in a way which is very liable to spoil the whole effect. Fig. 2 shows the same slates laid in accordance with the Delabole system, which has been evolved by G. T. and John Setchell, and here the margins decrease regularly 6½ in., 6 in., 5½ in., 5 in., and so on. The system provides a standard method of calculating the gauges ; it ensures a specified minimum lap, and it also makes certain that the margin of each course shall not be greater than that of the preceding course, thus controlling the diminishing effect. The full explanation of the way in which the system has been worked out would need a considerable amount of space, but it may be said that the slater has to follow only two rules, the first being that all slates are fixed to their normal gauge for the specified lap except when the normal gauge is less than the actual gauge of the preceding course ; the second rule is that when the normal gauge is less than the actual gauge of the preceding course, deduct the difference from the normal gauge. Readers who are interested enough to work out the practical application of these rules for themselves should apply to Setchell and Sons for a copy of their Delabole booklet. In this a full explanation is given with plenty of drawings, notes on the slating of hips, valleys and abutments, and several pages of fully worked examples showing how margins and laps work out for each course.—(*Setchell and Sons, Ltd., 9 Arundel Street, London, W.C.2.*)

Fuses and Circuit Breakers

For two or three years American manufacturers of electrical gear have been carrying on a fairly whole-hearted propaganda campaign for the use of circuit breakers instead of the ordinary fuse. The ordinary fuse, whether it is bare wire or cartridge type, is quite easy to replace, but there is a certain mild degree of danger in carrying out this process unless the fault has already been cleared, and there is also the disadvantage that not every household possesses spare fuse wire, nor can it always be found when it is needed. Circuit breakers are definitely more expensive, but they give rather better protection and the re-setting process is as easy as turning on an ordinary lighting switch, and, moreover, it is not possible to force them back into an engagement if the fault is still present, nor can they be deliberately mal-adjusted to carry more than their proper load, a vice which is almost encouraged by the usual type of re-wirable fuse in which electricians often find 16-gauge copper instead of the proper 5 amp. lead. Small circuit breakers have been available in this country for some years, the G.E.C., for example, having marketed one three or four years ago. Nalder Brothers and Thompson, Ltd., also have a full range of single and double pole types, and these can be used either separately or built up into distribution boards. Used in groups, circuit breakers have the very considerable advantage that it is possible to see at a glance which one is pulled out, and the whole process of restoring current supply should be very much quicker than with the ordinary fuse. Prices run from 8s. 4d. each upwards, considerably more, admittedly, than fuses, but the first cost should be the last and they are probably much better from the point of view of the user.—(*Nalder Brothers and Thompson, Ltd., Dalston Lane Works, London, E.8.*)

Glazing for A.R.P.

British Xylonite, who make plastics of all kinds, have just introduced a wire-reinforced clear Bexoid which is marketed under the name of Armourbex. The wire-reinforcement runs in both directions at ½-in. centres and is welded at every crossing. The total thickness is nearly $\frac{1}{10}$ in., and the result is claimed to be blastproof. The material is intended for general glazing purposes, and since the wire is completely enclosed in the Bexoid it should be satisfactory if used in corrosive atmospheres, provided that the edges are protected. It can easily be cut to any size or shape, and equally easily bent if the windows are curved on plan. Fire-resistance is adequate in that the material will char under enough heat, but will not really burn. Standard sheets are 5 ft. 1 in. by 2 ft. 3 in.—(*British Xylonite Co., Ltd., Hale End, London, E.4.*)

Ventilating Fans

Factory Acts and the growing need for mechanical ventilation in various industrial processes have led to considerable improvements in fan design which have also been partly brought about by increasing research work on general aero-dynamics. Two recent catalogues of Aerex fans deal with plant for industrial purposes of all kinds. These fans are of the axial flow type and the plates are solid metal of proper airfoil section, giving efficiencies which are claimed to be as high as 85 to 90 per cent. In the smaller sizes the rotors are cast in one piece, but the larger models have separate bolted-on blades. Proper fairings are provided at each end of the fan shaft, and the intakes

are designed to reduce noise as far as possible. Since nearly all industrial installations have to be purpose made there is no point in attempting to give prices. It would seem, however, that this firm might well be consulted if the ventilation or extract system is to be at all elaborate. They are, incidentally, a branch of Colliery Engineering, Ltd., who presumably know as much as there is to know about shifting large quantities of air.—(*Aerex Fans, Rutland Park, Sheffield, 10.*)

LAW REPORT

DISPUTED FIRE ESCAPE

Horton v. Town Investments, Ltd.—Court of Appeal. Before the Master of the Rolls and Lords Justices Clauson and du Parcq

THIS was an appeal by the defendants, Town Investments, Ltd., of South Audley Street, W., from an interlocutory order of Mr. Justice Simonds, sitting in the Chancery Division, in an action brought against them by Mr. Walter Thomas Horton, of 245 Vauxhall Bridge Road, S.W., hotel proprietor.

The order appealed from was that the defendants be restrained from commencing the demolition of No. 247 Vauxhall Bridge Road until they had obtained and delivered to Mr. Horton all necessary licences and permits for the erection of a means of escape from fire from 245 Vauxhall Bridge Road, which means of escape was to remain until the defendants' new building was completed.

Mr. J. M. Gover, K.C., and Mr. C. A. J. Bonner appeared for the appellants, the defendants, and Mr. Harold Christie, K.C., and Mr. Milne Holland for the respondent, the plaintiff.

It was explained in the court below that Mr. Horton was the owner of a property adjoining that of the defendants in the Vauxhall Bridge Road and was carrying on there an hotel with about 65 rooms and on which he had expended about £30,000. On adjoining site the defendants were building an hotel, and in the circumstances it was necessary to have a fire escape staircase.

Negotiations took place between the parties, and it was arranged that there should be one fire escape stairway from the defendants' premises to the plaintiff's, and that the latter would pay the cost.

Mr. Gover, K.C., in support of the appeal, said that the defendants had entered into a contract to rebuild their property, but before doing so they took steps to obtain the necessary licences for the erection of a temporary means of escape from the premises of Mr. Horton. But Mr. Horton was not satisfied that certain conditions of the licence from the L.C.C. had been complied with, and took the present legal proceedings.

Mr. Christie, K.C., for the respondent, said that if the court was satisfied that the necessary licences had been obtained and complied with, he did not wish to argue that point. But he would desire to say something on the costs.

After hearing the arguments of counsel on the question of costs, the Master of the Rolls, in giving judgment, said that the order made by Mr. Justice Simonds would be discharged except as to the costs. He said that Mr. Gover was not asking for the costs of the appeal down to February 27, because down to that date there was still a point outstanding between the parties. The costs of the appeal from that date must be paid by Mr. Horton and there must be a set-off.

Lords Justices Clauson and du Parcq concurred.

THE BUILDINGS ILLUSTRATED

NEW WESTMINSTER HOSPITAL (pages 682-687). Architects: Adams, Holden and Pearson. General contractors: Holloway Bros. (London), Ltd. Sub-contractors and suppliers included: Dorman Long & Co., steelwork; Morner Flooring and Parquet Co., Ltd., and Wm. Mallinson and Sons, Ltd., wood floors; F. H. Wheeler & Co., electrical work; J. Jeffreys & Co., Ltd., heating; Waygood-Otis, Ltd., lifts; W. B. Simpson and Sons, Ltd., tiling; Crittall Manufacturing Co., Ltd., metal windows; Shanks & Co., sanitary fittings; J. A. King & Co., Ltd., Glascrete lights; Orb Flooring and Supplies, Ltd., floor tiling; F. Jukes, wrought iron work; J. P. White and Son, lead protection to X-ray; Rippers, Ltd., flush doors and fire-resisting doors; Benham and Sons, Ltd., kitchen equipment; John Edgington & Co., A.R.P. screens; Nettlefold and Sons, Ltd., ironmongery; Henry Wiggin & Co., stainless sinks and kitchen sinks; A. Johnson & Co. (London), Ltd., stainless sinks in duty room; Richardsons Plasterers, Ltd., plastering; C. & T. Painters, Ltd., painting; British Oxygen Co., Ltd., oxygen apparatus; James Slater & Co. (Engineers), Ltd., H. Wilson & Co., Ltd., Manlove Alliott & Co., and Donald Rose, sterilisers; Newton and Wright, General Radiological, Ltd., and Phillips, X-ray apparatus; H. J. Moyse, demolition; Limmer and Trinidad Lake Asphalt Co., Ltd., dampcourses, asphalt; G. M. Callender & Co., Ltd., Ledkore dampcourses; R. Y. Ames, bricks; Hemel Hempstead Patent Brick Co., block partitions; Goslett and Goldstein, glass; British Challenge Glazing Co., roof lights; Clockhouse Brick Co., Hollowtile flooring; Bratt Colbran, Ltd., gas fixtures; Matthew Hall & Co., plumbing; Korkoid Decorative Flooring Co., stairtreads; Haywards, Ltd., iron staircases; J. Avery & Co., dark blinds; Birmingham Guild, Ltd., metalwork; Roanoid, Ltd., signs; Bull Motors, Bull super silent motor.

GARLINGE INFANTS' SCHOOL, MARGATE (pages 688-689). Architect: Capt. F. Arnold Perren. The general contractors were Ward, Barton & Co., Ltd., who were also responsible for the excavation, foundations, dampcourses, reinforced concrete, bituminous felt, gasfitting, plumbing, plaster, joinery and water supply. The sub-contractors and suppliers included: Geo. M. Callender & Co., Ltd., Ledkore; Salter Edwards & Co., Ltd., flat roofs, asphalt floors and natural rock asphalt; Nautilus Fire Co., Nautilus gas flue blocks; British Reinforced Concrete Engineering Co., reinforcement fabric; London Brick Co., Ltd., Phorpres keyed flettons; J. A. Osborn, stonework and Portland stone copings, etc.; Cement Marketing Co., Ltd., Blue Circle and Ferrocrete cements; High Brooms Brick and Tile Co., multi-red facing bricks; Redpath Brown & Co., Ltd., steel roof trusses to assembly hall; G. Tucker and Sons, Ltd., Dun roofing tiles; James Clark and Son, Ltd., glass; J. H. Sankey and Son, Ltd., Pyruma fire cement; Stevens and Adams, Ltd., oak and jarrah blocks; Cork Insulation Co., Ltd., Eldorado cork floor in babies' room; Kerner-Greenwood & Co., Ltd., Pudlo brand waterproofer; Edwd. Deane and Beal, Ltd., central heating and Ideal Britannia boilers; Claygate Brickfields, Ltd., fireplace bricks; Isle of Thanet Gas Co., hot plates and Panella fires; E. Saunders (Margate), Ltd., electric wiring and electric light fixtures; Greenwood's Ventilating Co., Ltd., ventilators; Leeds Fireclay Co., Ltd., sanitary fittings: A. Olby and Son, suppliers of the Leeds Fireclay sanitary fittings; Henry Hope and Sons, Ltd., door furniture, metal windows, and doors, window furniture and sunblinds; T. W. Palmer & Co., iron gates and railings; Gypsum Mines, Ltd., Sirapite and Keen's plaster; Merchant Trading Co., Ltd., ceilings in Donnacona Veelap boarding; J. R. Pearson (Birmingham), Ltd., bronze metal memorial plate in entrance hall; Drytone Joinery, Ltd., flush cupboard doors; Tarmac, Ltd., supplied the Tarmac paving to playgrounds; Chittenden and Simmons, Tarmac paving to playgrounds; W. H. Griffiths, floor tiling; R. Gay & Co., Impenetrable and Gaymatt paints; Walpamur Co., Ltd., Walpamur water paint; Kingfisher, Ltd., and Crawshaw and Tongate, furniture; Corporation Parks Dept., site turfing and planting; MacDougall's Educational Co., Ltd., suppliers of Hyloplate; Alfred Brown & Co., cloakroom fittings; Ronuk, Ltd., floors (polished); Nash and Hull, Ltd., bronze metal letters of main entrance.

CLELAND HOUSE, WESTMINSTER (pages 699-702). Architects: T. P. Bennett and Son. The general contractors were Sir Robert McAlpine and Sons, Ltd.; quantity surveyors, Gardiner and Theobald; lift consultants, A. H. Barker and Partners; reinforced concrete engineers, Mouchel and Partners, Ltd. The sub-contractors and suppliers included: Troughton and Young, Ltd., electrical engineers; Norris Warming Co., heating engineers; Franki Compressed Pile Co., piling; Independent Sprinklers, Ltd., sprinkler; Hollis Bros. & Co., Ltd., hardwood floor; Express Lift Co., Ltd., lift engineers; Courtney Pope & Co., Ltd., panelling; Ramsdens (London), Ltd., internal and external terrazzo; Stitson, White & Co., Ltd., sanitary fittings; Matthew Hall & Co., Ltd., plumbing and drainage; Haywards, Ltd., lantern light and pavement light; Ragusa Asphalte Paving Co., Ltd., asphalt; Claude-General Neon Lights, Ltd., garage neon work; Tecalemit, car hoist; J. W. Gray and Sons, lightning conductor; Potter Rax Gate Co., decorative metalwork; Le Bas Tube Co., Ltd., G F malleable fittings; Bull Motors, Bull silent motor.

HOUSE AT MINNIS BAY, BIRCHINGTON (page 705). Architects: Frank Risdon and Paul Cornu. The general contractors were G. H. Pettman, Ltd., who were also responsible for the joinery. Electrical engineers, Courtney Pope & Co., Ltd. The sub-contractors and suppliers included: Norris Warming Co., Ltd., heating engineers; Frazzi, Ltd., roofing Paropa; Shanks & Co., sanitary fittings; General Electric Co., Ltd., lighting fittings; Crittall Manufacturing Co., Ltd., metal windows; Eaton, Parr and Gibson, ventilators; Yannedis, door furniture and fittings.

Messrs. Abbey Building Supplies were responsible for the Spear Point floor clips, dovetail slot and anchors, and Ankortite box fittings which were specified at the Metropolitan Police Section House, Compton Street, W.C., which was illustrated in the JOURNAL for April 13.

Manufacturers' Items

Messrs. Robert Jenkins & Co., Ltd., of Ivanhoe Works, Rotherham, have just issued an eight-page brochure devoted to their A.R.P. boilers for de-contamination of clothing and A.R.P. emergency water tanks.

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A new section, containing specimens of many of the most famous inventions of early lampmakers, has been added to the Ediswan Collection of Historic Lamps, housed on the company's premises at 155 Charing Cross Road. The new section, though at present limited to less than twenty specimens, has cost much in time and money to get together. The task of identifying the old lamps, sorting the gold from the dross, and compiling accurate facts, was at times laborious work. Several names long since forgotten by even the oldest members of the industry are here revived—names once prominent in electrical science. Although every effort is still being made to acquire lamps by other manufacturers and inventors, of many early lamps not a trace can remain, since no more than one or two specimens were made and no commercial venture ensued. These have, no doubt, long since been broken up. But

records of every one of them exist still, and from such records Ediswan intend to compile a "Roll of Honour" giving the names of the inventors, a brief specification and, where possible, a sketch of the lamp as it would have appeared. In this way every lamp ever patented in Great Britain will be represented in the Museum, if not by an actual specimen of the lamp, at least by description.

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A brochure just issued by Hy-Rib Sales (the Trussed Concrete Steel Co., Ltd.) demonstrate some of the many ways in which Hy-Rib reinforcement is a useful and valuable building aid. For ceilings, floors, walls, partitions, it can be efficiently employed, and it helps to speed up construction and make for substantial economies by eliminating needless labour operations. In nearly every type of building, it is claimed, a use can be found for Hy-Rib. Copies of this new booklet may be obtained from Hy-Rib Sales, Horseferry House, Westminster, London, S.W.1.

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A number of interesting applications of aluminium paint are to be seen at the Ideal Home Exhibition at Earl's Court, where for the first time large quantities of paint from paste pigment have been used throughout the building. It is used extensively for protection and is applied as a primer for practically all the interior decoration work, pilasters, and so on. Parts of the floor have been sprayed and banners indicating the different sections have also been treated. In all, some 25 gallons of vehicle and 50 lb. of paste, representing approximately 30 gallons of paint, were employed in the work, the relatively small amount required being a striking indication of the covering capacity of the paint.

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The Coal Utilisation Council's model coal bunker, which proved such an attraction when it was first exhibited at the British Industries Fair, is now on view at the Council's stand at the Ideal Homes Exhibition at Earls Court. The stand (No. 98) is near the Brompton Road entrance and on the ground floor. The exhibit includes an open fire designed to throw the maximum of heat out into a room. It has a wide fire-back, but the depth of the fire from front to back is relatively shallow. The various advantages of coal are described in a series of posters which are used to decorate the stand.

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The long-wave wireless station plant at Caernarvon, which was one of the largest transmitting stations in the world, is being dismantled by Thos. W. Ward, Ltd., of Sheffield, and operations will commence immediately.

BUILDING NEWS

LONDON

BARKING. *Swimming Baths.* The Corporation has approved plans by the Borough Architect for the erection of swimming baths, gymnasium and club rooms and house at Mayesbrook Park.

BARKING. *Additions, etc.* Plans passed by the Corporation: Addition to factory, River Road, A. Ibbetson & Co.; 6 houses, Eldred Road, Mr. C. V. Young; offices, Harts Lane, Thames Plywood Manufacturers, Ltd.; store, etc., River Road, British Anti-Fouling Paint Co., Ltd.; block of 10 shops, 20 flats, etc., Gale Street, Mr. A. H. Callow.

ENFIELD. *Bungalows, etc.* Plans passed by the U.D.C.: Four bungalows, Beech Avenue, Crews Hill, Mr. C. V. Cable; alterations, 248 and 250 Hertford Road, Marshall and Tweedy; alterations, "The Grapes" public house, 124 South Street, Ponders End, Mr. S. A. S. Yeo; 4 houses, Great Cambridge Road, H. Wimpey & Co.; 6 houses, Burnham Close, Baker Street, E. Dover & Co.; 2 houses, Beech Hill Avenue, Hadley Wood, Mr. J. J. Cox; 4 flats, Chase Side, Mr. F. W. Field; extension to factory, Alma Road (Enfield Tool Co.), Mr. W. C. Clarke; 28 flats and 28 houses, Sunny Road, Mr. E. Pollex; 18 houses, 2-36 Sarsfield Road, Brimsdown, Bilton's Enfield Co., Ltd.; Sunday School building, Totteridge Road Baptist Chapel, Mr. Geo. W. Walker; factory building, Queensway (E. and E. Kaye, Ltd.), Nissen Buildings, Ltd.; 2 houses, Lancaster Avenue, Mr. V. G. Knapp; offices, etc., South Street (United Flexible Metallic Tubing Co.), Eiloart Son & Inman; 9 shops with flats over, Baker Street, Mr. A. G. Moulton; shops and offices, London Road, Bowyer and Bowyer; 149 houses, Holmesdale and Langdale Gardens, etc., Mr. W. M. Edwards.

FINCHLEY. *Flats.* The Corporation has now approved plans by Hertells Estates for the erection of 58 flats, 12 shops and 26 garages, in Regent's Park Road, between Chessington Avenue and Allandale Avenue.

ILFORD. *Houses, etc.* Plans passed by the Corporation: Four houses, Meldrum Road, etc., Mr. R. J. L. Slater; 55 houses, 89–90 Somerville Road, etc., Mr. J. T. Perrin; alterations, 9 Cranbrook Road, J. Lyons & Co.; factory building, New North Road, R. Cramp and Sons; 42 houses, Stoneleigh Road, etc., Hurstwell & Co.; 6 flats, Netley Road, V. and F. Jenner, Ltd.; 7 houses, 1–13 Virginia Gardens, Mr. J. Aldridge; 12 houses, 109–131 Wanstead Lane, Mr. A. P. Griggs; 4 houses, The Glade, Mitchell Bros.; 4 houses, 1–7 Naseby Road, W. H. Feasey and Sons, Ltd.; offices, canteen and warehouse building, Forest Road, Lehman, Archer and Lane, Ltd.

ISLINGTON. *School.* The L.C.C. is to erect an elementary school for about 700 junior and infant children at Highbury Quadrant, Islington.

STOKE NEWINGTON. *Flats.* Plans passed by the B.C.: 22 flats, 34, etc., Lordship Park; rebuilding, 137-9 Stoke Newington Road.

TOTTENHAM. *Alterations, etc.* Plans passed by Tottenham Corporation: Alterations to factory, Gourley Place, Mr. F. Hayllar; 4 houses, White Hart Lane, Mr. E. W. Allen; 12 flats, 69 Northumberland Park, Mr. E. C. Benfield; 2 houses, Springfield Road, Mr. P. Bygrave; meeting hall, Brook Street Chapel, H. Seymour Couchman and Sons.

TOTTENHAM. *Flats.* The Corporation is to erect 21 flats in the Arthur Street clearance area.

WESTMINSTER. *Offices.* Plans passed by the City Council: Offices, shops, showrooms and basement garage, 183-191 Vauxhall Bridge Road, and 17-25 Tachbrook Street; extension and alterations, St. John Clinic, Ranelagh; shops, offices, restaurant and cinema, Coventry Street, Haymarket, Oxendon Street and Shavers Place (amended); rebuilding as part of London School of Economics, 4 Portugal Street; flats, 1-3 Princes Gate; offices, 1-7 Regency Place; offices, shops and basement garage, Westminster Garage site, Petty France; milk distributing depot, 7-15 Longmoore Street; extensions, hostel, 942 Horseferry Road and Medway Street; 3 shops (amended), Neville House, Marsham Street; light factory and workshops, Antrobus Street and Johnson's Place; offices, 36-46 Grosvenor Place, and 15-19 Hobart Place.

PROVINCES

BARNSTAPLE. *Extensions.* The Devon Education Committee is to enlarge the Barnstaple grammar school at a cost of £32,860.

BATH. *Houses.* The Corporation is to erect 44 houses on the Dolemeads estate at a cost of £25,945.

BIRMINGHAM. *Welfare Centre.* The Corporation is to erect a new child welfare centre in Benacre Street, at a cost of £8,620.

BIRMINGHAM. *Hospital.* The Corporation is to obtain a site for a hospital in the northern area.

BIRMINGHAM. *Factory.* Mr. Bernard Instone is to erect a factory in Lime Kiln Lane, Birmingham.

BIRMINGHAM. *Houses.* The Corporation is to provide 24,440 municipal houses with hot water circulating systems at a cost of £439,920.

BIRMINGHAM. *Shops and Flats.* Derron House, Ltd., are to erect a block of modern shops and flats in Sutton New Road, Birmingham.

BIRMINGHAM. *Church and School.* The Corporation has sold land on the Glebe Farm Estate to the Bordesley Green Baptist Church for the erection of a church and school.

BIRKENHEAD. *Tenements.* The Corporation is to erect three blocks of tenements in Cleveland Street.

CARDIFF. *Extensions.* The Corporation is considering a scheme for extensions at the City Hall, at a cost of £130,000.

CARDIFF. *Baths Establishment.* The Corporation has asked the City Engineer to prepare plans for a baths establishment which shall contain a swimming bath of international size, facilities for slipper baths, Turkish baths, sunray treatment, etc., and living quarters for the baths manager.

CARDIFF. *Houses.* The Corporation is to erect 60 houses on the Pengam Farm Estate.

CHELTENHAM. *Houses, etc.* Plans passed by the Corporation: 14 houses, Naunton Way, for Cheltenham Estates, Ltd.; 2 houses, Alma Road, for Mr. C. Smith; house, Brooklyn Road, for Mr. E. L. Squires; 2 houses, Argyll Road, for Mr. S. G. Cox; alterations, "Whitesmiths Arms" public house, Gloucester Road, for Showell's Brewery; alterations, 190-2 Bath Road, for Gloucester Co-operative Society; 3 houses, Alstone Croft, for Mr. E. T. Stinchcombe; 3 houses, Exmouth Street, for Mr. W. Turner; house, Beaufort Road, for Messrs. Rogers and Davies; 2 houses, Haydon, for Mr. E. Strawford; 3 bungalows, Undercliffe Avenue, Leckhampton, for Messrs. J. D. Bendall and Sons.

CHELTENHAM. *Hotel and Shops.* Mars Commercial Properties, Ltd., are to erect an hotel and shops in Pittville Street, Cheltenham.

CHELTENHAM. *Reconstruction.* The Corporation has approved revised plans by Mr. Overbury for the reconstruction of the winter garden at a cost of £26,100.

CHELTENHAM. *Fire Station.* The Corporation is to erect a fire station in Keynsham Road, at a cost of £30,000.

DUDLEY. *Shops, etc.* Plans passed by the Corporation: Two shops, junction of Churchfield Street and Furnace Row, Coates Bros.; lock-up shop, Bowling Green Road, Netherton, Mr. J. Field; 34 houses, Buffery Road, Mr. A. W. Heathcock; bungalow, New Rowley Road, Mr. C. R. Cornwell; house, Selborne Road, Mr. P. Cox; 6 houses, Dalvine Road, Mr. S. Parkes; 8 houses, off Dudley Wood Road, Netherton, Messrs. Easthope and Auden; house, Kingswinford Road, Lloyd Bros.; house, Cole Street, Darby End, Netherton, Mr. W. Swingler.

EASTBOURNE. *Shop, etc.* Plans passed by the Corporation: Shop with two flats over, Cornfield Road, National Provincial Bank, Ltd.; alterations and additions, St. Andrew's Club, 403 Seaside, Vicar, St. Andrew's Church; house, Sancroft Road, W. James (Eastbourne), Ltd.; house, Kings Drive, Willingdon, Mrs. I. M. Marden; extension to nurses' home, Princess Alice Hospital, Carew Road, Princess Alice Hospital; two houses, Cherry Garden Road, Stanbridge and Rollison; house, Kings Drive, Willingdon, Mr. J. A. Cooper; house, Michel Grove Estate, Upperton Road, W. Llewellyn and Sons, Ltd.; house, Westham Road, Langney, Mr. R. Austen.

NORTHAMPTON. *Houses, etc.* Plans passed by the Corporation: Eleven houses, Burwood Road, Mr. H. W. Rainbow; 4 houses, Billing Road, E. H. Tibbs, Ltd.; 24 houses, Kingsway, etc., A. Glenn and Sons, Ltd.; warehouse extensions, 324 Kettering Road, Northampton Co-operative Society, Ltd.; 22 houses, Lovat Drive, etc., Chowns, Ltd.; reconstruction of licensed premises, The Racehorse Inn, Abington Square, P. Phipps & Co., Ltd.; 4 houses, Beech Grove, Boothville, etc., Messrs. Jordans.

PRICES

On the following pages appears Prices for Measured Work—Part I, with prices last published on March 30, brought up to date.

★ *ANSWERS TO QUESTIONS*

While the JOURNAL, *naturally, cannot presume to undertake the responsibilities of a quantity surveyor, it has arranged with the authors of this Supplement to answer readers' questions regarding any matter that arises over their use of the Prices Supplement in regard to their work, without any fee. Questions should be addressed to the Editor of the* JOURNAL, *and will be answered personally by Messrs. Davis and Belfield. As is the normal custom, publication in the* JOURNAL *will omit the name and address of the enquirer so that it is unnecessary to write under a pseudonym.*

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

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

● *Prices are for work executed complete and are for an average job in the London Area ; all prices include for overhead charges and profit for the general contractor.*

PART 3

CURRENT PRICES FOR MEASURED WORK—I

BY DAVIS AND BELFIELD

PRELIMINARIES

Water for the works		
Third party and other insurances to persons and property, employer's liability, unemployment and Public Health insurances, and fire insurances (based on value of contract) ..		1¼%
Single scaffolding	per yard super	2/–
Independent scaffolding ..	per yard super	2/8

EXCAVATOR

		Ordinary Ground	Clay
Surface digging average 9″ deep and wheeling and depositing on spoil heap, not exceeding two runs	per yard super	–/9	1/1

EXCAVATOR—(*continued*)

		Ordinary Ground	Clay
Excavating not exceeding 5′ 0″ deep to form basement and getting out	per yard cube	1/11	2/10½
Ditto, exceeding 5′ 0″ deep and not exceeding 10′ 0″ deep	per yard cube	2/5	3/6
Excavating not exceeding 5′ 0″ deep to form surface trenches and getting out	per yard cube	2/7	3/10
Ditto, exceeding 5′ 0″ deep and not exceeding 10′ 0″ deep	per yard cube	3/7	5/0
Ditto, not exceeding 5′ 0″ deep to form basement trench excavation commencing 10′ 0″ deep, and getting out	per yard cube	3/4½	4/6
Returning, filling in and ramming around foundations	per yard cube	1/1	1/5

CURRENT PRICES

BY DAVIS AND BELFIELD

EXCAVATOR, CONCRETOR AND BRICKLAYER

EXCAVATOR—(*continued*)

	Ordinary Ground	Clay
Filling barrows and wheeling and depositing excavated soil not exceeding two runs per yard cube	1/1	1/5
Spreading and levelling from excavated heaps in layers not exceeding 12″ per yard cube	–/9	1/–
Filling into carts or lorries and carting away per yard cube	4/6	4/10
Planking and strutting to sides of basement, excavation, including strutting per foot super	1/–	–/9
Planking and strutting to surface trenches (both sides measured) .. .. per foot super	–/4½	–/3
Hardcore, broken brick, filled in under floors and well rammed and consolidated per yard cube	6/6	
Hardcore, broken brick, deposited, spread and levelled, and rammed to a true surface 6″ thick per yard super	1/4	

CONCRETOR

Foundations and Mass Concrete

Portland cement concrete 1 : 6 with unscreened ballast, in foundations and masses exceeding 12″ thick per yard cube	20/2
Ditto, 1 : 3 : 6, with one part of cement and three parts of sand and six parts of clean gravel per yard cube	20/9
Ditto, 1 : 2 : 4, with one part of cement, two parts of sand and four parts of ¾″ crushed graded shingle per yard cube	25/7
Add if mixed by hand labour .. per yard cube	2/–
Add if in foundations not exceeding 12″ thick per yard cube	2/3
Add for mechanical hoisting .. .. per yard cube	1/6
Add for hand hoisting per 10 feet .. per yard cube	2/3

Surface Beds

Portland cement concrete 1 : 6, bed 6″ thick, spread and levelled .. .. per yard super	3/10
Add or deduct for each inch over or under 6″ in thickness per yard super	–/5½
Add for surface finished with spade face per yard super	–/3½
Add if laid in two layers with fabric reinforcement (measured separately) .. .. per yard super	–/3½

Upper Floors and Flats

Portland cement concrete 1 : 2 : 4 as before described, 6″ thick, packed around fabric reinforcement (measured separately) finished with spade face per yard super	5/3
Add or deduct for each inch over or under 6″ in thickness per yard super	–/7½

Casings

Portland cement concrete 1 : 2 : 4 as before, in encasing to steel joists .. .. .. per foot cube	1/3
Ditto, packed around rods (measured separately) in lintols, sectional area not exceeding 36 inches per foot cube	1/5½
Ditto, ditto, over 36 inches and not exceeding 72 inches sectional area .. .. .. per foot cube	1/4½
Ditto, ditto, over 72 inches and not exceeding 144 inches sectional area .. .. .. per foot cube	1/3½
Ditto, ditto, over 144 inches sectional area per foot cube	1/2½

Walls in Situ

Portland cement concrete 1 : 6 with unscreened ballast in 9″ walls packed around rods (m/s) per yard super	6/6
Ditto, in 12″ walls ditto .. per yard super	7/11

Reinforcement

⅛″ diameter and upwards mild steel rod reinforcement, cut to lengths, including bends and hooked ends and embedding in concrete lintols .. .. per cwt.	21/–
Under ⅛″ diameter, ditto .. .. .. per cwt.	22/6

Formwork

Close boarded formwork to soffites of floors and strutting up .. .. per yard super	3/9
Vertical formwork to sides of concrete walls, including struts, etc. (both sides measured) per yard super	3/–
Formwork to sides and soffites of concrete lintols and beams per foot super	–/6
Wrot ditto .. .. per foot super	–/1

BRICKLAYER

	Flettons £ s. d.	Second Stocks £ s. d.	Blue Staffordshire Wirecuts £ s. d.
Reduced brickwork in lime mortar 1 : 3 with ⅜″ joints .. .. per rod	22 19 9	31 18 8	
Ditto, ⅜″ joints .. .. per rod	22 12 7	30 17 2	
Reduced brickwork in cement mortar 1 : 3 with ¼″ joints .. .. per rod	24 14 9	33 13 2	50 13 2
Ditto with ⅜″ joints .. per rod	24 13 3	32 16 11	49 4 9
Add if lime mortar hand mixed .. .. per rod	5/8	5/8	
Ditto cement mortar .. per rod	12/9	12/9	9/–
Half brick walls in lime mortar 1 : 3 ¼″ joints .. .. .. per yard super	5/1	7/–	
Ditto in cement mortar 1 : 3 .. .. .. per yard super	5/5½	7/5	11/1
Labour forming 2″ cavity to hollow walls including wall ties, etc. .. .. per yard super			9d.

	£ s. d.
Add to the price of reduced brickwork for brickwork in underpinning .. .. per rod	4 0 0
Ditto, for brickwork circular on plan to flat sweep per rod	5 0 0
Ditto, ditto, to quick sweep .. .. .. per rod	10 0 0
Extra for internal fairface and flush jointing per yard super	1/1½
Extra for grooved bricks as key for plaster per yard super	3d.
Raking out joints ditto .. .. per yard super	4½d.
Hacking concrete ditto .. .. per yard super	6d.
Horizontal double slate damp-proof course 4½″ wide bedded in cement mortar .. .. per foot run	4d.
Ditto exceeding 4½″ in width .. per foot super	10d.
Vertical ditto .. .. per foot super	1/–
" Ledkore " (Grade B) D.P.C. .. per foot super	9d.
Plumbing angles .. .. per foot run	1d.
Rake out joints and point to lead flashings per foot run	2d.
Ditto stepped .. .. per foot run	3d.
Bedding door frames .. .. .. per foot run	1d.
Ditto and pointing one side .. .. per foot run	2d.
Ditto and pointing both sides .. .. per foot run	3d.
Parge and core flues .. .. each	4/–
Set and flaunch only chimney pots .. .. each	5/–
Hoisting and fixing metal windows size 3′ 6″ × 4′ including cutting and pinning lugs to brickwork and bedding frames in cement mortar and pointing in mastic on one side .. .. each	5/–
Ditto, including screwing to wood frame (measured separately) .. .. each	3/–

	9″ × 3″	9″ × 6″
Form opening for air brick including slate lintol and render around in cement and sand to 13½″ wall and build in Terra Cotta air brick each	2/6	3/3
Galvanized cast iron School Board pattern air bricks and building in .. .. .. each	9d.	1/3
Fixing only fireplace simple interior and surround each	27/6	

Partitions

	2″	2½″	3″	4″
Breeze set in cement mortar per yard super	2/11	3/5	4/1½	5/1½
Clay tile ditto .. per yard super	4/5	4/11	5/8	6/4½
Pumice ditto .. per yard super	4/6	5/2½	6/3	7/2
Plaster ditto .. per yard super	4/–	4/11	6/–	7/2
White glazed both sides best quality bricks, set in cement mortar and pointed in Parian cement per yard super ..	42/5			

Facings

Prices are extra over Fletton brickwork and are for raking out joints and pointing with a neat struck weathered ¼″ joint in cement mortar. For raking joints and pointing in white cement add an extra 11d. per yard super to the following prices.

	Flemish Bond	English Bond	Stretcher Bond
Stock facings p.c. 93/– .. per yard super	4/11	5/4	4/1
Rustic Flettons p.c. 70/6 .. per yard super	3/4	3/6	2/11
Blue pressed p.c. 180/– .. per yard super	11/7	12/11	9/1
Sand faced hand made reds p.c. 120/– per yard super	8/–	8/7	6/4
White glazed headers p.c. 470/– and stretchers 480/– .. per yard super	32/–	36/–	24/8
For a variation of 10/– per M. in p.c. of facing bricks size 8¾″ × 2⅝″ on face with ¼″ joints add or deduct per yard super	9d.	10d.	6¾d.

CURRENT PRICES

BY DAVIS AND BELFIELD

BRICKLAYER, DRAINLAYER, ASPHALTER AND PAVIOR

BRICKLAYER—(*continued*)

Facings—(continued)

	Rustic Flettons	Stock Facings	Sand Faced Hand Made Reds
Half brick wall stretcher bond in cement mortar built fair and joints raked out and pointed in cement mortar on one side .. .. per yard super	8/7½	9/9½	12/–
Ditto and pointed both sides per yd. super	10/6	11/8	13/10
One brick wall in cement mortar built fair and joints raked out and pointed in cement mortar on one side per yard super	15/5	17/8½	22/1
Ditto and pointed both sides per yd. super	17/3	19/6½	23/10
Half brick wall built in best quality white glazed one side bricks, stretcher bond, in cement mortar built fair and pointed in parian cement .. .. per yard super			31/–
Ditto white glazed both sides and pointed both sides per yard super			41/9
Labour and material in hand made sand faced red brick on end window head and pointing to face and 4½″ soffite per foot run			1/3
Hand made, sand faced brick on edge coping including double course of tile creasing with two cement angle fillets to one brick wall .. .. .. per foot run			2/3

DRAINLAYER

Excavate to form drain trenches for 4″ pipes and get out, including planking and strutting, filling in and ramming, and wheeling and spreading surplus.

Prices per 12″ average depth per foot run :	Ordinary ground	Clay
Trenches not exceeding 3′ 0″ deep	–/2½	–/3
Ditto, exceeding 3′ 0″ and not exceeding 5′ 0″ ..	–/5½	–/7
Ditto, exceeding 5′ 0″ and not exceeding 10′ 0″ ..	–/8½	–/9½

	6″ thick Portland cement concrete bed 6 : 1, 12″ wider than diameter of pipe, and flaunched halfway up sides of pipe	4″ pipes	6″ pipes
	per foot run	–/8½	–/10
6″ ditto, and completely encasing	per foot run	1/7	1/11

	2″	3″	4″	6″
Agricultural land drain pipes, laid complete with butted joints, exclusive of digging .. .. .. per yard run	–/4	–/6	–/8	1/1

British Standard Quality Salt Glazed Socketed Stoneware Drainpipes and Fittings

	4″ pipes Over 2-ton lots	4″ pipes Under 2 tons, 100 pieces upwards	6″ pipes Over 2-ton lots	6″ pipes Under 2 tons, 100 pieces upwards	9″ pipes Over 2-ton lots	9″ pipes Under 2 tons, 100 pieces upwards
Pipes jointed in 1:1 cement and sand per foot run	1/1	1/3	1/7	1/10	2/8½	3/4
Extra for bends .. each	1/4	1/7	2/–	2/4	3/6	4/–
Ditto, single junction each	1/10	2/2	2/–	2/4	3/6	4/–
Trapped yard gulleys with galvanized iron gratings, and setting in concrete and jointing to drain each	9/–	11/6	13/–	14/–	19/–	22/–
Ditto, with horizontal back inlet .. .. each	10/6	13/3	14/6	15/9	20/6	23/9
Ditto, with vertical back inlet .. .. each	11/3	14/–	15/3	16/9	21/3	24/9
Intercepting trap with Stanford stopper and setting in manhole and making good .. each	20/6	24/–	25/6	29/–	—	—

Coated Cast Iron Socketed Drain Pipes

	4″	6″	9″
Pipes in 9′ 0″ lengths and laying in trench, including caulked lead joints per foot run	3/4½	5/1	8/11
Cutting and waste at manholes .. each	1/9	3/6	—
Extra for bends, including extra joints and cutting and waste on pipe each	10/8½	20/3½	58/6½
Ditto, junction ditto .. .. each	17/2	32/6	97/11
Intercepting trap .. .. each	48/2	78/1	180/–

DRAINLAYER—(*continued*)

	4″	6″	9″
H.M.O.W. large socket gulley trap with 9″ gulley top and heavy grating and one back inlet	44/10½	78/8	—
H.M.O.W. gulley trap with 9″ inlet with high invert outlet for use with raising pieces	33/5	48/–	—
4″ inspection chamber with one 4″ branch .. .. each		65/2	
4″ ditto with two 4″ branches one side each		97/9	
6″ ditto with one 4″ branch .. .. each		94/2	
6″ ditto with two 6″ branches one side .. each		138/3	
9″ ditto with one 9″ branch .. .. each		209/9	
9″ ditto with two 9″ branches one side .. each		321/5	

	White glazed	Salt glazed
4″ half-round straight main channel 24″ long each	5/10	2/1
Ditto, channel bends (ordinary) .. .. each	8/6	3/–
4″ Three-quarter round branch bends (short) each	8/6	6/9
Fixing only, manhole covers and frames, including bedding in grease and setting in cement mortar .. .. each	4/–	

ASPHALTER

Various qualities of asphalte are marketed by different firms. The term "Best" is intended to imply the best quality produced by a single representative firm, and not necessarily the best or most expensive asphalte obtainable.

	Natural Rock Asphalte Best Quality	Natural Rock Asphalte Second Quality
Basement (Tanking).		
1½″ horizontal d.p.c. in three layers on concrete per yard super	8/5	6/10
¾″ vertical ditto in three coats on brickwork or concrete .. .. .. per yard super	11/6½	10/–
Double angle fillet .. .. .. per foot run	–/6½	–/5½
Hard Graded Paving.		
1″ thick .. .. per yard super	7/4	6/8½
¾″ thick .. .. per yard super	6/3½	5/3½
½″ dampcourse finish, with smooth surface to receive lino or other floor covering	5/3	4/8½
Roofing (Flat).		
¾″ thick in 2 layers .. .. per yard super	6/3½	5/3
1″ ditto .. .. .. per yard super	7/4	6/3½
Extras.		
Felt supplied and fixed .. per yard super	–/6½	—
Expanded metal reinforcement ditto per yard super	1/0½	—
6″ skirting and fillet on brickwork .. per foot run	1/0½	–/11½
6″ ditto on wood (reinforced) .. .. per foot run	1/2½	1/1½
Nosing at eaves on lead apron (measured separately) .. .. per foot run	–/3½	–/8½
Parapet outlets .. .. each	4/2½	3/8

PAVIOR

	1″	1½″	2″
Granolithic paving .. per yard super	2/7½	3/6	4/7
Add for dusting with carborundum powder per yard super			–/9
Cement and sand paving (1 : 3) per yard super	1/10	2/4½	—
½″ Jointless flooring, red, buff or brown, finished to a smooth trowelled surface, on concrete sub floors per yard super			5/3
¾″ Ditto, in two coats on spade faced concrete or wood sub floors			6/7
⅛″ thick ditto, reinforced with laths and galvanised wire netting .. .. .. per yard super			6/0½
Add for polishing .. .. per yard super			–/6½
Terrazzo paving, white chips set in white cement, panelled into squares with 1½″ × ½″ deep ebonite strips, on and including cement and sand screed. Total thickness 1½″ per yard super			19/5
Ditto, but white chips set in grey Portland cement per yard super			17/4
Terrazzo tiles, white chips set in white cement :—			
Size 9″ × 9″ × ¾″ .. .. .. per yard super			20/6
Size 12″ × 12″ × 1″ .. .. per yard super			18/8
Ditto, but white chips set in grey Portland cement :—			
Size 9″ × 9″ × ¾″ .. .. .. per yard super			18/11
Size 12″ × 12″ × 1″ .. .. per yard super			17/1

	1/16″	3/16″	¼″
Sheet rubber .. .. per yard super	11/7	14/8	17/10
Rubber tiles .. .. per yard super	13/8	16/10	19/11
	3/16″	¼″	¼″
Cork tiles, polished .. per yard super	12/10½	11/–	10/–

CURRENT PRICES

BY DAVIS AND BELFIELD

MASON, SLATER, TILER AND ROOFER, AND CARPENTER

PAVIOR—(*continued*)

Hard red paving bricks laid flat (9″ × 4½″ × 2⅝″)	per yard super	9/–
Ditto, laid on edge	per yard super	11/9
	⅝″ thick	7″ thick
6″ × 6″ best quality red quarry tiles	per yard super	10/– 11/–
6″ × 6″ best quality buff quarry tiles	per yard super	10/6 11/6
2″ Yorkshire stone paving, square joints and bedding	per yard super	22/–
2″ Finished path of coarse gravel finished with good binding gravel to slight camber	per yard super	1/7½
3½″ Path of clean hard clinker and 1½″ gravel finished to slight camber	per yard super	2/3
7½″ Carriage drive of 3″ clinker, 3″ coarse gravel and 1½″ binding gravel finished to slight camber	per yard super	3/9
2½″ Tar paving in two layers finished with Derbyshire spar	per yard super	4/9

MASON

	Bath	Portland
Stone and all labours of usual character, covering 7″ on bed, roughly squared at back, fixed and cleaned down complete .. .. per foot cube	11/–	16/–

Yorkstone

	Thickness 3″	4″	6″
Templates tooled on exposed faces, sawn beds and joints, and set in cement mortar :—			
Size 9″ × 9″ .. .. .. each	1/8	2/3	3/4½
,, 14″ × 9″ .. .. .. each	2/7½	3/6	5/3
,, 18″ × 14″ .. .. .. each	5/3	7/–	10/6
,, 22½″ × 14″ .. .. .. each	6/6	8/8	13/–
,, 27″ × 14″ .. .. .. each	7/10½	10/6	15/9

Artificial Stone

In steps, copings, band courses, etc., per foot cube, from 9/–

Reconstructed Stone

In steps, dressings, band courses, etc., per foot cube .. 12/6

Slate

	1″	1¼″	1½″
Slate slabs, sawn to size, not exceeding 10 ft. sup. and planed, with rubbed face and fixing as shelving, etc. .. per foot super	4/6	5/–	6/–
Ditto, not exceeding 20 ft. sup. per foot super	5/4	5/10	7/–
Rubbed edges .. .. .. per foot run	–/4½	–/4½	–/4½

SLATER, TILER AND ROOFER

Bangor and Portmadoc Slates

	20″ × 10″	16″ × 8″	24″ × 12″
Slates laid to a 3″ lap and fixed with zinc nails .. per square	79/–	77/–	80/5

Old Delabole Slates

	20″ × 12″	16″ × 10″
Grey medium gradings .. per square	86/–	84/6
Unselected greens (V.M.S.) (weathering greens and grey greens mixed) .. per square	96/6	94/6

Randoms		No. 1 Gradings 24″/22″ to 12″/10″
Ordinary grey greens	per square	91/3
Weathering grey greens (V.M.S.) ..	per square	101/9
		No. 2 Gradings 24″/22″ to 12″/10″
Weathering greens (V.M.S.)	per square	107/–

Westmorland Green Slates

Randoms		Bests 24″ to 12″ long proportionate widths
No. 1 Buttermere, fine light green ..	per square	122/9
No. 2 Buttermere, light green (coarse grained)	per square	120/9
No. 5 Buttermere, olive green (coarse grained)	per square	117/6
Broughton Moor light sea green, olive green, silver grey green and mixed shades ..	per square	127/6

SLATER, TILER AND ROOFER—(*continued*)

Tiles

Hand made sand faced 10½″ × 6½″ laid to 4″ gauge, fourth course nailed with galvanized nails	per square	65/–
Machine made ditto	per square	56/7

Pantiles

Berkshire hand made surface red laid dry,	per square	65/–
Bridgewater hand made red laid dry	per square	65/–
Bridgewater double Roman laid dry	per square	48/3

Sundries

Stripping, slating down to and including, 18″ × 9″	per square	4/6
Ditto smaller sizes	per square	6/–
Add for carrying down and stacking	per square	1/8
Ditto stripping battens down to and including 18″ × 9″	per square	1/4½
Ditto, ditto, smaller sizes	per square	2/3

Cedarwood Tiles

Canadian Cedarwood shingles laid to 5″ gauge	per square	47/4

Asbestos

Russet brown asbestos cement roofing tiles 15¾″ × 15¾″ laid diagonally with 2¾″ lap,	per square	38/–

CARPENTER

Centering

Turning piece to flat soffites 4½″ wide (For Formwork see "Concreter.") ..	per foot run	–/4

Fir Sawn and Fixed

Plates, dragon ties, sleeper joists and lintols, ground floor (4″ × 2″ and 4″ × 3″)	per foot cube	3/7
Floor joists (7″ × 2″)	per foot cube	4/1
Partitions (stud) (4″ × 2″ and 4″ × 3″)	per foot cube	4/10
Rafters and ceiling joists (4″ × 2″ and 4″ × 3″)	per foot cube	4/7
Purlins (6″ × 4″)	per foot cube	5/3
Hand labour wrot face	per foot super	–/2
Machine ditto	per foot super	–/1
Rebates, grooves, beads, chamfers and splays,	per foot run	–/1
1½″ × 9″ ridge	per foot run	–/6¾
1½″ × 11″ hips or valleys, including cutting ends of rafters against same	per foot run	–/8¼
Extra labour trimming 6″ × 2″ floor joists around fireplace, including notching ends of joists at 14″ centres to trimmer joist 7′ 0″ long and two tusk tenons ..	each	6/–
Boring small hole per inch of depth ..	per doz.	–/6
Ditto large	per doz.	1/–

Deal Battening for Slates and Tiles

2″ × 1″ spaced for Countess (20″ × 10″) slates to 3″ lap per square	10/3
2″ × 1″ ditto for Ladies (16″ × 8″) .. per square	13/6
2″ × 1″ ditto for Duchess (24″ × 12″) ditto per square	8/5
2″ × 1″ ditto for randoms 24″/22″ to 12″/10″ per square	11/6
1½″ × ¾″ ditto for plain tiles (10½″ × 6½″) to a 4″ gauge per square	13/7
1½″ × 1″ ditto for pantiles to approximately 11¼″ gauge per square	6/7

Roof Boarding

	¾″	1″
Deal roof boarding in batten widths close jointed per square	27/1	32/7
Ditto, prepared for patent flat roofing and including firrings to falls .. .. per square	37/1	42/7
Small tilting fillet	per foot run	–/2
Large ditto	per foot run	–/4

Felt

Sarking or slaters felt, fixed with 2″ side laps and 6″ end laps	per yard super	–/10½
Roofing felt ditto	per yard super	1/1
Bituminous hair felt ditto	per yard super	2/–

Weather Boarding

Rough deal feather edge boarding in batten widths ½″ average with 1¼″ laps	per square	28/9
Western Red Cedar ditto	per square	31/2

Fascia and Soffite Boards

1″ × 6″ deal splayed fascia fixed to rafter feet	per foot run –/4½
1″ × 9″ deal soffite tongued both edges, including grooves	per foot run –/7½

(*To be continued in next Issue*)