THE ARCHITECTS' JOURNAL

standard contents

every issue does not necessarily contain all these contents but they are the regular features which continually recur

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THE ARCHITECTURAL PRESS
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Registered as a Newspaper.

★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ie one week, Ig to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers. 49, Cadogan Square.	Sloane 1601/3158
IIBDID	Incorporated Institute of British Decorators and Interior Designers. Drayton House, Gordon Street, W.C.1.	Euston 2450
ILA	Institute of Landscape Architects. 12, Gower Street, W.C.1.	Museum 1783
I of Arb	Institute of Arbitrators. 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197/5176
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
IWA	Inland Waterways Association. 14, Great James' Street, W.C.2.	Chancery 7718
LDA	Lead Development Association. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264/4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3891
LSPC	Lead, Sheet and Pipe Council. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264/4175
MARS	Modern Architectural Research Group (English Branch of CIAM). Secretary: Trevor Dannatt, 6, Fitzroy Square, W.1.	Euston 7171
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. 23, Savile Row, W.1.	Regent 8411
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service. 8, St. James' Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94-98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record. 31, Chester Terrace, Regent's Park, N.W.1.	Welbeck 0619
NCBMP	National Council of Building Material Producers. 10, Storey's Gate, S.W.1.	Abbey 5111
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives. Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies. 13, Suffolk St., S.W.1.	Whitehall 1693
NHBRC	National House Builders Registration Council. 82, New Cavendish Street, W.1.	Langham 4341
NPL	National Physical Laboratory. Head Office, Teddington.	Molesey 1380
NSA	National Sawmilling Association. 14, New Bridge Street, E.C.4.	City 1476
NSAS	National Smoke Abatement Society. Chandos House, Buckingham Gate, S.W.1.	Abbey 1359
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Abbey 4504
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Fountainbridge 7631
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George St., S.W.1.	Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 22A, Queen Anne's Gate, S.W.1.	Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Trafalgar 2366
RSI	Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1.	Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1.	Victoria 2186
SCR	Society for Cultural Relations with the USSR. 14, Kensington Square, London, W.8.	Western 1571
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3.	Mansion House 3921
SIA	Structural Insulation Association. 32, Queen Anne Street, W.1.	Langham 7616
SNHTPC	Scottish National Housing. Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen.	
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 21, College Hill, E.C.4.	City 4771
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815
TTF	Timber Trades Federation. 75, Cannon Street, E.C.4.	City 5051
WDC	War Damage Commission. 6, Carlton House Terrace, S.W.1.	Whitehall 4341
ZDA	Zinc Development Association. Lincoln House, Turl Street, Oxford	Oxford 47988

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Surrey County Architect

E. R. Heathcote, A.R.I.B.A.

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W. J. Morley & Son, F.R.I.B.A.

Thomas W. East, F.R.I.B.A.
Derby Borough Architect

Eberlin & Darbyshire, F./F.R.I.B.A.

Hadfield, Cawkwell & Davidson, F./A.R.I.B.A.

Dudley C. March, L.R.I.B.A.

Noel Tweddell, A.R.I.B.A.

Frederick Sheldon, F.R.I.C.S.

Thomson, McCrea & Sanders, F./A.R.I.B.A.

Priestman & Lazenby, A./A.R.I.B.A.

Reavell & Cahill, F./F./A.R.I.B.A.

Spence & Price, A./A.R.I.B.A.

Roper Spencer & Hall, F./A.I.A.A.

A. Budge Reid, A.R.I.B.A., A.M.T.P.I., A.R.I.A.S.

Sir Percy Thomas & Son, F./A.R.I.B.A.

W. H. Watkins, Grey & Partners, F./F.R.I.B.A.

Alan W. Pipe & Sons, L.R.I.B.A.

Donald P. Reay, A.R.I.B.A., M.SC., B.ARCH.

Robert Sharp & Son, A./L.R.I.B.A.

Sydney G. Scales, A.R.I.B.A.

A. J. Seal & Partners, F./F.R.I.B.A.

L. Hugh Wilson, O.B.E., A.R.I.B.A., A.M.T.P.I.
Canterbury City Architect

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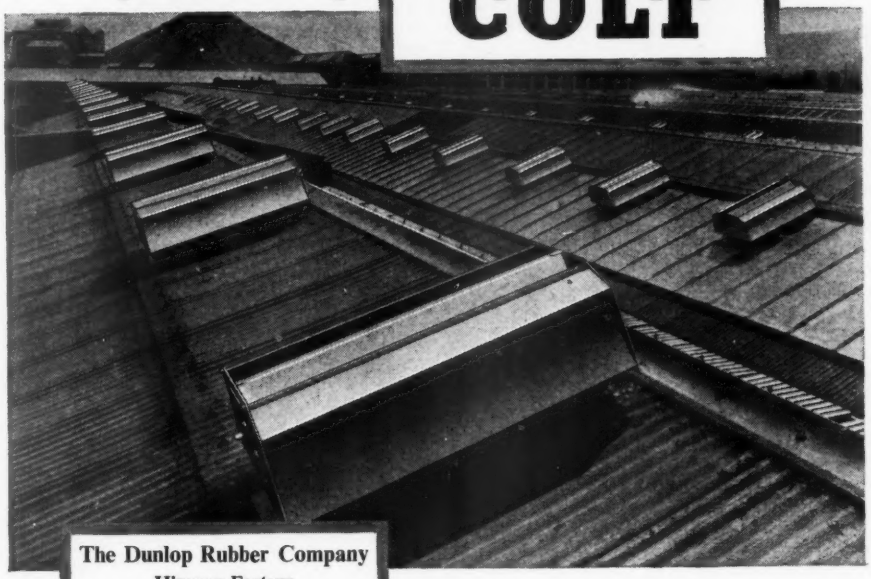

The Dunlop Rubber Company
Hirwaun Factory

COLT were consulted by The Dunlop Rubber Co. with regard to the ventilation of the Dunlopillo Factory at Hirwaun near Aberdare.

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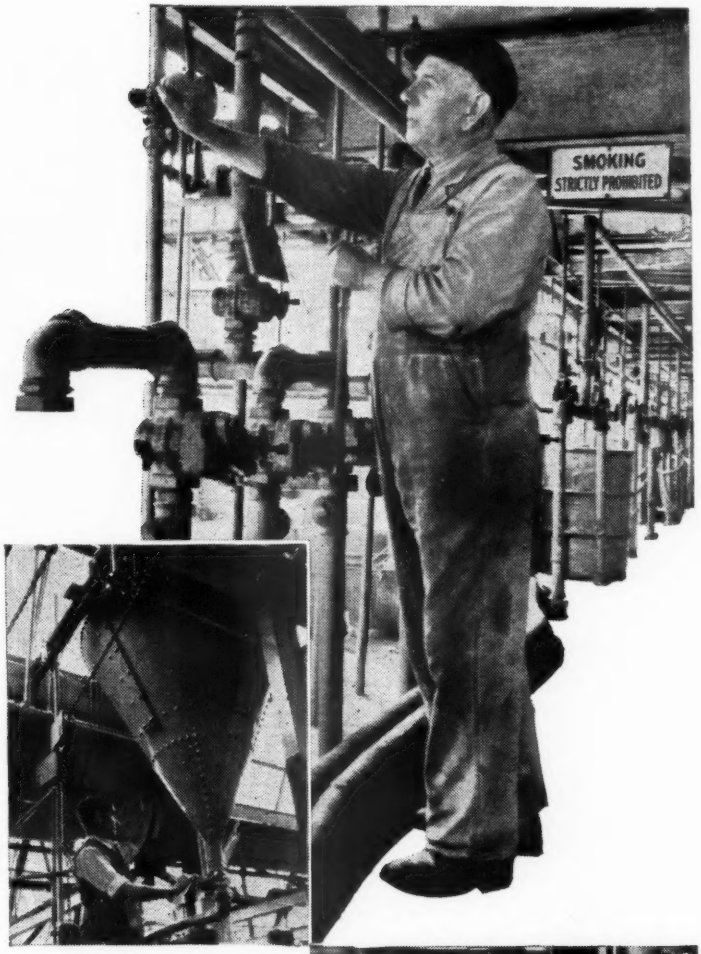
A.28

Messrs. Owen Owen of Coventry

Architects Hellberg & Harris F/A.R.I.B.A.

lots of pipes —but no smoking!



This network of pipe-lines carries an ever flowing variety of liquid solvents—some natural, some synthetic—from their storage tanks to the point at which they are introduced into large 500 gallon mixing vats. New solvents are constantly being investigated by alert research chemists in order to establish their suitability for use in current production or for incorporation in development formulæ.

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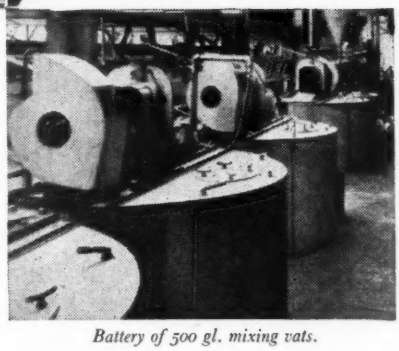
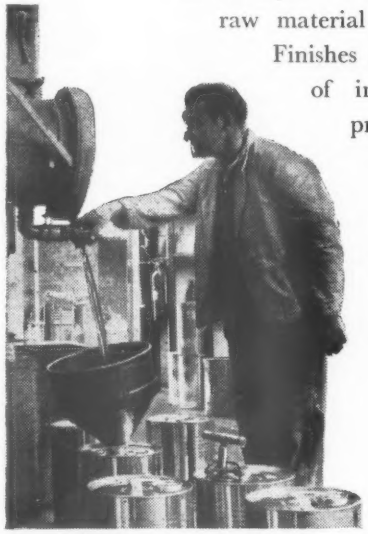


Battery of 500 gl. mixing vats.



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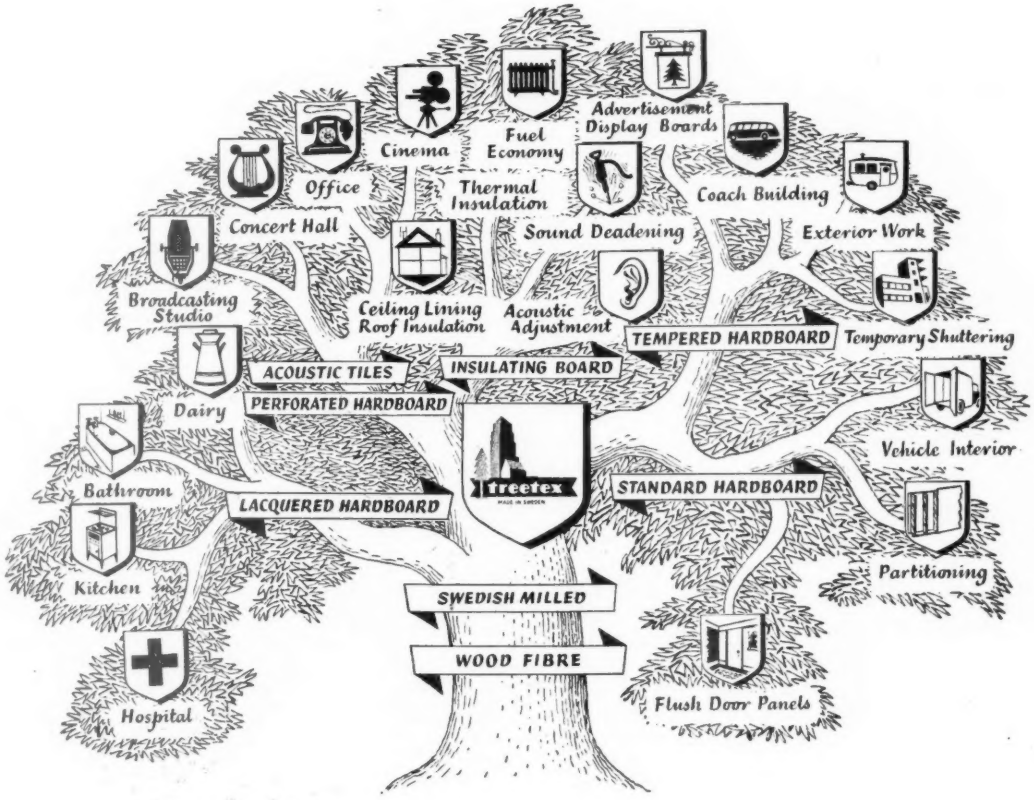

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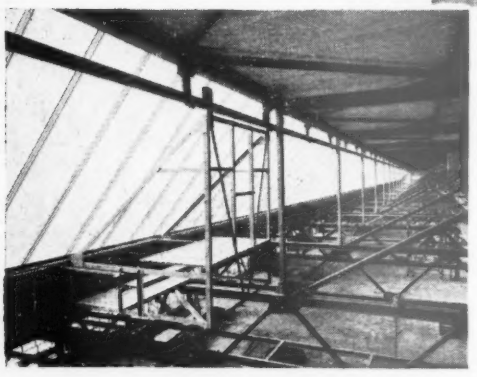

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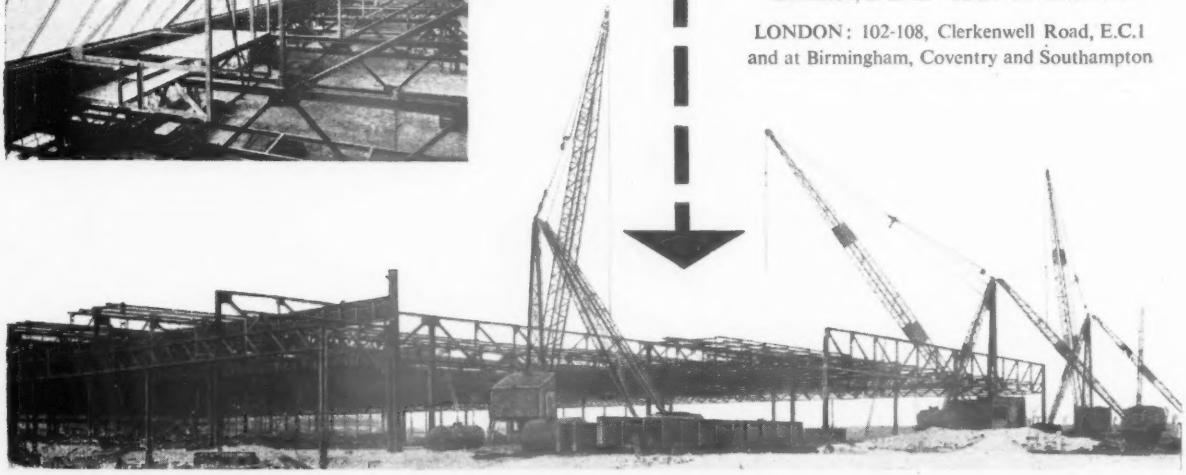

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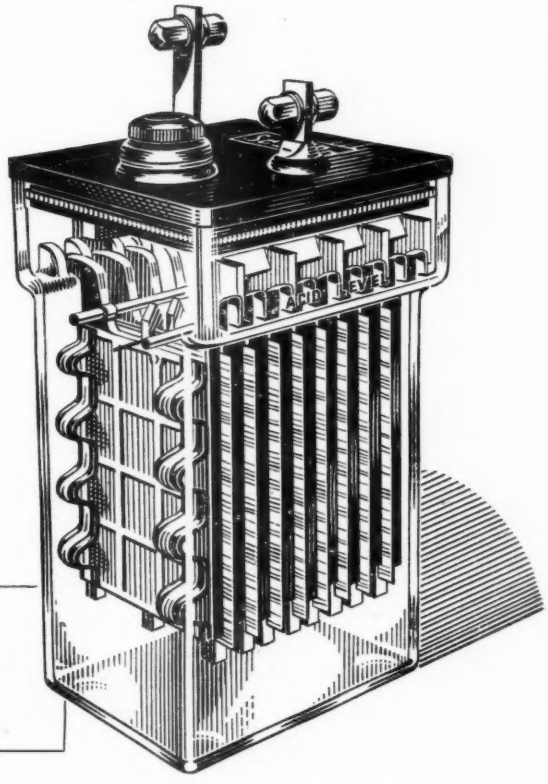

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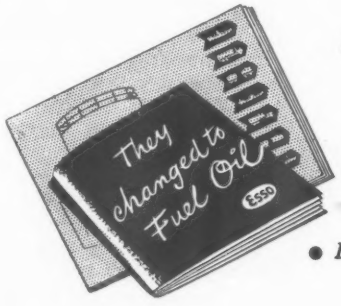

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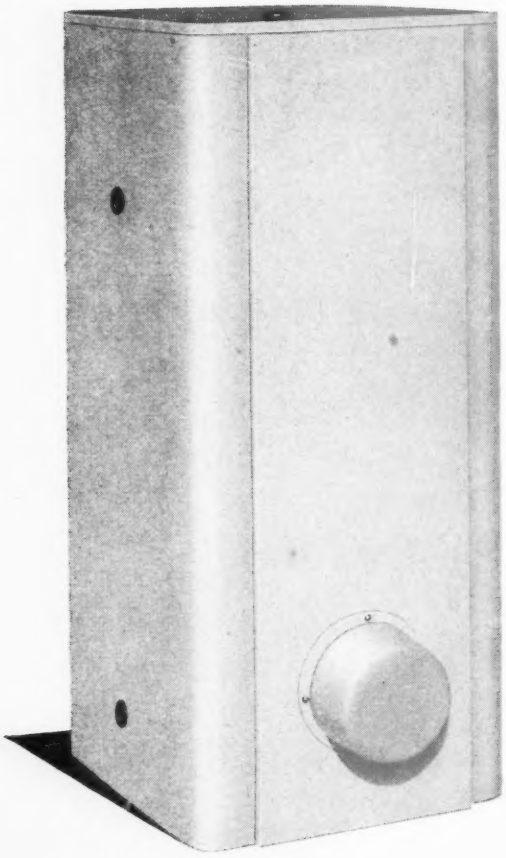

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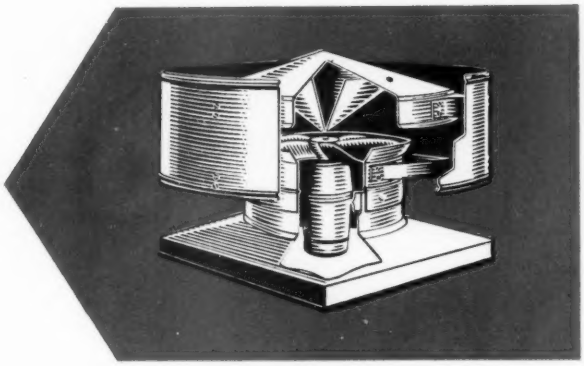

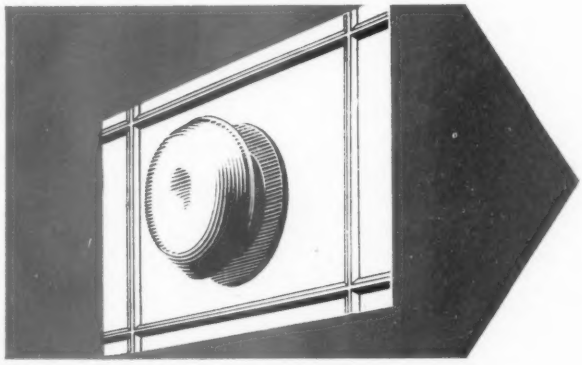

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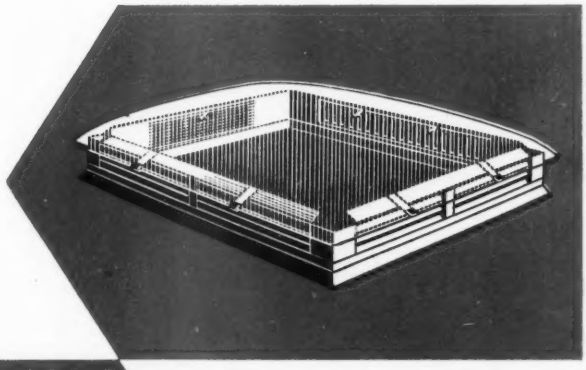

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Factory for Morris & Meads, Ltd., Nevenden Estate, Basildon.
Architect in Charge: M. R. Bool, Esq., A.R.I.B.A.
Contractors: W. & C. French & Co., Ltd.

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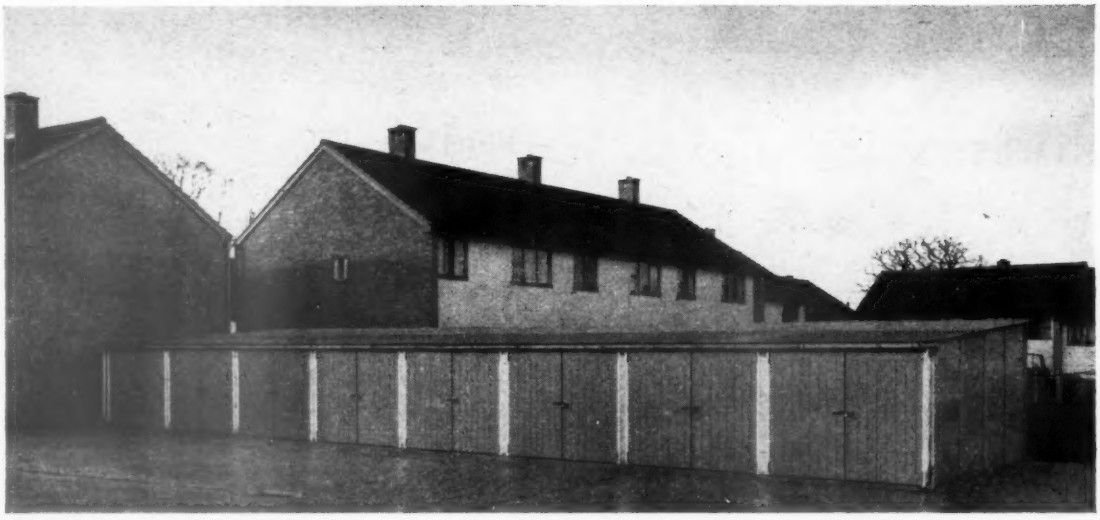
MULTIPLE GARAGES

single sloping roofs



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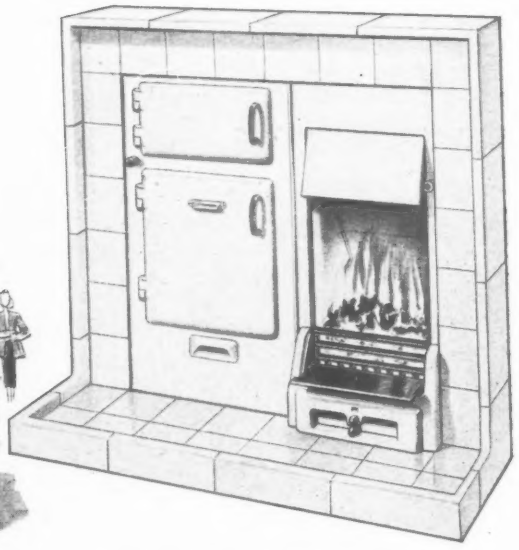

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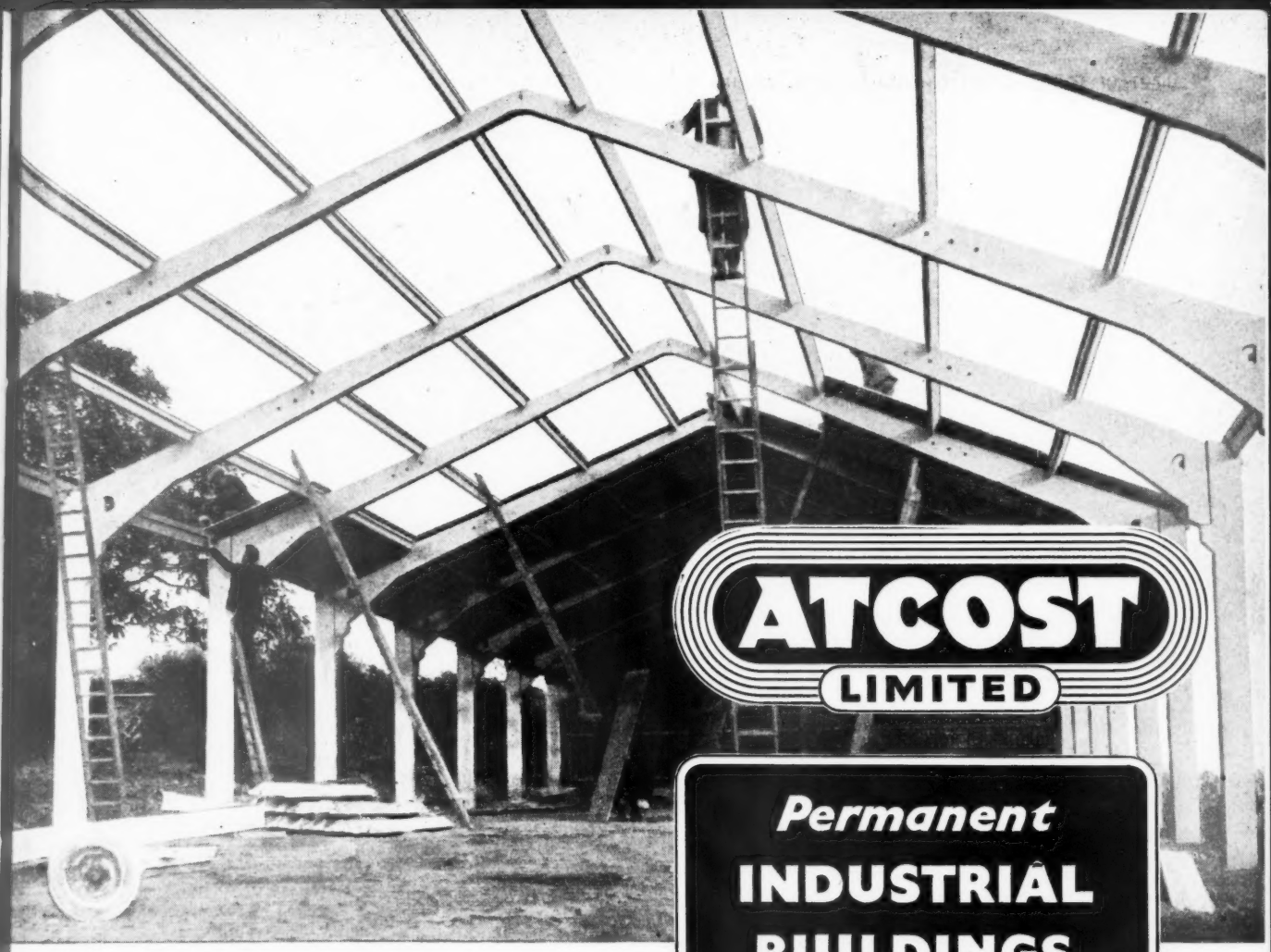

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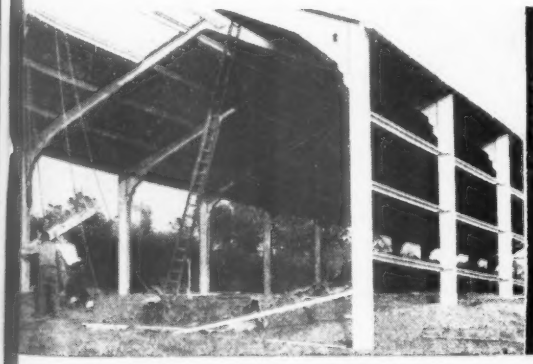

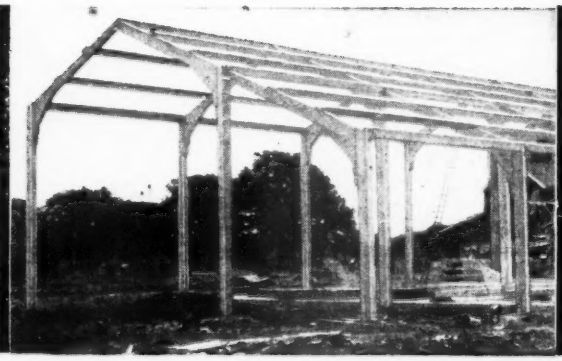

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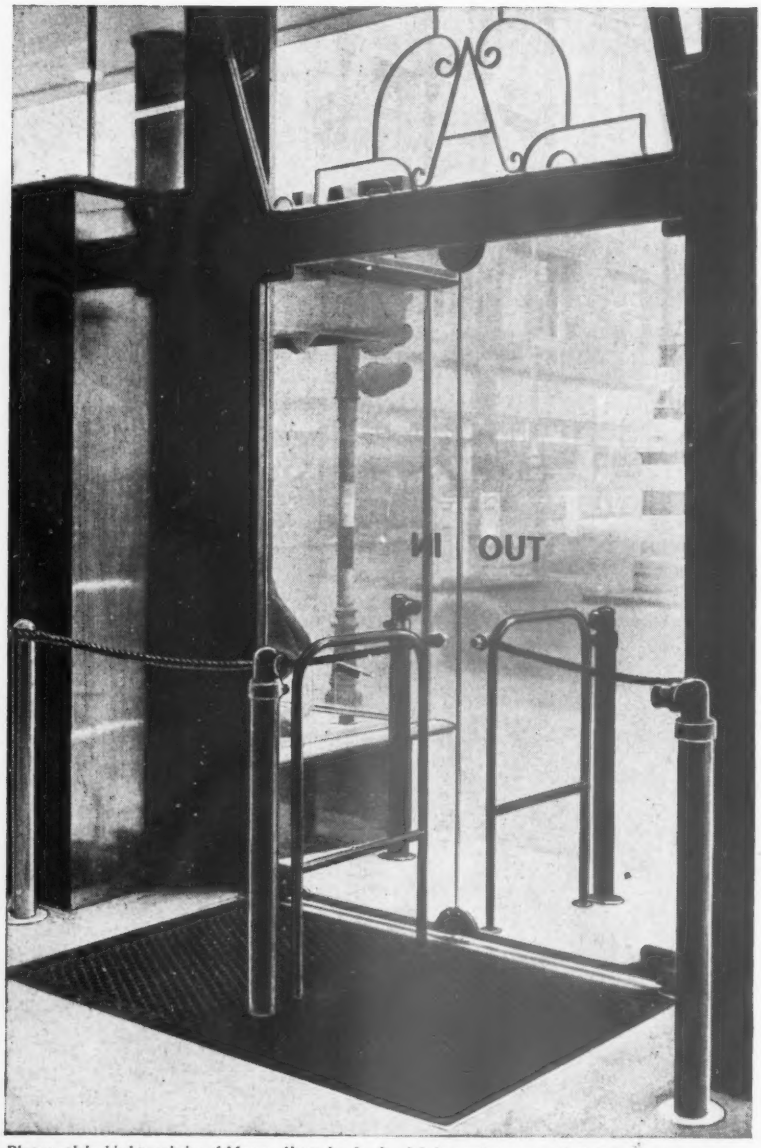

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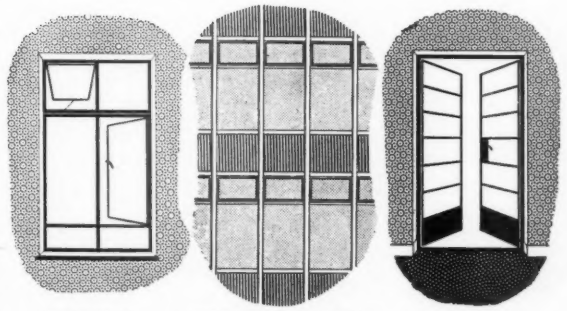
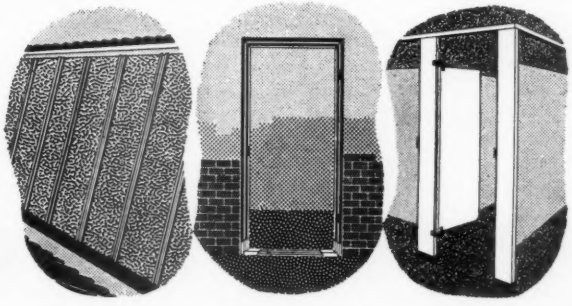


Metal Windows — Wallspan Curtain Walling — Metal Doors



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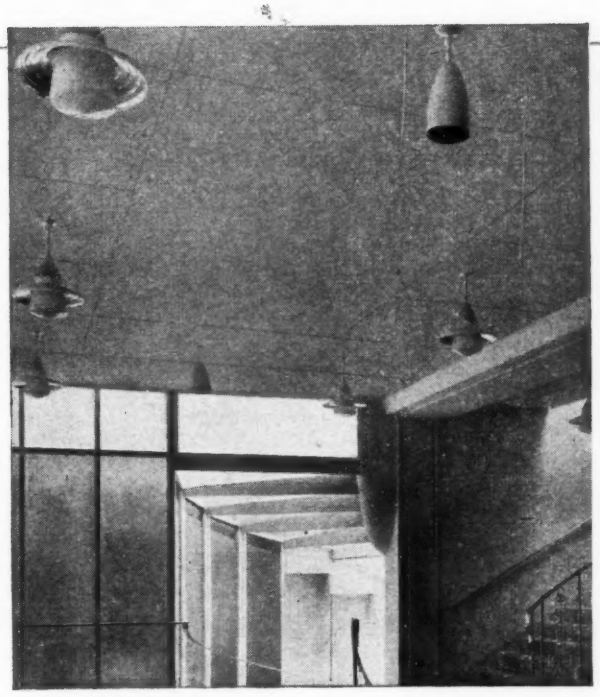
CEILING *for a John Lewis Store*

(CALEY'S OF WINDSOR)

by ASBESTOLUX



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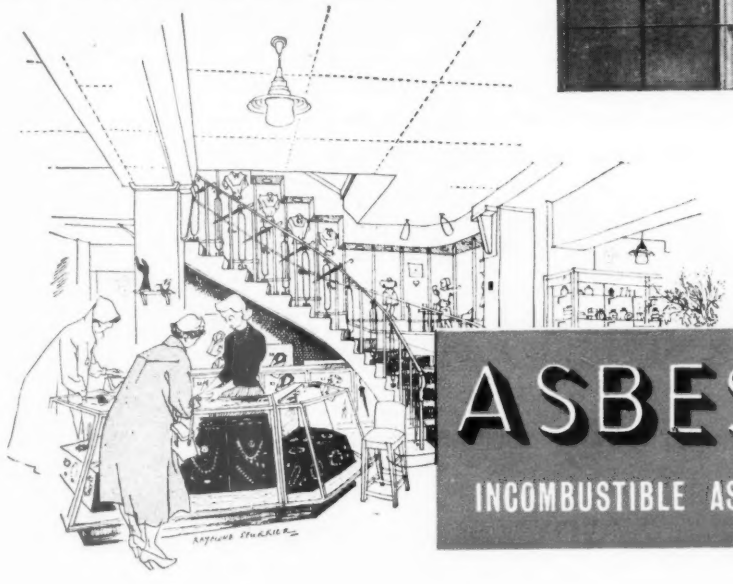

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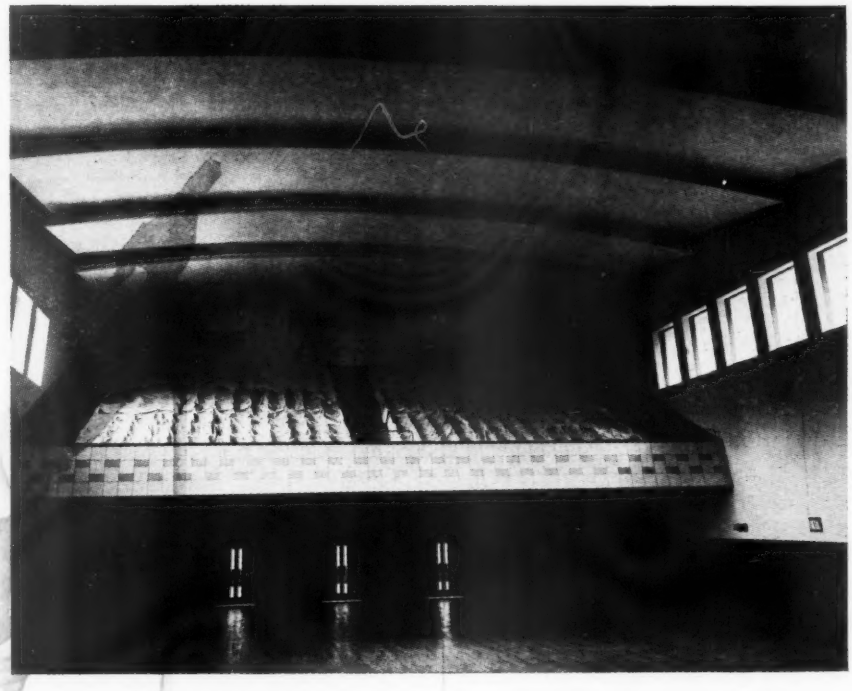

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THE ARCHITECTS' JOURNAL

9, 11 & 13, Queen Anne's Gate, Westminster, London, S.W.1 Whitehall 0611

No. 3122 December 30, 1954 VOL. 120

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ALWAYS THE PERFECT LADY

An honest attempt to pass on to you, Dear Reader, the main substance of Dr. Maurice Craig's recent talk on James Gandon has earned ASTRAGAL a rocket from the *Irish Times*, in which a columnist does us the honour of reprinting the relevant paragraphs from my notes of December 9, and then adding the following:—

*

"The writer of the foregoing is called 'Astragal,' probably a lady, possibly a distinguished British architect. (The word astragal means a malignant, extruded weal on a column: the reference may be to A.'s column in the *Architects' Review*.) ASTRAGAL is informed that there is no such word as Brittanicus; that Gandon was a pupil of Sir William Chambers only to the extent that he stole Gandon's design for Charlemont House in Dublin and passed it off as his own; and that Gandon's mother was a Cockney. Furthermore, he did not rebuild the Custom House; he built a new Custom House on a site a mile from the old one."

*

ASTRAGAL thanks the writer of the foregoing for the spelling correction, wishes him a Happy New Year, points out that the name of this paper is the ARCHITECTS' JOURNAL, and that the information or misinformation about which he complains was, as far as note-taking in the dark permits, a true record of Dr. Craig's opinions. Any objections should therefore be forwarded to *him*, though ASTRAGAL would like to see the file on any correspondence which ensues.

BRIGHTER BANKS

ASTRAGAL, who has always wanted to have a look at the inside of that neat Mies-like little building which Professor Basil Ward designed for the ceramics secton of the Royal College of Art, went there the other day to see some tile murals before they were shipped off to the West Indies. He was as pleased with the building as he was with the exhibit (see photograph on page 795).

*

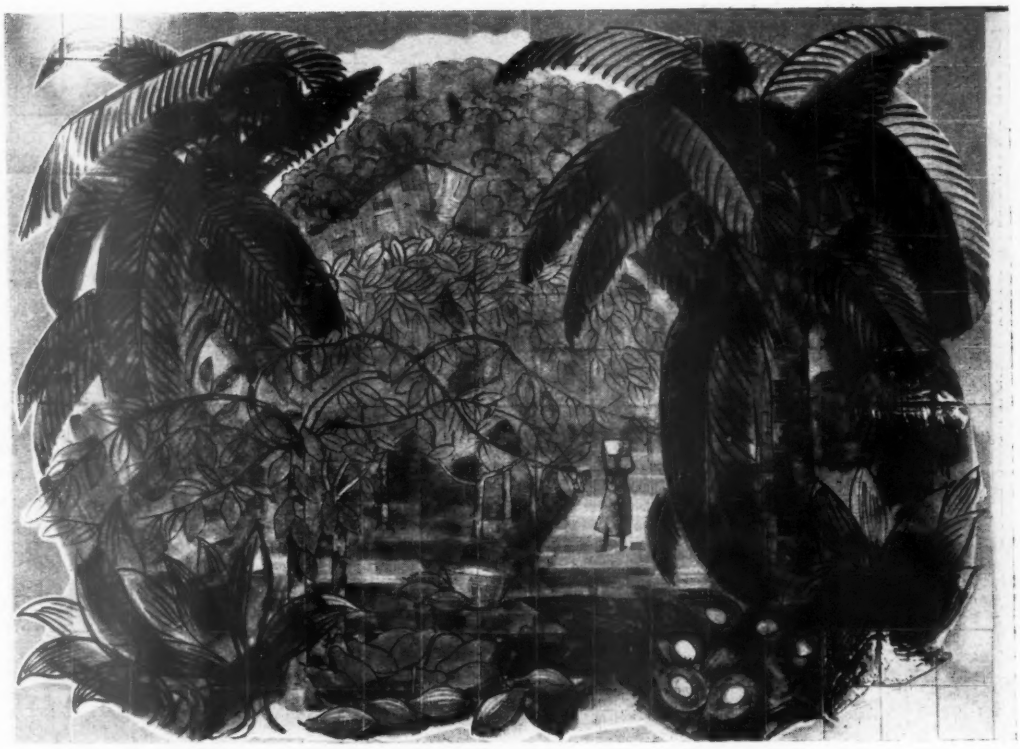
Quite frankly, tile murals for a bank in Kingston, Jamaica, do not sound very promising, but the entire project turned out to be most stimulating. The murals are more than man-high—the longest is more than fifteen feet wide—and are intended to go on the blank ground-floor wall of the bank, under a cantilevered canopy which shelters the pedestrian from the sun. The architects had originally called for some kind of bronze reliefs, to contain advertising matter relevant to the bank's business.

*

The advertising agents involved—please note well—thought it would be much better if these panels were straightforward works of art, and not executed in any material which offered too much scope to the ingenuity of passers-by. So now we have Professor Baker's tile murals showing scenes of life and commerce in the main areas where the Bank does business. And since most of these places are tropical zones or fruit-growing islands, and Professor Baker seems to have a nice sense of how to get the maximum decorative performance out of foliage, mountains, natives in bright clothes, and so forth, the result is very successful indeed. The colours are gay and sumptuous, and, if the result is no world-shattering masterpiece, it seems just right for the job for which it is intended.

GOOD NEWS FROM PLYMOUTH

In spite of the inclement weather, ASTRAGAL has no hesitation in taking his hat off to City Architect H. J. W. Stirling and the rest of his department down in Plymouth for their proposals for a new city office building. Just when it looked as if the marvellous opportunity for doing something bold and big in the way of rebuilding had been lost for ever, and the centre of Plymouth seemed sentenced for ever to a Portland stone straitjacket of worn-out pseudo-period detailing and



One of Professor Baker's tile murals which ASTRAGAL *writes about on page* 793.

pseudo-modernistic clichés, comes this exciting fourteen-storey slab hung all about with patent glazing, rising above courts and lesser buildings.

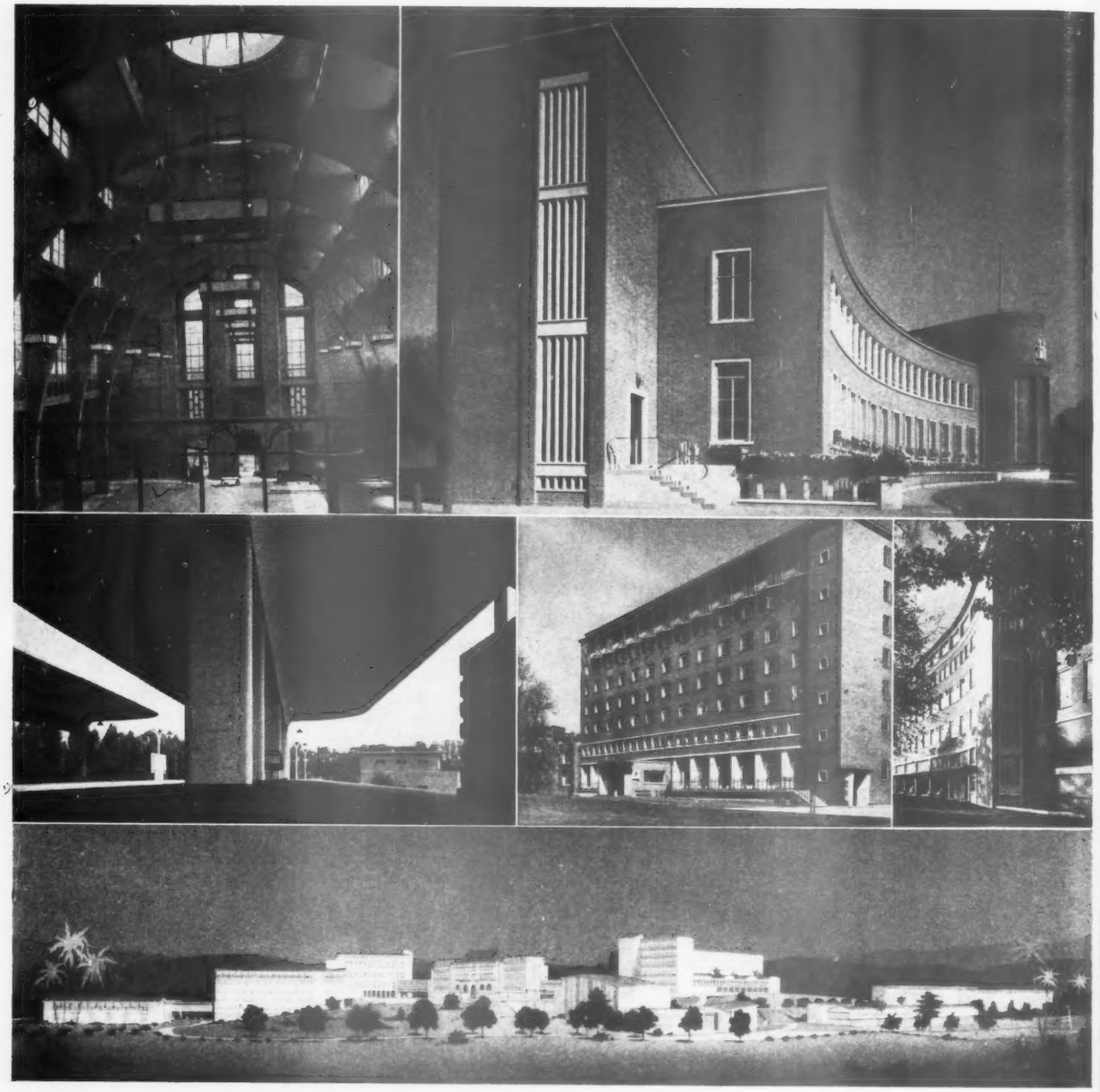
*

There has been plenty of local objection, of course, at the idea of spending approximately fourpence on the rates on something like the Lever Building, but it is nice to know that the spirit of Drake and Hawkins lives on in the City Architect's Department, even if it is moribund in the correspondence columns of the local Press.

THE NEW PRA

Just what that prominent publicist of the Drake-Hawkins spirit, Professor Richardson, would have to say on the matter can be guessed, though you can save yourself the trouble by looking in the December issue of the *Journal of the Guild of Surveyors*, where the Professor lets his rhetoric rip on "The Future of Architecture." Although it is a bit late in the day to do so, ASTRAGAL would like to congratulate him on becoming the first architect-president of the RA since Lutyens—and enabling a few small bets to come off in ASTRAGAL'S favour at the same time. The Professor's lively Light Programme interview with Gilbert Harding produced a picture of a fine roast-beef and port, Chippendale and carriage-varnish ideal of domestic architecture, with a craftsman-made fireplace in every room and a cheap watercolour by a young artist over its mantel, and not a standard-catalogue window in sight. A man who hates Impressionism and believes the past ought to be revived is no doubt just the right man for the Academy. Whether the younger generation of architects will welcome someone of his views—and of his ability in expressing them—being architecture's number one spokesman to the general public is another matter, of which we

The proposed city office block for Plymouth (*see page 793*).



Gold Medallist

These are some of the buildings for which the 1955 Gold Medallist, John Murray Easton (left), of Easton and Robertson, has been responsible. Top: Left, Royal Horticultural Society Hall, Westminster (1927); right, Metropolitan Water Board Laboratories, London (1938). Centre: Left, LPTB station, Loughton (1940); middle, hostel for students, St. Bartholomew's Hospital, London (1950); right, chemistry laboratories, Cambridge (1952). Above, proposed university of Malaya. Details of John Murray Easton's career were published last week.

shall no doubt hear more during the year.

WHEN IS AN ARCHITECT . . . ?

The history of English architecture has suddenly become one of the best documented of subjects instead of one of the worst—at least as regards information about the architects themselves. The publication this summer of H. M. Colvin's *Biographical Dictionary of English Architects:* 1660-1810 was a notable event and I have already expressed my admiration for this scholarly and comprehensive work. Now, as if that wasn't enough for one year, John Harvey has produced *English Mediaeval Architects:* a *biographical dictionary** which is nearly as big and covers even more untilled ground.

*

Mr. Harvey may almost be said to have invented the pre-renaissance architect; at least it is due to his efforts that the belief that gothic buildings were collectively (and therefore anonymously) designed has been dispelled. His book is the product of an immense amount of first-hand research. It begins with William de Abbotsbury (*fl* 1344-48) who provided stone for Windsor Castle and ends with Richard Zaneworth (*fl* 1379-81) who built the refectory at Pershore Abbey, now destroyed. Many of the hundreds of persons listed would normally be more accurately described as master-masons or master-carpenters than as architects, but Mr. Harvey does his best to avoid the confusion this might cause by printing in heavy type throughout his dictionary the names of those "whose architectural status is proven." These turn out to be about six-and-a-half per cent.

*

For Mr. Harvey's purpose the mediaeval period ends in the year 1550. Mr. Colvin's dictionary begins in 1660. What is the poor student to do, who wants information about the architects of the intervening years? Happily they are covered by John Summerson's volume in the *Pelican History of Art* (*Architecture in Britain*, 1530-1830) in which the treatment of the Elizabethan and Jacobean periods is by far the most original. Yet these periods still remain most worth the attention of scholars.

ASTRAGAL

* Batsford. 30s.

The Editors

TOO FAST OR TOO SLOW?

THE JOURNAL has always been a firm believer in the value and importance of the work of the Building Research Station, but certain events of the past year raise an interesting question about the Station's work. When criticism of BRS is heard it is almost always along one of two lines: either that it is difficult to get a definite answer to a specific question, or that the results of research work are not put over to the consumer fast enough.

We have joined in both types of criticism from time to time but there is another side to the story. During the last year three fairly major past recommendations of the Station have been more or less withdrawn, or at least rendered largely out of date, by further work. First we learnt that "floating" floors in timber joist construction have not been giving results in practice as good as had been expected. This was followed by the rather surprising discovery that 11-in. cavity party walls also were not as good as had been hoped in reducing noise nuisance in domestic buildings. Now we have a new Research Report* from which we learn that Daylight as calculated from "Daylight" Protractors is not properly indicated because the value of reflected light can, in fact, exceed the value of the direct light.

All these later ideas are the result of further research. The problem is how to judge where to draw the line between what at a given time, seems to be useful—but possibly incomplete—information as against waiting, for possibly a considerable time, to ensure that everything is final and beyond question. We are all in favour of taking risks even if occasionally we may be slightly misled. At the same time we offer our sympathy to the poor research worker who is almost certain to be blamed whichever attitude he adopts.

RURAL SCHOOLS

The recent announcement by Sir David Eccles that a vigorous drive is to be made to rehabilitate rural schools throughout the country is very good news, for there are thousands of schools in villages and small country towns where teaching is being carried on under almost impossible conditions.

A good deal of this work is likely to be in the form of fairly small jobs, often of a type needing a considerable amount of site supervision. It therefore seems reasonable to expect that much of it will be carried out by local private architects. Though the work is in some ways similar to that of school building generally, it has its own special problems. In order to assist architects who may be taking on this type of work for the first time the JOURNAL proposes to publish several articles written by an architect who has had wide experience in re-conditioning old rural schools. The first of these articles will appear in the next issue of the JOURNAL.

* National Building Studies Research Paper, No. 24.

MONOPOLIES

Result of Commission's Report

A correspondent writes the following:—The announcement by Nigel Birch, Minister of Works, in the House of Commons, of the London Builders' Conference undertaking to stop the practices stigmatised in the Monopoly Commission's Report (see the Technical Leader in the AJ of October 7, 1954) is very welcome and should open a new phase in building relationships.

This graceful retraction by the Conference should put the other members of the building team on their mettle. The chief enemy—as always—is ignorance, or at least thoughtlessness: it will be a great day when architect and client really come to appreciate what it is like being on the builder's side of the fence. This is a concern which we may safely entrust to the JOURNAL's Guest Editors for 1955. (See last week's issue for details about Editors and their proposed study of costs in building.)

MOHLG

Awards for Private Enterprize Housing

To encourage good design in private enterprise housing, awards of medals and diplomas are to be made by the Minister of Housing and Local Government on the recommendation of regional committees for the best-designed privately-owned house or houses built for letting or for sale since the end of the war, by firms of builders or property owners.

In another separate class of entries awards will be made for the best schemes of improvement or conversion carried out by private owners or public authorities in each Region. Schemes are eligible whether undertaken with or without the aid of a grant under the Housing Act of 1949.

The 1955 scheme of awards is being organised by the Ministry in collaboration with the RIBA, the RICS, the TPI, local authorities' associations, and the National House Builders' Registration Council.

Building Expansion

Speaking at a luncheon of the National Council of Building Material Producers at the Connaught Rooms, London, last week, Duncan Sandys, Minister of Housing and Local Government, said:—

"We hope and expect that the number of

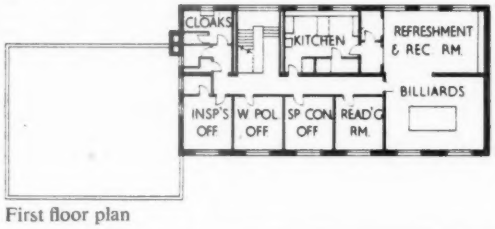
(*continued on page* 800)

POLICE STATION FOR THE HERTS

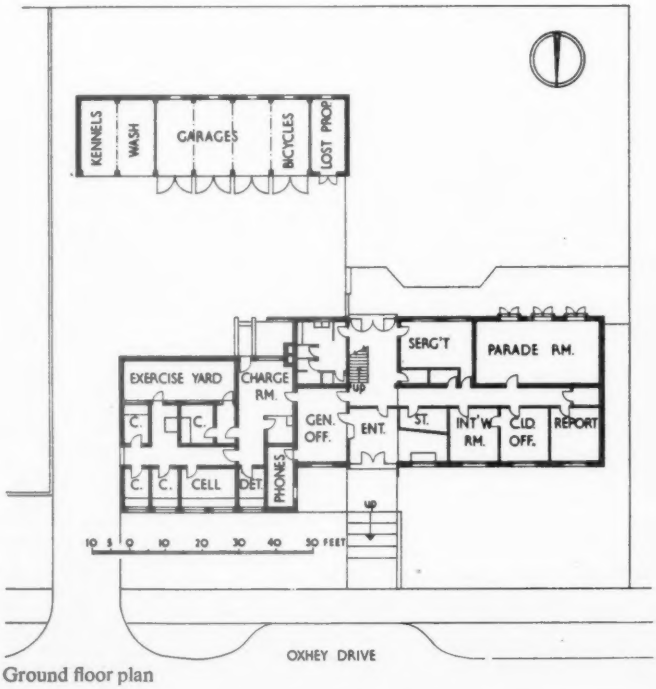
The Sub-Divisional Police Station, illustrated on this page and opposite, serves the new LCC estate at Oxhey, near Watford, and was designed for the Hertfordshire Constabulary by the Architects' Department, Hertford (County Architect, C. H. Aslin; Architect-in-Charge, J. M. Pyper). The Sectional Police Station in High Street, London Colney (Architect-in-Charge, R. E. McLardy) is illustrated on page 800. *The photograph above shows the north facade and main entrance at Oxhey; below,*

COUNTY CONSTABULARY AT OXHEY, NEAR WATFORD

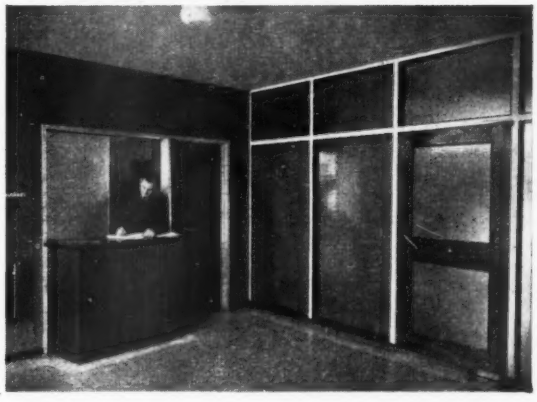
the south facade from the garden; above, the bar on the first floor refreshment room; above right, the main entrance facade from the north-west; below right, the public entrance; bottom right, the staircase from the first floor level. The clients required the following accommodation at Oxhey: Offices, with separate access for public and police, a cell block with separate entrance and inaccessible to the public, a parade room for lectures and inspections, recreation rooms and a garage for four vehicles. The site of half an acre is near the main shopping centre and railway station. A service road down the east side of the site provides access for the police to the parade ground, garages, police and prisoners' entrances, all cut off from public view. The office block has brick load-bearing walls, precast concrete floors and roof and purpose-made timber windows. The contract price was £25,081, price per ft. cube, 4s. 2d. and per ft. sq., 48s. 8d. The general contractors were Harry Neal Ltd. Sub-contractors, *page 822.*



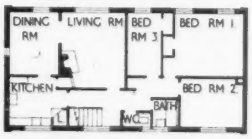
First floor plan



Ground floor plan



POLICE STATION AT LONDON COLNEY, HERTS



First floor plan

Ground floor plan [Scale : $\frac{1}{32}$" = 1' 0"]

The police station at London Colney was necessitated by the rapid post-war expansion of the village, and because it is not continuously manned, as is the station at Oxhey, living accommodation is provided on the first floor. The photograph above shows the road facade from the east, and below is the public entrance and enquiry desk. The main block consists of a flat for the sergeant - in - charge above the official accommodation except for the messroom, lavatories and garages, which are in a single-storey wing. The private garden at the rear is completely cut off from the road and the public part of the building. Walls are of load-bearing cavity brickwork with 4-in. clinker block inner leaf, above first floor level. On the front elevation the first floor is rendered externally. The contract price was £6,652. Price per ft. cube, 3s. 5¾d. gross and per ft. sq., 41s. 3½d. The general contractors were R. C. Ebbs Ltd. Sub-contractors, page 822.

News —(*continued from page 798*)

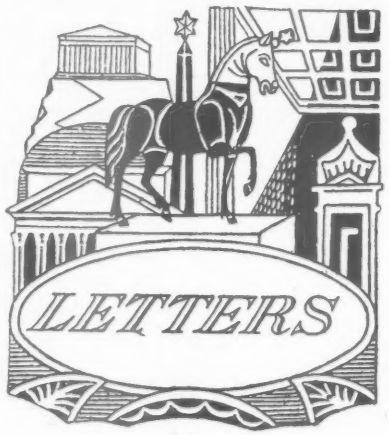
houses completed in Great Britain this year will beat last year's figure. We look like reaching over 340,000. This total includes some 220,000 subsidized houses for letting, which is more than in any previous year. There has also been a welcome increase in the number of houses built for people who want to own their own homes. At the same time more work is being done on the improvement and conversion of the older houses. And the slum clearance campaign, which was making such good headway until it was interrupted by the war, is now beginning to get under way again.

"This policy of freedom and expansion has been made possible only because of the achievements of the producers of building materials.

"1955 will certainly witness a further expansion in the construction of houses, schools and factories.

"There has also been a most welcome increase in productivity in the building industry.

"In short, the outlook for your industry is good. The opportunities are plentiful."



P. W. Edwards, F.R.I.B.A.

A. Branson, A.R.I.B.A.

V. Pilley, F.R.I.B.A.

SIR,—Your Guest Editor comments on the shortcomings of the rural cottage, and illustrates improvements to a block of three cottages (November 25). I assume from the plans illustrated that they were originally five cottages, which at some period had already been "improved" into three.

The improvements now shown would come in for criticism under the present byelaws: for instance, no w.c. may be entered direct from a kitchen or room in which meals are prepared or eaten, and one plan with the w.c. approachable only through the living room would quickly invoke the "blue pencil." The two staircases per cottage in two of the plans, with the consequent first floor muddle, seems a very poor solution.

There is a great need to stir landowners and farmers into providing something better in the way of living accommodation for the farm worker, and in fact, farmers are finding that the modern specialized farm worker will not accept employment where the cottage offered lacks reasonable amenities. Country slum dwellings can be equally as bad as city slums, but intelligent conversions and improvements need not spoil the countryside, and isolation is the worry of the town planner, and not the farm worker.

P. W. EDWARDS.

Chippenham, Wilts.

The Caravan Problem

SIR,—I was very interested in your article in the JOURNAL for November 4, 1954, and I feel it is most unfortunate that the whole of your article cannot be brought to the caravanning public, who I feel would show more interest than the architectural world for whom caravanning can only be on the outskirts of town planning.

There seems to be two types of caravanners, the permanent dwellers and those who caravan for a holiday, either mobile or immobile. The permanent caravanners create what is distastefully termed "substandard dwellers," but again this type of caravanner is clearly in two classes, those who are indeed substandard dwellers and would be substandard either in a caravan or a house or anywhere else, and those who generally prefer to live in a small, neat and compact house, and who often are quite well-to-do.

The substandard dwellers usually create a site which is so objectionable to the neighbourhood that local authorities (with the exception of St. Mary Cray) take immediate action to close the site ,and therefore our main concern in this category is with those who live on permanent sites by choice and who maintain quite a high standard of living.

Where new sites for such caravans are to be created such guidance as can be offered by the Caravan Club, Sheila Hayward and yourselves, is of great value.

The main problem undoubtedly is how to overcome the unsightliness of the established large caravan site (Weymouth, West Bay, Yarmouth, etc.). There is nothing to stop the breaking down of these vast sites into smaller ones containing, say, up to 50 caravans. The amenities, ablutions, etc., could quite easily be allocated to each section, and the sections divided one from the other by the planting of trees. From a disorderly mass you would at once, through natural vegetation, achieve some orderly cohesion.

A further point I would like to suggest is that the local authorities do not try and set standards for many caravanners which are, in fact, below the standards to which those caravanners are accustomed.

At Stratford-on-Avon the type of caravanner who attends the Shakespeare Festival has a well-equipped caravan which will even have a bath, and certainly has its own sanitation. On that particular site lavatories have been erected which are in a shocking condition. The roofs leak and there appears to be nobody to keep them clean and the standard of caravanning is being lowered by short-sightedness of the authorities.

If local authorities would only realise that the majority of caravanners take a considerable pride in looking after their caravans there would be no need to spend large sums of money on wash-houses, lavatory blocks, hard standing areas, etc., and this money could be very well spent to the benefit of the locality by tree planting and the provision of water from a hygienic tank.

Another point which causes concern to site owners, and which prevents site owners from good intelligent development on which they are very keen, is that a licence for a caravan site is only granted for three years, with the possibility to renew. This is a short-sighted policy as the greater number of private site owners I have met feel they cannot plant trees and develop their sites with the threat of their permission being withdrawn at the end of three years. It would appear better if a caravan site could be granted a five, seven or twelve year permission on the understanding that this could be withdrawn if the site was not kept up to a high standard.

There are many of these small site owners who are quite happy to earn £300/£400 a year from rents and live on the site, but they receive no encouragement through this short-term and short-sighted policy.

Another problem which faces the caravanners, which your article has not touched on, is the difficulty of storing the caravans in the winter. In the country this is comparatively simple, but in the town if a caravan stays in a front drive, the local authority at once demands its removal.

A garage for a caravan is expensive and therefore these caravans are invariably sent down to permanent sites to help swell the number of your sub-standard dwellers, and at the end of the winter, by which time they are in a fairly dilapidated condition, they are removed, renovated and used by the interested caravanner during the summer months, and so the circle goes on.

Caravanning on the continent, although this does not really come within the scope of your article, might be of interest to you. The mayor of a village is responsible for your well-being for one night when you are at his town or village and on reporting to the Mairie you are given the utmost courtesy and taken to a site either by the river, or even in the mayor's garden, so that the authorities know that you will leave the site as perfect as when you found it.

Every town and village provides a camping terrain; this has water provided, lavatories on the typical continental system, which are absolutely ideal for disposing of the contents of an Elsan, and a planned sprinkling of trees.

It is only in some cases where one comes across camping grounds for vagrants in France, and having convinced the authorities you are not a vagrant they will then put themselves out to see that you are comfortable and well supplied. It is my experience that this is completely contrary to the reception one receives in towns and villages in this country, and it appears that the public are frightened of caravans because of the vast local council caravan sites which have sprung up in the country.

I would like to conclude by saying how much your article is appreciated by caravanners and that I only hope the local authorities who have blotched their own countryside will endeavour to seek a solution which will provide caravanners both mobile, static, and holiday caravanners with pleasant surroundings, and a feeling of welcome, in stead of distastefulness, into their localities.

ANTHONY BRANSON.

Sevenoaks.

Mr. Pilley's Prophecy

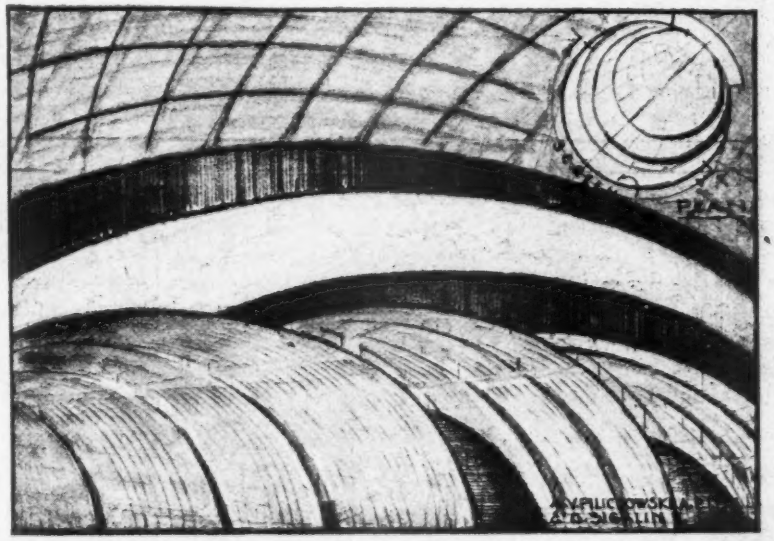
SIR,—In your issue of October 14, ASTRAGAL attributed the Cinerama screen to a colleague. I think you might be interested to know that I had this idea as far back as 1933, and I enclose a photographic copy of my sketch and sub-title from "Close Up" March, 1933. (Picture below.)

The idea occurred to me so long ago as to seem almost prophetic.

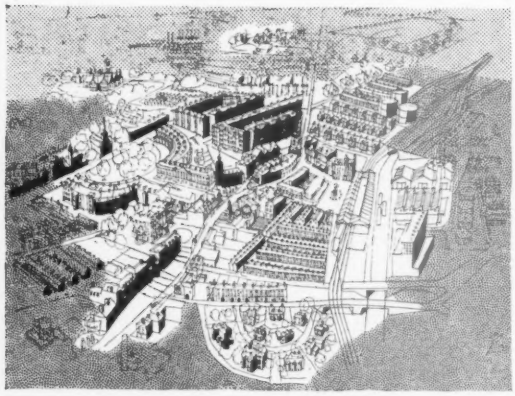
VIVIEN PILLEY.

London.

A foretaste of Cinerama. See "Mr. Pilley's Prophecy."



Mr. A. V. Pilichowski explains his sketch of a cinema of the future: "What seems required for a cinema to be truly cinematic is a more immediate contact between the screen and the audience. My suggestion is for a *panoramic screen*; the idea being that the screen should encircle the audience and thus make it part of a complete system. Mobile multiple projectors would throw pictures on the screen, the action being started at one end and terminated at the other. Visibility would not be required to be perfect from every seat at the same time, a certain element of interest being aroused by hiding, revealing, and hiding again the picture as it sweeps around the screen. The peculiar charm of the Elizabethean theatre or the intimate and spontaneous reactions experienced at the circus would be recaptured."



Last week Ernest Watkins wrote about problems of ownership and management in connection with the conversion of buildings. This week we continue our series of articles on conversions with another article by Mr. Watkins—this time on the means of getting grants and loans for conversion work. This article is followed, on page 806, by one on the Housing Repairs and Rents Act, written by the JOURNAL'S *Guest Editor for 1954, Felix Walter. Next week Mr. Walter will be writing about some miscellaneous problems which the "converter" is likely to come across, and J. C. Ratcliff will have something to say about the way Americans are tackling conversion problems.*

CONVERSIONS: HOW TO GET

GRANTS AND LOANS

Money may be borrowed on the security of the property on any one of the following methods: 1. By private loan secured by a mortgage. 2. By advance from a Building Society. 3. By an advance from a Life Assurance Company, almost invariably coupled with a policy on the life of the borrower. 4. By advances from banks. 5. By advance from the local authority of the area in which the property is.

Advances from Private Sources

These are usually a matter of negotiation between individuals, frequently between the intending borrower and solicitors. In country districts especially, there are numerous private trust funds of which the trustees are prepared to lend trust money on first mortgage of property, frequently on the advice of the trust's solicitors. Private trustees may not lend on mortgage an amount exceeding two thirds of an independent valuation of the property. The rate of interest charged fluctuates with conditions prevailing at the time. The loan is commonly not repayable by instalments but, unless special agreement is made, the mortgagees may call in the whole of the capital on three months' notice, while the borrower may likewise repay the full sum on six months' notice. The borrower is required to pay the solicitor's charges and the surveyor's fees, on the full professional scales. A disadvantage of a mortgage of this kind is that repayment may be required on short notice consequent upon changes in the trust having nothing to do with the borrower's affairs. This element of uncertainty may sometimes be removed where the lenders will agree to covenant not to call the mortgage in for a fixed period of years.

Advances from Building Societies

This is a well-known form of financing house purchase and very little need be said about it. Building Societies fall into two groups, those which cover the whole of the country, the larger societies, and those which are purely local, managed by a small committee of local residents. Building Societies' advances vary from 80/90 per cent. of the valuation of the property. The borrower is required to repay by instalments which consist of both principal and interest so that the total of the instalments paid over the period of the loan (normally varying from 15 to 25 years) liquidate the whole debt. A point to bear in mind is that Societies have different methods of calculating the interest: for example, some only set the instalments of principal paid during the year off against the remaining capital at the end of each year. The borrower is required to pay the surveyor's fees and the Society's solicitors' charges, but these are usually fixed on a scale below full professional fees and are appreciably less than those charged in the case of a private mortgage.

Advance from Life Assurance Companies

These are also a matter for individual negotiations. On the whole it is the practice of Life Assurance Companies to restrict their lendings on mortgages of property to either large scale transactions or to the financing of the purchase of a house by the individual who intends to live in it and who will take out a life policy on his life for an amount equal to the advance; in other words, the loans are an extension of the company's life assurance business.

Both property and life policy are charged to the company and the general practice is that the loan is not repayable during the life-time of the borrower, since it will become automatically repaid out of the sum assured by the life policy on his death. The proportion of the value of the property which the company will lend varies but the companies usually conform to building society practice, that is, restricting the loan to between 80/90 per cent. of an independent valuation of the property. Again, the borrower is liable to pay the fees of the lender's professional advisors.

Bank Loans

These are normally temporary advances, not a method for the permanent financing of investment. A local branch manager has some discretion as to the amount he will advance and the security he will require (which may eliminate the need for expensive valuation fees and costs). Interest is only payable on the actual balance outstanding from day to day. But, in general, banks will not tie up that section of their working capital available for advances to customers in loans which may be permanent. Their advances may tide over the interim between the purchase of a property and the finding of permanent finance for it; banks should not be expected to go further than this.

35-39, Dorset Square, London, N.W.1, whose conversion by Guy Nicholl is described on pages 812-814

Loans by Local Authorities

Local Authorities have power to make advances on mortgage to enable a borrower to buy or to build a residence for himself. This power was given by the Small Dwellings Acquisition Act, 1899, and extended by later Housing Acts. The limit of the amount of any one advance is £5,000 and of its term of repayment thirty years. The advance must not exceed 90 per cent. of the value of the property and the local authority is required to be satisfied that the title is one which an ordinary mortgagee would accept and that the house is in good sanitary condition and repair. The charge to the local authority must vest the legal ownership of the house in the authority (*e.g.*, it cannot be a second mortgage).

The advance is intended to provide a residence for the borrower. He must take up residence within six months of the mortgage and if he ceases to reside there a condition of the mortgage is broken and the local authority may exercise its power of sale. But the owner may sell the property subject to the mortgage, he may let the property furnished for not more than four months in any twelve and he may be granted exemption from the condition of residence if his employment requires him to be absent.

The rate of interest charged by local authorities is that applicable to local authority lendings and is usually lower than that charged by building societies.

For Improvements: Under Section 4 of the Housing Act, 1949, a local authority has power to make advances on mortgage to any person for the purpose of enabling him to acquire, construct, alter, enlarge or improve houses or for the purpose of converting buildings into houses. The authority must satisfy itself before making the loan that the houses are, or will be, habitable dwellings. The maximum amount of the advance is 90 per cent. of the value of the property after the work proposed is completed. The advance is to be secured by mortgage and the mortgage may provide that the advance and interest may be repaid by instalments over a fixed period of years. The property must be either freehold or held by the borrower on lease with an unexpired term which exceeds by not less than ten years the maximum period during which the loan is to be repaid.

A parallel power of providing finance for these purposes is contained in Section 5 of the same Act. This empowers a local authority to guarantee the repayment of money advanced by a building society or by a housing association for the same purposes up to a limit of two-thirds of the total of the advance and interest.

Loans of this description are distinct from grants made under the same Act, although there is certainly no reason why they should not be made available as part of the same transaction. The loan is wholly

repayable; the grant, normally, is not. The loan carries with it no conditions over how the property is to be managed and how the rents are to be fixed; the grant does.

The Small Dwellings Acquisition Act, authorising loans to a purchaser of a house who intends to reside in it, and the Housing Acts, authorising loans to those who will create or improve the residence, together provide an adequate machinery for the finance of conversions, provided the local authority will use its powers for this purpose. The Acts are permissive. They do not require an authority to take action, nor do they prevent an authority from imposing its own, additional, conditions on the prospective borrower. A local authority cannot be compelled to give financial aid.

Improvement Grants under the Housing Act, 1949

One of the objects of this Act was to encourage and assist the private owners of property structurally sound to modernize and improve their properties and to save them from degenerating still further into irredeemable slums. To this end it empowers local housing authorities to make outright grants to owners, to cover at least a substantial portion of the total cost. The Act is permissive but the Minister of Housing is giving increasing encouragement to local authorities to use its provisions and to make them fully known to property owners in their districts.

The grant is made by the local authority, and on the following conditions:

(*a*) The application, and the plans for the work, must be submitted to and approved by the local authority before the work is started.

(*b*) The local authority must be satisfied that the dwellings as improved by the proposed works will provide satisfactory housing accommodation for a period of not less than 10 years after the completion of the work (the minimum period was reduced from 30 years to this figure by the Housing Repairs and Rents Act, 1954).

(*c*) The applicant must own the freehold of the property or a leasehold interest with a period of 30 years unexpired at the date of the application not less than the estimated period during which the building will provide satisfactory housing.

(*d*) The estimated cost of the improvement works must not be less than £100 with a maximum grant of £400, or 50 per cent. of the cost, in respect of each unit of housing resulting from what is done. The two foregoing figures were authorized by the Minister in April, 1954. Although the grant is limited to 50 per cent. up to a cost of £800, no limit is now imposed on the total cost of the work. (In cases of buildings of particular architectural or historic interest the Minister of Housing may give his consent for a departure from these figures.)

(*e*) The grants are available only for improvements, not for works of ordinary repair, except in so far as these are incidental to the main enterprise.

The amount of the grant will normally not exceed half the estimated cost of the works (including professional fees) and, again normally, the total grant will not exceed £400 for any one dwelling, but a local authority has a discretion to go beyond these figures in the exceptional case.

The Minister has also laid down certain requirements as to the resulting unit of housing, intended to ensure that assisted work conforms to a minimum standard. These, as revised in 1954, are: The dwelling must, after improvement or conversion—

(1) be in a good state of repair and substantially free from damp;

(2) have each room properly lighted and ventilated;

(3) have an adequate supply of wholesome water laid on inside the dwelling;

(4) be provided with efficient and adequate means of supplying hot water for domestic purposes;

(5) have an internal or otherwise readily accessible water closet;

(6) have a fixed bath (or shower) preferably in a separate room;

(7) be provided with a sink or sinks and with suitable arrangements for the disposal of waste water;

(8) have a proper drainage system;

(9) be provided in each room with adequate points for gas or electric lighting (where reasonably available);

(10) be provided with adequate facilities for heating;

(11) have satisfactory facilities for storing, preparing and cooking food;

(12) have proper provision for the storage of fuel (where required).

Improvements grants, in the view of the Minister, should be made available where existing buildings can be given a new lease of life regardless of whether the owner could in fact finance the whole of the work himself unaided. The Minister's circular (36/54) of April 20, 1954, emphasizes that the imposition of a " means test " on the owner has no sanction from the Act itself. There is, it continues, " only one question which may properly be asked, namely, whether it (the proposal) will produce a satisfactory modernized dwelling or dwellings complying with the statutory conditions and the specified requirements."

Once the grant is made certain conditions attach to the property, and bind every subsequent owner during the period of twenty years after the completion of the work. These conditions cover both the rents which may be charged on lettings and the use to which the property is put. The property must only be used as a private dwelling house (unless the consent in writing of the local authority is first obtained). The house must be kept in a fit state for human habitation, and the local authority may require the owner, and any tenant, to give the authority information necessary to check that the conditions are being complied with.

With regard to rents:

(*a*) Where the building to be improved has been let as a dwelling at any time during the period of five years preceding the date of application, the maximum rent which may be charged for it under the Act is the rent at which the dwelling was last let before the works were begun, increased by an annual amount not exceeding 80 per cent. (6 per cent. before the passing of the Housing Repairs and Rents Act, 1954) of the part of the approved expense that falls to be borne by the applicant, (*i.e.*, the owner gets no benefit in increased rent for the element of public money used).

(*b*) In all other cases the local authority are required by the Act to fix, at the time they approve the application for the grant, the maximum rent of every dwelling to be provided or improved by means of the works.

(*c*) If further works are carried out subsequently by the owner at his own expense, the local authority may give a direction enabling him to increase the maximum rent by whatever figure they name (which may not exceed 8 per cent. of the cost of the further works).

(*d*) The rent fixed by the local authority does not apply while the dwelling is occupied by the applicant for the grant or by a person who continues in occupation after his death under his will or intestacy.

(*e*) Unless the first tenancy of the dwelling is a lease for twenty-one years or more, it is illegal for anyone to make any payment, other than rent, as a consideration for the transfer of the tenancy or with the right to possession from the tenant; equally it is illegal for a tenant to receive any such payment, directly or indirectly.

It is important to bear in mind that separate dwellings created by a conversion scheme aided by a local authority improvement grant do not become free from the operation of the Rents Acts, as do those which are created without such financial aid. The dwelling becomes subject to the Rent Acts when the council certifies that the

ANNUAL AND TOTAL COST OF BORROWING £1,000

over various periods and at various rates of interest (Half-yearly annuity method)

Rate of Interest	2 per cent.	2½ per cent.	2½ per cent.	2⅝ per cent.	2¾ per cent.	3 per cent.	3¼ per cent.	3½ per cent.	3¾ per cent.	4 per cent.	4¼ per cent.
Years	£	£	£	£	£	£	£	£	£	£	£
	211·16416	*212·58262*	*214·00614*	*214,71980*	*215·43474*	*216·86836*	*218·30702*	*219·75068*	*221·19938*	*222·65306*	*224·11172*
5	1056	1063	1070	1074	1077	1084	1092	1099	1106	1113	1121
	153·89234	*155·20276*	*156 61030*	*157·31672*	*158·02492*	*159·44664*	*160·87542*	*162·31124*	*163·75408*	*165·20394*	*166·66078*
7	1077	1086	1096	1101	1106	1116	1126	1136	1146	1156	1167
	110·83062	*112·23062*	*113·64078*	*114·34966*	*115·06108*	*116·49148*	*117·93194*	*119·38244*	*120·84296*	*122·31344*	*123·79384*
10	1108	1122	1136	1144	1151	1165	1179	1194	1208	1223	1238
	77·49622	*78·91906*	*80·35708*	*81·08176*	*81·81022*	*83·27838*	*84·76150*	*86·25950*	*87·77232*	*89·29984*	*90·84200*
15	1162	1184	1205	1216	1227	1249	1271	1294	1317	1340	1363
	60·91120	*62·36698*	*63·84282*	*64·58824*	*65·33862*	*66·85420*	*68·38944*	*69·94418*	*71·51826*	*73·11150*	*74·72372*
20	1218	1247	1277	1292	1307	1337	1368	1399	1430	1462	1494
	51·02546	*52·51576*	*54·03526*	*54·80314*	*55·57714*	*57·14336*	*58·73368*	*60·34782*	*61·98550*	*63·64642*	*65·33026*
25	1276	1313	1351	1370	1389	1429	1468	1509	1550	1591	1633
	44·48890	*46·01970*	*47·57986*	*48·37084*	*49 16904*	*50·78686*	*52·43290*	*54·10672*	*55·80790*	*57·53594*	*59·29036*
30	1335	1381	1427	1451	1475	1524	1573	1623	1674	1726	177
	39·86564	*41·43538*	*43·03882*	*43·85302*	*44·67546*	*46·34470*	*48·04598*	*49·77860*	*51·54194*	*53·33530*	*55·15794*
35	1395	1450	1506	1535	1564	1621	1682	1742	1804	1867	1931
	36·43770	*38·04646*	*39·69304*	*40·53030*	*41·37672*	*43·09664*	*44·85200*	*46·64186*	*48·46532*	*50·32142*	*52 20914*
40	1458	1522	1588	1621	1655	1724	1794	1866	1939	2013	2088
	33·80612	*35·45368*	*37·14292*	*38·00286*	*38·87282*	*40·64226*	*42·45012*	*44·29520*	*46·17626*	*48·09204*	*50·04122*
45	1522	1595	1671	1710	1749	1829	1910	1993	2078	2164	2252
	31·73148	*33·41740*	*35·14856*	*36·03068*	*36·92362*	*38·74114*	*40·59966*	*42·49760*	*44·43342*	*46·40548*	*48·41218*
50	1587	1671	1757	1802	1846	1937	2030	2125	2222	2320	2421
	30·06138	*31·78504*	*33·55722*	*34·46096*	*35·37618*	*37·24014*	*39·14720*	*41·09548*	*43·08300*	*45·10778*	*47·16786*
55	1653	1748	1846	1895	1946	2048	2153	2260	2370	2481	2594
	28·69418	*30·45486*	*32·26700*	*33·19170*	*34·12846*	*36·03704*	*37·99044*	*39·98634*	*42·02236*	*44·09620*	*46·20548*
60	1722	1827	1936	1992	2048	2162	2279	2399	2521	2646	2772
	27·55950	*29·35634*	*31·20728*	*32·15224*	*33·10974*	*35·06104*	*37·05842*	*39·09914*	*41·18044*	*43·29960*	*45·45394*
65	1791	1908	2029	2090	2152	2279	2409	2541	2677	2815	2955
	26·60698	*28·43010*	*30·32762*	*31·29208*	*32·26948*	*34·26148*	*36·30044*	*38·38316*	*40·50648*	*42·66730*	*44·86262*
70	1863	1991	2123	2190	2259	2398	2541	2687	2836	2987	3140
	25·79976	*27·66618*	*29·59096*	*30·57414*	*31·57054*	*33·60122*	*35·67930*	*37·80120*	*39·96330*	*42·16220*	*44·39460*
75	1935	2075	2219	2293	2368	2520	2676	2835	2997	3162	3330
	25·11008	*27·00978*	*28·96950*	*29·97058*	*30·98510*	*33·05236*	*35·16716*	*37·32540*	*39·52316*	*41·75670*	*44·02246*
80	2009	2161	2318	2398	2479	2644	2813	2986	3162	3341	3522

One can talk glibly about raising loans but few perhaps appreciate the high cost of this facility over long periods. This table, which was originally prepared by G. Richard Shepherd (for the *Municipal Journal*) and subsequently brought up to date, gives some idea of this expensive method of raising capital

works are complete and the rent fixed by the council as part of the conditions on which the grant is made become the standard rent of that dwelling.

If the conditions imposed by the Act are broken, the owner becomes liable to repay what might be called the unexpired portion of the grant, that is, that proportion of the total grant originally made which corresponds to the proportion between the balance then unexpired of the twenty year period and the full twenty years (for example, if the conditions are broken in the seventh year, leaving thirteen of the twenty years left, the owner will be required to refund 13/20ths of the original grant). Similarly an owner may obtain release from the conditions by repaying to the local authority the outstanding balance of the original grant calculated in the same way.

The Housing Repairs and Rents Act, 1954

Some of the changes made by this Act, those consisting of amendments to the terms on which improvement grants may be made by local authorities, have been noted in the section of the book dealing specifically with these grants. The other major changes in the law made by the Act are these:

1. By Section 34 of the Act, the Rent Acts will no longer apply to premises which are, in the words of the Act,

" (*a*) separate and self-contained premises produced by conversion, after the commencement of this Act, of other premises, with or without the addition of premises erected after the commencement of this Act;

(*b*) premises erected after the commencement of this Act."

(save where the conversion has been aided by an improvement grant from a local authority).

By sub-section (2) of this section premises are deemed to have been created or erected after the commencement of the Act if the work was completed after the Act came into force, even though it had been begun before.

2. In addition, houses owned by a housing association registered

under the Industrial and Provident Societies Act, 1893 or by a charity are free from the operation of the Rent Acts while they remain under such ownership.

3. The rents of premises already controlled may, in certain circumstances, be raised. It is outside the scope of these articles to make any attempt to deal with the Rent Acts and the problems they create for both owner and tenant. These problems can be extremely complex and anyone contemplating a conversion scheme for property in which there are protected tenants and tenancies will obviously be well advised to seek professional advice on the position of the tenants and the rights of an owner.

A tenant, if he would (and that is hardly likely), has no right to prevent his landlord from improving and modernising the premises he occupies. The point of importance here is what right has the landlord in law (that is, failing an agreement with his tenant that the rent shall be increased) to recover some additional rent from a tenant who remains under the protection of the Rent Acts as a return on his additional capital investment in improvements to the property? Over that, the 1954 Act makes a considerable change in the law.

Before the 1954 Act was passed the only rights a landlord had were under the Rent Acts themselves, Section 2 of the 1920 Act as amended by Section 7 of the 1932 Act. Under these sections a landlord could increase the standard rent of a protected tenancy by an amount equal to 8 per cent. of what he had spent on improvements, structural alterations and additional fittings to the house (but including what was spent on decorations or repairs). The practical difficulty in the way of much action under this section was that the landlord had to be prepared to show, to the County Court if need be, that the work was " necessary," and the ruling of the Court on this was final. The decisions under the Acts were not particularly encouraging to enterprise on the part of landlords. The Courts held that the installation of a modern sanitary system was an improvement and necessary, that the substitution of rough-cast for weatherboarding to the exterior was an improvement but unnecessary and that the replacement of a thatched roof by one of slate a repair.

The additional rights given to an owner by the 1954 Act are contained in Section 22 and make a fresh approach to the problem. The assumption underlying the section is that a landlord will do, and does, repair, but that, since their costs have tripled since 1939, he can no longer afford to do so out of a rent unchanged since then. The effect of Section 22 is to allow a landlord to increase the rent payable by the tenant by an amount equal to twice the cost of the statutory repairs deduction (these deductions are set out in the Third Schedule to the Act) provided he can show that the house is in good repair and that he has spent on repairs to the house either

(*a*) in the previous twelve months not less than three times the amount of the statutory repairs deduction or

(*b*) in the previous three years not less than six times the amount of the statutory repairs deduction.

In either case the total rent may not be increased beyond an amount equal to twice the gross annual value of the premises.

4. Under Section 39 of the Act a landlord is entitled to apply for an increase to the amount payable under a protected tenancy where he is under obligation to supply services (*e.g.*, heating, porterage, etc.) to the tenant and where the rent payable by the tenant is controlled at the figure payable before the war. The landlord seeking an increase on these grounds must be able to show the local tribunal (that set up by the 1946 Act, originally to survey the rents of furnished lettings) that it is reasonable that the rent should be increased because of the rise in the cost of supplying these services. This provision should be of value to the owners of blocks of flats let at pre-war rentals where the rent was inclusive of the services the landlord was under agreement to provide.

The Housing Repairs and Rents Act, 1954

In the following short article our Guest Editor for 1954, *Felix Walter, gives some notes for the benefit of those who have not yet read the Housing Repairs and Rents Act,* 1954, *or the last printing of the Bill.*

On August 30 last the Housing Repairs and Rents Act, 1954, came into force. It is a complicated piece of legislation and makes tiresome reading, for it refers in all to twenty-nine previous Acts going back as far as 1845, and it affects in one way or another nine of these past Acts.

To have removed all the Rent and Housing Acts and to have replaced them by one comprehensive enactment would have been an unenviable and enormous task. Each successive government has been too concerned over its own security to undertake such a politically dangerous but long overdue reorganization, with the result that the countless dead ends and new shoots have made this legal labyrinth almost impenetrable. It is the layman's loss that the new Act must remain a profitable hunting ground for the legal profession.

It is a matter for conjecture how long the general public, who are expected and encouraged to take advantage of the Act's less stringent conditions, will tolerate costly professional advice which may be necessary before they can receive the ultimate benefits.

That Mr. Macmillan and his Ministry of Housing and Local Government must have anticipated this inevitable antipathy is suggested by the publication of two excellent small booklets* which reassure the layman by answering a series of questions relating to grants and rent increases. The following notes dealing with the more relevant points in the two booklets are included for the benefit of those who have not read, as yet, either the Act itself or the last printing of the Bill. It is scarcely necessary for me to add that these notes and the booklets themselves do not enable one to by-pass the reading of the Act, which contains a mass of complex detail in addition and in fact these notes are intended as an introduction to the new legislation rather than a short cut. The numbers in brackets refer to the section references in the booklets.

"Grants for Improvements and Conversion"

ELIGIBILITY: *Any house, or any building capable of being converted into a house or flats, is eligible so long as it will provide satisfactory accommodation for at least* 15 *years, and will comply as far as possible with the* 12*-point standard.*

* "Grants for Improvements and Conversion" and "The New Act—Repairs and Rents." HMSO. Price 4d. net each.

When in doubt, the local Council can ask the Minister to use his power of waiver. These grants are only for improvements and conversion—repairs are the financial responsibility of the owner (1, 2 *and* 3).

IMPROVEMENTS: *A few examples of the commonest types of improvement are listed. One surprising item is "remedying dry-rot." One would scarcely have expected its inclusion because it is due so frequently to the neglect of essential repairs and maintenance, but owners should be grateful for this offering* (4).

REPAIRS: *These are excluded from grant aid because the intention is to encourage the "modernization of houses." But if the owner cannot raise enough capital for repairs, and sometimes these amount to as much as 40 per cent. of the improvement and conversion work, he can obtain a loan from the local Council.*
Examples of exceptions to this rule about repairs are (a) where for instance a room has to be redecorated as the result of structural work within it forming part of the improvement or conversion, and (b) where "a building built for some other purpose is converted into a house or flats" all repair and decoration may be included in the expenditure qualifying for grant aid (6).

WHO CAN APPLY: *Anyone who is the owner of the property or a leaseholder whose lease has at least 15 years still to run—and there is no means test* (7 and 9).

THE EXTENT OF GRANT AID: *On each unit provided in a scheme, the minimum total cost to qualify for a 50 per cent. grant is £100. The upper limit is half the cost of the work of improvement or conversion, or £400 per dwelling unit provided (whichever is the less). But there is no limit to the amount spent by the owner. For example, an owner could convert his house into two units at a total cost of, say, £1,500, but normally he could not receive a grant of more than £800 or £400 per unit* (10).

ADDITIONAL FINANCIAL ASSISTANCE: *Where an owner has insufficient capital to meet his share of conversion costs, he can borrow money from his local Council at a low rate of interest.* (15).

RENT INCREASES: *The local authority fixes a maximum rent which is intended to represent the value of the dwelling after improvement or conversion. If the rent has already been fixed by a Rent Tribunal, the owner may increase the rent by 8 per cent. of the money he has spent himself on improvement or conversion* (16).

LANDLORD AND TENANT: *"In all ordinary lettings the landlord cannot carry out the work without the tenant's agreement." In other words, if the tenant does not consider that the improvements are worth the assessed maximum rent, he can prevent the work from going ahead* (17).

RESTRICTIONS: *After improvement or conversion with grant aid, a dwelling must be kept fit for human habitation; be used only as a private house and occupied by the applicant or a member of his family or it must be let or kept available for letting at a rent not exceeding the maximum laid down* (18).

GRANTS FOR SELF-HELP: *Where unpaid labour is engaged or where the owner does the work himself, only the cost of material would qualify for grant assistance* (20).

COMPLETED WORK: *No work for which a grant is requested may be started until the Council's approval has been given.*

"The New Act—Repairs and Rents"

The second of the two booklets, "The New Act—Repairs and Rents" deals with the increase of existing rents, how the landlord becomes entitled to claim these and how the tenant and sub-tenant are protected. In general, the landlord cannot claim rent increase within six weeks of serving the notice on his tenant.
Section (2) explains that the maximum repairs increase is twice the statutory repairs deduction for the house for rating purposes and that it will be less if the rent is already high or if the landlord is not responsible for all repairs.

THE LIMIT TO RENT INCREASE: *If the rent is already more than twice the gross value, then no increase at all may be claimed by the landlord. But if it is less, he may claim the difference if he is eligible to do so* (4).

BASIS FOR CALCULATIONS: *In estimating the rent increase, calculations are based on the net rent less rates and any amounts payable for furniture or services provided by the landlord and any addition made to the rent by the landlord for structural alterations or improvements or improved fixtures and fittings* (6).

CLAIMING THE INCREASE: *Completing the form of notice, with all the detailed information required, will be a searching test, and a trying one, for the landlord who lacks method in record keeping. Only the official form may be used* (8).

THE LEASE AND TENANCY CONTRACT: *Rent increase can apply to these during the running of the current contractual tenancy* (9).

THE TENANT'S PROTECTION: *If he doubts the validity of the landlord's expenditure test, the tenant can take action in the County Court within 28 days of the notice. But if he disputes the actual condition of the house he can, at any time, ask the local authority for a "certificate of disrepair." If granted, he serves a copy on his landlord and no repairs increase is payable from the date of his successful application—and this applies also to the 40 per cent. increase under the Rent Act, 1920, if he should be liable for this as well* (10–11).

RIGHT OF REDRESS: *If the tenant's application for a certificate of disrepair is refused, he can "risk withholding the repairs increase and leave it to the landlord to take him to the County Court." Also, the landlord can challenge the validity of the certificate of disrepair in the County Court* (12).

REPAIRS: *All repairs for which the tenant is under no express liability, are considered to be the responsibility of the landlord* (15).

INTERNAL DECORATIONS: *Where neither landlord nor tenant is under any express liability for internal decorations, the landlord may decide against being responsible. In such a case the repairs increase and the expenditure test would be reduced by one-third* (16 and 17).

EXPENDITURE TEST: *The main test for the landlord responsible for all repairs, including internal decoration, is that within a continuous period of twelve out of fourteen months prior to serving the notice, he must have carried out work to a value of not less than three times the statutory repairs deduction. Within four months of August 30, 1954, in other words until the end of 1954, the landlord can conform with an alternative test which provides that in a continuous period of three years out of four before serving the notice, the value of the work of repair in that period must be not less than six times the statutory deduction* (18).

INADMISSIBLE WORK: *War damage repairs and work executed by the tenant cannot be included—but materials supplied to the tenant can* (19 *and* 20).

TAX ON REPAIRS INCREASE: *The landlord has to pay tax, but he can claim maintenance relief based on his average expenditure over the preceding five years* (22).

THE SUB-TENANT: *A tenant can pass on to the sub-tenant the proper proportion of the repairs increase which he has to pay himself to the landlord. There is a special form for this also—and only two weeks' notice is necessary in this case.*

SERVICES: *The landlord can claim, in addition to any repairs increase an increase in rent to cover the rise in service costs since September 3, 1939. As with the repairs increase, increases of rent for services cannot be claimed in respect of houses that had never been let until after September 1, 1939. Disagreements are to be settled by the Rent Tribunal* (24).

EXTENT OF INCREASES: *The rent increase to cover repairs and service costs does not apply to houses let for the first time after September 1, 1939. But under the new Act, Rent Tribunals may increase as well as reduce rents for these houses* (26 *and* 27).

RENT RESTRICTION: *All unfurnished houses with a rateable value of not more than £100 in the London Metropolitan Police District or the City, and £75 elsewhere in England and Wales are rent restricted. Exceptions are:*
(i) new houses and conversions completed without grant aid after August 30, 1954;
(ii) lettings by local authorities;
(iii) lettings by certain Housing Associations and Trusts and by New Town Development Corporations.

To the private developer, perhaps the most interesting part of the new Act is Section 35 which states that new houses and conversions completed after the commencement of the Act are excluded from the Rent Acts so long as they are financed solely without government assistance. Many owners will prefer to raise their own capital if they can determine themselves the economic rents for the accommodation provided—and this freedom of action may do much to encourage conversion work which would otherwise be entirely controlled by the government. At the end of the booklet will be found four

examples showing how the rent increase is calculated, a note on standard rents and a table (Appendix 2) of gross values and statutory repairs deductions. These two small publications will answer many queries but it is unfortunate that government cannot yet produce Acts which are more readable and more easily understood by the majority who are obliged to consult them.

22 Ripplevale Grove N1

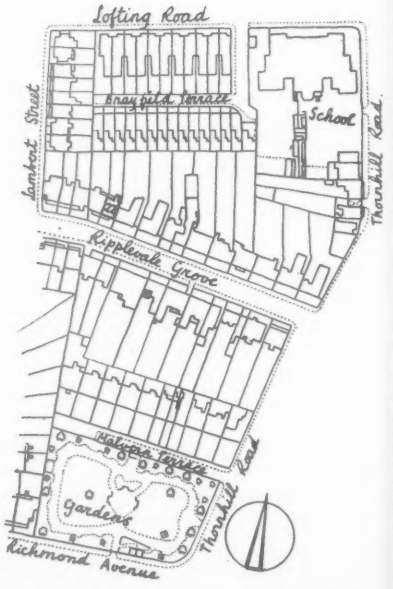
Architect: C. R. Whittaker

In addition to grants for works of improvement and conversion discussed in detail elsewhere, government loans are available also to those requiring additional financial assistance. All this may sound attractive but there are complications and perhaps the most tiresome is that of the time element. One condition when applying for grant aid is that none of the work may be put in hand until the application has been approved whilst the cost of any work carried out when awaiting approval would be exempt from grant assistance. This condition is not unreasonable so long as applicants' cases are dealt with expeditiously by the authorities; but herein lies the trouble, for at least one case comes to mind where more than twelve months elapsed before any final decision was reached. It is scarcely surprising therefore that individuals are wary of becoming enmeshed in such tedious negotiation. Yet the Ministry of Housing and Local Government is anxious that full advantage should be taken of these facilities. The obvious answer to all this is that local authorities and central government must overhaul their own machinery if they are to encourage full use of these subsidies and loans; and furthermore, they really should be less critical over very small items which contravene the byelaws, particularly where neither health nor limb are endangered. By following the diary of a typical current application for an improvement grant, one can discover how rapidly some local authorities are meeting their obligations. For this purpose, a small 19th century house has been selected in Islington. In addition to the grant application a Government loan is to be applied for to cover the cost to the leaseholder, who is also the architect, of his share of improvements.

22, Ripplevale Grove in the Borough of Islington, consists of a basement, ground and first floor; it is gas lit throughout and has a sink and copper

22 Ripplevale Grove, right centre, before conversion

Site plan 1870



Site plan 1954, showing how few changes have been made in the area

in one basement room with a W.C. *off a half landing. Structurally the house is in a fair condition but lacks most amenities. There was a small patch of wet rot in the front basement room and a crack from top to bottom of the party wall; but over the past two years evidence has shown that there is no longer any movement. When the lease was taken over, the basically Victorian decorations were more or less intact though faded with time; and the glass globes were still on the gas fittings regardless of the "gas man's" comment that the system was unsafe.*

The present gross value of the house is £49 and the rateable value £35. The lease, purchased for £500 plus £35 to cover the ground landlord's legal and surveyor's costs, is a full repairing and insuring lease for 41¼ years from March, 1954, expiring on June 24, 1995. There is a ground rent of £10 per annum.

To bring the accommodation into line with present standards, the following are to be carried out:

(a) New electrical installation comprising 12 light points and 7 13-amp. power points. (b) A bathroom provided with new bath, lavatory basin and W.C.*—and a new window to light and ventilate the room. (c) A gas cooker and new sink in the basement kitchen-dining room. (d) A solid fuel boiler in the basement playroom-workroom to heat the domestic hot water and four radiators. (e) New french doors and steps into the garden. (f) A new larder—there was none before. (g) New tiled concrete floor in back basement room (Playworkroom). (h) Defective area of flooring in front basement room to be replaced by a concrete slab floor with screed finish (Kitchen-dining). (i) A new 80-gallon water storage cistern, a 30-gallon hot water cylinder and 20-gallon feed tank. All pipes, cylinder and tanks are to be lagged. (j) A trap door into the roof space—there was none before. (k) Pointing of external brickwork. (l) Sundry repairs throughout and external redecoration.*

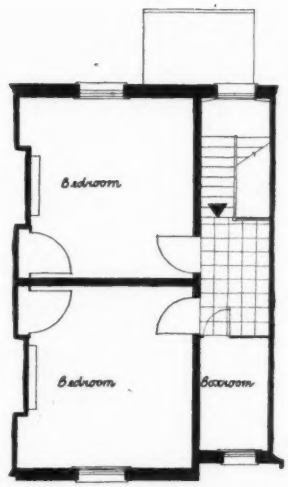
The diary opens on April 6, 1954, when Whittaker first saw the house, one of a series of linked villas in a London backwater. The area appealed to him for the house was architecturally intact and the small gardens contained plenty of trees.

APRIL 8. *Visit to Estate Agents and make offer of £500 plus £35 to cover ground landlord's expenses.*

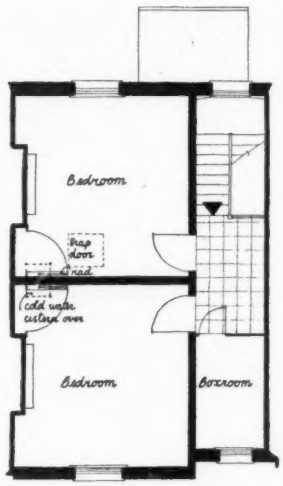
APRIL 13. *Letter from Agents confirming our offer. Abortive interview with Co-op. Building Society. "All funds going into new building—haven't put any money into that area since the war."*

APRIL 21. *Hear that better offer made for house—but this was not followed up.*

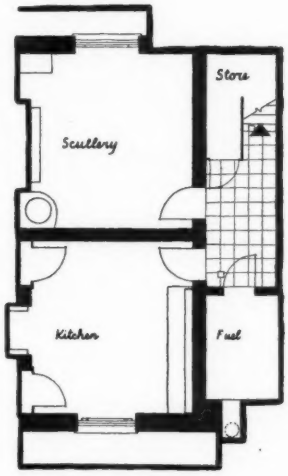
APRIL 25. *Contact possible guarantors.*



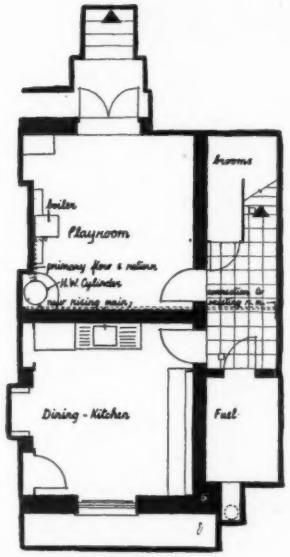
First floor before



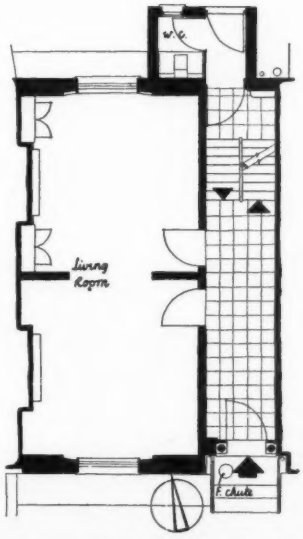
First floor after



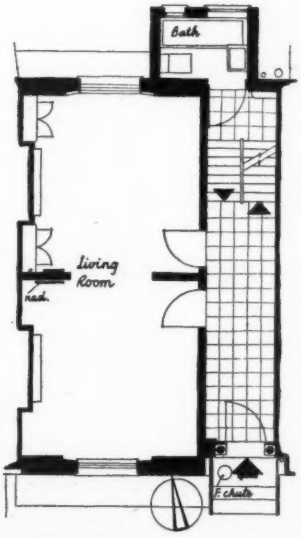
Ground floor before



Ground floor after



Basement before [Scale ¼" = 1' 0"]



Basement after

The kitchen on the ground floor before conversion

APRIL 27. *Hear of Housing Act loans for house purchase but Islington BC lists for May meeting already closed. Obtain letter from IBC asking LCC to act instead.*

APRIL 30. *Examine draft lease at solicitor's office. Send cheque for £4 to LCC (basic fee for Housing Loan survey—half of which is refunded on refusal to act).*

MAY 3. *Telephone IBC re Improvement Grants.*

MAY 4. *Questionnaire from IBC received.*

MAY 6. *Application form for Improvement Grant received from IBC. Pay £100 deposit to ground landlord's solicitors. About this time property inspected by LCC surveyors. Also builders inspect to tender for various works (preliminaries only). One builder recalled the sight 50 years ago when after six o'clock you couldn't get into Thornhill Square for the broughams driven by coachmen with top hats and cockades. Also pursuing enquiries from Bank if property not eligible for Housing Act loan; might be allowed an overdraft against guarantors.*

MAY 10. *Move in furniture (three weeks before signing lease; occupation permitted through generosity of landlord's solicitors).*

MAY 12. *Letter from LCC confirming inability to recommend house for loan as so much of loan would have to be held back to put house in good repair—not a worthwhile proposition. Surveyor surprised that Whittaker, an architect, would want to buy the lease of such a house. Unperturbed by these unsolicited remarks, guarantor machinery, already set up in case mortgage line fell through, was set in motion.*

MAY 26. *Letter from Bank agreeing maximum of £550 overdraft if "you will deposit the deeds of the house with us as collateral security." In addition, written guarantees were obtained from one relation and a friend. Bank suggested an average monthly repayment of £12; the interest on overdraft is at present 4½ per cent.*

MAY 29. *Sent cheque for £3 4s. to Co-Operative Insurance Society for house and contents (exclusive of fire, covered by policy nominated by landlord).*

JUNE 1. *Sign lease at solicitor's office and pay balance on lease and costs.*

JUNE 14. *Letter from solicitors confirming completion. Signed undertaking to set house in good repair within six months; this was a separate document but formed part of lease agreement.*

JUNE 22. *Visit to MOHLG Exhibition in Holles Street of dwellings converted under the Housing Act (for illustrations of this, see pp. 811-812). Advised by Minister's representative to include in grant application additional work previously omitted; these were the boiler and hot water system, radiators, new floor in back basement, and new larder. Write to IBC same night about this.*

JUNE 26. *Chimneys swept.*

JULY. *With view to moving in before improvements are carried out, spend much time decorating living room where we would camp for time being. Awaiting engineer's department to vet outline specification before preparing details of full and formal submission.*

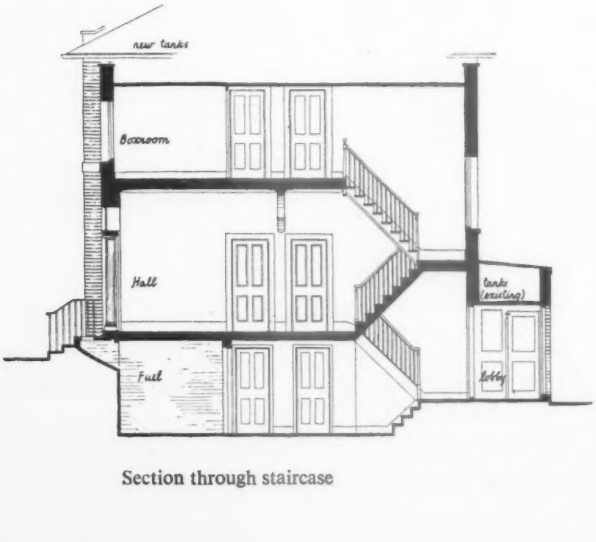
JULY 30. *Felix Walter calls. We examine house together by candlelight.*

AUGUST 10. *Interview Deputy Town Clerk and Borough Engineer who approve scheme in principle.*

AUGUST 14. *We move in (wife, small baby and self).*

AUGUST 27. *Letter from IBC setting out decisions of meeting which in general approved my application.*

SEPTEMBER 2. *Revised form of application under new Act (Housing Repairs and Rents Act, 1955) received from IBC. Since then considerable delays through illness at No. 22. Trying to make house more liveable unti-*



Section through staircase

improvements carried out. Preparing drawings and specifications for formal application.

OCTOBER. *More illness at home—inevitable delays but drawings and spec. progress slowly.*

NOVEMBER 9. *Submit drawings to District Surveyor.*

NOVEMBER 10. *District Surveyor replies "There would appear that no points would arise under the London Building Acts and Bye-Laws."*

NOVEMBER 13. *Dispatch drawings and spec. for tenders from three contractors; copies to ground landlord also for his approval.*

NOVEMBER 16. *Call at IBC. Gather that my application will have to be vetted by Public Health Department as a matter of course. Some consternation, for realise that some ceiling heights too low. To be on safe side, visit P.H.Dept. who agree to send an inspector same afternoon to have a look round.*

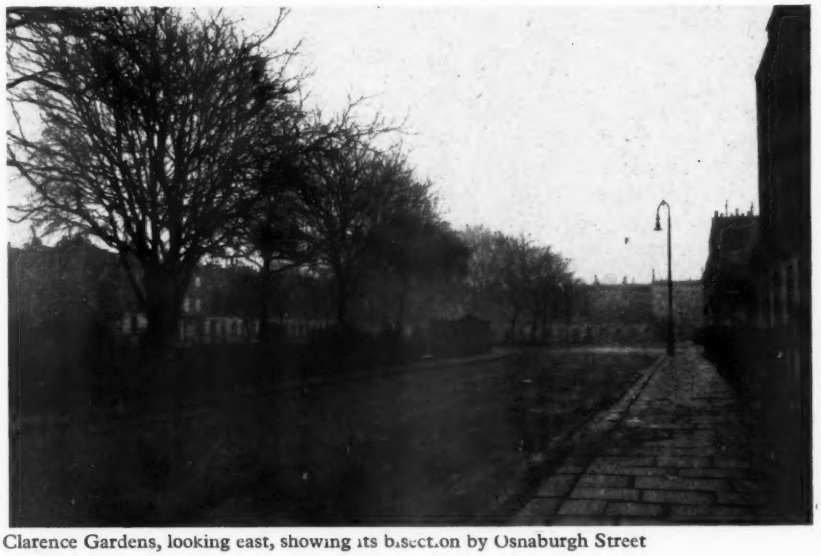
NOVEMBER 17. *Again at IBC. Discuss results of Surveyor's visit, the main points being:*
(a) Basement room height 6 ft. 10 in.—minimum is 7 ft. 0 in. (b) No site concrete. (c) Slight rising damp in partition wall. (d) Inadequate lighting. Basement window area is $\frac{1}{12}$, ·25 of floor area —should be $\frac{1}{8}$, 30 deg. angle of light not therefore met. (e) Opening part of same window too small. It is $\frac{1}{38}$ and should be $\frac{1}{20}$. (f) Front area only 1 ft. 9 in.—should be at least 2 ft. Outside level is only 5½ in. below existing floor level and should be 6 in. If floor level is lowered to meet minimum headroom, it will be only 3½ in. below it. (g) No damp proof course.
The rear basement room falls short in a similar manner but the requirements, apart from the DPC would be met by the spec. (lowering and providing new floor; also french doors).

NOVEMBER 20. *Letter from one contractor. Unable to tender, or at least unable to start work before March* 1955.

NOVEMBER 24. *Telephone conversation with Public Health Inspector who considers little hope of obtaining waivers. Recommended meeting with Chief of Department. Arranged for the 26th. One contractor's tender received—£709. Had hoped for around £500.*

7-10 Clarence Gardens N W 1

Scheme by M O H L G

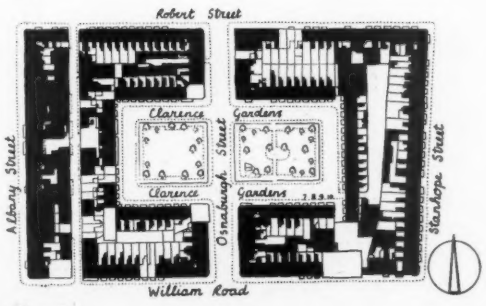


Clarence Gardens, looking east, showing its bisection by Osnaburgh Street

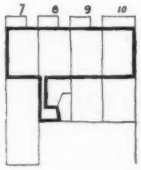
THE SCHEME: *Owing to individual house ownership, property conversion has to be, as a rule, a piecemeal affair; but one can nevertheless appreciate the greater advantages to the neighbourhood and to the single dwelling when large blocks of terrace housing can be overhauled simultaneously and to a similar pattern. Also from the economic point of view there is much to commend this approach. Through haphazard adaptation as a temporary means of housing some of the larger estates in central London and elsewhere have suffered almost irrevocable damage socially; areas before the last war regarded as desirable residential neighbourhoods are now little short of slums and the general standards of repair and decoration add to the sordid squalor of these fine squares and terraces. This call for neighbourhood conversion rather than the separate unit, the group of terrace houses or the square, although the most satisfactory approach, has many complications but nevertheless, at least one authority is preparing a comprehensive scheme on this scale and it would be encouraging to see some of the larger property owners in areas around Marble Arch and Lancaster Gate in London, for instance, tackling this same problem which gets worse year by year.*

In Clarence Gardens and in the streets adjoining to the East and West there are endless numbers of houses which could provide perfectly satisfactory houses from these simple but attractive early 19th century dwellings. The Ministry of Housing and Local Government prepared a scheme more than a year ago to show what could be done here. By horizontal conversion three flats were provided, one on each floor, from two houses.

PLANNING DETAIL: *Unfortunately, this scheme was not fully developed for only a section of the problem was solved. The planning of the flats was quite straightforward as the illustrations show, but the overall picture was ignored. The future use of the basements and back-yard areas was not considered whilst the cost put at £785 per unit for conversion did not include repair expenditure. However, the proposals did at least confirm that these houses were eminently*



Site plan



Nos. 10, 9 and 8 Clarence Gardens, seen from the north-east

suitable for conversion at reasonable expense, assuming that general repair and maintenance costs would not be excessive. Clarence Gardens itself is a large square and spoilt as such by Osnaburgh Street which bisects it into two almost equal areas. This is really a case where the broader aspects of conversion should come to the rescue. As in the case of Eaton Square (AJ December 16), the cul-de-sac atmosphere is ruined by the roadway cutting through the centre and one would be inclined to suggest in this case that the gardens should be united across Osnaburgh Street thereby discouraging through traffic. A pedestrian footpath might link the two sections of the severed street and in this way only vehicles destined for Clarence Gardens or the adjoining streets would use this route; this would reduce vehicle speeds and possible accidents to children playing in the square or on the roadway around it.

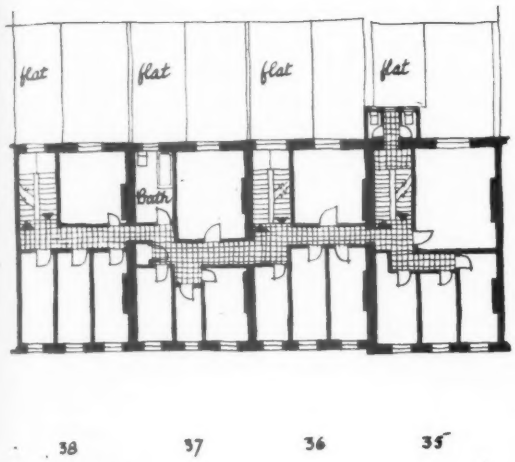
COST : *The Ministry's purpose in staging this scheme, which formed the basis of an exhibition in London, was to show what could be done with this type of property when subsidized by a Government grant. In this case the grant aid would be 50 per cent. of the capital outlay on conversion work only; but, as mentioned above, the total cost is unrealistic for it disregards repair and maintenance expenditure as well as supplementary expenditure for basement and back-yard improvements.*

RATEABLE VALUES : *The properties at present carry rateable values varying from £39 to £44 per house.*

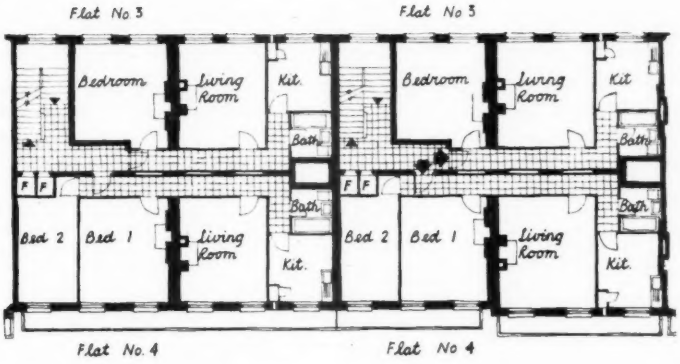
35-39 Dorset Square N W 1

Architect: Guy Nicholl

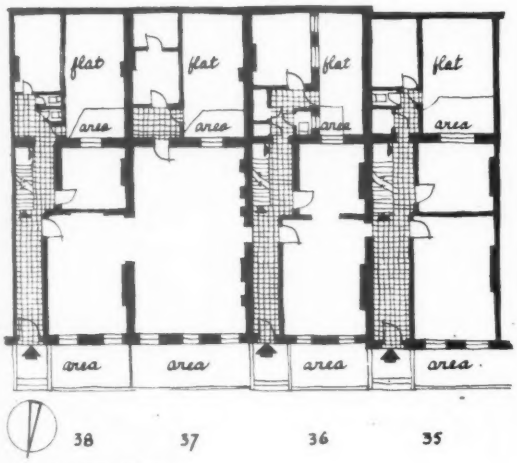
THE SCHEME: *In 1941, Nos. 36 and 37 Dorset Square were hit by H.E. bombs and Nos. 35 and 38 were left gutted. Although written off by the War Damage Commission, these four houses were reclassified later on the condition that the original hereditaments were maintained. The Borough Council of St. Marylebone wished to plan for the maximum number of medium sized flats but the ground landlords, from whom the property was requisitioned, called for a layout which would give eventual accommodation as large flats.*



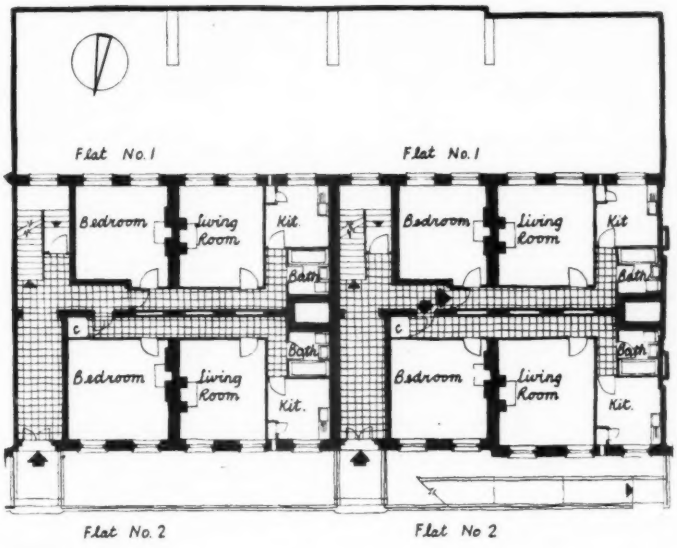
First floor before



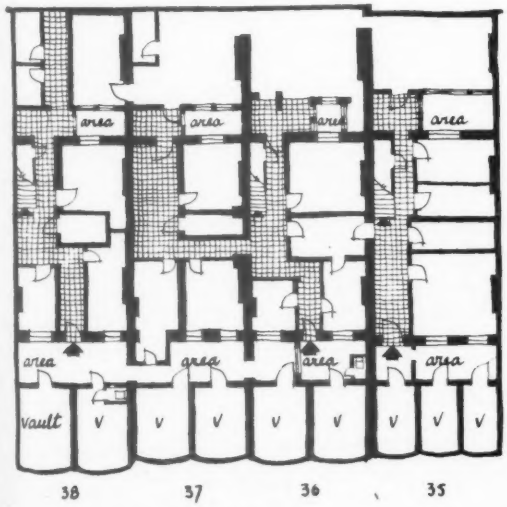
First floor after



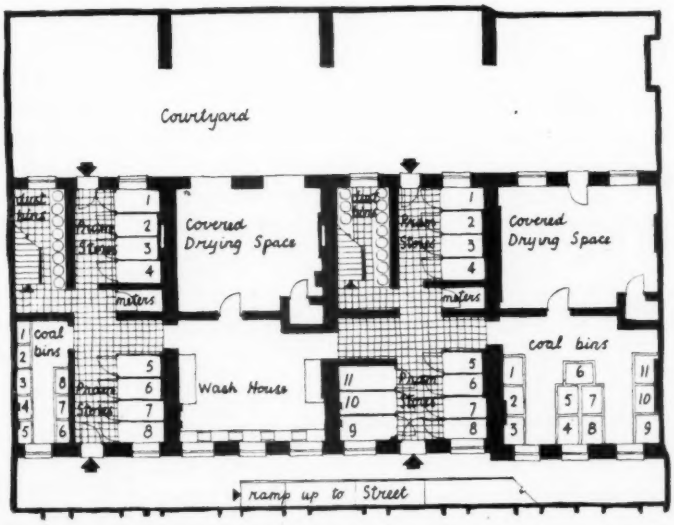
Ground floor before



Ground floor after



Basement before [Scale : $\frac{1}{16}$" = 1' 0"]

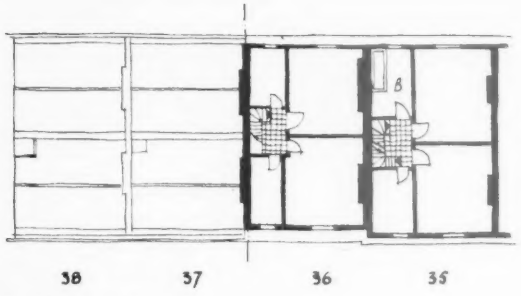


Basement after [Scale : $\frac{1}{16}$" = 1' 0"]

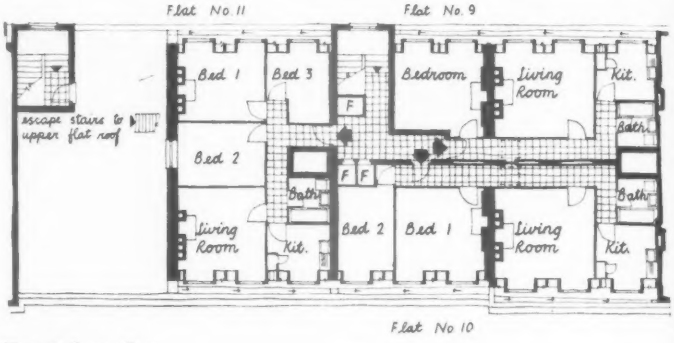
Whilst maintaining the external character of the Square elevation, both short and long term needs had to be satisfied.

PLANNING DETAIL: *To meet this problem, the longitudinal spine wall was punctured at intervals and the openings closed by temporary double skin breeze partitions which could be removed simply at a later date. Thus some flexibility was provided so that the four flats extending over one floor of the four houses could be converted into two flats, with twice the floor area of those illustrated. All outbuildings outside the main rear external walls were demolished. A ramp from basement to pavement level gives easy access to this lower area which contains a fully-equipped laundry, covered drying space, children's playroom, private lockable cycle and pram stores and supplementary fuel bins. The separate refuse bins (shown on the drawings) have since been replaced by one large container to each building.*

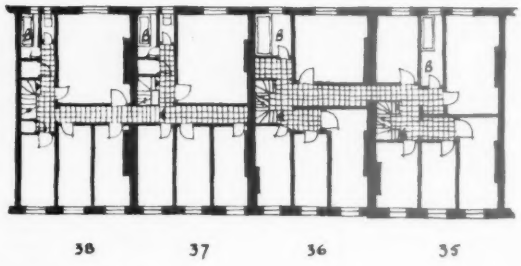
STRUCTURE AND SERVICES: *Due to the multitude of fractures in the remaining brickwork and the absence of footings and foundations, all that remained of the four houses was finally demolished. Although essentially a rebuild, this example in its replanning is typical of the conversion job and it offers services to the tenants which so many omit. All plumbing and services are planned around the large ducts thereby concentrating costly installations around two points on each floor. For this reason, the internal bathrooms are mechanically ventilated.*



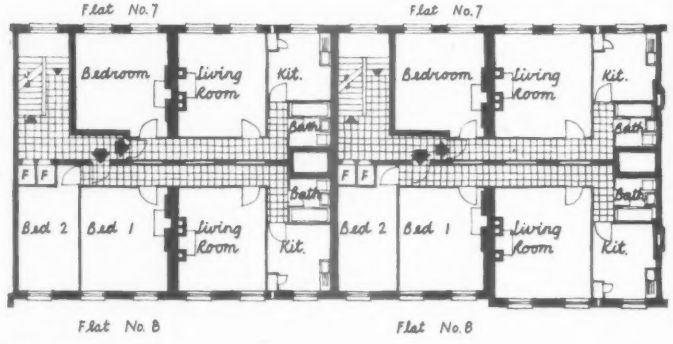
Fourth floor before



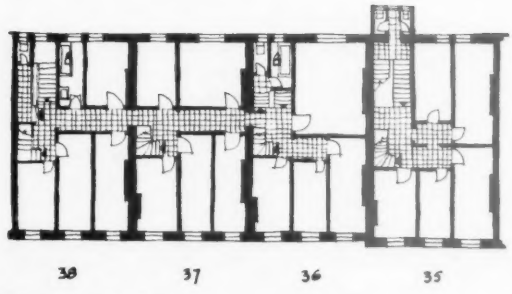
Fourth floor after



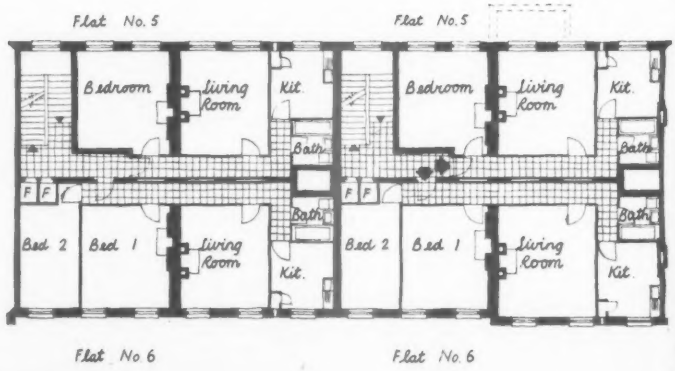
Third floor before



Third floor after



Second floor before



Second floor after

TECHNICAL SECTION

The issuing by the Institution of Heating and Ventilating Engineers of a draft Code for testing heating installations is most welcome. At present the proposed test is restricted to checking that circulation is adequate throughout low pressure hot water systems. It is revealed in the accompanying explanatory note that similar tests for other types of heating systems may follow, and that the question of a standard code for assessing performance in terms of air temperatures in buildings is being considered. The standardized procedure set forth in the code should assist engineers in their final balancing of circuits, and will, no doubt, eventually contribute to improved design. All this shows a praiseworthy desire to ensure that the heating systems designed according to the standard methods of the Institution will give full satisfaction in practice.

This week's special article

18 CONSTRUCTION: THEORY
report of a symposium on high buildings

The number preceding the week's special article or survey indicates the appropriate subject heading of the Information Centre to which the article or survey belongs. The complete list of these headings is printed from time-to-time. To each survey is appended a list of recently-published and relevant Information Centre items. Further and earlier information can be found by referring to the index published free each year.

With High Paddington not entirely forgotten and the Shell centre awaiting planning approval, "High Buildings" was an excellent choice of subject for the Symposium held at the ICE on December 7. Four main speakers took part: Sergei Kadleigh on the social aspect, S. J. Chamberlain of Scotland Yard on the traffic problem, and Professor Barker and Dr. Skempton on foundations. As this was primarily an engineering event we print the report prepared by our Specialist Editor (No. 14) for structural engineering.

In his planning paper Mr. Kadleigh traced social developments through the last 150 years for his explanations for the reluctance up to the moment to produce really high buildings, *i.e.*, 200 ft. or more in height. He referred to the efforts of Cadbury and Rowntree in their model towns and to the "Garden City" theories applied to Letchworth and Welwyn and showed how our planners had developed the "garden city" mind to the extent that the only solution to overpopulation is to deposit the overspill elsewhere—usually to the detriment of agricultural land. This is a solution which takes no account of the personal attachment of the individual to the city, which he regards as his own; and certainly fails to appreciate the multiple usage of areas within the city where high buildings could be erected. Once built, such

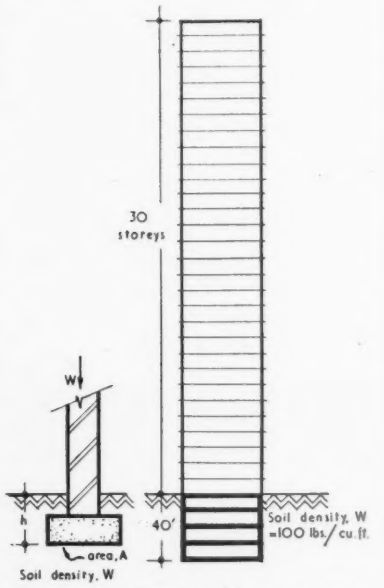


Fig. 1. Diagram illustrating "gross" and "net" pressure.

buildings could rehouse the people living in the overcrowded property around them which could then be demolished to provide parks and open spaces.

THE TRAFFIC PROBLEM

The high building does also bring its disadvantages, particularly where it is applied as an office building in the city. For example, the new Shell Centre will concentrate 6,000 or 7,000 people between County Hall and Waterloo Bridge who are at present housed at various smaller buildings in the City and the problems of getting them there and dealing with the concentration of traffic have also to be considered. Mr. Chamberlain advocated improvements in street layout to deal with traffic circulation and arrangements for providing parking space off the highways. The existing street layout can be amended in many ways to provide roundabout working, one way systems, prohibition of right-hand turns, further traffic control signals and signs. Such provision deals only with the immediate area of intensified building and does not solve the problem unless it is coupled with radial roads or, better still, with a ring road round the congested area to which all main radial roads can be linked. In regard to parking space the high building must provide parking space underneath or at roof level and squares and open spaces in the vicinity must be considered for parking underground.

The meeting generally endorsed the opinion of both Mr. Kadleigh and Mr. Chamberlain but there was some criticism of the former's hope that the "hill-town" would provide both home and business occupation for the majority of its inhabitants on the ground that it would only be a matter of time before the occupants lived in one high block and moved to various other high blocks thus making traffic movements even more complicated. Another criticism of the Paddington Scheme was that while it might be desirable to build over Paddington Goods Yard it seemed impossible to do so without completely disorganizing that vital marshalling yard until the structure had reached an upper floor level. Questions on the cost of building upwards compared with developing outwards received the usual non-committal replies: certainly there are many aspects which must be considered other than the immediate comparison of the cube cost of high flats and ordinary houses, though it is interesting to note that this country is one of the few where that comparison shows the ordinary house to be cheaper.

STRUCTURAL PROBLEM: WIND PRESSURE

Turning to the structural aspect of high buildings, the two problems which require earnest consideration are those of wind pressure and foundations. These were dealt with most adequately by Prof. A. L. L. Baker and Dr. Skempton. There are various ways of dealing with wind effects in buildings. Floors can span horizontally to carry shears to end walls, but in a high narrow building the walls would be very thick and costly. Alternatively, a number of thinner cross-walls can be constructed at frequent intervals. These last, however, would limit flexibility and though acceptable in flats would be an embarrassment in an office block. It is possible to use brick panelling as bracing within a reinforced concrete framework but the cost may be higher than using light partitions and making the framework alone capable of carrying the wind blocks. Research work is still proceeding on brick panelling in a structural frame and there does seem some possibility that the structure may be excessively overstressed before it deforms sufficiently for the panelling to come into action as effective bracing. For a high building which is to enjoy maximum flexibility in planning the only real solution is to design an unbraced framework which cantilevers from the ground as a vertical vierendeel frame. The usual treatment assumes points of contraflexure at the mid heights of the columns and the bending moment at the top or bottom of a column is then the accumulated wind load at the top of the column multiplied by the half height of the column. Professor Baker stated that this is approximately correct for continuous elastic conditions in the upper storeys but may be incorrect in the lower storeys where the stiffness ratio is low. All the same, for ultimate conditions of load such assumptions are nearly always true. Professor Baker therefore made a strong plea for the use of plastic theory design in reinforced concrete frameworks as has already been applied to steel frameworks. He provided one such solution in his paper, together with an application of the method to a four-bay frame of any number of storeys in height. The immediate thought which one has when considering reinforced concrete at all is that it is a material of somewhat varied parts; workmanship enters into its making at so many stages that there may be little uniformity even in one member. Unlike steelwork which can be subjected to a more rigid control, concrete is a brittle material, and it is this aspect which one views with some concern when applying plastic design to reinforced concrete without a vast experience of both the material and the behaviour of the structure.

DESIGN OF RAFTS

Prof. Baker's contribution on foundations was limited to his experiences in designing raft foundations for high buildings in South Africa and some advice on rafts generally. It is a common occurrence to find rafts designed as reversed floors in which the average ground pressure takes the place of the floor load. Prof. Baker considers this to be quite wrong as it takes no account of differential settlement of columns which might cause the raft to deflect as a whole. In this respect the stiffness must have an influence on the behaviour of the raft, the more flexible the raft the more it behaves like the reversed floor, the more stiff the raft the more it is likely to deflect as one member, thus producing quite different bending moments.

Prof. Baker considers that rafts should generally be as flexible as possible up to the limit at which the deflection under the worst conditions of load can be allowed, having due regard to the nature of the superstructure. A figure of 1 inch in 1,350 inches has been suggested as a suitable figure for brick or stone clad buildings.

REVIEW OF FOUNDATIONS

The last paper, by Dr. Skempton, must rank as one of the finest reviews on foundations of tall buildings which has ever been prepared. Dr. Skempton remarked that when he started to find the material for his paper he was himself surprised at the little recorded matter concerning actual constructions. Most of his examples were provided by experts throughout the world and were hitherto unpublished. He reviewed the trend of foundations from the late 19th century to the present day showing how, in the last 50 or so years, foundation techniques have improved to enable high buildings to be carried on almost any reasonable soil.

Modern techniques have, then, provided three types of foundations: spread footings of reinforced concrete or steel grillage, reinforced concrete rafts, and piles of reinforced concrete, steel or timber and concrete caissons. Of these the spread footing is the simplest and is the usual solution for low buildings.

GROSS AND NET PRESSURE

Dr. Skempton uses the words "gross" and "net" pressure in connection with all types of foundation and to avoid confusion we will explain the terms. In Fig. 1 the simple strip footing plus the loaded wall has a weight W. The gross pressure at the underside of the foundation is $\frac{W}{A}$ and there is an attempt to squeeze out sideways and upwards the soil under the base. This is resisted by the height h, and weight wh, which attempts to squeeze the soil down again. W being the soil density. This value wh can be added to the allowable bearing pressure to oppose the base load or can be deducted from the gross pressure under the base to provide a "net" pressure of $\frac{W}{A} - wh$.

The importance of this will be seen in the tall building shown in Fig. 1. Suppose this has a roof, 30 loaded floors and a double basement, then the average gross pressure at the underside of the basement is, say, 33 × 250 lbs. per sq. ft. or approximately 3.7 tons per sq. ft. The net pressure however, owing to the deep basement is only 3.7 − 40 × 100/2.240. *i.e.* 1.9 tons per sq. ft. This reduction of pressure in the case of deep basements can only be applied if the whole structure acts as one member resisting the soil pressure.

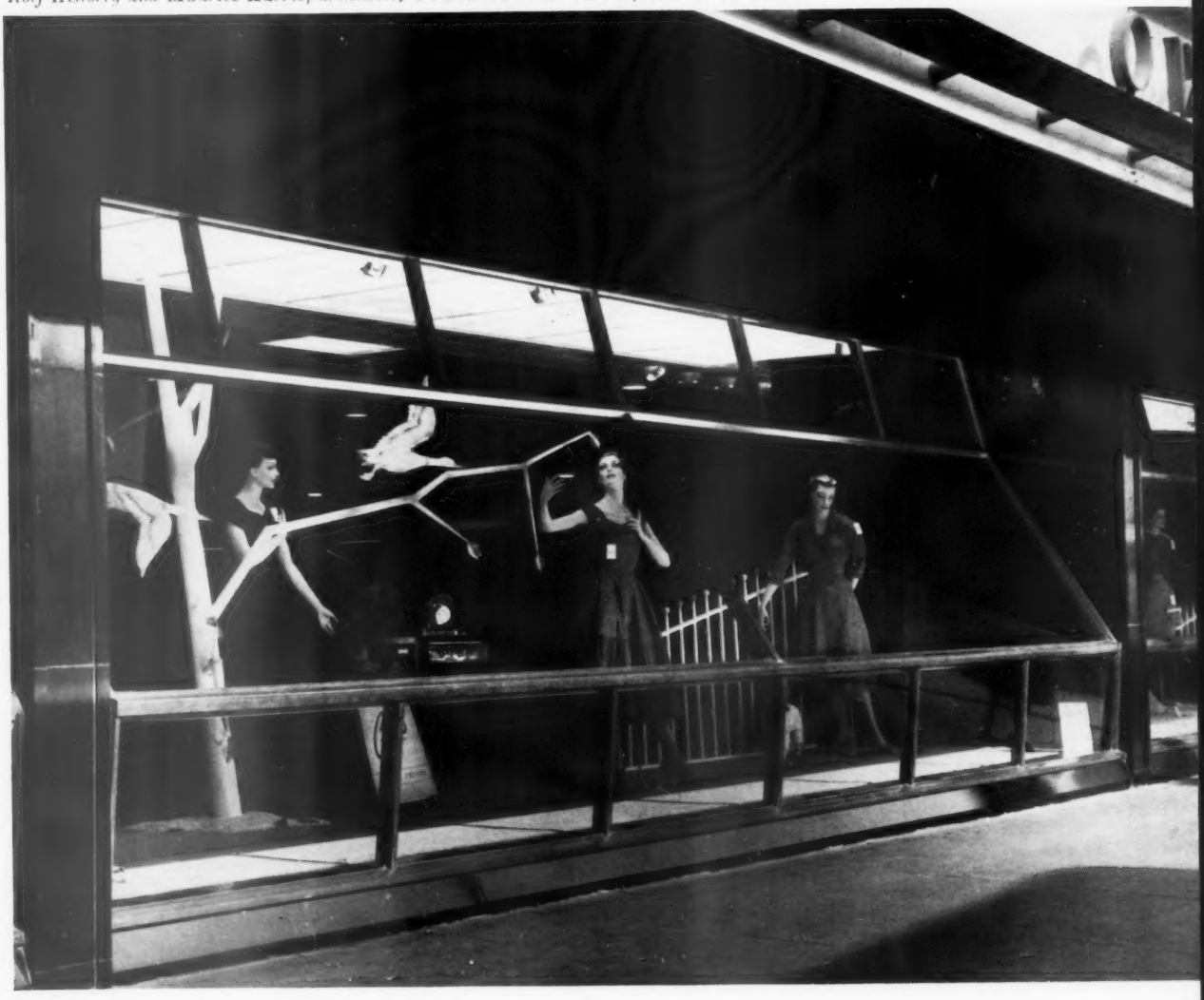
SOIL MECHANICS

Returning to the types of foundations, the spread foundation will be used provided the allowable bearing pressure can be chosen to give an adequate factor of safety against shear failure in the soil and to ensure that the settlements are not excessive. This is particularly important with regard to differential settlements and it may be noted here that settlements for a given pressure increase with the width of the footing. This variation is almost in direct proportion in clays and to a less degree in sands. Because of the overlapping of the spread from adjacent foundations there is a tendency for uniformly loaded foundations to settle more at the inside of a building than at the outsides and it is therefore sound to use a slightly larger pressure under the smaller sized bases and for the bases at the outside of a building. Sands and gravels are easier to deal with

WORKING DETAIL

SHOPFRONT: DEPARTMENT STORE IN BROADGATE, COVENTRY

Rolf Hellberg and Maurice Harris, architects; P. Beard and M Jarrett, assistant architects



The essential idea behind the design of this non-reflecting display window (for which a patent has been applied for by the designer) is to slope the different planes of glass in such a way that, for viewers in the street, there are no reflecting surfaces to disturb vision. This is achieved mainly by tilting the section of the glass which is at eye level so that the light is reflected at an angle which strikes the light-absorbing surface of the canopy soffit.

WORKING DETAIL

SHOPFRONT: DEPARTMENT STORE IN BROADGATE, COVENTRY

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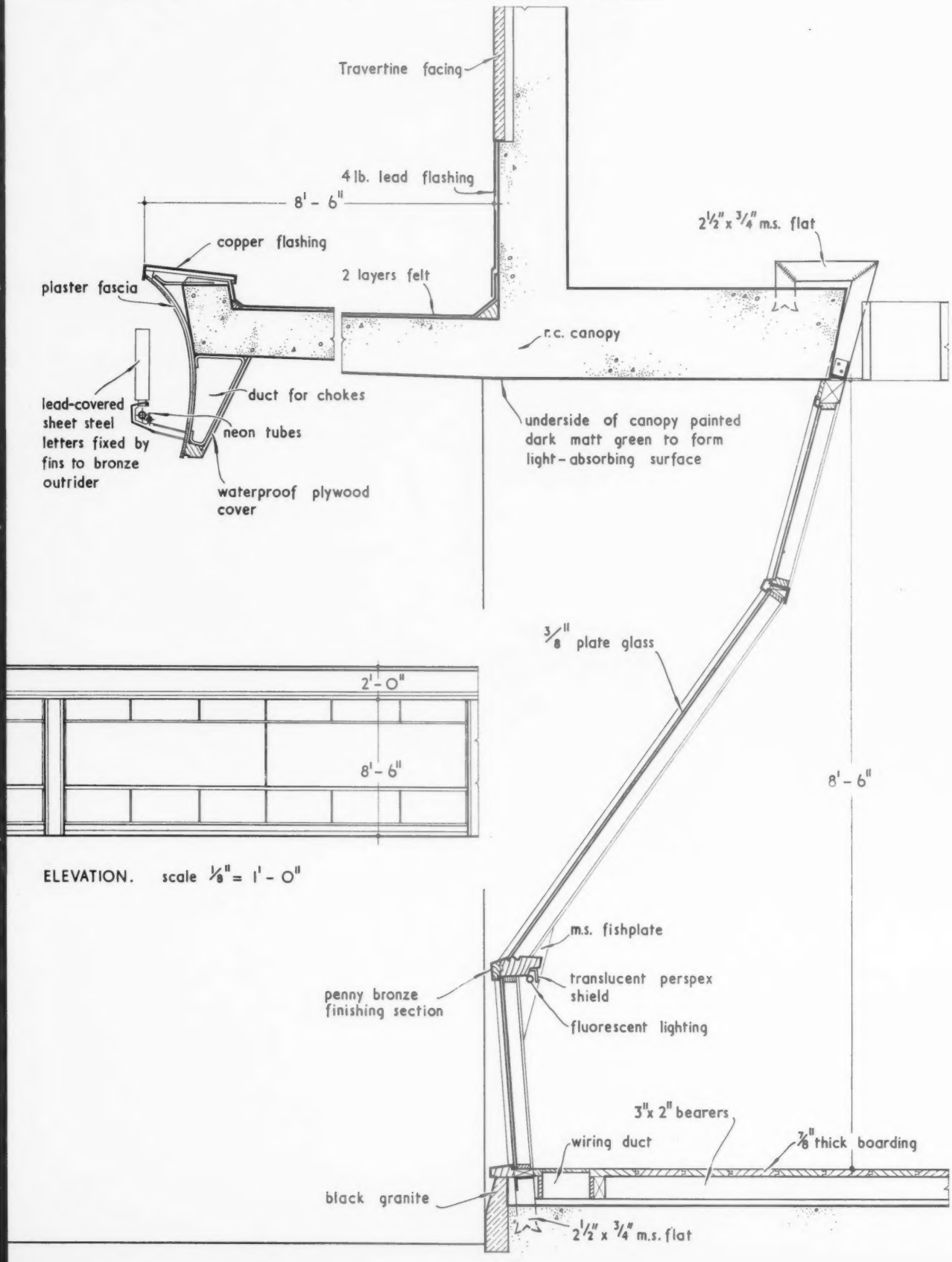


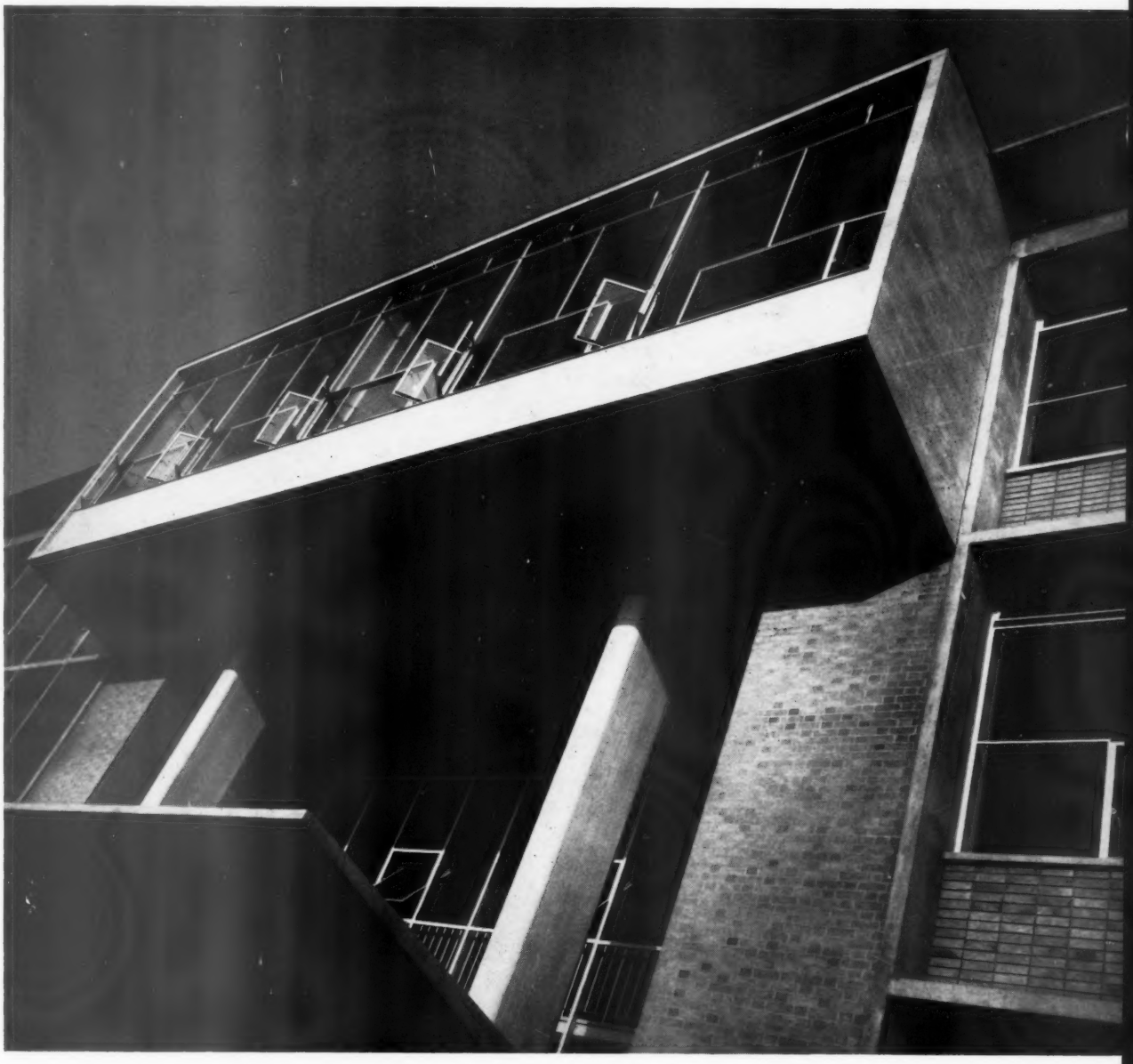
ELEVATION. scale ⅛" = 1' - 0"

VERTICAL SECTION THROUGH DISPLAY WINDOW. scale ¾" = 1' - 0"

WORKING DETAIL **WALLS AND PARTITIONS: 18**

MARBLE FACING: OFFICES AT WYTHENSHAWE, MANCHESTER

Cruickshank and Seward, architects

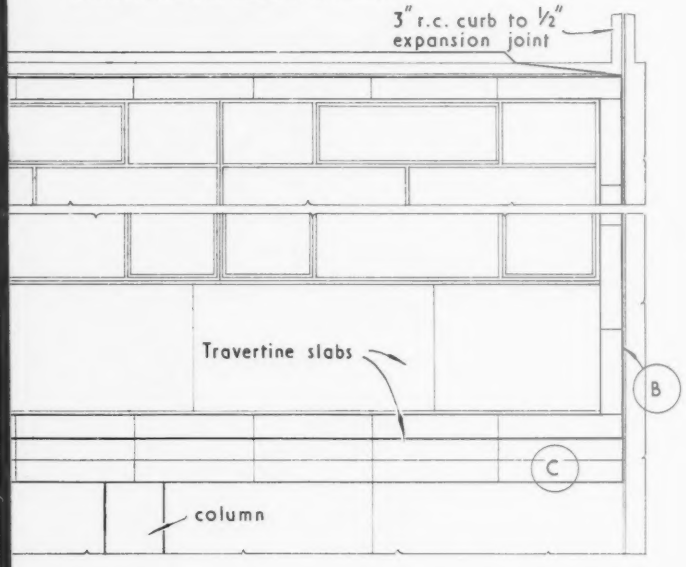


The large slabs are fixed by bronze strappings (two to each slab) and the small slabs by wire cramps (four to each slab). The precise position of these fixings is left to the craftsman on the site since it must be determined by the structure (and capacity for drilling) of each separate slab. Mitred joints are birdsmouthed to avoid a feather edge. Joints between slabs are effected with cement which is toned to the exact shade of the slabs.

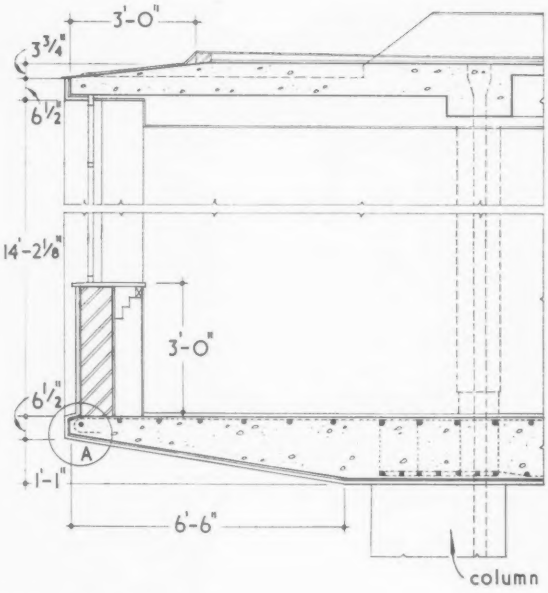
WORKING DETAIL **WALLS AND PARTITIONS: 18**

MARBLE FACING: OFFICES AT WYTHENSHAWE, MANCHESTER

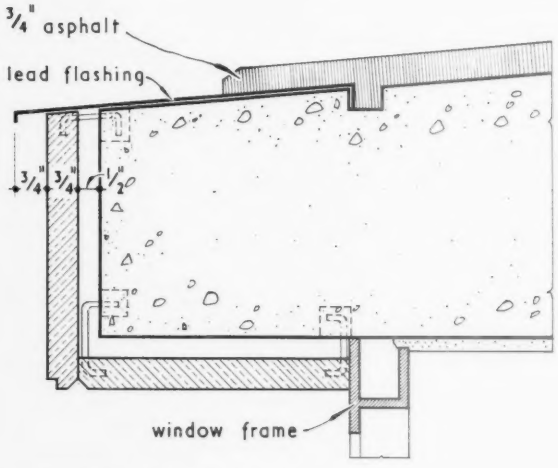
Cruickshank and Seward, architects



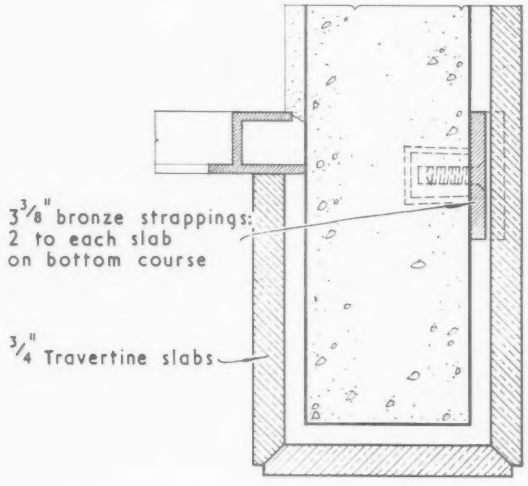
KEY ELEVATION. scale ¼" = 1'-0"



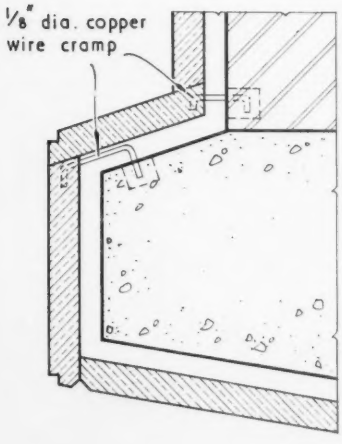
KEY SECTION.



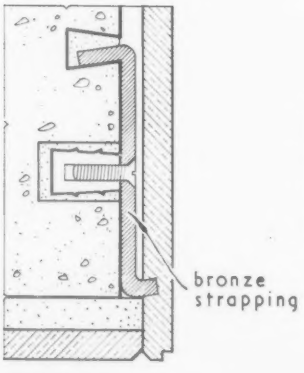
SECTION AT ROOF.



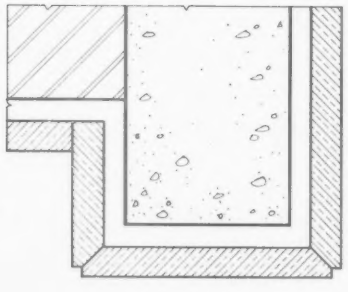
PLAN OF JAMB AT WINDOW LEVEL.



DETAIL AT 'A'.
scale ¼ full size



DETAIL AT 'B' AND 'C'.



PLAN OF JAMB UNDER WINDOW.

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14. Permanent shuttering to concrete walls.
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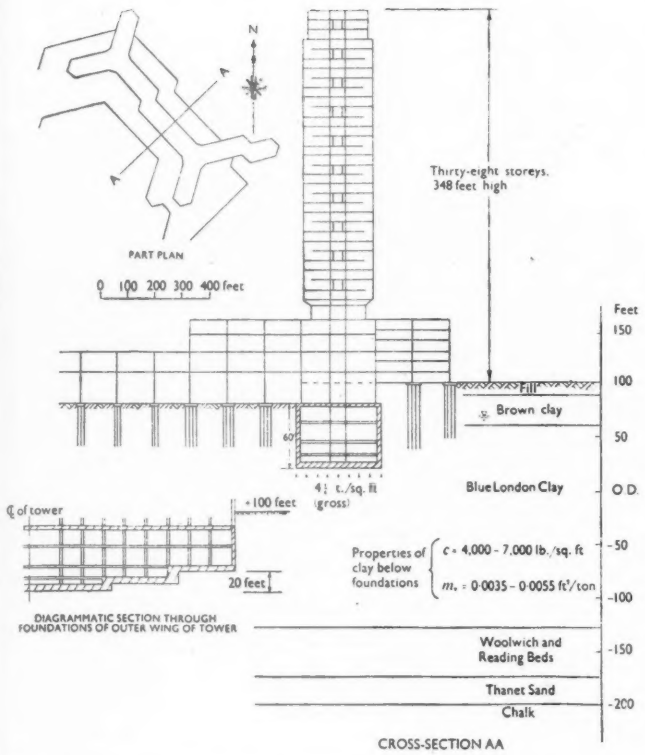


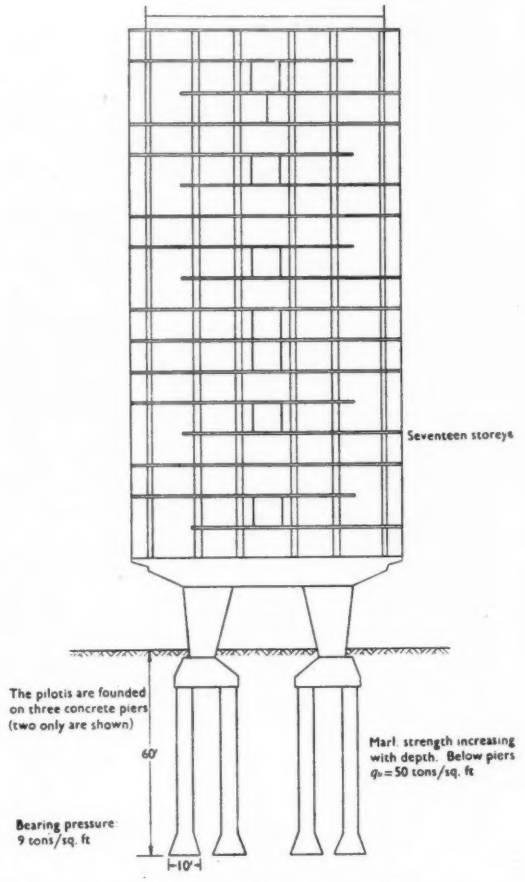


Fig. 2 (above). Diagram showing the foundations proposed for the High Paddington scheme (architects: Kadleigh and Horsbrugh; foundation consultants: A. W. Skempton, associated with Ralph Freeman and R. T. James). Fig. 3 (right). The foundations of the Unité d'habitation, Marseilles (architect: Le Corbusier, engineer: V. Bodiansley).

than clays as the settlement takes place quickly and is probably complete by the time the building is completed. Small scale loading tests can therefore be accepted as a means of assessing settlement in sands and quite large pressures can often be used where the sand is not underlain by softer layers. The C.B.I. Esplanada Building in Sao Paulo, 30 storeys in reinforced concrete, has strip footings with pressures as high as 5½ tons per sq. ft.

Clays, however, are liable to long term settlements and can cause more trouble. The ultimate bearing capacity can be obtained with some accuracy from tests on undisturbed samples when a factor of safety of 2½ should be applied. Modern type office buildings or flats can be built up to twelve storeys on London clay with spread footings about 10 ft. wide.

In view of the settlement problems in clay it is therefore essential to limit the net pressure to some small figure, say, 1½ tons per sq. ft., when considering high buildings and here the raft foundation and the basement are a great help. Fig. 2 shows the High Paddington foundation treatment. Despite the size of this structure the net pressure is only 1 ton per sq. ft. Note also the manner in which the basement is stepped at the outer wings to give a higher net pressure. The peculiar star shape of the structure is partly determined by the necessity to provide stability against tilting. Of course, deep basements have their difficulties both from the construction cost and technique.

PILES FOR MARSEILLE'S UNITÉ

Piles are sufficiently well known in all their various forms to avoid reference here but Fig. 3 is rather interesting as it provides a view of Le Corbusier's Marseilles Block which we do not often see, *i.e.*, the three piers under each "piloti" sharing a load of 2,000 tons. The piers are 5 ft. in diameter and 50 ft. deep, belled out to 10 ft. diameter at the bottom to give a pressure of 9 tons per sq. ft. on the marl which has a compression strength at this point of 50 tons per sq. ft.

Two points which were not the subject of papers were touched on in the discussion: floor and cladding loadings and fire protection. These are subjects on which the JOURNAL will report in the near future.

INFORMATION CENTRE

6.47 planning: social and recreational

NURSERY SCHOOLS

Nursery Schools Today. Nursery School's Association. (University of London Press Ltd., 1954, 2s. 6d.)

A fairly elementary little booklet but one which states in clear and simple language many of the results of careful examination of the subject and results from schools which have been built. Architects with a nursery school to build should certainly read it. Among useful details are full descriptions and sketches of well-designed sandpits—a feature which so often is incorrectly built.

6.48 planning: social and recreational

GROWTH OF GRASS

Inhibiting Grass Growth with Maleic Hydrazide. by E. R. Webber. Vol. 20 No. 1. pp. 23-27 (Parks and Sports Grohnds. October, 1954.)

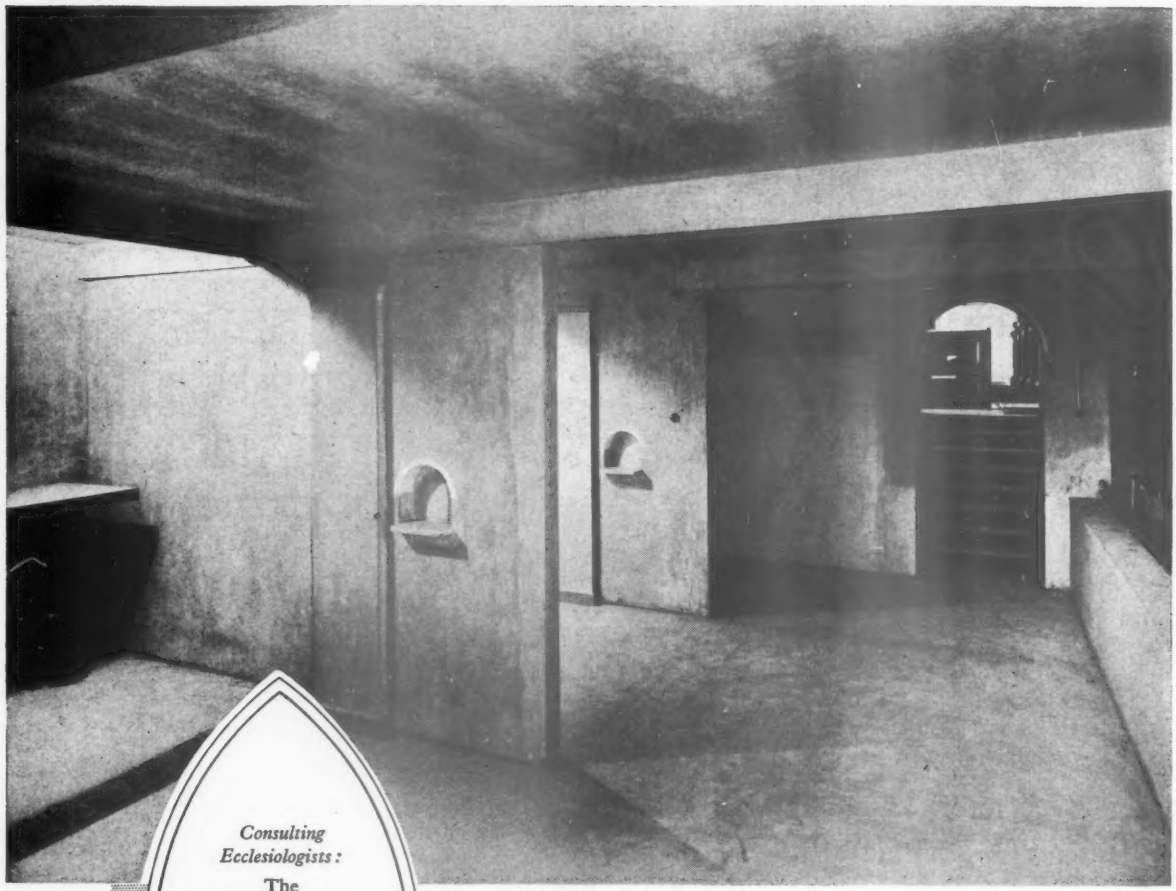
Maleic hydrazide, a derivative of hydrazine the rocket fuel, has been found to have the power of retarding the growth of most kinds of plants.

Although it is being used for such purposes as the prevention of sprouting potatoes and onions, the retarding of growth in hedges, the artificial "stopping" of flowers and so on, it is in its use on grass that most interest at present is centred. Maleic hydrazide, or MH as it is more usually called, is a growth inhibitor not a weedkiller and when used in recommended dosages will cause no lasting harm to plants. It is applied in the form of a spray and is absorbed by the plants over a period of about 36 hours after spraying and is then translocated downwards during the next 10 to 12 days during which time the grass must not be mown. Heavy rain up to 12 hours after spraying will seriously affect the result and the spraying is best carried out, if possible, when no rain is expected for 36 hours.

Spraying can be done during the spring, summer and autumn, but is not recommended during the winter when the plants are dormant.

A spring application when the grass is about three inches high will inhibit the growth of the grass for 10 to 14 weeks and with one or two more sprayings the growth can be controlled for the whole growing season.

Tests carried out by research organizations and interested firms showed that on fine turf too much damage was done to recommend its



Consulting Ecclesiologists:
The Brothers Anthony and Ældred Bartlett, of B.O.W.S & Bartlett Ltd.

Contractors:
Messrs. Walker-Symondson Ltd.

In the construction of the Crypt, excavated below the Sanctuary area in the Chapel of the Jesuit Theological College at Heythrop Hall, Enstone in Oxfordshire, protection against the penetration of water that is liable to surround the structure to a depth of 2 feet above the floor level, was provided by the inclusion of 'PUDLO' Brand Waterproofer in the concrete floor and wails. Housed within the Crypt are six Chapels, each containing a stone altar on a raised predella, credence recess and concealed electric light. Entrance is by flights of steps leading down below the Sanctuary floor. One half of the Crypt is shown in the illustration. Descriptive booklet and the Specification No. 5A worked to in this case will be sent on request.

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use for lawns, putting greens and the like, but on coarser grass where a smooth sward is not so essential—such as roadside and path verges, orchards, parts of golf courses, churchyards, cemeteries, and so on—the growth can be effectively controlled with only a slight discoloration of the grass. There is no risk of poisoning and no special precautions are necessary in its handling.

Thus it would seem that although the possibilities of using MH on fine turf are limited there may be good opportunities for its use on areas of rougher grass where the labour costs of mowing are high.

There is at present one commercial brand of Grass-Growth Regulator obtainable by responsible bodies such as Borough and County Councils but the general public is not to be supplied until some more experience has been gained in the use of the chemical.

6.49 planning: social and recreational
AIR POLLUTION

PEP (*The Menace of Air Pollution*). (Planning: Vol. XX, No. 369. Aug. 16, 1954.)

A general resume of the issues entailed which appears at a topical time when the full consequences of the great London fog have become known.

6.50 planning: social and recreational
HOSPITALS

Hospital Planning Requirements. Guy Aldis, A.R.I.B.A. (Sir Isaac Pitman & Sons Ltd. 85s.)

Mr. Aldis knows far too much about the problems of hospital design to attempt to put forward "ideal" plans. Hospitals are made up of a multiplicity of departments related to each other in much the same way as are buildings and zones in a town: although each is to some extent self-contained, yet it is dependent for its proper functioning on its position in the whole complex. For example an X-ray department, no matter how perfect, must be easily accessible from outpatients or it will not be a success, much as a shopping centre must be easily accessible from the residential area in a town.

There is also a client for each department, very much bound up in the work of the department and not always able to picture his position in the whole. An ideal plan for the complete hospital or for its various parts would presuppose all special departments working in the same way up and down the country and all hospitals made up of the same specialties related to each other in the same way.

Very few architects can spare the time to study each department, analysing accurately the needs arising from the pattern of work. Mr. Aldis's book provides landmarks for an architect brought into the gigantic and almost chartless field of hospital design. He takes each hospital department separately and sets out its basic needs as to planning and equipment as a skeleton scheme, which the architect can develop with the aid of the specialists concerned. He also gives information on the essential inter-departmental relationship. If there is one criticism which may be made, it is that some of his detailed proposals are controversial. That is to say, while they may have proved to be very suitable for a particular specialist their advantages are not sufficiently manifest to warrant uncritical acceptance. However, as any architect knows, who has had to deal with hospital design, his proposals are unlikely to be accepted uncritically!

9.48 design: general
ARCHITECTURAL REFERENCE

Schedario Di Architettura. Edited by Marcello Rutelli: Pub. D.E.I. Via Reggio Emilia, 32. Roma L300 per issue.

The Italian publishing house D.E.I. has started what might be freely translated as an "illustrated architectural reference," which aims at classifying and recording for reference the most interesting items which have appeared in the architectural papers. These are recorded by means of a few key illustrations to each subject. printed on sheets 8 in. × 5½ in. designed for filing, and are published, 30 items at a time, in lightly gummed blocks which appear every other month, collectors of the series being supplied with files to match.

This is a formidable undertaking, particularly as it includes Town Planning, Interiors and Furniture.

The editor of the Schedario is an architect, Marcello Rutelli: on whom, presumably, agonizing decisions must fall. It would be interesting to know if his choice is made according to the stylistic allure of the subjects or according to the adequacy of the original articles to which the user is referred.

10.116 design: building types
CLIMATE AND ARCHITECTURE

Climate and Architecture by Jeffrey Ellis Aronin. Pub. Reinhold. Price £5 0s. 0d. (Published in England by Chapman and Hall.)

While we are still in the stage of re-analyzing the basic determinants of our architecture and town-planning, it is good to find an architect who has assembled much of the relevant data about one of the most important of these determinants—that of climate. And it is in the study of climate, as much as anything, that we can see emerging the architectural influence of science on man's environment. Until, for instance, scientific methods of accurate measurement and recording developed, the effects of climate could only be estimated by long-established custom or by rough guesses, and even these were largely submerged by other determinants, such as social customs or literary allusions.

This book is, in fact, the first attempt, and a very praiseworthy one, to make a comprehensive study of climate as a major influence on architectural and urban design. It is also part of the very important "bridging-the-gap" process, whereby collaboration between experts enables the discoveries of one to be more fully understood and used by the others.

After beginning with an interesting historical introduction, the author deals with each of the principal climatic phenomena in turn, *i.e.*, the sun, the wind, and the rain; sets out the relevant scientific facts about each, poses the problems which they present to the architect, and illustrates attempts which have been made to solve them. In dealing with sunlight, for instance, almost all the known methods of computation are described, particular credit being given to the British B.R.S. studies. The various architectural problems of sunlight are then described, chiefly as light and warmth giver in the North, and as something to be protected against in the South. (Although the book is based on American experience, much of it has general application.)

Then follows a series of well chosen examples, which extend beyond the narrow confines of building to include that vital component of architecture—planting. All the way through the book deals with the various aspects of climate in this broad and sensible way, so that, in spite of certain irrelevancies, and a degree of flippancy that is not adequately excused by the author's objective of making the book readable by the general public, it is a most useful work of reference.

Mr. Aronin is well acquainted with the work of many of the pioneers of the contemporary movement in architecture, and introduces their experiments at appropriate places. He rightly nails the absurd claim which is sometimes made that le Corbusier invented the brise soleil, but carries absurdity even further by attributing it to the inspiration of Papadaki. As was made clear at the recent London Conference on Tropical Architecture, it has been a common use in the East for centuries, together with several other well tried methods of sun control which have still to be "discovered" by Western architects.

There is an interesting section on the planning studies of Messrs. Meyer and Whittlesey for Chandigarh. They brought in the American climatologist, Dr. Landsberg, to make a climatic and micro-climatic survey before they began their master plan, and one hopes that this attitude of mind is carried right through to the completion of the job by Messrs. le Corbusier, Jeanneret, and Fry's Indian colleagues.

The format of the book, which is by Papadaki, is excellent, and the illustrations are exceptionally clear, but the price at £5 is out of reach of many architects in this country who would most benefit by having it by them for reference.

10.117 design: building types
COWHOUSE EQUIPMENT

Cowhouse Equipment. BS 2505: 1954. (British Standards Institution 2s. 6d.).

One of a series of BS's for farm buildings and their equipment, this deals with mangers and stall divisions. Two types; one in concrete and the other in tubular steel.

10.118 design: building types
MILKING PARLOUR DOORS

Wood Doors and Frames for Milking Parlours. BS 2504: 1954. (The British Standards Institution 2s. 6d.).

Prepared at the request of the Timber Industries Standards Committee, so presumably there must be some demand though one would have thought that most farmers would hardly bother with a BS for such things. Covers both flush doors of factory manufacture and also a framed, braced and matchboarded type suitable for local workshops to make. Metal sheeting of inside of lower half of door is recommended.

13.121 materials: timber
BEETLE ATTACK

Insect Infestation of Churches. A. W. McKenny Hughes. (Journal RIBA, Aug., 1954.)

Brief and clear description of types of beetle, habits and methods of attack. Where to look for them and how to treat. Also some interesting notes on other forms of insect attack and effect on woollen materials such as carpets, hassocks, etc., and also notes on insects which attack books and papers.

14.71 materials: concrete
AGGREGATES

Concrete Aggregates From Natural Sources. (British Standards Institution, 2s. 6d.) B.S. 882, 1201: 1954.

B.S. 882 is for aggregates for concrete and B.S. 1201 is for aggregates for granolithic. These revised specifications do away with the old division of aggregates into Classes A and B which had proved to be unsatisfactory. Grading of fine aggregates is now based on division into four zones, varying from coarse to fine gradings. Aggregate from any of the four can be used for concrete, but for high quality concrete the proportions of fine aggregate to coarse needs to be varied according to which zone grading of fine aggregate is used.

All this is very important if good concrete is to be obtained and architects must learn to specify in some detail rather than by a general reference such as: "in accordance with the latest B.S." Whether, having specified properly, they will find builders cooperative in obtaining aggregates which really comply with the specification, is another matter. In some districts the suppliers of aggregate still seem very unwilling to take the B.S. seriously.

14.72 materials: concrete
CONCRETE MIXING AND PLACING

A Study Of Concreting Methods on Housing Sites. Material Building Studies Special Report No. 23. (HMSO 1954, 2s. 6d.)

Results of detailed studies by BRS. Of special importance to builders but, as the results show how much good organisation as well as new types of plant can affect the cost of concreting, architects should be interested and ought to be in a position to discuss with their builders the ideas and results contained in this report.

There is first a detailed description of concreting by normal methods of mixer and wheelbarrow. Here productivity per man-hour can vary to an astonishing degree and it is clear that the rather happy-go-lucky arrangement one sees so often should not be allowed to continue. Possibly it is in this field that the architect could do most good by being able to spot the essential points and make suggestions to builders. The latter part of the report deals with newer ideas on plant in which more elaborate means are used to move the concrete from mixer to final position. Before dismissing the ideas as quite impracticable because the appearance of the plant makes it look expensive, read on and see the results produced. The cost figures, allowing for plant, are most impressive.

17.105 construction: general
BUILDING CODE

National Building Code of Canada 1953. National Research Council Canada (Scientific Liaison Office. 23s. 0d.)

While not of direct interest to architects in this country, this revised Code is of value to anyone concerned with similar documents. It is essentially a code of minimum requirements for use by local building authorities. Its chief interest lies in the way it is divided into sections dealing with:—Administration, Climate, Use and Occupancy, Design (this is sub-divided into General, Foundations, Wood, Masonry, Plain Concrete, Reinforced Concrete, Steel, and Cladding), Materials, General Services, Plumbing, Construction, Safety Measures.

The section dealing with Use and Occupancy is especially interesting and lists requirements of all kinds for a wide variety of buildings which are classified into groups. It includes not only the usual items such as lighting, ventilation, fire escapes, etc., but also such things as Dust Explosion Pressures and Size of Crawl Spaces. A very useful guide and very clearly set out. One wishes our own regulations could be standardized and set forth as clearly.

18.157 construction: theory
PRESTRESSED CONCRETE DESIGN

Prestressed Concrete. Gustave Magnel. (Concrete Publications Ltd. 1954. 20s.)

Third edition of Professor Magnel's well-known book on theory and practice of prestressed concrete.

Additions to the second edition include a very useful table of dimensions of beams for spans of 50 ft. to 164 ft. and various loads together with the number of cables required. In the section dealing with tests, new items include tests to failure on a mast in the form of a Vierendeel girder and a slab prestressed in two directions. A fairly simple method of calculating the ultimate strength of beams is based on tests made on full-size beams. Details are given of fatigue tests and of resistance of beams to extremes of temperature and to dynamic loads. The section on applications includes new bridges, building frames, and a flat-slab floor.

25.111 water supply and sanitation
HYGIENE

Architectural Hygiene. Sir Banister Fletcher, Major H. Phillips Fletcher. (9th Edition. Pitman 1954. 25s. 0d.)

This is the 9th and revised edition of a book which is well known. It is brought up to date on legislation but other parts of the book show very clearly that even in its present revised form it inherits much of the material included from a bygone age. Plans of some of the houses and other buildings bear little relationship to modern practice.

25.112 water supply and sanitation
DRAINAGE AND SANITATION

Sanitation Drainage and Water Supply. G. Eric Mitchell (5th Edition. George Newnes Ltd. 1954. 17s. 6d.)

First published in 1941, this edition is usefully revised. Much of the information is well presented in clear diagrams. The lengthy section on water supply should be useful both to students and for reference in offices and the drainage chapters are brought well up to date.

26.114 services equipment: miscellaneous
ELECTRIC FITTINGS

The Modern Electric Home. (Electrical Review, 15th Oct., 1954.)

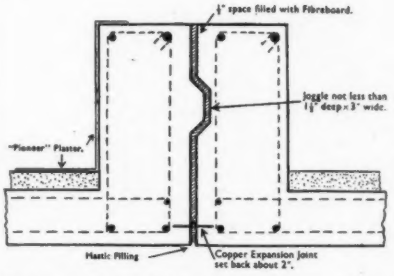
Survey of equipment now available. Illustrations of many items. Twenty-one pages plus list of manufacturers.

THE INDUSTRY

From the Industry this week, Brian Grant reports on expansion joints, two new catalogues of lighting fittings, metal windows and roof-lights, a new fabric, automatically opening garage doors, roof sheeting, and steel fabrication.

EXPANSION JOINTS

A new leaflet from I.C.I. describes copper corrugated jointing strip for use in expansion joints in large masses of concrete or brickwork. It is often essential that such joints shall be waterproof, and the corrugation in the centre of the strip is flexible enough to accept the movement within the joint. Two types of strip are supplied, one to BS 1878 and another to I.C.I.'s own design, which is very similar to the BS type but has punched holes along the flanges to help keep the strip firmly in position. The strip is 5 in. wide, having a ½- by ¼-in.



Copper expansion jointing strip cast in a r.c. column.

corrugation in the centre, and is supplied in standard lengths of 10 to 12 ft., though special lengths are available, but by overlapping consecutive lengths a continuous waterproof joint can be built up. The edges of the strip, or the strip as a whole, can easily be bent to avoid reinforcement rods.

The adjoining section plan shows a typical application to a column which is cast in two structurally separate halves with a 1½-in. joggle as a precaution against lateral movement. (*Imperial Chemical Industries Ltd., Metals Division, Kynoch Works, Witton, Birmingham,* 6.)

LIGHTING FITTINGS

A new list from George Forrest & Son (one of the Thorn Electrical Industries Group) illustrates a number of fittings which can be assembled from a range of basic components, which include reflectors of various shapes and colours, with supporting brackets, and supporting rods and bases to carry the reflectors. Floor, table, wall and ceiling fittings can all be produced in great variety. It is also worth adding that the firm is enlightened enough to employ an

architect to run its design service. (*George Forrest & Son Ltd.*, 30, *Osborne Road, Acton, London, W.*3.)

A well produced catalogue of Utralux, Versalite and Mondolite fittings has just been issued by Troughton & Young. The catalogue includes the new designs which have been added to the different ranges during the past year, and also some further designs now available for the first time. The fittings are all illustrated and clearly dimensioned, and it is also worth recording that quite a number of price reductions have been made. An excellent catalogue which most people will want to keep for reference. (*Troughton & Young (Lighting) Ltd.*, 143, *Knightsbridge, London, S.W.*1.)

WINDOWS AND ROOFLIGHTS

Maclean & Co. have just issued two new catalogues. The first describes purpose-made windows and doors based on the Universal sections, which fulfil all the demands likely to be made in a wide variety of window arrangements. The sections are rolled from mild steel or extruded in bronze or aluminium. Several different types of window are illustrated with excellent clear drawings to show the ways in which the sections can be used. The catalogue also illustrates light structural steelwork, including internal stairs, fire escapes, balustrade handrailing, fireproof doors and laylights.

The second list covers pavement and roof lights, dome lights and concrete fencing. Domes are produced in diameters from 2½ to 6 ft., and in rectangles from 3 ft. square to 6 by 4 ft. The sketch shows a typical fixing to a concrete curb: ventilation can be provided by raising the fixing clips on small stools. (*Maclean & Co. (Metal Windows) Ltd., Cadzow Works, Hamilton, Lanarkshire.*)

WASHABLE FABRICS

Some months ago a new fabric known as Rydura was produced, and to the two original designs there have now been added a further three, each of which is available in several colours. The material consists of a calico base with a washable surface in "Profilm," which gives a general effect which might be described as halfway between a glazed chintz and plastic sheeting in appearance. It is intended for chair coverings and upholstery in general, and has the advantage that it can be cleaned with a damp cloth; it can also be applied to walls, either direct, or in ready made panels which can be used for table tops or trays. Panels bonded to boards in this way are sold under the name of Rymalite and are made by *Mallinson Bros. Ltd., Brown Street, Salford* 3, *Lancs.* The Rydura sheet is made by *Ryiack Productions Ltd.*, 89, *Oxford Street, Manchester*, 1.

OPENING GARAGE DOORS AUTOMATICALLY

Messrs. Acrow's "Up and Over" garage door fitting was introduced some time ago and is now made in two models, the latest version (Model 2) having horizontal side tracks at the top of the door so that a minimum of head room is required. For use with this model the makers have produced an electrically-operated opener which costs £44 10s. 0d.

The essential part of the equipment is a magnetic detector which is buried ½ in. deep in the approach drive at some convenient distance from the door. A magnet unit is fixed permanently beneath the car and a control wire to dashboard or steering column. When the car approaches the garage the magnet is lowered to within about an inch of the ground and the buried magnetic detector opens the door by starting the driving motor mounted above the door lintel. A push button control closes the door when the car is inside, and there is also a keyed switch which is, in effect, a lock, as it cuts off the current supply. When the car is to leave the garage the door is opened by push button control and the car closes it on leaving via the magnetic detector, which will operate provided that the car magnet passes within 1 ft. radius of it. There are no particular installation difficulties and the door operation gear needs a clearance of only 9 inches above the head of the door. (*Acrow [Engineers] Ltd., South Wharf, Paddington, London, W.*2.)

TRANSLUCENT SHEETING

There are already several makes of glass reinforced polyester roof sheeting on the market, and two new ones, Saropane and Sarolite, must now be added to the list. Saropane is reinforced with "chopped strand mat," short lengths of glass fibre random laid, and is produced in two thicknesses, 1/16 in. and 3/64 in. The glass fibre reinforcement of the thinner sheet is scarcely noticeable, so that the sheet is almost transparent and the light diffusion factor is low.

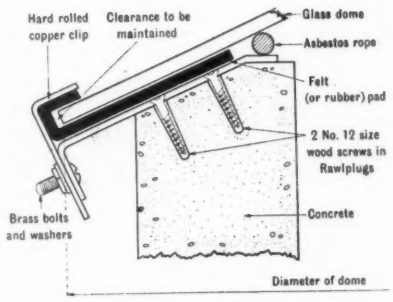
Sarolite, on the other hand, contains woven glass-fibre cloth to give maximum strength and light diffusion, and to the eye appears only moderately translucent, although it transmits about the same amount as Saropane. The extra diffusion of Sarolite, however, makes it more suitable for the lighting of machine shops, where shadows are to be avoided if possible.

Sheets in both grades are made to fit most of the corrugated and trough sections now used for roofing. Following tests at Boreham Wood by the Joint Fire Research Organisation, the LCC will now allow these materials to be used in panels of not more than 30 sq. ft., though there are some limitations on the spacing between panels. This is not a general permission, as individual applications are needed for each job. (*Saro Laminated Wood Products, Ltd., Folly Works, Whippingham, East Cowes, Isle of Wight).*

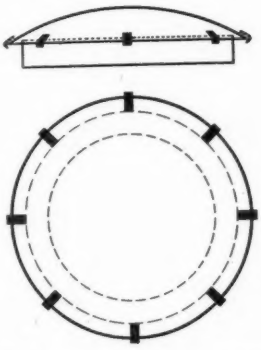
STEEL FABRICATION

A new revised edition of S. W. Farmer's catalogue lists a large number of steel staircases, gangways, fireproof and other doors, guard rails, coal and rubbish chute hoppers, railings, gates, fencing, and many other items of equipment which come under the general heading of metalworking. The firm also supplies structural steelwork on a considerable scale. In nearly every instance the photographs of executed work are amplified by constructional notes and clearly dimensioned drawings. (*S. W. Farmer & Son Ltd., Lewisham, London, S.E.*13.)

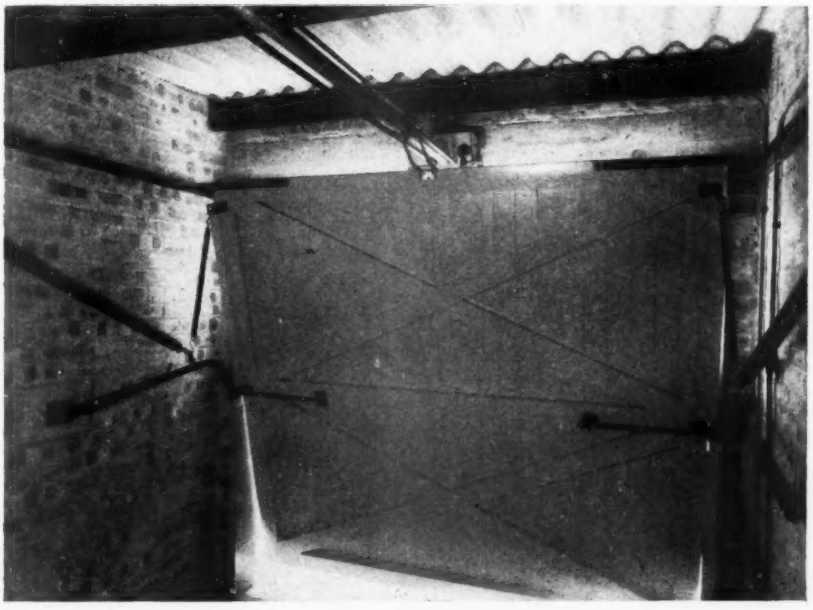
DRAUGHT-PROOF TYPE FIXING



POSITION OF CLIPS



Draught proof fixing for dome lights (from S.W. Farmer's catalogue).



"Up and over" garage door fitted with an automatic opening device.

Readers requiring up-to-date information on building products and services may complete and post this form to the Architects' Journal 9, 11 and 13, Queen Anne's Gate, S.W.1

ENQUIRY FORM

I am interested in the following advertisements appearing in this issue of "The Architects' Journal." (BLOCK LETTERS, and list in alphabetical order of manufacturers names please.)

.....

.....

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Please ask manufacturers to send further particulars to :—

NAME.....

PROFESSION or TRADE

.....

ADDRESS.....

.....

30.12.54

Buildings Illustrated

Sub-Divisional Police Station at Oxhey, Watford, Hertfordshire for the Hertfordshire County Council. (Pages 789-799.) Architect: C. H. Aslin, C.B.E., P.R.I.B.A.; Architect-in-charge: J. M. Pyper, A.R.I.B.A.; Quantity Surveyors: Thomas Barrett Sons & Partners; General Contractor: Harry Neal Ltd.; Clerk of Works: Mr. Dale; General Foreman: Mr. Mackenzie; Sub-contractors: asphalt, Asphaltic (London) Ltd.; reinforced concrete floor and roofs, Siegwart Floor Co. Ltd.; bricks, Eastwoods Sales Ltd., and Uxbridge Flint Brick Co. Ltd.; artificial stone, Girlings Ferro-Concrete Co. Ltd.; roofing felt, D. Anderson & Son Ltd.; patent flooring, Camden Tile & Mosaic Co. Ltd., Asphaltic (London) Ltd. and Hollis Bros. Ltd.; central heating and hot water installation, H. G. Gibbons & Sons; gasfitting, Eastern Gas Board: electric wiring, George R. Clay Ltd.; sanitary fittings, B. Finch & Co. Ltd.; door and window furniture, Nettlefold & Moser Ltd.; rolling shutters, Thornborough & Son (Manchester) Ltd.; sunblinds, Waller Palladium Co. Ltd.; metalwork, Clark, Hunt & Co. Ltd.; windows, Henry Norris & Son Ltd.; cranes, R. C. Gibbons & Co. Ltd.; water supply, Colne Valley Water Co.; signs, Falcon Signs Ltd.

Sectional Police Station in High Street, London Colney, Hertfordshire, for the Herts Constabulary. (Page 800.) County Architect: C. H. Aslin, C.B.E., P.R.I.B.A.; Architect-in-charge: R. E. McLardy, A.R.I.B.A.; Quantity Surveyors: Thomas Barrett Sons & Partners: General Contractor: R. C. Ebbs Ltd.: Clerk of Works: Mr. Speary; General Foreman: Mr. Clark; Sub-contractors: dampcourses, Ruberoid Co. Ltd.; reinforced concrete, The Artificial Stone & Concrete Co: facing bricks, Eastwoods Sales Ltd.; artificial stone, Oak Concrete Tru-Bloc Co., and Empire Stone Co.: roofing felt, Permanite Ltd.; patent flooring, Semtex Ltd.; central heating, Eastern Plumbing & Heating Co. Ltd.; grates, Ideal Boilers & Radiators Ltd.; gas fixtures and gasfitting, Eastern Gas Board; electric wiring, bells, Eastern Electricity Board; sanitary fittings, B. Finch & Co. Ltd.; door furniture, W. N. Froy & Sons Ltd.; casements, A. P. Lightfoot Ltd.; furniture, Jayanbee Joinery Co.; shrubs and trees, S. A. Plumb & Co. Ltd.; signs, Falcon Signs Ltd.

Announcements

PROFESSIONAL

Lewis E. Martin, A.A.DIPL. (HONS.), A.R.I.B.A., A.N.Z.I.A., has entered into partnership with D. George Porter, B.ARCH., A.R.I.B.A., A.N.Z.I.A., A.M.T.P.I. The firm is to be known as Porter and Martin, Registered Architects and Town Planning Consultants, and practises at 219, Lambton Quay, Wellington, New Zealand.

Mr. Ronald J. Rabson, DIPL.ARCH., A.R.I.B.A., has opened his office at 86, Edgware Way, Middlesex (telephone number: STOnegrove 6686), where he would be pleased to receive trade catalogues.

Mr. Anthony P. G. Borley, A.R.I.B.A., Chartered Architect, has moved to 111, Haverstock Hill, Hampstead, N.W.3, telephone: PRImrose 3158.

Mr. Stirling Craig has relinquished his appointment as Senior Architect to Stevenage Development Corporation, and is practising in partnership with his wife, Margaret Craig, at North Lodge, Shephall, Stevenage, Herts., and will be pleased to receive trade catalogues, etc.

Arthur T. Beer, B.ARCH., A.R.I.B.A., Chartered Architect, has commenced practice at 272, Christchurch Road, Newport, Monmouthshire, and will be pleased to receive trade catalogues, literature and samples. Telephone: Newport 72316.

CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advt. Manager, "The Architects' Journal," 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, and should reach there by first post on Friday morning for inclusion in the following Thursday's paper.

Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

Public and Official Announcements

25s. per inch: each additional line, 2s

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 inclusive or a woman aged 18-59 inclusive unless he or she or the employment is excepted from the provisions of the Notification of Vacancies Order, 1952.

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.

Vacancies for ARCHITECTS, Grade III (up to £892 10s.), and ARCHITECTURAL ASSISTANTS (up to £739 10s.), in Schools and Housing Divisions.

Particulars and application forms from Architect (AR/EK/A/2), County Hall, S.E.1. (1058) 2206

GOLD COAST GOVERNMENT.
VACANCIES FOR ARCHITECTS—PUBLIC WORKS DEPARTMENT.

Applications are invited for vacancies in the post of Architects in the Public Works Department.

Duties: The Architects will be required to carry out investigation for plan, design and supervise the construction of new Government buildings arising in connection with the Government's development programme, such as quarters, offices, hospitals, schools, halls, reading rooms, etc. They will also be responsible for the preparation of working drawings and specifications, and the administration of contracts. One vacancy is for a Senior Architect, expected to be Resident Architect on a new hotel project in Accra, with salary range from £2,100-£2,500.

Qualifications: Candidates must be Associates of the Royal Institute of British Architects. Previous experience of Government or Local Authority Work is desirable and of Hospital or Bank Buildings an advantage.

Terms of Service: Some of these posts are "Development Posts" for implementation of specific projects under the Gold Coast Development Plan. The appointments will be on contract/gratuity terms for one tour of 18 to 24 months, with a possible extension to two tours. Salary will be in the range £1,030-£2,020 per annum (consolidated), according to age, qualifications and experience. A gratuity at the rate of £37 10s. for each completed three months of satisfactory service will be payable on final termination of the contract.

Free passages on first appointment and on leave will be provided for the officer and his wife once each way during each tour of service. Officers will normally be required to travel by air. Free air passages will also be provided for a maximum of three children under 13 years of age.

Vacation leave with pay: seven days for each month of service. Free medical and dental attention provided for officer and family. Reasonable but substandard (at present) partly furnished quarters are available at low rentals. Income tax at local rates. Kit allowance on first appointment £60-£30, according to salary (if no recent tropical experience), and salary below £2,020.

For candidates on Local Government Service arrangements are possible for superannuation rights to be frozen.

Intending candidates should apply to the Adviser on Recruitment, Gold Coast Office, Melbourne House, Aldwych, London, W.C.2, for a form of application. 6075

MINISTRY OF WORKS.

LEADING ARCHITECTURAL ASSISTANTS required for drawing offices in the Chief Architect's Division in London, Edinburgh and various provincial offices.

Candidates must have had at least three years architectural training, good experience in an architect's office, and be of Intermediate R.I.B.A. standard. London salary £710—£834 per annum. Rates elsewhere slightly less. Starting pay according to experience. Prospects of promotion and establishment.

State age, full details of training and experience, and office desired, to E. Bedford, Esq., C.V.O., A.R.I.B.A., Chief Architect, Ministry of Works, W.G.10/C.A.10(F), Abell House, John Islip Street, London, S.W.1. 4732

THE SOUTH WALES ELECTRICITY BOARD.

Required, two ARCHITECTURAL DRAUGHTSMEN, Civil Engineering Department, Head Office, St. Mellons.

Applicants will be required to undertake the layout and preparation of working drawings for showrooms, offices and substations, including measuring up and alterations to existing buildings.

Salaries: Grade 6 (£510-£630) of Schedule D of N.J.B. Agreement.

Applications, stating age, present position and salary, qualifications, experience, and three referees, to be addressed to the Secretary, to arrive by 8th January, 1955.

D. G. DODDS,
Secretary.

St. Mellons, Cardiff. 6055

LONDON COUNTY COUNCIL requires:—

(i) ARCHITECTURAL ASSISTANTS for the preparation of surveys, sketch schemes, working drawings and specifications for buildings and ancillary works in parks and open spaces, and

(ii) LANDSCAPE DESIGNERS for the preparation of surveys, sketch schemes, working drawings and specifications for the laying out of parks and open spaces and garden areas to housing estates. Salaries up to £688, according to qualifications and experience. Application forms from Chief Officer, Parks Dept., Spring Gardens, S.W.1. (1622) 6077

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.

ARCHITECT/PLANNERS required for Civic Design, Reconstruction Areas, Detailed Planning, and Development Control. Grade III's, salary up to £892 10s., and PLANNING ASSISTANTS up to £739 10s. Particulars and application form, returnable by 13th January, 1955, from Architect (AR/EK/TPB2), The County Hall, S.E.1. (1642). 6078

METROPOLITAN BOROUGH OF WOOLWICH.
BOROUGH ENGINEER'S DEPARTMENT.

The Council requires:—

(a) SENIOR ARCHITECTURAL ASSISTANT. Grade V, commencing £750 rising to £900, plus London Weighting. A.R.I.B.A. or equivalent essential. Superannuation Scheme. Medical Examination.

Application forms from Borough Engineer, Town Hall, Woolwich, S.E. 18.

(b) ARCHITECTURAL ASSISTANT. Grade III-V. Unestablished Post. Commencing £600 rising to £900, plus London Weighting. Applicants should be qualified and state their age, qualifications and experience and give two referees.

Applications for both vacancies to be submitted to the Town Clerk by 15th January, 1955.

Canvassing disqualifies 6084

CAMBRIDGESHIRE COUNTY COUNCIL.

Applications are invited for the following appointments:—

(a) One ARCHITECTURAL ASSISTANT—A.P.T. II (£560—£640)

(b) One BUILDING INSPECTOR—Grade A.P.T. II (£560—£640).

Applicants for (a) should have passed the Royal Institute of British Architects Intermediate Examination or its equivalent at one of the recognised Schools of Architecture, and have worked in an Architect's office for a period of two years; shou'd have a good knowledge of construction and details, and be able to prepare drawings from preliminary sketches.

Applicants for (b) should have a technical and practical knowledge of all building operations, and be capable of preparing schedules of dilapidations, reports, estimates and specifications, checking builders' accounts, supervising works of maintenance, and be fully experienced in the duties of a Building Inspector. The successful applicant should be able to drive a car, which will be provided by the County Council.

Applications, stating age, qualifications and experience, accompanied by one recent testimonial, and the names and addresses of two referees, should be sent to the Clerk of the County Council, Shire Hall, Cambridge, not later than Wednesday, 5th January, 1955.

The appointments will be subject to one month's notice on either side, and to the provisions of the Local Government Superannuation Acts appropriate to the appointment.

The selected candidates will be required to pass a medical examination.

CHARLES PHYTHIAN.
Clerk of the County Council.

Shire Hall,
Cambridge.
9th December, 1954. 5090

THE SOUTH WALES ELECTRICITY BOARD.

Required CIVIL ENGINEERING DRAUGHTSMAN Civil Engineering Department, Head Office, St. Mellons.

Applicants should have a sound knowledge of reinforced concrete design, and be capable of preparing complete working drawings for substations and buildings applicable to the Electricity Supply Industry.

Salary: Grade 5 (£640-£740) of Schedule D of N.J.B. Agreement.

Applications, stating age, present position and salary, qualifications, experience, and three referees, to be addressed to the Secretary, to arrive by 8th January, 1955.

D. G. DODDS,
Secretary.

St. Mellons, Cardiff. 6054

SINGAPORE IMPROVEMENT TRUST.

ASSISTANT ARCHITECT required on contract for three years. Qualification: A.R.I.B.A.

Commencing salary $1 500, $1.550, $1.600 per month for Architects with 5, 6 and 7 years' experience after qualifying respectively. Annual increment $50 p.m. (Malayan $1=2s. 4d.). A motor vehicle allowance payable according to duty mileage. No other allowances payable.

Quarters, with heavy furniture, provided, if available, at public rental.

Medical examination.

Leave: 14 days annually. On completion of contract one month for each completed year of service.

Applications in DUPLICATE, giving full particulars, with copies of three recent testimonials, also in duplicate, to Messrs. Allen & Williams, 1, Victoria Street, London, S.W.1, before Thursday, 13th January, 1955. 6092

COUNTY BOROUGH OF SOUTHEND-ON-SEA.
BOROUGH ARCHITECT'S DEPARTMENT.

Applications are invited for the following established posts:—

ASSISTANT ARCHITECTS:
Senior Assistant Architect, Grade A.P.T., VIII.
Senior Assistant Architect, Grade A.P.T., VII.
Assistant Architect, Grade A.P.T., V.
Assistant Architect (Female), Grade A.P.T., IV.
(Applicants should be Associate Members of the Royal Institute of British Architects.)

ASSISTANT QUANTITY SURVEYORS:
Senior Assistant Quantity Surveyor, Grade A.P.T., IX (with possible promotion in due course to Chief Quantity Surveyor, A.P.T. X).
Senior Assistant Quantity Surveyor, Grade A.P.T., VII.
Assistant Quantity Surveyor, Grade A.P.T., VI.
Assistant Quantity Surveyor, Grade A.P.T., Va.
Assistant Quantity Surveyor, Grade A.P.T., V.
(Applicants should be Associate Members of the Royal Institute of Chartered Surveyors.)

The above refer to the old grades of salaries, and are subject to revision and increase from the 1st January, 1955.

The appointments will be subject to the provisions of the Local Government Superannuation Act, 1937, and the J.I.C. Scheme of Conditions of Service. In each case the successful candidate will be required to pass a medical examination.

Applications, stating age, qualifications and experience, with the names of two persons to whom reference can be made, should be submitted to the Borough Architect, 30, Alexandra Street, Southend-on-Sea, not later than the 14th January, 1955.

ARCHIBALD GLEN, *Town Clerk.*
6094

MINISTRY OF WORKS.

ARCHITECTURAL ASSISTANTS required for drawing offices in London, Edinburgh and various provincial offices, including Aldermaston, Berks; Harwell, Berks; Nancekuke, Cornwall; Ranskill, Notts; and Bishopton, Renfrew.

Candidates must have had at least three years architectural training, some experience in an architect's office, and be of Intermediate R.I.B.A. standard.

London salary £442—£695 per annum. Rates elsewhere slightly less. Starting pay according to age and experience. Prospects of promotion and establishment.

State age, full details of training and experience and office desired, to E. Bedford, Esq., C.V.O., A.R.I.B.A., Chief Architect, Ministry of Works, W.G.10/C.A.10(F), Abell House, John Islip Street, London, S.W.1. 4731

COUNTY BOROUGH OF WOLVERHAMPTON.
APPOINTMENT OF CHIEF PLANNING ASSISTANT.

CHIEF PLANNING ASSISTANT required on the staff of the Borough Engineer and Planning Officer, at a salary in accordance with New Grade VI (£825—£1,000 per annum). Superannuable post. Medical examination. N.J.C. Conditions of service.

Candidates should be Corporate members of the Town Planning Institute, preferably with an appropriate additional qualification, and must have wide experience in all aspects of Town and Country Planning, and administrative ability.

Particulars of the appointment may be obtained from the Borough Engineer and Planning Officer, Town Hall, Wolverhampton, to whom applications should be submitted by 12th January, 1955.

A. G. DAWTRY,
Town Clerk.

Town Hall,
Wolverhampton. 6037

ARCHITECTURAL ASSISTANTS required by the GOVERNMENT OF UGANDA for one tour of 30-36 months in the first instance, with provident fund benefits. Salary scale (including pay inducement and cost-of-living allowance), £772, rising to £1,280 a year. Commencing salary according to experience. Free passages. Liberal leave on full salary. Outfit allowance £30. Local Government superannuation rights can be preserved. Candidates, of good education, must be rapid and accurate architectural draughtsmen, with considerable experience in the preparation of working drawings of buildings generally. They must have a sound knowledge of building construction and be capable of carrying out calculations for simple reinforced concrete structures. Experience in the use of levelling instruments is essential. Write to the Crown Agents, 4, Millbank, London, S.W.1. State age, name in block letters, full qualifications and experience, and quote M2B/40421/AG. 6060

NORFOLK COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the following posts:—

CHIEF ASSISTANT ARCHITECT, A.P.T., Grade V (£750×£30—£900). Candidates must be qualified, with good general experience in design, construction, and all aspects of handling building contracts.

ARCHITECTURAL ASSISTANT, A.P.T., Grade II (£560×£20—£640). Candidates should be of Intermediate R.I.B.A. standard, with general office experience.

Both appointments are permanent and are subject to Local Government Superannuation Acts and National Joint Council Service Conditions.

Applications, stating age, full details of training, experience, qualifications, past and present appointments, and names of three referees, to Mr. C. H. Thurston, County Architect, 27, Thorpe Road, Norwich, by 17th January. 6097

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.

ARCHITECT, GRADE III. Salary up to £892 10s., for work in connection with recording of buildings of architectural and historic interest, the Survey of London, and general record purposes. Candidates should have special knowledge of the history of architecture in England, together with first-class experience in the preparation of measured drawings of buildings.

ARCHITECTURAL ASSISTANT. Preferably A.R.I.B.A. or equivalent, with an interest in historic buildings for work of maintenance to such buildings owned by the Council. Salary up to £739 10s.

Particulars and application form, returnable by 8th January, 1955, from the Architect (AR/EK/HB/2), The County Hall, S.E.1. (1640) 6079

CANNOCK URBAN DISTRICT COUNCIL.
(Population—41,230 (est.).

Applications are invited for the following appointment in the Architect's Department:—

QUANTITY SURVEYOR. Salary within Grades A.P.T., V (£840-£900), and A.P.T., VI (£895-£1,000).

A.R.I.C.S. required to take charge of Section to enable junior officers to take qualifying examinations.

HOUSING ACCOMMODATION AVAILABLE for married candidates.

Further particulars and forms of application are available from the undersigned.

Closing date: 17th January, 1955.

W. C. SPEEDY,
Clerk of the Council.

Council House, The Green,
Cannock, Staffs.
16th December, 1954. 6082

GLENROTHES DEVELOPMENT CORPORATION.

Applications are invited for the posts of TWO ASSISTANT QUANTITY SURVEYORS. Commencing salary for suitable applicants, £750, rising to maximum of £890 per annum. Corporate Members of the R.I.C.S. preferred. Medical examination under superannuation scheme. The Corporation will provide a house to let, if required.

Applications, stating age, qualifications and experience, together with copies of not more than three recent testimonials, must reach the Secretary, Glenrothes Development Corporation, Glenrothes, Fife, not later than 10th January, 1955. 6096

UNIVERSITY OF HONG KONG.

Applications are invited for vacant LECTURESHIPS IN ARCHITECTURE.

Emoluments for a single man on expatriate terms are £1,240×£40—£1,480 per annum. (A family allowance and temporary and variable high cost-of-living allowance are paid as applicable.)

Applicants must be qualified Architects, and should have had practical and teaching experience.

First-class sea passages are provided for expatriate staff.

Further particulars and information as to the method of application may be obtained from the Secretary, Association of Universities of the British Commonwealth, 5, Gordon Square, London, W.C.1.

The closing date for the receipt of applications, in Hong Kong and London, is *7th February*, 1955. 6059

DERBYSHIRE COUNTY COUNCIL, COUNTY ARCHITECT'S DSPARTMENT.

Vacancies exist for ARCHITECTURAL ASSISTANTS on A.P.T., Grade II (salary: £560×£20 to £640 per annum).

Application forms and details to be obtained from F. H. Crossley, County Architect, County Offices, St. Mary's Gate, Derby. 6081

COUNTY BOROUGH OF STOCKPORT.
ARCHITECTURAL ASSISTANT (Qualified), Education Department. Salary £675—£725. Application forms from Director of Education, Town Hall, Stockport, to be returned by 15th January, 1955. 6090

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.

Vacancy for ARCHITECT, Grade I, to lead a group in the Schools Division, initially. A.R.I.B.A., able to take complete charge from sketch design to completion of contract. Local Government experience unnecessary. Salary within range £1,071 to £1,224.

Particulars and application form, returnable by 11th January, 1955, from Architect (AR/EK/S/2), The County Hall, S.E.1. (1630) 6062

CIVIL SERVICE COMMISSION, DUBLIN—TEMPORARY POSITIONS VACANT IN THE OFFICE OF PUBLIC WORKS.

(*a*) ASSISTANT ARCHITECTS (5). *Rates of pay:* Man, £11 19s. 7d. to £16 3s. 6d. a week; woman, £9 13s. 7d. to £13 2s. 7d. a week. *Maximum age limit:* 40 years.

(*b*) ARCHITECTURAL ASSISTANTS (13). *Rates of pay:* Man, £7 11s. to £9 13s. 7d.; woman, £5 18s. 10d. to £7 14s. 6d. *Maximum age limit:* 35 years. *Essential:* Adequate training in Architectural work.

For both posts: Higher starting pay and extension of the age limit in certain cases. Application forms and further particulars from the Secretary, Civil Service Commission, 45, Upper O'Connell Street, Dublin. *Latest date for accepting completed application forms:* 14*th January*, 1955. 6080

Tenders for Contracts

6 lines or under, 12s. 6d.; each additional line, 2s.

BOROUGH OF BEBINGTON.
NEW TOWN HALL.

Tenders are to be invited from Registered Building Contractors for the erection of Stage I of a New Town Hall for the Bebington Corporation. Applicants wishing to tender, who must be firms of standing, should submit their names in writing to the Architects, Messrs. Willink & Dod, F./F.R.I.B.A., Cunard Building, Liverpool, not later than 1st February, 1955.

Selected Contractors will be advised when the Specifications, Bills of Quantities and Forms of Tender are available, and these will then be forwarded on receipt of a deposit of three guineas, which will be returned on receipt of a *bona fide* tender. Instructions as to the requirements of the Council in relation to the submission of tenders will be supplied with the Form of Tender.

Drawings may be inspected at the Architects' office on or after the 1st February, 1955.

G. CHAPPELL,
Town Clerk.

Municipal Offices, Bebington.
16th December, 1954. 6095

Architectural Appointments Vacant

4 lines or under, 7s. 6d.: each additional line, 2s.

The engagement of persons answering these advertisements must be made through a Local Office of the Ministry of Labour or a Scheduled Employment Agency if the applicant is a man aged 18-64 *inclusive or a woman aged* 18-59 *inclusive unless he or she or the employment is excepted from the provisions of the Notification of Vacancies Order*, 1952.

REQUIRED for Architects' office, Central London area, young qualified ASSISTANTS interested in design and construction. Write, stating experience and salary required. Box 2325.

BUILDING SURVEYING ASSISTANT (about R.I.C.S. Final Standard) with at least two years' practical experience required by City firm of Chartered Surveyors & Architects. 3925

ARCHITECTURAL ASSISTANT, intermediate standard required as a personal assistant to a principal in a large general practice in the Home Counties. The appointment will offer opportunity for works in all stages of architecture and in the administration of a private practice. Enthusiasm and ability essential. Box 5063.

A VACANCY occurs in a small Knightsbridge office for an ASSISTANT of Inter. or Final standard, good prospects for right man, write stating age, experience. Salary by arrangement. Box 5060.

SENIOR ASSISTANT ARCHITECTS required with experience of work on commercial and industrial buildings. Salaries up to £915 per annum for suitably qualified applicants.

ASSISTANT ARCHITECTS also required, capable of preparing working drawings and details from preliminary sketches. Salaries up to £745 per annum.

Applications stating age, experience, qualifications and salary required to G. S. Hay, A.R.I.B.A., Chief Architect, Co-operative Wholesale Society Ltd., 1, Balloon Street, Manchester. 4919

ASSISTANTS required Manchester District—one qualified or of final standard, one intermediate standard. State salary required. Box 4858.

EXPERIENCED Senior and also Intermediate to Final standard ASSISTANTS required. Applicants to have knowledge of commercial work, including offices and stores, etc. London experience is essential. Box 4890.

ARCHITECTURAL ASSISTANT: Intermediate approaching final. Commercial and industrial work; large-scale contracts. Watson, Johnson, Stokes, Victoria Square, Birmingham. 4895

ARCHITECTURAL ASSISTANTS required in West End Architect's office. Those studying for Inter. to Final R.I.B.A. Examination or qualified. Varied practice, specialising somewhat in factories, city offices and stores. Write, giving full particulars to Box. N.959, Willings, 362, Gray's Inn Road. W.C.1. 4953

PROBATIONER or STUDENT R.I.B.A. required in the Architectural Department of a large engineering company near Nottingham. Wide variety of work. 5-day week. All facilities for part-time training, including a day off per week with pay to attend College. Applications in writing, stating age, details of education, and previous experience, if any, to Box 6099.

QUALIFIED ASSISTANT—R.I.B.A., Finals/or near,, for Bournemouth Office. Must carry out contracts from sketches to final accounts. Reply stating sa.ary required and when free and give references. Box 5099.

JUNIOR ASSISTANT required, preferably with some office experience, for Housing projects. Salary £550 or according to ability. Sir Lancelot Keay, Basil G. Duckett and Partners, 80, Wimpole Street, W.1. 6026

SHOPFITTING DRAUGHTSMAN required, experienced in first-class work. Salary £750—£1,000 and permanency offered to capab.e applicant—S. J. Stephenson, Gillis & Partners, 2, Saville Chambers, North Street, Newcastle-on-Tyne. 6027

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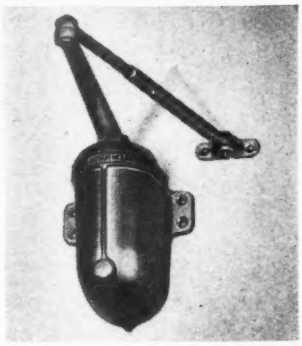

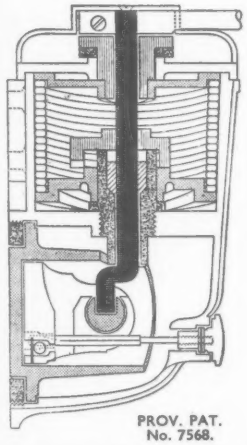

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