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The Architects' JOURNAL for July 21, 1955

# THE ARCHITECTS' JOURNAL



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every issue does not necessarily contain  
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[VOL. 122

THE ARCHITECTURAL PRESS

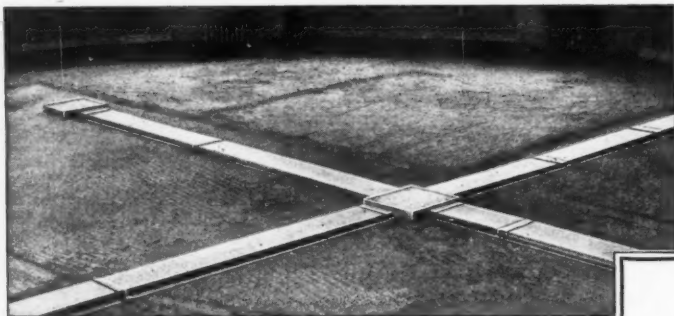
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★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to I one week, I to Z the next. In all cases where the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

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy.: W. Marlborough Whitehead, "Dyneley," Castle Hill Avenue, Berkhamstead, Herts.	
ABS	Architects' Benevolent Society, 66, Portland Place, W.1.	Langham 5721
ABT	Association of Building Technicians, 5, Ashley Place, S.W.1.	Victoria 0447-8
ACGB	Arts Council of Great Britain, 4, St. James' Square, S.W.1.	Whitehall 9737
ADA	Aluminium Development Association, 33, Grosvenor Street, W.1.	Mayfair 7501/8
ArchSA	Architectural Students' Association, 34/36, Bedford Square, W.C.1.	
ARCUK	Architects' Registration Council, 68, Portland Place, W.1.	Langham 8738
BAE	Board of Architectural Education, 66, Portland Place, W.1.	Langham 5721
BATC	Building Apprenticeship and Training Council, Lambeth Bridge House, S.E.1.	Reliance 7611, Ext. 1706
BC	Building Centre, 26, Store Street, Tottenham Court Road, W.C.1.	Museum 5400
BCC	British Colour Council, 13, Portman Square, W.1.	Welbeck 4185
BCCF	British Cast Concrete Federation, 105, Uxbridge Road, Ealing, W.5.	Ealing 9621
BCIRA	British Cast Iron Research Association, Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association, 10, The Boltons, S.W.10.	Fremantle 8494
BEDA	British Electrical Development Association, 2, Savoy Hill, W.C.2.	Temple Bar 9434
BIA	British Ironfounders' Association, 145, Vincent Street, Glasgow, C.2.	Glasgow Central 2891
BID	Building Industries Distributors, 52, High Holborn, W.C.1.	Chancery 7772
BINC	Building Industries National Council, 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade, Whitehall Gardens, Horseguards Avenue, Whitehall, S.W.1.	Trafalgar 8855
BRDB	British Rubber Development Board, Market Buildings, Mark Lane, E.C.3.	Mansion House 9383
BRS	Building Research Station, Bucknalls Lane, Watford	Garston 2246
BSA	Building Societies Association, 14, Park Street, W.1.	Mayfair 0515
BSI	British Standards Institution, British Standards House, 2, Park St., W.1.	Mayfair 9000
BTE	Building Trades Exhibition, 4, Vernon Place, W.C.1.	Holborn 8146/7
CABAS	City and Borough Architects Society, C/o Johnson Blackett, F.R.I.B.A., Civic Centre, Newport, Mon.	Newport 65491
CAS	County Architects' Society, C/o F. R. Steele, F.R.I.B.A., County Hall, Chichester.	Chichester 3001
CCA	Cement and Concrete Association, 52, Grosvenor Gardens, S.W.1.	Sloane 5255
CCP	Council for Codes of Practice, Lambeth Bridge House, S.E.1.	Reliance 7611
CDA	Copper Development Association, Kendalls Hall, Radlett, Herts.	Radlett 5616
CIAM	Congrès Internationaux d'Architecture Moderne, Dolderhof, 7, Zurich, Switzerland.	Abbey 7080
COID	Council of Industrial Design, Tilbury House, Petty France, S.W.1.	Sloane 4280
CPRE	Council for the Preservation of Rural England, 4, Hobart Place, S.W.	Sloane 7080
CUC	Coal Utilization Council, 3, Upper Belgrave Street, S.W.1.	Sloane 9116
CVE	Council for Visual Education, 13, Suffolk Street, Haymarket, S.W.1.	Reading 72255
DGW	Directorate General of Works, Ministry of Works, Lambeth Bridge House, S.E.1.	Reliance 7611
DIA	Design and Industries Association, 13, Suffolk Street, S.W.1.	Whitehall 0540
DPT	Department of Overseas Trade, Horseguards Avenue, Whitehall, S.W.1.	Trafalgar 8855
EJMA	English Joinery Manufacturers' Association (Incorporated), Sackville House, 40, Piccadilly, W.1.	Regent 4448
EPNS	English Place-Name Society, 7, Selwyn Gardens, Cambridge.	
FAS	Faculty of Architects and Surveyors, 68, Gloucester Place, W.1.	Welbeck 9966
FASS	Federation of Association of Specialists and Sub-Contractors, Artillery House, Artillery Row, S.W.1.	Abbey 7232
FBBDO	Fibre Building Board Development Organization, Ltd., 47, Princes Gate, Kensington, S.W.7.	Kensington 4577
FBI	Federation of British Industries, 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission, 25, Savile Row, W.1.	
FCMI	Federation of Coated Macadam Industries, 37, Chester Square, S.W.1.	Sloane 1002
FDMA	The Flush Door Manufacturers Association Ltd. Trowell, Nottingham.	Ilkeston 623
FLD	Friends of the Lake District, Pennington House, nr. Ulverston, Lancs.	Ulverston 201
FMB	Federation of Master Builders, 26, Great Ormond Street, Holborn, W.C.	Chancery 7583
FPC	The Federation of Painting Contractors, St. Stephen's House, S.W.1.	Whitehall 3902
FRHB	Federation of Registered House Builders, 82, New Cavendish Street, W.1.	Langham 4041
GBPA	Gypsum Building Products Association, 11, Ironmonger Lane, E.C.2.	Monarch 8888
GC	Gas Council, 1, Grosvenor Place, S.W.1.	Sloane 4554
GG	Georgian Group, C/o R. H. Davies, F.R.I.B.A., 44, Lowndes Street, S.W.1.	Belgravia 3081
HC	Housing Centre, 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors, 75, Eaton Place, S.W.1.	Sloane 5615
ICA	Institute of Contemporary Arts, 17-18, Dover Street, Piccadilly, W.1.	Grosvenor 6186
ICE	Institution of Civil Engineers, Great George Street, S.W.1.	Whitehall 4577
IEE	Institution of Electrical Engineers, Savoy Place, W.C.2.	Temple Bar 7676
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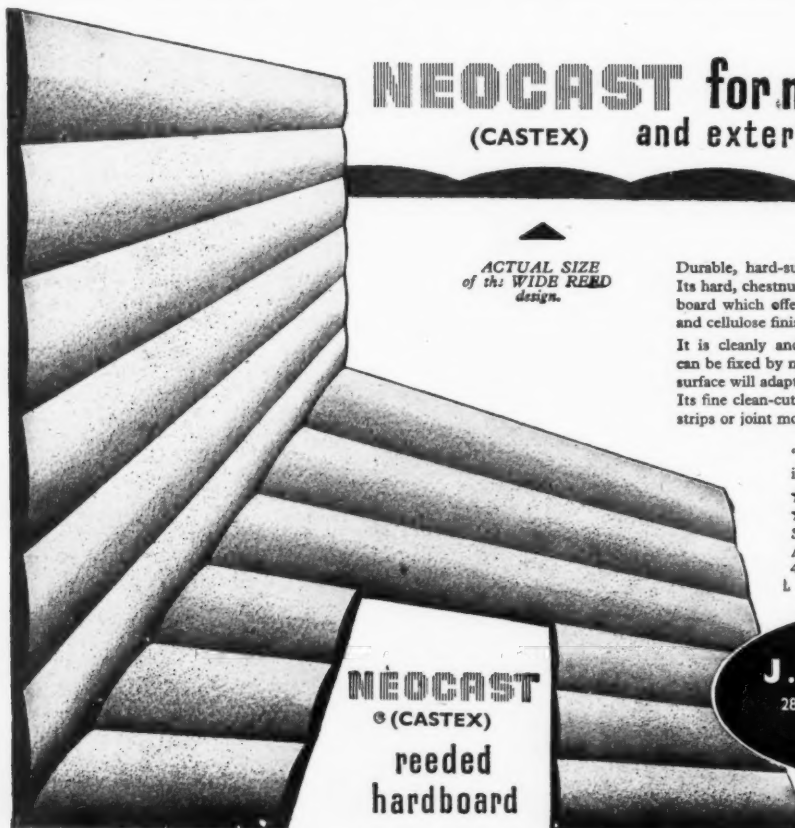
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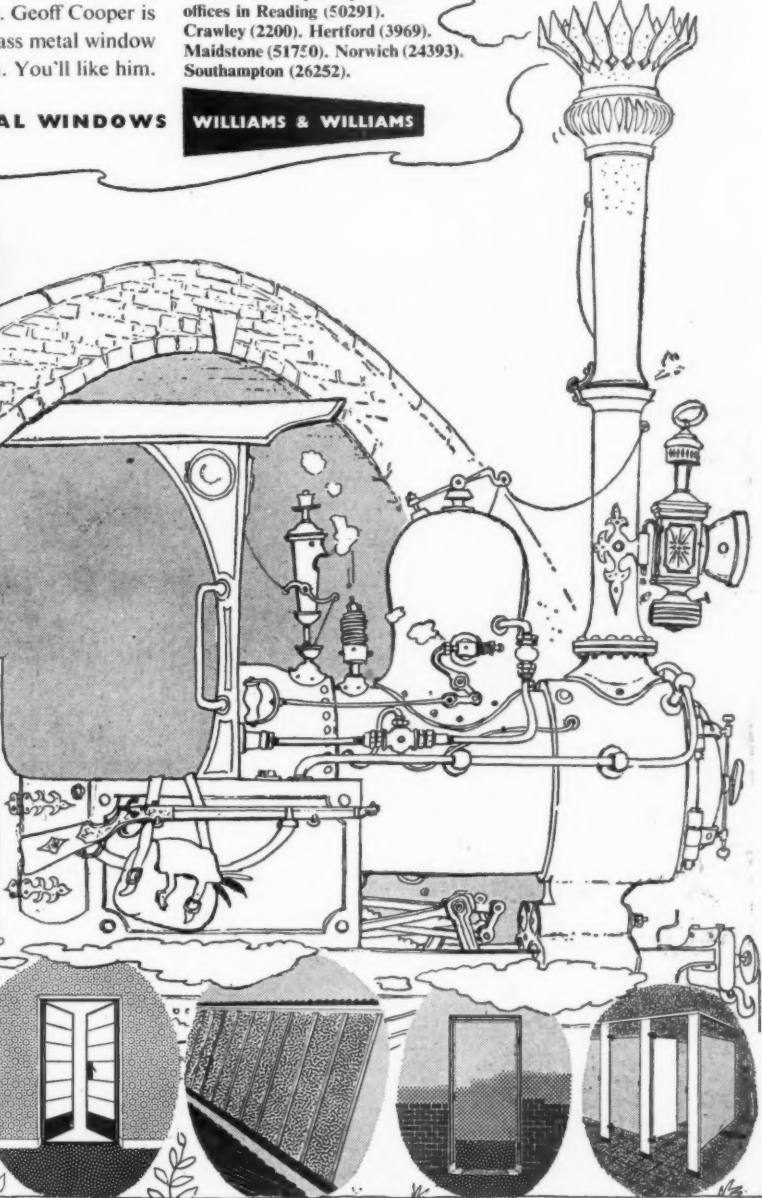
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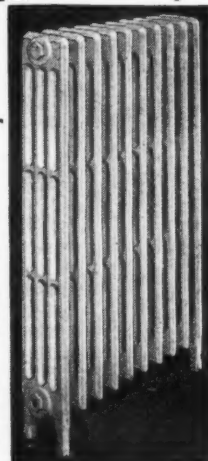


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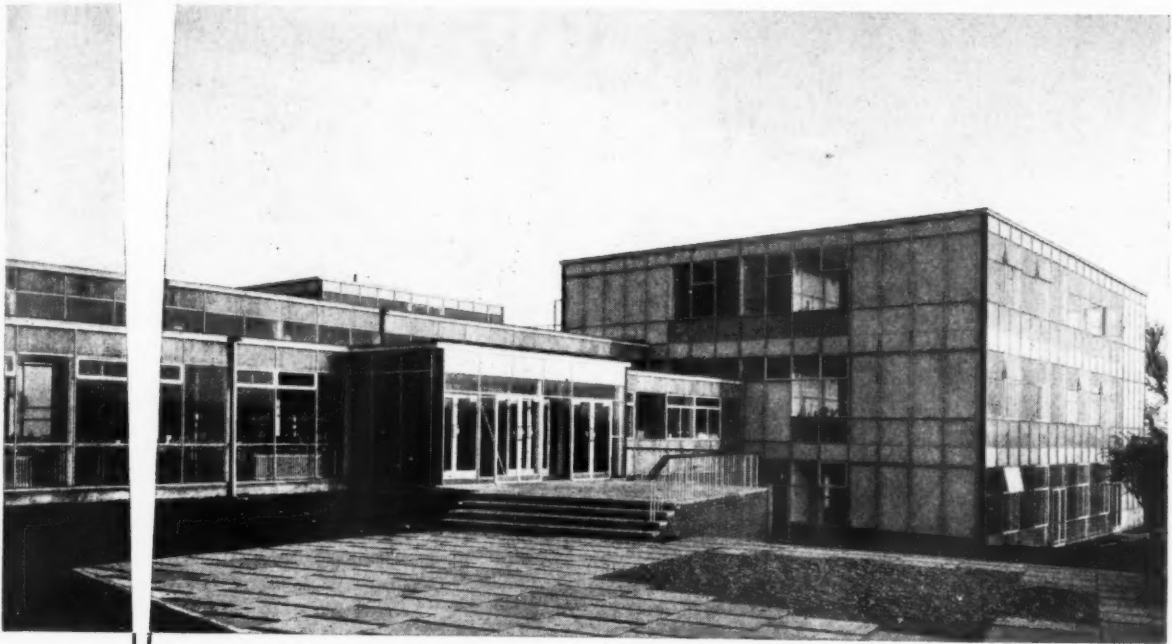
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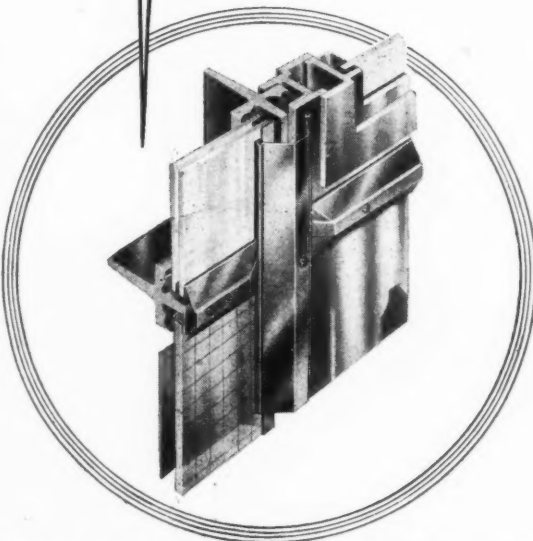
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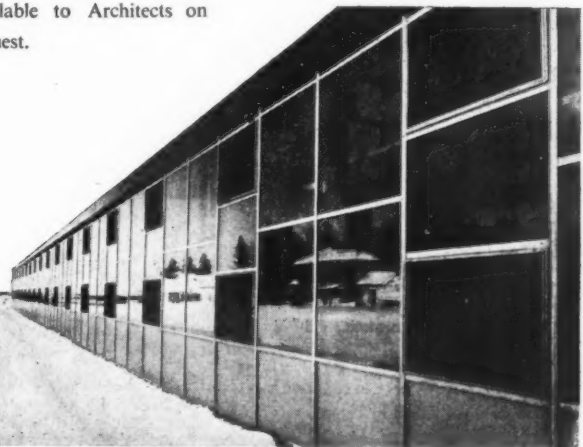
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(Illustrated at top). *Hurlfield Secondary Modern School for Girls, Sheffield. Architects: Co-Partnership in collaboration with J. L. Womersley, A.R.I.B.A., A.M.T.P.I., City Architect.*

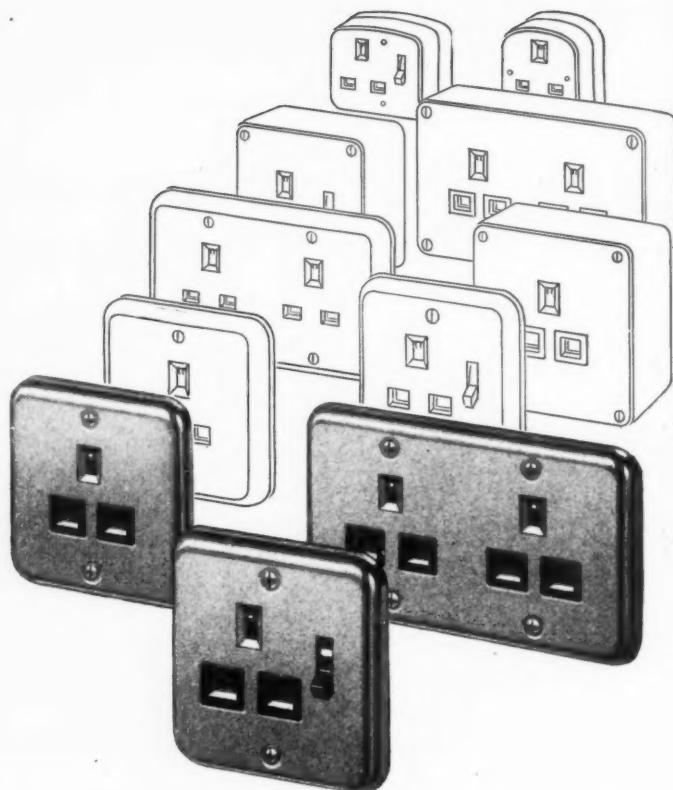
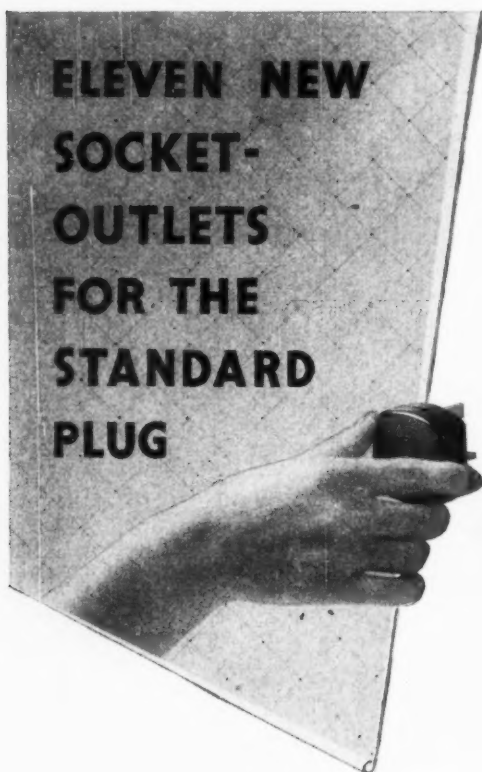
(Right). *The Wingham District High School, Toronto. Architects: Messrs. Kyles & Kyles.*



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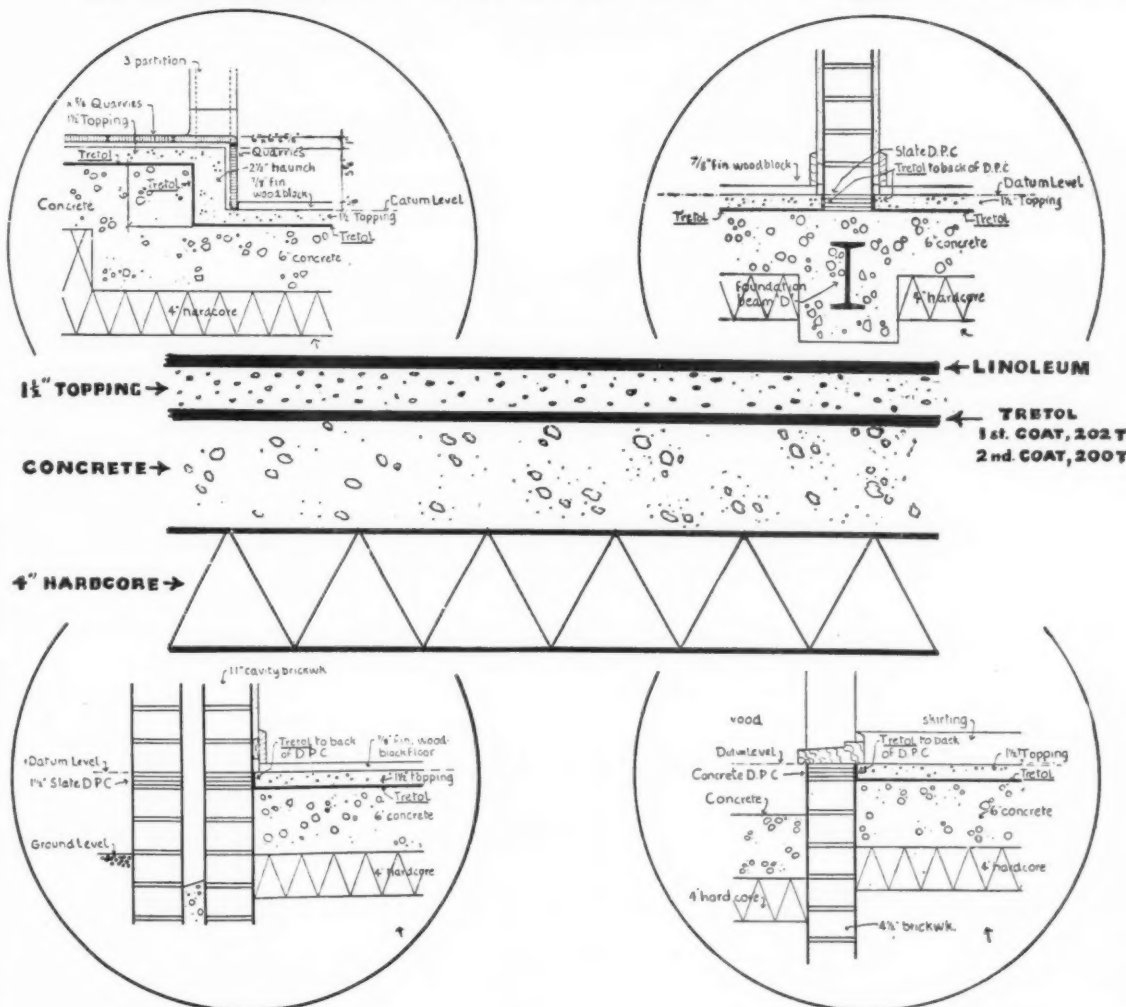
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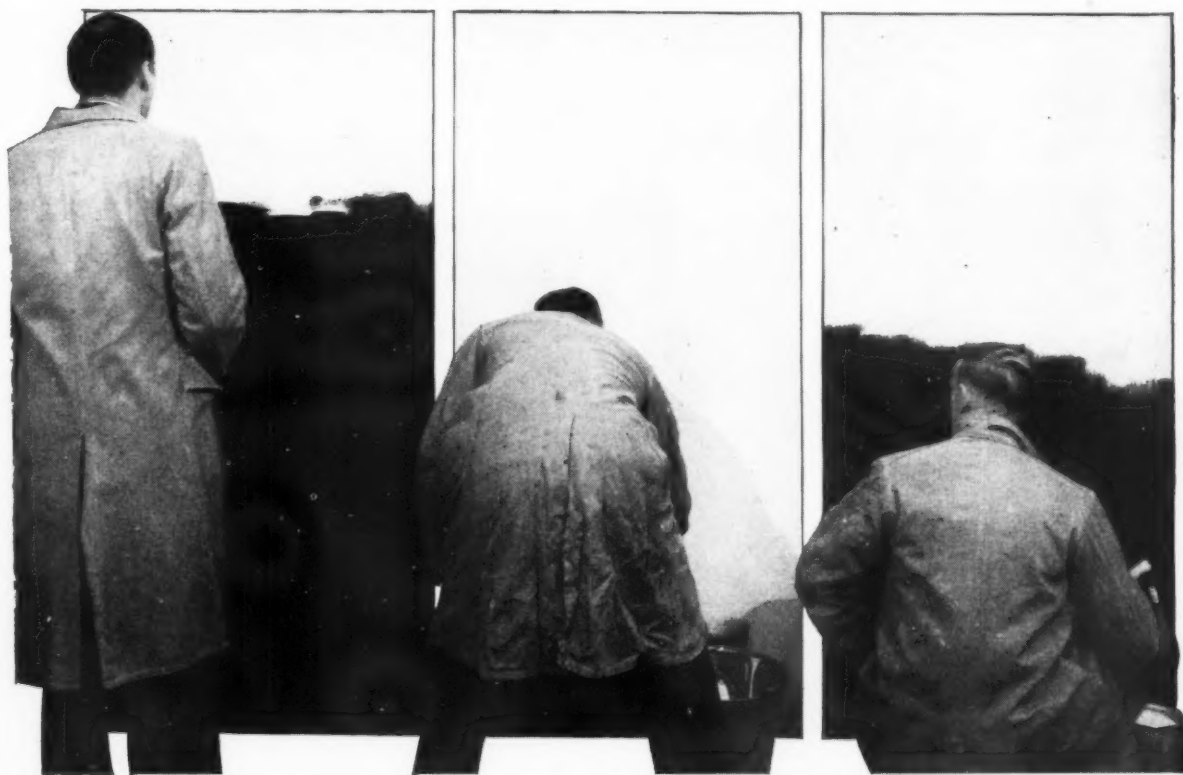
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# DOMESTIC KITCHEN PLANNING

## THE ESSENTIAL REQUIREMENTS

Kitchen planning is no longer a novelty: it is not just a matter of ordering a sink unit, cupboards and appliances; nor is it a complicated exercise in traffic routes, storage accommodation and plumbing. It consists primarily in providing a simple rectangular room with adequate windows and the minimum number of doors arranged to give as much continuous unbroken wall space as possible. Unless this is done the necessary appliances cannot be installed in the correct relationship, and the housewife will be unable to make the best use of them.

### The Grouping of Equipment

Consider first the work that is carried out in an ordinary kitchen in connection with meals. Food is brought in, sorted and stored in the refrigerator (or larder), grocery cupboard, vegetable rack and so on. When a meal is required, the food is taken from storage, prepared, cooked and served to the dining table; the necessary plates, dishes and utensils being kept conveniently nearby. The used articles are returned after the meal, washed up, and put away.

These operations require a basic grouping of storage space, work counters and appliances, represented in the simplest possible way in Fig. 1. This arrangement is not a matter of individual preference or a few bright ideas, but is based on the outcome of much research and wide experience. Each group is centred on a major appliance and contains the related work counters and 'storage accommodation'—the dominant appliances being the cooker, refrigerator and sink.

The cooking and washing-up groups should always be next to each other, the food preparation group being within easy reach of both, all being provided with good natural lighting and, as far as possible, being self-contained.

### The Space Required

The provision of the requisite lengths of unbroken wall space depends on the position of doors and windows in relation to each other and to the adjacent corners of the kitchen. Lack of attention to these points will make a room of adequate area totally unsuitable for a kitchen, as may be seen from Figs. 2 and 3a. The first example is in an existing house, and nothing can be done to obtain a workable layout: nothing could turn this into a "labour-saving kitchen". The second example, Fig. 3a, shows a kitchen in its original form: in this case it was possible to make the necessary revisions to door and window positions before the house was built, without increasing the floor area or the cost (Fig. 3b). These two diagrams show how the available area of useful wall and floor space is increased when the doors and windows are correctly placed. Fig. 4 shows the same kitchen fully equipped.

From these examples it can be seen that:

- Doors and windows must not be placed in the four corners of the room (or even in three).
- The distance from door or window jamb to the return wall is critical.

Door and window jambs should be 1 ft. to 1 ft. 3 ins. from the return wall, according to the detailing of frame and architrave, to allow a standard shallow cupboard (1 ft. deep) to go right up to the end wall; alternatively the distance should be increased to 1 ft. 9 ins. or 2 ft. if a standard deep cupboard or working counter is to be accommodated. If a free-standing refrigerator is to be placed in a corner as in Fig. 4 the distance required from door jamb to return wall or partition will not exceed 2 ft. 6 ins., even for large models (see R.1). The only other major appliance likely to be stood in a corner in this way is a washing machine (see EL.1): 2 ft. 3 ins. should be regarded as the distance to accommodate both standard and automatic types.

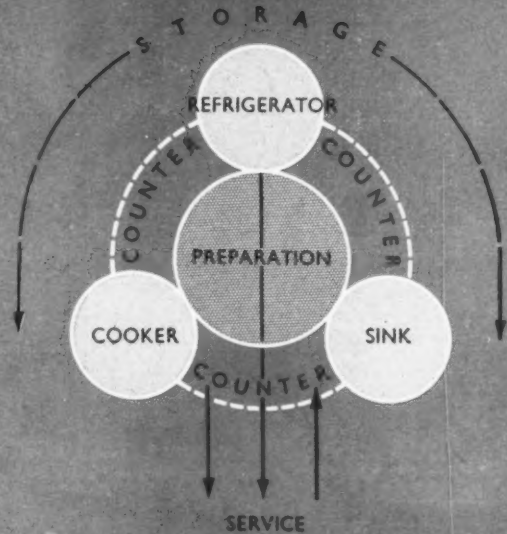


Fig. 1 Basic grouping of equipment

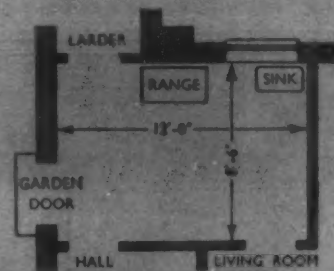


Fig. 2 Kitchen as existing

SCALE: 8 FEET EQUALS 1 INCH

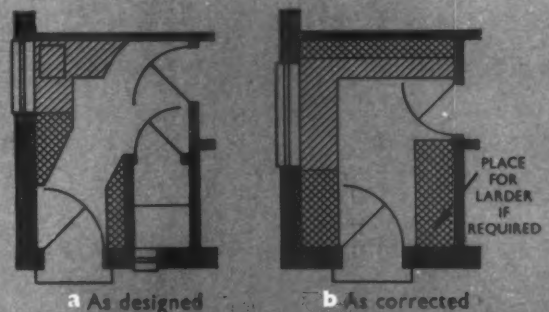
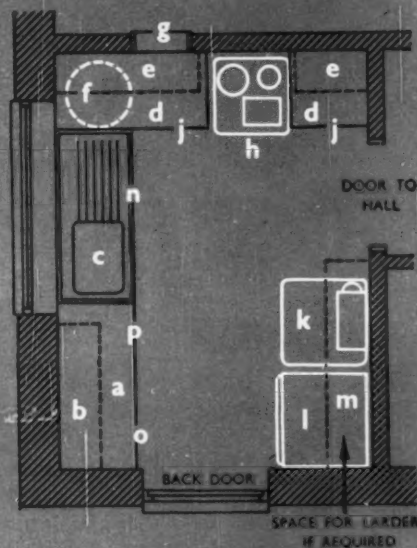


Fig. 3 A kitchen replanned

SCALE: 8 FEET EQUALS 1 INCH

- Hatched areas = space available for 3 ft. high fittings
- Cross-hatched areas = space available for full height cupboards

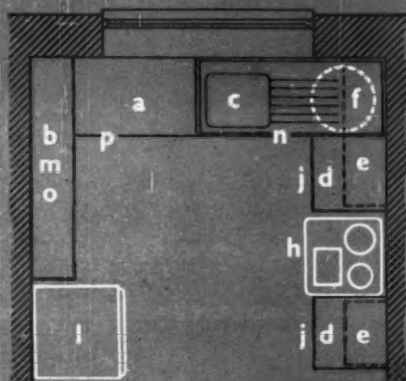
KP.1



**Fig. 4 L-shaped layout**

SCALE: 4 FEET EQUALS 1 INCH

See also Figs. 3a and b



**Fig. 5 U-shaped layout**

SCALE: 4 FEET EQUALS 1 INCH

See also Figs. 3a and b

Key to Figs. 4 and 5

- |                                   |                           |
|-----------------------------------|---------------------------|
| a Preparation counter             | b Cooker                  |
| b Ventilated food store over      | i Pans and utensils under |
| c Sink                            | k Washing machine         |
| d Service and dishing-up counters | l Refrigerator            |
| e China and glass stores over     | m Grocery store           |
| f Water heater under              | n Garbage can under sink  |
| g Service hatch                   | o Vegetable store under   |
|                                   | p Space for chair         |

In all cases the actual dimensions of the major appliances to be used should be ascertained at an early stage of the planning of any small kitchen. Both sink units and cookers can be obtained which project only 1 ft. 6 ins., a depth which is also satisfactory for work counters provided the length is adequate and that they are not overhung by upper cupboards.

#### Doors and Access to Storage Space

In all cases the floor and wall space taken up by the swing of room and cupboard doors should be taken into account, and in small kitchens, should be actually drawn on the plan. Cooker oven doors are hinged on the left (unless of the drop-down type); refrigerator doors, on the right. The kitchen door should open directly into the room, otherwise space may be wasted by having to walk round the opening door as in Fig. 3a.

Wide cupboard doors are a nuisance in small kitchens, especially when the cupboards are above working counters, as the user has to step back every time a door is opened: consideration should be given to sliding doors and the tambour or roller shutter. The storage capacity of a cupboard is frequently determined by ease of access: reaching over and stretching or bending to get at the contents should not be necessary (see R.1).

If a larder is required, the old-fashioned "walk in" type should be avoided; it wastes a considerable floor area as generally built with a deep and wide slate or concrete shelf. As articles requiring low temperature storage will be kept in a refrigerator, the larder should be considered as a ventilated food store rather than a refrigerator-substitute, and designed as such with shelves 1 ft. deep and full access from top to bottom, occupying only a fraction of the space usually taken up by the traditional larder.

#### The Relation Between the Three Groups

With the appliances and equipment in a straight line, the classic order is Preparation — Cooker — Sink. The straight line is however rarely used, the U shape being preferred as more compact and involving less walking about, although in practice it often brings the cooker under the window, where the interior of the oven may not be well lighted. This difficulty is removed by changing over the positions of the sink and the cooker, placing the sink next to the preparation counter and the cooker on the side wall as shown in Fig. 5.

The result is a very efficient kitchen which is large enough for most families of 5 or 6 and which can be planned within a surprisingly modest area, provided the room doors are all kept clear of the U. It has provided the basis for many successful designs (see L.4 and E.L.1, Figs. 1 and 3) particularly where economy is an important consideration.

In many cases the wall space available is confined to two adjacent walls with perhaps a third area separated from the remainder by doors (as in Fig. 3b). This need not be a serious disadvantage, provided the two adjacent walls allow enough space to accommodate the three major appliances and the working counter space that goes with them, as shown in Fig. 4. A further requirement is that the major part of the storage accommodation should also be included, so that the remainder which occupies the third area is kept to the minimum but remains within one step of the preparation counter. On no account should a door come between the preparation counter, sink, and cooker, neither should cooker or sink unit be isolated: if the plan appears to require this, it is the plan that must be revised as no arrangement of the appliances under these conditions will be satisfactory.

Further aspects of kitchen planning will be discussed in subsequent sheets.

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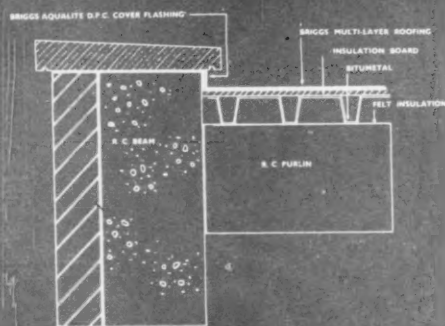
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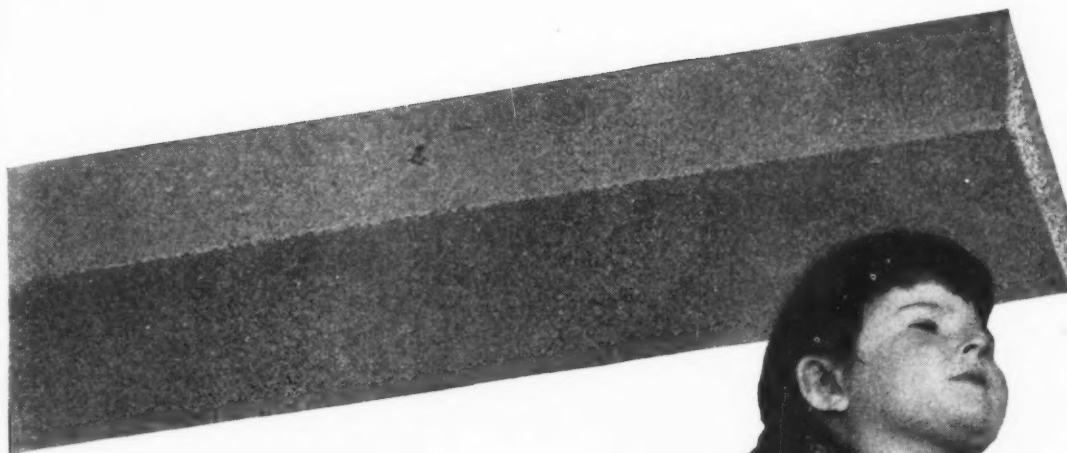
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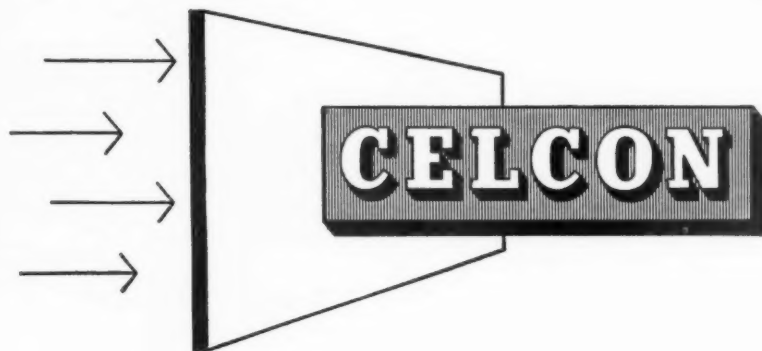
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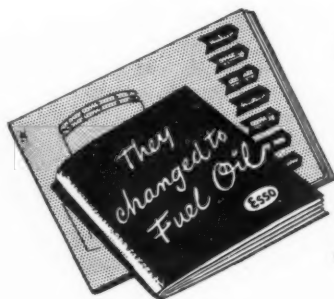
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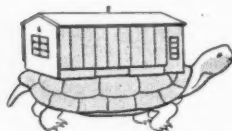
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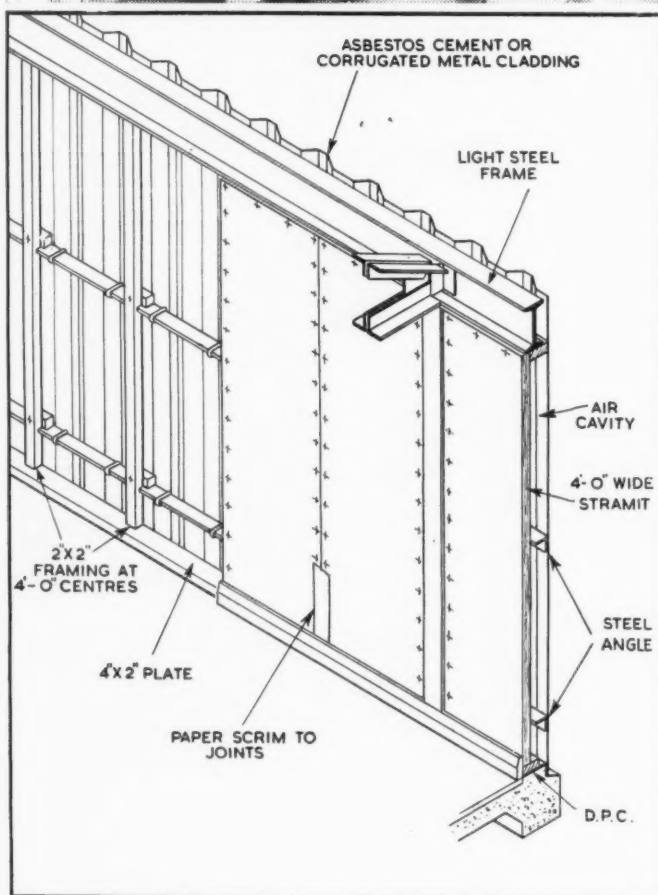
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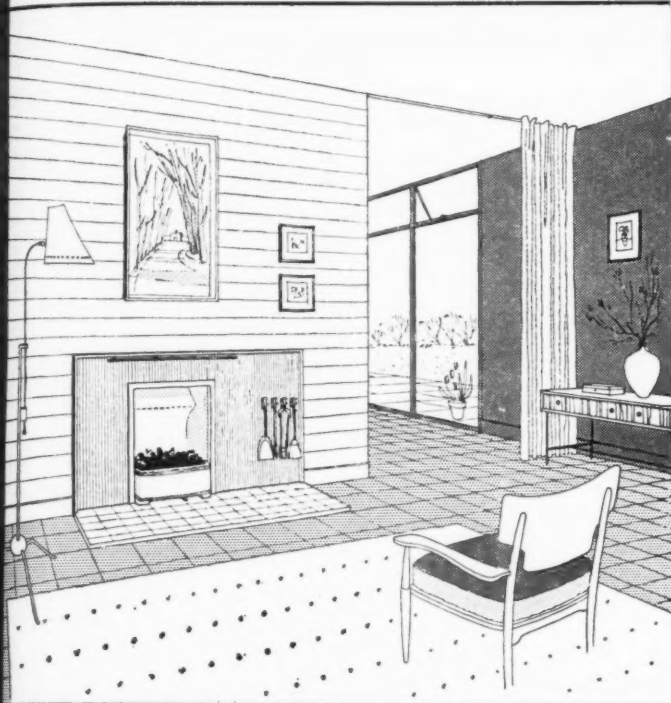
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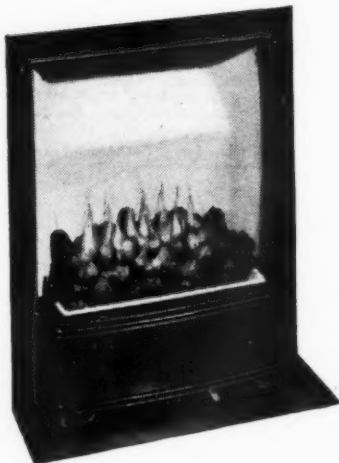
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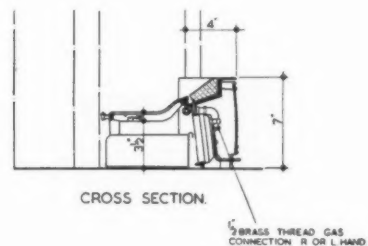


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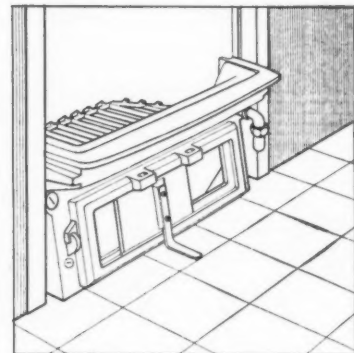


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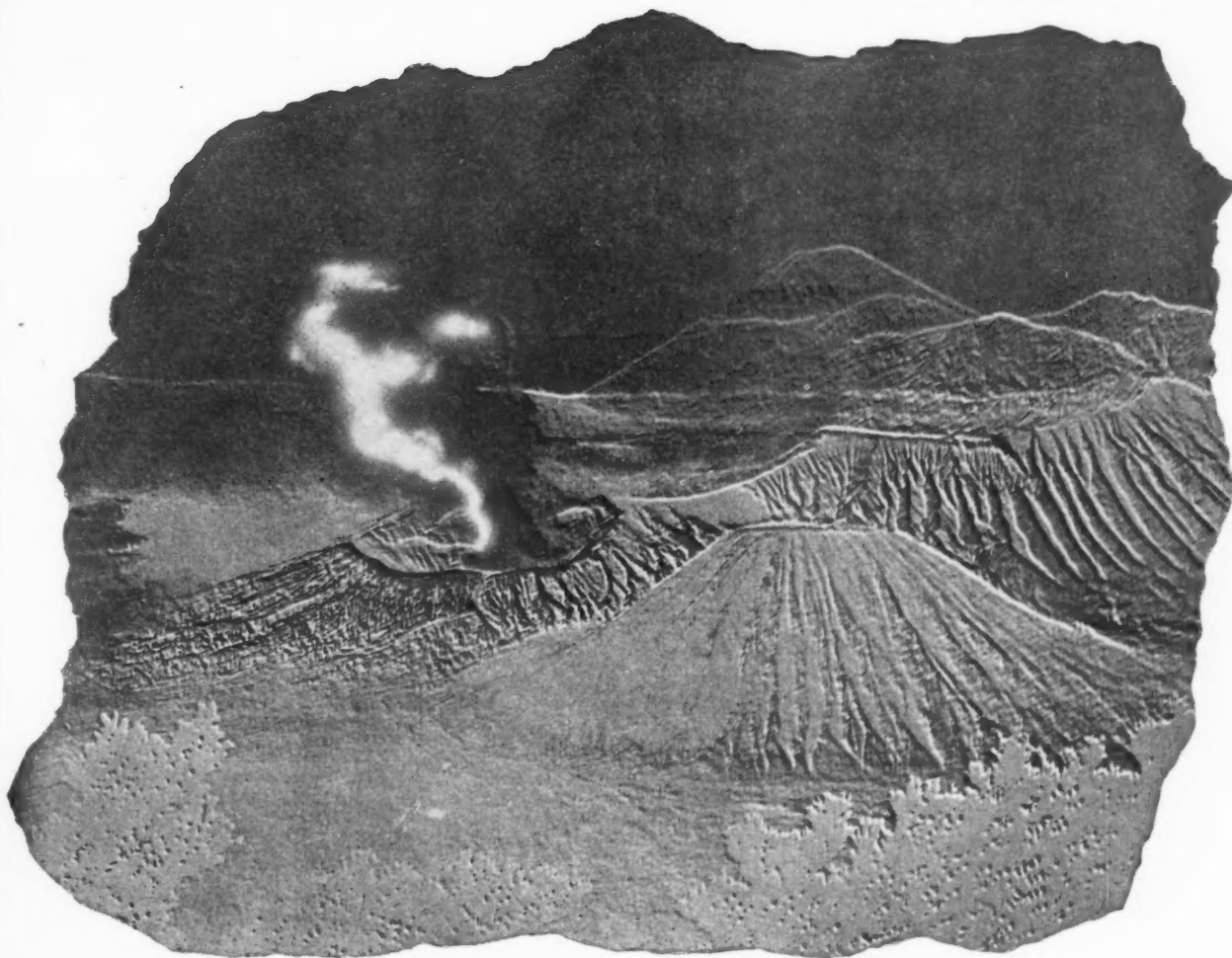
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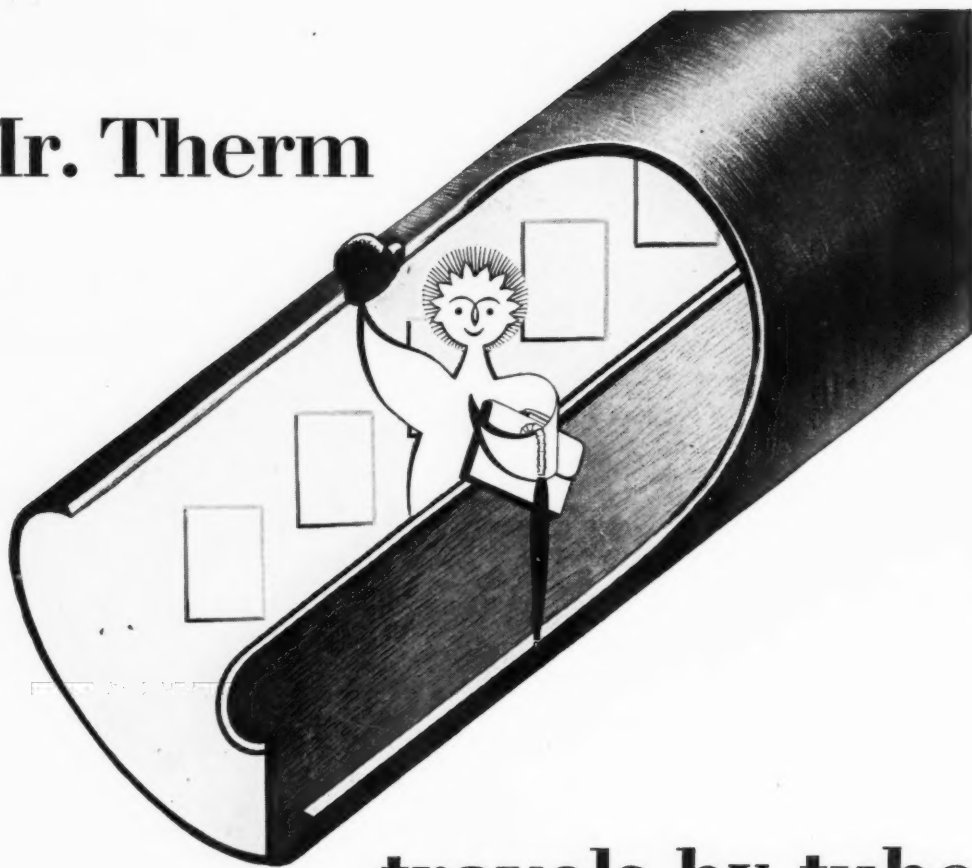
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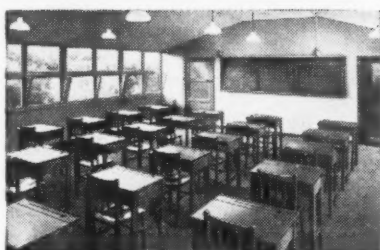
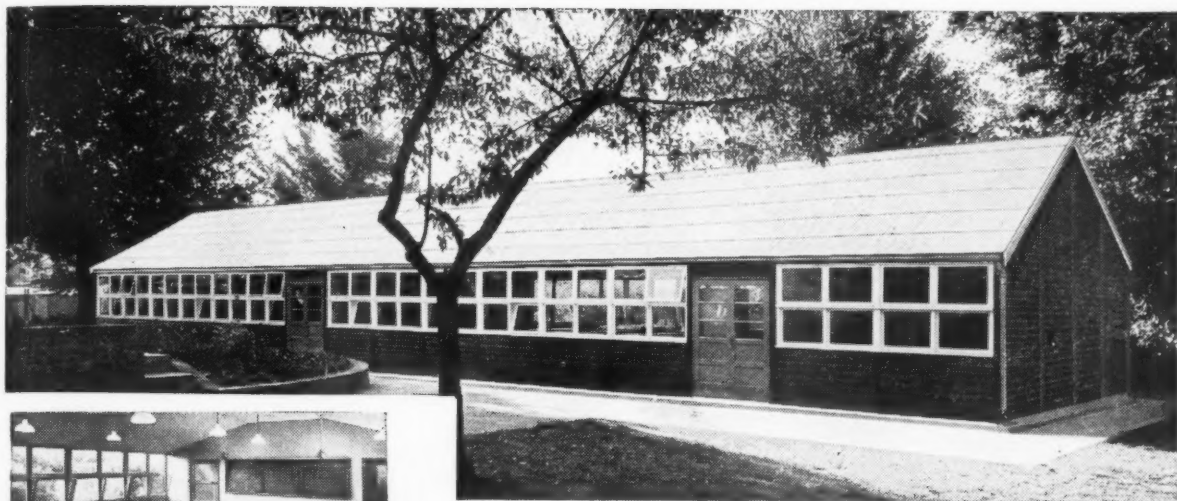
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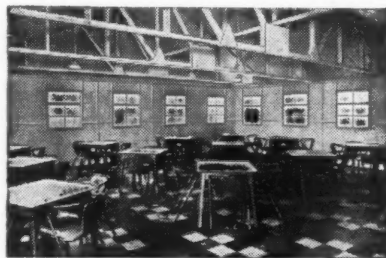
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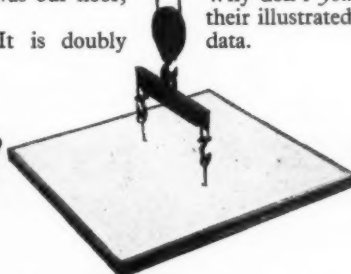
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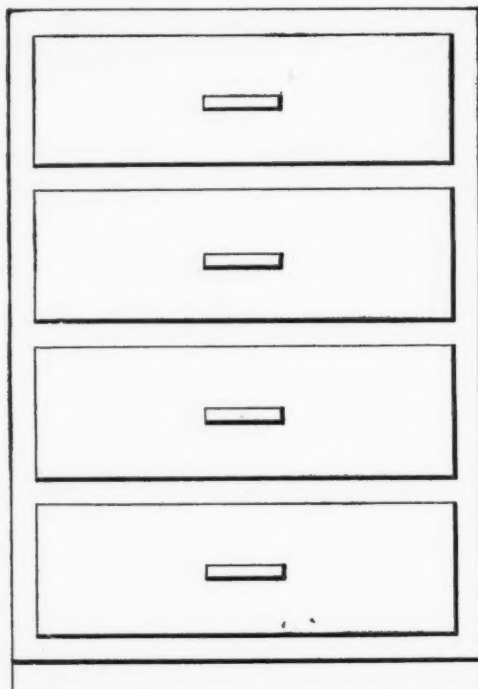
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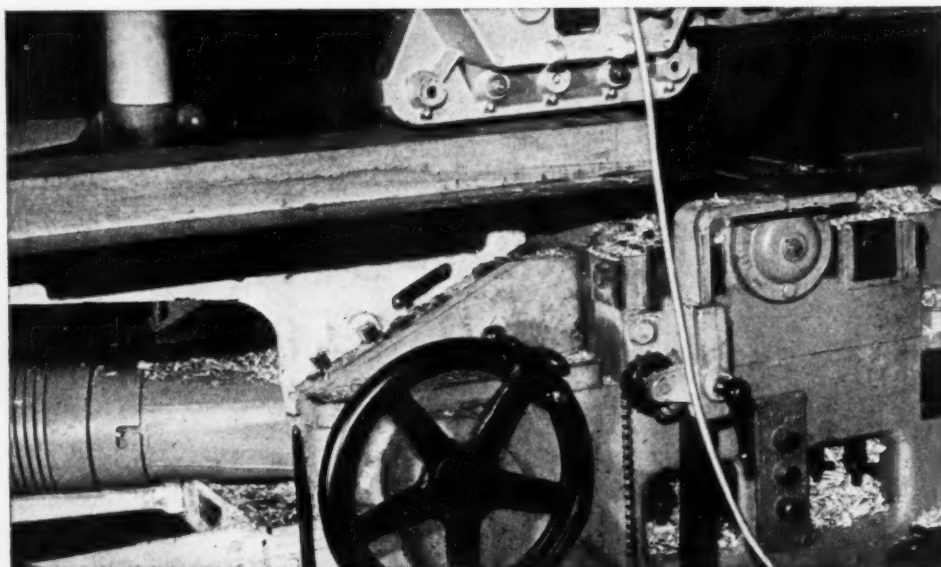


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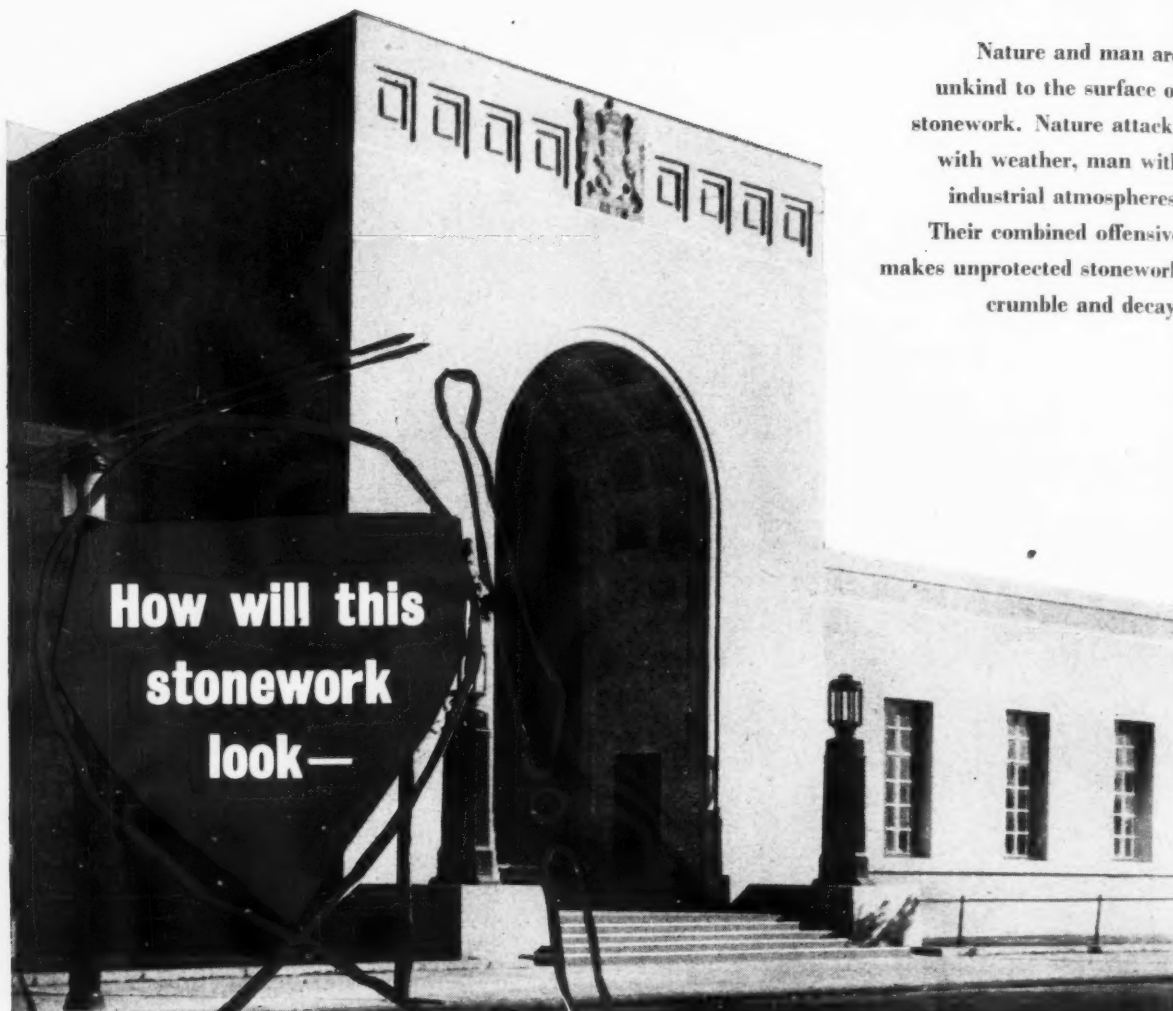
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*Ruberoid specifications are listed in detail in Publication No. 326.*

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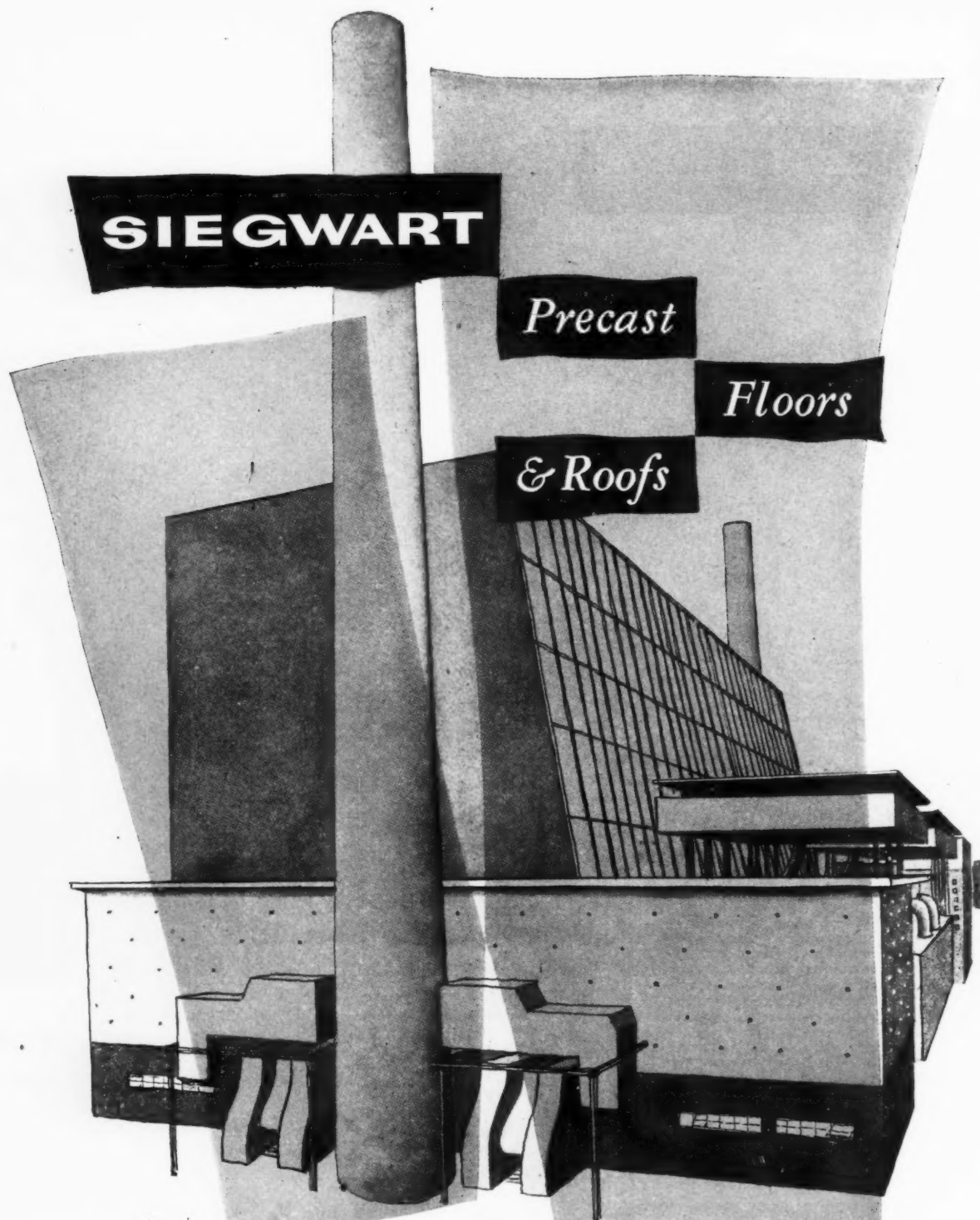
## Roofing Service

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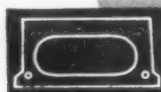
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*Christ Church Cathedral, Oxford, from a recent painting by Felix Kelly.*



*Christ Church Cathedral, Oxford, is a fine illustration, in one building, of architectural development from Norman to Tudor times. But it is very much a living church and attracts large congregations. An oil-fired heating system was installed in 1950.*

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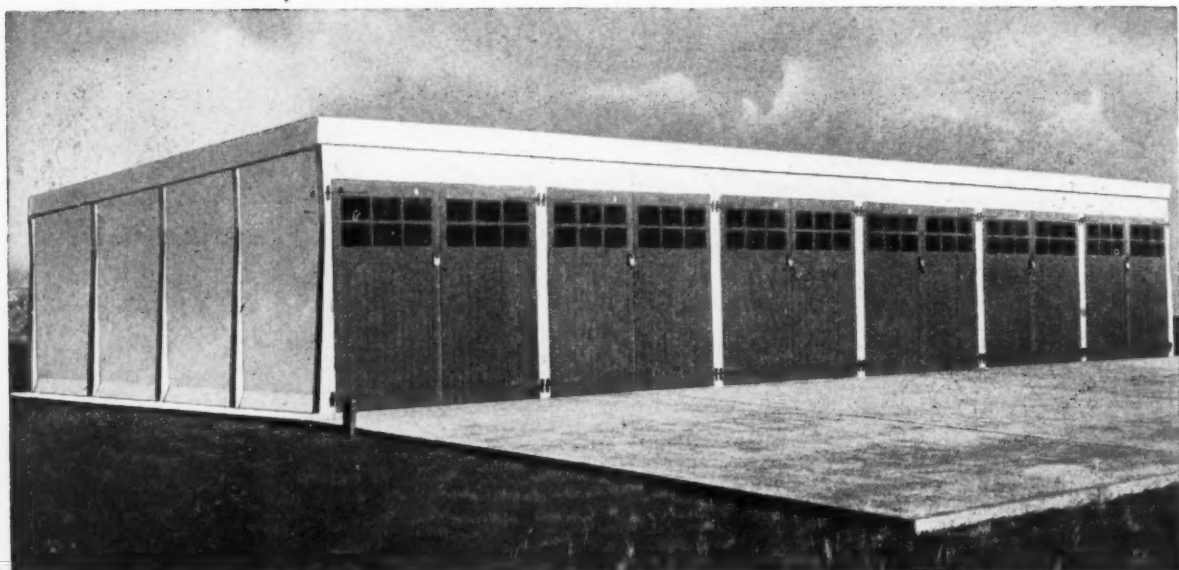
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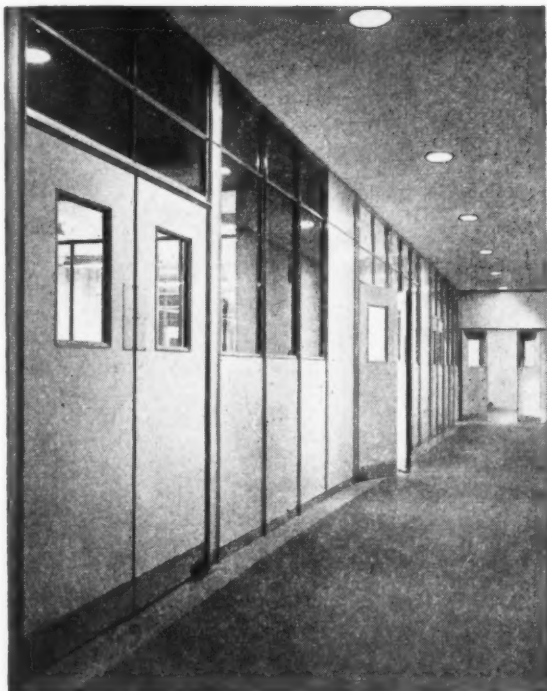
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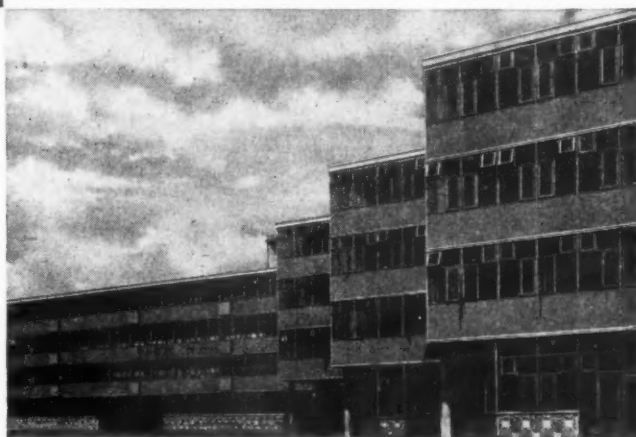
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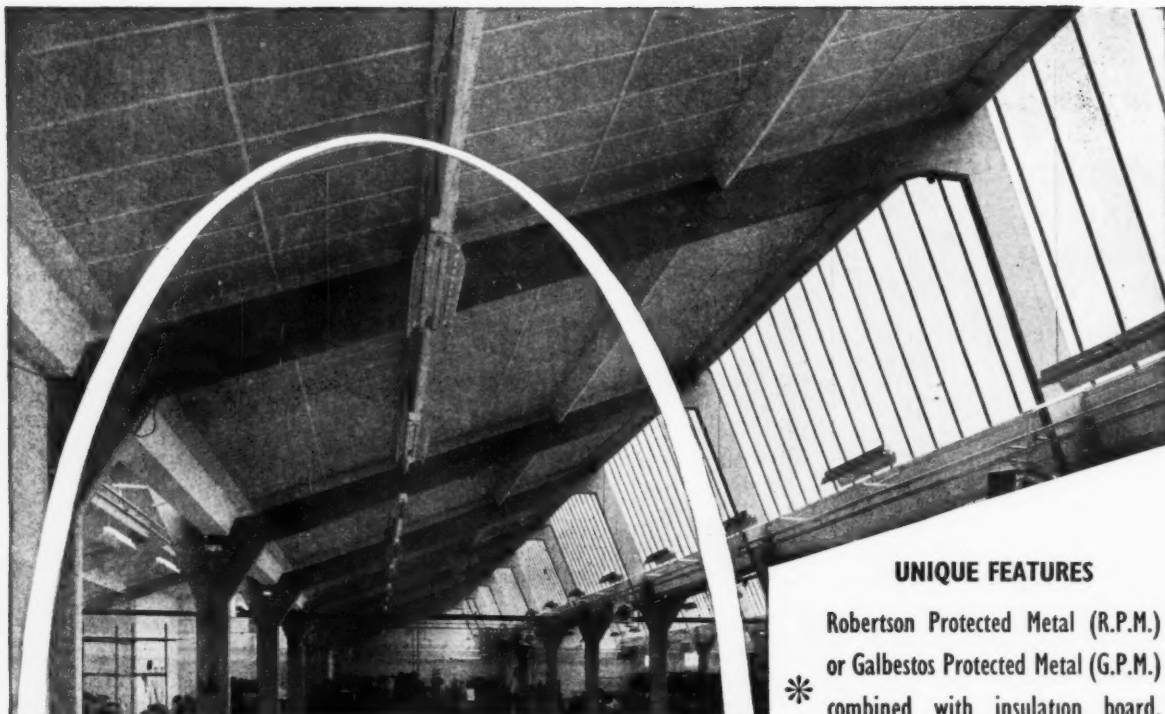
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# Zinc roofing



Architects: Messrs. Challen & Floyd, A/ARIBA.

## House at Woodford Green

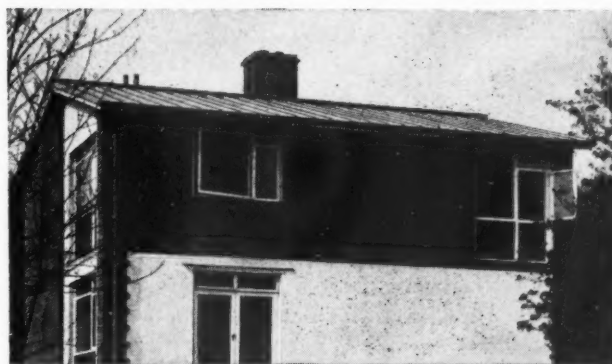
These illustrations show an interesting example of Italianized zinc roofing applied to a modern house. By this system, the sheets are factory formed: site work is cut down to a minimum, and roofs can be rapidly covered.

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## Think Zinc



View showing contour of Italianized sheets.



Flashing round chimney stack.



Detail of verge apron.

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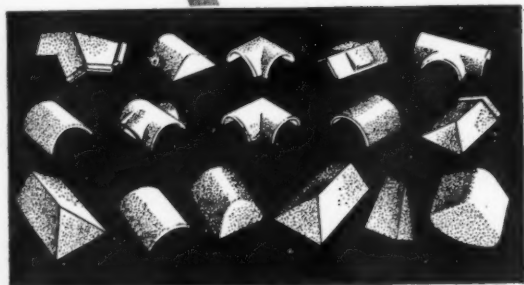
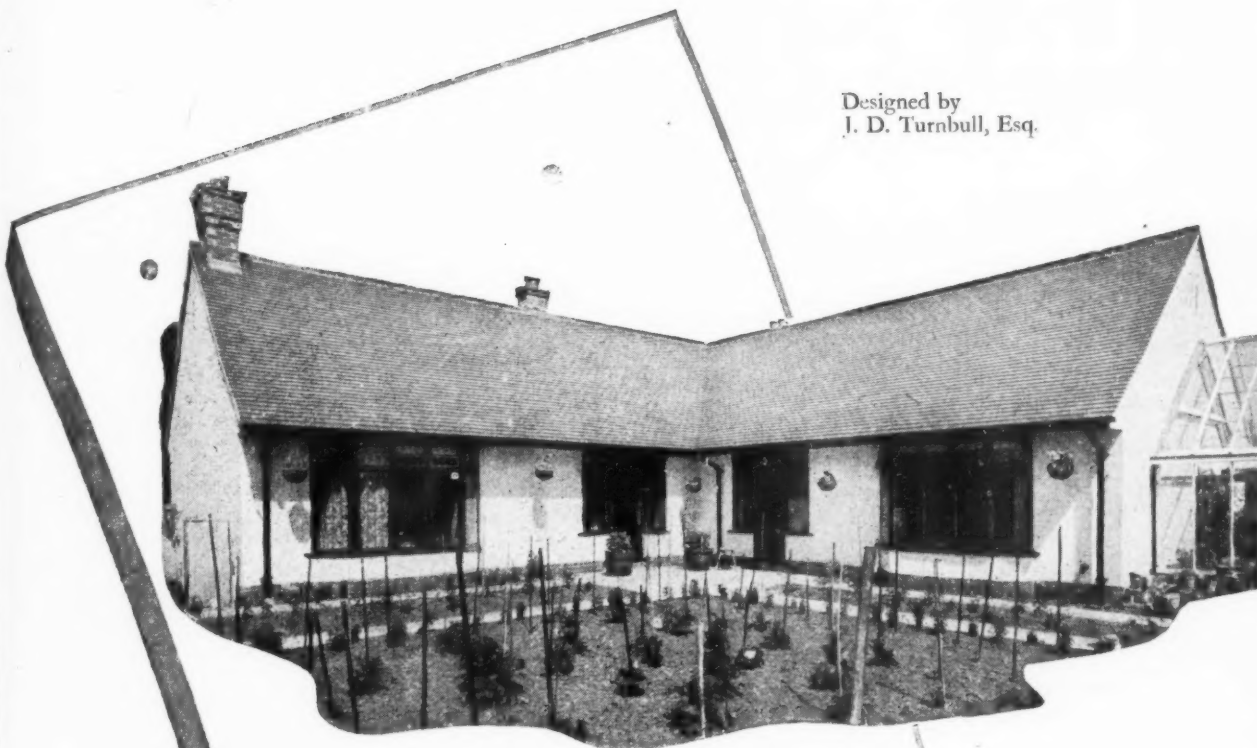
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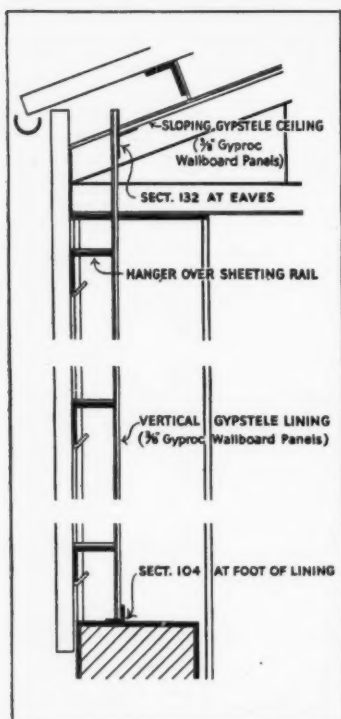
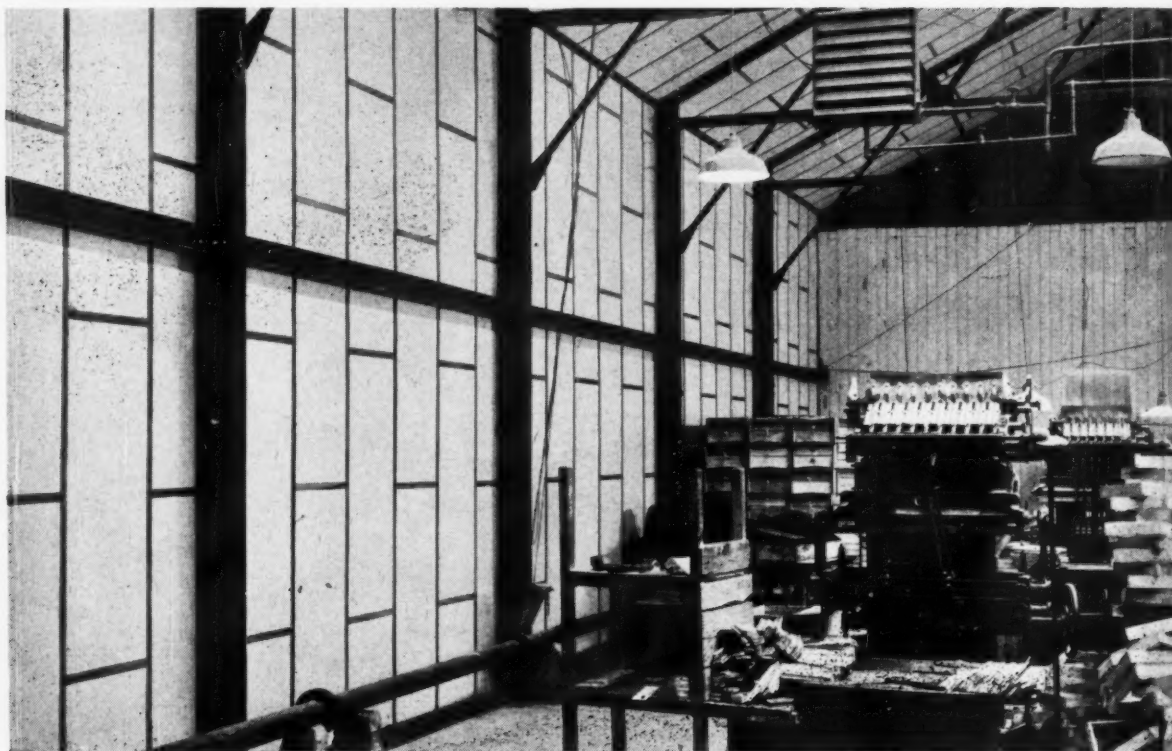
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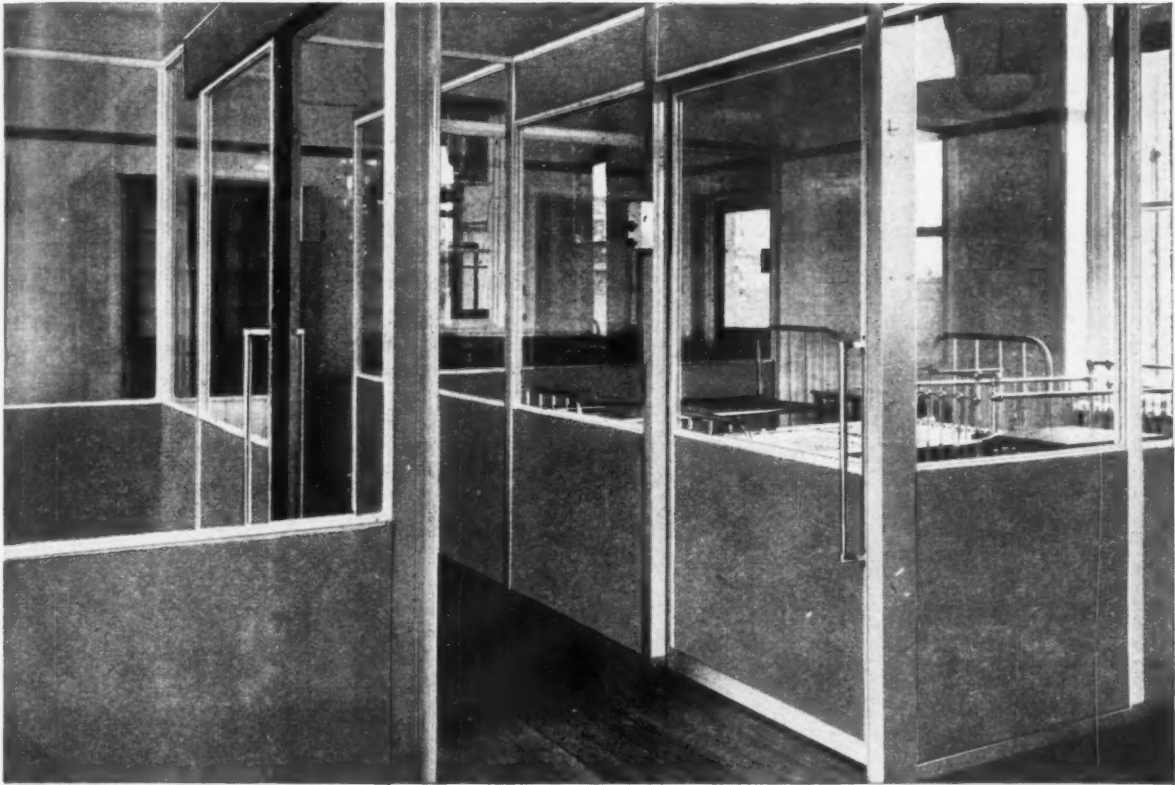


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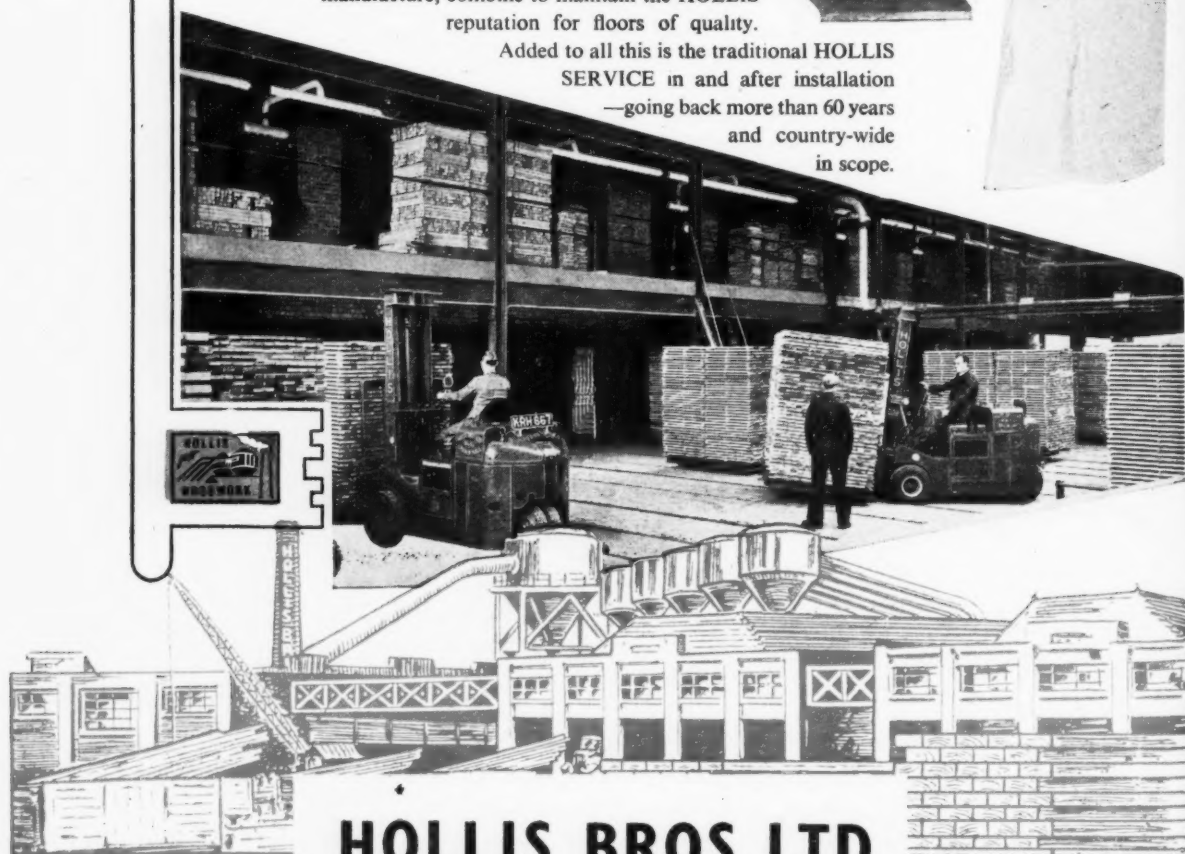
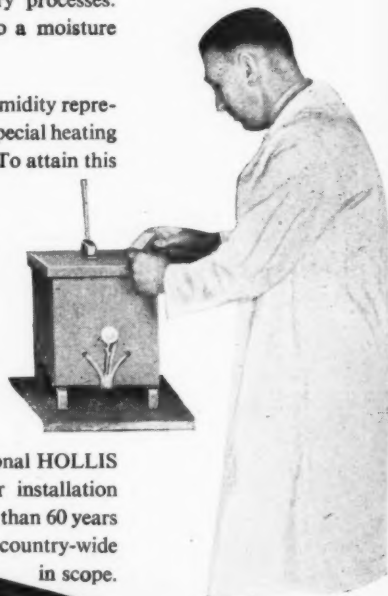
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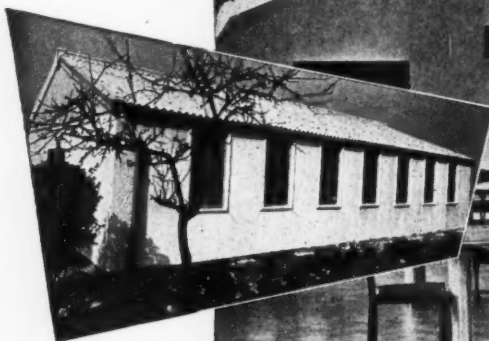
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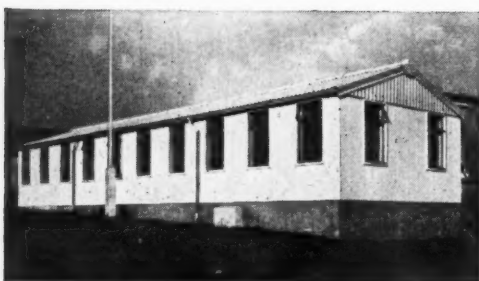
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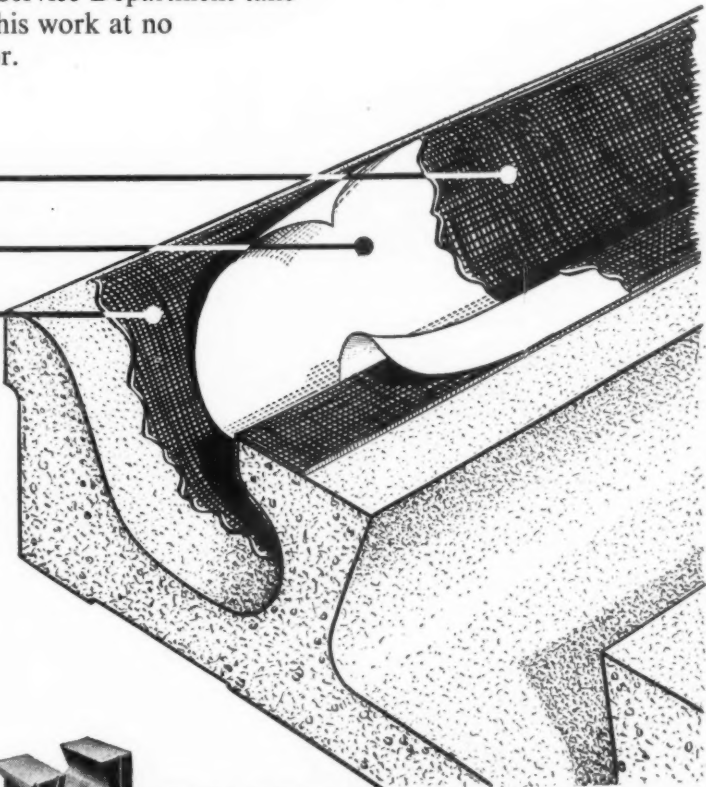
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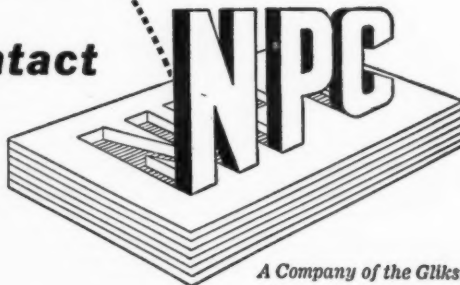
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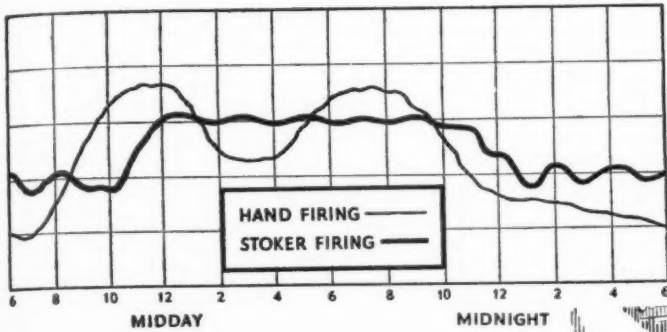
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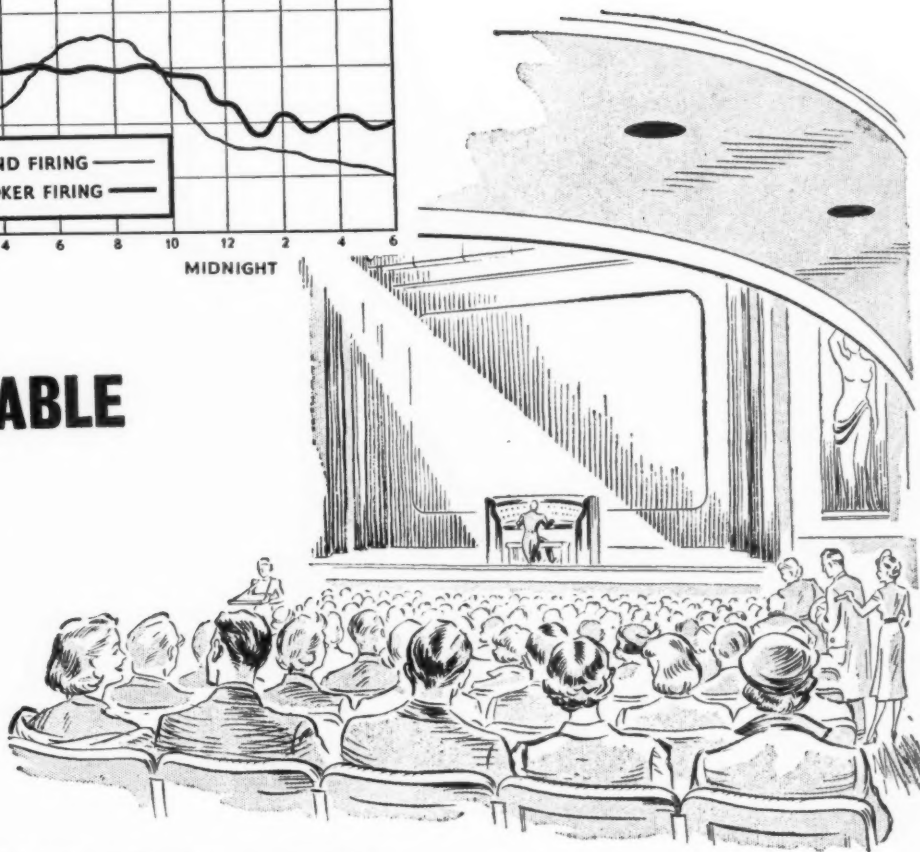
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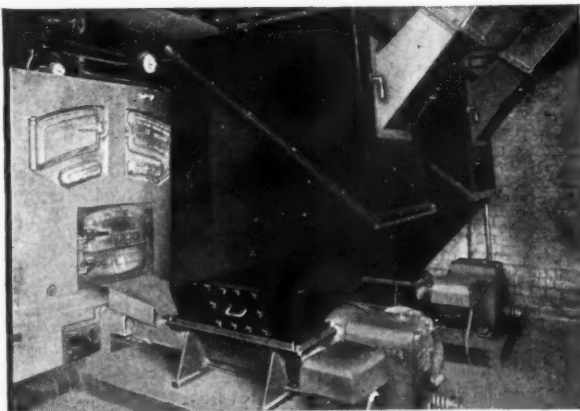




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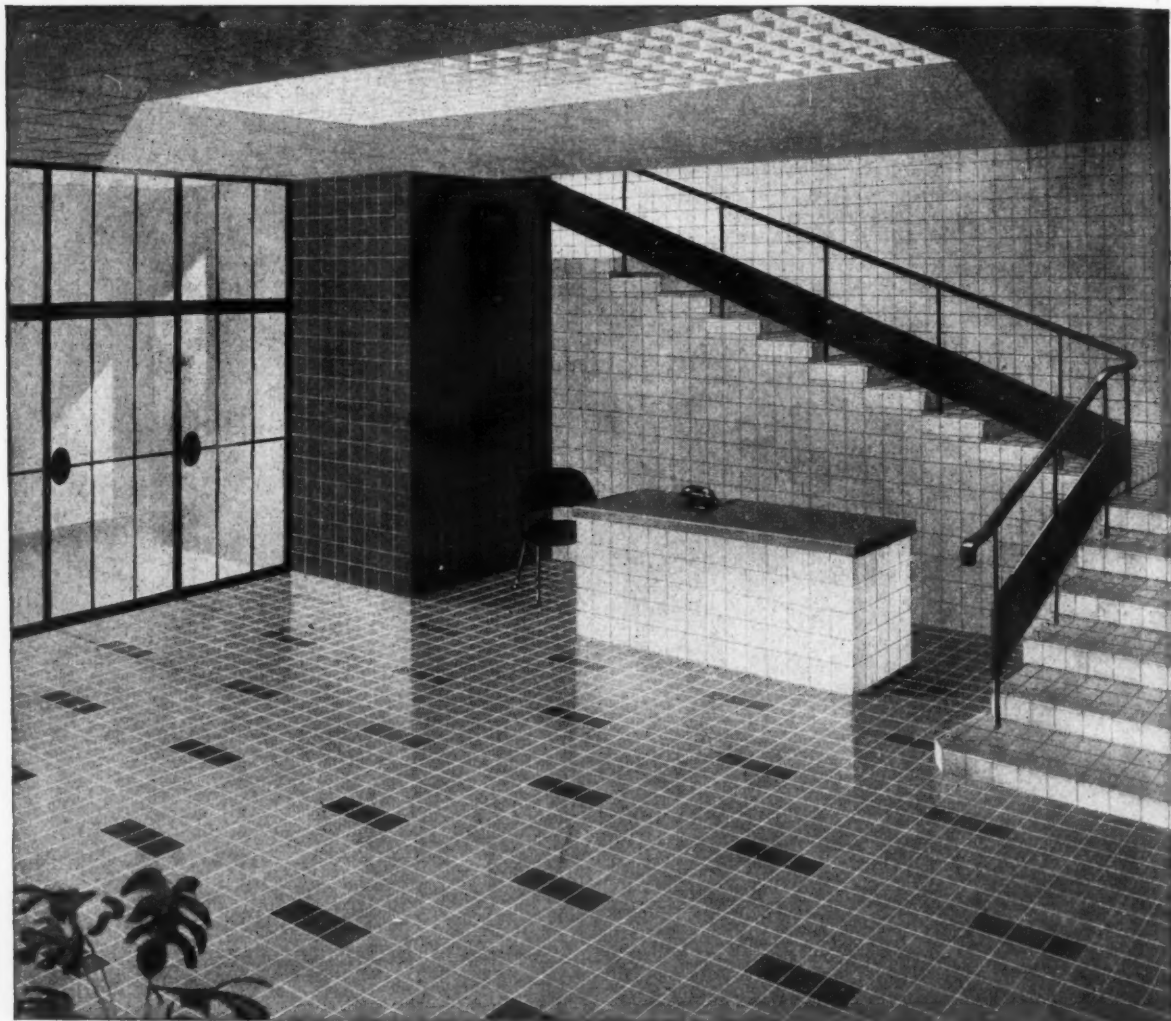
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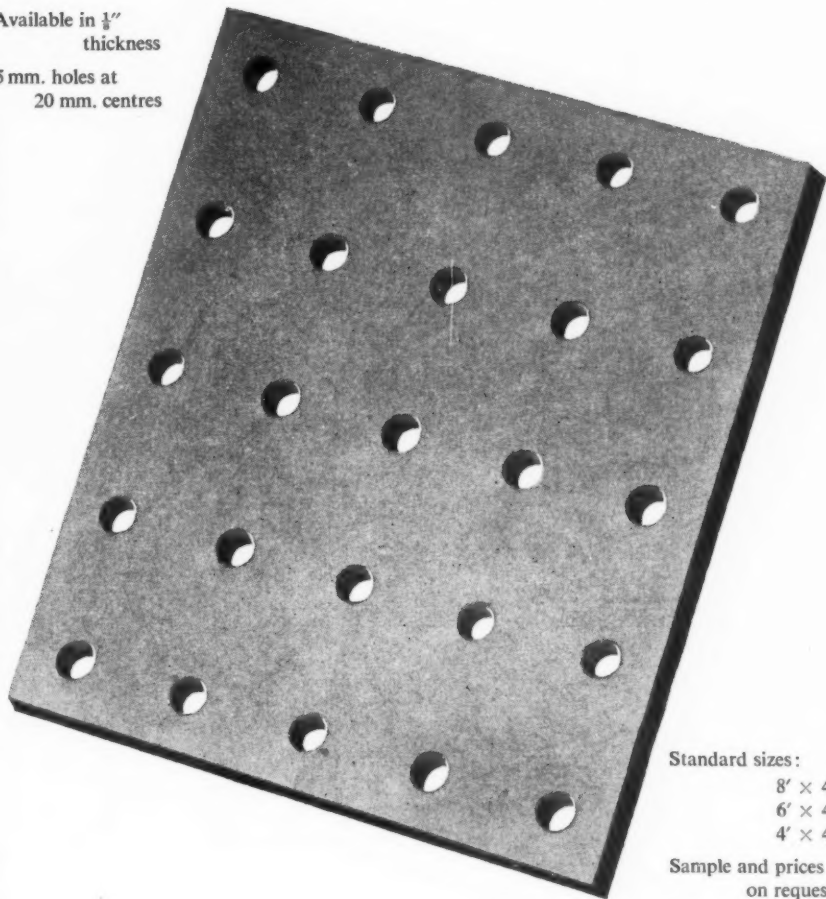
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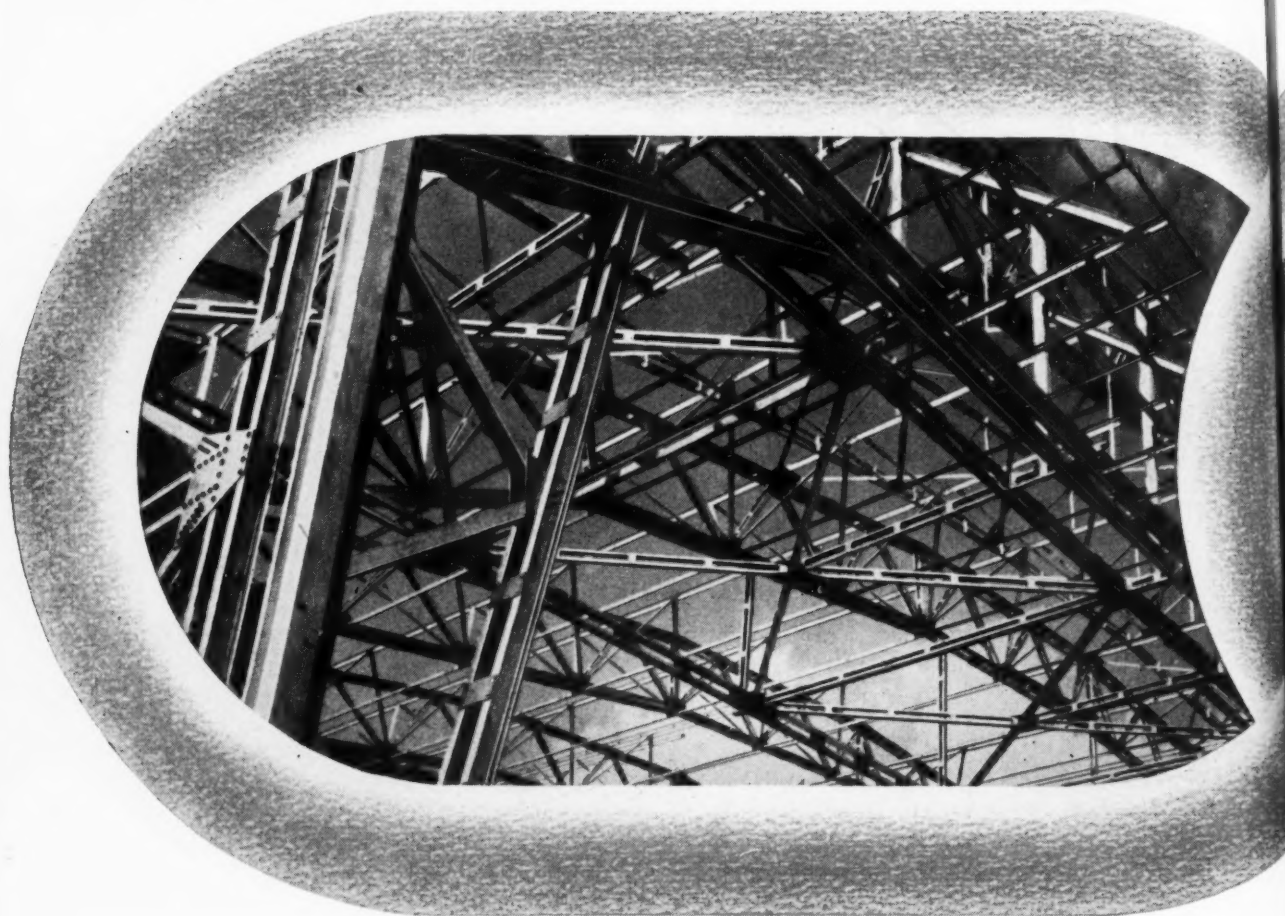
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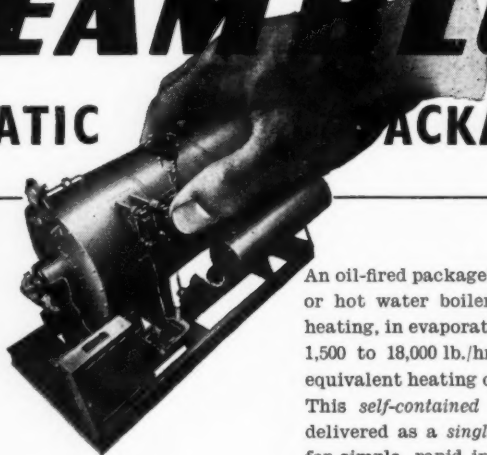
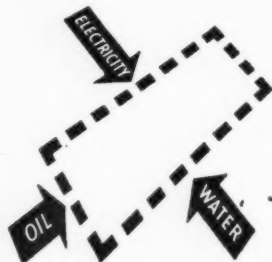
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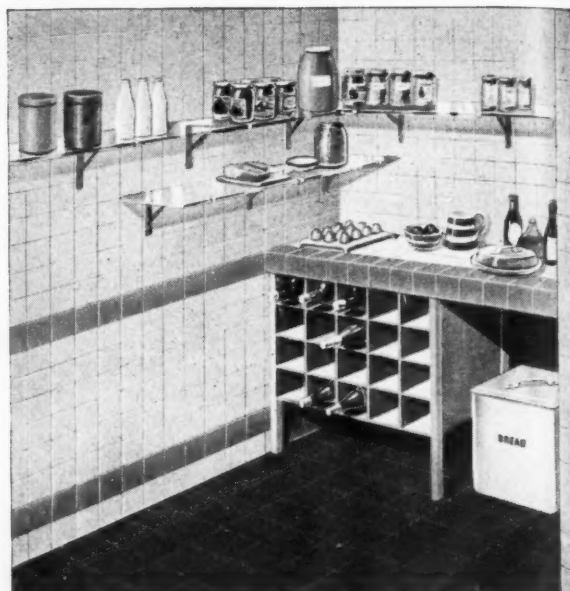
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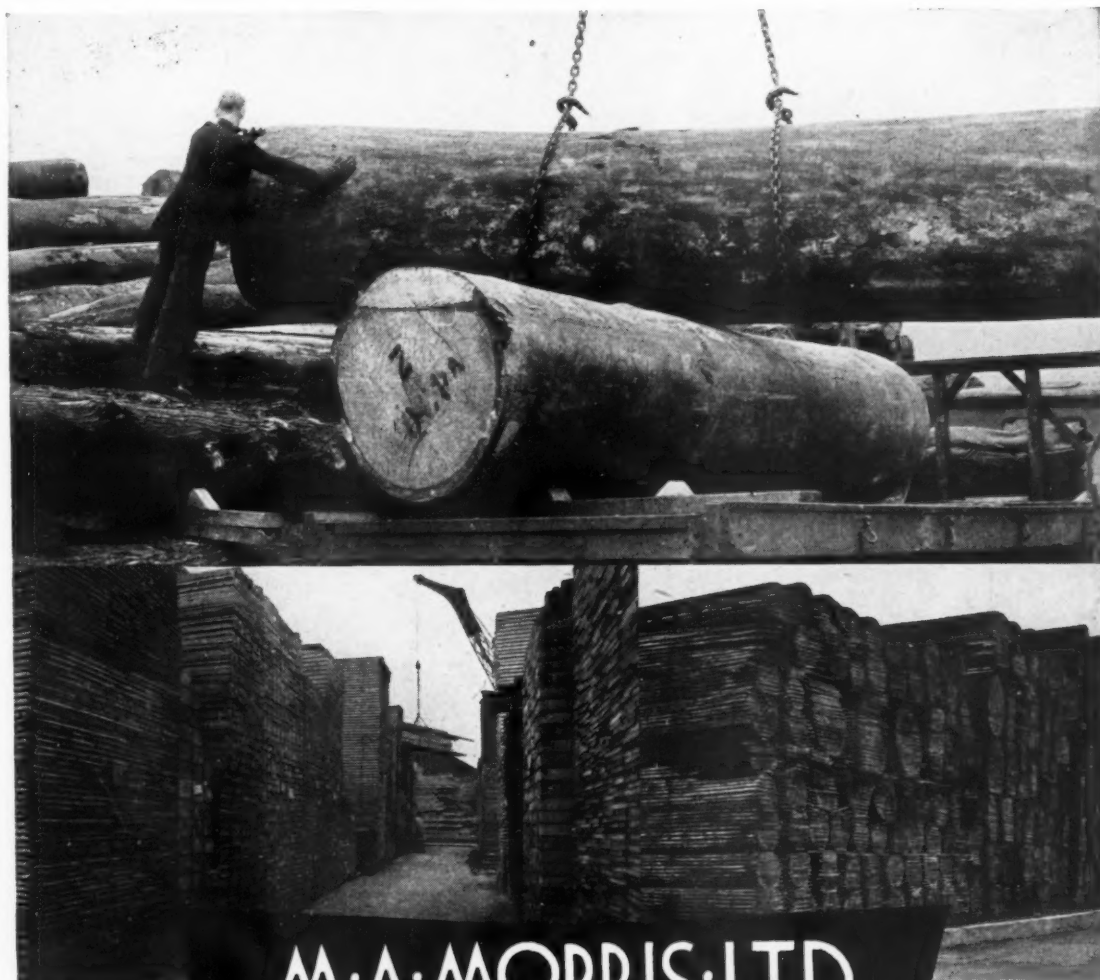
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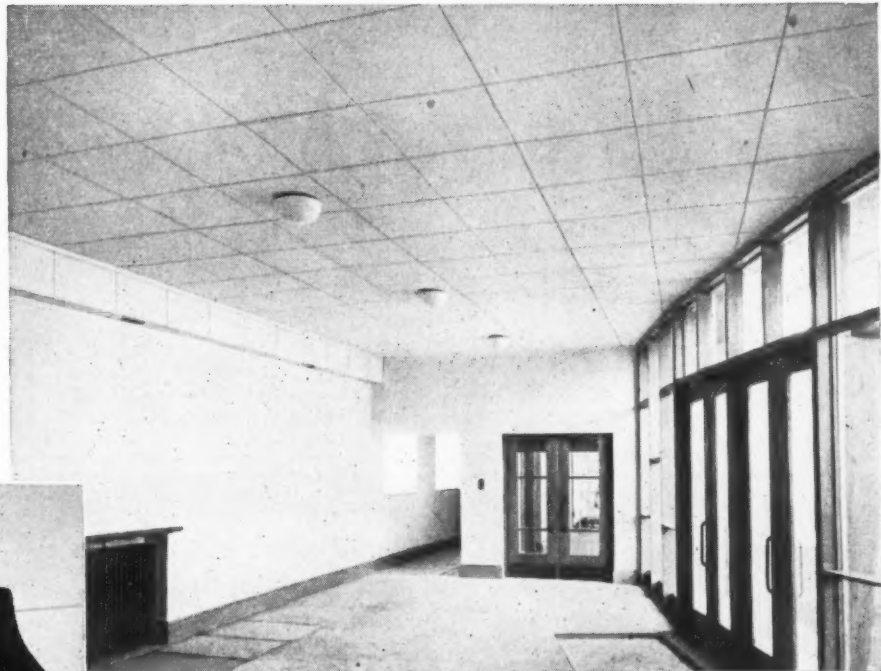
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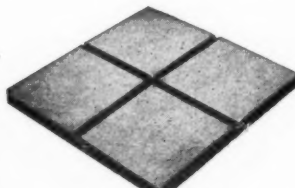


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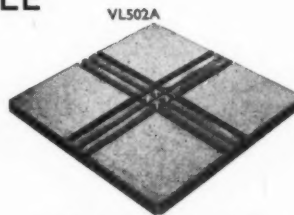
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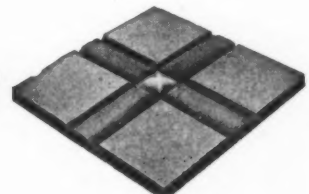
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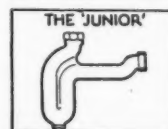
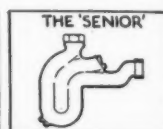
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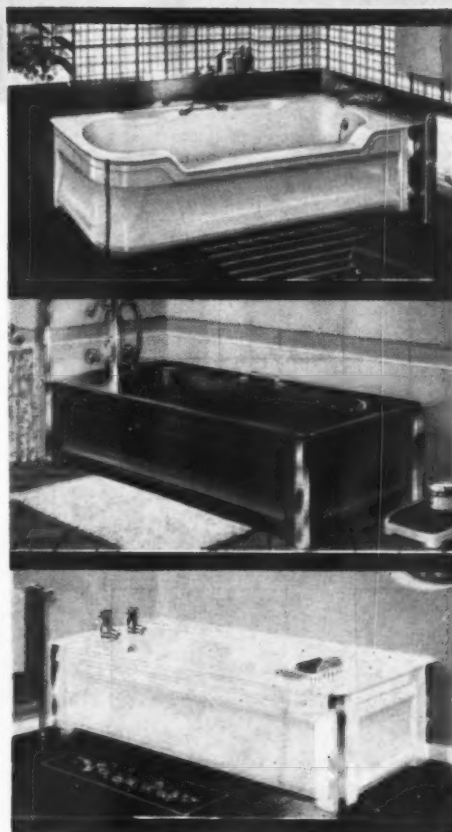
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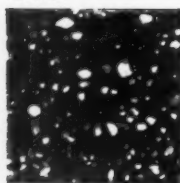
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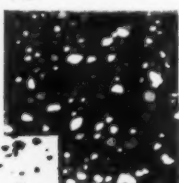
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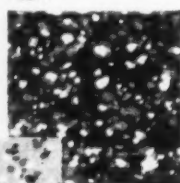
HB 1  
FANTASY



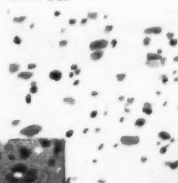
HB 3  
GALA



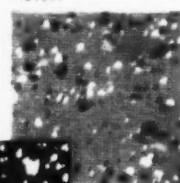
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FIESTA



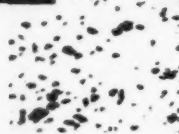
HD 21  
MAYPOLE



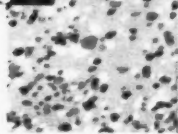
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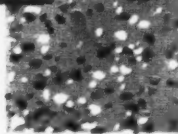
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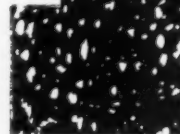
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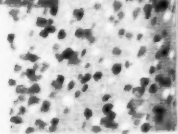
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No. 3151 July 21, 1955 VOL. 122

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## TURN AGAIN

I hope the MARS Group exhibition at the Royal Exchange, called "Turn Again" (picture on page 76), will be visited by everyone concerned with new building projects in the City. Architects no doubt will have criticisms to make of it: that it doesn't concern itself closely enough with the specific problems London is facing; that it doesn't make clear that modern architecture means more efficient planning and more economic construction as well as an appearance more suited to our time; that it doesn't deal with the relationship between buildings as well as with buildings individually, and so on. Yet what are these shortcomings beside the fact

that pictures of modern buildings are being shown for the first time in the heart of the City, where the contrast between what is and what might be can be drawn simply by looking round one.

Because I think most architects over-rate the average business man's awareness of the meaning and significance of modern architecture. His apparent preference for the kind of thing that has come under such heavy fire lately isn't based on any sort of architectural opinion but on a blissful unawareness that there is an alternative. So merely to put pictures of better buildings where he is bound to see them is something worth doing. Nevertheless, I feel that the exhibition, gay and lively though it is to look at, could have done with a little more explanation of what modern design is all about.

Incidentally one of the most significant things to come out of the opening ceremony has so far been overlooked: a phrase that occurred in the message sent to the Lord Mayor by the Minister of Housing and Local Government, who was unable to be present. Mr. Duncan Sandys said "I trust that we in our generation will not only seek to design fine streets and facades but will, here and there, venture to reach up high into the air, and so make our own distinctive modern contribution to London's skyline."

So the Government at last has come down on the side of high buildings. That being settled it is up to the L.C.C. to make sure that the vital "here and

there" means what it ought to mean in terms of London as a whole.

## BIRDS OF PASSAGE

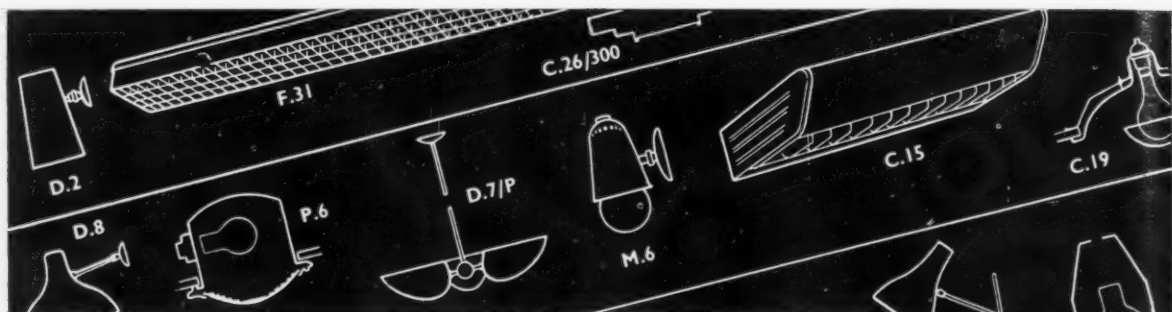
This is the season for architect visitors from abroad, and it occurred to me that my readers might care to know who is here each week—though the visitors—especially the Americans—seem to come and go so quickly that by the time I have reported their arrival they are probably already on their way home.

So, at the risk of sounding like a society gossip columnist—here goes. Last week I mentioned Prof. Henry-Russell Hitchcock's presence. He has just left for Greece and Turkey but will be with us again at the end of August. Last week also Antonio Bonet came from the Argentine and left for Copenhagen. He has a concert-hall to build in Buenos Aires and was here for talks on acoustics at BRS and to study the Royal Festival Hall. Copenhagen, of course, has long been a centre of acoustic science.

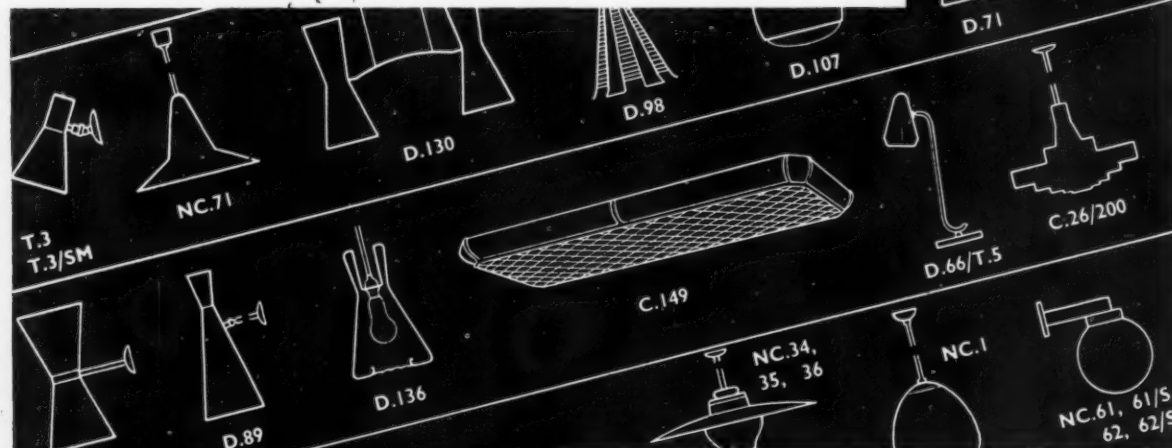
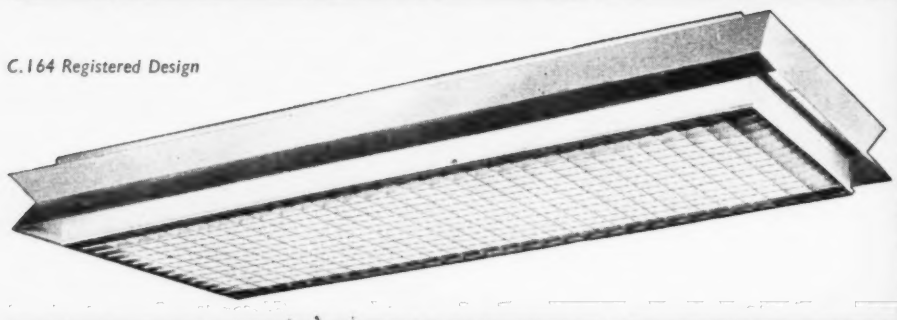
Finally, a particular welcome, on behalf of the AJ, to Douglas Haskell, editor of the AJ's distinguished American contemporary, *The Architectural Forum*, which has become so much more enterprising since Haskell took over full control six months ago.

## COMING OF AGE

The Lawn Road Flats' twenty-first birthday party last week was an enjoyable as well as an important occasion. The building was looking its best, the new white rendering effectively bringing out the masculine quality of the design, which Prof. Pevsner stressed in his



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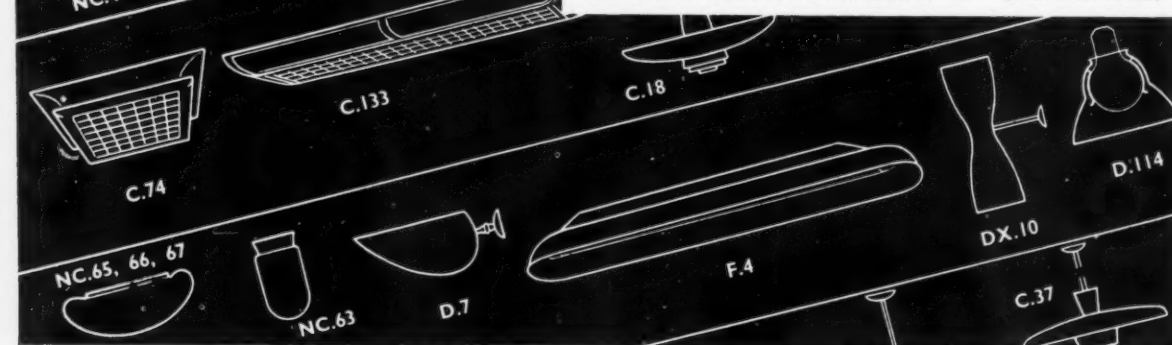
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14



speech during the party, in which he paid tribute to its importance as a pioneer and placed it in its proper historical perspective along with the early work of Tecton, Sir Owen Williams et al.

\*

It is no disrespect to Wells-Coates's admirable design to say that the real pioneer is not the building but Jack Pritchard, its originator and the originator of Isokon furniture and several other pioneer contributions as well. And last week's party was attended by the ghosts of the many people he and his wife befriended at Lawn Road Flats, enabling them to make their important contribution to modern architecture and design, including Gropius, Breuer, Moholy Nagy and others.

\*

It was truly a reunion of pioneers, for the other speaker, besides Prof. Pevsner, was Henry Morris of Cambridgeshire village college fame whose association with Lawn Road led to Gropius's employment at Impington. All these memories took us back a long way, but Jack Pritchard being himself, there was no sense of *looking backwards*. His outstanding characteristic is that he is always concerned with the future and the younger generation was present in force to be inspired by this, as many others have been in the past.

#### AA EXHIBITION

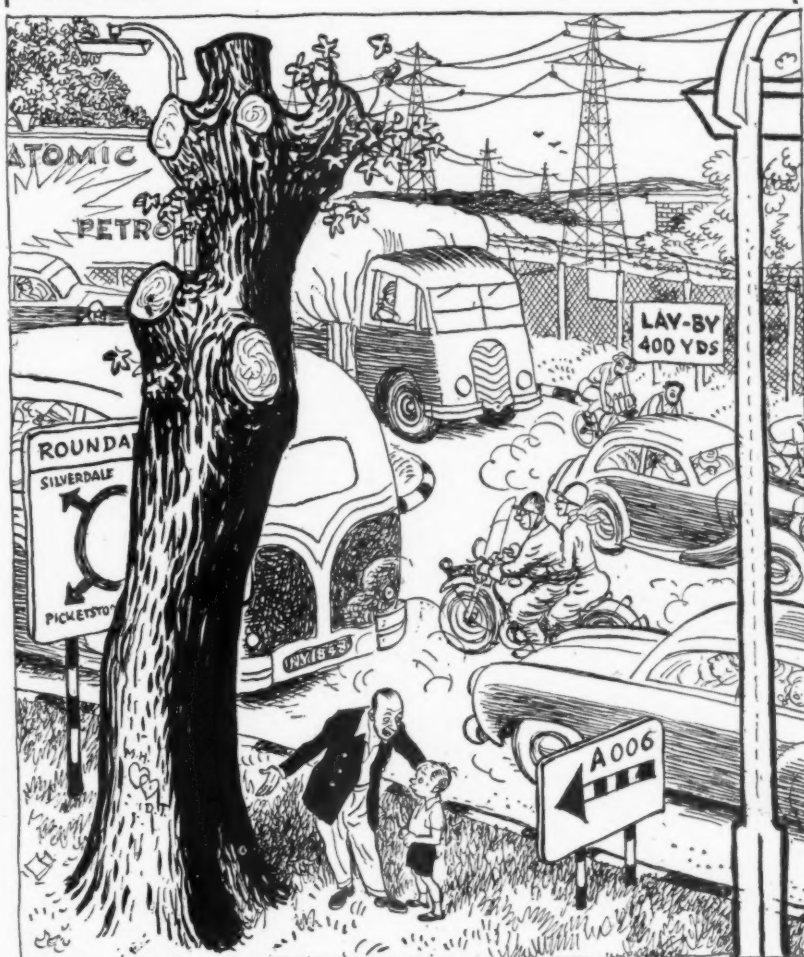
This year's AA exhibition is a double feature event for not only is there a showing of students' work but there is also an exhibition of members' work which ASTRAGAL had little time to look at before going to press and will deal with another time.

\*

The students' work is a stimulating, all-embracing well-worth-a-visit show. The curriculum has not been changed much in the last year but it is interesting to note that there are few if any of those theoretical diagrammatic city containers which have taxed our brains in the past and many more schemes where such ideas have been applied to definite areas. Indeed those who regard the MARS "Turn Again" exhibition as nebulous might well supplement it with a glance at the 4th year City of London development

## SUBTOPIA

by Illingworth



"I said THIS is where I proposed to your mother."

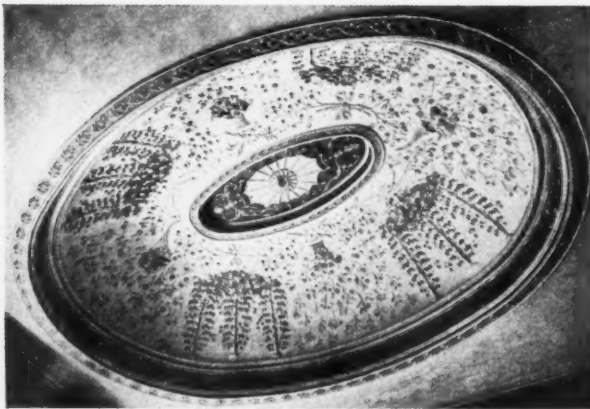
The above cartoon which recently appeared in the "Daily Mail" is an illustration of the encouraging way the daily press is taking up the campaign launched in "Outrage," the June issue of the "Review"—and at the same time adopting the "Review's" terminology. "Subtopia" is the "Review's" name for the indiscriminating world that makes a utopian ideal out of suburbia.

schemes. One is always pleasantly surprised by the variety of architectural ideas and subject matter at the AA; how apt for example that there should be a scheme for a nuclear power station (not to my surprise the first thesis of this kind) with Sir John Maude, the permanent secretary to the Ministry of Fuel and Power, giving away the prizes. If, as the actor Boris Karloff once said, the secret of success is being on the right street corner at the right time, David Bottoms obviously has a future.

\*

The AA is often at its best with

industrial architecture and housing is another *specialité de la maison* and it is fascinating to see how firm a grip *Unite D'Habitation* still has on student imagination. ASTRAGAL is the last person to believe in originality for its own sake and has long believed that Le Corbusier and Mies and the other avant garde boys of the twenties are rightly the conservative academicians of the fifties, but for all that he feels the themes could occasionally be exploited with more variation and depth of expression. Most interesting of all at this year's show are the first fruits of the school of tropical archi-



## Rococo—or Something

One of the most interesting features of Mr. Christopher Hussey's authoritative new book on *Early Georgian* (in Country Life's recently-inaugurated series of volumes on *English Country Houses*) is his attempt to give a name to the interregnum between the deaths of the great Palladian Architects and the rise of Robert Adam—roughly 1750-1760. The name he suggests is Rococo, which is indeed apt

enough for an interior like the Chinese Room at Claydon, top, but will it stick effectively to the stiff pretty naturalism of Thomas Stocking's delightful dome at Kyre Park, above left? And how can the introduction of Greek Doric in 1759 at Hagley Park, above right—regarded by contemporaries as something like New Brutalism—be fitted into the term? (See ASTRAGAL'S comments on page 73.)



ecture. They are fresh, imaginative and full of promise.

\*

A last fleeting thought: why since we seldom find convincing modern church designs should crematoria produce such good results? There are three very nice ones at the AA.

#### NEW EARLY GEORGIAN

An old friend of architectural students has been into dry dock and come out re-fitted and re-treaded—Avray Tippling's classic *English Homes* has been given so thorough an overhaul by *Country Life* that what has come out, Christopher Hussey's *English Country Houses*, is pretty well a new publication from basement to attic. Only one volume has appeared so far, viz., *Early Georgian 1715-1760*,\* so there must be a lot more to come. See frontispiece opposite.

\*

This first volume gets us from post-Vanbrugh to pre-Adam, covering miscellaneous minor Baroquetry, the major monuments of High Palladianism, and various bits and pieces from that awkward fifteen-year pause between the death of Kent and the complete emergence of Adam—a period which Mr. Hussey, taking the bit between his teeth, has decided to call *Rococco*. ASTRAGAL will not argue with so distinguished a historian on a point of nomenclature on which his elders and betters will, no doubt, be laying down the law in more august journals in due course. It is a period which needs a label of some sort, even if it is a label which looks pretty odd on Greek Doric. (See frontispiece on opposite page.)

\*

In any case the book is a feast for the eye, as well as solid nourishment for the mind, since it contains such rousing monuments as Holkham Hall and Strawberry Hill, and Wentworth Woodhouse and Houghton and Mereworth Castle and Hagley Hall . . . pretty well the cream, in fact. The price, one fears, will put it way out of the reach of most people, so you had better get to work on your handiest librarian.

ASTRAGAL

\* *English Country Houses*. Vol. 1: *Early Georgian 1715-1760*. By Christopher Hussey. *Country Life* £6 6s.

## POINTS FROM THIS ISSUE

**Turn Again:** MARS Group exhibition at the Royal

Exchange . . . . . pages 69 and 76

**Olivetti Offices in Milan:** described and illustrated . . . . . page 82

The Design and Practice of Joinery: Part V **The Design**

**and Machining of Joints** . . . . . page 93

## The Editors

### IN DEFENCE OF FLATS

**H**ARDLY a month goes by without that most persistent and voluble body, the TCPA, attacking the building of flats anywhere, and, particularly, in central urban areas, and advocating instead low-density, garden-city housing. Admittedly, the density for housing has been raised a trifle—F. J. Osborn, the most vociferous of the TCPA's advocates of suburban planning, now suggests 15 to 20 houses to the acre in a statement issued last month—but the main argument is to show that, in terms of housing subsidies, flats are a waste of public money.

It seems singularly pointless for a body of the standing of the TCPA to dissipate its energies in a campaign against flats as such. Flats are a necessity, in certain circumstances, and should be accepted. It would be a more worthwhile task of the TCPA if it undertook to help to discover why flats in this country are more expensive to build than flats on the Continent, or than the equivalent accommodation in two-storey houses. The fault with flats is not the type of accommodation produced, but the cost—as far as British builders are concerned—of building them.

On the whole, it is as easy to argue the merits of flats as a form of accommodation as houses. The two are complementary. When the young man or woman leaves home to start a job, the ideal accommodation is a flat—perhaps, for the better-off, a service flat. This should give the young owner accommodation near his work, freedom from undue parental control, the opportunity to entertain his own friends, and—an underrated value—a degree of anonymity. The same type of accommodation, the flat, is suitable for the young married couple, or the couple, both of whom work for a living—the housework is slight, and the flat being in the centre of the town is near the theatres, concert halls, dance halls, restaurants, and so on, which amuse the childless couple.

It is not until a married couple have children that the advantages of the house—and its garden, or near-by park—gain over those of the flat. For the large family, provided that the father enjoys gardening, the house, in as low a density as possible,

consistent with maintaining a garden, remains the ideal for the majority. With the dispersal of the family, however, and the onset of old age, the attractions of a house and garden fade. For the old, the flat becomes once again the ideal. The advantages of living in a lively central area, of having the amenities of libraries, cinemas, restaurants, and so on, close to hand mitigate to a certain extent the loss of family life.

Of course, it is obvious that these three stages in life's accommodation—flat, family house, flat—will not please all. Rented rooms (and motherly landladies), hostels, residential hotels, old people's homes, small houses, will always be in demand, and therefore supplied. We are only concerned here with showing that there is a good case for flatted accommodation, if it can be built at the right price, for preserving a social life in the central areas of cities. The TCPA might more usefully admit this, and concentrate its very considerable energies and influence in endeavouring to show how the present preponderance of three-bedroom houses at low density in the country's building programme endangers not only the country's rural life—witness *The Architectural Review's* subtopia article—but endangers the waning life of the country's city centres too.

#### DELEGATION OF PLANNING POWERS BY LCC

The news that the LCC are considering the delegation of Town Planning Development Control to the Metropolitan Borough Councils offers cause for anxiety. This proposal originates from the recommendations of the Local Government Manpower Committee (set up six years ago) that our County Councils should delegate more of their functions to the district councils. The delegation of powers to the smallest organization capable of wielding them is implicit in our notion of democracy, but the operative phrase is, of course, "capable of wielding them." The trouble in this case is that so many of the Metropolitan Borough Councils have no suitable staff for looking after Development Control. Under the ruling set-up they are "consulted for observations" on planning matters and it is the practice of most of them to hand this work to the Borough Engineer. It is perhaps this, and recognition of the fact that the LCC herself is responsible for carrying out the Administrative County of London Development Plan, which has led the proposers of the change to suggest the *delegation* of these powers and not their transfer, and to limit this delegation to proposals which conform to the primary zoning and programming of the Plan. These limitations afford some safeguard: but nine tenths of development control concerns decisions about relatively small matters which seem individually of small moment but which together determine the character of the environment. It is essential that the appointed watch dogs should be men with a training in visual things. If, therefore, the LCC decide to hand over this control they must have it established that the Boroughs appoint Planning Officers who are Chartered Architects.



Brunton, Baden Hellard and  
Partners, A./A.R.I.B.A.

James F. Hampton, A.R.I.B.A.

G. R. Vinycomb, A.R.I.B.A.

I. D. Thomson

D. Kershaw

#### Study Group Wanted

SIR.—We were very interested by your notes upon the points raised in Mr. Woodbine Parish's address to the Harrogate Conference, particularly upon the matters of a proposal for a Study Group to examine management practices and upon the action which should be taken to try out new forms of contract and contractual procedure—where all parties to the contract are willing. Particularly if such contract were to bind the employer, architect and contractor in such a way as to encourage building owners to be discriminate in their instructions, and more particularly, consequent revisions thereto!

We have pursued in this office methods of contracting procedure aimed along these general lines, and we know that others have done likewise.

May we therefore suggest that the JOURNAL take a lead in this matter by arranging an interchange of ideas and methods used in these offices, perhaps leading to a draft procedure which could then be generally pursued by those architects interested, thereby increasing the rate of advance resulting from individual research.

This may also be one step in a research programme of a Building Industry Study Group, and we suggest that at this stage, manufacturers of building materials might well be persuaded to support, with their experience and finance, this Industry Study Group, since the growth of manufacturing techniques has led, and must continually lead, to their receiving an ever larger share of the building "cake."

We think it is quite likely that the research upon these contractual matters would lead to an analysis of the psychology of those engaged upon small building contracts, which as we know, make up a very large proportion of the industry's work, and thus we add our support to ASTRAGAL's comment, and look forward to discussing and interchanging views on these matters with others interested.

We would suggest that a programme as set out below might be used to develop these ideas:

1. Call for names of those trying new methods in the contractual sphere, who would be willing to contribute their experience.
  2. Arrange Study Meeting to uncover systems used by individual offices with their comments on the relative advantages and disadvantages of their methods.
  3. As a result of this meeting draw up syllabus for a Study conference lasting say one weekend, attendance at which to be limited, but including all spheres—architects, quantity surveyors, contractors, sub-contractors and component manufacturers—(legal experts?).
  4. The objects of this conference to be: (a) Conclude on not more than three main contractual systems and their implication to all parties involved (those mentioned in 3 above). (b) Instruct smaller groups to draw up these systems which would then be collectively pursued by numbers of offices.
  5. If successful, conclusions from these experiments could then be put to the RIBA, RICS, NFBTE, TUC, etc., for their approval prior to drafting new forms of contract suitable to current developments in building techniques.
- BRUNTON, BADEN HELLARD & PARTNERS.  
London.

[We think that a study group of this kind could provide valuable experience of contractual procedures and act as a spur to official action. We have already taken tentative steps to discover what support we could expect if we undertook the task proposed by Messrs. Brunton, Baden Hellard & Partners. If, on seeing this letter, any reader feels similarly disposed, would he please write to the Editors.—Eds.]

## Architect's Registration

SIR,—I solicit THE ARCHITECTS' JOURNAL to give expression to the feelings of the rank and file of the profession, particularly those who have recently commenced practice and those who have been established for some few years.

Practising architects experience a very keen sense of frustration in their work by the activities of unqualified persons, against whose activities architects have no redress, being bound by a Registration Act and a very high code of professional conduct.

Any relaxation of the latter is not desired, but a strong desire exists for the former to be amended. The Act was passed to safeguard the term "Architect" and to safeguard the public against the misuse of the term.

It is well known that the Act has failed to accomplish its object.

Much concrete evidence has been presented to the RIBA in support of the contention that no time should be lost in presenting a petition to Parliament seeking to close all the loopholes which exist in the Act and so protect the public against the practices of unqualified persons, carrying out the architect's work. For example, 90 per cent. of domestic work is out of the hands of qualified architects.

The reply of the RIBA has been that the time is not opportune.

The RIBA decreed, without consulting the members, that a book of house designs be published. However, strong objection to such a publication has fortunately doomed that venture.

The recent rank-and-file action at the a.g.m. on May 3 last, over the returns of a questionnaire (from the results of which the leaders must be judged to have had no real

intention of abiding), shows what results can be obtained by a like expression for immediate action on the Registration Act.

Where the interests of the public are disregarded over this matter, and perhaps, least of all, the means of livelihood of those who form the membership of the RIBA are disregarded, "the general advancement of architecture" is wishful thinking under present conditions.

Will the members take up this challenge?

JAMES F. HAMPTON.

Kent.

## Simpler BQ's

SIR,—I have a suggestion which may be acceptable for discussion by readers in your columns in advance of the meetings of the RIBA's proposed joint committee For the Investigation of the Simplification of Bills of Quantities.

In the days of a hundred and more years ago buildings were constructed *on the job* of a few simple elements—lime, sand, bricks, cast iron, the fairly new Baltic softwood, brown bread, pepper and salt and mild ale.

These were the days when Thomas Cubitt was developing Belgravia as a speculation and Joe Soap and his friend the walrus received eighteen-and-six a week for a twelve-hour day.

With a limited number of simple elements put together on the site the Bills of Quantities of those days comprised a separate bill for each of the traditional trades in an order that is summarized, stylized and fossilized in the B.S. Sequence of Trade Headings.

The development of sanitary plumbing (1870), fire-resisting construction (1900) and structural steelwork (1910) introduced techniques and services which enfranchised the architect and complicated the Bills of Quantities.

No longer was the B.Q. the handwritten and lithographed *estimate* (as the B.Q.'s for the larger buildings are still called today) intended only for the prices and extensions of the builder.

Today, with the specifications disused and out of the contract (a pity, for it is the architect's one and only chance of deploying his grammar school education; ablative absolute and all) the Bills of Quantities are a veritable vade-mecum for all concerned with a building contract; essential to the architect himself—a sort of King's Regulations to throw at the client—; a leaning post for the architectural assistant who does all the work but only gets a small salary for doing it; a friend in need to the harassed clerk of works and also to the ambitious general foreman eager for his bonus; and an Eldorado for the contractor who knows how to pan gold.

With all these varied interests using the Bills of Quantities plus the quantity surveyor who does the old one-and-a-half/two-and-a-half juggling act at the end of the contract in washing the dirty laundry in his top back room there is, clearly, a case for presenting the Bills in some (organic) way which meets the needs of those using the document by providing "get-at-able" information in a visual, intelligible way.

My suggestion is that the Bills of Quantities are made up in a *functional order* corresponding to the sections of the surveyor's dimensions.

For example:

Bill No. 1. Foundations, Substructure, etc., as now (Excavator, Concretor, Bricklayer, Asphalter, and so on)

Bill No. 2. Internal Finishings

3. Fittings and Sundries
4. Plumbing
5. Staircases
6. Engineering Services
7. Windows
8. Doors
9. Cupboard Doors

10. Brickwork
11. Facings
12. Fires and Vents
13. Floors
14. Roof

The germ of my suggestion is already to be found in modern B.Q.'s and I plan to extend the yeast to leaven the whole loaf. Simply, it is that in one or two trades, "Builders' Work in Connection" is billed with the trade concerned. Plumber is an example. In my re-modelled Bill "windows," for instance, would comprise the window-frame, lintel, brick and plaster reveals, concrete and tile chills, glazing and painting.

Finally, my "functional order" would facilitate the preparation of the final account.

C. R. VINYCOMB.

Luton, Beds.

## The Outrage of Subtopia

SIR,—As one who is genuinely interested in improving the standard of service details, I feel that your JOURNAL has of recent years adequately made the point that improvement is needed. I do not think it is very difficult to find examples of the kind of structure, etc., to which one, personally, takes exception in whatever field, and I would consequently be more interested to see one day in your publication illustrations of what is considered to be beyond reproach.

I think it is true to say that the "engineers' products", which you condemn, have generally been put up to fulfil a purpose at minimum cost, but as adequately as technical standards at the time of their erection allowed, and as one who, like most of us, has to bear his share of the cost of these articles, I would need to be convinced that the probable extra cost involved in substituting articles which were considered beyond reproach by people "trained in design" was really justified. Is the average man so very upset at the present standards of "telephone wire, traffic signs, and fencing"?

An architect of my acquaintance, who is probably as concerned as any in his profession about painstaking attention to detail when applied to the buildings he designs but does not pay for, apparently shares my doubts on this point, since he has recently had erected at his own expense a domestic garage which might very well be illustrated in "Outrage."

I. D. THOMSON.

Bovingdon, Herts.

## Large Scale Models

SIR,—Some time ago I read in a book by Sir Roger Pratt (1620-1684) how it was common practice in early days to build large scale models of proposed buildings. Pratt writes "The model of Saint Peter's in Rome cost 4184 crowns and the architect as a present had 1500 more; the length of it was 22 feet, the breadth 16 and the height 13, which was in all about one thirtieth part of the whole work. . . ."

The majority of models one sees these days are to a very small scale, but I was interested to hear recently of the building of a full-size flat in order that the architect could see how the various components, fittings, etc., would appear when completed. In this instance the contract, which was for a large number of flats in separate blocks, had actually commenced when the architect decided that to see a full-size model would assist him considerably.

I would be glad to hear from readers whether they have heard of large scale models being built in these days, if so, their scale, etc., or whether this ancient practice is dying out.

D. KERSHAW.

Harrogate.





## BRS

*Open Day*

On July 18 the first open day was held by the Building Research Station. On this occasion the BRS were spotlighting the culmination of 30 years' work on building engineering problems, but still observing traditional reticence on current research.

It is hoped through open days to publicize the wide knowledge and services now available to the building industry.

With a library of over 70,000 volumes to back it and some of the most advanced instruments, the BRS deserves a wider public.

## COMPETITION

*Stand Design Winners*

Results are announced of the competition to design the stand for Ascot Gas Water Heaters at the Building Trades Exhibition in November. They are:

First: Dennis E. Pugh, A.R.I.B.A., 6, West Road, Tottenham, N.17. Second: Hugh R. Brady, B.A.(ARCH.), A.R.I.B.A., 4, Evelyn Gardens, London, S.W.7. Third: W. F. Mullins, A.R.I.B.A., A.A.(HONS.) DIP., 114, Thurlow Park Road, London, S.E.21.

About 800 applications were received for entry forms, and 160 entries were received. The judges were Mr. F. Yerbury, O.B.E., HON. A.R.I.B.A., Director of the Building Centre, and Mr. C. S. Mardall, F.R.I.B.A., of Yorke, Rosenberg and Mardall.

All the entries will be on exhibition at the Building Centre from Monday, July 25, until Saturday, July 30.

## RESIDENTIAL COURSE

*Management and Productivity*

Messrs. Urwick, Orr & Partners, of which E.F.L. Brech (one of the JOURNAL's Guest Editors) is senior partner, are to hold a one week course for "senior and intermediate managers from building and civil engineering circumstances. The technique of Work Study, November 28 to December 2, is restricted to 16 people, and costs 50 guineas (including residence and board). It will be held at the Urwick Orr Training Centre, 17 Mackenzie Street, Slough, Bucks.

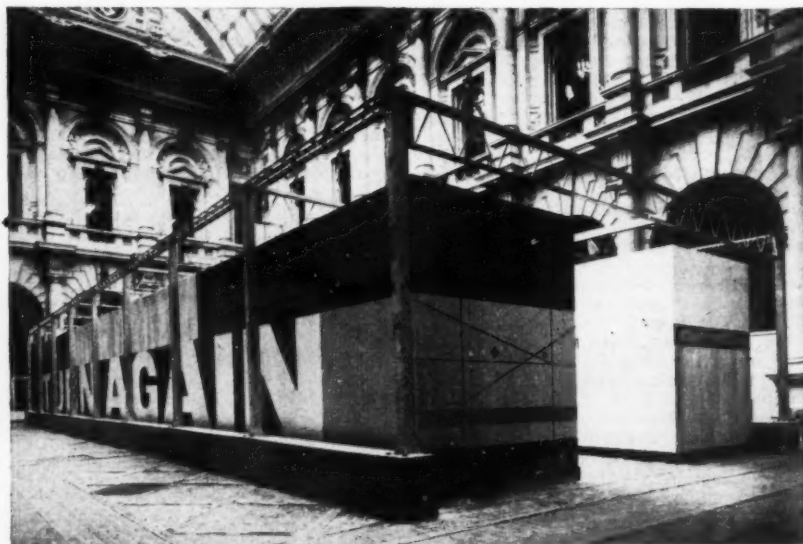
There will be lectures with practical illustrations, discussion groups and the study of cases. Mr. Brech contributes the following notes on the subject of manage-

ment: The technique of Work Study is one particularly concerned with the analytical examination of working methods and conditions in order to arrive at the optimum standards of working and the assurance that all operations are being carried out in the way most effective in the light of existing circumstances. The technique of Work Study has, as already indicated, been well-known in manufacturing industries over a considerable number of years and of course has been used to some quite useful extent by the Building Research Station in the study of craft and labour operations as well as by some of the Contracting firms. As yet, however, in the Building and Civil Engineering industries there has been nothing at all to parallel the widespread development and application of Work Study techniques that has characterized the last twenty or twenty-five years in the manufacturing industries.

Work Study falls broadly into two halves. The one can be labelled "Method Study" and is particularly directed to a close scrutiny of the way in which the operations are carried out in order to ascertain whether there are opportunities for methods improvements or perhaps improvements in equipment or any other changing condition that would enable the job to be done more effectively with less effort with the same quality of work and with benefit in terms of cost. The second half is called "Work Measurement." It is particularly concerned with ascertaining the work load of a given operation in order to determine the appropriate target for the operation when carried out in the defined way, that is to say, the correct way. The target then serves for planning purposes, i.e. the provision of data from which operating plans can be calculated and also for bonus incentive targets against which the performance of the operatives can be measured; equally of course in the latter context, it can provide a labour cost target against which the progress of cost can be compared. The aim of this technique will, of course, be recognized in common words as efficiency, economy and productivity, but the main difference that comes out from this line of approach is that facts are produced from systematic studies instead of decisions being based on the individual's hunch or flair or guess.

Mr. Brech adds that architects would be welcome at the course.

*An exterior view of the MARS Group exhibition, "Turn Again," in the courtyard of the Royal Exchange. See ASTRAGAL's comments on page 69.*



## TPI

*New President Elected*

At the first meeting of the newly elected Council of the Institute held today Desmond Heap was elected President of the Town Planning Institute for 1955-56 and will take office in November next on the expiration of the term of office of E. H. Doubleday. Mr. Heap is the Comptroller and City Solicitor to the Corporation of the City of London.

## RIBA

*Golfing Society*

This year the summer meeting was held at Princes Golf Club, Sandwich, in excellent weather, although a high wind made the long course difficult to play. The Allenby Bowl, played for on Saturday, was won by Mr. H. Cullerne Pratt, A.R.I.B.A., with a score of 31½ points. The 4-ball bogey competition, on Saturday afternoon, was won by E. H. Firmin, F.R.I.B.A., and R. Duncan Scott, F.R.I.B.A., with a score of one-up. The Captain's Prize, presented by Mr. F. T. Smith, L.R.I.B.A., played for on the Sunday morning, was won by Douglas White, A.R.I.B.A., with a net score of 78 after the result had been decided on the second nine holes. The President's Prize, presented by the President, Sir Giles Gilbert Scott, was won by S. H. Statham, A.R.I.B.A., with a score of 34 points.

## MOW

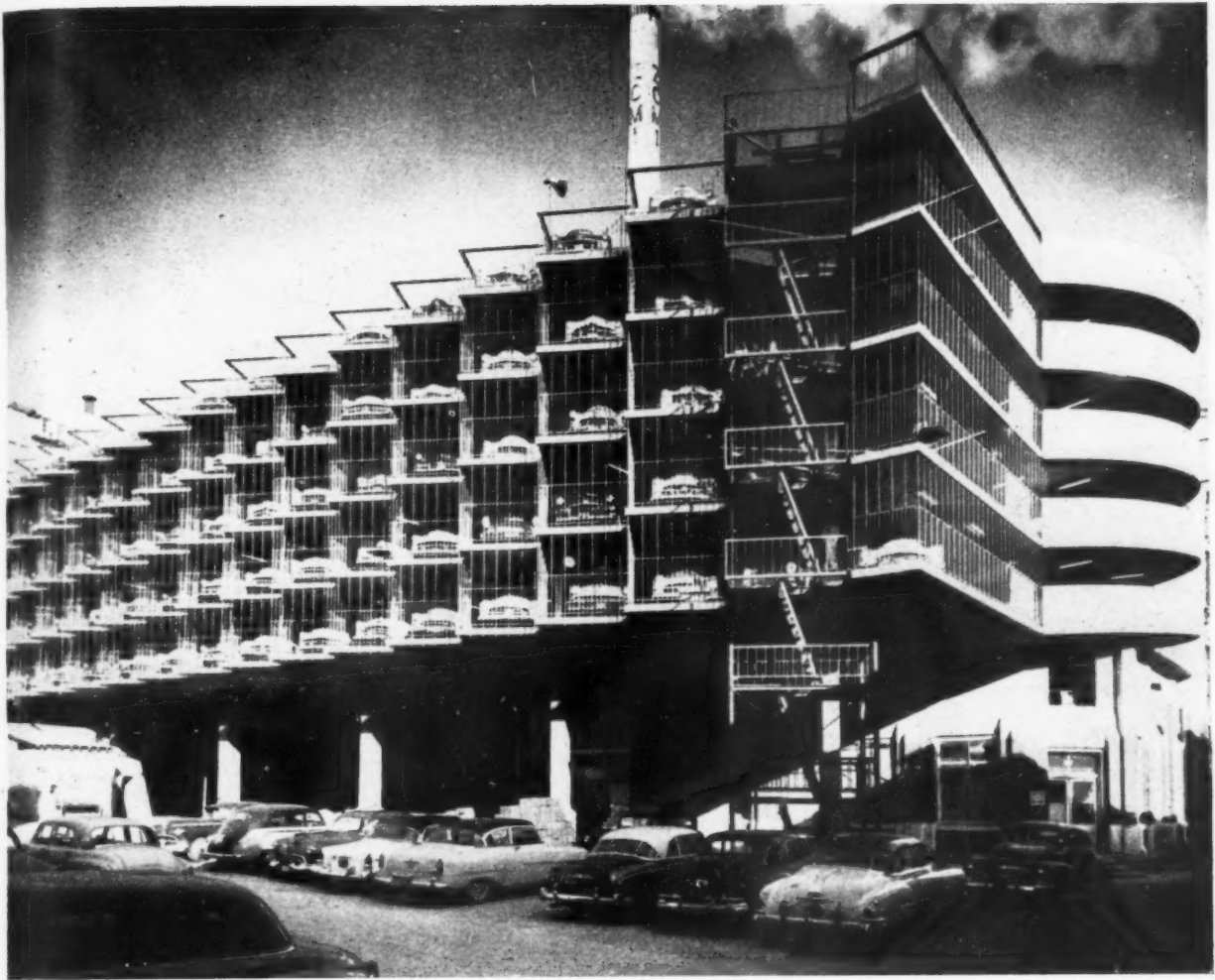
*Grants to Historic Buildings*

During the past three months 20 grants for the preservation of historic buildings, their contents and adjoining land, have been offered and accepted. The grants totalling about £75,000 are offered by the Minister of Works acting on recommendations by the Historic Buildings Councils for England, for Scotland and for Wales.

The 20 buildings are as follows:

England: Ashdown House, Forest Row, Sussex (second grant); Gazebos at Hales Place, Tenterden, Kent; Broughton Castle, Oxon; 7, High Street, Chipping Norton, Oxon; Gorhambury, St. Albans, Herts; Linden House, Eye, Suffolk; Althorp House,





The photograph above shows a recent five-floor garage for Salt Lake City's biggest department store. With only limited ground space available, it was decided to provide a multi-storey parking area for 542 cars over the delivery yard at the rear of the store. The resultant increase in sales has led to projected accommodation for a further 200 cars. "Staggered" self-parking is arranged on all floors, with ramps to take cars from one half level to the next. All floors were cast at the same time, around 40 pre-cast, pre-stressed columns. In the case of the cantilevered slab, the top slab was cast first, formwork being winched down, floor by floor, and finally removed at the bottom. The zig-zag edges reduce cantilevered dead-load, and also act as parking demarcation.

## CORRECTION

### Dublin News-Letter

We regret that through an editorial mistake (see page 45 of last week's issue) Michael Scott was described as having embraced "the life of pleasure of a hag-ridden baukunstler." The author, in fact, wrote "Jag-borne," i.e., carried about by a Jaguar. Our apologies to Niall Montgomery and Michael Scott.

## DIARY

Turn Again. MARS Group exhibition at the Royal Exchange. Monday to Saturday. 10 a.m.—5 p.m. UNTIL JULY 30

Students' Work and Members' Work. Two exhibitions at the AA, 36, Bedford Square, W.C.1. Monday to Friday 10 a.m.—6 p.m. Saturday 10 a.m.—2 p.m.

JULY 16 TO 28. AUGUST 3 TO 12

Man, Machine and Motion. Discussion on the ICA exhibition with Dean Delamont, Reyner Banham, Peter Smithson and J. S. Shapiro. Chairman: C. H. Gibbs-Smith. At the ICA, 17-18, Dover Street, W.1. 8.15 p.m. Members, 2s. Guests, 3s.

JULY 21

LMBA Lecture. By Professor A. E. Richardson. At the Royal Institute, Albemarle Street, W.1. 5 p.m. JULY 27

Northants (second grant); Lydiard Park, Lydiard Tregoze, Wilts (third and fourth grants); Pictures at Corsham Court, Wilts; Taunton Castle, Somerset (second grant); Garden Buildings, Shugborough, Staffs; Chetham's Hospital, Manchester; Town Hall, Berwick-on-Tweed (second grant).

Scotland: Dunvegan Castle, Skye; Toll Booth and Burgh Court House, Stirling; Delgatie Castle, Aberdeenshire; Muchalls Castle, Stonehaven; Embo House, Dornoch; Newbattle Abbey, Dalkeith, Midlothian.

Wales: Pen-y-lan, Meifod, Montgomeryshire (second grant).

With the grants announced on March 25, July 5 and October 4, 1954, and on January 6 and April 4, 1955, the total number of buildings assisted under the Historic Buildings and Ancient Monuments Act is now 164 and the total value of the grants is about £480,000.

Over 800 applications for aid have so far been received by the three Historic Buildings Councils of which about 439 have so far been rejected.

In the financial year ending March 31, 1956, there is a provision of £350,000 for grants under the Act towards the repair or maintenance of outstanding historic buildings, their contents and adjoining land.

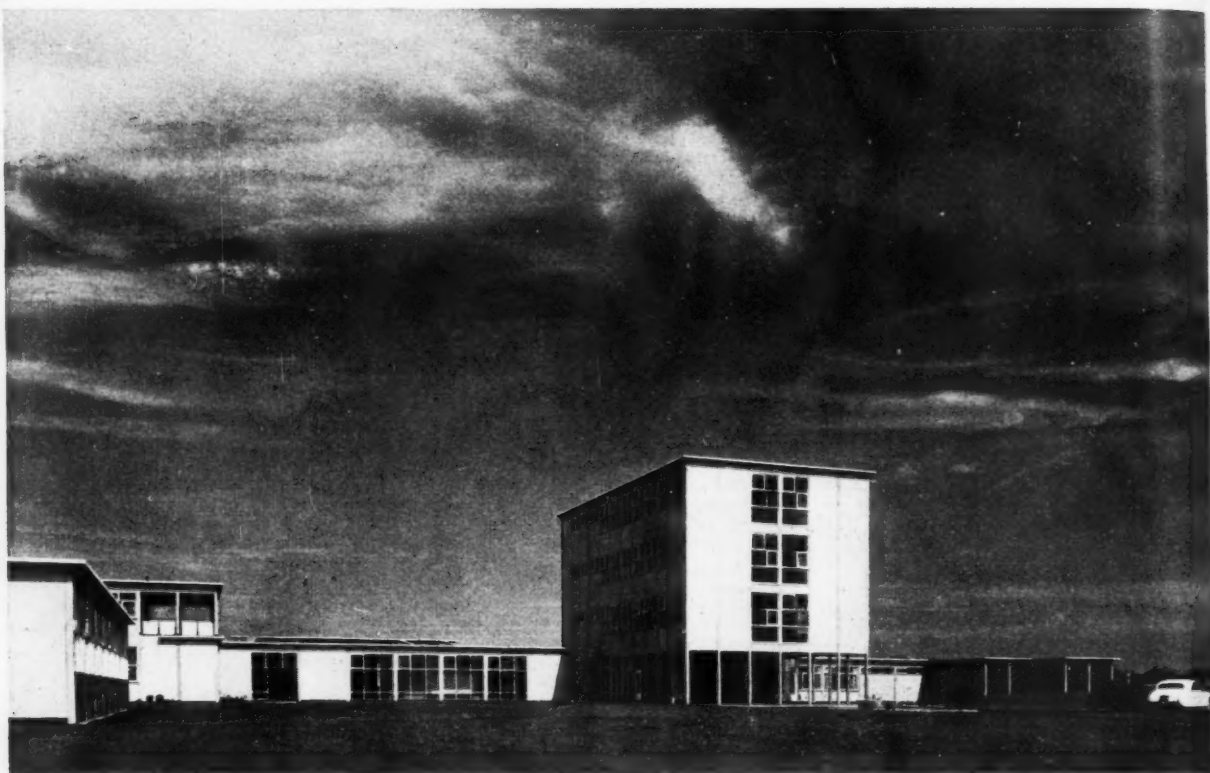
### New Wall Sheets

The first of a new series of visual aids for the building industry has just been published by MOW. It is entitled "Dampness in Buildings" and comprises a series of captioned photographs showing the causes and the observed effects of dampness.

It is to be followed by wall sheets describing wall finishes and the cause and prevention of building accidents.

These wall sheets are intended for display on building sites, schools and technical colleges and may be obtained by applying to any of the MOW Regional Technical Information Offices.

## BUILDINGS IN THE NEWS

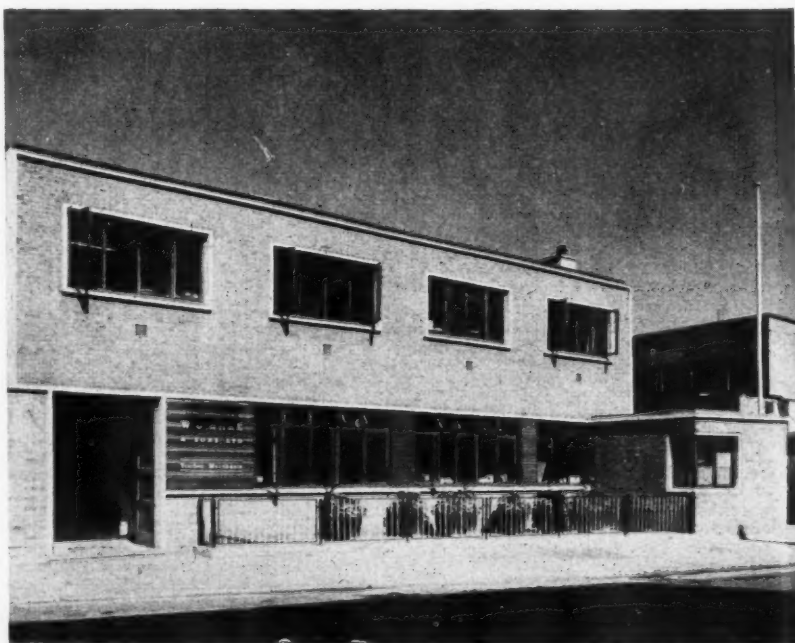


### Technical High School at Worthing

*The Technical High School in The Boulevard, Durrington-on-Sea, West Worthing, has been recently completed for the Worthing Borough Council and the West Sussex County Council by the Architects and Building Branch of the MOE, Chief Architect, S. A. W. Johnson-Marshall. The assistant architects were, Maurice Lee (architect-in-charge), Mary Crowley and John Kitchin, in consultation with the West Sussex County Architect, F. R. Steele. The clients required a 4-form entry secondary school for 600-680 boys and girls from 11 to 18 years of age. The main aim of the school is to provide a good general education, with a basic course during the first two years common to all pupils, followed by specialized courses. The school will be illustrated fully in a later issue of the JOURNAL.*

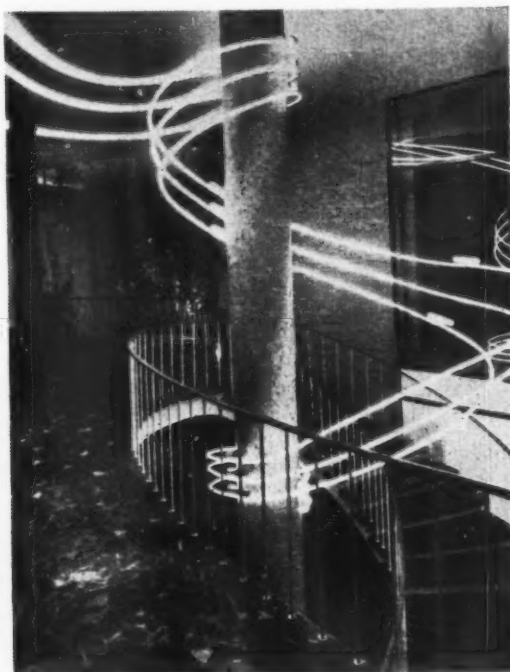
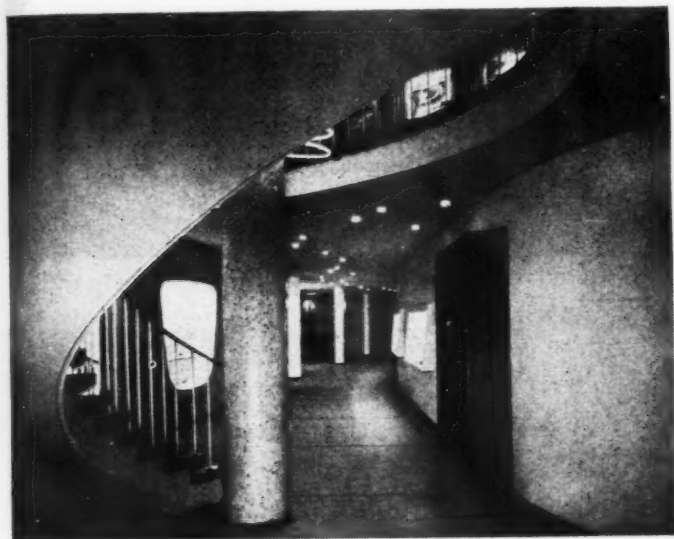
### Offices in London, S.E.11

*The photograph right shows the new offices for W. C. Ware & Sons Ltd. at 6-12 Kennington Lane, London, S.E.11 designed by Arthur A. Stewart. The offices replace a building destroyed by enemy action on the same site and have been built for a little over £7,000. The facade facing the road is finished in two contrasting types, of facing bricks and the flank walls are rendered. There is a precast stone trim and the joinery is gurjun throughout, including window frames. Walls are of 13½-in. load-bearing brickwork. The general contractors were T. S. Appleton Ltd.*

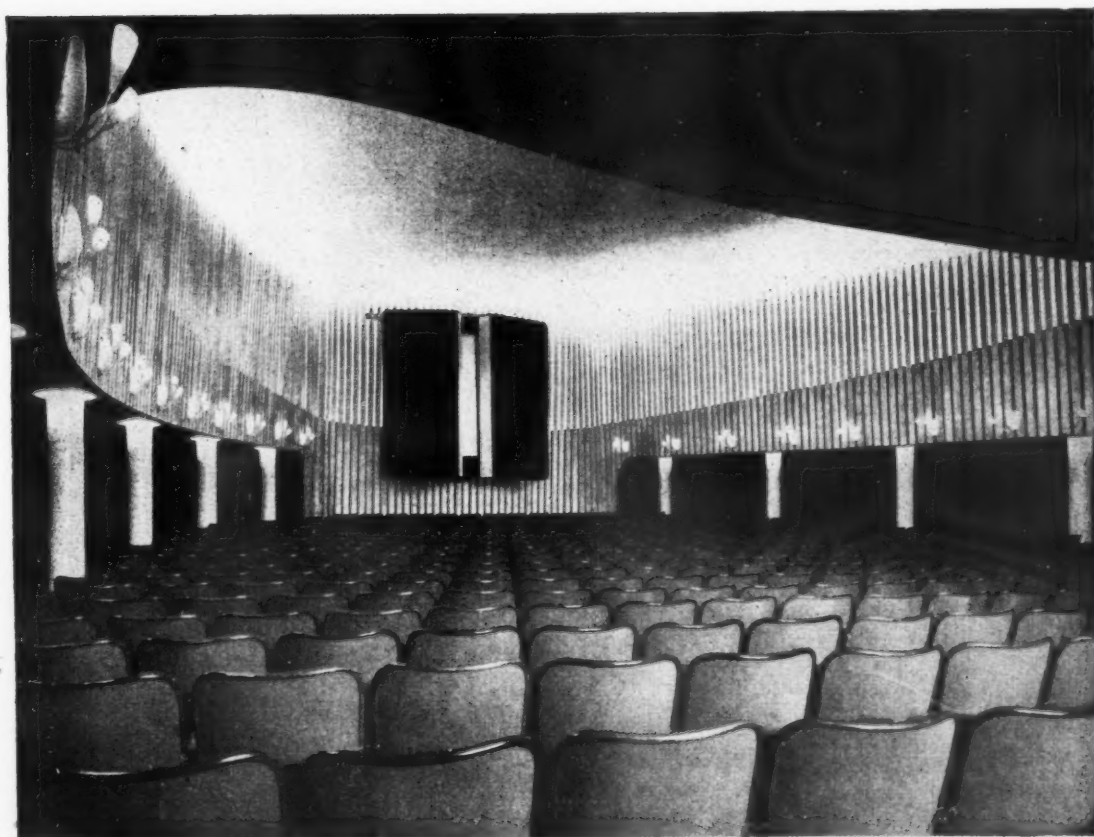


# Cinema in Hanover

Professor Dieter Oesterlen, the architect of this new cinema in Hanover, has used fluorescent lighting to suggest the circulation flow for the audience. Right can be seen three continuous lines of light which lead from a sign over the entrance through the ticket hall and down the stairs to, below, the foyer in the basement, where ceiling lights are designed to mark the entrance doors of the theatre. Bottom, the auditorium. The glass mosaic columns are lit from above. The auditorium is partially lit by

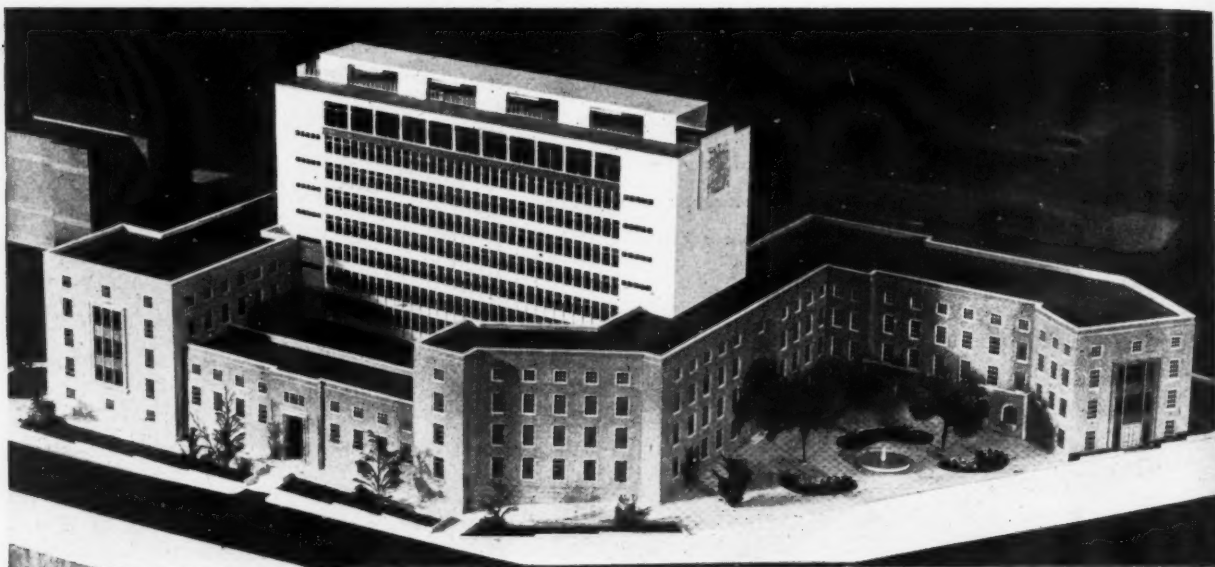


indirect lighting from sources behind wooden-lamina walls, and by direct light from wall-lamps. (From: Architektur und Wohnform, June, 1955.)





BUILDINGS IN THE NEWS (continued)

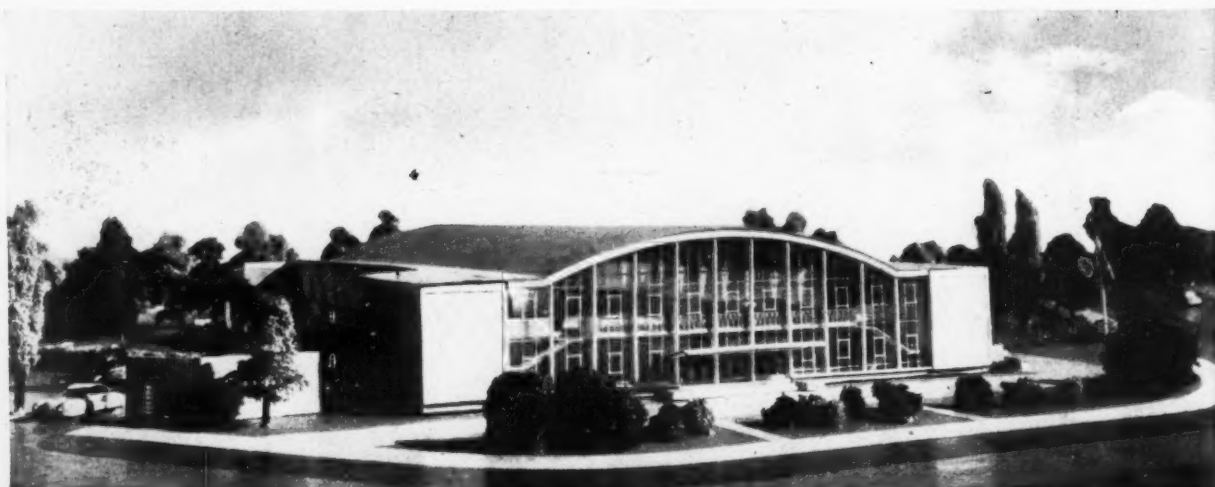
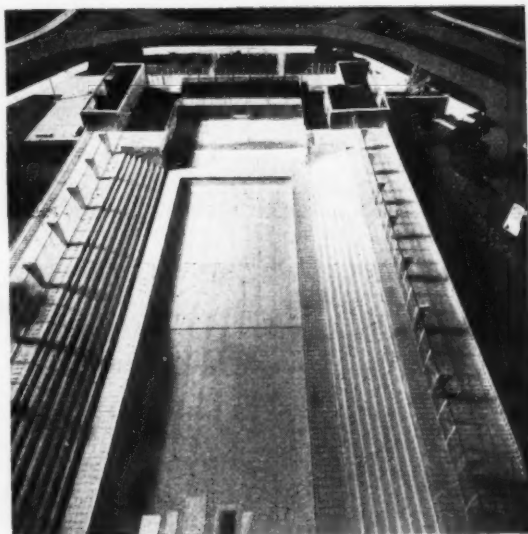


**Proposed Civic Offices, Leeds**

*The model photograph, above, shows the proposed extension to the Civic Hall in Leeds, designed by R. A. H. Livett, City Architect. This nine-storey office extension is planned to span the internal courtyard formed by the existing offices, which were erected about 1933.*

**Proposed Swimming Baths, Manchester**

*Right and below are photographs of the model of the proposed swimming bath at Wythenshawe, near Manchester, designed by Leonard C. Howitt, City Architect. The bath will be entered through a spacious hall on the north side (seen below), running the full width of the building. Behind the entrance hall there will be a café, from which a complete view of the bath will be obtained through a fully glazed wall. And on the terraces on the two longer sides of the bath (right), there will be permanent seating for approximately 1,100 spectators. At first-floor level a committee room, club room, kitchen and lavatories are planned. The pool will be 110 ft. by 48 ft. and the estimated cost is £261,844.*





# Redecorated Tailoring Department, London, W.1

The new bespoke tailoring department at Messrs. Austin Reed's in Regent Street has been designed by Westwood, Sons and Harrison (partner-in-charge, Norman Westwood, assistant architect, Alan Irvine). The clients decided that the sixth floor of their premises, which was being used as a tailors' workroom, could be converted into valuable sales space, together with a cutters' room and pressing room adjoining. The architects were asked to provide a thoroughly up-to-date department, but one in which the design would not become dated rapidly or require constant upkeep. The photograph right shows the department from the lift landing. The floor of the landing is of travertine marble and of the sales area, a grey worsted carpet with yellow and white spots. Below, one of the cloth storage racks. The wall is faced with ribbed, veneered Honduras mahogany and light yellow-green leather. Right, the cloth blocking table (9 on plan) which is of wych elm. The revolving cloth rack in the centre of the floor (10 on plan) will be illustrated as a Working Detail in a later issue of the JOURNAL. For contractors, see page 102.

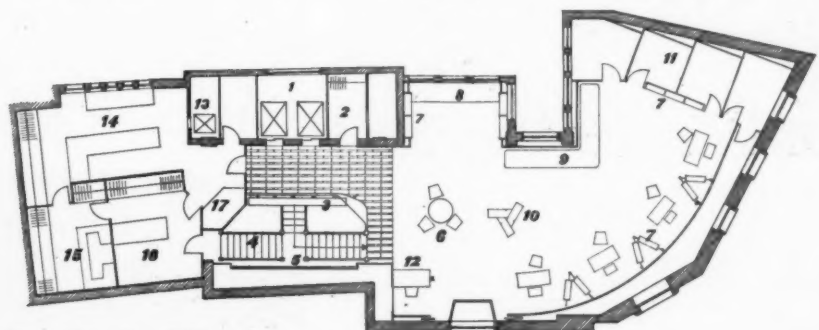


- KEY  
1. Lifts  
2. Pattern bunches  
3. Glass display case  
4. Existing staircase

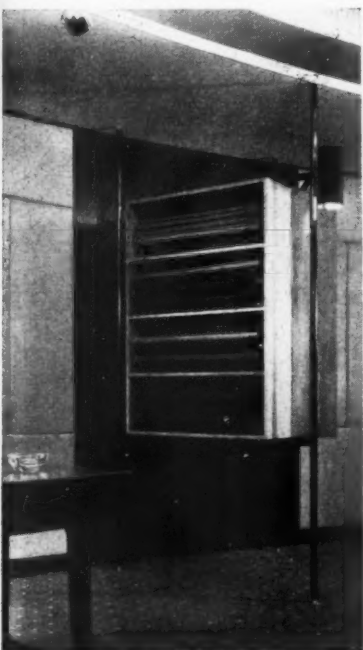
5. Mural  
6. Waiting space  
7. Cloth storage racks  
8. View window and table

9. Cloth blocking table  
10. Revolving cloth rack  
11. Fitting room  
12. Reception desk  
13. Goods lift

14. Cutters' room  
15. Pressing room  
16. Alterations room  
17. Packing bench



Plan [Scale:  $\frac{1}{4}'' = 1' 0''$ ]

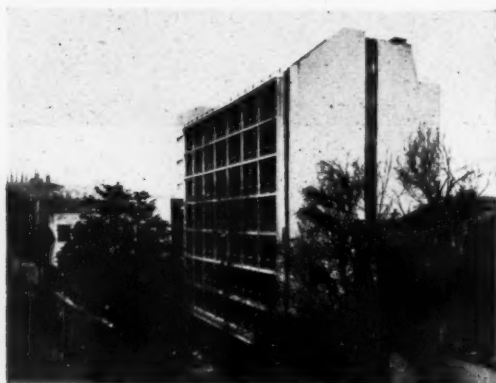


## OLIVETTI OFFICES IN MILAN

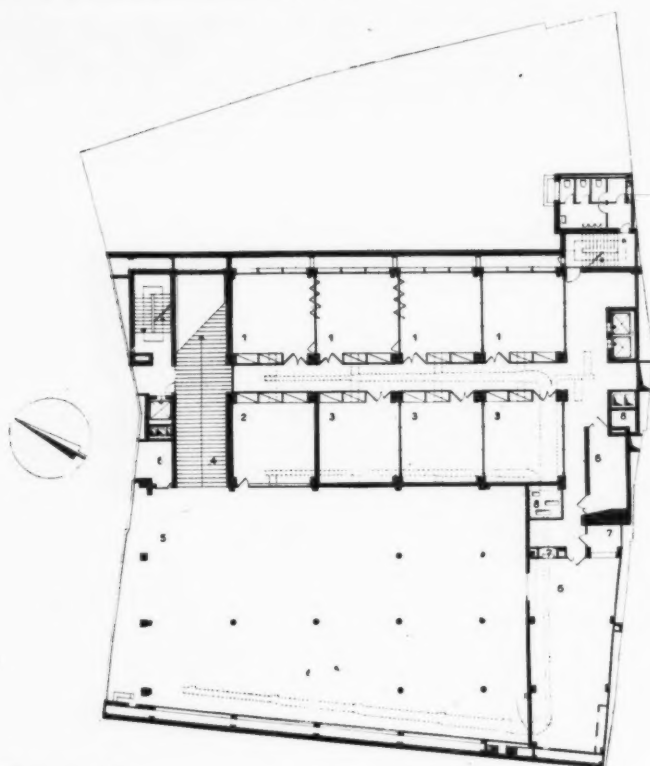


The Olivetti offices (architects G. A. Bernasconi, A. Fiocchi and Professor Marcello Nizzoli) are sited near the centre of Milan close to the Piazza del Duomo. The Via Clerici, in which they stand, is a narrow side street, about 15 ft. wide. The plan is in the form of an H, the main building stands back about 60 ft. from the street frontage. Two wings (of which one only has been built so far) project forward towards the street. The ground floor of the main block is completely glazed, giving a view into the showroom and through to the gardens at the back. The architectural treatment of the blocks has been determined by the incidence of sunlight. The facade facing the garden, which gets the sun only in the early morning, is hung with venetian blinds, but the facade facing the street, which gets the sun all day, is fitted with vertical brise-soleils made in aluminium. These brise-soleils are grouped together in units of ten and can be manipulated from within and thus kept normal to the sun's rays.

Above, detail from one of the offices showing door furniture and name plate. Below, general view of garden front (the pinnacles of the Duomo can be seen in the distance). Right, general view from the street. Opposite page, the entrance.



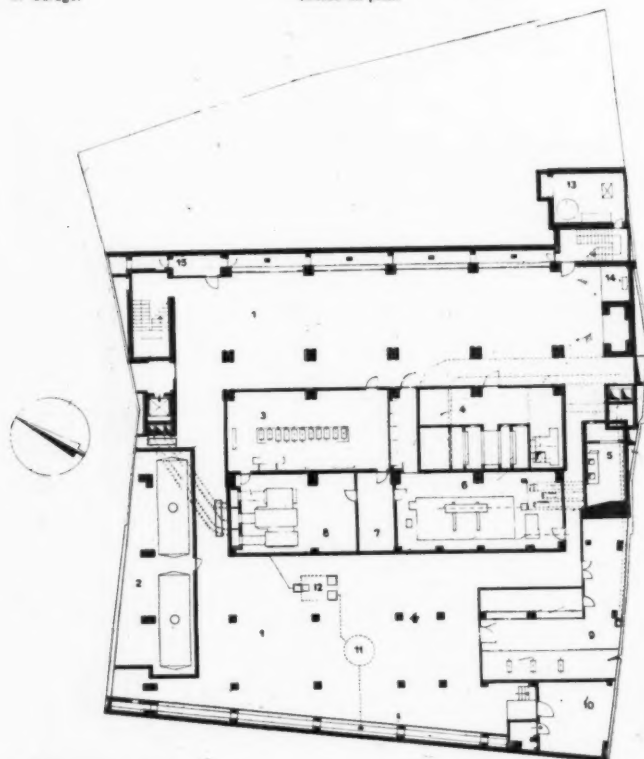




Basement plan

KEY: Basement  
1. School for metalwork.  
2. 3. Laboratories.  
4. Ramp.  
5. Garage.

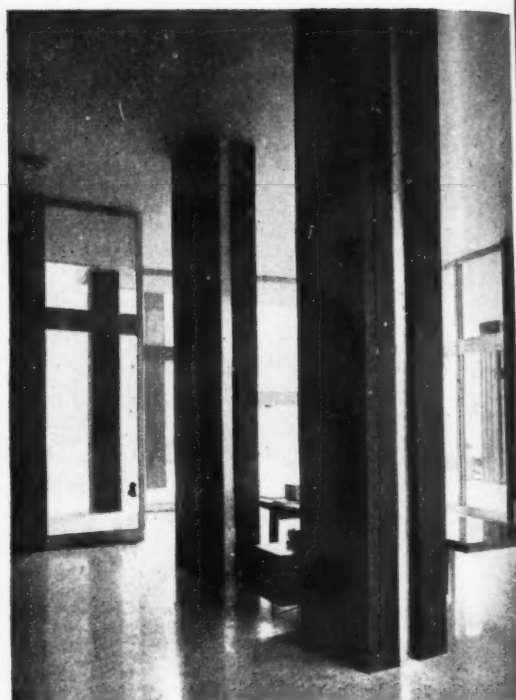
6. Stores.  
7. Electric meters.  
8. Air conditioning.  
Note: Air conditioning ducts shown dotted on plan.



Sub-basement plan

KEY: Sub-basement  
1. Stores.  
2. Naphtha Store.  
3. Pumps.  
4. Air-conditioning plant.  
5. Air-conditioning and heating vertical ducts.  
6. Refrigeration plant.  
7. Supervision.

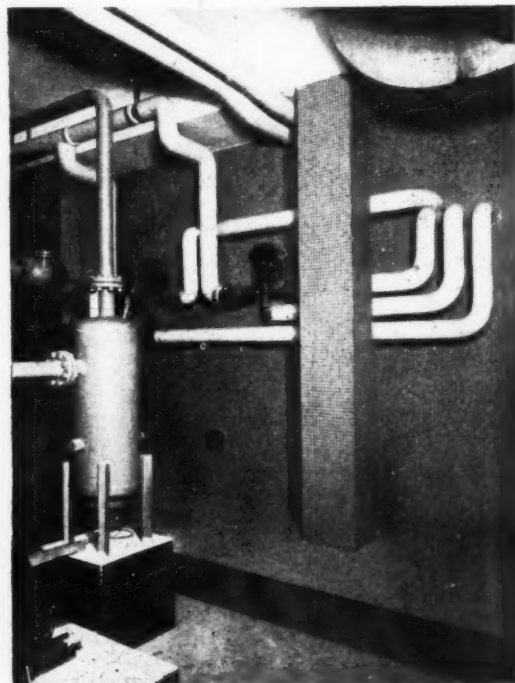
8. Boilers.  
9. Transformers.  
10. Telephone.  
11. Rainwater tank.  
12. Sump for surface water from garage.  
13. Tank room.  
14. Effluent treatment plant.



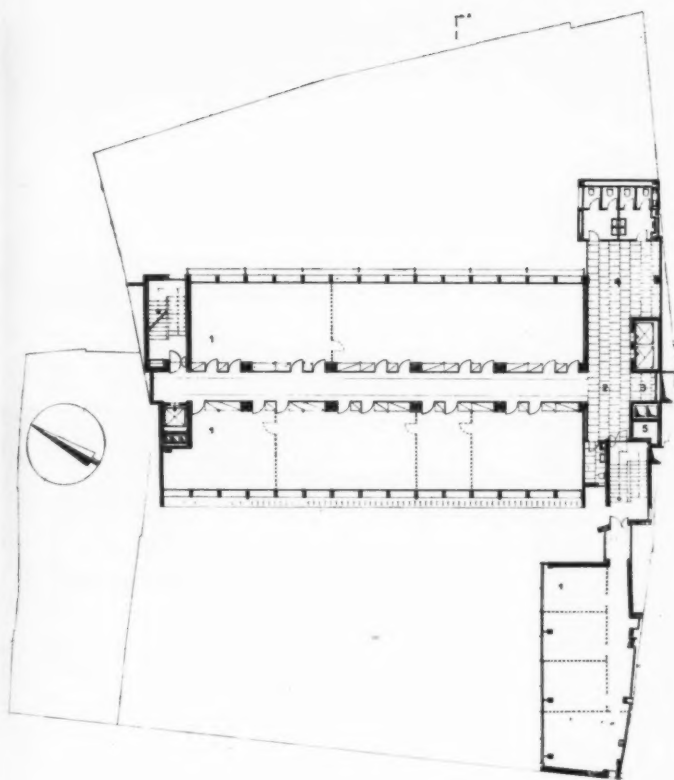
Above, entrance hall. Below, pipe layout in sub-basement.

The most numerous users of the building are the company's commercial travellers each one of whom has a "booth" in one of the offices with a lock-up desk (see page 88). The usual plan is for three booths to be set in line against a glazed partition to form a complete wall unit. As use is only intermittent the three

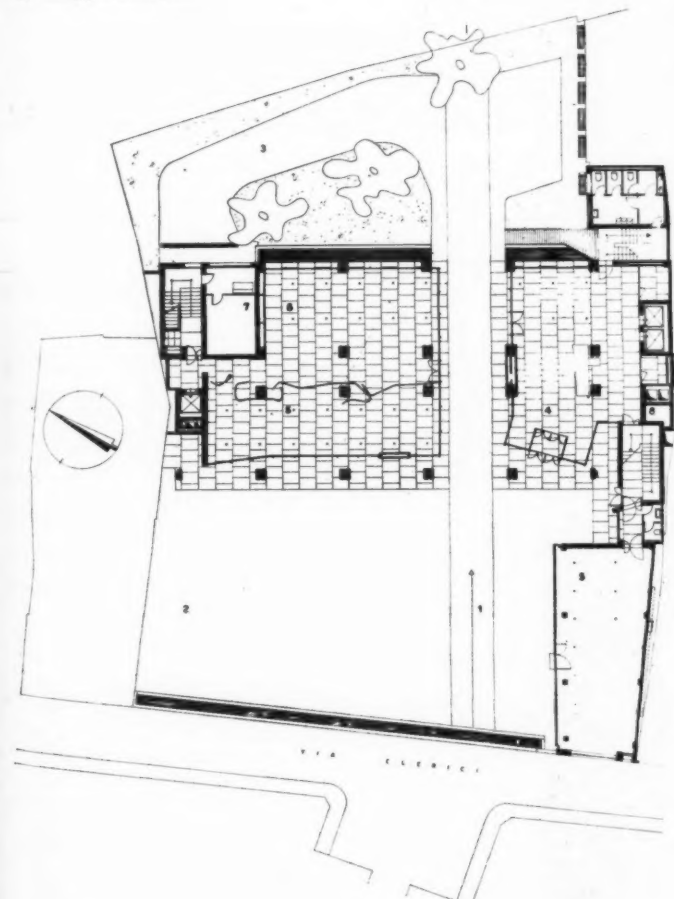
#### OFFICES IN MILAN



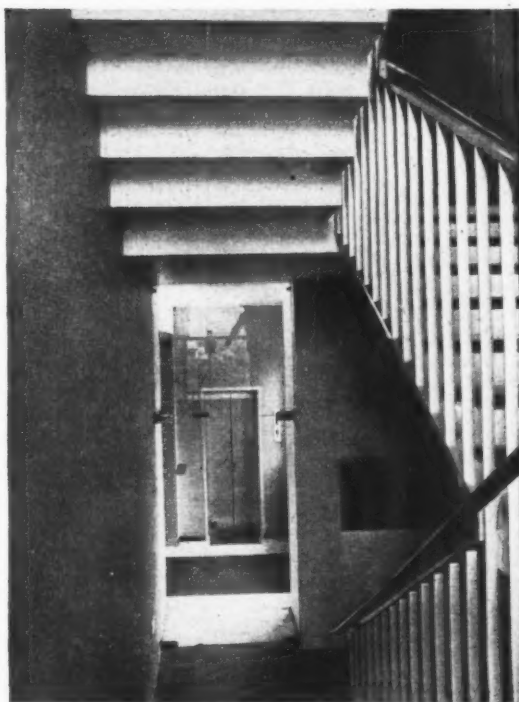




Typical upper floor plan



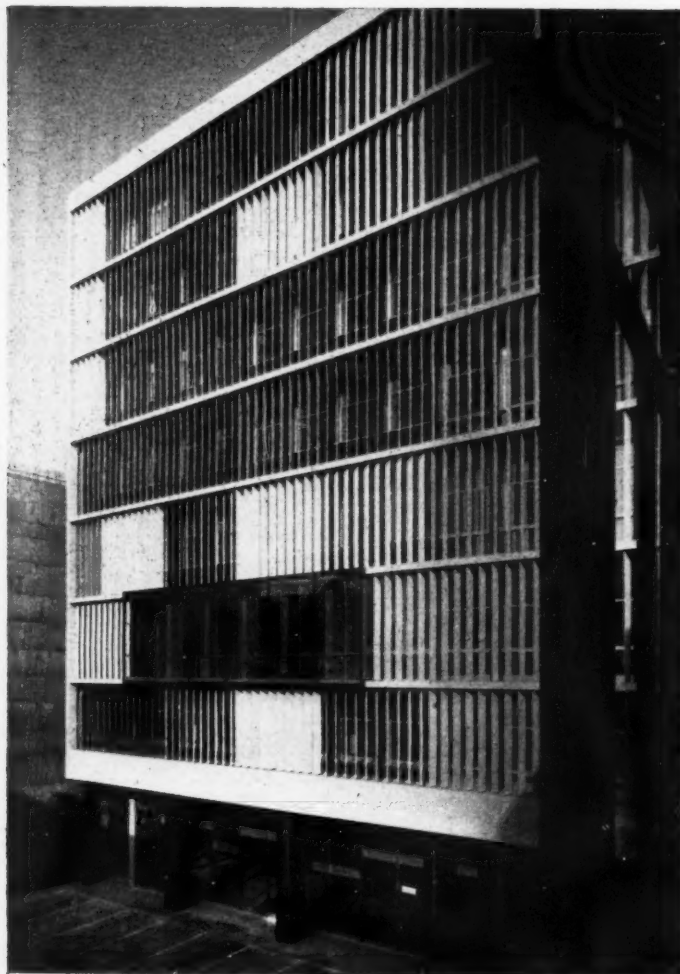
Ground floor plan



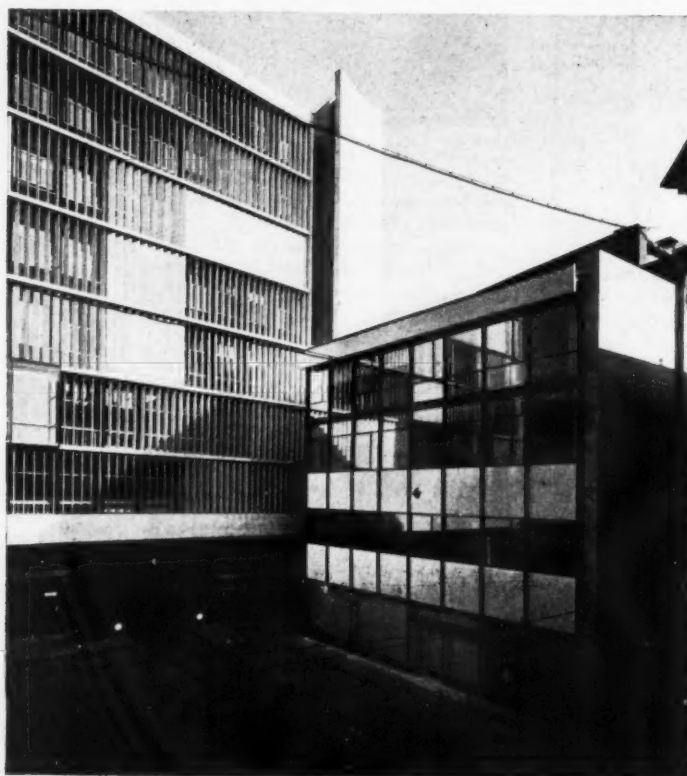
Top, detail of staircase. The risers are in botticino marble, the treads in polished serpentine. Balustrades are aluminium, the handrail steel tube covered in black plastic. It will be noticed that the balustrades lie in one vertical plane. Below, detail of demountable storage walls.

- KEY: Upper floor
1. Office space.
  2. Entrance lobby.
  3. Porter.
  4. Waiting room.
  5. Air conditioning.
  6. Assembly hall.
  7. Telephone racks and switch-board.
  8. Air conditioning.
- KEY: Ground floor
1. Carriageway paved with rubber.
  2. Waiting space for cars, paved with flagstones.
  3. Ramp.
  4. Entrance hall.
  5. Showroom.
  6. Assembly hall.
  7. Telephone racks and switch-board.
  8. Air conditioning.

booths share a telephone which stands behind a glazed screen in the adjacent corridor. The main block is 8 storeys high and has two basements. The upper of the two basements provides garaging for 40 cars and is reached by a ramp which rises up through the garden. It also houses a school for mechanics and a range of laboratories. The sub-basement is used for housing the mechanical



Left, view of the facade facing the courtyard taken from the completed wing. Note the adjustable brise-soleils and the projecting window of the board room, glazed with heat-resisting glass. Below, the completed wing at night.



equipment and for storage of used typewriters. The ground floor of the main block comprises an entrance hall and a large showroom-cum-assembly hall, which are separated from one another by the carriage way which gives access to the car park. The board room and the directors' offices are on the first floor, the board room being expressed externally by a large window which projects beyond the face of the brise-soleil. The remainder of the accommodation in the main block is devoted to office space and is divided up by means of demountable partitions and, on the corridor side, by demountable storage walls the depth of which corresponds to that of the main columns.

#### OFFICES IN MILAN

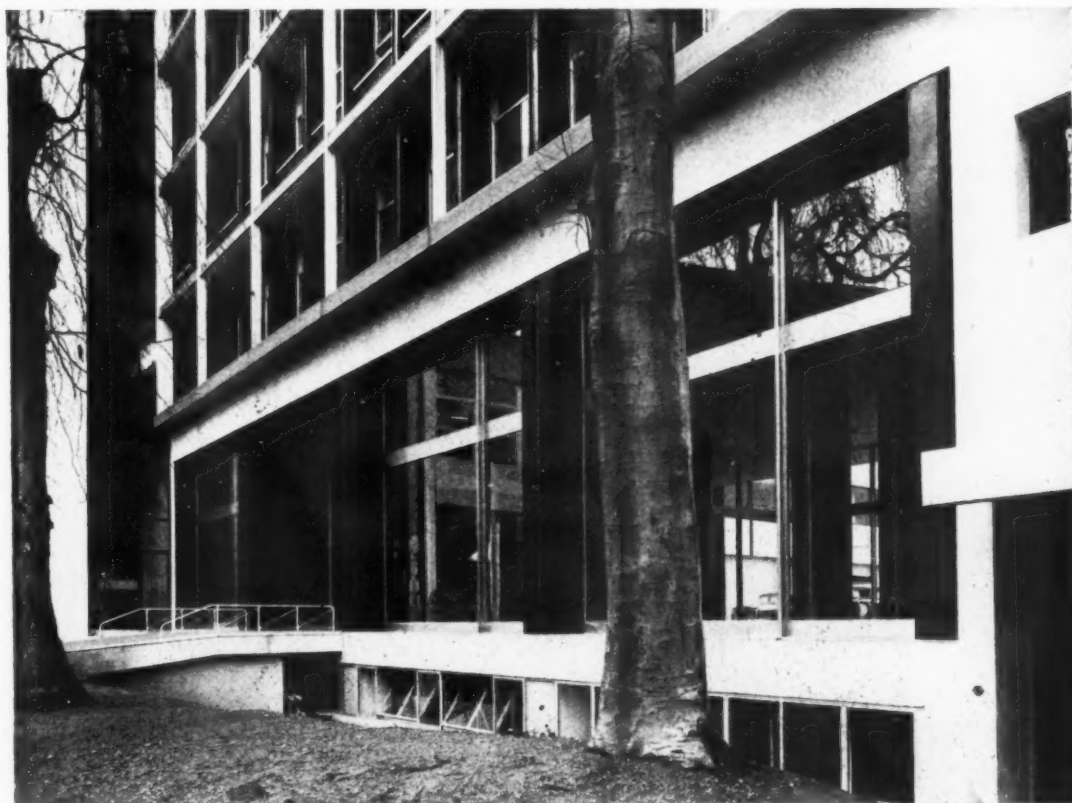
Bottom, left, view of the completed wing taken from a window across the street.



*The main structure is orthodox reinforced concrete and has been designed to receive an additional top deck to serve as a landing for helicopters. The columns are sheathed externally with black and white anodised aluminium. Fascias are clad in botticino marble and other external wall surfaces in white ceramic mosaic. The designers have taken particular care with acoustic insulation. All the main structural elements are isolated by means of expansion joints, the internal partitions are double glazed, the ceilings have acoustic linings and the corridors are floored with rubber.*

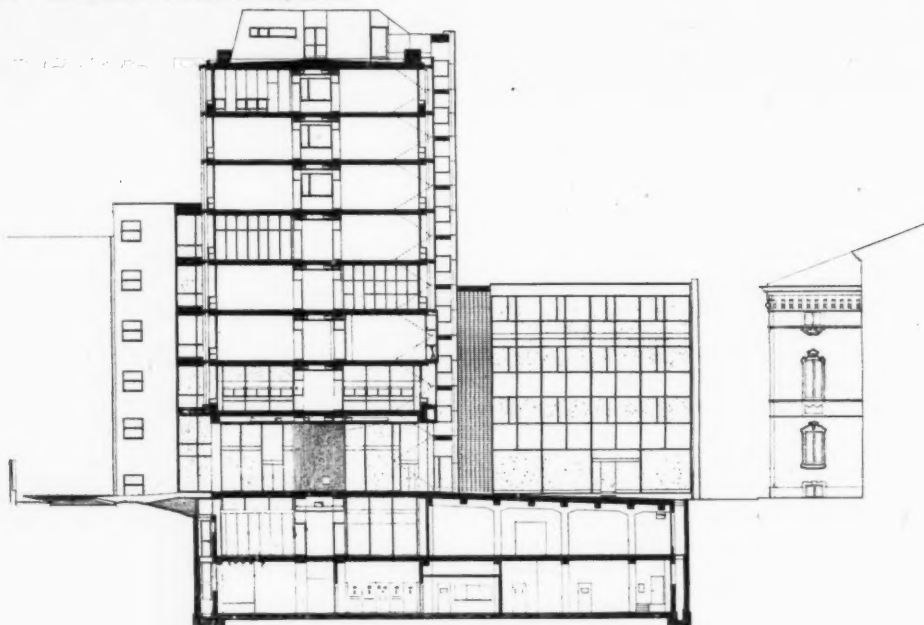
#### OFFICES IN MILAN

Left and below, rear facade of the main block showing the carriage way.



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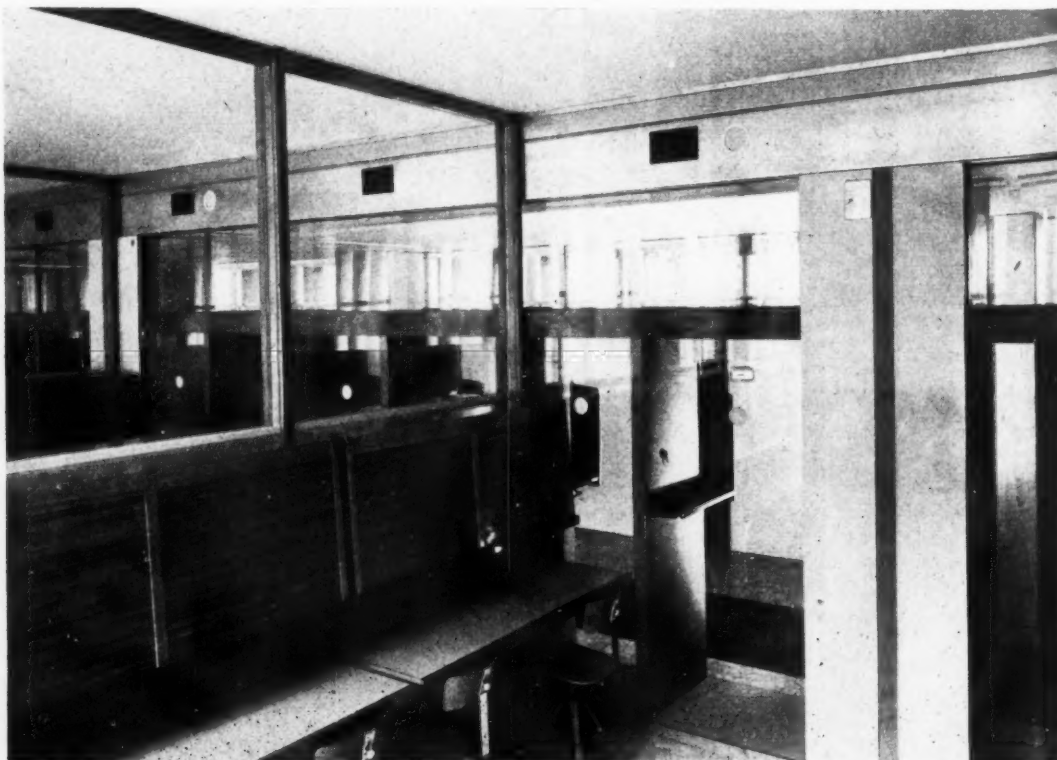
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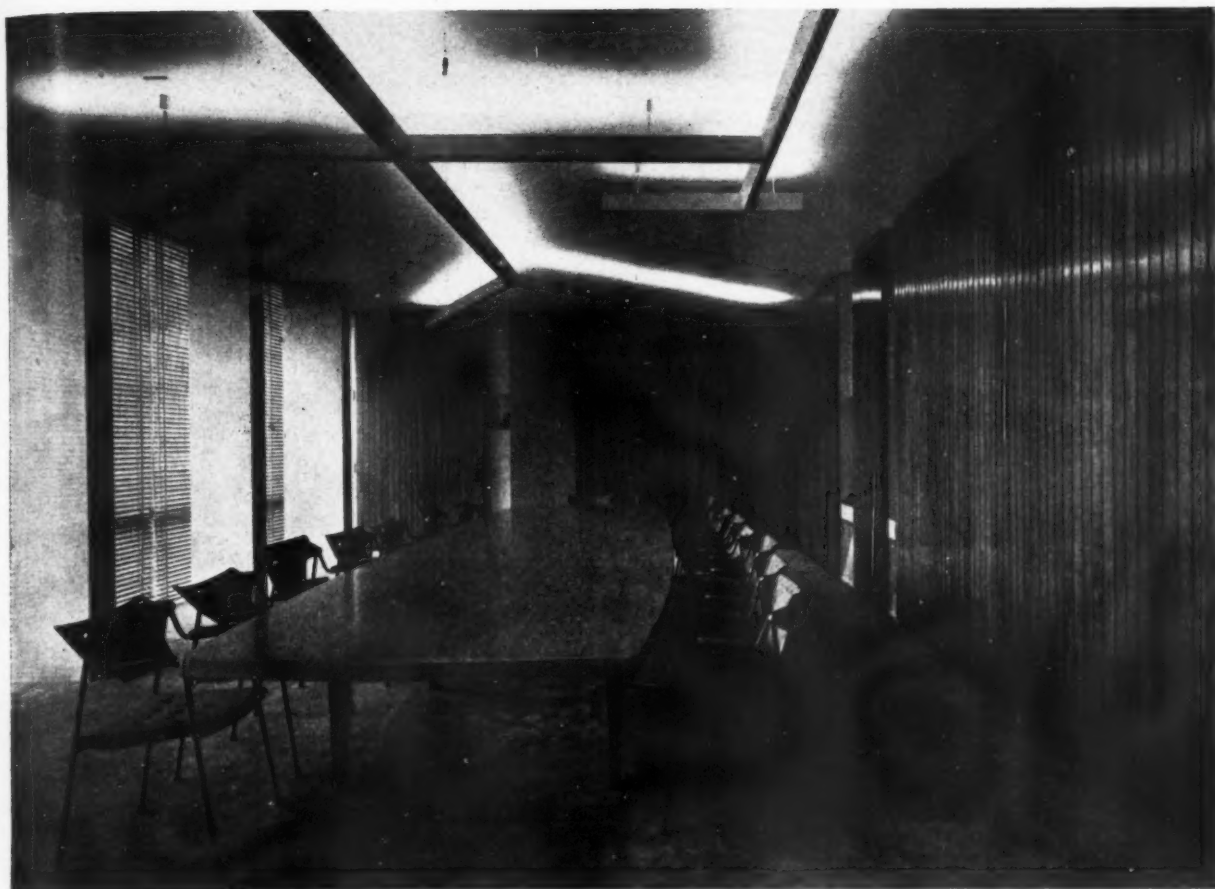
Section through main block and basements

*The offices are air-conditioned throughout. The installation gives, in winter, a temperature of 64°F and 40-50% humidity with an outside temperature of 23°F and, in summer, a temperature of 79°F and 55% humidity with an outside temperature of 90°F. There are two automatic duplex lifts adjacent to the main stair, a service lift adjacent to the secondary stair and a 5-ton hoist for conveying goods between ground and sub-basement.*

Below, view of one of the offices. Note the double-glazed screens and the roll-down lock-up desks. All telephones are sited in the storage wall, with access from the corridor.





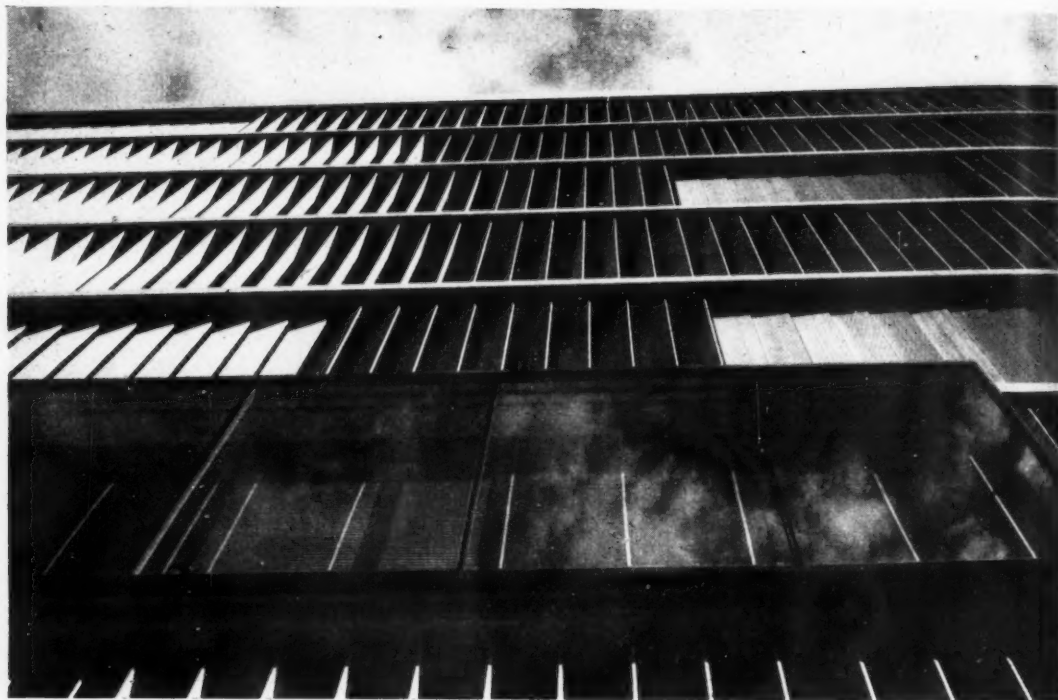


Above, general view of the board room.  
Below, a director's office.

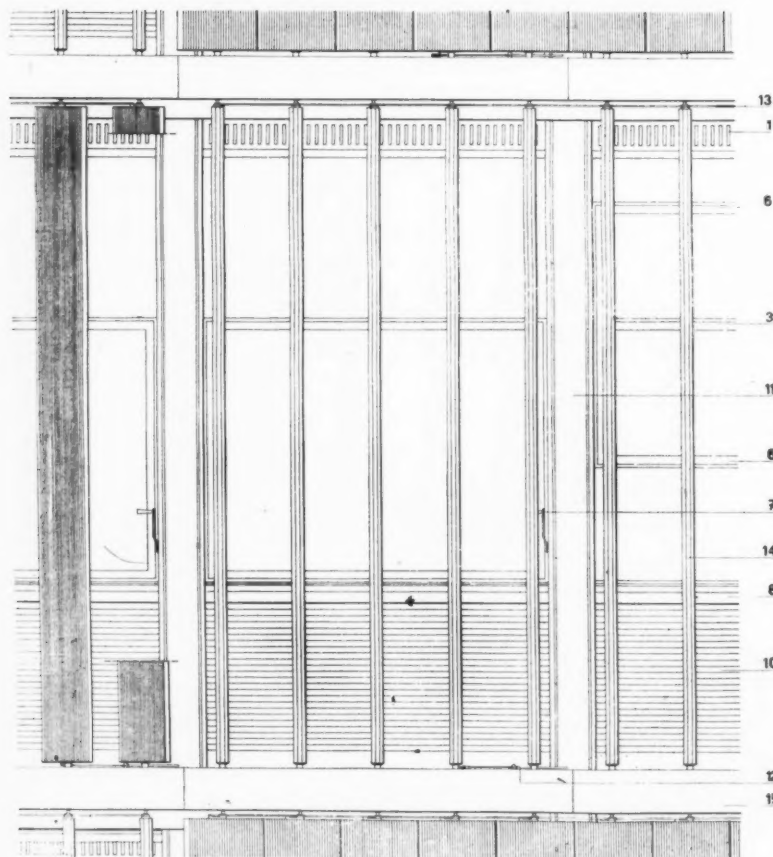


*There is a large painted panel by Mattia Moreni in the showroom, low relief sculpture by Giovanni Pintori in the entrance hall and a large tempera painting by Professor Nizzoli in the board room.*

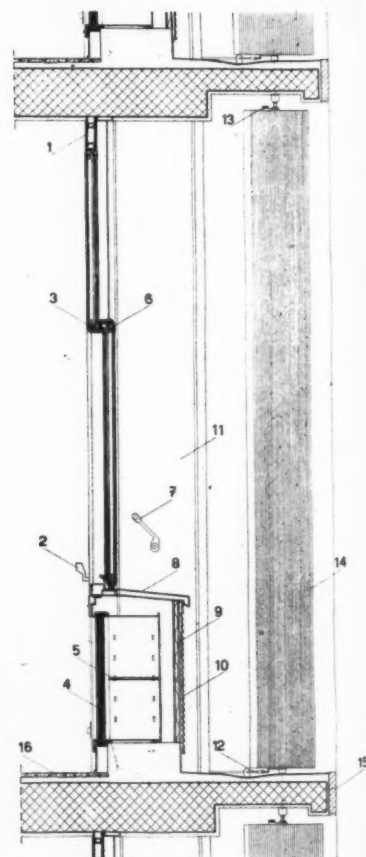
#### OFFICES IN MILAN



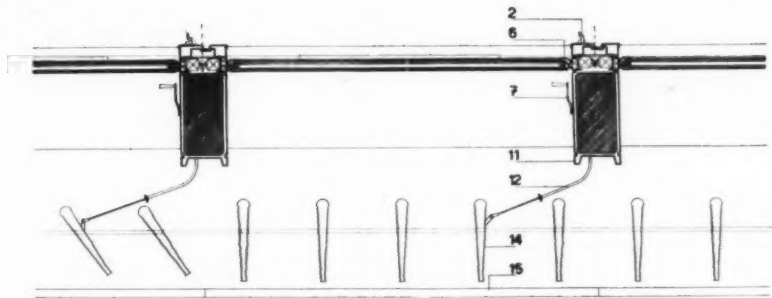
Above, view looking up at the main facade facing towards the street, showing the boardroom window and the vertical brise-soleils.



Elevation of one-storey height of brise-soleil and window behind [Scale: approx.  $\frac{1}{8}'' = 1' 0''$ ]  
See key on opposite page.



Vertical section



Plan section of brise-soleils and window (see previous page for elevation and vertical section)

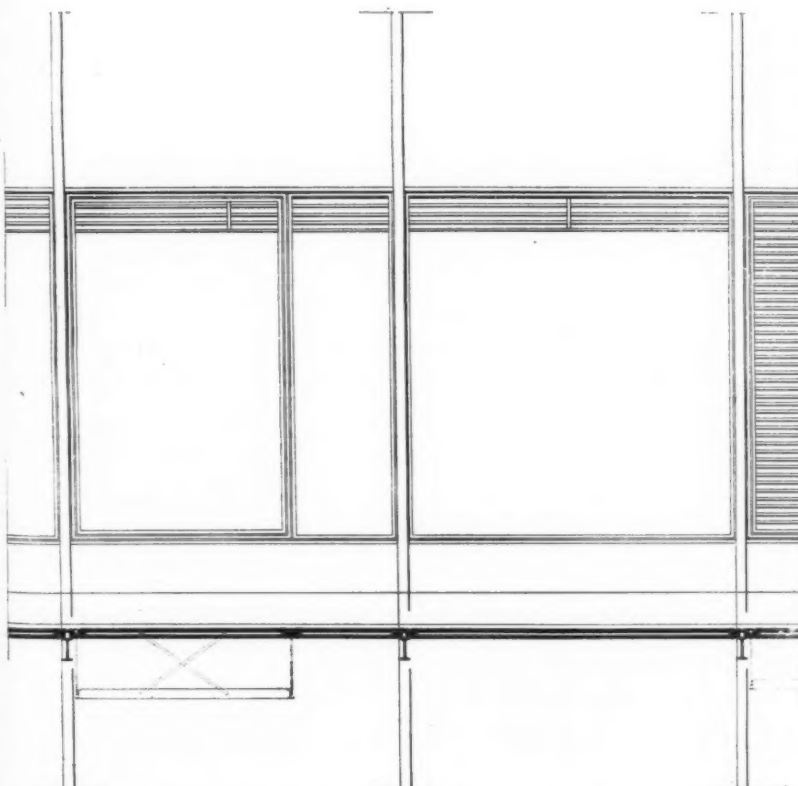
KEY

- |                                                                      |                                                             |
|----------------------------------------------------------------------|-------------------------------------------------------------|
| 1. Adjustable ventilating grille in natural aluminium.               | 8. Aluminium external sill.                                 |
| 2. Operating handle of the grille in black oxidized aluminium.       | 9. Insulating panel.                                        |
| 3. Fixed sash in natural aluminium.                                  | 10. Corrugated sheeting panel in black oxidized aluminium.  |
| 4. Plastic sliding doors for small cupboards.                        | 11. Plaster sheathing in black oxidized aluminium.          |
| 5. Movable shelves.                                                  | 12. Remote control for operating brise-soleil.              |
| 6. Sliding sash                                                      | 13. Linking member connecting 10 units of the brise-soleil. |
| 7. Operating handle of the brise-soleil in black oxidized aluminium. | 14. Brise-soleil built up from aluminium extrusions.        |
|                                                                      | 15. String facing in polished botticino.                    |
|                                                                      | 16. Mosaic floor in light botticino.                        |

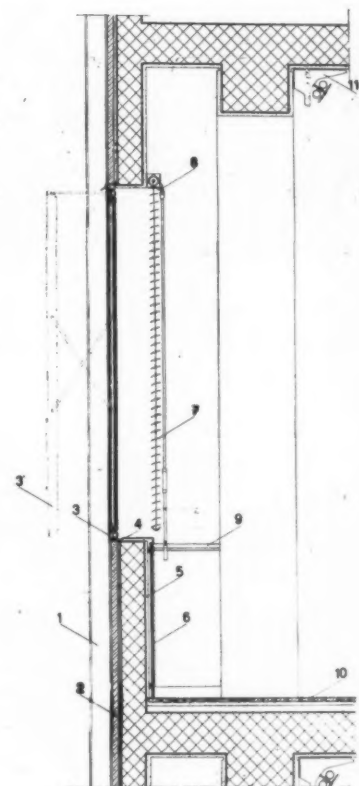
OFFICES IN MILAN

KEY

- |                                                        |                                                                                       |
|--------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1. Continuous mullions in black oxidized aluminium.    | 6. Internal panelling in grooved mahogany.                                            |
| 2. Polished botticino slab facing.                     | 7. Venetian blind.                                                                    |
| 3. Window frames in black oxidized extruded aluminium. | 8. Blind box.                                                                         |
| 4. Inside sill in black oxidized aluminium.            | 9. Side panel in light botticino.                                                     |
| 5. Insulating panel.                                   | 10. Mosaic floor in light botticino.                                                  |
|                                                        | 11. Holder for fluorescent tubes composed of lacquered m.s. plates on plastic holder. |



Elevation of window used on completed wing. Note that the opening light is opened by projecting outwards so that glass is always parallel to the remainder of window  
[Scale : approx.  $\frac{1}{8}'' = 1' 0''$ ]

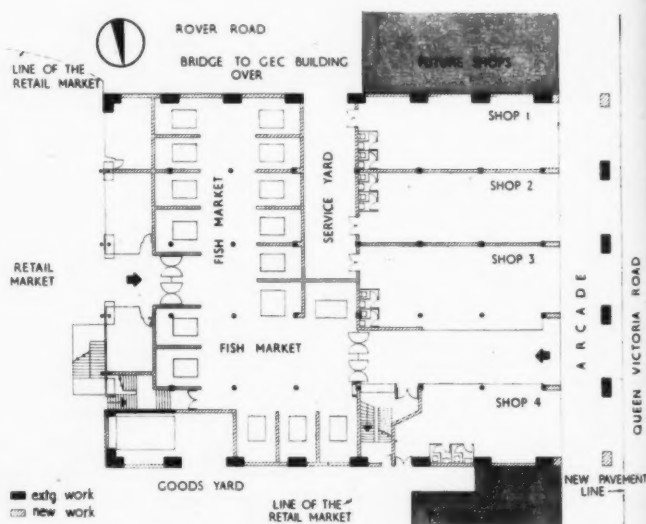


Vertical section

## PROPOSED FACTORY CONVERSION AT COVENTRY

The Coventry City Council has decided to acquire the premises now occupied by Cornercroft Ltd. (seen in the centre of the photograph below), in Queen Victoria Road, which is soon to be evacuated. The designs for conversion and reconditioning of the premises have been carried out under the

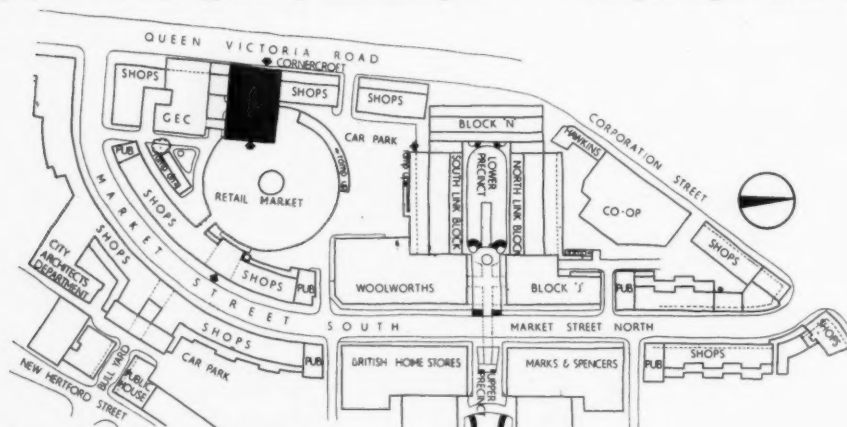
direction of the new City Architect and Planning Officer, Arthur G. Ling, the Deputy City Architect and Planning Officer, David Percival, the principal



Ground floor plan, Cornercroft Building [Scale:  $\frac{1}{4}$ " = 1' 0"]

assistant architect, Douglas Beaton, assistant architect, Ralph Iredale, and assistant, Ian Crawford. The proposals, recently approved by the Planning and

Redevelopment Committee, give the opportunity of commencing the redevelopment and transformation of this road into a lively shopping street and also providing the entrance to the new retail market, seen in the layout



Layout of proposed shopping area

plan, left. On the upper floors of the premises, there will be flatted factory space of 27,600 sq. ft. The sketch, top, shows the premises after the proposed conversion. On the right are similar premises which it is hoped to convert later. Windows and parapets will be replaced and Horton stove facings will be applied to the brick piers. The estimated cost is £77,000.





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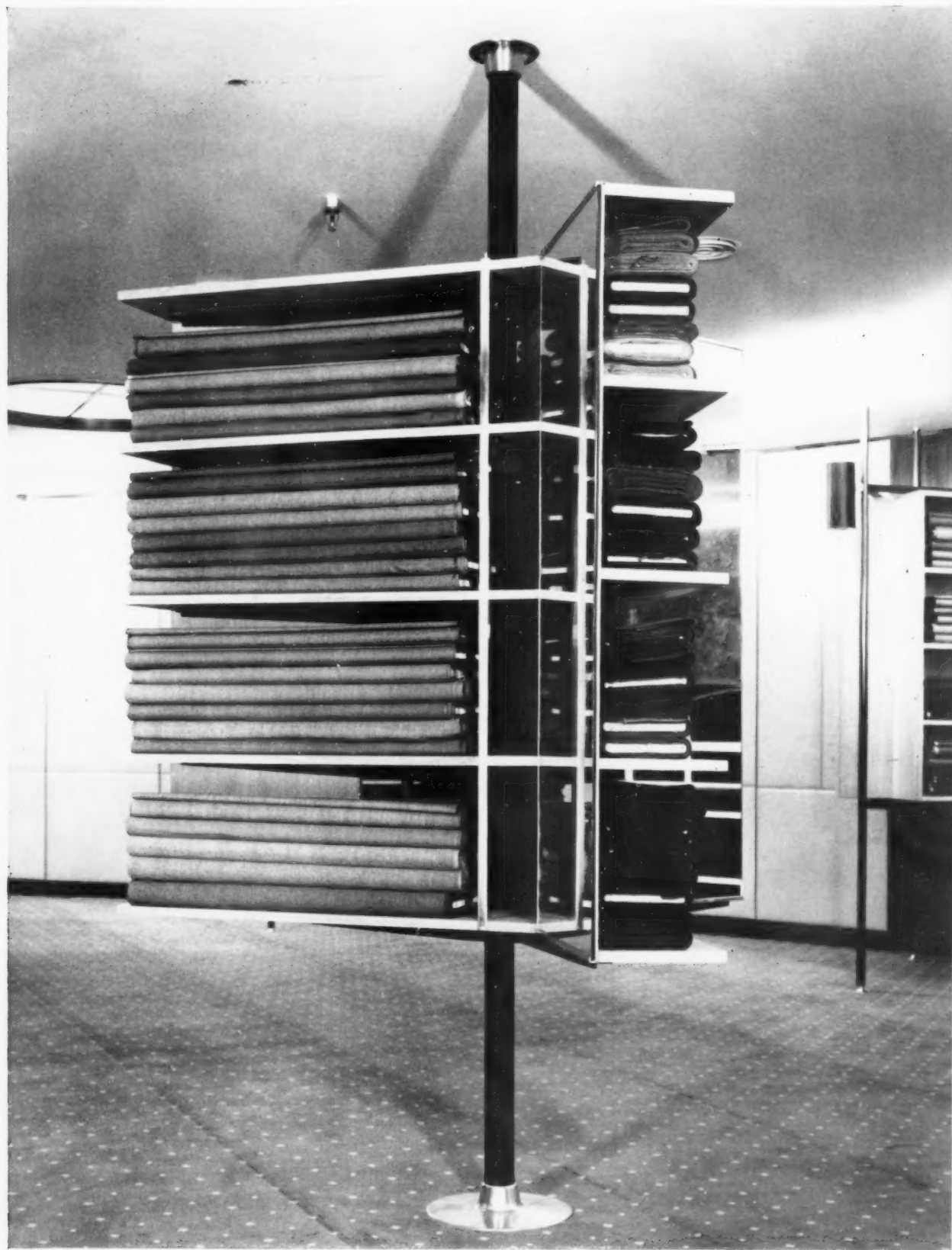


## WORKING DETAIL

REVOLVING CLOTH RACK: SHOP IN LONDON, W.1

*Westwood, Sons and Harrison, architects; assistant architect-in-charge, Alan Irvine*

FURNITURE AND FITTINGS: 52

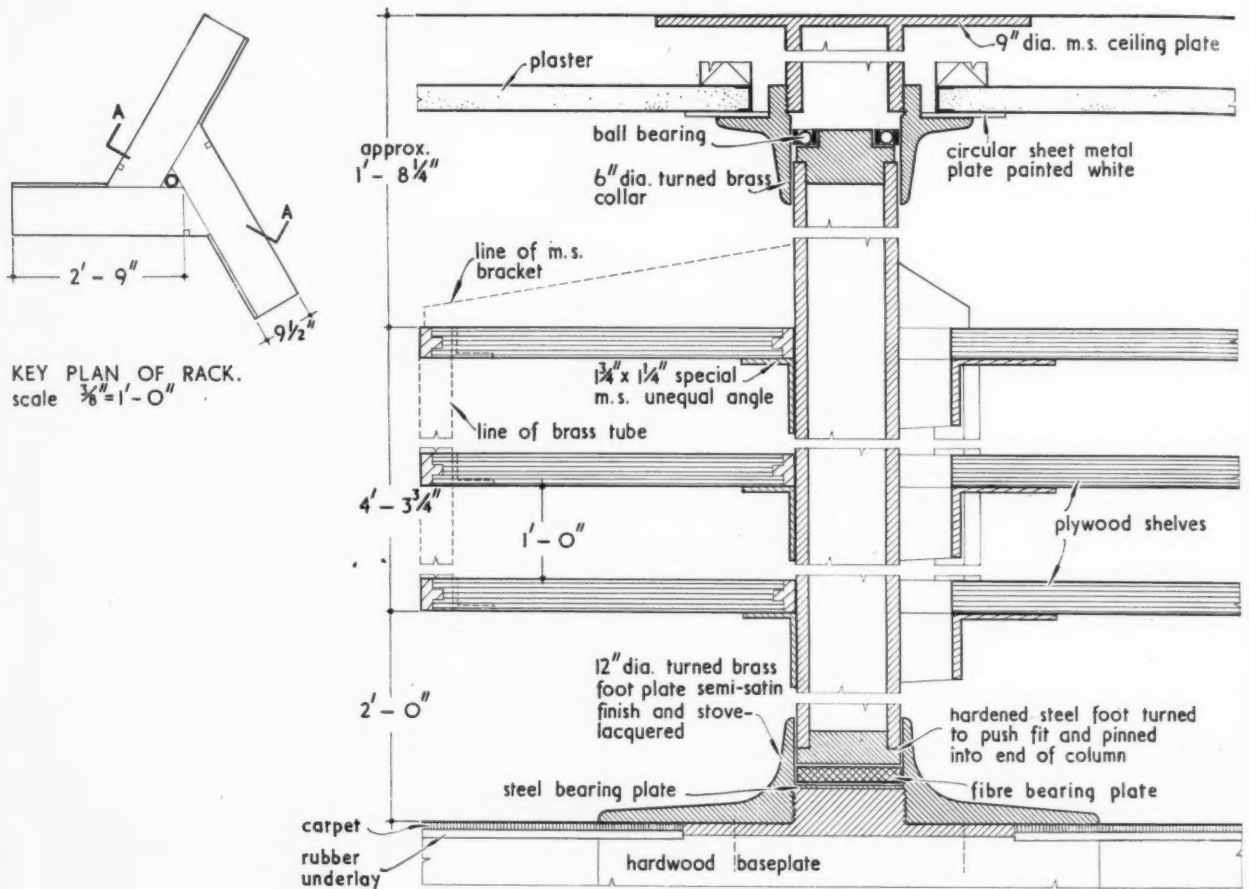


*The cloth rack comprises a rigid framework welded to a revolving column. Each of the five tiers of shelves is supported on a triangular frame comprised of unequal angles which are welded to the column and to each other. Additional stiffness is provided by the plate-glass mirrors and by the three, square brass tubes which are bracketed to the outside edge of the shelves. These are pinned at the top to a m.s. bracket which is welded to the supporting column. The reflected image of the shelf-fronts in the mirror gives the illusion that the fitting occupies less space than in fact it does.*

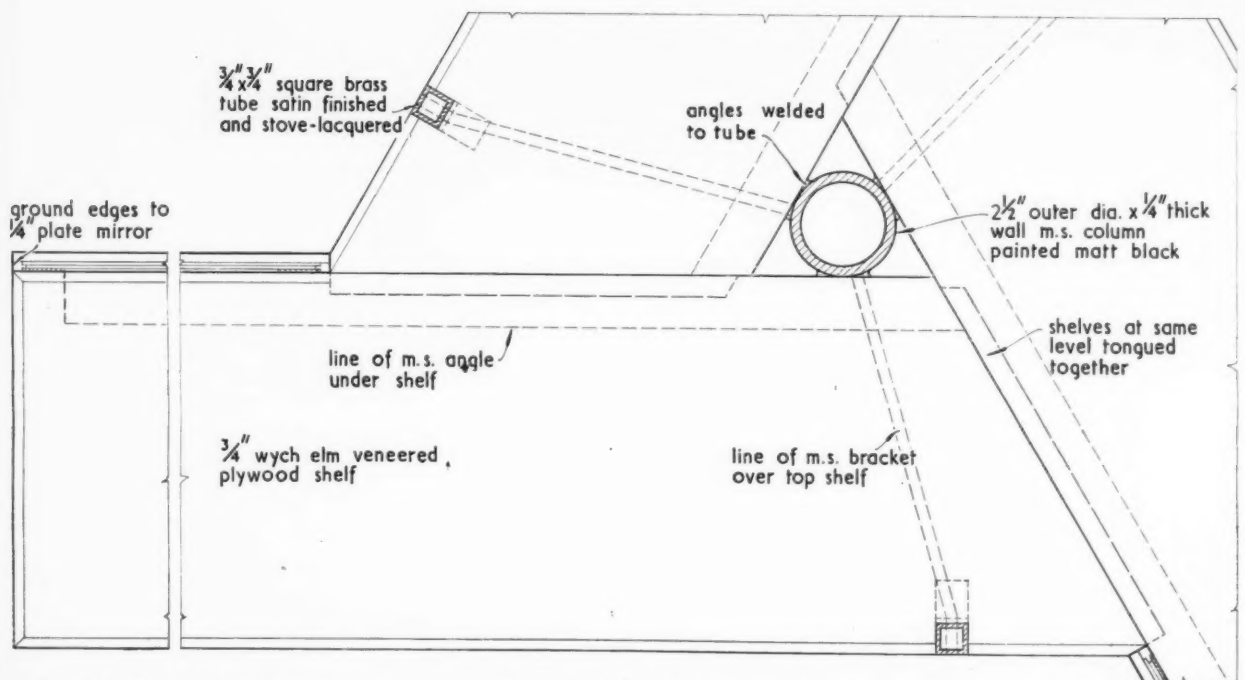
## WORKING DETAIL

FURNITURE AND FITTINGS: 52

REVOLVING CLOTH RACK: SHOP IN LONDON, W.1

*Westwood, Sons and Harrison, architects; assistant architect-in-charge, Alan Irvine*

VERTICAL SECTION A-A. scale 1/4 full size



PART PLAN OF REVOLVING CLOTH RACK. scale 1/4 full size



## WORKING DETAIL

ISOOTOPE STORE: HOSPITAL IN LONDON, N.W.3

*John Lacey, architect*

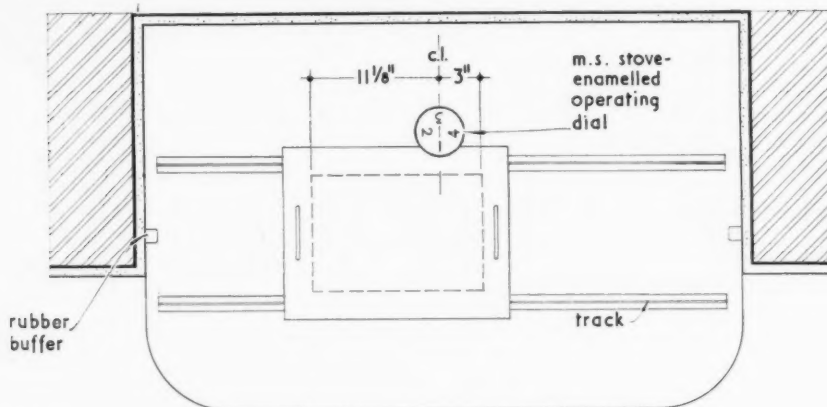
FURNITURE AND FITTINGS: 53



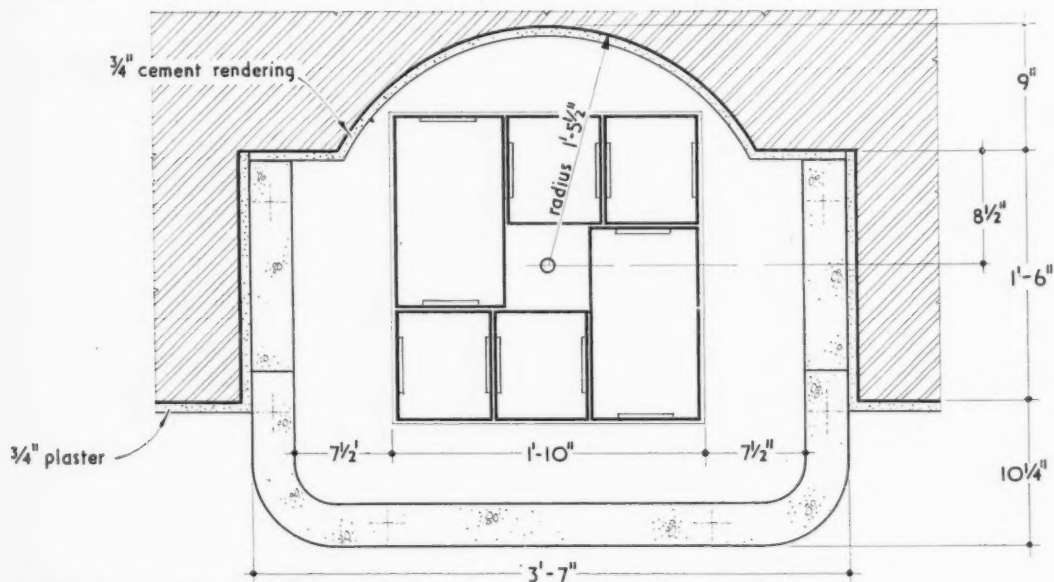
*Isotope stores, which are becoming normal equipment in certain categories of hospital, require to be completely enclosed in a minimum of 3 in. of concrete or the equivalent. In this example the opening for the removal of the canisters containing the isotopes (which can be seen standing on top of the store) is covered with a lead door which slides on rails. Within the store is a revolving rack which supports a compact group of steel containers: by manipulating the dial the required container can be brought directly under the opening.*

**WORKING DETAIL**

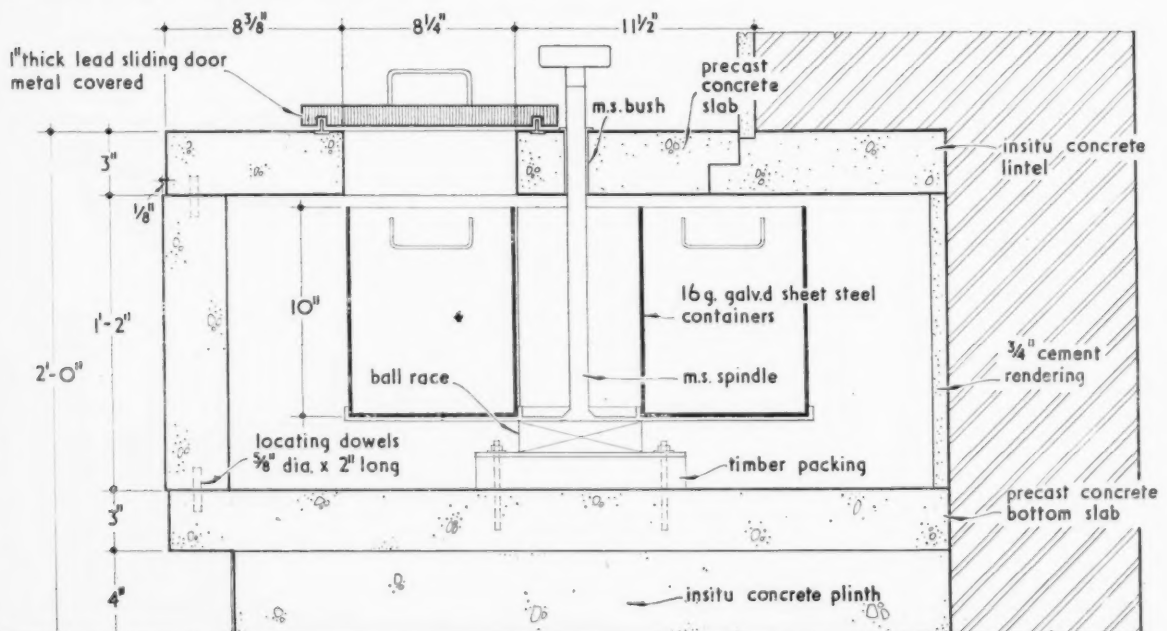
ISOTOPE STORE: HOSPITAL IN LONDON, N.W.3

*John Lacey, architect*

PLAN OF TOP. scale: 1" = 1'-0"



PLAN OF CONTAINERS. scale: 1" = 1'-0"



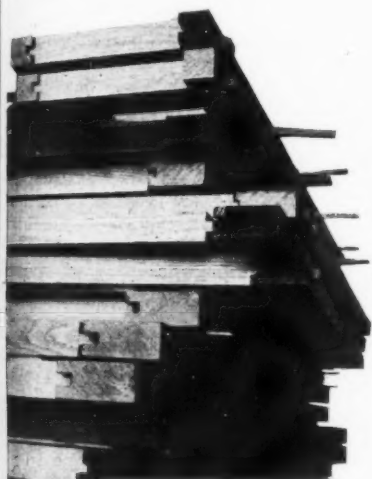
CROSS SECTION THRO' ISOTOPE STORE. scale: 1/2" = 1'-0"







## TECHNICAL SECTION



*In their last article in this series, John Eastwick-Field and John Stillman discussed the design and machining of sections (AJ, March 24, 1955)\*; this week they pass on to the design and machining of joints. When they came to investigate this subject they were surprised to find that, despite new gluing and machining techniques, so many of the traditional joints are still in use. They judged that their most valuable service would be to illustrate and give critical notes on eighty of the more important joints. This article, therefore, discusses the principles of jointing and contains the first section of the critical notes, while a second article, to be published very shortly, will contain the remainder. The drawings are by Robert Maguire. For purposes of classification the series is numbered 13. Materials: Timber.*

\* Previous articles in this series appeared September 30, 1954; November 25, 1954; January 13, 1955.

### THE DESIGN AND PRACTICE OF JOINERY

by John Eastwick-Field and John Stillman

#### 5. THE DESIGN AND MACHINING OF JOINTS

If one collects together all the joints which have been used in joinery from time to time one finds that there is a bewildering number. We have noted some 100 which are quite common. It might have been supposed that in current practice only a small proportion of these would be used, but in fact it is surprising to find that very few of them are considered to be obsolete, despite the introduction of machine working and of new glues. Having examined all of them, and obtained the opinion of many manufacturers we have selected 80 which are in common use and which we discuss here and in the next article in detail.

Many traditional joints, especially those for use externally were put together with white lead, without glue and relied for their strength solely on their mechanical pro-

perties. For instance, they were pinned or wedged so that they could not be pulled apart. It might be thought that as modern waterproof glues would make the mechanical properties of the joints less important, since more reliance could be placed on the glues, there would be considerable changes in their design, but in practice the traditional methods of making them persist. The main exception is the "comb" joint which has been designed specifically for machine production and relies for its strength on glue. It will be seen that the gluing surfaces or "glue lines" as they are called are more extensive than in traditional joints used for the same purpose. When one is concerned with an industry that has become largely mechanized one is accustomed to look for the effect of machine production on design.

Although in joinery the joints are now almost exclusively prepared by machine, it would appear that the nature of the raw material has had more influence on their design and shape than the tools which make them. Such differences as exist at the moment between hand-made and machine-made joints are only differences of detail, and these are mentioned in the notes about the individual joints given below. On the other hand some joints which were laborious and expensive to make by hand can be quickly and cheaply made by machine, and are therefore used more freely. The dovetail is a typical example of such a joint. It is now often used for joining the back of a drawer to the sides, for it is as easy to make by machine as the traditional method of grooving the sides and slotting in the back.

## THE PRINCIPLES OF JOINTING

The objects of all joints are to fix one member to another in such a way that

- (a) as much of the strength of the individual pieces is maintained as possible;
- (b) the actual joint takes place within the section of the wood. In carpentry, by contrast, many joints are formed by lapping the two pieces of wood over each other;
- (c) the joint shall be as little visible as possible: the butting of two pieces of handrail is, for instance, very difficult to see if well done. The avoidance of "end grain" on visible surfaces also governs the design of some joints, since end grain will often be obvious even after painting or polishing;
- (d) they shall be so designed as to withstand dampness, especially when exposed to the weather;
- (e) they shall be reasonably easy to make: notably that the two pieces to be joined shall be easily located, and that it shall be possible to hold them together whilst the glue sets. In some joints such as dovetails they are automatically held together, in others pins and wedges are used, and in others, screws;
- (f) it should not be possible to see through the joint if it should open as a result of shrinkage;
- (g) when reliance is placed almost wholly on the glue, there should be as large as possible a gluing area;
- (h) in certain circumstances allowance must be made for movement. This applies in the joint between battens in a battened door. Arrangements such as the forming of a bead, and V-joints to avoid unsightly cracks in such positions are a tradition;
- (i) they shall be so designed as to avoid stressing any part of the joint in such a way as to cause splitting;
- (j) they shall be reasonably economical to make, by minimizing the number of machine operations and by avoiding wastage of timber.

## BEST TRADITIONS OF THE TRADE

Specifications often call, quite properly, for joinery work to be put together in the "best traditions of the trade" or to be "properly framed up," and if this is to have any meaning for the architect he should at least know which joints are appropriate to use in various situations. It may be that there are several alternative joints which are equally good but which have certain special characteristics, and if the architect is very particular in his design he will wish to know what these characteristics are, and what effect they will produce, and to show in detail on his drawings which joint is to be used. It may be, for instance, that he would wish to have a dowelled joint between the head and stile of a door instead of a mortice and tenon joint, although both joints are considered to be sound practice. Often no joints are shown or specified by the architect, in which event their choice would be made by the manufacturer. This is usually satisfactory but the architect should have sufficient knowledge when inspecting the work, either at the factory or on the site, to decide whether the joints accord with good practice.

## GLUES, SCREWS AND NAILS

It is necessary to discuss glues, screws and nails since all joints except those designed for movement have to be glued, and there are legitimate uses for screws and nails which should be recognized. Formerly, when animal glues, which were not weather-proof, were used, it was common practice to joint up larger members in external work in white lead. This acted as a protective "gap filler" but did little to stick the members together: it is little used today, because of the introduction of new glues.

For all practical purposes three main kinds of glue are used in this country and their characteristics are discussed below:

*Animal Glues* made from bones, hides, commonly known as Scotch glue, or from fish are still favoured by some, especially for interior work and for cabinet making, since all joiners are accustomed to them by tradition; they are strong and durable in *dry* conditions; they do not stain the wood, and they can be cleaned off or machined without blunting the blades. Although they have to be applied hot they have a long "pot" life, and they are convenient and economical to use.

*Casein Glues* made from soured milk are used in assembly work and in plywood and veneering. They are supplied in powdered form, mixed with water and applied cold. Their main disadvantages are that they are irritating to the skin, they stain woods, particularly oak and mahogany, and the joints lose their strength if wetted, although they regain it on re-drying. There are a number of varieties of these glues with differing characteristics; some are claimed to avoid staining and others to be waterproof. As a class they should therefore not be used indiscriminately.

*Synthetic Resin Glues* have two great advantages over the other two mentioned above; first that they are extremely resistant to moisture and second that they are immune from attacks by moulds and bacteria.

There are two main types, those based on Urea Formaldehydes (weather resistant), and those based on Phenol Formaldehydes (weatherproof). In each type there are a number of different varieties, some in powder and some in syrup forms, and usually with a hardener supplied separately. The method of application also varies, sometimes requiring heat to obtain setting. They all require greater care in the gluing operation and their "pot" life is relatively short. They also have a dulling action on tools. Nevertheless, the variety of their forms and their marked superiority in weather resistance has led to their being used extensively in the industry.

It will be seen that properly chosen and used, synthetic resin glues can be relied upon under all conditions. An architect could justifiably specify them for all joinery work, but it must be recognized that some smaller firms may not have had much experience of them, and it would be reasonable for him to permit one of the other kinds to be used in work that is not subjected to moisture.

The development of the synthetic glues has been associated with those parts of the industry dealing with specialized work such as plywood manufacture, aircraft or ship production, and has produced its own technology.

The choice of the right grade for different purposes and their application has required more control to obtain the best results than was the custom when using animal glues. However, now that most joinery is produced under factory conditions where modern techniques are more readily assimilated, they are understood and widely used.

*Screws* of various sizes and materials are used in joinery for five main purposes. First to hold joints together until the glue sets; second, as the sole means of fixing flat surfaces together, such as battens screwed on a wall, or ledges on a drawing board (with slots to allow for movement); third, to fix components in such a way that they can be dismantled; fourth, to fix fabricated components in position in a building; and fifth to secure fittings of all kinds.

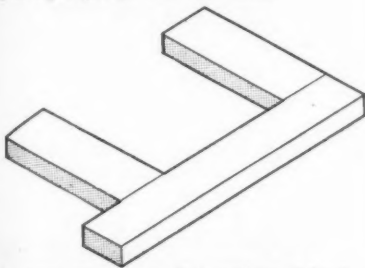
When screws are used to enable components to be taken to pieces or parts removed, such as glazing beads, they may have to be visible, and they are then usually used with brass cups which enable the screw to be removed and replaced without enlarging the hole. Otherwise, they are usually kept out of sight and if used, for instance, to secure a polished hardwood architrave they would be countersunk and covered by pellets of the same hardwood in which the grain would be matched with that of the surrounding wood.

When concealed, steel screws are used for cheapness and for strength, but they are liable to rust and also to stain certain woods, notably oak. Brass screws, though less strong, do not have these disadvantages. Where screws are used in association with fittings they should preferably be of the same metal as the fitting or at least of a matching colour, e.g., chromium plated screws for aluminium fittings. Needless to say, steel screws even when painted are liable to rust and it is possible to obtain them galvanized or otherwise rustproofed. *Nails* are used in inferior work for holding joints together whilst the glue sets; they are then a poor substitute for screws. Round iron or French nails are often used in these positions. Oval wire nails, panel pins and veneer pins and other special nails are however legitimately used for fixing such items as linings, skirtings and heads and plywood panelling. They are punched in and concealed with putty or other filling material which may then be painted or polished.

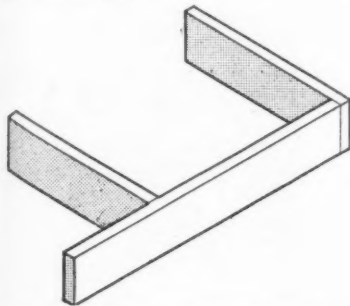
## ANALYSIS OF JOINTS

To revert to the joints themselves we have purposely divorced them from the components with which they are traditionally associated in our description and have collected them into eight groups according to their functions. We have taken the principal joints from each group and described them in some detail, with notes about the remainder.

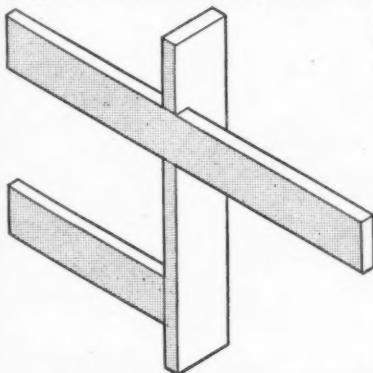
The eight groups are as follows:



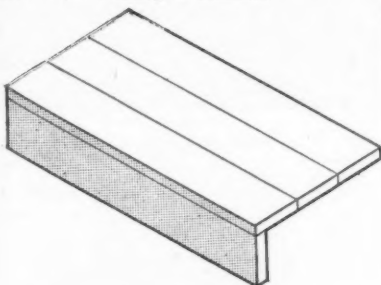
1. Near square or flat sections joined at right angles in the same plane as in head and stile of door.



2. Flat sections joined at right angles transversely, as in the construction of a bookcase.



3. Flat sections joined with direction of the grain and plane of section exposed, encountered in the framing of fitments.



4. Flat sections fixed longitudinally, as in wide shelving and counter tops, or for instance in the cased framing of a sash window.

5. Flat sections joined longitudinally allowing movement as in matchboarding.

6. End-to-end joints as in a handrail or in an extra long cill.

7. Joints between "built up" boarding including lippings.

8. Miscellaneous fastenings.

## GROUP 1: NEAR SQUARE OR FLAT SECTIONS JOINED AT RIGHT ANGLES IN THE SAME PLANE

The joints in this group are those used in such situations as the junction of the rails and stiles of doors, and elsewhere where the pieces of timber have the relationship shown in the sketch. It may be asked why with modern glues one could not butt one member against the other and rely upon adhesion at the point of junction. In the first place glue is less reliable when applied to end grain, and is also stronger in shear than in tension; but these considerations apart, the diagrams below (a) to (c), show that even if the glue were strong enough, the wood when so joined might easily fail. They also serve to illustrate the principles of design which are used in overcoming the likelihood of failure.

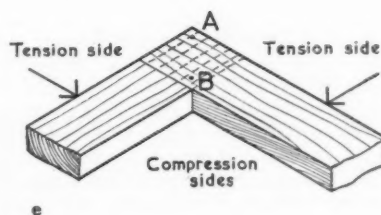
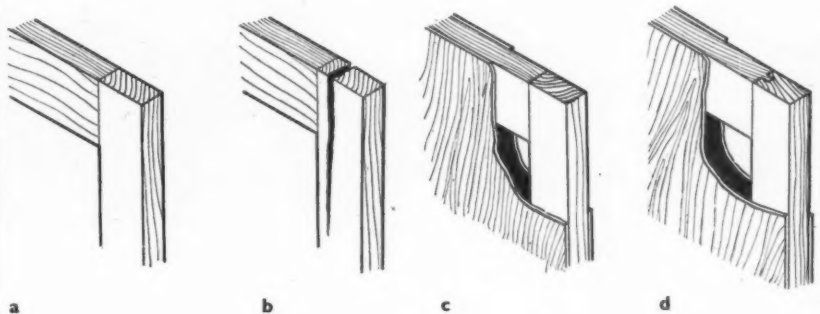
The most common joint used in practice is the mortice and tenon, of which there are various forms for different situations as described below. The dowelled joint is an alternative for the mortice and tenon, but whereas certain advantages can be claimed for it it is not nearly so often used. The comb joint is also employed as an alternative to the mortice and tenon but is mainly restricted to the construction of windows. All these three kinds of joint succeed particularly in fulfilling the functions listed above.

### MORTICE AND TENON JOINT

Figs. 1, 2 and 3 show one of the most commonly used of the mortice and tenon joints. As distinct from that shown in Fig. 7 which is the simplest form of the joint, it is designed for use where the vertical member does not continue past the horizontal member and where it is necessary to retain sufficient material at the top of the vertical

member to withstand the pressure of the wedges. It will be seen that the tenon is cut away for part of its length leaving what is known as the haunch. This helps to prevent warping and also prevents a gap showing if the joint should open. When mortice and tenon joints were made by hand the craftsman introduced a number of refinements to increase their efficiency. For instance the mortice was cut slightly wedge-shaped as shown in Fig. 4, so that when the wedges were inserted and glued to it, the tenon was virtually converted into a dovetail. This is still done in good joinery despite the fact that the mortices are cut by a machine which would normally cut a parallel side slot. The tapers are made by tilting the wedge in which the mortice is cut to each side in turn. It is particularly necessary to do this with hard woods, otherwise it would be difficult to insert the wedges. If the architect wishes to be sure of obtaining a really good joint, however, he should specify that the mortices should be tapered. In addition the wedges were sometimes cut in such a way that they gripped mainly near the shoulders so that any shrinkage which occurred in the vertical member would not cause the joint to open.

In principle all mortice and tenon joints are the same. Each consists of one or more tongues known as tenons on one member, and slots or mortices in the other. The tenons are inserted into the mortices and fixed with wedges and glue. The thickness of the tenon should preferably be one-third the width of the section, and the depth of the tenon restricted to five times its thickness. For most mortice and tenon joints the mortice is cut right through the member and,



In a glued butt joint (a), the glue will be at least as strong as the wood; but the joint will nevertheless fail by splitting (b), owing to the grain structure of the wood. Failure is due to a bending moment producing tension across the grain. When this is taken by other means, e.g., plywood covering (c), a butt joint is practicable. In practice, the butt joint is difficult to manufacture as it does not "locate" itself. A tongue and groove is often introduced to overcome this difficulty. (d) The problem is to connect the fibres of one piece to those of the other, so that stresses are transferred uniformly from A to B. (e).



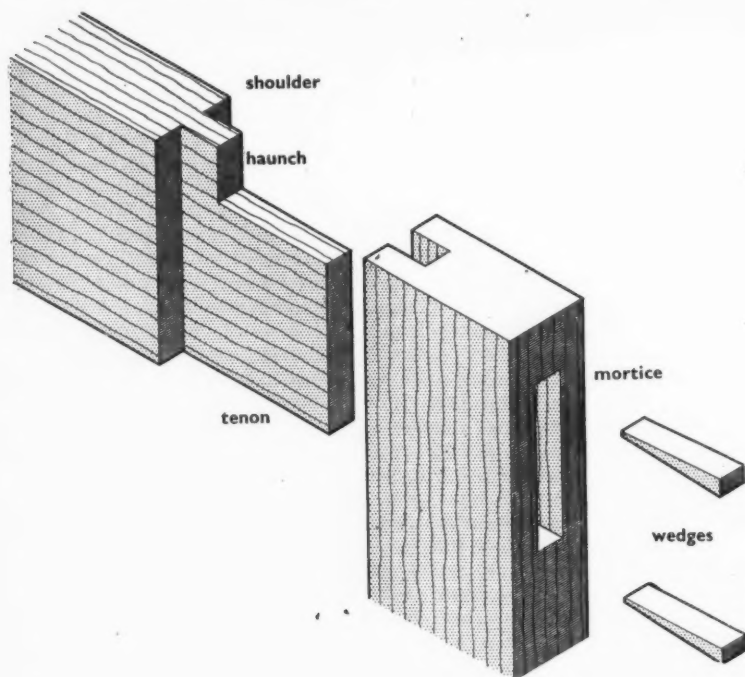


Fig. 1 (above). Diagram of haunched mortice and tenon joint. Fig. 2 (above right). A typical haunched mortice and tenon joint being made in oak door. The wedges have been glued and driven and the joint is cramped until the glue sets. The projecting tenon and wedges will then be cut off. Fig. 3 (right). The same door being assembled. Note the haunch on the centre rail and the use, in this case, of Scotch glue in the double container.

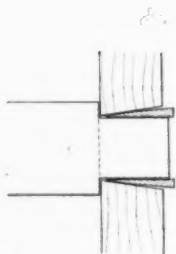
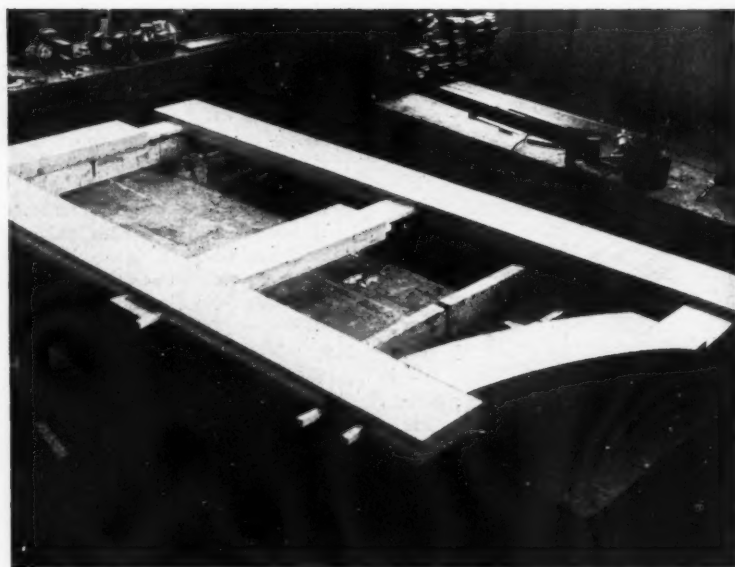


Fig. 4. Diagram showing section of mortice with wedges.

when inserted the tenon shows on the outer edge. When the main purpose of the joint is to locate one member relative to another and when the joint will not be subjected to tension, a short tenon, known as a "stub"

tenon can be inserted into a shallow mortice and be fixed by gluing and possibly also by pinning, but without wedges.

For cabinet work and for joinery of extra high quality where the best possible workmanship is demanded, a special kind of mortice and tenon can be used. In this joint, the mortice, which is wedge-shaped, is not carried through the member in which it is cut, and the tenon is correspondingly short. Before the tenon is inserted, however, wedges are driven partially into it so that when the joint is cramped up they secure the tenon in the mortice, as shown in the drawing, Fig. 5, secretly, without exposing either the wedges or the end grain of the tenon.

This process, which is known as foxtail wedging, is expensive, possibly doubling the

cost of the joint. The wedges should be of hardwood, and the work has to be very accurate for, once made, the joint cannot be taken apart and reassembled should there have been any error in the making.

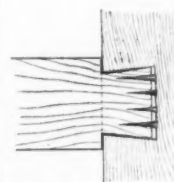
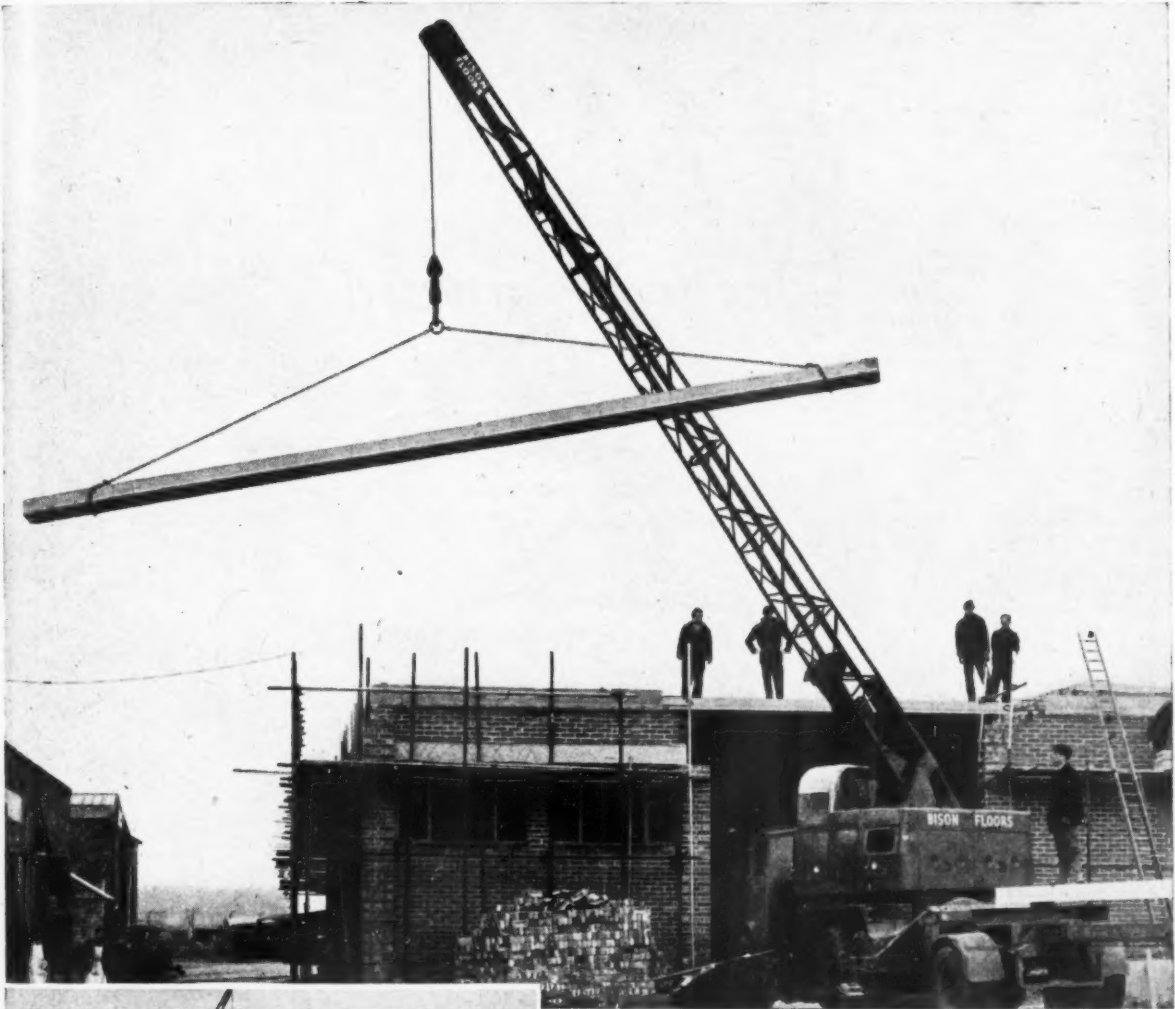


Fig. 5. Section through a stub tenon with foxtail wedging.





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## MORTICE AND TENON JOINTS

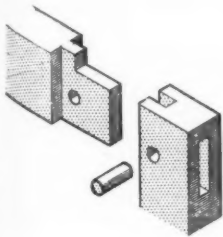


Fig. 6. Pinned mortice and tenon: In large sections the mortice is sometimes secured with a circular piece of wood known as a pin or dowel or peg in addition to the usual wedges. In very small sections, where wedges are impracticable, the pin alone may be used.

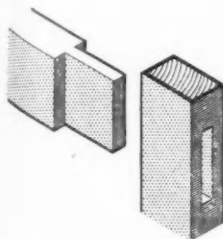


Fig. 7. Through mortice and tenon: This is a simple version of the mortice and tenon joint used for the junction of intermediate rails. The tenon is sometimes cut down or "reduced" to provide shoulders at the top and bottom so that if the tenon shrinks it does not expose an opening into the mortice.

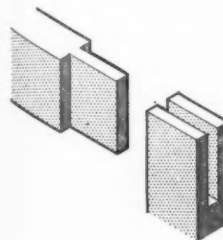


Fig. 8. Open or slot mortice: A cheap easily made joint used in positions where good appearance is not essential: suitable for heavy external use. It should be glued and pinned or screwed. Since it cannot be wedged it may be held together by draw pinning. In this process the holes in the two parts of the joint are not exactly opposite each other so that as the dowel is driven home the two members are drawn together.

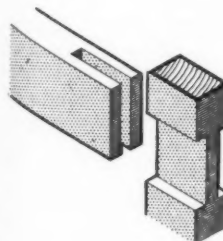


Fig. 9. Tee bridge: There is some dispute about the use of this joint and various joinery manufacturers have offered the following opinion:  
 "Seldom used in joinery."  
 "Of general use, particularly where members vary in thickness."  
 "Constructional joint used extensively in the Middle Ages to carry loads."  
 "Used principally for site assembled work."

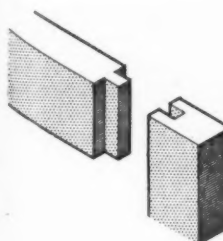


Fig. 10. Stub tenon with continuous groove: As shown here this "stopped" tenon is used to locate one member in relation to the other and is valuable only in such situations as the construction of flush doors where the members are afterwards covered by sheet material. "Stub tenon" also refers to a joint in which a short tenon is made on the end of one member with shoulders on all four faces. It is used mainly at the bottom of vertical members to keep its foot in position: for example at the junction of a window mullion with a cill.

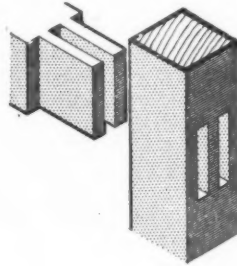


Fig. 11. Double tenons: Used in thick sections (e.g. 2½ in. upwards) and particularly in lock rails where mortice locks are specified. Cutting away for the lock between the tenons weakens the joint but to nothing like the same extent as it would if the tenon itself were cut away which would happen if a single tenon were used. Can be made with haunches for top rails or with reduced tenons having the advantages described above under 4.

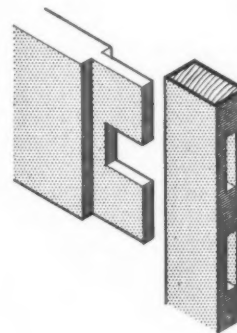


Fig. 12. Twin tenons: Used in deep rails, sometimes with reduced tenons, or with haunches. The two tenons shrink less in their mortices than would one deep tenon.

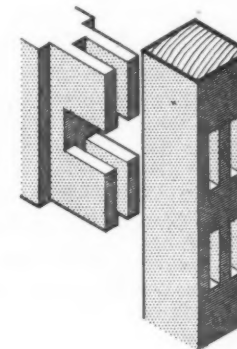


Fig. 13. Twin double tenons: Used where the timbers are both wide and deep, as in the middle and bottom rails of heavy doors.

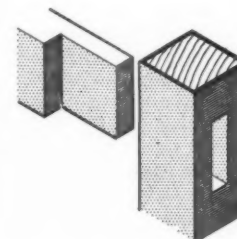
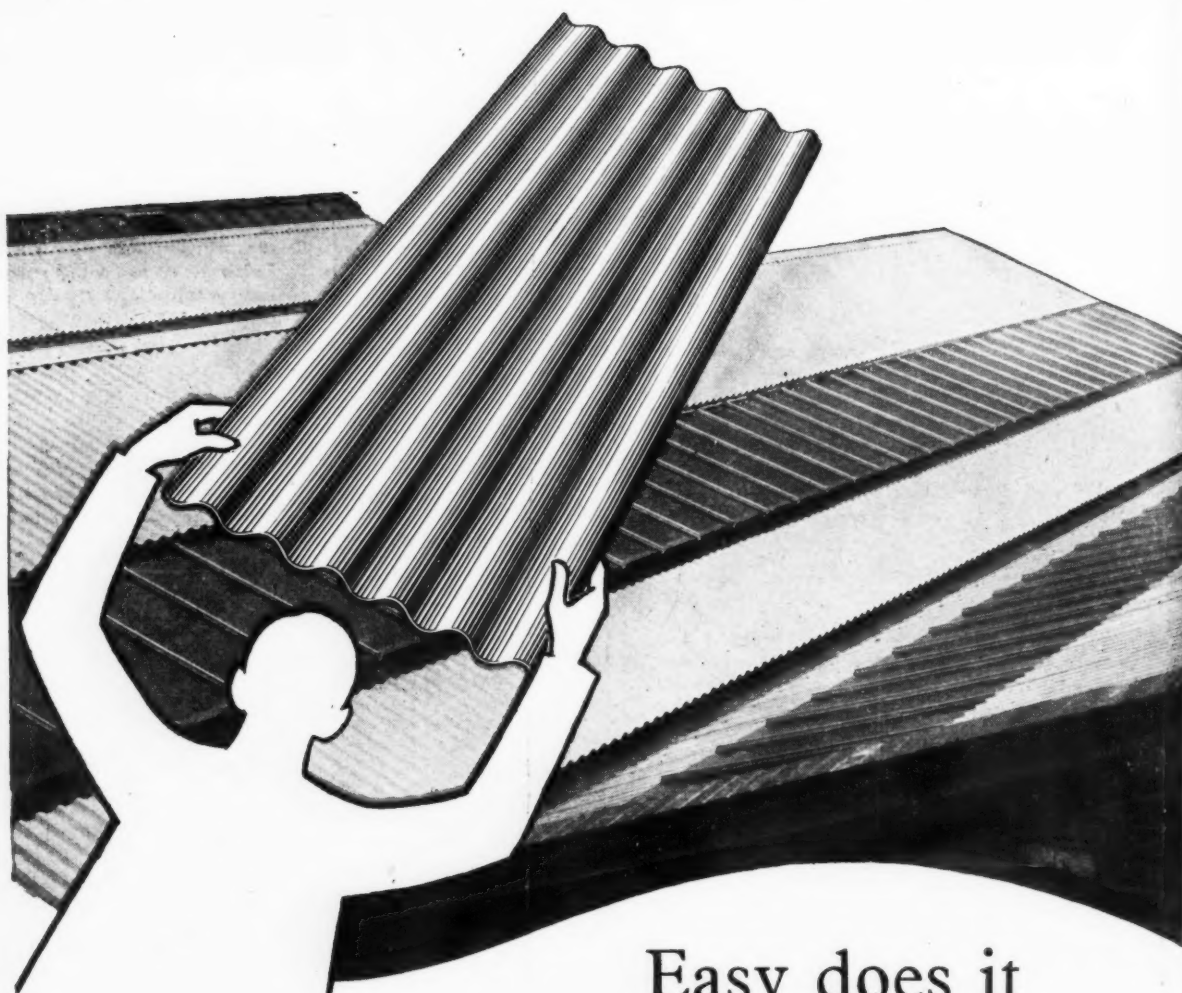


Fig. 14. Bare faced tenon: Used where the two members are of different thicknesses: notably in framed and ledged and battened doors, and in rails in tables.



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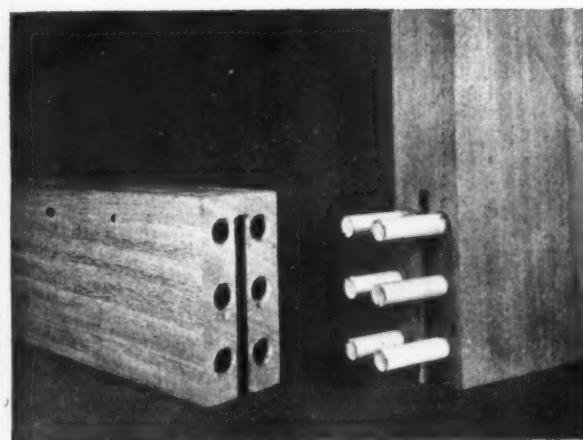
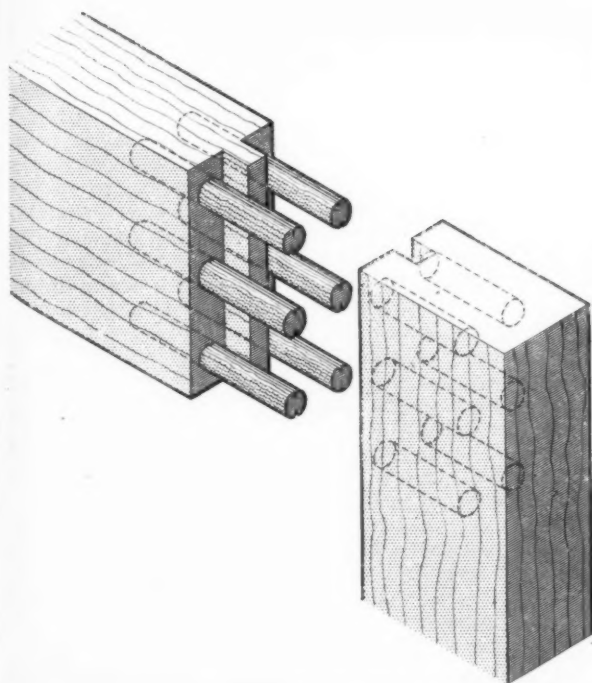


Fig. 15. Above, diagram of a dowelled joint with a stub tenon. Below, dowelled joint prepared to receive a loose tongue. The joint is not satisfactory unless there are two rows of dowels as in these examples, and is improved by having the tongue or stub tenon.

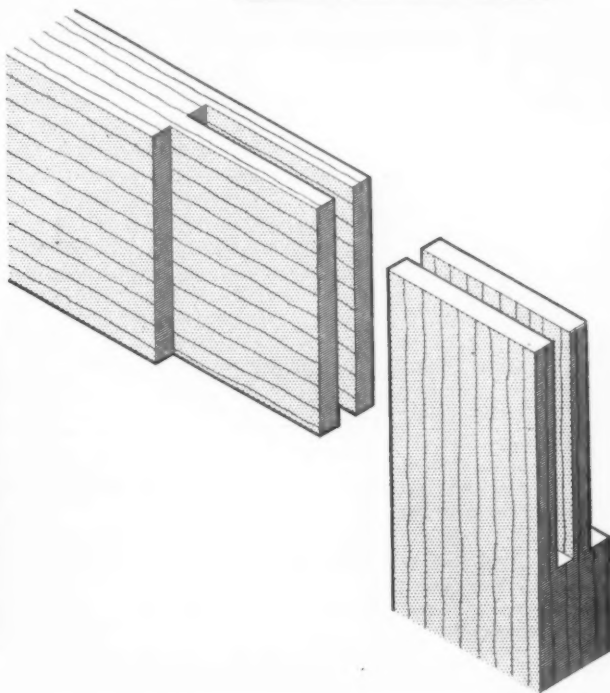


Fig. 16. Above and below. The comb joint as would be used at the corner of a casement window. The slots have been arranged to coincide with the mouldings on the section. The splay to the section in the example below has been made after the joint by the use of a router.

#### DOWELLED JOINTS

We have already mentioned that the dowelled joint is an alternative for the mortice and tenon, and is normally associated with the manufacture of mass-produced doors and of furniture, although the manufacturers use it almost to the complete exclusion of mortices and tenons in all their work and consider it to be superior if properly made. From the point of view of the efficiency of the joint it is claimed that there is less likelihood of any gap appearing between the rail and the stile if the stile should shrink away from the shoulders, as is possible in a mortice and tenon joint; and if made with a double row of dowels and with a cross tongue it is considered quite as strong as the latter. There is also a slight saving of timber as compared with mortice and tenon joints since there are no tenons to be cut on the end of the rail. As may be

seen from the illustrations the joint consists of a number of hardwood dowels which are glued into accurately-prepared holes in either member to be jointed. The dowels should have small grooves formed in them to allow the surplus glue to squeeze out of the holes. The cross tongue is often omitted in cheap work and the dowels are sometimes reduced in number to provide only one row. In this form it is inferior to a mortice and tenon and is not an acceptable substitute.

#### THE COMB JOINT

This joint is the most obvious example of a new joint developed for manufacture by machine, and relying upon the additional strength and durability of modern weather-resisting glues, which should always be used with it. It has been used mainly in the construction of casement windows and particularly in connection with the EJMA

standard pattern. There seems no reason why it should not be used in other places, since, if one accepts the reliability of synthetic-resin glues used in normal production, the joint is a very sound one, the effect of which is to form a lamination over the area of the joint.

The design of the joint gives a proportionately greater gluing area than would a mortice and tenon. There should be at least two tongues on each member, and the two members are held together whilst the glue sets by dowels, or by special white-metal pins of star-shaped section.

#### ACKNOWLEDGMENTS

Acknowledgments to The Timber Development Association, The Joinery Managers Association, D. Burkle & Son Ltd., John P. White & Sons Ltd., Rippers Ltd., Samuel Elliott & Sons (Reading) Ltd., J. L. Green & Vardy Ltd., G. E. Wallis & Sons Ltd., James Longley & Co. Ltd., Tomo Trading Co. Ltd., Dove Bros. Ltd., and Aero Research Ltd. for their assistance.

30

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BRIDGWATER	Somerset Wood Preservation Co. Ltd., Church Street (Bridgwater 2676)
CARDIFF	Hickson's Timber Impregnation Co. (G.B.) Ltd. Lewis Rd. East Moors
* CASTLEFORD	Hickson's Timber Impregnation Co. (G.B.) Ltd. (Castleford 2607/9)
CRAWLEY	W. C. Youngman Ltd., Manor Royal, (Crawley 1234)
DOUGLAS (I.O.M.)	Quiggin & Co. Ltd., Lake Timber Yard (Douglas 1)
DUBLIN	Dinan Dowdall & Co. Ltd., East Road (Dublin 41535)
GLASGOW	Brownlee & Co. Ltd., City Sawmills, Port Dundas, C.4. (Douglas 7331)
* HULL	Hickson's Timber Impregnation Co. (G.B.) Ltd., Da la Pole Street (Hull 33114)
IMMINGHAM	Calders Ltd., Immingham Docks, Grimsby (Immingham 220)
* KING'S LYNN	J. T. Stanton & Co. Ltd., St. Ann's Fort (King's Lynn 2605)
LEICESTER	George Walker (Syston) Ltd., Electric Sawmills, Syston (Syston 86137)
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LONDON	Burt, Boulton & Haywood Ltd., Brasenham House, Strand, W.C.2. (TEM 5801/8). (Plant at Belvedere)
LONDON	Calders Ltd., 29-31 Regent Street, S.W.1. (REG 7471) (Plant at Rotherhithe)
* LONDON	London Plywood & Timber Co. Ltd., Wharf Road, Ponders End, Middlesex (HOW 2424).
* MANCHESTER (3)	J. Gerrard & Sons Ltd., Swinton (Swinton 2261)
* MATLOCK	J. Gregory & Sons Ltd., Victoria Sawmills, Darley Dale (Darley Dale 3106)
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* PORTSMOUTH	Bailey & Whites Ltd., 451 Commercial Road (Portsmouth 2107)
PORT TALBOT	Calders Ltd., North Bank (Port Talbot 10)
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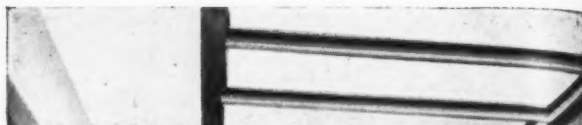
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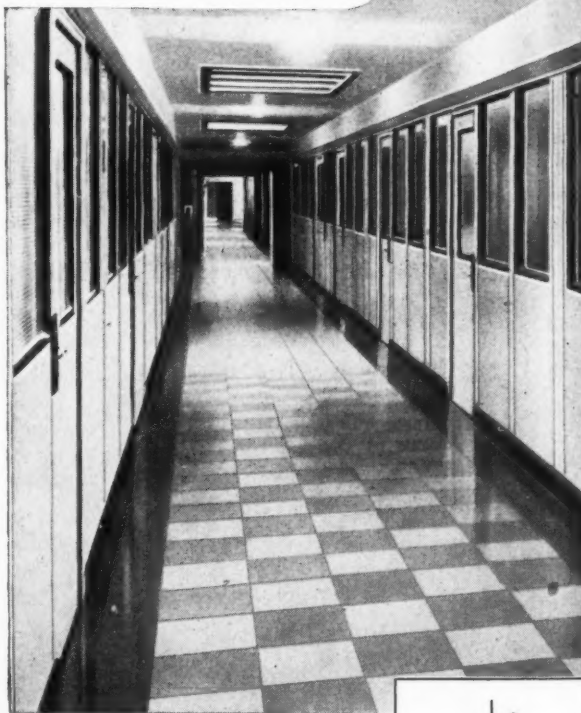
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## INFORMATION CENTRE

*A digest of current information prepared by independent specialists; printed so that readers may cut out items for filing and paste them up in classified order.*

### 7.44 practice CHECK LISTS

*Building Check List.* Ben John Small. (Reinhold, New York.)

The biggest part of this book consists of check lists for specifications under what approximate to our trade headings. A second part has check lists for equipment under a number of building type headings. This second type of information is not easily found elsewhere and provides a useful reference to 11 types of buildings. It might remind one to include for a missal stand in a church, a chow mein machine for a kitchen, a blanket brushing machine in a hospital or a key punch desk in an office and also a number of other things which one might not have remembered or have been told about by the client.

There are also check lists for the contract—not very useful over here as they relate to American conditions—and some other rather miscellaneous information also mainly applicable to America.

### 7.45 practice PLANNING PAYMENTS

*Applications for Planning Payments.* A. E. Telling, M.A., and F. H. B. Layfield, A.M.T.P.I. (Butterworth & Co. (Publishers) Limited. 38s. 6d.)

This book by the authors of *Planning Applications, Appeals and Inquiries*, is written in the same style and explains the provisions of the Town and Country Planning Act, 1954. This Act deals with the repayment of development charges, compensation for planning restrictions and compensation on compulsory purchase.

The narrative form of explaining the Act is most useful to the lay mind and should enable those concerned with the subject to understand what our legislators have said. The three matters dealt with under the Act are explained in distinct parts of the book, references to the relevant sections of this and related Acts being provided by footnotes.

The Central Land Board have been particularly careful to provide Rules for the payment of professional fees in respect of claims to be dealt with by the Board, and on page 103 will be found the circumstances in which no contribution towards fees will be made by the Board. The "certain circumstances" in which the Board will pay is not disclosed in the Rules, and the authors suggest that this information may be divulged "under the counter." But what about the Official Secrets Act?

It would have been of assistance if the authors had made quite clear the position in regard to the reinstatement of war dam-

aged buildings. This matter is referred to on pages 120 and 192, and is governed by the Planning Act of 1951. Does this Act override Class XI of the 1950 General Development Order and any Direction given under that Order? This may be an important matter to owners.

The book should prove of value to those acting for planning authorities and those submitting claims. Students should also find it a great help in understanding the provisions of a complicated piece of legislation.

### 8.43 surveying and specification VALUATION PRACTICE

*The Complete Valuation Practice.* By Mustoe, Eve and Anstey. (Published by The Estates Gazette, Ltd., 1955.)

As the authors of this standard work themselves suggest in their preface to this 4th Edition, the preparation of such a book nowadays (like the practice of valuation itself) entails a race to keep up with new legislation. In the present work, place is found for brief mention of the Town and Country Planning Act and the Landlord and Tenant Act of 1954: readers who are not practising valuers, however, should also beware of other changes bearing on the art of valuation which have occurred and continue to occur, since the book was prepared, e.g. the passing of the Housing Repairs and Rents Acts, 1954, which does not get a mention.

However, in the 29 chapters of the new edition, the authors have certainly done their best to make the book live up to its name, as a glance at the table of contents shows. Not only is clear and expert exposition given of the mechanics of valuing almost every kind of interest in real property for every kind of purpose in accordance with the best established practice, but individual chapters cover in considerable detail such diverse but related matters as war damage, report writing and the legal position of the valuer as expert witness, trustee in bankruptcy, liquidator and receiver.

There is a lucid chapter on valuation for rating, a subject which now is much in discussion.

In spite of its comprehensive character the fascinating (and appalling) fact remains that many of the matters covered in the book are the subject of whole bibliographies in themselves the mere digestion of which will not, unless accompanied by at least some years of continuous and contemporary practical experience, make the reader competent in the art of valuation.

### 10.134 design: building types HIGH FLATS

*High Flats. Report of a Symposium held on February 15, 1955, at the RIBA.* (RIBA. 6s.)

This gives, in book form, the full texts of all the papers read at the Symposium, generously illustrated from the lecture slides.

The subjects of the papers are: The principles of mixed development; Some aspects of experience in the USA; high flats in medium sized towns; living in high flats; high flats and higher densities in Europe; architectural problems of high flats in the reconstruction of city areas; fire protection in high flats; detailed design and the effect of services on design; principles of structural design; the structural problem of high flats; the contractor's viewpoint; economics of multi-storey flats.

The book is prefaced by Dr. J. L. Martin and concludes with a verbatim report of the discussion.

### 10.135 design: building types AMERICAN HOUSING

*Housing Design.* Eugene Henry Klaber. (Chapman & Hall, Ltd., for Reinhold Publishing Corporation, New York. 68s.)

This is a monumental work written by a man who is described in the publisher's blurb as "the dean of the housing design field." "Housing" in American means something different from what it means over here, for it covers everything but the mansions of the very rich. Mr. Klaber, as it happens, was concerned for nine years in "housing" in the English sense of the word, that is in a public authority housing department, but the centre of gravity of his book is in the range of home building which in this country is supplied by private developers. Again, he evidently envisages in his discussions traditional building, if we include in this the heavy reinforced concrete structures which still provide the staple for multi-storey apartment houses in America. For all its common sense and ingenuity the kind of planning he proposes is very different from what we have come to expect. He is mostly concerned with what we might call problems of drawing board planning: problems like how to get the greatest number of apartments into the most awkward site without making any of them unlettable. The best in English practice seems to have advanced further towards the solution of fundamentals.

The book is fully illustrated with the author's own diagrams, it is racily written (jerry building: "a lava flow of miserable cracker boxes . . .") and is a mine of the last generation's wisdom.

### 18.167 construction: theory STRUCTURAL TIMBER DESIGN

*The Strength of Timber Struts.* Forest Products Research. Special Report No. 9. (HMSO, 1955. 1s. 6d.)

Publication detailing test results on timber struts of Douglas fir, Sitka spruce, Scots pine and Baltic redwood as used in light structural work. Theoretical formulæ and assumptions on which they are based are stated and application to timber is discussed in relation to the test results. Statistics in estimation of working stresses are dealt with, also use of readings of lateral deflection when estimating the crippling load of timber struts.

### 18.168 construction: theory STRUCTURAL TIMBER DESIGN

*Laminated Beams from Two Species of Timber.* Forest Products Research. Special Report No. 10. (HMSO, 1955. 1s. 6d.)

Publication on the design of timber beams constructed by gluing thin laminations of dense strong pieces of wood to a core of less dense weaker wood thus offering a lighter or more economical member to resist a given load. Indicates that for a given quantity of material, maximum strength occurs when the compression laminate is thicker than the tension. Equations for calculating strength of any form of construction from the basic properties of the materials are presented.





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## 21.45 construction: miscellaneous COST SAVINGS

*Cost Savings Through Standardization Simplification and Specialization in the Building Industry..* Published by OEEC, Paris (obtainable through HMSO, price 12s. 6d.)

The object of this document is to "... simulate productivity by influencing ... governments ... organizations ... and public services in European countries" and to "convince management and workers alike of the benefits of productivity and to enlist their co-operation."

Part I explains the meaning of the words in the title, and describes the organizations in America which correspond to our BRS and BSI. It then gives an account of the main American industries producing building materials, and reports their efforts towards standardization, simplification and specialization.

The second part of the book gives sixteen American "case studies" of these efforts, from prefabricated windows, stairs and kitchen cabinets, to roof trusses, brickwork and masonry; including studies of the whole house. Finally there is a list of American building standards and a glossary of technical terms.

The verbose and repetitive text is laced with facts: that manhours on an 811 f.s. 5 room house were reduced by 21 per cent. by modular co-ordination. That a window firm reduced the number of types from 800 to 370 and could therefore reduce estimating staff from two full time to one less than half time employee. That a pre-fabricated timber house floor cost only 104 dollars for labour where a site built floor cost 169 dollars. That shop-made standard staircases require 50 per cent. less man hours than site built ones. That if cast iron plumbing units are shop-assembled, two men can complete the installation in three houses in a day instead of two men one house a day with conventional methods.

It is evident that much hard work has been put in by the compilers of this document in order to present American experience to the 18 member countries of OEEC (the US is not itself a member). The hope is, presumably, that each country will adapt the lesson of this experience to its own situation. In this country the learning of the productivity lesson has proved to be swift and comparatively painless; what we now face is the more arduous and probably more protracted task of discovering how to put it into effect. One wonders how the less industrialized countries such as Turkey or Greece will make use of this insular document.

## 24.193 lighting

### LIGHTING CODE

*IES Code for Lighting in Buildings—1955.* (Illuminating Engineering Society, 5s.)

For many years the IES Code has been a familiar guide to lighting engineers. The Illuminating Engineering Society has now brought out a revised edition which has been extended in scope with the avowed intention of meeting the needs of architects.

The code is divided into three parts: Part I—Light and Sight; Part II—Artificial Lighting; Part III—Natural Lighting.

Part I briefly explains the mechanism of seeing and describes the fundamental factors which affect the ability to see, stressing such points as differences in brightness and colour, the avoidance of glare, and the effect of the lighting environment.

Part II commences with a plea for early co-operation between architect and lighting engineer and gives a list of essential information required for the lighting engineer to design a satisfactory installation. It gives notes on the selection and location of light sources—a classification of lighting fittings in terms of diffusion, brightness and utilization efficiency—the minimum desirable general illumination—the illumination for particular areas—the relation between local and general illumination. The recommendations also include the allowances to be made for depreciation of lamps and the soiling of fittings. Compared with the previous code it includes rather more detailed information on the avoidance of glare. A point of interest is that the requirements for the permissible brightness of light sources and fittings are more exacting than hitherto. Reference is also made to steadiness of light output, presumably with fluorescent lamps in mind and also to the spectral composition of light. The familiar chart of illumination values is given as in the previous code, but with a rather more detailed explanation of its use. In general, this section is very reminiscent of the previous code.

Part III is considerably more detailed than Parts I and II and represents a substantial advance on previous IES codes. It is evident that here a serious effort has been made to secure the interest of architects and for this reason alone it is worth studying. It describes first an approach to the computation of direct and reflected light, although it only briefly indicates the methods of measurement which can be

employed. Much has already been published on ways of measuring direct and reflected daylight but it would have helped building designers to have included a brief review of the aids now available. Points of special interest to architects are the notes on reflected lighting and modelling; and on the location and design of window openings. The Section concludes with an explanation of the factors which cause glare and includes recommendations for the appropriate daylight factor for various types of buildings.

There are three appendices to the code which include a comprehensive schedule of recommended values of illumination for a large variety of industries and occupations, a useful list of references, and a list of British Standards relating to lighting equipment.

### CLASSIFICATIONS

1. Sociology. 2. Planning: General. 3. Planning: Regional and National. 4. Planning: Urban and Rural. 5. Planning: Public Utilities. 6. Planning: Social and Recreational. 7. Practice. 8. Surveying and Specification. 9. Design: General. 10. Design: Building Types. 11. Materials: General. 12. Materials: Metal. 13. Materials: Timber. 14. Materials: Concrete. 15. Materials: Applied Finishes and Treatments. 16. Materials: Miscellaneous. 17. Construction: General. 18. Construction: Theory. 19. Construction: Details. 20. Construction: Complete Structures. 21. Construction: Miscellaneous. 22. Sound Insulation and Acoustics. 23. Heating and Ventilation. 24. Lighting. 25. Water Supply and Sanitation. 26. Services and Equipment: Miscellaneous. 27. Furniture and Fittings. 28. Miscellaneous.



REPRINTS

All Information Sheets published since the new series was started in October, 1947, have been reprinted. Specially-designed binding cases to hold approximately 100 Sheets may be obtained at the price of 5s. 0d. each. (Postage 6d.)

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21.7.55

## Buildings Illustrated

New Tailoring Department for Austin Reed Ltd., Regent Street, London, W.1. (Page 81.) Architects, Westwood, Sons & Harrison, F./F.R.I.B.A.; partner-in-charge, Norman Westwood, F.R.I.B.A.; assistant architect, Alan Irvine, Des.R.C.A., A.R.I.B.A.; curtain design, Betty Middleton-Sandford; mural painting, Dennis Bailey, A.R.C.A. Contractors: shopfitters, George Parnall & Co. Ltd.; builders, Hall, Beddall, & Co. Ltd.; marble, Fenning & Co. Ltd.; glass, James Clark & Eaton Ltd.; carpet and chairs, Heal's Contracts Ltd.; leather arm chairs, George & Co. (Leather) Ltd., Hills of London Ltd.; cash system, Lamson Engineering Co. Ltd.; venetian blinds, J. Avery & Co. Ltd.; filing cabinets, Roneo Ltd.; heating, Rosser & Russell Ltd.; special light fittings, Venreco Ltd.; door furniture, Yandenis & Co. Ltd.

## Announcements

### PROFESSIONAL

Mr. J. C. Milne, B.A.CANTAB., has resigned his appointment in the City Architect's Department, Leicester, and has commenced practice as an architectural consultant and surveyor at 98, Mere Road, Leicester, telephone number Granby 2177, where he will be pleased to receive trade catalogues and samples.

Mr. W. Fowler Howitt, DIP.ARCH., A.R.I.B.A., has been appointed architect for the reconstruction of St. Thomas' Hospital, and will be practising from 27, Paris Street, S.E.1, telephone number WATERloo 3837, where he will be pleased to receive trade representatives and catalogues.

Mr. A. L. Osborne, F.R.I.B.A., has moved to 2, Erskine Hill, N.W.11, telephone number SPEDwell 2800.

Messrs. Downes & Meehan (Mr. J. V. Downes, B.A.R.C.H., F.R.I.A.I., F.R.I.B.A., Mr. F. Bernard Meehan, F.R.I.A.I., A.M.T.P.I., and Mr. Harry S. Robson, M.S.C., B.A.R.C.H., F.R.I.A.I., A.R.I.B.A.) have moved to 37, Leeson Park, Dublin, telephone number as before, 61315.

### TRADE

In the firm of Messrs. Rhodes, Brydon & Youatt Ltd., Engineers, of Waterloo Engineering Works, Gorse Mount Street, Stockport, Mr. M. A. Graham has been appointed sole Technical Representative in Northern Ireland. His address is 10, Brunswick Street, Belfast, telephone Belfast 29087.

Mr. E. J. Edwards has been appointed Branch Manager at the London Office of The Brightside Foundry & Engineering Co. Ltd., at Craven House, 16, Northumberland Avenue, W.C.2.

Mr. G. H. E. Vivian has been appointed a Director of The Limmer & Trinidad Lake Asphalt Co. Ltd.

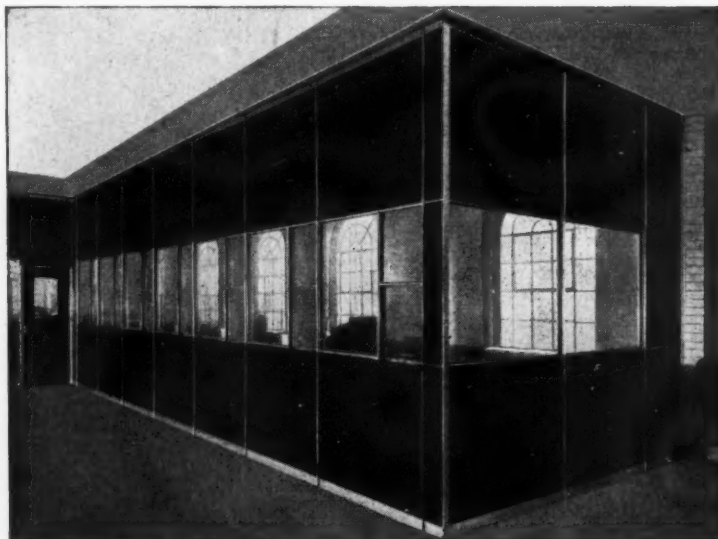
Mr. L. Parker has been appointed Manager of the Newcastle Office of Messrs. Williams & Williams Ltd., at 51, Grainger Street, Newcastle-on-Tyne, 1. His office covers the counties of Northumberland, Durham, Cumberland, Westmorland, and the North Riding.

## Correction

Douglas Stephen, whose letter on the New Barbican was published on July 7, is an associate of the RIBA, not—as we indicated—a student.

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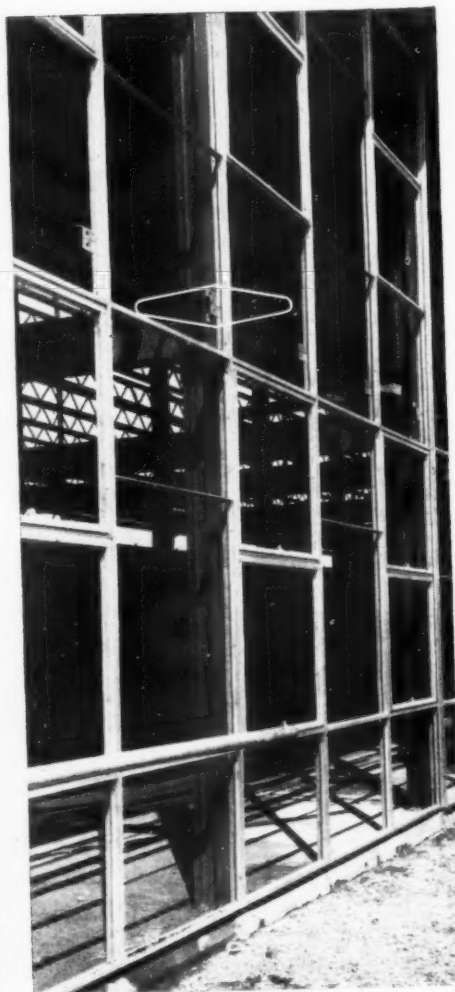
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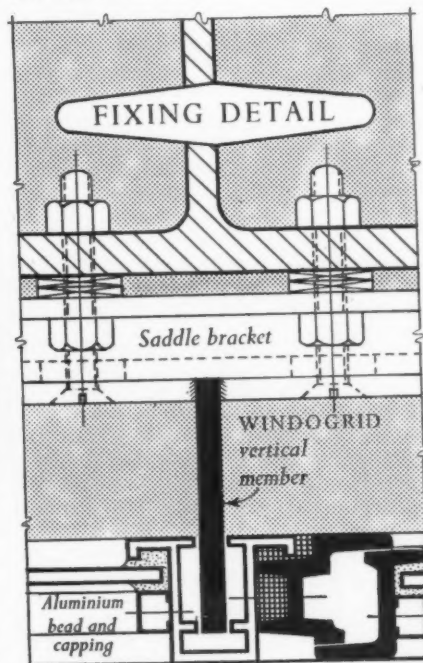
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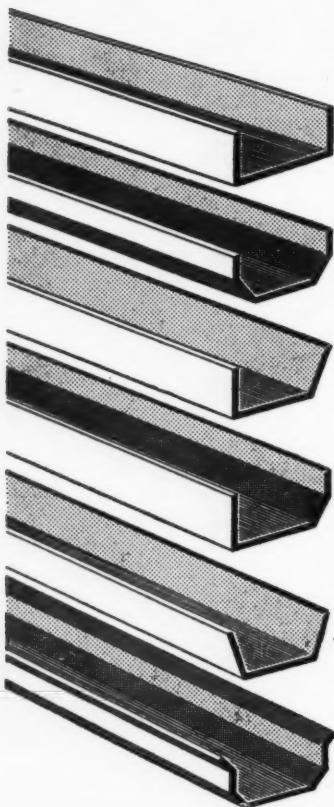
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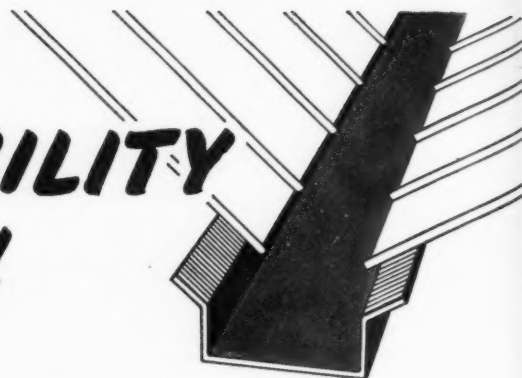
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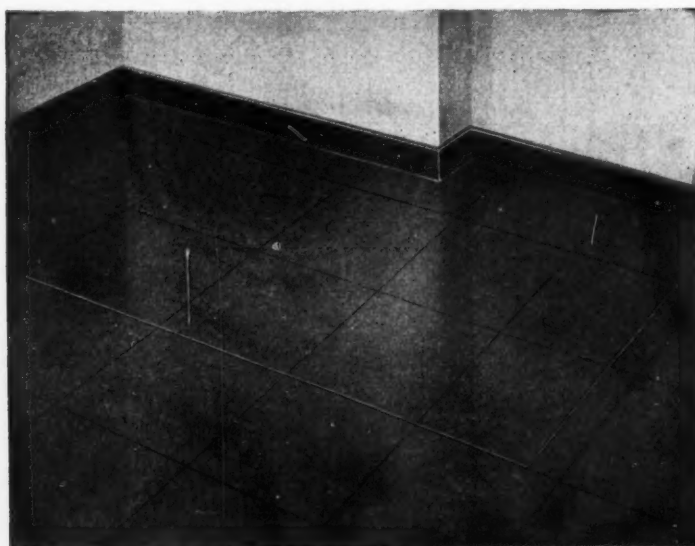
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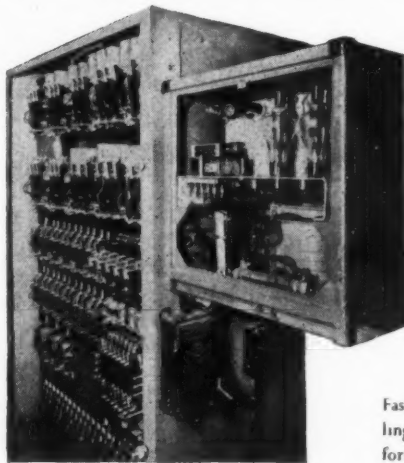
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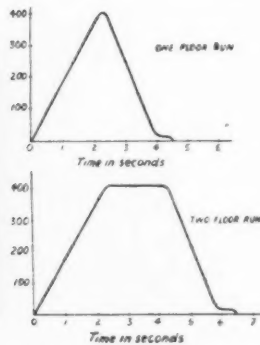
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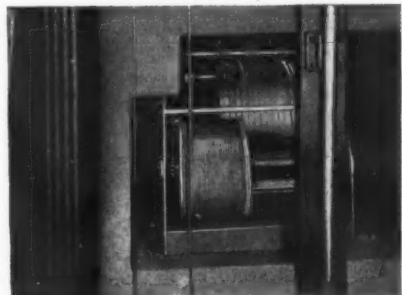
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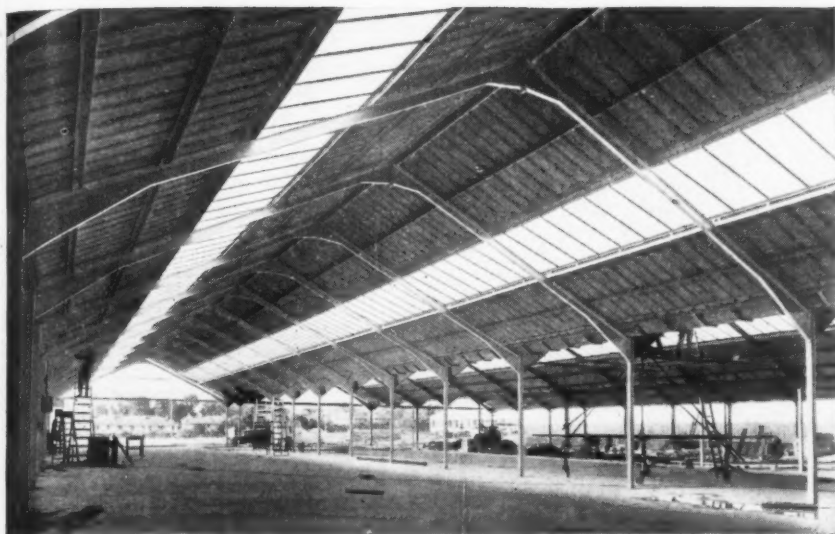
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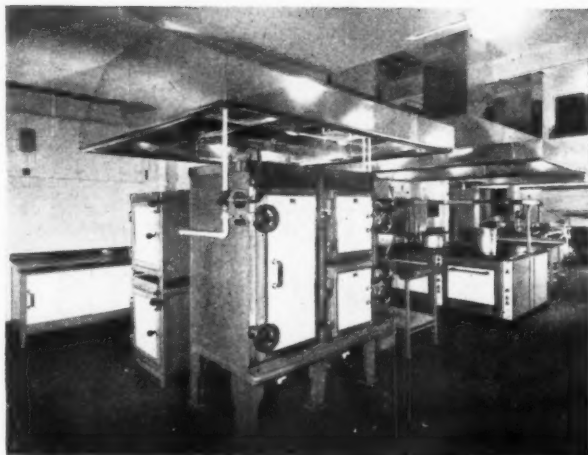
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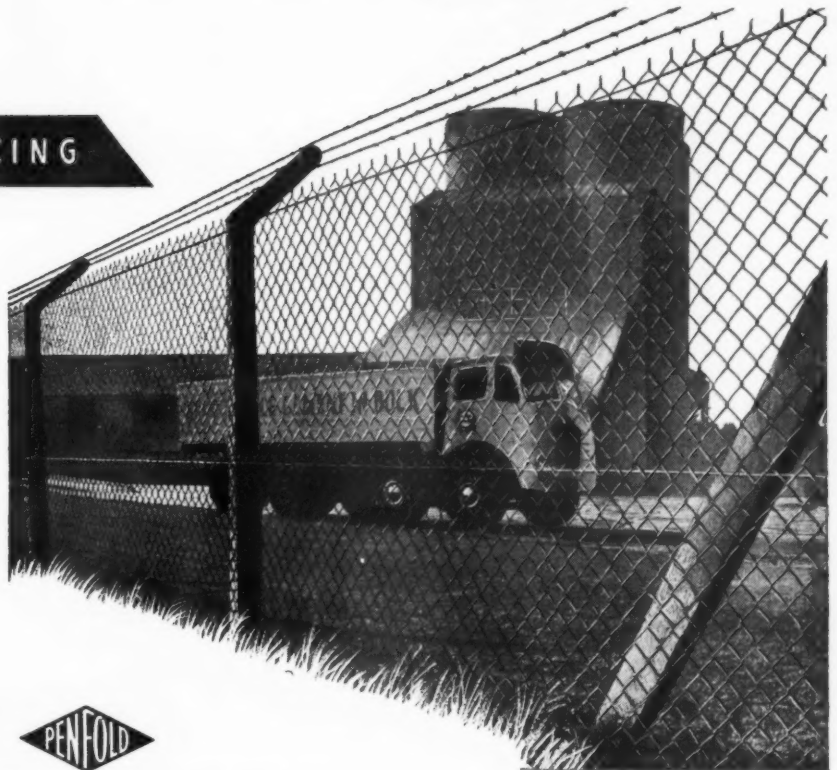
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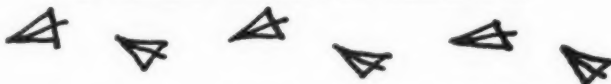
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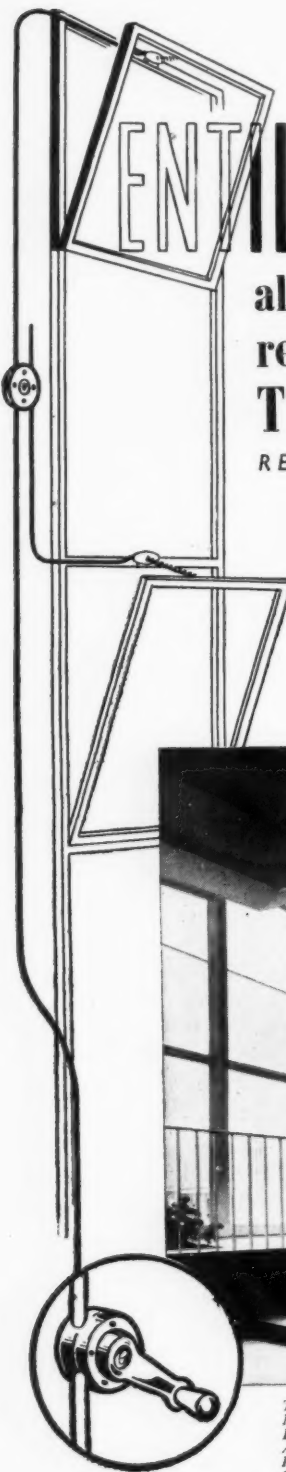
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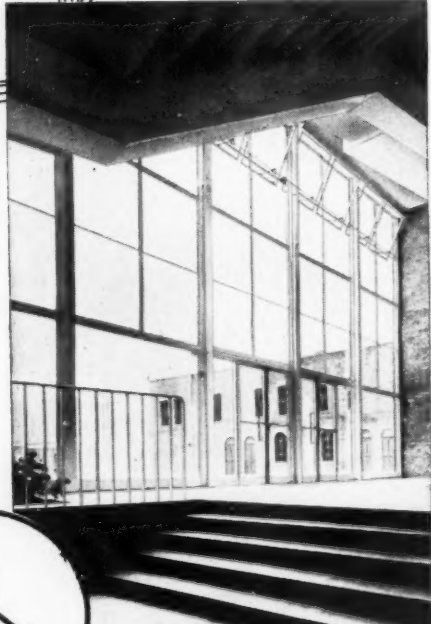


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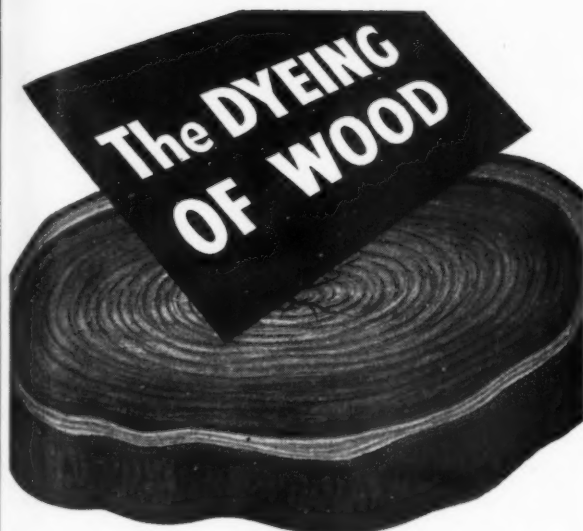
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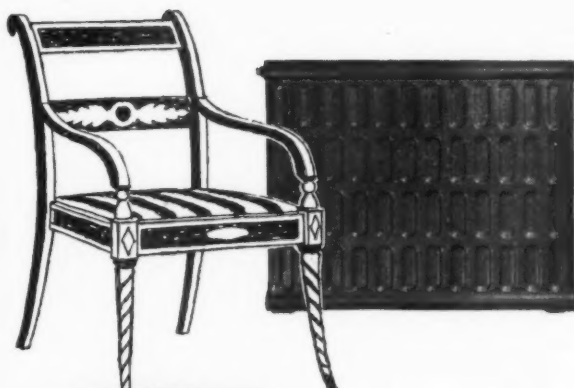


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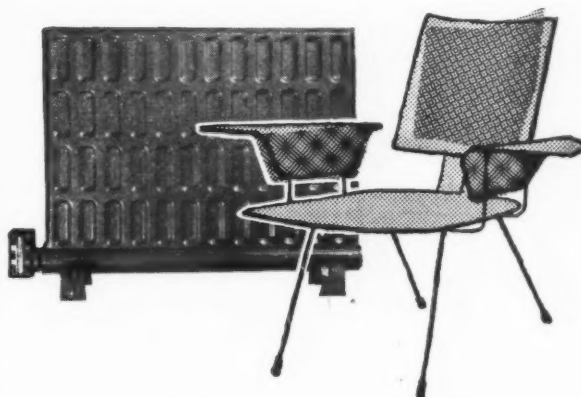
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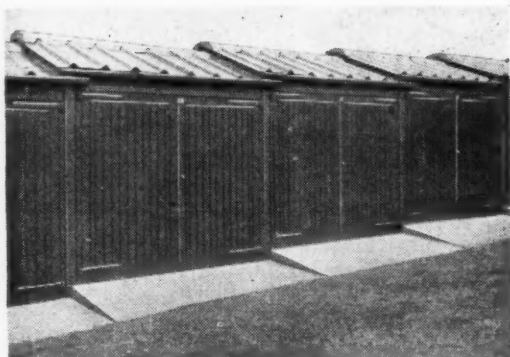
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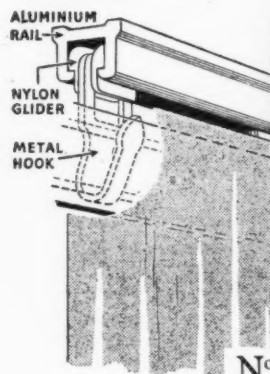


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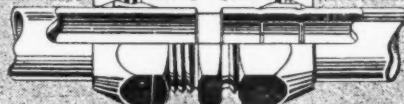
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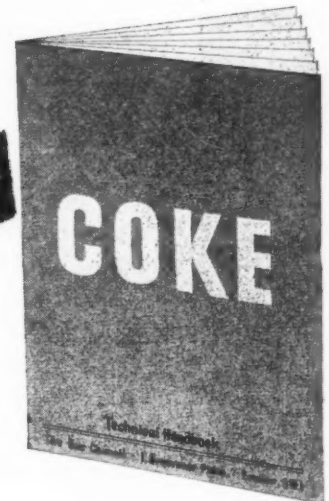


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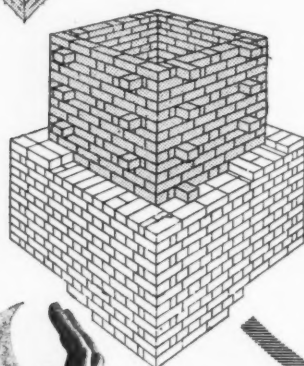
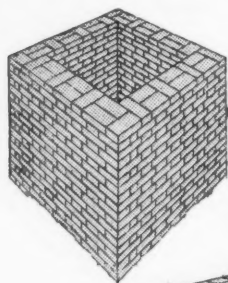
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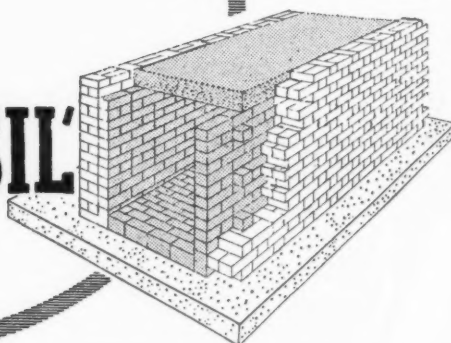
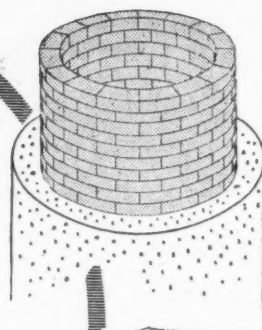




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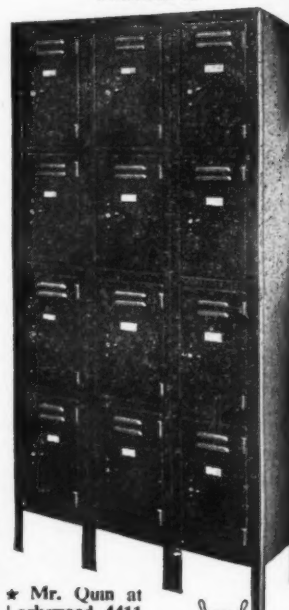
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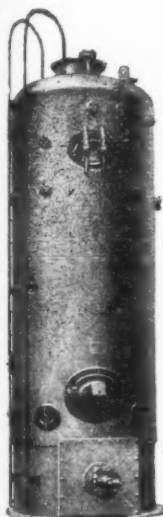
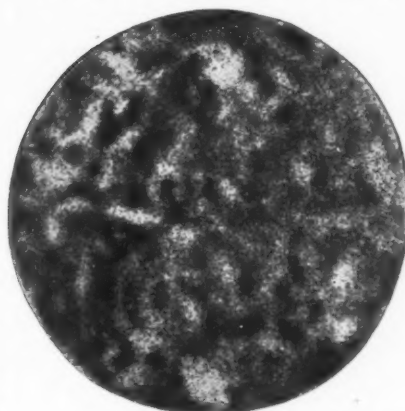
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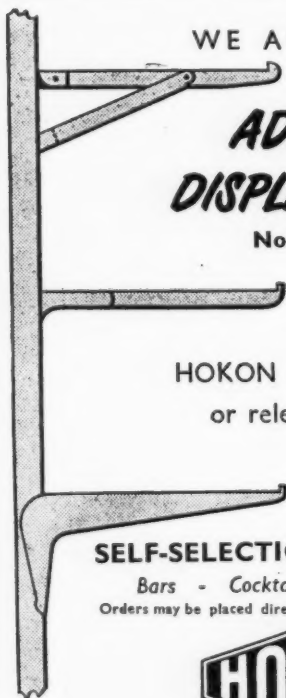
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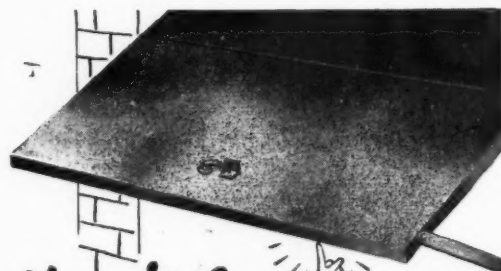
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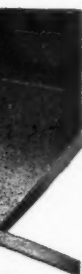
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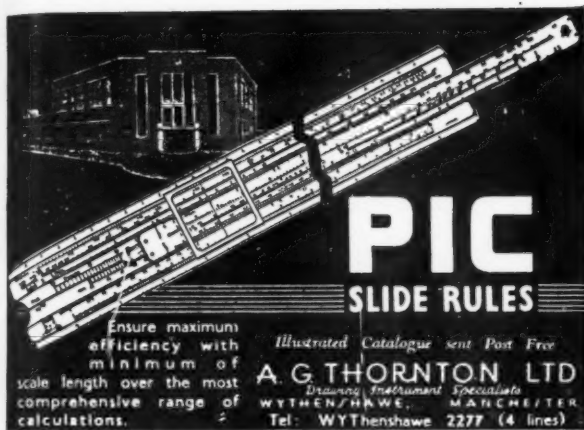
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THE ARCHITECTS' JOURNAL for July 21, 1955

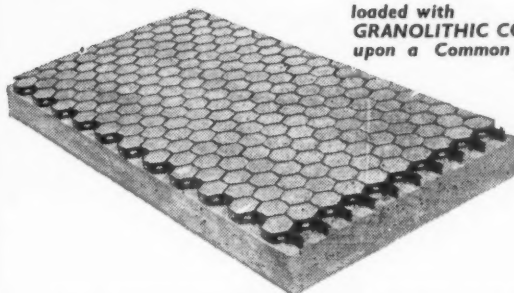
# ADAMANT FACTORY FLOORS

JOINTLESS, HEAT AND WEAR RESISTING

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## "CAUSEWAY" STEEL ARMOUR

loaded with  
**GRANOLITHIC CONCRETE**  
upon a Common Concrete  
Subgrade.



FOR RETOPPING WORN CONCRETE FLOORS,  
RAISING LEVEL ONE INCH ONLY AND  
WITHOUT BREAKING UP EXISTING SURFACES

Floors so laid and armoured will resist the worst of  
Steelworks or Foundry or Coke Oven conditions.  
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refractory cements to give a combination of  
resistance to both extremely high temperatures  
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## 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.

**OFFICE OF THE RECEIVER FOR THE METROPOLITAN POLICE DISTRICT.**  
Applications are invited for unestablished appointments as ARCHITECTURAL ASSISTANTS (New Works and Maintenance Branches) and also as SANITARY ENGINEERING ASSISTANTS in the Chief Architect and Surveyor's Department.

Salaries of pay, £442 10s. (age 21) by annual increases to £595 (men) and £442 10s. by annual increases to £615 (women). Overtime of approximately £24 per annum is also payable while a 45-hour week is worked.

Conditional hours, 44 per week. Annual leave, 24 days.

Application forms from the Chief Clerk, Architect and Surveyor's Department, New Scotland Yard, S.W.1, stating for which drawing office application is made. 9798

## CORPORATION OF GLASGOW. ARCHITECTURAL AND PLANNING DEPARTMENT.

**ASSISTANT ARCHITECTS.**  
**PLANNING ASSISTANTS.**  
**ASSISTANT QUANTITY SURVEYORS.**  
Applications are invited from suitably qualified persons. Salary on a scale £515-£915, with placing according to age, qualifications and experience. The posts are superannuable, subject to medical examination. Form of application may be obtained from the Principal Administrative Officer, 20, Trongate, Glasgow, C.I.

A. G. JURY,  
City Architect and Planning Officer. 1529

**MINISTRY OF WORKS require ARCHITECTURAL ASSISTANTS** for drawing offices in London, Edinburgh and various provincial offices, with at least 3 years' training, some experience in an architect's office, and of Inter. R.I.B.A. standard. London salary, £442 to £595 per annum; rates elsewhere slightly less. Starting pay according to age and experience; prospects of promotion and permanency. State age and full details of training and experience to E. Bedford, Esq., C.V.O., A.R.I.B.A., Chief Architect, Ministry of Works, 20 (F), Abell House, John Islip Street, London, S.W.1. 1620

## COUNTY BOROUGH OF SOUTHEAST-ON-SEA. BOROUGH ARCHITECT'S DEPARTMENT.

Applications are invited for the following established posts:-

ARCHITECTURAL ASSISTANT: £560 x £20-£640.

ASSISTANT ARCHITECT: £600 x £25-£725.

ASSISTANT QUANTITY SURVEYOR: £600 x £25-£725.

ASSISTANT QUANTITY SURVEYOR: £675 x £30-£825.

DRAUGHTSMAN: £500 x £20-£580.

STUDENT DRAUGHTSMAN: General or Higher General Division.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937 and the N.J.C. Scheme of Conditions of Service so far as adopted by the Council. Successful candidates 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, forthwith.

ARCHIBALD GLEN,  
Town Clerk. 1664

## WAR DEPARTMENT.

### C.R.E. SHOEBURNESS.

ARCHITECTURAL ASSISTANTS.  
Vacancies exist on the establishment of the Commander, Royal Engineers, for ARCHITECTURAL ASSISTANTS-Males.

In addition to the usual draughtsman's qualifications, applicants should be capable of preparing detailed working drawings and be able to survey and level.

Applications are invited from persons between the ages of 21 and 50 years.

Salaries payable will be from £440 10s. p.a. at age 21 to £605 per annum at age 28 or over, subject to deductions for provincial service ranging from £20 per annum to £30 per annum at the maximum.

Letters of application giving details of age, experience and qualifications, should be addressed to:-

C.R.E. Shoeburness, Old Ranges, Shoeburness, SOUTHEAST-ON-SEA, Essex. 1777

## METROPOLITAN BOROUGH OF WANDSWORTH. ARCHITECTURAL STAFF.

Applications invited for established appointments of:-

(a) SENIOR ASSISTANT ARCHITECT, A.P.T., VII (£930-£1,130).

(b) SENIOR ASSISTANT ARCHITECT, A.P.T., VI (£855-£1,030).

(c) SENIOR ASSISTANT ARCHITECT, A.P.T., V (£780-£930).

(d) ARCHITECTURAL ASSISTANT-Special Classes-Grade III(A) (£680-£805).

Applicants for posts (a), (b) and (c) must be Associates of the R.I.B.A. and have had experience in the design and planning of housing estates, particularly multi-storey blocks of flats and/or other framed buildings, and in the supervision of their erection. Experience in local authority work is desirable.

Applicants for (d) must have passed Parts I and II of the R.I.B.A. Final or Special Final Examination or their equivalent at one of the recognised schools of architecture, and had at least five years' experience, including training.

Application forms obtainable from the Borough Engineer, Surveyor and Architect must reach me by 3rd August, 1955.

R. H. JERMAN,  
Town Clerk. 1806

## CITY OF CAMBRIDGE.

Applications are invited for the following appointments in the Architect's Section of the City Surveyor's Department.

(a) TWO SENIOR ASSISTANT ARCHITECTS (Grade V, salary £840-£900).

(b) ONE ASSISTANT ARCHITECT (Grade III, salary £625-£725).

Applicants for (a) must be Associates of the R.I.B.A., who have had at least five years' post graduate office experience and be capable of taking charge, from inception to completion, of specific large Educational and General projects. The posts will provide scope for the successful applicants to exercise ability in design, construction, administration, and supervision of building work.

Applicants for (b) should preferably be Associates of the R.I.B.A. and have had good office experience of Schools or Housing work. The successful applicant is required as an Assistant for one of the posts in (a) above.

All appointments are superannuable, subject to medical examination, and terminable by one month's notice on either side.

Housing accommodation will be considered.

Forms of Application may be obtained from the City Surveyor, The Guildhall, Cambridge, to whom they should be returned not later than the 4th August, 1955.

ALAN H. I. SWIFT,  
Town Clerk. 1793

## URBAN DISTRICT COUNCIL OF CORBY. DEPARTMENT OF THE ENGINEER AND SURVEYOR.

Applications are invited for the following appointments:-

(a) SENIOR QUANTITY SURVEYOR, Grade A.P.T., V (£750-£900), commencing at £750 per annum.

(b) ARCHITECTURAL ASSISTANT, Grade A.P.T., III (£600-£725), commencing at £600 per annum.

The immediate building programme includes schemes for a Public Hall, covered Swimming Bath and Café, Cemetery Chapel and adjoining Staff Houses, in addition to Housing Contracts.

Housing accommodation will be made available to the successful candidates (if married).

Applicants for appointment (a) must have passed the Final R.I.C.S. (Quantities Section) Examination, and be experienced in the preparation of Bills of Quantities, adjustment of variations and settlement of final accounts. Previous experience of substantial Contracts for local authority housing is desirable.

Applicants for appointment (b) must have passed the R.I.B.A. Intermediate Examination or its equivalent at a recognised School of Architecture, and have had at least two years' experience in an Architect's office (exclusive of pupillage). Preference will be given to applicants who have reached an advanced stage in preparing for the Final Examination and who have had Testimonials of Study accepted. A contemporary outlook and all-round general experience is desirable.

The provisions of the Local Government Superannuation Acts, 1937/1953, will apply to these appointments.

Forms of application may be obtained from the undersigned, to whom they should be returned not later than the first post on Saturday, the 30th July, 1955.

Testimonials will be required only from applicants selected for interview.

G. B. BLACKALL,  
Clerk of the Council. 1772

Council Offices, Corby, Northants. 1772

**DEVON COUNTY COUNCIL require ASSISTANT PLANNING OFFICER (National Park) A.P.T. V.** Should be Associate of the R.I.B.A. or I.L.A. and have had considerable experience in National Parks or other areas of High Amenity Value. Closing date 30th July, 1955. Particulars from Director of Planning, "Bellair," Topsham Road, Exeter. 1902

## ANGLESEY COUNTY COUNCIL. COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the following posts in the above Department.

**ASSISTANT ARCHITECT, Grade A.P.T., III (£825-£725).** Preference will be given to Associate Members of the Royal Institute of British Architects, with good general experience in design and construction.

**ASSISTANT ARCHITECT, Grade A.P.T., II (£560-£640).** Applicants should have good experience in preparation of working drawings, and preference will be given to applicants who have passed the Intermediate Examination of the R.I.B.A.

The posts are superannuable, and candidates will be required to undergo a medical examination.

Further particulars may be obtained from the County Architect, Shire Hall, Llangefni, Anglesey.

Applications, giving names and addresses of two referees, to be forwarded to the Clerk of the County Council, Shire Hall, Llangefni, by 25th July, 1955. 1791

## BOROUGH OF SCARBOROUGH. BOROUGH AND WATER ENGINEER'S DEPARTMENT.

**ARCHITECTURAL ASSISTANT.**

Applications are invited, from appropriately qualified candidates, for a post of Architectural Assistant. Salary, Special Scale, £650-£775 per annum.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937-1953, and to the passing of a medical examination, and will be terminable by one month's notice on either side. The Council may assist in the provision of housing accommodation.

Applications, in envelopes endorsed "Architectural Assistant," stating age, present and previous appointments, training, qualifications and experience, together with the names of two referees, must be delivered to the undersigned not later than the 26th July, 1955.

H. V. OVERFIELD, M.I.C.E.,  
Borough and Water Engineer.  
Town Hall, Scarborough. 1861

## COUNTY BOROUGH OF DERBY. BOROUGH ARCHITECT'S DEPARTMENT.

(a) SENIOR QUANTITY SURVEYOR, Grade IV. Salary £675-£825 per annum.

Qualifications: A.R.I.C.S. (Quantities) or A.I.Q.S. with appropriate experience.

(b) JUNIOR QUANTITY SURVEYOR, Salary A.P.T. II, £560-£640.

Qualifications: R.I.C.S. Intermediate Examination standard or A.I.Q.S. Experience in abstracting and billing, measuring on site, preparation of final accounts, and taking off quantities for small building works.

(c) ASSISTANT ARCHITECT, Grade IV. Salary £675-£825 per annum.

Qualifications: A.R.I.B.A.

(d) TWO JUNIOR ARCHITECTS. Salary General Division (£275 at 20, rising to £400 or £475); A.P.T., I (£500-£580); or A.P.T., II (£560-£640), according to qualifications.

Permanent superannuable appointments, subject to one month's notice and to medical examination. National Conditions of Service.

Forms of application obtainable from and to be returned to the Borough Architect, The Council House, Corporation Street, Derby, not later than Monday, 8th August, 1955.

Canvassing disqualifies.

G. H. EMLYN JONES,  
Town Clerk. 1877

6th July, 1955.

## COVENTRY CORPORATION Staff within Grades A.P.T. VII (£900-£1,100), VI (£825-£1,000), V (£750-£900), IV (£675-£825), Special Grade (£650-£775), II (£560-£640), I (£500-£580). Additional local awards £26 (men) £19 (women) in approved circumstances on salaries up to £750.

Full qualification required for Special Grade and above. Housing accommodation may be available according to individual circumstances. Application forms and conditions from City Architect and Planning Officer, Bull Yard, Coventry, returnable 15th August. 1983

## CITY OF CHESTER-DEPARTMENT OF CITY ENGINEER.

Applications are invited for:-

(1) PRINCIPAL ARCHITECTURAL ASSISTANT. Salary A.P.T., Grade V (namely £750-£900 per annum). Candidates should have had good training and experience, particularly in school design, and should be Associates of the R.I.B.A. or hold a University degree in Architecture.

(2) SENIOR ARCHITECTURAL ASSISTANT. Salary A.P.T., Grade IV (namely £675-£825 per annum, commencing at £765 per annum). Candidates should have had good training and experience, particularly in school design, and should be Associates of the R.I.B.A. or hold a University degree in Architecture.

(3) ARCHITECTURAL DRAUGHTSMAN. Salary Miscellaneous, Grade IV (namely £465-£545 per annum). Candidates should be able draughtsmen, with experience of building construction.

Applications with two testimonials should reach City Engineer, 43, Northgate Street, Chester, by Friday, 29th July, 1955. Canvassing directly or indirectly will disqualify, and relationship with any member or officer of the Council must be disclosed. 1796



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KENT COUNTY COUNCIL require ASSIS-  
TANT ARCHITECTS at salaries (a) £675-£825,  
and (b) £650-£775 a year.

Candidates for (a) must be Associates of the  
Royal Institute of British Architects, and for  
(b) must have passed Parts I and 2 of the Final  
Examination of the Institute.  
Details and application forms from the County  
Architect, Springfield, Maidstone. Closing date:  
29th July, 1955. 1862

#### CITY OF NOTTINGHAM.

HOUSING ARCHITECT'S DEPARTMENT.  
Applications are invited for the following  
appointments:-

- One ASSISTANT ARCHITECT, at a com-  
mencing salary within the A.P.T. Special  
Grade (£650-£775). Applicants should  
have passed Parts I and II of the R.I.B.A.  
final or special final examination.
- One ARCHITECTURAL ASSISTANT, at a  
commencing salary within the A.P.T. Grades I  
and II (£500-£640) according to qualifications  
and experience. Applicants should preferably  
have passed the intermediate examination of  
the R.I.B.A.

The appointments will be subject to the  
National Joint Council's Scheme of Conditions of  
Service.

Applications, stating age, qualifications, experi-  
ence, present appointment and salary and naming  
two referees, should be sent to the City Housing  
Architect, The Guildhall, Nottingham, by the  
16th August, 1955.

T. J. OWEN,  
Town Clerk. 1992

The Guildhall,  
Nottingham.

#### BUCKS COUNTY COUNCIL.

Applications are invited for the following  
appointments in the County Architect's Depart-  
ment:-

- One SENIOR QUANTITY SURVEYOR. (Grade  
VII, £400-£440-£1,100 p.a.)  
Applicants must be Associates of the R.I.C.S.  
with considerable experience in the preparation  
of Bills of Materials and final accounts on all  
types of Local Authority Projects.

- One ASSISTANT QUANTITY SURVEYOR.  
(Grade V, £350-£380-£490 p.a.)  
Applicants preferably Associates of the R.I.C.S.  
with considerable experience in the preparation of  
Bills of Materials and settlement of final  
accounts.

- One ASSISTANT QUANTITY SURVEYOR.  
(Grade IV, £375-£400-£425 p.a.)  
Applicants preferably members of the R.I.C.S.  
with considerable experience and ability to under-  
take abstracting and billing.

- One ASSISTANT ARCHITECT. (Grade V, £750  
-£800-£900 p.a.)  
The successful applicant will be required to  
work on a large and interesting building pro-  
gramme, including traditional and new building  
techniques.

The appointments are superannuable and subject  
to medical examination.

A weekly allowance of 25s. and return fare  
home once every two months may be paid for  
six months to newly appointed married officers  
of the Council unable to find accommodation.

Application forms giving further particulars  
of the appointment are obtainable from Mr. F. B.  
Pooley, County Architect, County Offices, Ayles-  
bury, and returnable by 2nd August, 1955. 1903

#### COUNTY OF HUNTINGDON.

COUNTY ARCHITECT'S DEPARTMENT.  
Applications are invited from suitably qualified  
persons for the following appointments:-

- One SENIOR ARCHITECTURAL ASSISTANT,  
Grade A.P.T. VI, £825-£1,000 per annum.

- One ARCHITECTURAL ASSISTANT, Grade A.P.T.  
IV, £675-£800 per annum.

- One ARCHITECTURAL ASSISTANT, Grade A.P.T.  
II-III, £550-£725 per annum.

The appointments will be subject to the pro-  
visions of the Local Government Superannuation  
Acts and the successful candidates will be  
required to pass a medical examination.

An allowance of 30s. per week will be paid for a  
period not exceeding six months in the event of  
a married man being appointed who is unable  
to find accommodation.

Applications stating age, qualifications, experi-  
ence, present position and salary, together with  
the names of two referees, should be delivered to  
S. M. Holloway, A.R.I.B.A., County Architect,  
County Buildings, Huntingdon, in a sealed  
envelope appropriately endorsed, by Friday, 29th  
July, 1955.

A. C. AYLWARD,  
Clerk of the County Council. 1904

County Buildings,  
Huntingdon.

15th July, 1955.

#### CARDIGANSHIRE COUNTY COUNCIL.

Candidates are invited for the following  
appointments in the County Architect's Depart-  
ment, County Hall, Aberystwyth.

- Two ASSISTANT ARCHITECTS on Grade  
A.P.T. IV £675-£825.

Candidates should be members of the R.I.B.A.  
and commencing salary will be according to quali-  
fications and experience.

Application form and conditions of appointment  
can be obtained from the County Architect and  
must be returned to the undersigned not later  
than 1st August, 1955.

J. E. R. CARSON,  
Clerk of the Cardiganshire County Council,  
Swyddfa'r Sir,  
Aberystwyth,  
Cards. 1967

#### CITY AND ROYAL BURGH OF EDINBURGH.

##### CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the following:-  
(1) PRINCIPAL ASSISTANT ARCHITECT  
(DESIGN). Salary £875 x £25-£975.

Applicants must be Members of the R.I.B.A.  
by examination and should have wide experience  
in design and construction.

- (2) ASSISTANT ARCHITECT, A.P.T. VII.  
Salary £790 x £25-£865. To act as Group  
Leader. Must be Member of the R.I.B.A. by  
examination and have had a good general experi-  
ence.

- (3) ARCHITECTURAL ASSISTANT, A.P.T. IV/  
V. Salary £615 to £715. Must be Member of the  
R.I.B.A. by examination and have had a good  
general experience.

Applications stating age, qualifications, experi-  
ence, present position and salary, together with  
the names of two referees, should be lodged with  
the undersigned not later than Friday 22nd July,  
1955.

A. STEELE,  
City Architect. 1918

City Chambers, Edinburgh.

#### ZETLAND COUNTY COUNCIL.

Applications are invited for the following  
appointments in the County Architect's Depart-  
ment:-

- (1) ARCHITECTURAL ASSISTANT. Salary in  
A.P.T. Grades V-Va of National Joint Scheme.  
Candidates should be Associates of the Royal  
Institute of British Architects, and have had  
experience in the preparation of sketch plans and  
working drawings for housing, schools and other  
local authority projects.

- (2) ARCHITECTURAL DRAUGHTSMAN.  
Salary in General Division of National Joint  
Scheme. Candidates should preferably have passed  
the Intermediate Examination of the Royal  
Institute of British Architects, and have had  
experience in the preparation of sketch plans,  
working drawings and details.

Written applications, giving particulars of age,  
qualifications and experience, and stating when  
applicants can take up duty, should be lodged with  
the Subscriber by 31st August, 1955. One copy of  
not more than three recent testimonials should be  
enclosed. Canvassing in any form will be dis-  
allowed.

JOHN N. STINCLAIR,  
County Clerk. 1930

County Buildings,  
Lerwick.

6th July, 1955.

(Amended Advertisement)

#### NORTHUMBERLAND COUNTY COUNCIL.

COUNTY PLANNING DEPARTMENT.  
Applications are invited for the appointment of  
an ARCHITECT/PLANNER at a salary in  
accordance with A.P.T. Grade VI of the  
National Joint Council Scales (£825-£1,000 p.a.).  
The starting point will depend upon qualifications  
and experience.

The successful candidate will be in charge of the  
Architectural Design Section of the department  
and must have experience in dealing with re-  
development schemes, housing layouts and archi-  
tectural control. This appointment involves con-  
siderable responsibility and provides a wide scope  
for an architect who is interested in the related  
architectural/planning problems of a County  
Planning Authority. Candidates must have passed  
the final examination of the R.I.B.A. and posses-  
sion of the A.M.T.P.I. qualification would be an  
advantage.

Applications, on forms obtainable from the  
undersigned, should be completed and returned  
not later than the 13th August, 1955.

J. B. ROSS, A.R.I.C.S.,  
County Planning Officer. 1900

County Hall,  
Newcastle-upon-Tyne, 1.

15th July, 1955.

#### CWMBRAN DEVELOPMENT CORPORATION.

CLERK OF WORKS.  
Applications are invited for the above superan-  
nuable post in the CHIEF ARCHITECT'S  
Department to supervise the erection of perma-  
nent houses and other buildings; including  
setting out, levelling, measuring and keeping  
records.

Commencing salary will be £565 on the scale  
£565 x £25 to £665 per annum.

Housing accommodation will be made available  
in suitable cases or otherwise lodging expenses in  
accordance with the Corporation's scale will be  
allowed for a limited period to married men.

Applications which should state age, experience,  
present and former employment (with applicable  
salaries) together with the names and addresses  
of two referees, should reach the undersigned by  
not later than Friday 5th August, 1955.

J. C. P. WEST, A.R.I.B.A., M.T.P.I.,  
Chief Architect. 1946

Victoria Street,  
Cwmbran,  
Monmouthshire.

15th July, 1955.

#### SURREY COUNTY COUNCIL.

Applications invited for the following  
vacancies:-

- (1) ASSISTANT ARCHITECT, Grade V, £750 x  
£30-£900 p.a. plus London Allowance. Should be  
Associate Member, R.I.B.A.

- (2) ARCHITECTURAL ASSISTANT, Grade I,  
£500 x £20-£580 p.a. plus L.A.

- (3) ASSISTANT QUANTITY SURVEYOR,  
Grade IV, £675 x £30-£825 p.a. plus L.A. Should  
be Associate Member, R.I.C.S.

Full details and present salary, accompanied  
by copies of three recent testimonials to County  
Architect, County Hall, Kingston, as soon as pos-  
sible. 1960

County Buildings,  
Kingston.

15th July, 1955.

#### BOROUGH OF LEYTON.

(Non-County Borough in the County of Essex;  
population 103,200- R.V. £784,110).

Applications are invited for the appointment of  
TWO GENERAL ARCHITECTURAL ASSIS-  
TANTS, established posts, grade A.P.T. III-IV  
(£600-£825 p.a. plus London weighting allowance  
according to age, which at 25 is at a maximum  
of £30).

These appointments are primarily in connection  
with the proposed re-development schemes in the  
Borough and candidates must have had good  
experience in the design and construction of  
houses, flats, and municipal buildings.

Alternate Saturday mornings free of duty, and  
canteen facilities available.

Details of appointments and form of applica-  
tion may be obtained from:-

H. D. Peake, M.Sc.(Eng.), Borough Engineer  
and Surveyor, Town Hall, Leyton, E.10, to whom  
they should be returned not later than Wednesday,  
3rd August, 1955.

D. J. OSBORNE,  
Town Clerk. 1944

Town Hall,  
Leyton, E.10.

#### GOVERNMENT OF NORTHERN IRELAND.

VACANCY FOR ARCHITECT.  
Applications are invited for the unestablished  
post of ASSISTANT ARCHITECT Class II in the  
Works Directorate, Ministry of Finance.

The salary scale which attracts pay supplement  
of amounts between £25 and £35 per annum is  
£675 x £25-£750 x £30-£960 x £40-£1,000. The  
minimum is linked to age 25, plus an increment  
for each year above that age, subject to a com-  
mencing salary not exceeding £900 plus pay sup-  
plement of £30. An officer between 25 and 26 will  
be given an inclusive commencing salary of  
£675 and, if under 25 will be paid according to  
qualifications and experience.

Candidates must be Registered Architects by  
examination and must have at least two years'  
experience in an Architect's Office in the  
preparation of working drawings for new build-  
ings.

Preference will be given to a suitably qualified  
candidate who served in H.M. Forces during the  
1914-18 or 1939-45 wars, provided the Ministry is  
satisfied that such a candidate is, or within a  
reasonable time will be, able to discharge the  
duties of the post efficiently.

Application forms may be obtained from the  
Director of Establishments, Ministry of Finance,  
Stormont, Belfast, to whom they must be  
returned, with copies of two recent testimonials,  
so as to reach him not later than the 27th July,  
1955. 1912

HUYTON-WITH-ROBY URBAN DISTRICT  
COUNCIL.

ERECTION OF 62 DWELLINGS AT  
ST. JOHN'S ROAD (EAST) HOUSING ESTATE,  
HUYTON.

Tenders are invited for the erection of 62  
DWELLINGS, comprising two 3-Storey blocks of  
12 Flats, one 3-Storey block of 30 Flats, one block  
of six houses and one pair semi-detached houses.

Applications for Form of Tender and Bills of  
Quantities, accompanied by a cheque for £2 10s.,  
are to be sent to R. T. Chapple Esq., A.R.I.B.A.  
Architect, Council Offices, Derby Road, Huyton,  
not later than Friday 29th July, 1955.

Plans and Conditions of Contract can be seen  
at the Architect's office and Bills of Quantities  
will be forwarded when ready.

The Council do not bind themselves to accept  
the lowest or any tender.

H. E. H. LAWTON,  
Clerk of the Council. 1892

Council Offices,  
Derby Road,  
Huyton.

July, 1955.

#### COUNTY COUNCIL OF NORTHUMBRIA.

COUNTY ARCHITECT'S DEPARTMENT.  
Applications are invited from qualified Archi-  
tects having some previous office experience, for  
the post of ASSISTANT ARCHITECT on the tem-  
porary staff of this Department. Salary within  
A. P. T. Grade IV-£675, rising to a maximum of  
£825 per annum.

The appointment will be subject to the pro-  
visions of the Local Government Superannuation  
Acts and the successful candidate will be required  
to pass a medical examination.

Applications in writing, stating age, qualifi-  
cations and previous experience, together with the  
names and addresses of two referees to whom  
reference can be made, to be forwarded to the  
County Architect, County Hall, Newcastle-upon-  
Tyne, 1, not later than Wednesday, 27th July,  
1955. 1893

County Hall,  
Newcastle-upon-Tyne, 1.

27th July, 1955.

#### BOROUGH OF DAGENHAM.

ARCHITECTURAL ASSISTANT-GRADE  
A.P.T. IV.  
Applications are invited for the appointment of  
ARCHITECTURAL ASSISTANT, Grade A.P.T.  
IV-Salary £675 to £875 per annum, plus London  
Weighting (£30 per annum at age 25 and over).  
Applicants must be Registered Architects and  
hold A.R.I.B.A. or similar qualification. Experience  
in Housing or Educational work an advan-  
tage.

Form of application, together with further  
details of the post, obtainable from the Borough  
Engineer and Surveyor. Closing date, 29th July,  
1955.

Housing accommodation may be made available.

KEITH LAUDER,  
Town Clerk. 1894

Civic Centre,  
Dagenham.

29th July, 1955.

**WARWICKSHIRE COUNTY COUNCIL.**

**ARCHITECT'S DEPARTMENT.**  
Applications are invited for the appointment of **SENIOR ASSISTANT ARCHITECTS** Grade A.P.T. V (£150-£200). The commencing salary can be within the grade according to ability and experience. Applicants should be Members of the Royal Institute of British Architects.

The appointments are on the established staff and subject to the conditions of the Local Government Superannuation Acts, 1937-53.

Application to be on form, F.R.I.B.A., County Architect, Shire Hall, Warwick.

**L. EDGAR STEPHENS,**  
Clerk of the Council.

Shire Hall,  
Warwick.  
11th July, 1955.

**CITY OF CANTERBURY.**

Applications are invited for the temporary appointment of **ARCHITECTURAL ASSISTANT**, Grade A.P.T. I-II (£150-£280; £560-£640 per annum) according to experience.

Candidates must have passed the Intermediate Examination, R.I.B.A.

Applications, naming two referees, to the City Architect, Municipal Buildings, Canterbury, not later than Friday, 29th July, 1955.

Canvassing will disqualify.  
**J. BOYLE,**  
Town Clerk.

Municipal Buildings,  
Canterbury.

**CITY OF LEICESTER EDUCATION COMMITTEE.**

**LEICESTER COLLEGE OF ART. SCHOOL OF BUILDING.**

Applications are invited for the appointment of **SENIOR LECTURER** in Quantity and Building Surveying.

Applicants should be Fellows or Professional Associates of The Royal Institution of Chartered Surveyors (Quantity Surveying Section) with a wide experience of all types of work. Salary will be in accordance with the Burnham scale for **SENIOR LECTURERS**, £1,065 x £25 to £1,215 per annum.

Preference will be given to those having previous teaching experience (full or part-time).

Application by letter (no form) should include details of age, general and technical education, professional training and experience, qualifications, previous appointments with dates, previous teaching and/or lecturing experience, when available, and names and addresses of two referees.

Applications should reach the Registrar, Leicester College of Art, within 14 days of the appearance of this advertisement.

**ELFRED THOMAS,**  
Director of Education.

**H.M. Prison Commission** have vacancies for three **TEMPORARY ARCHITECTURAL DRAUGHTSMEN**, Male or Female, and one **TEMPORARY ENGINEERING DRAUGHTSMAN**, Male or Female. Salary (Men), £442 10s. at age 21, rising to £605 at age 28, then to £695; (Women), £442 10s. at age 21, rising to £592 at age 28, then to £626. Starting pay according to age up to age 28 then according to age and qualifications. The Women's Scale is subject to the scheme for the introduction of equal pay into the non-industrial Civil Service.

Hours of duty, 44, plus overtime. Annual leave, 24 working days, plus 28 working days after three years, plus nine days public and privilege holidays. Candidates for the former posts must have had a recognised training with a good general knowledge of construction and surveys. Candidates for the latter post should preferably have obtained educational training up to the ordinary National Certificate in Mechanical or Electrical Engineering course standard, or the equivalent in Heating and Ventilating Course.

Regulations and application forms from the Establishment Officer (E.126/2/20), Prison Commission, Horseferry House, Dean Ryle Street, London, S.W.1, to be returned by 12th August, 1955.

**POPLAR BOROUGH COUNCIL** require:—  
(a) Two **ASSISTANT ARCHITECTS** (TEMPORARY), salary £800 x £50 to £850. Applicants should have passed the Final R.I.B.A. Examination.

(b) Three **ARCHITECTURAL ASSISTANTS** (TEMPORARY), salary £700 x £50 to £750. Applicants should have passed the Intermediate R.I.B.A. Examination.

(c) One **SENIOR PLANNING ASSISTANT** (PERMANENT), A.P.T. V (£750-£900). Applicants should have passed Final Examination of Town Planning Institute, plus London "Weighting" in each case. Posts (a) and (b) offer about 3/4 years' employment. Forms obtainable from the Borough Engineer and Surveyor, Poplar Town Hall, Bow Road, E.3. Closing date 15th August, 1955.

**LANCASHIRE COUNTY COUNCIL.**

**PLANNING ASSISTANTS**, A.P.T. Grade IV (£1675-£2875), Special Scale (£650-£775), A.P.T. II (£560-£640) and A.P.T. I (£500-£580) required at Preston. For the higher grades, applicants should be qualified architects, engineers or surveyors; planning experience is desirable but not essential. Applicants for Grades I and II should be studying for an appropriate professional qualification. Applications, stating grade applied for, giving age, qualifications, present appointment, experience, etc., and two referees to the County Planning Officer, East Cliff County Offices, Preston by 3rd August, 1955.

**COUNTY BOROUGH OF STOCKPORT.**

Applications invited for the following appointments in the **EDUCATION ARCHITECT'S DEPT.**—

(a) **CHIEF ASSISTANT ARCHITECT** Grade VI £825-£1,000 per annum.

(b) **ASSISTANT ARCHITECTS**—Grade V £750-£900 per annum.

(c) **ASSISTANT ARCHITECT**—Grade IV £675-£825 per annum.

Applicants for all posts should be Associate Members of the R.I.B.A. and must have a high standard of contemporary design. For (a) applicants must be accustomed to accepting responsibility and fully competent to administer contracts from Director of Education, Town Hall, Stockport, to be returned by 6th August, 1954.

**NEW SOUTH WALES, AUSTRALIA.**

Permanent appointments in the New South Wales Government Service are available to:—  
**ARCHITECTS.**

**ARCHITECTURAL DRAUGHTSMEN.**

Salary: Commencing salary according to qualifications and experience between £2960 per annum and £41,364, with promotion to considerably higher salaries. Superannuation.

Qualifications: University Degree, Technical College Diploma, or equivalent.

Location: Sydney or country district offices in New South Wales.

Fares to Sydney: Appointee's contribution to fare is £10 sterling per adult.

Application form and further information may be obtained from the New South Wales Government Offices, 56/57 Strand, London, W.C.2. 1915

**BURGH OF CLYDEBANK. TOWN PLANNING ASSISTANT.**

Applications are invited from suitably qualified persons for the above post. The appointment will be temporary, but would be for a minimum period of two years, and terminable by one month's notice on either side. The salary offered is £750 per annum.

Applicants should have had experience in the carrying out of planning surveys and the preparation of town maps.

Applications, giving details of qualifications, experience, and the names and addresses of two referees, should be sent so as to reach the undersigned not later than 15th August, 1955.

**HENRY KELLY,**  
Town Clerk.

Municipal Buildings,  
Clydebank.

**MIDDLESEX COUNTY COUNCIL—COUNTY ARCHITECT'S DEPT.**

**ARCHITECTURAL ASSISTANTS** required. Commencing salary up to £755 p.a. Unestablished, subject to prescribed conditions. Full details of age, education and experience to County Architect, 1, Queen Anne's Gate Buildings, Dartmouth Street, S.W.1, by 2nd August. (Quote Q 856, A.J.) Canvassing disqualifies. 1913

**METROPOLITAN BOROUGH OF HOLBORN. JUNIOR ARCHITECTURAL ASSISTANT**

required. R.I.B.A. Intermediate or equivalent necessary. Salary A.P.T. I-II (£500 to £640 plus London Weighting) according to experience. Application with two referees to Town Clerk, Town Hall, High Holborn, W.C.1, by 30th July, 1955.

1907

**COUNTY BOROUGH OF BOLTON. APPOINTMENT OF QUANTITY SURVEYING ASSISTANT.**

Applications are invited for the appointment of a **QUANTITY SURVEYING ASSISTANT** in the Borough Engineer's Department (Architects' Section) at a salary in accordance with Grade A.P.T. I of the National Joint Council's Scale (£500-£590 per annum).

Applicants should have had some experience in a Quantity Surveyor's Office and be capable of assisting in preparation of bills of quantities, measuring up and checking accounts.

Commencing salary will be according to qualifications and experience.

The appointment is subject to the provisions of the Local Government Superannuation Acts and to the passing of a medical examination.

Application forms may be obtained from the undersigned to whom they should be returned not later than Monday, 8th August, 1955.

**PHILIP S. RENISON,**

Town Hall,  
Bolton.

**NORTHUMBERLAND COUNTY COUNCIL. COUNTY ARCHITECT'S DEPARTMENT.**

**APPOINTMENT OF HEATING & VENTILATING ENGINEER.**

Applications are invited for the appointment of **ASSISTANT HEATING AND VENTILATING ENGINEER**, Grade 3. Salary £600 x £25 to £725 on the permanent staff of the Department.

Applicants should be experienced in design, specification and the preparation of drawings for heating schemes. Domestic Hot Water Supply, Ventilation projects, boiler house layouts for S-schools and large public buildings. Electrical engineering knowledge will be an advantage.

I.H.V.E. or must be Students for the I.H.V.E. examination.

The successful candidate will be required to pass a medical examination.

Applications with copies of two testimonials should reach this office within 10 days of the appearance of this advertisement.

County Hall,  
Newcastle-upon-Tyne. 1.

**MINISTRY OF AGRICULTURE, FISHERIES AND FOOD require TEMPORARY ASSISTANT ARCHITECTS or ASSISTANT LAND COMMISSIONERS** for farm buildings advisory duties.

Possibility of establishment later for suitable candidates. A.R.I.B.A. or A.R.I.C.S.; knowledge of agricultural buildings desirable. Location Nottingham and Wolverhampton; other vacancies may occur. Starting salary for men from £645 at 25 to £890 at 34 or over; somewhat lower for women. Maximum men and women £995. Application forms quoting J242/5 (A) from M.L.N.S. Technical and Scientific Register (K), Almack House, King Street, London, S.W.1. 1970

**NATIONAL COAL BOARD—WEST MIDLANDS DIVISION.**

**ARCHITECTS** Grade I, Salary Scale £900 x £30 to £1,200, Headquarters at Fenton, Stoke-on-Trent.

Applicants must be Associate Members of the Royal Institute of British Architects and have considerable experience in the preparation of sketch plans, working drawings, the design and construction of all types of buildings, preferably in the industrial field, supervision of works in progress and the control of large scale contracts. The office is engaged on a programme of varied and interesting work and offers scope for applicants with a progressive architectural outlook.

Applications to the Divisional Establishment Officer, National Coal Board, Himley Hall, Dudley, Worcs. 1975

**HACKNEY BOROUGH COUNCIL** invite applications for the appointment of **ASSISTANT ARCHITECT** within Grades A.P.T. IV-V (£705-£930 p.a., including London Weighting Allowance).

Candidates must be Registered Architects or must have passed the Final Examination of the R.I.B.A. and preference will be given to candidates with experience in the design and construction of municipal housing schemes and public buildings. The commencing salary will be fixed according to the qualifications and experience of the successful candidate.

Application form obtainable from the Town Clerk, Town Hall, Hackney, E.8, returnable by 20th August, 1955.

**MONMOUTHSHIRE COUNTY COUNCIL. APPOINTMENT OF ARCHITECTURAL STAFF.**

Applications are invited for the following posts in the County Architect's Department under the N.J.C. conditions:—

**TWO ARCHITECTURAL ASSISTANTS**, Grade A.P.T. IV, salary commencing at £765 by £30 annual increments to £825 per annum.

**TWO ARCHITECTURAL ASSISTANTS**, Grade A.P.T. III, salary £660 to £725 per annum.

**FOUR JUNIOR ARCHITECTURAL ASSISTANTS**, Grade A.P.T. II, salary £560 to £640 per annum.

**ONE QUANTITY SURVEYING ASSISTANT**, Grade A.P.T. II, salary £560 to £640 per annum.

Forms of application, particulars of post and conditions of service can be obtained from the undersigned.

Applications, together with copies of three testimonials, must be forwarded to the County Architect, Queen's Hill, Newport, Mon., not later than Saturday, the 6th August, 1955.

**VERNON LAWRENCE,**

County Hall,  
Newport,  
Mon.

**THE COUNTY COUNCIL OF CLACKMANNAN. ARCHITECTURAL ASSISTANT**

wanted for County Architect's Department. Salary Grade I of the A.P.T. Division of the J.I.C. Scale, viz.: £515 per annum rising by £15 to £560 per annum. Superannuated post. Appointment subject to medical examination.

Applications stating age, qualifications and experience, with copies of three recent testimonials, to the County Clerk, County Buildings, Alloa, within ten days of publication of this advertisement.

13th July, 1955.

**COUNTY COUNCIL OF NORTHUMBERLAND. COUNTY ARCHITECT'S DEPARTMENT.**

Applications are invited for the appointment of **THREE TEMPORARY ARCHITECTURAL ASSISTANTS** at a salary of up to £800 p.a. according to experience; to work on new School projects. Some office experience essential.

Applications stating age, qualifications, details of training and experience, together with the names of two referees, should reach the County Architect, County Hall, Newcastle-on-Tyne, 1, not later than Saturday, 30th July, 1955.

1961

**METROPOLITAN BOROUGH OF SHOREDITCH. ASSISTANT ARCHITECT.**

Applications are invited for the appointment of **ASSISTANT ARCHITECT**. Salary depending on experience and qualifications. Subject to medical exam. Council's Superannuation Scheme and N.J.C. Conditions.

Applications to Borough Architect, Town Hall, Old Street, E.C.1, stating age, training, experience and salary required and giving two referees to arrive by 28th July, 1955.

**COUNTY BOROUGH OF EAST HAM. ARCHITECTURAL ASSISTANT—HOUSING DEPARTMENT.**

Applicants should be Associates R.I.B.A. and have had experience in housing work of a local authority. Salary £650 x £25 to £775 per annum plus London Weighting.

Further details and form of application (returnable by 10th August, 1955) from the Town Clerk, Town Hall, East Ham, E.6.

1952



FISHERIES ASSISTANT AND COMMISSARY duties suitable for a suitable candidate of location. Noter vacancies from £645 at lower for £495. App. M.L.N.S. (K), Almack 1979 MIDLANDS £900 x £23 Stoke-on-Trent. Members of the and have separation of design and preferably of works in the contracts. The value of varied for application outlook. Establishment miley Hall, 1975 invite appl. ASSISTANT (4706- Allowance). Architects or ration of the ven to can and con- chery will be and experi- the Town turnable by 1984 COUNCIL. AL STAFF. owing posts under the NTS, Grade 1975 by £30 NTS, Grade 1975 by £30 AL ASSIST- to £640 per ASSISTANT. per annum. of post and from the three testi- Archi- later than VRECE, the Council. 1972 MANNAN. wanted for Grade I scale, vi. per annum. subject to tions and cent testi- Buildings. n of this 1961 ERLAND. MENT. nment of CTURAL £800 p.a. new School al. details with the County Tyne, 1. 1951 OF entment of ending on medical me and 1949 AM. USING B.A. and of a local r annum (return- n Clerk. 1982

**BOROUGH OF ERITH.**  
**THIRD ARCHITECTURAL ASSISTANT.**  
Applications are invited for the appointment of Third Architectural Assistant, Grade A.P.T. II (£560 x £220—£640 per annum, plus London weighting).  
Applicants should hold appropriate qualifications.  
Applications, stating age, qualifications, previous appointments and experience, together with the names and addresses of two referees, should be sent to the Borough Engineer and Surveyor, Town Hall, Erith, Kent, not later than Monday, the 30th July, 1955.  
The Council is unable to assist in the provision of housing accommodation.  
**J. A. CROMPTON,**  
Town Clerk. 1804  
Town Hall, Erith, Kent.

**CITY OF ROCHESTER.**  
**ARCHITECTURAL ASSISTANT.**  
Applications are invited for the above appointment in the City Surveyor's Department at a salary in accordance with A.P.T. Grade II, of the National Scale of Salaries, viz., £560—£640 per annum.  
Preference will be given to candidates who have passed the Intermediate Examination of the Royal Institute of British Architects.  
A good general experience is desirable, particularly in the preparation of drawings and specifications for municipal housing schemes.  
In an appropriate case the City Council will provide the successful applicant with suitable housing accommodation.  
The appointment will be subject to—  
(1) The National Joint Council's Scheme of Conditions of Service.  
(2) The Local Government Superannuation Acts, and the successful candidate will be required to pass a medical examination.  
(3) One month's notice on either side.  
Applications, stating age, qualifications and experience, together with names and addresses of three persons to whom reference may be made, should be delivered to the City Surveyor, 66, Maidstone Road, Rochester, not later than 2nd August, 1955.  
Canvassing, directly or indirectly, will be deemed a disqualification, and applicants must state whether to their knowledge they are related to any member or senior officer of the Council.  
**PHILIP H. BARTLETT,**  
Town Clerk. 1760  
Guildhall, Rochester.  
1st July, 1955.

**EAST ANGLIAN REGIONAL HOSPITAL BOARD.**  
(1) **ASSISTANT ARCHITECTS** (2)—Candidates must be qualified and registered architects and possess good general experience in design, construction and specification writing. Knowledge of hospital work desirable. Salary £625—£890 per annum.  
(2) **SENIOR ASSISTANT ENGINEER (Mechanical)**—Candidates to be experienced in design and installation of heating, ventilating, steam boiler plant and services, etc., and must be A.M.I.Mech.E., or equivalent. Salary £900 x £30—£1,050 per annum.  
(3) **ASSISTANT ENGINEER (Mechanical)**—Candidates to be experienced in the work at (2) and should be A.M.I.H.V.E. or Graduate Members of the I.H.V.E., or equivalent. Salary £625—£890 per annum.  
(4) **ASSISTANT ENGINEER (Electrical)**—Candidates to be experienced in design and installation of electrical engineering services and should be A.M.I.E.E., or Graduate Members of I.E.E., or equivalent. Salary £625—£890 per annum.  
(5) **ENGINEERING ASSISTANTS**—Candidates to be experienced in work described above and possess Ordinary National Certificate (Mechanical or Electrical). Salary £465 (at age 21 or over)—£650 per annum.  
(6) **DRAFTSMEN (Engineering)**—Candidates to have had suitable training and experience. Salary £380 (at age 21 or over)—£570 per annum.  
Additional increments within the scale based on experience and age may be granted in respect of posts (1), (3) and (4). Commencing salary for post (5) may be fixed at point above minimum but will not exceed £550 per annum. The above salary scales are at present under review.  
Applications indicating appropriate post and stating age, qualifications, experience and details of present position with names of three referees to Secretary of Board, 117, Chesterton Road, Cambridge, by 2nd August, 1955. 1884

**CITY AND COUNTY OF BRISTOL.**  
**APPOINTMENT OF PLANNING ASSISTANT.**  
Applications invited for appointment of Planning Assistant in City Engineer and Planning Officer's Department. Salary in accordance with Special Grade (£650—£775) if successful applicant has passed Final Examination of Town Planning or other appropriate Institute and has necessary experience or Grade A.P.T. II (£560—£640) if he has passed Intermediate Examination of such Institute.  
Applicants should have had good general planning experience including control of development and preparation and administration of Development Plan.  
Applications giving age, qualifications, present and previous appointments and full details of experience, together with names of two referees should be sent to City Engineer and Planning Officer, 420, Bath Road, Brislington, Bristol 4, by 8th August, 1955. 1368

**PEMBROKESHIRE COUNTY COUNCIL.**  
**COUNTY ARCHITECT'S DEPARTMENT.**  
Applications are invited for the post of ASSISTANT ARCHITECT on the permanent staff.  
Applicants should be Members of the R.I.B.A. by examination and/or holding equivalent academic qualifications, with experience of contemporary Architectural and/or Structural design. Salary scale, Grade V, A.P. & T. Division (£750 x £30 to £900 per annum), according to qualifications and experience.  
The appointment, which will be subject to the provisions of the Local Government Superannuation Acts and the National Joint Council's Scheme of Conditions of Service, will also be subject to a satisfactory medical examination.  
Forms of application can be obtained from the County Architect, County Offices, Haverfordwest, and should be returned duly completed to the undersigned not later than 28th July, 1955.  
**H. LOUIS UNDERWOOD,**  
Clerk of the County Council. 1843  
County Offices, Haverfordwest.  
5th July, 1955.

**CUMBERLAND COUNTY COUNCIL.**  
**COUNTY ARCHITECT'S DEPARTMENT.**  
Applications are invited for the following appointments to the Architectural staff: N.J.C. service conditions: Posts pensionable: Subject to medical examination.  
(a) **A.P.T. GRADE IV: £675—£825** (2 posts). Should be A.R.I.B.A., preferably with Schools experience.  
(b) **SPECIAL GRADE: £650—£775** (3 posts). Final R.I.B.A. examination.  
Applications, on forms obtainable from John H. Haughan, F.R.I.B.A., County Architect, 15, Portland Square, Carlisle, to be received by him NOT LATER than MONDAY, 15th AUGUST, 1955.  
**G. N. C. SWIFT,**  
Clerk of the County Council. 1881

**LONDON COUNTY COUNCIL.**  
Applications are invited for appointment as **DEPUTY ARCHITECT** to the **LONDON COUNTY COUNCIL** on a salary scale of £2,750 x £250 (biennially)—£3,250 a year, with a commencing salary in accordance with qualifications and experience. The position is permanent and pensionable. The Architect to the Council is responsible for the design, erection and maintenance of most of the architectural work required by the Council. He also advises the Council on all Town Planning matters. Application forms, giving full particulars, are obtainable from the Clerk of the Council (CL/G), County Hall, Westminster Bridge, S.E.1, and must be returned by Monday, 19th September, 1955. Canvassing disqualifies. (1083) 1834

**I.A.A.S.**  
**FORTHCOMING EXAMINATIONS.**  
The Incorporated Association of Architects and Surveyors will hold the following examinations during the week beginning 21st September, 1955:  
**QUANTITY SURVEYORS' SECTION:**  
Intermediate grade (Relegations only).  
Final grade—Part I (Relegations only).  
Final grade—Part II.  
Direct Final grade (Relegations only).  
**BUILDING SURVEYORS' SECTION:**  
(Including Municipal)  
Intermediate grade (Relegations only).  
Final grade—Part I (Relegations only).  
Final grade—Part II.  
Direct Final grade (Relegations only).  
The examinations will be held in London, and at selected provincial centres. Applications from candidates for permission to sit, made on the prescribed form, must be received not later than Monday, 29th August, 1955.  
Full information on application to the General Secretary, I.A.A.S., 75, Eaton Place, London, S.W.1. 1544

**PADDINGTON BOROUGH COUNCIL.**  
**REQUIRE A SENIOR ASSISTANT ARCHITECT.**  
within A.P.T. Grade V (£780 x £30—£930 p.a., £10 p.a. less if under age 26 years). Candidates must be A.R.I.B.A., with experience of local authority work, contemporary design, and construction of general municipal work, including multi-storey flats; supervision of large building contracts and architectural staff; Town Planning experience an advantage.  
Applications, stating age, qualifications, present and past appointments, with dates and salaries, details of experience and names and addresses of three referees, should be received by the undersigned by 29th July, 1955 (quoting A.223).  
**W. H. BENTLEY,**  
Town Clerk. 1833  
Town Hall, Paddington Green, W.2.

**COUNTY BOROUGH OF BURNLEY.**  
**NEW SCHOOLS PROGRAMME.**  
Applications are invited for the appointment of an **ARCHITECTURAL ASSISTANT** in the Borough Engineer and Surveyor's Department at a salary in accordance with the A.P.T. Special Grade (£650 x £25 x £775).  
Applicants should be Associate Members of the Royal Institute of British Architects and should preferably have had considerable experience in connection with new schools.  
Forms of application and conditions of appointment may be obtained from the Borough Engineer, 22/24, Nicholas Street, Burnley, to whom applications should be returned not later than Saturday, the 13th August, 1955.  
**O. V. THORNLEY,**  
Town Clerk. 1976

**PUBLIC SERVICE OF SOUTH AUSTRALIA.**  
Applications are invited for positions as under, in the Public Service of South Australia:—  
**QUALIFICATIONS:**  
**ARCHITECTS:** Membership of a recognised Institute of Architects, or qualified by examination.  
**STRUCTURAL ENGINEERS:** A university degree in Engineering or membership of a recognised Institute of Engineering.  
**SURVEYORS:** A licence to practice as a Surveyor in a Commonwealth country or Corporate Membership of the Royal Institution of Chartered Surveyors. Alternatively, applicants who have passed a substantial portion of a recognised survey course with several years practical experience will be considered.  
**SURVEY ASSISTANTS:** Considerable practical experience as well as technical training in Survey Drafting.  
**QUANTITY SURVEYOR:** Final R.I.C.S. (Quantity Section).  
**ASSISTANT QUANTITY SURVEYOR:** Intermediate standard R.I.C.S. (Quantity Section).  
**SPECIFICATION WRITERS:** A good general knowledge of architectural construction and of associated building trades.  
**DRAFTSMEN (Architectural & Structural):** Appropriate diploma of Technical College or equivalent.  
**SALARY RANGES:**  
**ARCHITECTS:** Minimum £A1,300, maximum £A1,550.  
**STRUCTURAL ENGINEERS:** Minimum £A1,300, maximum £A1,550.  
**SURVEYORS:** Minimum £A1,200, maximum £A1,450.  
**SURVEY ASSISTANTS:** Minimum £A1,100, maximum £A1,250.  
**QUANTITY SURVEYORS:** Minimum £A1,200, maximum £A1,350.  
**ASSISTANT QUANTITY SURVEYORS:** Minimum £A1,100, maximum £A1,250.  
**SPECIFICATION WRITERS:** Minimum £A1,100, maximum £A1,250.  
**DRAFTSMEN (Architectural & Structural):** Minimum £A1,100, maximum £A1,250.  
The commencing salary and the maximum salary offered in each case will be determined in accordance with the appointee's qualifications and experience.  
First-class passages London to Adelaide for appointees and families will be paid.  
Further particulars may be obtained from The Agent General and Trade Commissioner for South Australia, South Australia House, Marble Arch, London, W.1. 1939

**EAST SUFFOLK COUNTY COUNCIL.**  
**ARCHITECTURAL ASSISTANT.**  
Applications are invited in connection with this vacancy on A.P.T. Grade III (£600 x £25 to £725) or the Grade for Special Classes (£650 x £25 to £775).  
Applicants must be quick and accurate draughtsmen capable of carrying projects through all stages with the minimum of supervision. They should have a sound knowledge of design, building construction and specification writing. Preference will be given to applicants who have passed parts 1 and 2 of the R.I.B.A. Final or Special Final examination, or their equivalent at one of the recognised schools of architecture—a candidate so qualified will be eligible for appointment on the Grade for Special Classes.  
The commencing salary on either grade will be fixed according to qualifications and experience: the appointment will be subject to one month notice on either side and to the provisions of the Local Government Superannuation Acts: the selected applicant will be required to pass a medical examination.  
Applications, stating age and qualifications, giving full details of previous experience, and accompanied by copies of two recent testimonials, should be sent to E. J. Symcox, F.R.I.B.A., County Architect, County Hall, Ipswich, not later than Tuesday the 26th July, 1955. 1947

**BOROUGH OF BARKING.**  
**DEPARTMENT OF THE BOROUGH ARCHITECT.**  
Applications are invited for the following appointments on the established staff on Grade A.P.T. II (£560—£640 x £90 p.a. plus London Working £10—£20 according to age):—  
**TWO ASSISTANT ARCHITECTS, A.P.T. II.**  
**ONE CLERK OF WORKS A.P.T. II.**  
Further particulars and form of application may be obtained from the Borough Architect, Town Hall, Barking, and completed applications should reach the undersigned not later than 9 a.m., Thursday, 28th July, 1955.  
**E. R. FARR,**  
Town Clerk. 1936  
Town Hall, Barking.

**ARGYLL COUNTY COUNCIL.**  
Applications are invited for the appointment of a **QUANTITY SURVEYING ASSISTANT** for the County Architect's Department, salary scale grade I—III (£515—£630) with placing according to experience and qualifications. The post is superannuable. Applicants must have completed a five years' apprenticeship and be capable of taking on preparing bills of quantities and measuring all trades.  
Apply giving details of qualifications and experience along with copies of recent testimonials to County Architect, County Offices, Dunoon, within seven days of publication.  
**A. D. JACKSON,**  
County Clerk. 1939

**COUNTY COUNCIL OF RENFREW.**  
Applications are invited for the appointment of **SENIOR ARCHITECTURAL ASSISTANT** in the County Engineer's Department (APT/V1/VII-2750-1865). Applicants must be Registered Architects and Members of R.I.B.A. and/or R.I.A.S. Previous Local Authority experience would be an advantage. The appointment is superannuable. Applications stating age, qualifications and experience, together with recent testimonials, should be sent immediately to the County Clerk, P.O. Box 12, Paisley. 1943

**AYCLIFFE DEVELOPMENT CORPORATION.**  
**APPOINTMENT OF QUANTITY SURVEYOR.**  
Applications are invited from fully qualified and experienced Chartered Surveyors for appointment as the Quantity Surveyor in the department of the Corporation's Chief Architect.

Salary £1,200 p.a.  
Appointment subject to N.J.C. conditions, superannuation, satisfactory medical examination and one month's notice in writing on either side. Housing accommodation available if required. Applications stating age, qualifications and experience, with names of two referees, to arrive not later than Tuesday, 2nd August, 1955.

A. V. WILLIAMS,  
General Manager.  
Newton Aycliffe,  
Co. Durham. 1991

### 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.

**ARCHITECTS' ASSISTANTS** required (1 Senior and 2 Juniors) for West End Office. Write, stating full particulars and salary required to Box 8725. 9266

**ARCHITECTURAL ASSISTANT** required in small private office. Intermediate to Final standard. Write, stating experience and salary required, to: A. F. Bennett, 35, Queen's Gate Mews, London S.W.7. 9266

**SAMUEL MORRISON & PARTNERS** require **ASSISTANTS** of Intermediate and Final standard. Salaries comparable to Local Authority Scales; interview expenses paid. 103, Beiper Road, Derby. 1764

**ARCHITECTURAL ASSISTANTS** required, preferably with Inter. R.I.B.A. min. and some experience in industrial buildings. Good salary and working conditions. B.S.P. Industries, Ltd. (Ref. A/56), Elstree Way, Boreham Wood, EL8 3JN. 1683

**OLIVER LAW & PARTNERS** (Chartered Architects), 36, Ebury Street, Westminster, require two or three additional **ARCHITECTURAL ASSISTANTS** (DRAUGHTSMEN). Architectural School or office experience essential. Salaries £600 to £900 per annum, according to experience. 1691

**RAMSEY, MURRAY & WHITE** have a vacancy for **ARCHITECTURAL ASSISTANT**, about Intermediate standard, preferably with office experience. Salary according to qualifications. Apply 32, Wigmore Street, London, W.1, or telephone WELbeck 1409. 9823

**ARCHITECTURAL ASSISTANT** (Intermediate standard) required at once for varied practice in City office. Write, stating age, experience, and salary required, to Henry C. Smart & Partners, L.R.I.B.A., 120, Moorgate, E.C.2. 1611

### BRITISH RAILWAYS—LONDON MIDLAND REGION.

**A SENIOR ASSISTANT ARCHITECT** is required in the Regional Architect's office to work on Modernisation projects.

Applicants must be Associates of the R.I.B.A., and have several years' experience, also ability to control staff.

The person appointed must have a progressive outlook, and a sound knowledge of modern structural technique.

Salary £1,050, rising to £1,250.  
Residential and other travelling facilities available. Five-day week.

Apply in writing, giving particulars of age, qualifications and experience, to the Chief Civil Engineer, British Railways, London Midland Region, 5A, Euston Grove, London, N.W.1. 1994

**A** N Architectural group, engaged in industrial undertakings of a varied nature, require **ASSISTANTS** who are prepared to take the rough with the smooth, relieving the inevitable down to earth detailing by producing an occasional brochure, perspective or model. Salary by arrangement. Please reply Box 1690.

**PROGRESSIVE** and expanding London office, with widely varied practice, requires **JUNIOR** and **INTERMEDIATE ARCHITECTURAL ASSISTANTS**. 5-day week, good salaries. Lewis Solomon, Son & Joseph, 21, Bloomsbury Way, W.C.1. HOL. 5108 or 7082. 1689

**SENIOR** and **INTERMEDIATE** standard **ASSISTANTS** required for busy practice engaged upon a large programme for schools, industrial buildings, offices, etc. Write, giving full particulars of qualifications, experience, and salary required, to Johns Slater & Howard, F.A.R.I.B.A., 32, Foundation Street, Ipswich. 1715

**ASSISTANT ARCHITECT** required for the London Head Office of a major oil company. The work is in connection with large-scale development of service stations, involving the design of new and the re-modelling of existing stations. Should preferably be an Associate Member of the R.I.B.A., capable of supervising staff and controlling work through all stages of development. Must hold current driving licence. Pension and Life Assurance Scheme. Generous sickness benefits; luncheon voucher scheme; social club. Write, giving full details, stating age, experience and salary required, to Box 1236, quoting Ref. RO/AA 713. 1775

**EXPERIENCED ARCHITECTURAL ASSISTANT** required, with view to partnership, South-West London office. Apply in writing, giving full particulars of experience, age, and salary required, to Box 1711. 1691

**REQUIRED** for progressive London office. **ARCHITECTURAL ASSISTANT**. Intermediate stage or above, some office experience. Please write for interview. Box 1019.

**ARCHITECTURAL DRAUGHTSMEN** required by Ilford, Ltd., for Staff Architect's office. Applicants should have completed at least one year's office experience. Apply in writing, stating age, training and experience, to Ilford, Ltd., Romford, Essex. 176

**ARCHITECTURAL ASSISTANT** required by Major Oil Company undergoing expansion, for its Sheffield office. Applicants should be of Intermediate standard, and must be capable of carrying out work on the design and re-modelling of service stations. Social Club, Pension and Life Assurance scheme, generous sickness benefits. Write, giving full details of experience, age and salary required, to Box 9262, quoting Ref. A.A. 588.

**ARCHITECTURAL ASSISTANTS** required urgently for London office. Intermediate stage or above, and with practical experience, particularly in traditional domestic and other work. Please write stating age, experience, and salary required to Box 9896.

**COLLINS, MELVIN, WARD & PARTNERS**, 15, Manchester Square, W.1, require **SENIOR** and **JUNIOR STAFF**. Competent working drawings essential. Opportunity to work on contemporary buildings. Write or telephone WELbeck 9991. 1267

**ARCHITECTURAL ASSISTANTS** required, with about four years' office experience. Write or telephone giving full particulars, including age and salary, to Hasker & Hall, Architects, 13, Welbeck Street, W.1. (WELbeck 0061). 1626

**JUNIOR ARCHITECTURAL ASSISTANT** with some office experience required. Write or telephone giving full particulars, including age and salary, to Hasker & Hall, Architects, 13, Welbeck Street, W.1. (WELbeck 0061). 1627

**REQUIRED** at Company's Head Office, Guildford, experienced **ARCHITECTURAL ASSISTANT**, varied work, mainly factory. Five-day week. Salary by arrangement. Box 1817.

**CHIEF ASSISTANT** required immediately for busy private practice within 50 miles of London. Should be qualified, experienced, car owner/driver, and capable of taking full responsibility. Good salary and prospects for the right man. Full particulars and salary required to Box 1813.

**ARCHITECTURAL ASSISTANTS** required, of Intermediate R.I.B.A. Standard for work on contemporary industrial buildings. Good salaries and plenty of opportunity for initiative. London office. Write, giving details of salary, experience, to Howard Souster & Fairbairn, 81, Piccadilly, W.1. 1775

**RECKITT & COLMAN LTD.** require experienced **ARCHITECTURAL ASSISTANT** at Norwich. Must be at least Intermediate R.I.B.A. standard. Experience in surveying would be advantageous. Apply, stating age, experience, qualifications and salary required, to Secretary, Carrow Works, Norwich. 1808

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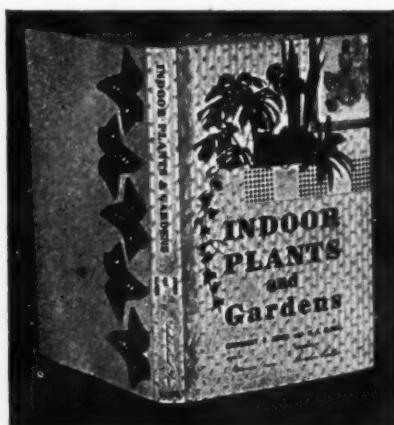
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**JUNIOR and SENIOR ARCHITECTURAL ASSISTANTS** required for rapidly expanding, contemporary office. Write, giving details of age, experience and salary required, to Box 1812.

**YOUNG ASSISTANT**, up to Inter. R.I.B.A. standard, required to assist Staff Architect in small Drawing Office of a Multiple Combine with branches throughout Great Britain. Able to work with the minimum of supervision. Occasional travelling may be involved. Apply stating age, previous experience and salary required, to Box 1858.

**ARCHITECTURAL ASSISTANTS, SENIOR and JUNIOR**, required in busy London office with varied practice. Good salary and prospects for suitable applicants, five-day week. Write Box 75 c/o 7, Coptic Street, W.C.1. 1782

**JUNIOR ARCHITECT, R.I.B.A.**, intermediate standard, required at Guildford. Five-day week. Salary by arrangement. Box 1818.

**ARCHITECTURAL ASSISTANTS** required immediately in expanding Midland practice for varied works. Pleasant surroundings and good prospects. Please send full details of training, experience, salary, etc., to Box 1814.

**ASSISTANT**, intermediate standard required for small West End office. Variety of work, industrial, housing, development work on new methods, exhibitions.

Must be n. at, speedy draughtsman. Opportunity for all round experience and future senior appointment.

Salary, £550 to £600 p.a. Write, giving full details to A. F. Hare, A.R.I.B.A., 24, Baker Street, London, W.1. 1869

**TAYLOR WOODROW HOMES LIMITED**, require an **ARCHITECTURAL ASSISTANT** (Intermediate Standard) for large scale housing development. Must be capable of producing full working drawings. Pensionable post. Write giving full details of experience, etc., to Personnel Department, Ruislip Road, Southall, Middlesex. 1856

**ARCHITECTURAL ASSISTANT**—Final standard, able to work on own initiative on Commercial and Industrial projects of contemporary character. Leonard J. Multon, F.R.I.B.A., 6, Greenfield Crescent, Birmingham, 15. 1856

**ARCHITECTURAL ASSISTANT** required in the Architect's Department of S.W. London Building Contractors. Reply stating age, experience, qualifications and salary required to Box 1779.

**ARCHITECTURAL ASSISTANTS** required for varied work. Intermediate and Final standard with at least two years' office experience. Apply in writing, stating age, experience, etc., and salary required, to Cordingley & McIntyre, Chartered Architects, Owengate, Durham. 1766

**ARCHITECT'S ASSISTANT** required for a London office of a firm of Architects with interests throughout the country, must be of Intermediate to Final R.I.B.A. standard. Superannuation scheme. Apply in writing to Messrs. Cotton, Ballard & Blow, 133A, Wembley Park Drive, Wembley, Middlesex. 1763.

**R. & D. HALL, F./A.R.I.B.A.**, Masonic Builders, Bangor, N. Wales, require: One qualified **ARCHITECTURAL ASSISTANT** and one qualified **QUANTITY SURVEYOR**. Interesting work in pleasant area. Ability and energy essential with salaries accordingly. 1805

**APPOINTMENT** giving opportunity for initiative and responsibility in Midland Office with long term programme of office blocks, flats, hotels, public buildings and industrial development. Salary range £850—£1,000.

Vacancy also for Intermediate Stage **ARCHITECT**, £650—£750 range, according to experience. Box 1797.

**ARCHITECTURAL ASSISTANT** required, capable of assuming responsibility for industrial and commercial work. Reply, stating age, experience and salary required, to Hill, Allum & Partner 21, Carlton Crescent, Southampton. 1830

**ARCHITECT'S ASSISTANT** required in Birmingham Suburban Office, not below intermediate standard, varied and interesting work. Good prospects for suitable applicant. Profit sharing scheme. Write giving details of experience and salary required to Box 1841.

**SENIOR and JUNIOR ARCHITECTURAL ASSISTANTS** required for general and commercial practice. Apply stating age, experience, qualifications and salary required, to Duncanson, Clark & Beckett, F./R.I.B.A. F./R.I.C.S. Architects & Surveyors, 7, West Stockwell Street, Colchester. 1846

**TRIPLE & WAKEHAM**, 16, Fitzhardinge Street, W.1 require **ASSISTANTS** either qualified or unqualified, with upwards of 2 years' experience. 1848

**ARCHITECTURAL ASSISTANTS** required urgently in Hertfordshire Office. Intermediate stage or above. Good conditions and variety of work. Apply Box 1825.

**B.C. requires ARCHITECTURAL ASSISTANTS** in London for work on design of studio, transmitter and office premises. Candidates should be up to Intermediate or Final R.I.B.A. standard, with preferably a few years' office experience. Salary in scale £650—£850 or £725—£960, according to qualifications and experience. Requests for application forms to Engineering Establishment Officer, Broadcasting House, London, W.1, within 7 days, quoting Ref. EX47 A. Jnl. 1981

**CO-OPERATIVE WHOLESALE SOCIETY, LTD., ARCHITECT'S DEPARTMENT, LONDON, ASSISTANT ARCHITECTS, WORKER-UP.**

**APPLICATIONS** are invited from suitably qualified persons. Salary on a scale £485—£945, inclusive of L.W., with placing according to age, qualifications and experience. The posts are superannuable, subject to medical examination. Five-day week in operation.

Applications, stating age, experience, qualifications and salary required, to: W. J. Reed, F.R.I.B.A., Chief Architect, Co-operative Wholesale Society, Ltd., 99, Leman Street, London, E.1. 1934

**ASSISTANTS** (Inter. standard or above) required in newly formed Architects' Department for interesting work involving prefabricated Structures. Apply, stating age, experience, and salary required, to Taylor Woodrow (Building Exports), Ltd., 41, Welbeck Street, London, W.1, marking envelope "D.O.R." 1941

**SECO, LTD.**, urgently require **ARCHITECTURAL ASSISTANTS and DRAUGHTSMEN** for the preparation of working drawings and details for a variety of buildings designed on the unit principle. Apply in writing to Chief Architect, Seco, Ltd., 11, Upper Brook Street, W.1. 1940

**APPLICATIONS** are invited for appointments in South-West England with Designers and Manufacturers of new traditional buildings. (a) **CHARTERED ARCHITECT** as Deputy to Staff Architect. Applicants must have good practical experience, and be capable of taking charge of Drawing Office Staff. (b) **ARCHITECTURAL ASSISTANTS**. Applicants should have good experience up to R.I.B.A. Inter. 1940

Full particulars of qualifications, age, experience, and salary required, to Box 1948.

**ASSISTANT** required in busy practice in West End, in early twenties, about Intermediate R.I.B.A. standard. Excellent opportunities for gaining all round experience. Box 1942.

**ARCHITECTURAL ASSISTANT**, with experience and ability, required immediately for varied work in office adjacent Victoria Station, S.W.1. Apply Box 1973 or Tel. TAT. 0597.

**ARCHITECTURAL ASSISTANTS** required for Architects' office Newcastle-upon-Tyne. (1) A.R.I.B.A. salary, £700—£750 per annum. (2) Intermediate, R.I.B.A. standard. Please write, stating age and experience, to Messrs. Wilson & Wilson, St. Andrew's Buildings, Gallowgate, Newcastle-upon-Tyne, 1. 1969

**SENIOR and JUNIOR ARCHITECTURAL ASSISTANT** required at once at Exeter. Box 1970.

**EXPERIENCED ASSISTANT**, of Intermediate standard required immediately in busy London Architect's office. Write, giving details of experience, salary required, when free, Box 1911.

**ARCHITECTURAL ASSISTANT (SENIOR)** required. Please reply, giving particulars of qualifications, experience, and salary, to Bernard H. Dale & Partners, 19, Carlton Crescent, Southampton. 1891

**BANK** Architect's Department in City has vacancy for an **ASSISTANT of R.I.B.A.** (Intermediate) standard, and used to work of good class. Appointment will be permanent, subject to probationary period, and salary will be according to age and experience. Box 1929.

**DAMS, HOLDEN & PEARSON** require **SENIOR and JUNIOR ARCHITECTURAL ASSISTANTS** immediately. Write, giving particulars of experience and salary required, to 38, Gordon Square, W.C.1. 1928

**GRENFELL BAINES & HARGREAVES**, To accelerate work on two large interesting projects, special opportunity for **ASSISTANT ARCHITECTS**: minimum five years' office experience after graduation. Basic salary and guaranteed bonus £1,000 per annum, plus overtime at basic rates, for minimum of one year, following three months' trial period. Possibility of permanence, with established superannuation scheme. Apply 12, Guildhall Street, Preston. 1927

**ARCHITECTURAL ASSISTANTS** required immediately in busy London office with varied practice. Intermediate to Final standard or equivalent. Good salary and prospects for suitable applicants. 5-day week. Write, stating age, experience, to J. M. Sheppard & Partners, 38, Bedford Place, W.C.1. 1926

**QUALIFIED ASSISTANT (25-32)**, with some practical design and structural experience, preferably also in exhibition work; good, quick draughtsmanship and perspectives; salary by arrangement. Apply by letter to S. P. Jordan, A.R.I.B.A., M.S.I.A., Dip.T.P., 11, King's Road, Sloane Square, S.W.3. 1925

**SCHERER & HICKS**, 19, Cavendish Square, W.1 require **ARCHITECTURAL ASSISTANTS**. Previous office experience not essential. Work includes medical and industrial laboratories, housing and flat development schemes. 5-day week. Salary range £400—£650. 1923

**W. H. WATKINS, GRAY, F.R.I.B.A., & PARTNERS**, require experienced **ASSISTANTS** for interesting hospital work. Pension scheme in operation. Reply, giving full particulars and salary required, to 57, Catherine Place, S.W.1. 1922

**E. R. COLLISTER & ASSOCIATES**, Chartered Architects and Consulting Engineers, Springfield Place, Chelmsford, Essex, and 70, Victoria Street, London, S.W.1.

Applications are invited for the following vacancies:

(a) **TRACERS**. Salary (over age 20) within range £317—£429 p.a.

(i) **Architectural**. Experienced and skilled in tracing of all types of drawings for architectural purposes.

(ii) **Engineering**. As above for structural, heating and electrical engineering drawings.

(b) **ARCHITECTURAL ASSISTANTS**.

Grade 1. £500×£20 to £580 p.a.

Grade 2. £560×£20 to £640 p.a.

Grade 3. £600×£25 to £725 p.a.

Grade 4. £675×£30 to £825 p.a.

Grade 5. £750×£30 to £900 p.a.

Applicants for:—

(a) Grade 1 should be Students R.I.B.A. with at least 12 months' office experience.

(b) Grades 2 and 3 should have passed Intermediate Examination R.I.B.A.

(c) Grades 4 and 5 should be A.R.I.B.A.

(c) **STRUCTURAL ENGINEERING ASSISTANTS**.

Within the salary range in (b) above.

(d) **HEATING ENGINEERING ASSISTANTS**. Within the salary range in (b) above for varied and interesting work, including boiler plant and services for large industrial projects.

A pension scheme is available. Successful applicants will be required to work in Chelmsford or London on industrial projects, hotels, television transmitting stations, office buildings, etc.

Applications should be made in own handwriting, stating age, experience, and qualifications. 1957

**ESTATE** Department of a Manchester Brewery Company requires an **ASSISTANT ARCHITECT**. The work is varied and interesting, knowledge of quantities an advantage. Good salary and prospects, non-contributory pension scheme. Reply Chief Architect, Box 1920.

**ARCHITECTURAL ASSISTANT** required by Manchester Brewery Company, for work on the modernisation of existing properties, and the preparation of schemes for new licensed premises. There is plenty of opportunity for design. The position holds prospects, and will carry a good salary. Non-contributory pension scheme. Chief Architect, Box 1921.

**NEWMAN, LEVINSON & PARTNERS** require one experienced qualified **ARCHITECTURAL ASSISTANT**, and two **ASSISTANTS** of post intermediate standard. Write, stating full particulars of experience and salary required, to 9, Mansfield Street, Portland Place, W.1. 1916

**ARCHITECTURAL DRAUGHTSMEN** required immediately. Experienced in working drawings and details for industrial buildings. 5-day week. Hal Williams & Company, 43, Bedford Square, W.C.1. 1966

**SLOUGH ESTATES, LTD.**, require an **ARCHITECTURAL ASSISTANT**, with at least five years' experience, and capable of preparing working drawings of factories and other buildings, estate layouts, etc., with the minimum of supervision. The work is interesting and carries the benefits of pension and sickness schemes. 5-day week, except for one Saturday in four. Brief particulars please of age, experience, and salary required, to The Architect, Slough Estates, Ltd., Trading Estate, Slough, Bucks. 1964

**ARCHITECTURAL ASSISTANTS** required, for contemporary office. Salary according to experience. C. H. Elsom, F.R.I.B.A., 44, Catherine Place, S.W.1. Victoria 4304. 1950

**ARCHITECTURAL DRAUGHTSMEN** of Intermediate R.I.B.A. standard urgently required for work at Head Office. Reply, giving details of experience, to Sir Alfred McAlpine & Son, Ltd., The Oaks, Hooton, Cheshire. 1963

**ARCHITECT** in City Office of large organisation requires **QUALIFIED ASSISTANTS**, to deal with substantial contracts of industrial type. Applicants should be experienced in design and supervision of work. Salary £800—£900, according to experience. Applications, stating age, qualifications, detailed experience and present salary, to be addressed to Box 1955.

**YOUNG ARCHITECTURAL ASSISTANT** (in 20's) required for North-East Midlands private office. Practice comparatively new and rapidly expanding. Recently qualified or Inter. standard required, with opportunity to control contracts. Good prospects. Pub. Industrial, Domestic work, etc. Apply, giving particulars and salary, to Box 1955.

**EXPERIENCED ASSISTANT** required by Brownlow White & Smetton, Architects, 72, Newhall Street, Birmingham, 3. 1909

**JAMES CURRIE & PARTNERS** require **ARCHITECTURAL ASSISTANT**, age 25-35. Salary according to experience. Apply by letter, giving details of previous positions, to 25, Gloucester Place, W.1. 1908

**ARCHITECTURAL ASSISTANT** required, able to prepare working drawings and detail surveys, and supervise works in progress. Good prospects. Salary according to experience. Apply G. Langley-Taylor & Partners, 9, Kings Bench Walk, Temple, E.C.4. Telephone Central 4774. 1905

**WESTWOOD, SONS & HARRISON, F.F.R.I.B.A.**, urgently require a **SENIOR ARCHITECTURAL ASSISTANT**, A.R.I.B.A. standard, with office experience; also **JUNIOR ASSISTANT**. Apply in writing, giving qualifications, to 46, Baker Street, W.1. 1958

**ARCHITECT**, practising N.W.3 area, requires experienced **SENIOR ASSISTANT**, to work on hospital programme. Please state experience and salary required. Box 1959.

**ASSISTANT**, Intermediate R.I.B.A. standard, required, with previous experience in private Architect's office. Ability to prepare attractive sketches and perspectives an advantage. Apply to H. S. W. Stone & Partners, Chartered Architects, 20, The Crescent, Taunton, Somerset. 1953

**SENIOR ARCHITECTURAL ASSISTANT** required, to take charge of busy drawing office in Romford area. Varied practice. Please reply, stating salary required, and details of experience, to Box 1899.

**ARCHITECTURAL ASSISTANTS** required, of Intermediate and Final standard, preferably with office experience. State age, qualifications, experience, and salary required. Pyle & Saint, Chartered Architects, Thomas Street House, Cirencester. 1897

**ARCHITECTURAL ASSISTANT** required in London by a firm of City Architects for work on modern office buildings. Please telephone CENTRAL 7743. 1987

**SEVERAL ARCHITECTURAL ASSISTANTS** (all grades) required for Consultant's office at 8, Ruislip. State salary required to Mr. Stanbury, 24, Notting Hill Gate, W.11. BAY 4104. 1993

**ARCHITECTURAL ASSISTANTS** wanted in general London practice. Intermediate standard or above. Please apply, with details of experience, age, and salary required, to David A. Wikie & Partners, 45, Chancery Lane, W.C.2. CHANCERY 6450. 1896

**DRAUGHTSMEN** or **ARCHITECTURAL ASSISTANTS** required for work on school and hospital buildings; new system of prefabrication in timber. Permanency. Superannuation scheme available. Write or telephone, stating age, experience, salary required. J. Thorn & Sons, Ltd., Brampton Road, Bexleyheath, Kent. Phone 305. 1895

**ARCHITECTURAL ASSISTANT** wanted in office at London Bridge; qualifications not necessary but draughtsmanship and office experience essential, to take charge of contracts. Salary by agreement according to capabilities. Apply—Douglas White & Furniss, A.A.R.I.B.A., 12, Station Approach, London Bridge, S.E.1. 1990

**ARCHITECTURAL ASSISTANT** required for work in the City. State age, experience, and salary required, to Clifford Strange, 5, London Wall Buildings, E.C.2. 1910

**YOUNG REGISTERED ARCHITECT** (male) required in office of John E. Beardshaw & Partners, 186, Oxford Road, Manchester, 13. Should have completed National Service. State age, experience, salary and date available. 1989

**ARCHITECTURAL ASSISTANT** Grade 1 and **JUNIOR ARCHITECTURAL ASSISTANT** required in Area No. 4 Property Office, Co. Durham. Architectural Assistant Grade 1, salary within scale £525×£25 to £650, salary for Junior Assistant age scale 47/6d. to 160/-. Applicants for Grade 1 post should possess qualifications, have experience, able to prepare working drawings, and have a sound knowledge of building construction. Applicants for junior post should be studying for a suitable qualification and have experience in the preparation of working drawings. Applications to be submitted within 7 days of publication to Area Secretary, National Coal Board, Durham Division, Area No. 4, Howlish Offices, Condon, Bishop Auckland. 1988

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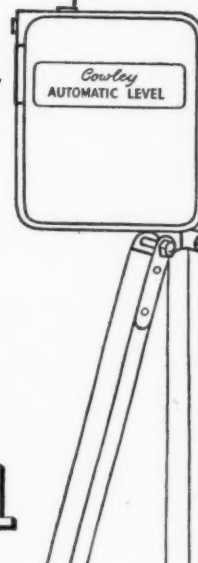
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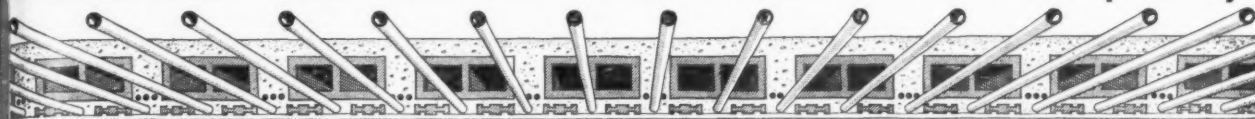
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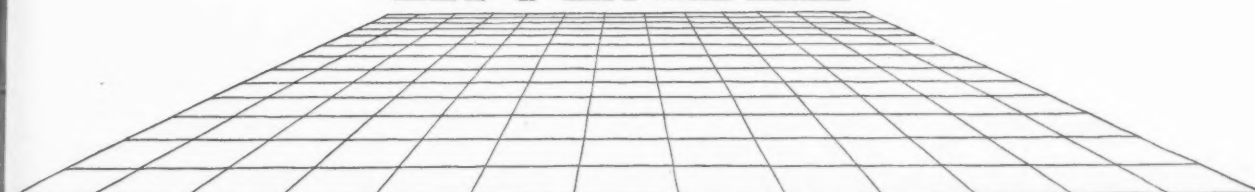
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