

# THE ARCHITECTS' JOURNAL



## standard contents

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

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★ 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.	Welbeck 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
APRR	Association for Planning and Regional Reconstruction. 34, Gordon Square, W.C.1.	Euston 2158-9
ArchSA	Architectural Students' Association. Department of Architecture, School of Building, Ferndale Road, Brixton, S.W.4.	Brixton 7048
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Welbeck 9738
ASB	Architectural Science Board of the Royal Institute of British Architects. 66, Portland Place, W.1.	Welbeck 5721
AScW	Association of Scientific Workers. 15, Half Moon Street, Piccadilly, W.1.	Grosvenor 4761
BAE	Board of Architectural Education. 66, Portland Place, W.1.	Welbeck 5721
BATC	Building Apprenticeship and Training Council. Lambeth Bridge House, S.E.1.	Reliance 7611, Ext. 1706
BC	Building Centre. 9, Conduit Street, W.1.	Mayfair 8641/6
BCC	British Colour Council. 13, Portman Square, W.1.	Welbeck 4185
BCCF	British Cast Concrete Federation. 17, Amherst Road, Ealing, W.13.	Perivale 6869
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. 43, George Street, Croydon.	Croydon 5452
BEDA	British Electrical Development Association. 2, Savoy Hill, W.C.2.	Temple Bar 9434
BGF	British Gas Federation. 1, Grosvenor Place, S.W.1.	Sloane 8266
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	Glasgow Central 2891
BIAE	British Institute of Adult Education. 29, Tavistock Square, W.C.1.	Euston 5385
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. Millbank, S.W.1.	Whitehall 5140
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 2246
BSA	Building Societies Association. 14, Park Street, W.1.	Mayfair 0515
BSI	British Standards Institution. 28, Victoria Street, S.W.1.	Abbey 3333
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., Borough Architect, Town Hall, Newport, Mon.	Newport 3111
CAS	County Architects Society. C/o A. Guy Chant, F.R.I.B.A., Salop County Council, 5, Belmont, Shrewsbury.	Shrewsbury 3031
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Sloane 5255
CDA	Copper Development Association. Kendals Hall, Radlett, Herts.	Radlett 5616
CIAD	Central Institute of Art and Design. 41, 42, Dover Street, W.1.	Regent 3074
CIAM	Congrès Internationaux d'Architecture Moderne. Dolderal, 7, Zurich, Switzerland.	
CID	Council of Industrial Design. Tilbury House, Petty France, S.W.1.	Whitehall 6322
CPC	Codes of Practice Committee. MOW, 42, Onslow Gardens, S.W.7.	Kensington 8161
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.	Sloane 4280
CUJC	Coal Utilization Joint Council. 13, Grosvenor Gardens, London, S.W.1.	Victoria 1534
DGW	Directorate General of Works, Ministry of Works, Lambeth Bridge House, S.E.1.	Reliance 1761
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Whitehall 0540
DOT	Department of Overseas Trade. 35, Old Queen Street, S.W.1.	Victoria 9040
EC	Electricity Commission. Savoy Court, Strand, W.C.2.	Temple Bar 7565
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. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
FB 1951	Festival of Britain 1951. 2, Savoy Court, Strand, W.C.2.	Waterloo 1951
FASSC	Federation of Association of Specialists and Sub-Contractors. 21, Tothill Street, S.W.1.	Whitehall 9606
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.1.	Chancery 7583
FRHB	Federation of Registered House Builders. 82, New Cavendish Street, W.1.	Langham 4041
FS (Eng.)	Faculty of Surveyors of England. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
GG	Georgian Group. 27, Grosvenor Place, S.W.1.	Sloane 2844
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
ICE	Institution of Civil Engineers. Great George Street, S.W.1.	Whitehall 4577

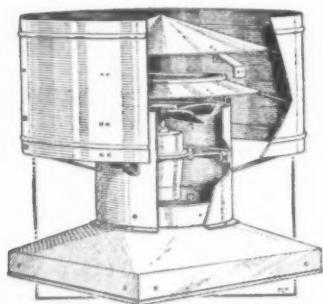
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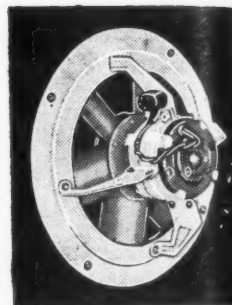
CUT-AWAY VIEW SHOWING FAN INSTALLATION IN DUAL-PURPOSE "MECHAVENT" NATURAL AND MECHANICAL ROOF VENTILATOR

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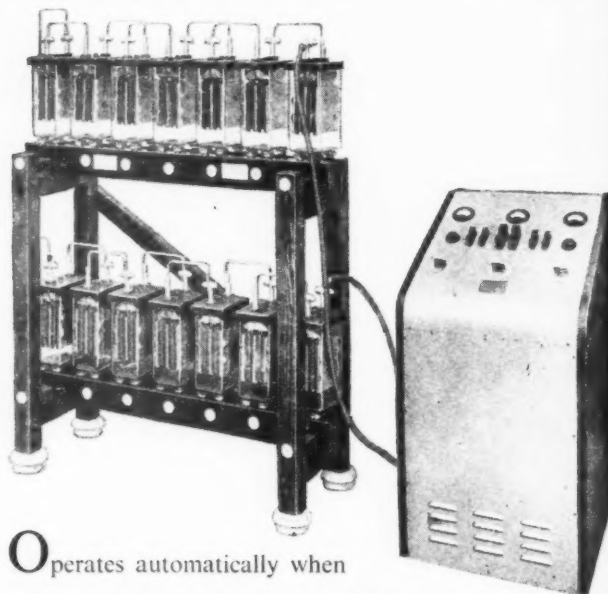
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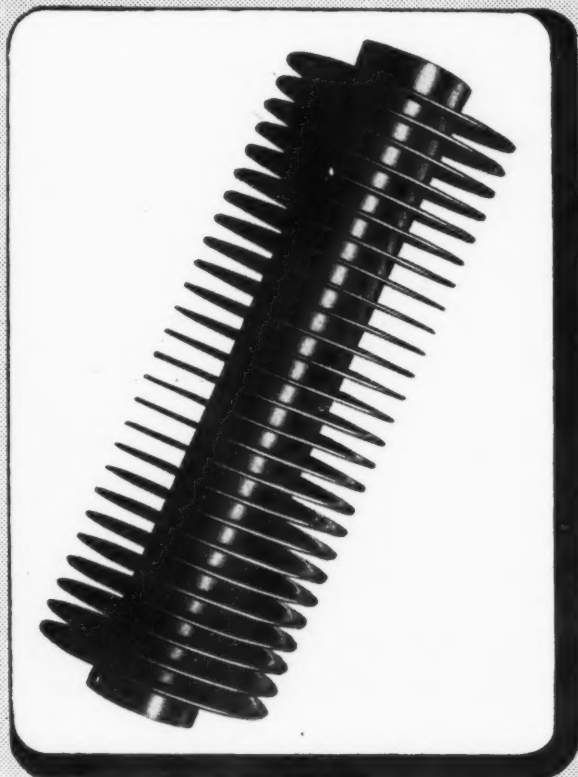
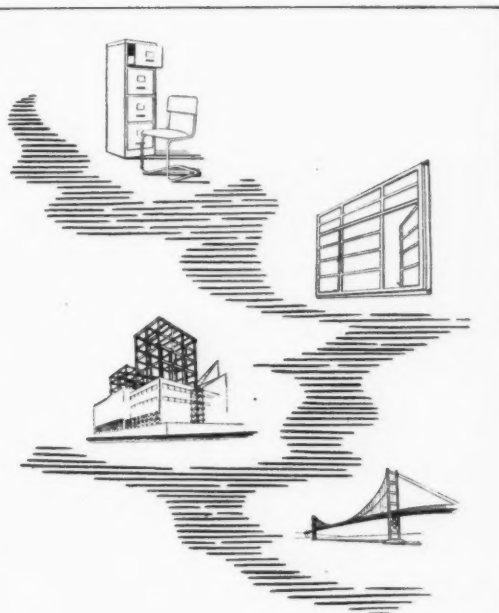
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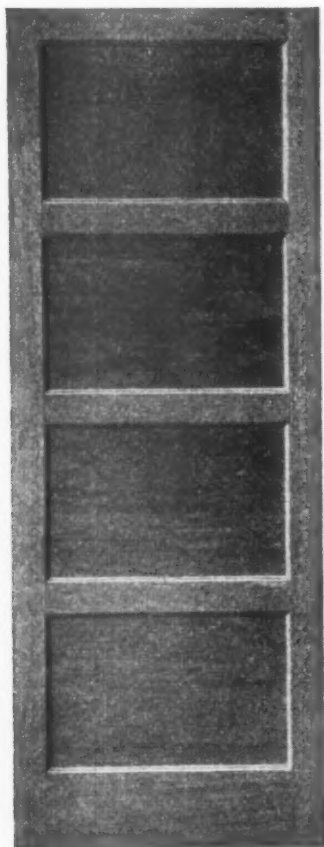
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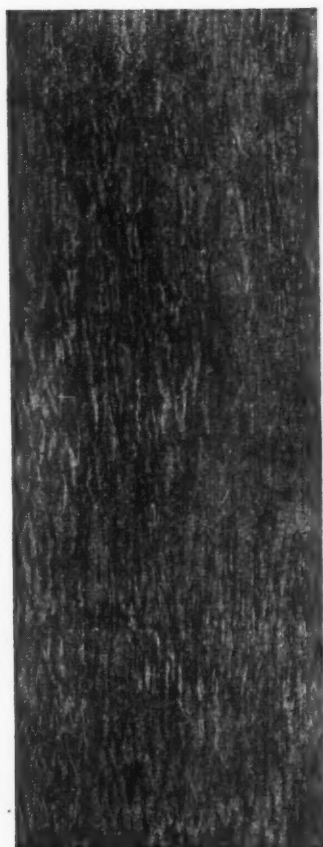
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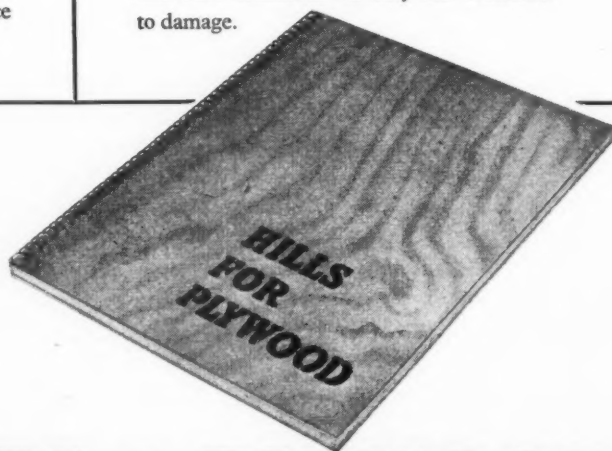
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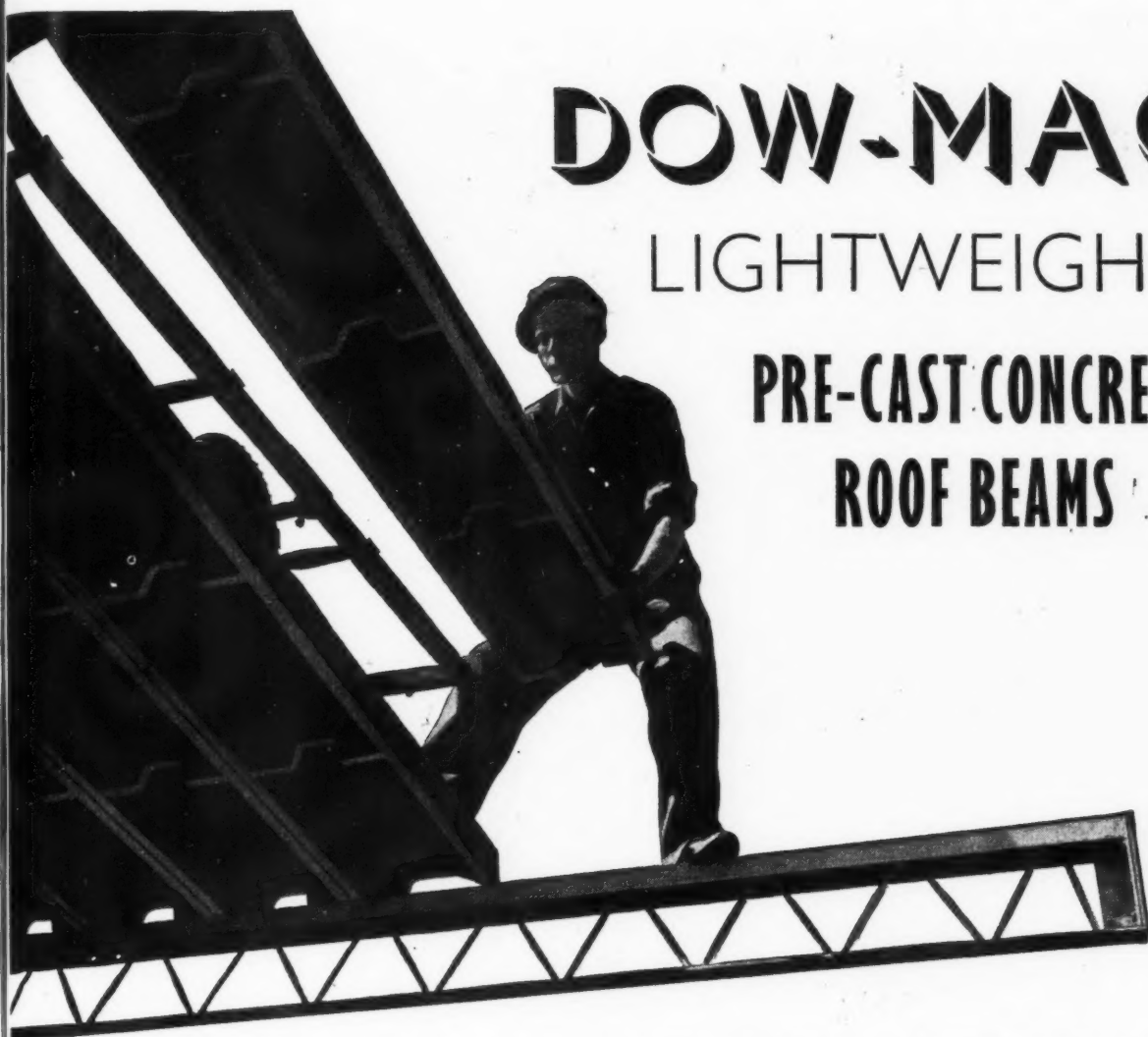
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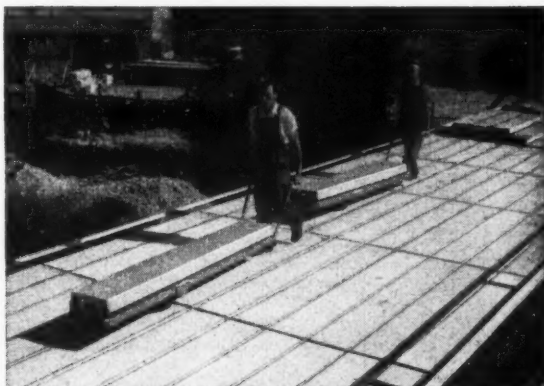
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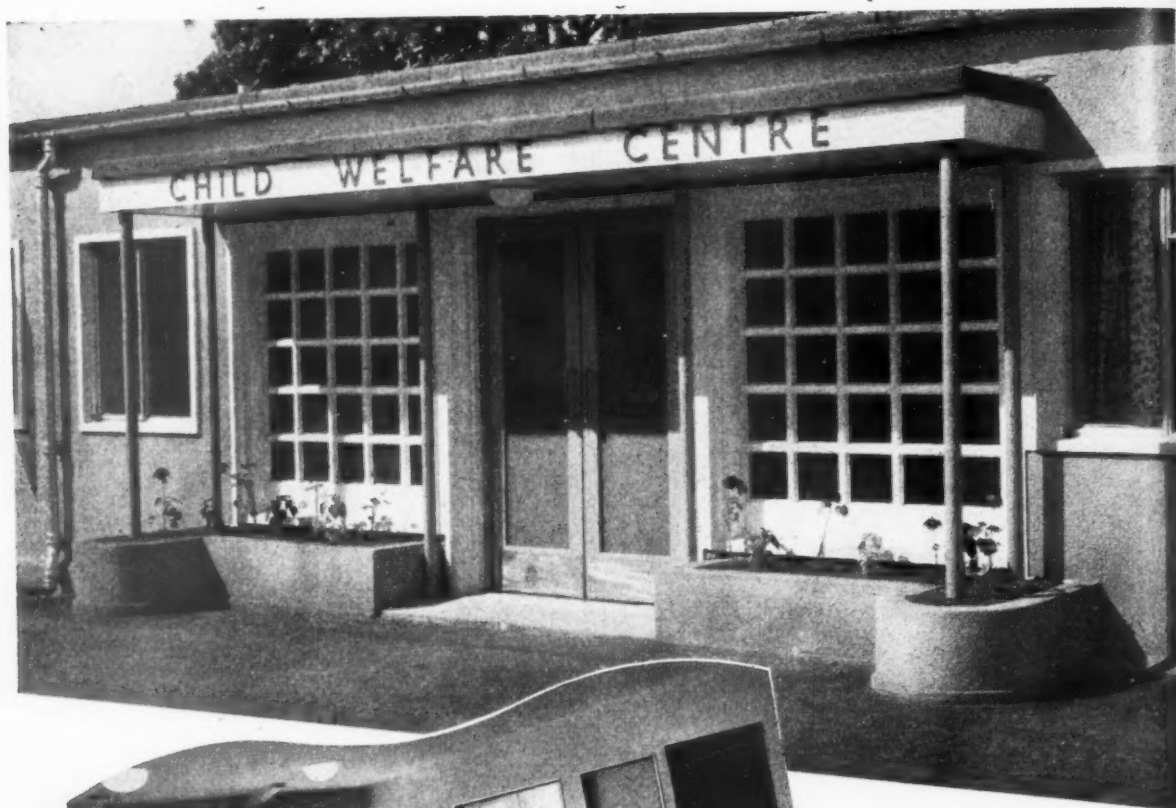
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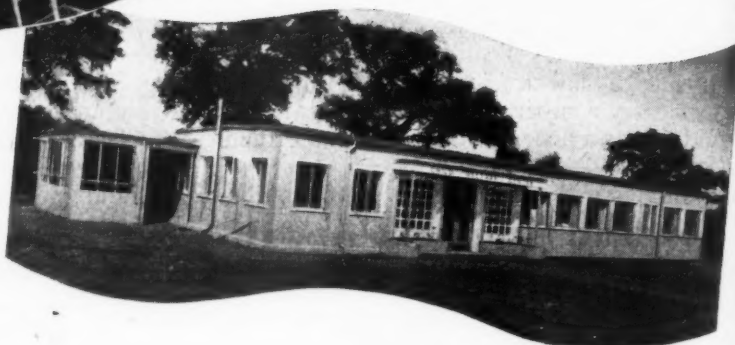
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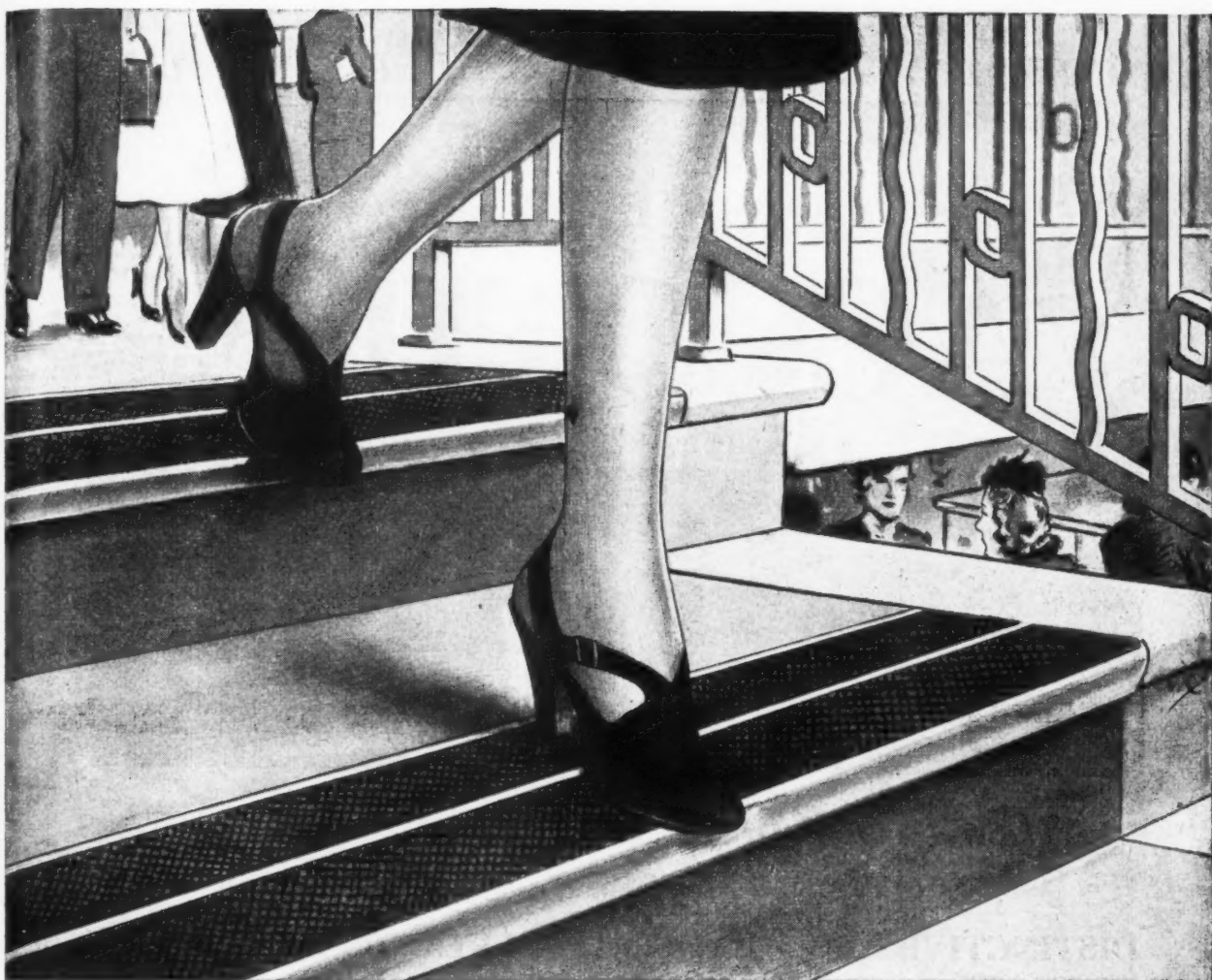


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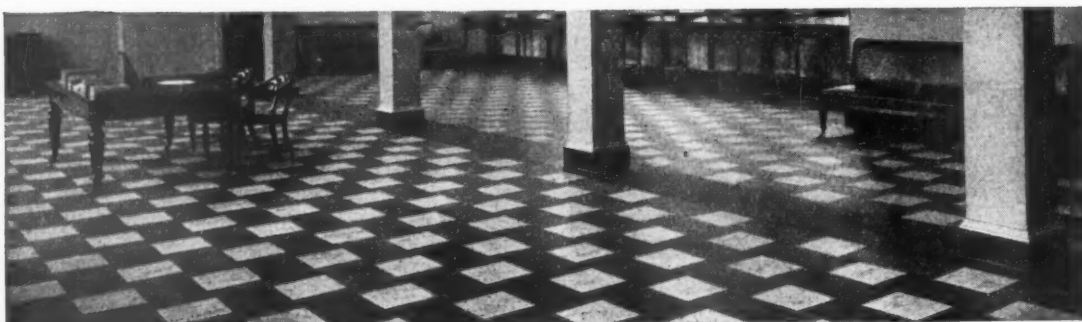
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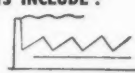
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Kent County Architect.

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##### Architect:

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##### Architect:

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##### Architects:

Wood's Bakery, Perth.

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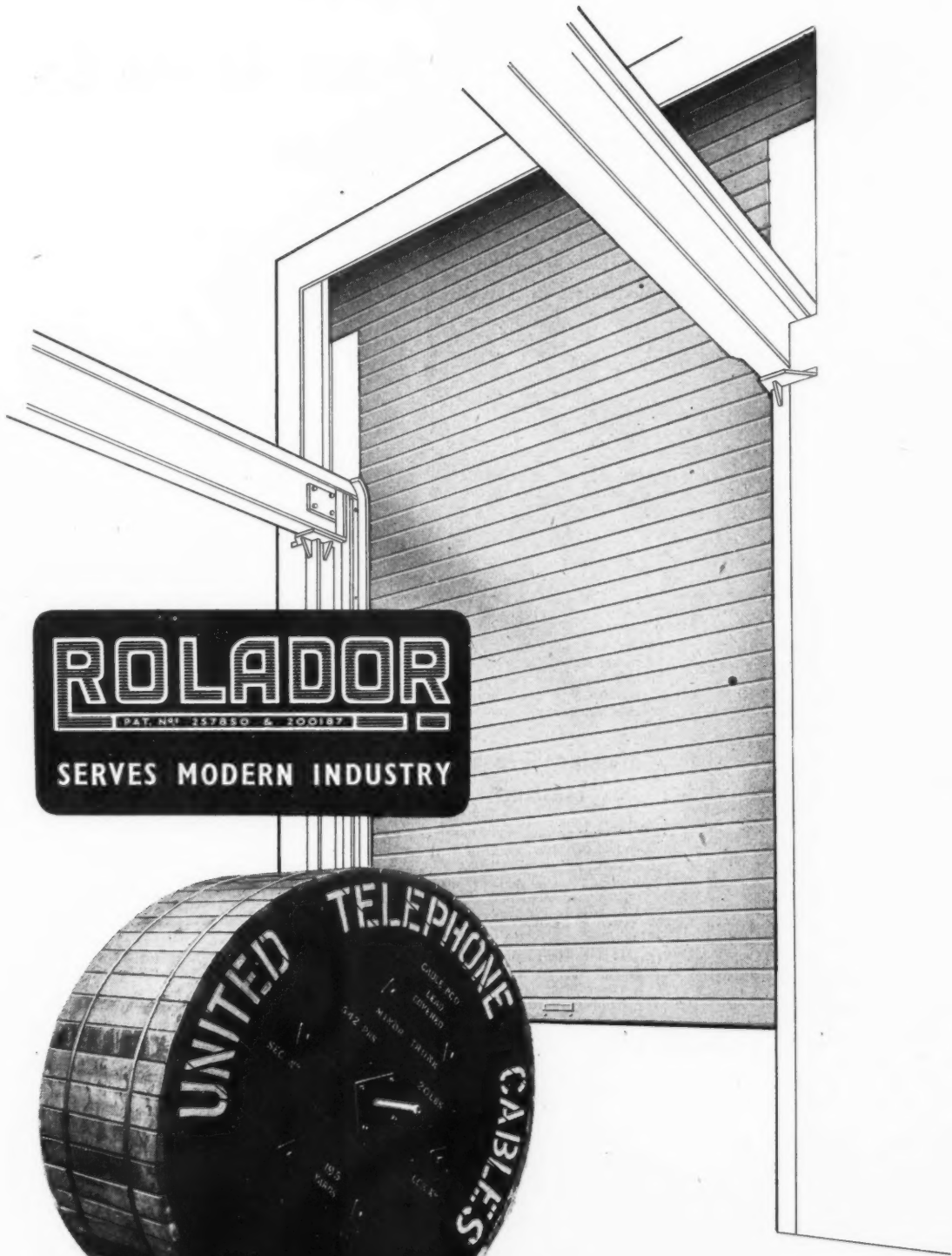
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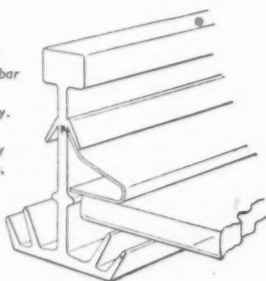


# PROFILE: the Aluminex Patent Glazing Bar and its applications

If it is true that the function of a patent glazing system is "to hold glass permanently in place, in any plane, over any given area by the simplest possible means", then it is by this exacting standard that the Aluminex patent glazing system should be judged.

The examination may most conveniently begin with the profile of the Aluminex aluminium alloy glazing bar. It is a shape completely determined by its function. Nothing about it is by intention ornamental nor is any part of it attributable to an afterthought. It is, in other words, good functional design and by virtue of that, has a pleasing appearance. It consists of a main web with a strengthening ridge at the top holding a necessary weight of metal in balance. From the "spine" emerge ribs on each side to hold the continuous glazing cover strip, ribs to serve as anti-capillary stops for the glass and supporting flanges to receive the weight of the glass. There are further flanges to form drainage and condensation channels.

This Aluminex patent glazing bar is of extruded aluminium alloy. The glass is held in place by the cover strips, one of which is seen here in position.

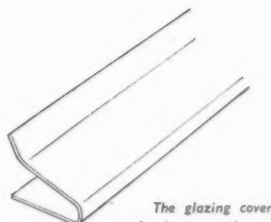


## The role of the glazing cover strip

Complementary to the glazing bar is the glazing cover strip. This is a continuous strip of aluminium alloy rolled into a springy wedge shape which is compressed and pushed into place between the upper rib on the glazing bar and the surface of the glass. It holds the glass without aid from putty, screws, cord seatings or flashings. It fits tightly but "gives" in response to thermal movement sufficiently to make a firm and safe grip for the glass in all conditions.

The glazing bar and cover strip, as well as all the minor fittings are made of an alloy of aluminium, silicon and magnesium in which the proportion of silicon and magnesium is specially determined in order to obtain the maximum resistance to corrosion. (It has been found that the composition of an aluminium alloy is the major factor in the control of corrosion, anodizing and the other surfacing processes being of secondary importance.)

In the case of this alloy the weathering process rapidly produces an extremely hard patina on the surface which thereafter remains static and protects the metal.



The glazing cover strip is a continuous springy strip of aluminium alloy rolled to this shape.

These two basic components of the Aluminex glazing system — the glazing bar and the cover strip — have been designed to fulfil the requirement of the definition, that glazing should be done "by the simplest possible means". As for the other requirements, it has been shown that to ensure security in any plane we have a firm glass holding device and for permanence a corrosion-resistant alloy.

## Aluminex — a method of construction

But examination of many of the applications of the Aluminex patent glazing system suggests a larger claim. Aluminex in fact has been used not merely as a glazing system but as a method of construction in its own right.

It is difficult, for instance, to think of the glazed stretch 1,052 ft. x 50 ft. on the northern side of the Brabazon hangar at Filton as a window (even as the "biggest composite plate glass window in the world", as it has been called.) It is more properly, a "glass wall", and the Aluminex glazing is an integral part of the structure of the building.

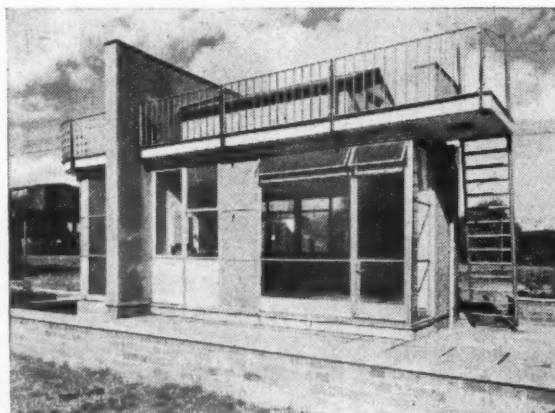
An extension of this idea, although on a much smaller scale, is to be seen in the I.C.I. Experimental building at Witton. Here, as part of the general intention to test the application of non-ferrous metals in various fields, the South West wall is entirely built on a skeleton of Aluminex casement sections. The spaces between the bars are in some cases not glazed but fitted with a variety of solid panels. This construction can best be described as a "grid wall" of a new type, yet it is in fact only an application of the Aluminex method of construction.

## The possibilities of double glazing

By means of modified types of the glazing bar, the Aluminex system provides double glazing which gives a high degree of insulation and freedom from internal condensation. The problems of providing light cladding to suitable buildings can therefore, it is clear, be approached with this system of construction in mind.

In fact, in the hands of an architect of imagination, this young, yet accepted, method of construction has exciting possibilities. This is particularly so in the treatment of industrial and similar buildings where the maximum of light is required. The company may be relied upon for enthusiastic co-operation in all such developments and invites communications from all architects who might like to discuss ideas and projects in this field.

**Aluminex Division of Williams & Williams Limited, Reliance Works, Chester. Telephone: Chester 3600 (7 lines). Telegrams: Reliance, Chester.**



The Experimental building of the I.C.I. Metals Division at Witton. The wall grid seen here holds both solid and glazed panels.

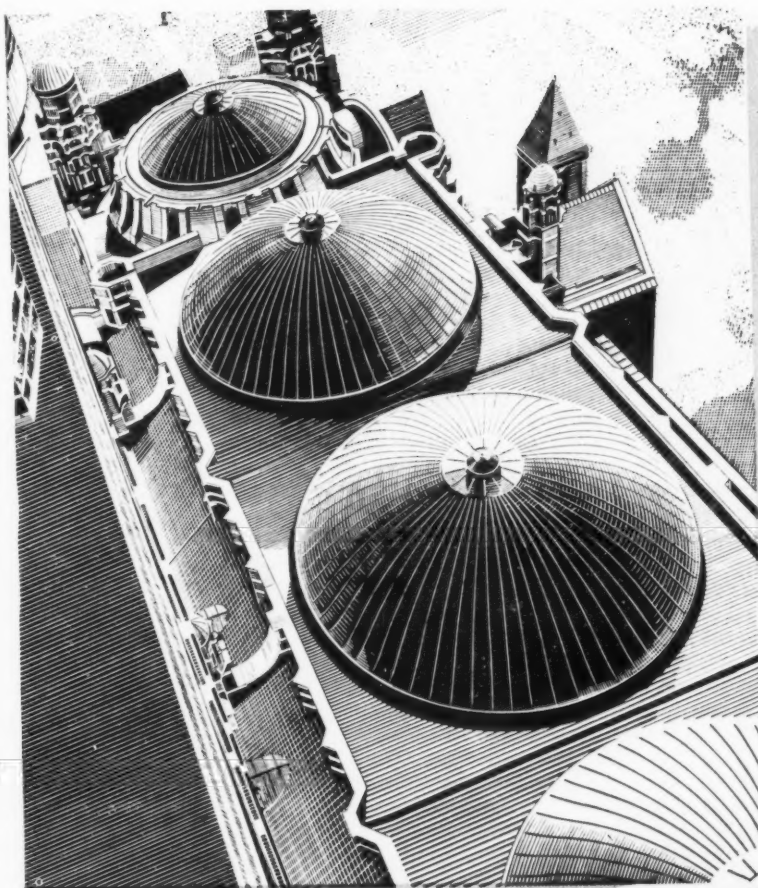












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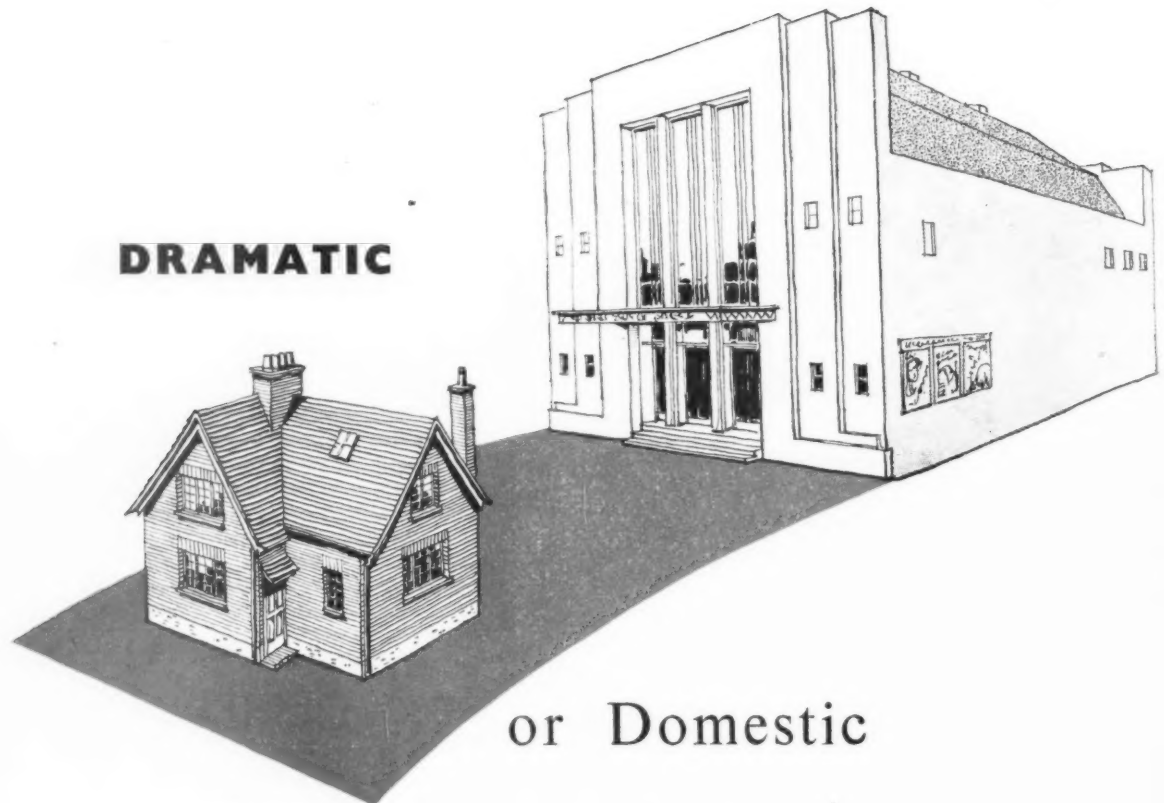
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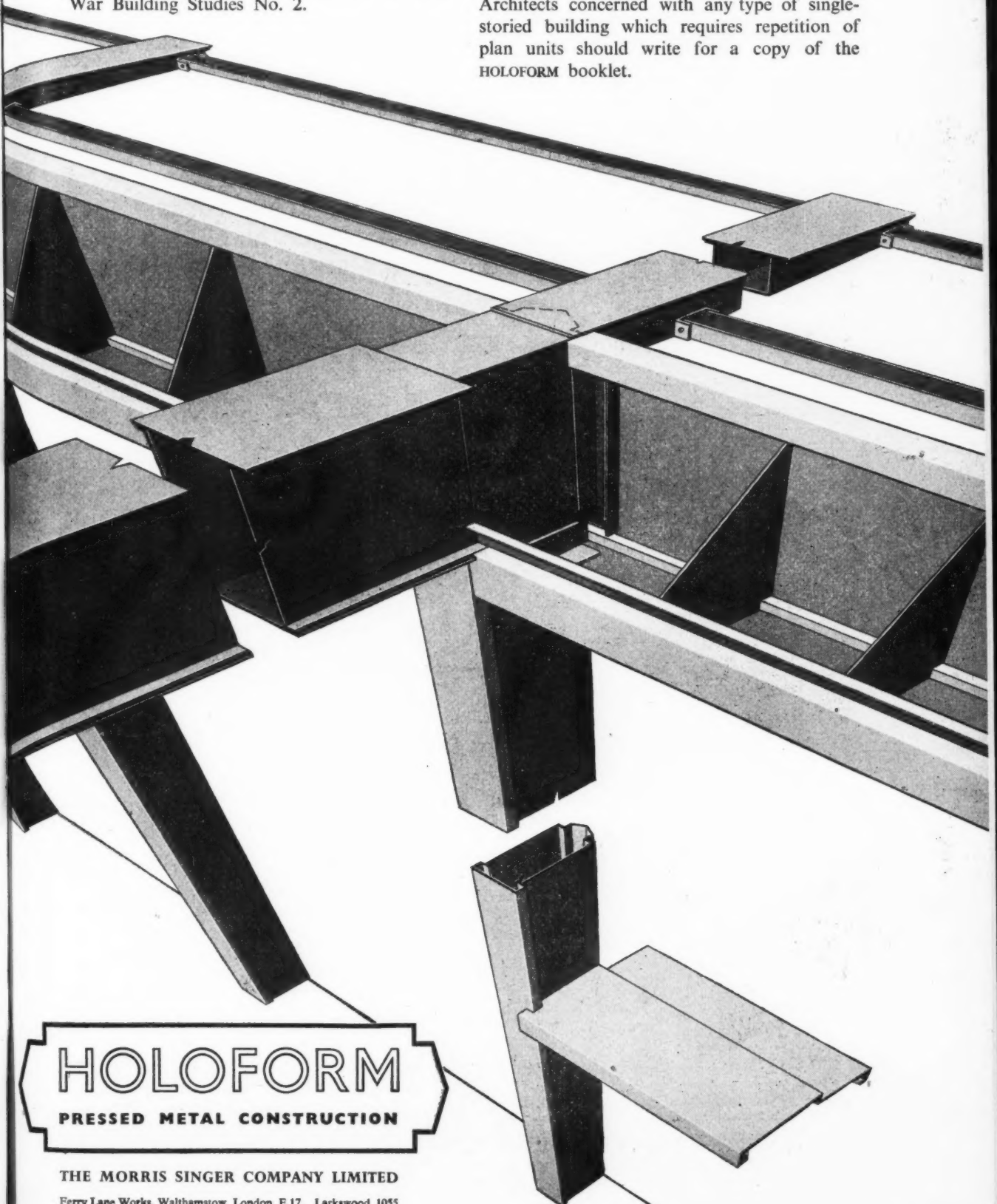


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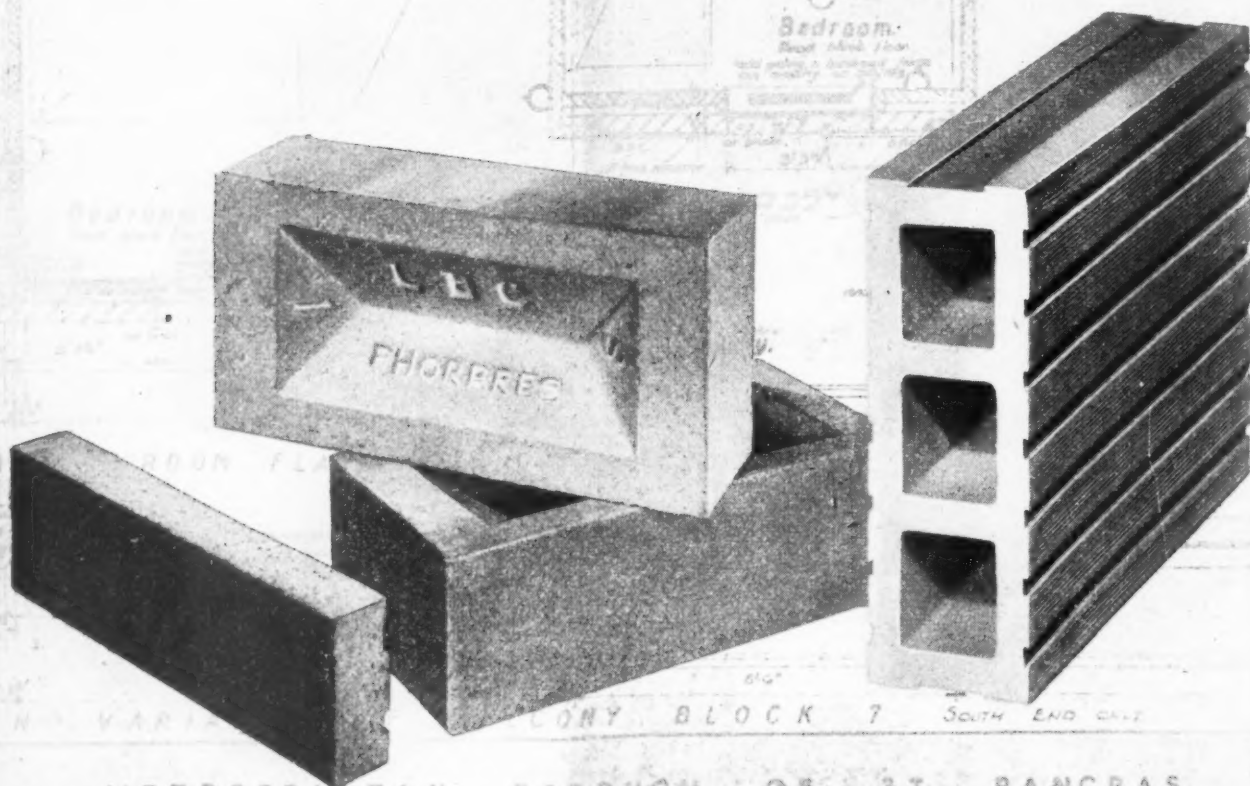




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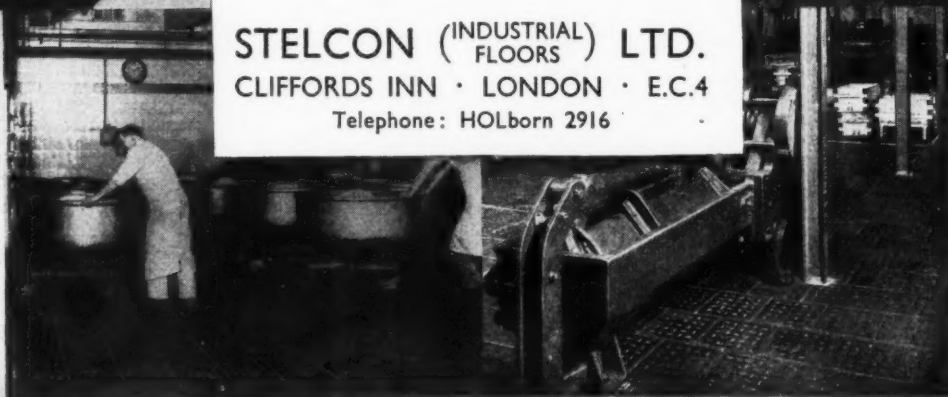
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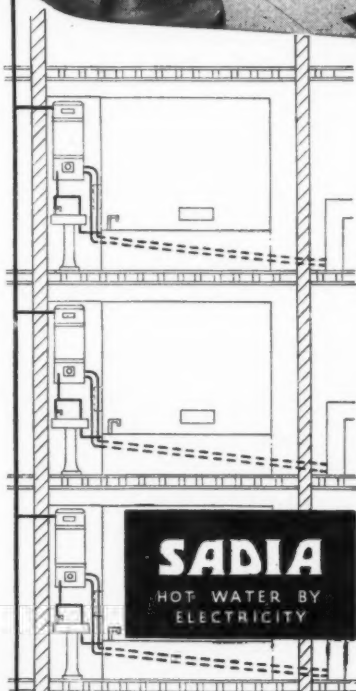
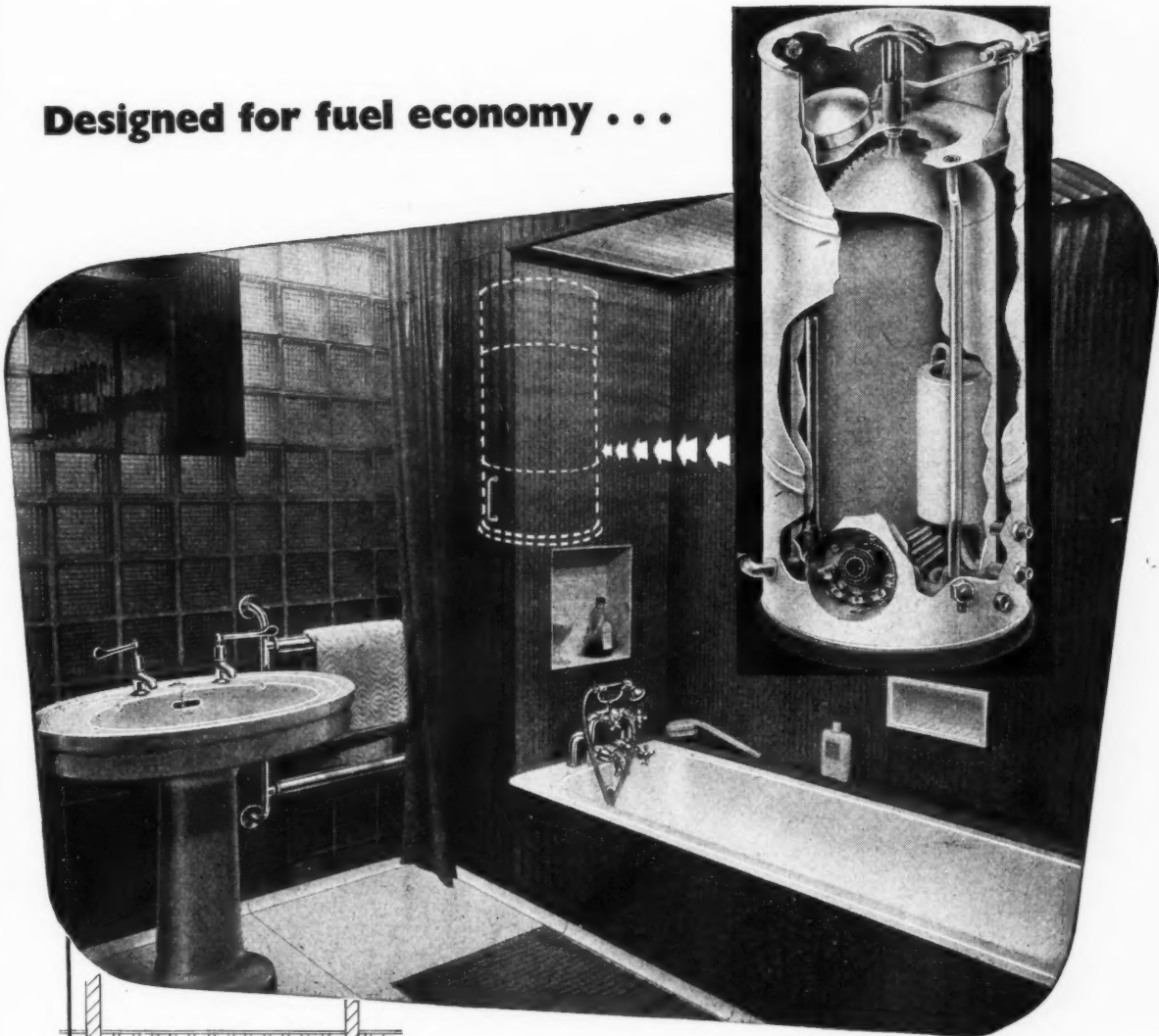
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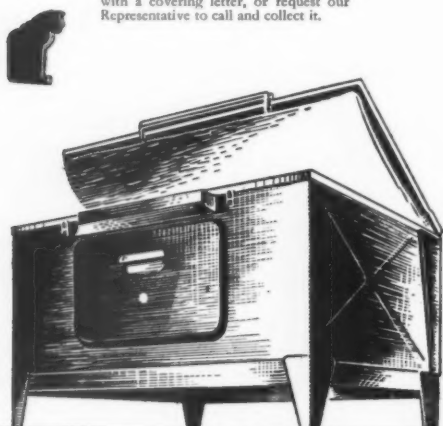




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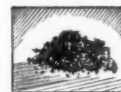
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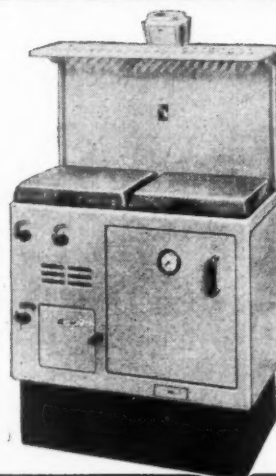


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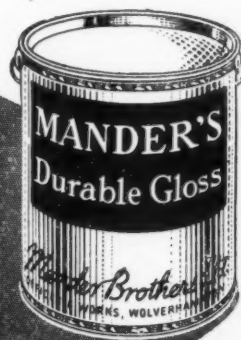


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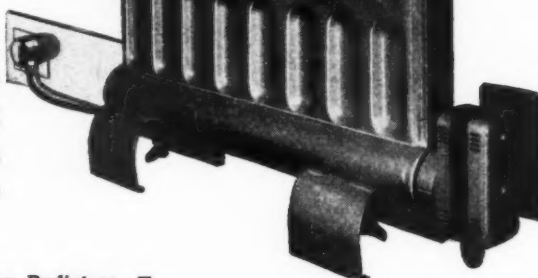
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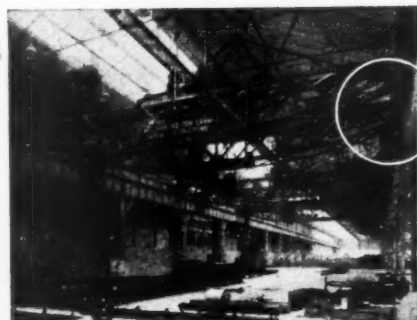
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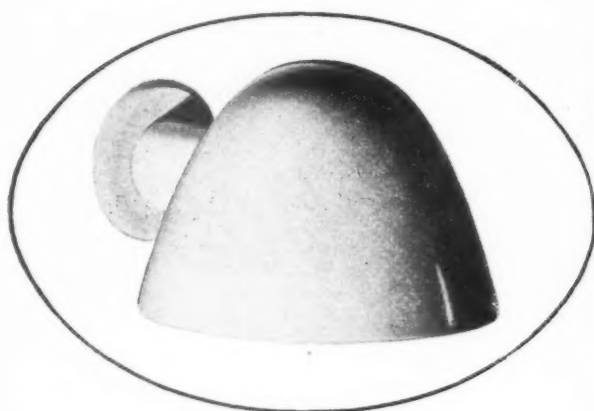
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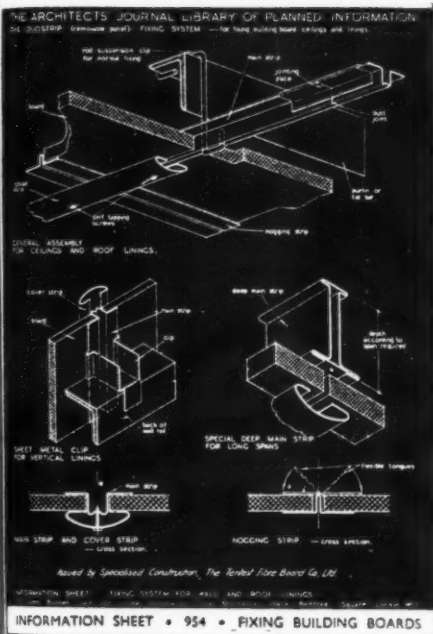
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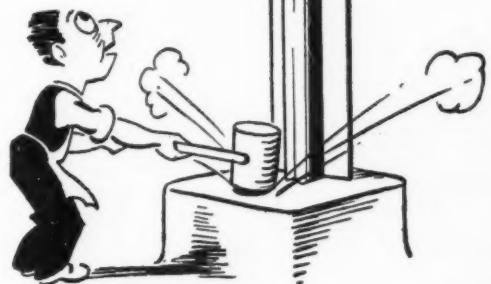
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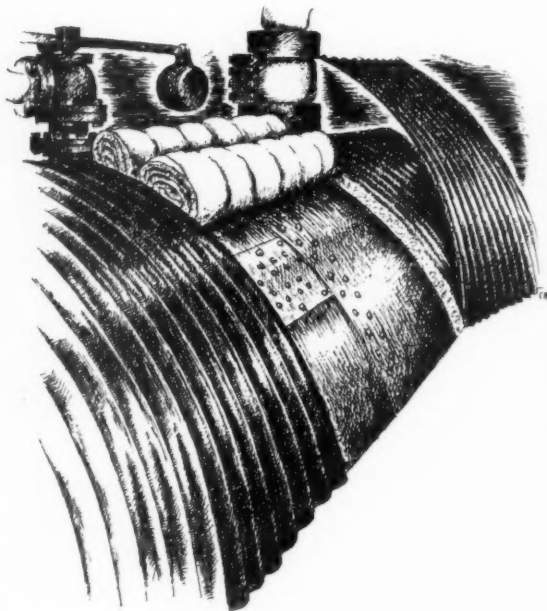
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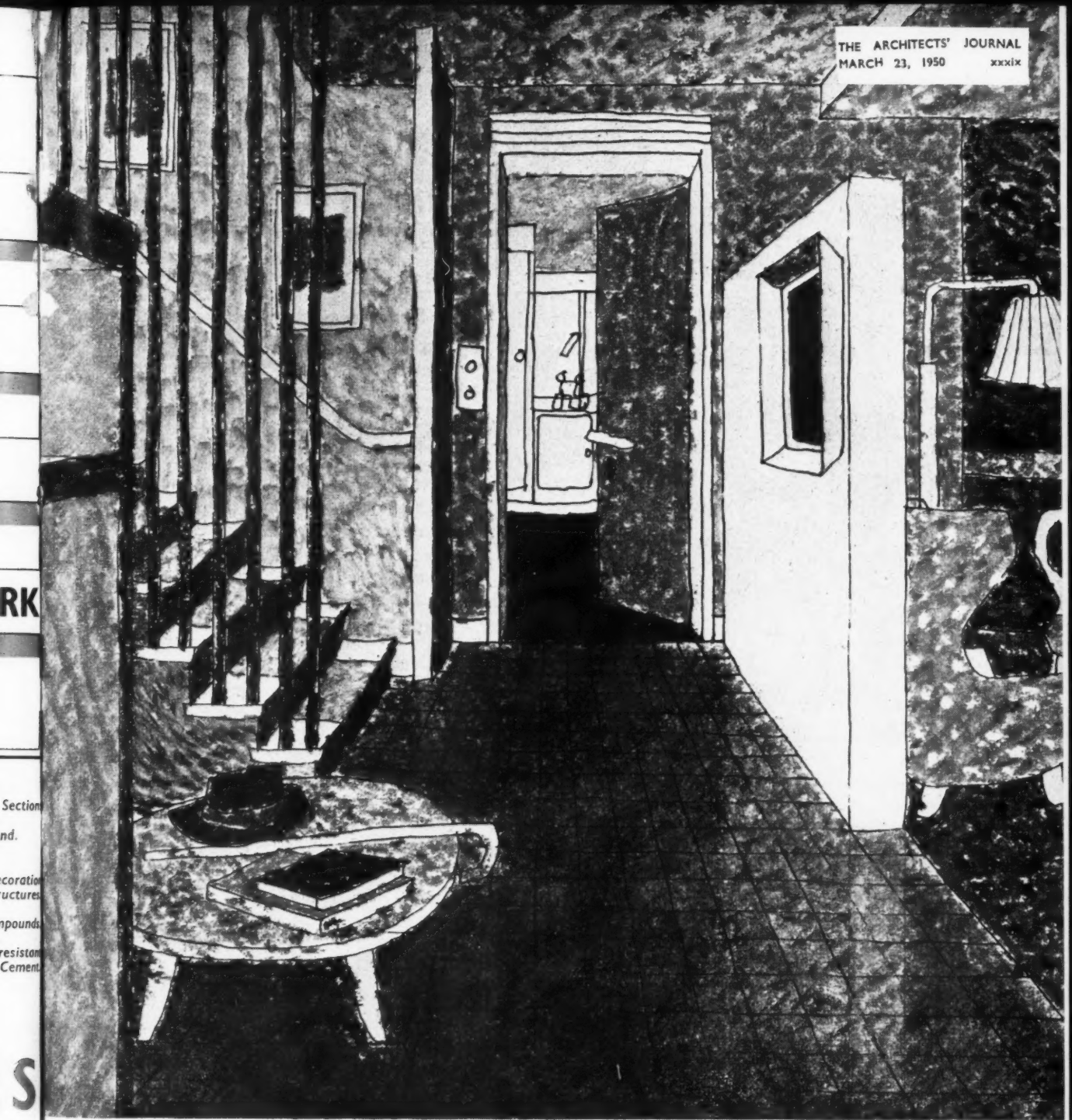
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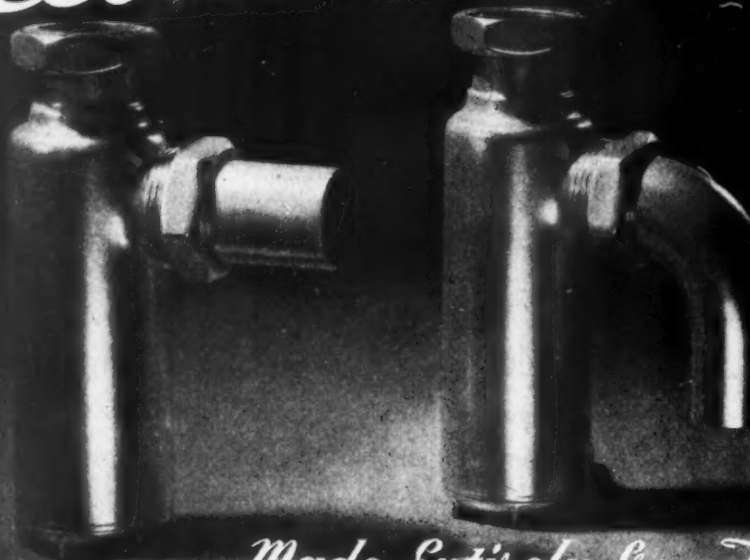
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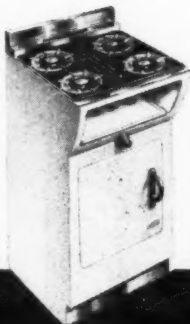


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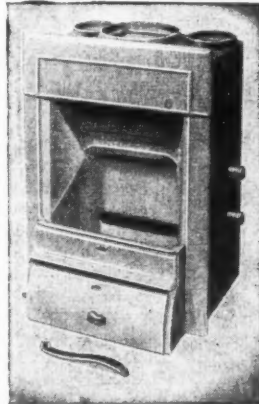
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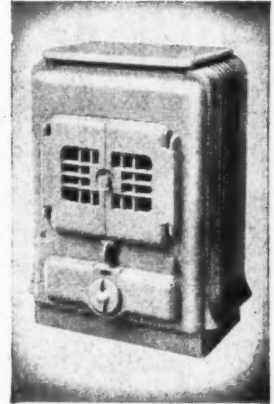
The CHEVIN self-contained flue set is suitable for interior frame or tile opening, 16 in. wide by 22 in. high. The fire-back has a removable plate giving free access to the boiler and main flue. Either copper or wrought welded boilers can be supplied, with tappings at the side, handed as required. Easy access is obtainable by removing the side bricks as shown, and the flue casing has a sliding damper, operated by a tool supplied. An interior frame suitable for slabbing into a surround can be supplied. This set incorporates the Chevin Smokeless Fuel Grate.



The Chevin Grate and Flue Set



The Chevin Convector Fire

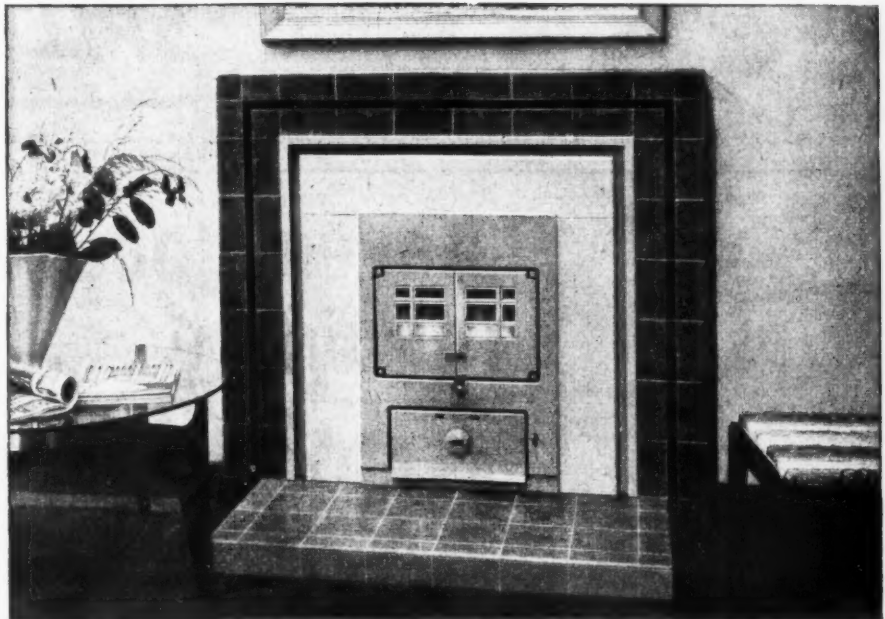


The Siesta Stove No. 2A

## The Chevin Convector Fire

A self-contained open convector fire, using the "Chevin" Smokeless Fuel Grate. When installing the double-cased unit a duct should be provided to supply fresh air to a sump under the baseplate. This air passes inside the convector fire casing, becomes heated, and is directed by ducts to other parts of the house for background heating. Where the single-cased model is used for convection heating in the same room, no fresh air or warm air ducts are necessary. Inlet grills at the base of the surround, and a warm air outlet grill in the surround above the fire should be fitted.

A boiler may be fitted to either model for the supply of domestic hot water, and models are supplied for use with interior frame and tile opening fireplace. With this combination, the Chevin, in one or other of its forms, solves practically all heating problems. Radiation, convection and water heating can be combined or separated in whichever way required.



The Siesta Stove No. 3D in No. 25 Surround

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The boiler output is 10/12,000 B.Th.U's/Hr. depending on fuel. This is equivalent to 16-20 gallons per hour at 110° F. (Cold Water temperature 50° F.) Storage cylinder should not exceed 25 gallons.

## The Siesta Stove No. 3D in No. 25 Surround

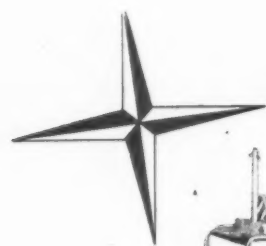
With inset slow combustion stoves and convector fires, some form of removable surround is desirable for access to boiler connections, and for flue cleaning.

The No. 25 Surround has been designed to suit the No. 3D "Siesta" Stove and all models of "Chevin" Convectors. Made of cast iron, it is finished in Vitreous enamel.

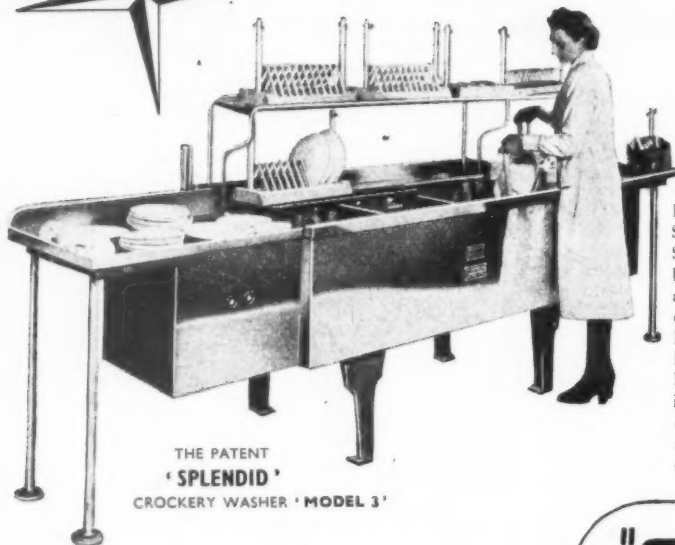
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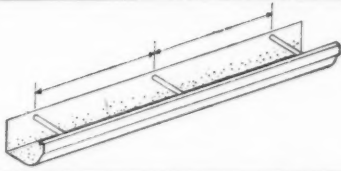
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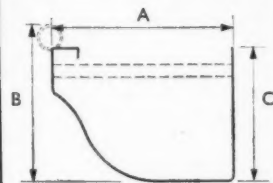


# OGEE ZINC EAVES GUTTERS

DATA SHEET FOR ARCHITECTS No. 6



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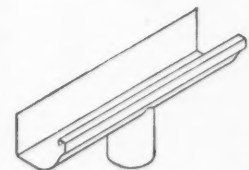


Gutters are made in standard lengths of 6', 7' and 8' and in sizes as follows:—

A	3"	4"	4½"	5"
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C	2½"	3"	3½"	3½"



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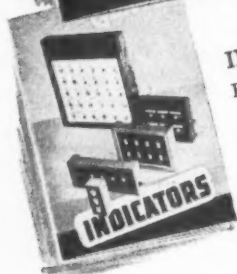
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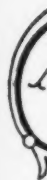






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THE ARCHITECTS' JOURNAL

No 2876 23 March 1950 VOL III

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## THE AA GOES WEST

Readers of the JOURNAL will recall that Professor Gordon Brown, when principal of the AA School, suggested that one of the Association's future developments might be a country school. Robert Jordan has now brought the idea nearer to fulfilment by organizing, in conjunction with the Bath Academy of Art, an International Summer School, which will be held at the Academy's headquarters, Corsham Court, Wiltshire. Clifford Ellis, the principal of the Bath school has given enthusiastic support to the idea of gathering together students of all nations to do practical work, and the Academy's hostels are to be used to house the 150 people who are expected to attend.

Corsham Court, the seat of Lord Methuen, who still lives in one wing of

the building, was built in 1582, but has been tampered with by many hands since that time. The State Suite, with its picture gallery, was designed by Capability Brown, whose architectural activities are comparatively unknown. Brown also laid out the park, which was completed by Repton. It contains a most impressive artificial Gothic ruin, which undoubtedly suggests imminent collapse. There is also work in the park by Nash.

There could hardly be a more delightful neighbourhood in which to attempt the development of a closer understanding between architects, painters and sculptors. The architecture of the West Country provides supreme examples of all kinds of building; the work of Brunel, for the old Great Western Railway, and his Clifton Bridge, together with many early and restored buildings, and silk and woollen mills, provide an epitome of architectural history of the last few hundred years.

It has frequently and truthfully been said that the majority of architects are urban products, and have little fundamental understanding of rural problems. Here is the first serious attempt to change this situation. Although three weeks may seem a short time in which to immerse architectural students in rural problems and rural delights, it is at least a beginning. It is certain that neither of the principals of the two schools, Mr. Ellis and Mr. Jordan, will neglect the further development of this excellent scheme.

## BURLINGTONIANISSIMO!

Horace Walpole writes somewhere of his surprise and delight on first seeing the forecourt colonnades of Burlington House, at dawn after a ball there. The

previous evening he hadn't seen them in the dark, and it went without saying that one didn't notice the architecture of other people's town houses without at least an invitation to dinner. To every portico its party, as it were.

Those colonnades have made way for learned societies; but the noble tradition of combining the appreciation of architecture with a social occasion was worthily maintained at Burlington House last week, when the Georgian Group held a reception in the very rooms in which Walpole danced the night away. One had the impression that no-one would have been in the least abashed if the architect earl himself had walked in, and at least one guest is prepared to swear that on returning from the buffet he saw the Group's chairman talking to the ghost of William Kent.

And even if the Georgian Group did spring into being a good many years too late to save Lord Burlington's colonnades—as it would undoubtedly have done but for that error of chronology—it made ample amends the other evening by putting on a first-rate exhibition of other Burlingtoniana, collected from here, there and nearly everywhere you can think of.

## MEETING ABOUT THE BUSH

For some time I have been bewildered by a suburban pub sign, on which the words "The Three Pigeons" are accompanied by a painting of a four leafed clover or some similar botanical rarity. Precious moments of my life have been wasted in speculation as to what this meant. But last week the mystery was cleared up for me by Lt.-Col. John Codrington, who told members of the London Society that certain bye-laws forbid





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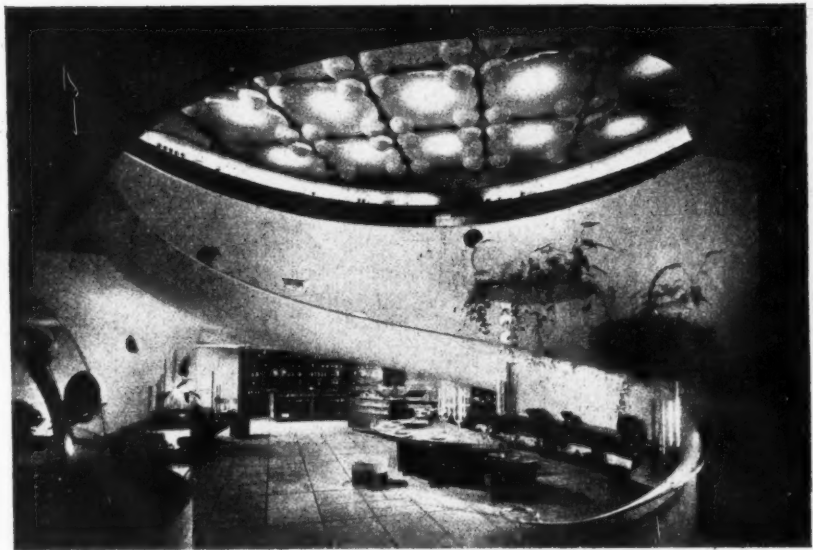
the hanging of ordinary inn signs but permit advertisements to be hung. No doubt my four leafed clover, or whatever it is, symbolizes nothing more than a brand of beer.

\* \*

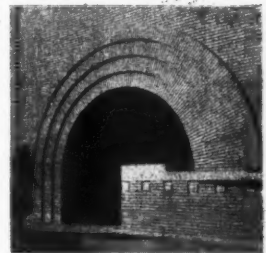
The speaker who enlightened me was addressing his audience, which included a number of brewers who had been specially invited, on "The London Pub in the London Scene," a subject that was worthy of better treatment than he gave it. His talk was largely made up of captions to a series of interesting lantern slides of Georgian, Victorian and modern pubs. However, he did make one or two points which the brewers present would do well to take to heart. The exteriors of ugly gin palaces could be improved, he said, by a bright or light colour wash, the addition of window boxes, and the substitution of well designed signs in place of unnecessary advertisements. It would be difficult, of course, to persuade a brewer that any advertisements are "unnecessary"; few of them are followers of the maxim that "a good wine needs no bush." Nevertheless, many of them would surely agree that while the real function of the hanging sign is to give point to a good design, it may also be used effectively to distract the eye from the dismal façade of an ugly Victorian or modern pub, and may thus have some sort of advertising value in itself.

\*

Incidentally, Colonel Codrington made several surprising statements. "At one time," he said, "it was considered rather immoral to make pubs look nice." As most people thought of pubs as dens of iniquity the idea arose that "the more ugly the pub was the better, because the less people would be likely to go into it." This is the first time I have heard it seriously suggested that the Victorians and Edwardians were consciously striving for ugliness in their architecture; I had the impression that ugliness came naturally to them. But the speaker evidently has some unusual views about architecture. One pub he described as "admirable architecture, but with nothing human about it." Another was, in his view, "a very good building but rather uninteresting architecturally." After this I felt I



*Following the publication, on November 10, of a photograph of the exterior of a shop in San Francisco (right) designed by Frank Lloyd Wright, the JOURNAL has received a great deal of correspondence, some attacking the work, and others defending it. One reader pointed out that it was unfair to show only the outside of the building so here is an interior view, which recently appeared in the "Architectural Forum."*



was listening to something by Oscar Wilde and tried unsuccessfully to read a paradoxical epigram into every sentence.

#### LOCAL DESIGNERS MAKE GOOD

Talking of pubs, we shan't have long to wait now for the results of the *Review's* pub competition. I haven't seen any of the designs, of course, but the assessors have been busy and I am told there are a number of entries of a very high standard.

\*

The result should make a real contribution to solving one of the most difficult architectural problems and the exhibition of the designs at the Victoria and Albert Museum (April 4 to 29) will ensure a wide public for them.

#### YOUR FRIENDS WILL TELL YOU

Many months ago I mentioned that some bright American tycoon had evolved a scented rubber floor. Now I find that the same thing is available here. For 10 per cent. more than the standard tile price one can have a floor scented with "Eau de Cologne, Laven-

der, Bouquet Rose, Carnation, etc." As far as I know the firm concerned makes admirable tiles but if I must have smells thrust at me I would favour Aldous Huxley's "Feelies," in which, if you remember, a cinema audience was expected to use its nose as well as its eyes.

I console myself with the reflection that my life may now be easier. If I say (rashly) that I think a building smells, it need only be assumed that I think the bathroom floor ought to be "Shocking" rather than Chanel No. 5.

#### HQ FOR ICA

That lively organization, the Institute of Contemporary Arts, whose current exhibition, "London-Paris" at the New Burlington Galleries is well worth seeing, has now brought architecture within its field of activity. One day it hopes to approach this subject from a more practical point of view by building its own headquarters; meanwhile, it has persuaded a number of architectural schools to set such a building as a design subject. Members of the ICA advisory council





## *International Summer School*

Corsham Court, Wiltshire, shown here, will be the headquarters of the International Summer School to be held between August 25 and September 15 this year by the Bath Academy of Art, which is in residence there, and the Architectural Association. The Schools hope to provide a forum in which students of painting, sculpture and architecture from many countries can consider not how painting and sculpture can be "applied" to architecture,

but how those arts can again become one. Corsham Court is well situated for visiting places of historic and contemporary architectural interest. The mansion itself, the seat of Lord Methuen, was built originally in 1582. In the middle of the 18th century "Capability" Brown designed the State Suite containing the magnificent picture gallery, and also the Park, which was completed by Repton. (See also news item on page 359.)

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briefed the students on requirements for the headquarters, and I am told that some first rate ideas have been put forward.

\*

Each of the schools taking part in this shared programme, which includes three London schools—the AA, the Bartlett and the Northern Polytechnic—and three provincial schools, has been asked to select the best designs of its students and send them to an exhibition to be held in Bedford Square in April. Although they have not worked to exactly the same schedule of accommodation (as some schools were able to give more time to it than others, and therefore to set a more ambitious programme), it will be interesting to see how different schools tackle the same subject or whether, in fact, an identical idiom is to be found everywhere.

#### COUNCIL'S GOOD COUNSEL

Holborn, an enlightened borough, has been having as much difficulty as most with its housing problem. The waiting list is as long as ever it was and there are hardly any sites available for building. In an attempt to keep the residents in the picture, and to show them that the Housing Committee is not just standing still, every inhabitant has been sent a circular explaining in detail the drill which has to be gone through before a block of flats can even be started. Here are details of the whole rigmarole with which architects are only too familiar, but which has been unknown to the unfortunates who sit hopefully way down the waiting list and watch nothing happening.

\*

Holborn has, to a limited extent, given up the struggle and recommended all those who do not have to live in London to ask the LCC for homes somewhere in the Greater London area. It seems to me that this borough, which has a waiting list of over 1,000, and is still awaiting LCC approval for five small blocks of flats, is to be commended for telling people of the many months of delay that are inevitable even if schemes go through the four essential stages at copybook speed.

ASTRAGAL

## The Editors

### SALARIES OF THE FUTURE

IN two or three years' time, we stated in last week's JOURNAL, the average annual income of those working in or for a private practice will be in the region of £366 per head. This is based on three suppositions. First, that the amount of money spent each year on building will remain constant. Second, that the bulk of the large number of post-war students will then be attempting to earn a living. Third, that the clients of the building industry will cease employing architects to prepare designs for which they will not be able to obtain licences to build.

The figure of £366 is, of course, an average one. The next step is to show the actual amount which will be earned by architects and assistants from the top to the bottom of the financial scale. Accurate figures cannot be obtained, and are in this instance based on reasonable conjectures. Of the total of twenty-one thousand architects and assistants, perhaps one hundred will earn £5,000 or over a year. Another nine hundred may earn £2,000, and a further two thousand earn £1,000 a year. This means that three thousand architects, representing the bulk of the principals and seniors of the architectural firms in the country, will collect £4,300,000 of the £7,962,500 available. The remaining £3,662,500 will be shared among eighteen thousand assistants, at an average of £203 a head. This figure is startlingly low. It can be safely assumed that, in fact, the average salary will, for architectural assistants, not drop so far. What is more likely to happen is that a very considerable number of the lower paid assistants will be unemployed.

This is a depressing picture to paint, but it is as well for the profession to be aware of this possibility, so that steps can be taken to avoid the dangers of an architectural slump.

### SECONDARY SCHOOLS

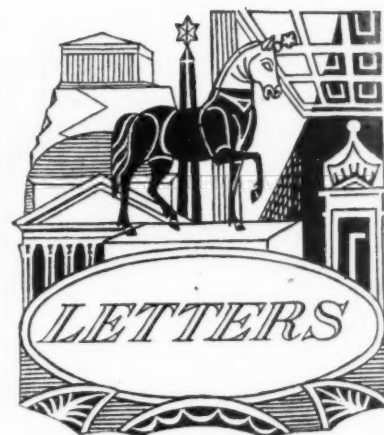
This week we publish a review of the MOE's Building Bulletin on Secondary Schools. More space than usual has been given to this review because we feel that this report is the most effective demonstration of an analytical approach to architectural problems to have been made by any Ministry. Much of the school building since the war has been unexciting and, perhaps, rather inefficient. Structurally too many new schools reflect the influence of Ministry of Works hutting and the army camp; educationally too many reflect no coherent concept at all. Who is to blame? The teachers, for not saying what kind of school they wanted? The local authorities, for failing to cut through the intricacies of procedure and controls to get at the fundamental problems? Architects, for being too overwhelmed by the shortages of materials and labour to develop new ideas? Or the MOE, for having regulations which are too restrictive?

This last defect, at least, looks like being remedied by the series of Building Bulletins. This Bulletin, and its predecessor



on primary schools, suggest that the MOE is engaged on an unusual policy: to use the need for economy to give the designers of schools more freedom. The old building regulations which prescribed, box by box as it were, most of the rooms in a school, are to be replaced by a new set which will state simply a total figure in square feet for all teaching accommodation (which includes halls, gymnasias and dining rooms) and another total figure for teaching storage. Virtually the only other limiting factor is to be the figure of cost per place. This, at £240 for 1951, compared with £290 for this year and £320 in 1949, is a tough problem; but the new method of control presents the challenge in a most attractive light, for it gives everybody concerned much more freedom of manœuvre. We hope that the Ministry are prepared to be, and will be, taken at their word when they say that the suggestions in the Bulletins are not the only solution. It will be to the benefit of school building if the Bulletins stimulate many different answers, from many different sources. Such solutions, though primarily the task of the architect, cannot be solved, however, without the full participation of the building industry as a whole. This Bulletin is concerned mainly with planning. No doubt future numbers will deal with structural techniques in an equally challenging way. Now is the moment for specialists in building materials, heating and lighting, and for manufacturers of fittings and furniture to start reconsidering the needs of school building so as to ensure the maximum economic utilization of their products and resources, and thus meet in advance the challenge which the Ministry will soon present.

There remains the criticism that whatever the merits of post-war school buildings as structures they are not very good as schools. There seems to be something in this and it reveals a weakness in the link between architects and educational experts. Bulletin No. 1 urged the importance of teamwork in this respect. Bulletin No. 2 returns to the same theme. And it is one of the merits of both Bulletins that they are fundamentally educational documents: they go back to first principles and try to consider what really goes on in a school. No preconceived ideas are regarded as sacred. No panaceas are prescribed. Many of the suggestions will provoke argument. But that is all to the good, especially if the argument is well-informed. The Ministry of Education is to be congratulated on introducing flexibility where rigidity had threatened, and on making a lively contribution towards meeting the triple challenge of quality, cost and speed. We have, since the war, struggled through an era in which much has been sacrificed to the outstanding need for speed. The next phase should surely be dominated by quality: quality educationally, quality architecturally, and quality in spite of economy. This is not the task of the architect alone. It is the task of the teacher and the builder, the administrator and the tradesman, the councillor and the manufacturer and, not least, those who provide the money.



(A. G. Stanwell, A.R.I.B.A.)

(S. J. Worsley)

### Suburban Harmony

SIR,—On the question of eliminating front garden fences altogether, I would agree with Astragal (March 9) that the rights of compulsion do not or should not exist, but I would also contend that the compromise design for the Bessingby Estate is the best form of persuasion to inspire many who are all too insular, to become more communally effective, with the fronts of houses "pleasant, carefully designed open spaces." Perhaps Astragal is all too aware of the famous Voltaire philosophy: "*Il faut cultiver notre jardin*," but as Voltaire himself clearly illustrated in his own life, he had no time for a "fugitive and cloistered virtue," shutting himself off or hedging himself in.

On a housing estate where I was able to give some assistance, my humble opinion is that one of its redeeming features is the open layouts in the front gardens.

Again, however, if such communal planning is interpreted as "socializing" "mutualizing" or putting individuality second, I cannot help feeling that Mr. Culpin's preservation of the completely fenced-in back garden is also an excellent compromise, and more likely to preserve the individual's rights than allowing personal whims on every side.

If this is sentimentally permitted there will be the usual swing over to the other extreme (to which the human mind is all too prone) and we might arrive at the "Exhibition Style" coined by Mr. Gordon Cullen in your New Year issue, an era in which there would hardly be a flower box worth cultivating, let alone individual freedom.

A. G. STANWELL.

Beckenham.

### Building Courses

SIR,—In your issue of March 9, under the heading ABT, there is a reference to this College. I have no wish to comment on the arguments set out, but merely to point out that while there is overcrowding in the Final Evening Courses in Building and Quantities, all suitable Candidates in other Courses have been accepted and there are a few vacancies. Even in Building and Quantities (Evening) the waiting list is very small compared with that in the preceding post-war years.

S. J. WORSLEY.

The College of Estate Management,  
Kensington.



## BUS INQUIRY OFFICE AT REDHILL



AA

## International Summer School

The summer school, which is to be held by the AA and the Bath Academy of Art at Corsham Court, Wiltshire, from August 25 to September 15, is primarily intended for students of architecture, painting or sculpture. Students' applications should give details of training, etc., and be supported by a recommendation from the principal of the college or the equivalent. Applications will be considered from students at any stage in their training, but if the number of applications exceeds the number of places available, the school authorities reserve their right of selection. About 150 places will be available, and these will be allocated between (a) students from abroad, (b) students of the Bath Academy of Art, and (c) students of the Architectural Association School, London. A few places will also be offered to students of drama, ballet, music, etc. No applications can be considered for part-time attendance.

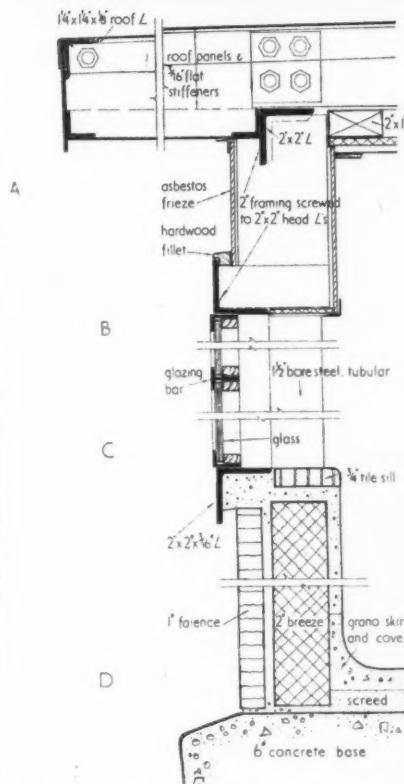
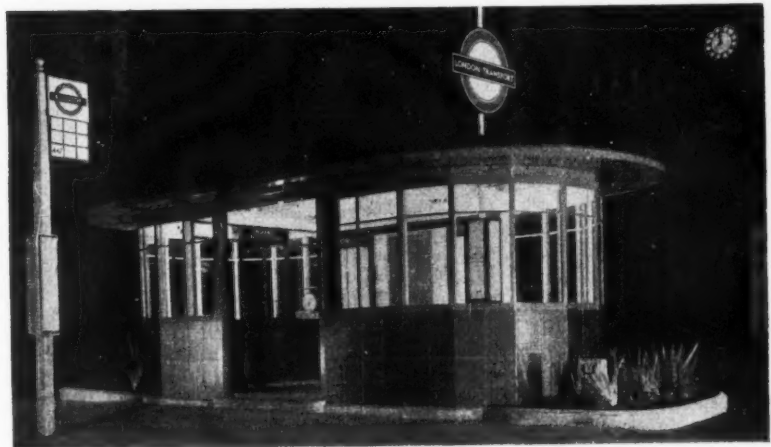
Lectures and discussions will be in English, so a certain knowledge of that language is essential.

The cost of the summer school will be £5 per week per student (£15 for the whole period). This is inclusive of full board and lodging, tuition and lectures, and three excursions run in conjunction with the school. The only extra cost will be the journey to and from Corsham Court, the cost of drawing materials, private excursions, and purely personal expenses.

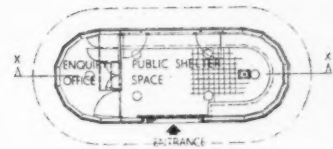
Students will be accommodated in bed-sitting rooms in hostels belonging to Corsham Court.

The nearest main-line stations to Corsham Court are Chippenham (4 miles) and Bath (9½ miles), and there are regular bus and train services from there to Corsham. There is a regular train service from Paddington station, London, the return fares being £1 5s. 7d. and £1 9s. 4d. respectively. On Friday, August 25, and Friday, September 15, there will be special buses between Bedford Square, London, and Corsham Court, and students using these will find that there is a slight saving compared with the railway.

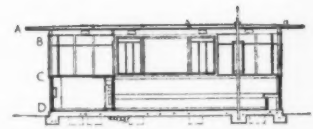
Corsham Court is ideally situated for visiting places of historic and contemporary architectural interest. The surrounding country is some of the loveliest in England and is particularly rich in country houses, farms and villages. Bath is, of course, the finest 18th-century town in England. Apart from visits to Bath and places of interest near Corsham, three full-day bus excursions are included in the cost of the summer



Details at A, B, C and D [Scale 2"=1'0"]

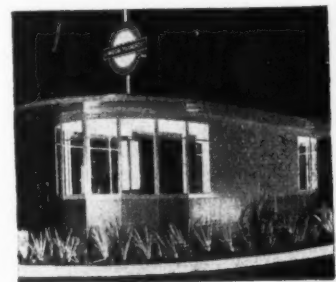


Plan



Section X-X

[Scale: 1/4"=1'0"]



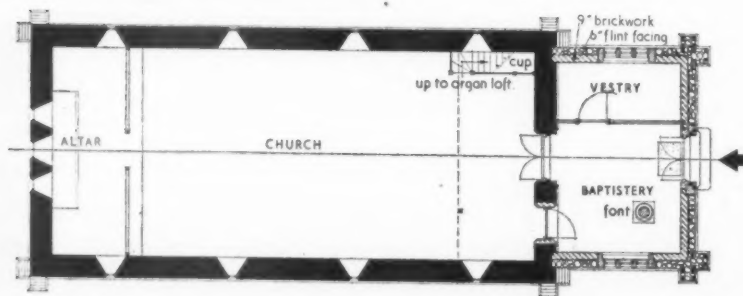
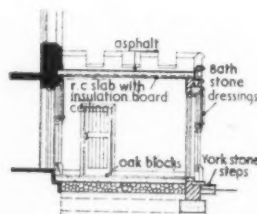
The combined inquiry office and waiting room for country buses in Station Road, Redhill, is constructed of a light steel frame on a concrete base slab. The main frame consists of 1½-in. bore steel tubes having 2-in. × 2-in. × 3/16-in. steel angles welded to the external face, forming a head and cill frame to windows. The lower part of the walls is filled with concrete blocks and faced externally with black faience slabs, and the upper part is of steel sash windows and poster panels of enamelled iron. The interior is plastered and painted. The roof is covered with 18-gauge steel panels, bitumen painted, and the ceiling is lined with insulation board. The waiting space floor is tiled and the joinery and seat are of teak. The architects were Thomas Bilbow, G. C. Manly (Section Architect) and D. J. Routley of the London Transport Executive. The general contractors were Messrs. E. Pollard, Ltd. For list of sub-contractors, see page 382.



## CHURCH EXTENSION AT MIDDLETON



To mark the centenary of the Church of St. Nicholas at Middleton-on-Sea, the Parochial Church Council decided to erect a single storey extension at the west end. This provides proper accommodation for the font and vestry and forms an entrance lobby, as well as allowing additional seating space. The entrance doorway has been left in its original form but an additional doorway in the same wall will help the congregation in the baptistry to hear the service. The plan and section below are to  $\frac{1}{8}$ "-in. scale. The architect for the extension was Dorian H. S. Prince. The general contractor was H. W. Seymour and Son, Ltd., of Bognor Regis.



school: (1) the Cotswold area, including some of the finest small towns and villages from the 14th to 18th centuries; (2) Cirencester, Gloucester and the industrial development area of South Wales; (3) the cathedral cities of Salisbury and Wells.

The summer school will be under the direction of Clifford Ellis, principal of the Bath Academy of Art, and Robert Furneaux Jordan, principal of the Architectural Association School, London. They will be assisted by members of the staff of both schools, and by visiting lecturers.

Fuller details of the summer school, including further application forms, may be obtained from M. S. Colborne Brown, AA School, 34-36, Bedford Square, London, W.C.1. Completed application forms must be returned not later than May 1, 1950. Students will be notified by May 22 whether or not they have been selected for the summer school.

## COMPETITIONS

*Royal National Eisteddfod*

The Royal National Eisteddfod of Wales Arts and Crafts Committee have organized the following competitions: (1) a pithead baths and canteen, prize £50; (2) a national theatre for Wales, prize £50; (3) a hotel for a small town, prize £50; (4) a neighbourhood unit, prize £50. Assessors: T. Alwyn Lloyd and Lewis John. Programmes, site plans, and full particulars may be obtained from A. Glyn Lloyd, General Secretary, The Eisteddfod Office, Caerphilly, Glam. Closing date, June 17, 1950; last day for submitting entry forms, May 15, 1950.

*Australian War Memorial*

The Australian Battlefields Memorial Committee invite entry by British sculptors, artists, architects and designers in a competition for the design of an Australian war memorial to be erected near Australia House, Strand, London, to commemorate all Australian Fighting Services and the Merchant Navy in the Second World War.

Prizes: First, £250; second, £150; and third, £50 (Australian). Assessors: Five Australian art experts in consultation with a designs committee, subject to approval by the Australian Cabinet.

Intending competitors must be British citizens and should register their names with the secretary, Australian Battlefields Memorial Committee, 434, Collins Street, Melbourne, Victoria, Australia, before noon on April 1. Registration secures certain advantages, but is not compulsory. Closing date: September 1. Details available from the Official Secretary, Commonwealth of Australia, Room 115, Australia House, Strand, W.C.2.

*Civic Buildings, Nairobi*

The Municipal Council of Nairobi, Kenya, invite architects in the United Kingdom and all British dominions, colonies and dependencies to submit designs in competition for the new City Hall group of buildings proposed to be erected on a site adjacent to the present Town Hall. Assessor: Professor L. W. Thornton White. Promoters have appointed town engineer, H. R. Bridger, and the town planning adviser to the Town Planning Government, H. Thornley Dyer, to act as their representatives to confer with the assessor during the course of the competition. Premiums: £550, £450 and £250.

Conditions are obtainable, on deposit of £2 2s., from the Town Clerk, Town Hall, Nairobi, Kenya, to whom questions should be addressed by air mail to arrive on or before April 20.

Completed designs should be sent to the Town Clerk, Nairobi, to arrive not later than August 31.



## ORPHANS' HOME, BIRCHINGTON, KENT



*This feature covers aspects of legislation, parliamentary news and statutory rules and regulations which are of special significance to the architectural profession.*

**ERNEST WATKINS**

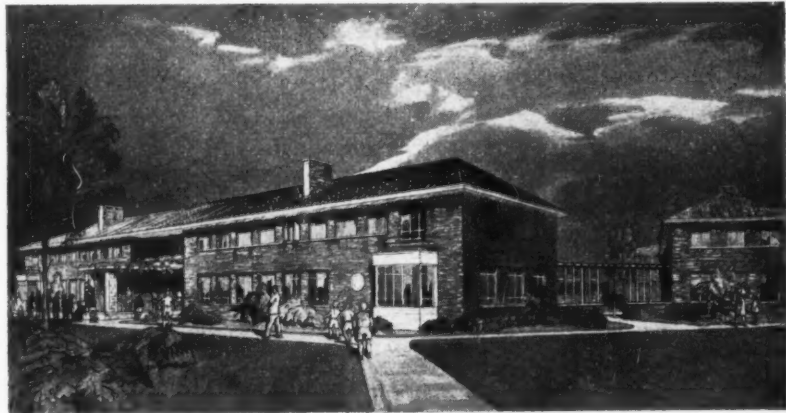
## The Architect and Current Affairs

What can the profession glean from last week's debate on housing?—the final day in the debate on the King's Speech. The importance of the Minister of Health's speech on March 13 was that it was the fullest statement of Government policy on housing we are likely to have over the next six months, and that this policy will almost certainly govern all aspects of house construction during this year.

On policy, the Minister can be summarized quite briefly. Some 200,000 permanent houses will be built this year (roughly the same as the actual construction last year) and from 175,000 to 180,000 next. The figure is dictated by financial policy, not available resources, and all the economists agree that circumstances are not likely to change in a way that will encourage any increase in that figure. The only other clues in the speech on construction were the references to power stations and hospitals; it is clear that, for instance, some of the money voted for the health service will be spent on hospital construction and repair. Finally, the Minister declared that he regarded the right ratio between houses built for sale and private ownership and houses built for letting under public ownership to be one to ten. That is the situation. From it most architects should be able to plot with some exactness the shape of their income tax returns for the year ending April 5, 1951.

To turn to the stream of pamphlets, etc.: One I have just caught up with is the Ministry of Health's circular 24/50, dated February 10, on a revised procedure for the submission of housing proposals to the Ministry (HMSO, price 3d.). I expect most readers have read it already. It does two things of importance. It restores some independence to the local authority and greater responsibility to the profession. Belated as the Ministry's change of heart is, it is none the less welcome.

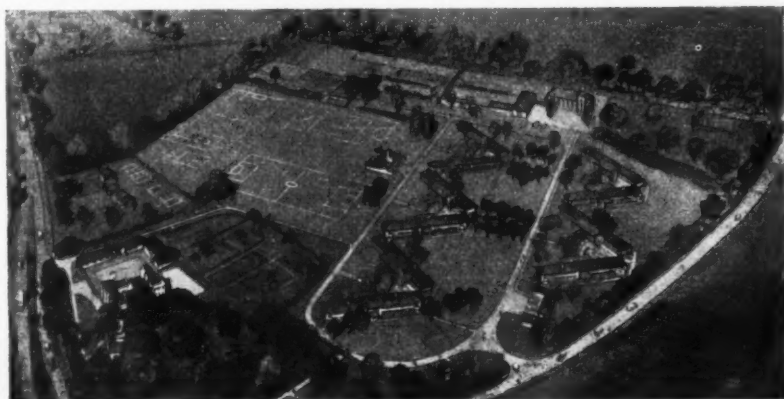
Finally, two legal decisions of recent weeks. *Charles Rickards Ltd. v. Oppenheim*. A useful survey of what the expression "Time is of the essence of the contract," used by lawyers, means in actual practice. When a man contracts for a thing to be supplied by a certain date and makes it clear that his plans depend on that time limit being kept, the Courts consider that, even though he does allow the stipulated



Plan of ground and first floors.

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

*Spurgeons Orphan's Home for 300 children, the first private children's home to be approved by the Home Office since the Children Act, 1948, is to be built on a 37-acre site. It will consist of five domestic buildings, each with four self-contained houses for 15 children each. In the connecting wing between the houses there will be dining rooms and a kitchen for 60 children and staff. It is proposed to develop the estate with further buildings including a chapel, assembly hall, library, sports pavilion and gymnasium. One of the domestic buildings, on which work has already begun, is seen above and this view, together with the aerial perspective below, is by J. D. M. Harvey. The architects are Woodroffe, Buchanan and Coulter. The general contractors are Messrs. Rice and Son, Ltd.*





date to go by, he can still fix a fresh date beyond which he will not allow things to slide. In this case the "thing" was a car body being built on a chassis the man had purchased, but the principle is the same. Overdue deliveries of fittings have less and less excuse now, and architects may well read the judgment here with advantage.

The case of *Solle v. Butcher* raised an interesting point under the Rent Acts. A seven-year lease was granted for a war-damage-repaired flat at a rent of £250 p.a. It was subsequently discovered that the standard rent was £140 p.a. By a remarkable combination of common sense and legal ingenuity the Court produced an answer which gave substantial justice to both landlord and tenant. This case should be read by everyone engaged in conversion schemes. It is full of reminders over the pitfalls that exist.

## DIARY

**Paris-London Exhibition.** New trends in sculpture and painting represented by 16 young French and English Artists. New Burlington Galleries, Old Burlington Street, W.1. (Sponsor, ICA.) 10 a.m.-6 p.m., daily. Tuesdays and Thursdays, 10 a.m.-8 p.m. UNTIL APR. 4

**Ideal Home Exhibition.** Olympia, London. 9.30 a.m. to 9.30 p.m. (Sundays excepted).

UNTIL APR. 1

**Building Exhibition.** Shrewsbury Technical College, Abbey Foregate, Shrewsbury. (Sponsor, MOW.) Opening day, 3.30 p.m.-9 p.m. Daily (except Sunday), 11 a.m.-9 p.m. MAR. 24-31

**The Manufacture, Properties and Applications of Aluminium and its Alloys.** Colin J. Smithells. RSA, John Adam Street, W.C.2. MAR. 27

**Economy in Traditional House Building.** H. F. Broughton. At Henry Jarvis Hall, RIBA, 66, Portland Place, W.1. (Sponsor, MOW.) 6.30 p.m. MAR. 27

**House Insulation.** J. C. Weston. At Reception Room, Guildhall, Hull. (Sponsor, MOW.) 7.15 p.m. MAR. 28

**Housing in Relation to Planning.** Lionel Brett. 13, Suffolk Street, S.W.1. (Sponsor, HC.) 5.45 p.m. MAR. 28

**Talks on the County of London and Greater London Plans.** Arthur Ling, Gordon Stephenson and Peter Shephard: *The New London* (March 28). Prof. Holford: *How Will the Plans Work?* (April 5). MAR. 28 and APR. 5

**Heating Research for Houses.** J. C. Weston. At Main Hall, Technical College, Queen Street South, Huddersfield. (Sponsor, MOW.) 7.15 p.m. MAR. 29

**The Building (Safety, Health and Welfare) Regulations, 1948.** W. D. Short. At National Farmers' Union, Queens Street, Exeter. (Sponsor, MOW.) 7 p.m. MAR. 29

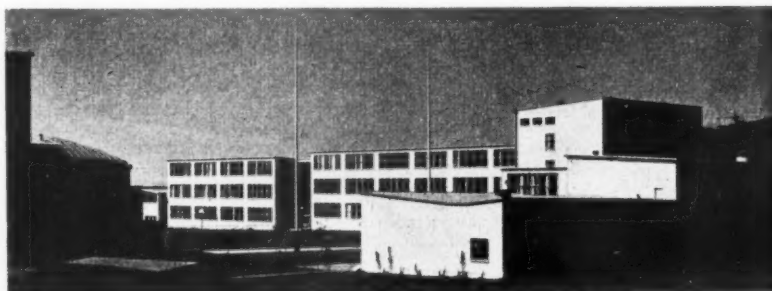
**Standards and Codes of Practice for Building.** C. Roland Woods. At Walker Hall, Technical College, Abbey Foregate, Shrewsbury. (Sponsor, MOW.) 7 p.m. MAR. 29

**Techniques and Devices for Improving Bricklaying Output.** C. S. Thompson, Lecture Hall, College of Technology, Department of Building, Salmon Pastures, Sheffield. 7.15 p.m. MAR. 30

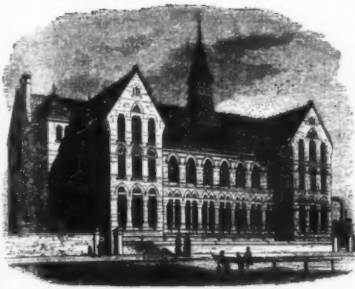
**The Building (Safety, Health and Welfare) Regulations, 1948.** W. D. Short. At Mutley Assembly Rooms, Mutley Plain, Plymouth. (Sponsor, MOW.) MAR. 30



The reaction against the compact multi-storeyed nineteenth century school has resulted in the open-planned single storeyed structures of the last decade. As is so often the case, the pendulum of reaction has swung unnecessarily far, and the MOE's *Building Bulletin* No. 2, reviewed on the following pages, without actually saying so, implies a return to more compact planning, possibly on two or more storeys, when conditions permit. The primary school in Stepney, above, built in 1874, shows the dangers we have left behind. The photographs below, of a school in Stockholm, built in 1939 by Ahrbom and Zimdahl, and of a school in Lucerne built in 1948 by Zauch and Burgi, typifies the considerable success with which architects abroad have been dealing with the problem of the two and three storey schools during recent years.







Elementary School, Stepney, designed 1870

The MOE have recently published their *Building Bulletin No. 2*. The *Bulletin* is reviewed here by Anthony Cox, of the Architects Co-operative Partnership; John Newsom, County Education Officer for Hertfordshire; William Allen, architect of BRS and C. C. Handisyde, architect. Illustrations are taken from the *Bulletin*.

## REVIEW of Building Bulletin No. 2

Anthony Cox, John Newsom, William Allen and C. C. Handisyde

It is unfortunate that the Ministry of Education's first major post-war pronouncement on secondary schools should have had to be made at a time of most drastic economy cuts. Clearly the Ministry has a lot of exciting things to say, and an approach to the problem of school building which will surely capture the imagination of many of us. This approach is so very evident in *Building Bulletin No. 2* that there is perhaps a danger of our forgetting that the fundamental purpose of the *Bulletin* is to suggest ways of producing cheaper schools at once. Economies in space provide the most immediate solution; this is the unpleasant but inescapable context in which the *Bulletin* must be considered.

Having put ourselves on guard against Pangloss, whose comfortable conclusions echo faintly in parts of the *Bulletin*, we can thank our lucky stars for two things. Firstly, although indeed it puts a heavy burden on architects, that the Minister should have decided to maintain the rate of building by building more cheaply, rather than to reduce the number of schools and not worry unduly about the cost, or alternatively to build parts of schools with the hope that the missing limbs could be added later. And secondly, the decision having been made, that his Ministry should have succeeded with really extraordinary rapidity in forming an appreciation of the problem, and in suggesting with considerable brilliance a course of action, and then actually getting it printed and illustrated and on to the bookstalls. For that, and for making the best of a situation that no one would have wished for, full marks and our gratitude.

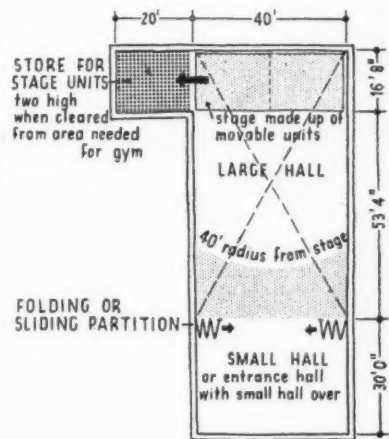
### A SIGNIFICANT DOCUMENT

Consider what it might have been like: the hateful dismal recital of unavoidable conclusions, of smaller rooms and fewer of them and processions of closely spaced coat pegs in galvanized iron. Instead we have the most significant document that has yet been written about secondary school architecture; one that for all its background of economy yet makes a positive contribution, and that bears the stamp of architects and educationists working together on a common problem at both the analytical and creative stages. This needs emphasis, for one of the greatest difficulties between client and architect is that the client generally thinks in terms of what he knows and has experienced architecturally, and in consequence produces requirements that are dead from the start. This the writers of the *Bulletin* have admirably avoided, and it is to be hoped that their readers will find the new spirit and method of approach infectious.

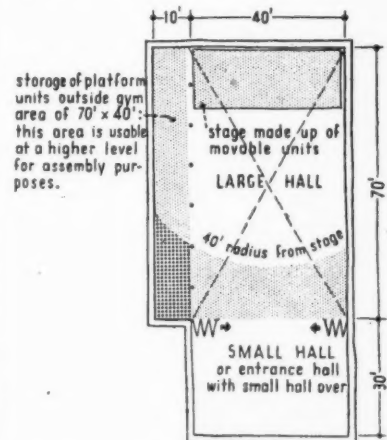
Of course it is quite easy to pick holes. You can pick holes in most things that have guts and imagination. But it is important to remember that this is not the Gospel (although unfortunately it is almost certain to be taken as such by some pinheads). The architectural proposals it puts forward are merely suggestions, and it makes clear, if perhaps in not bold enough headlines, that they are not the one and only prescription. The new *Building Regulations* will certainly leave the way open for a hundred and one other solutions if they are intelligently interpreted and administered. May architects and their clients be equal to their task.

The harsh position is this: the average net cost\* of the secondary modern

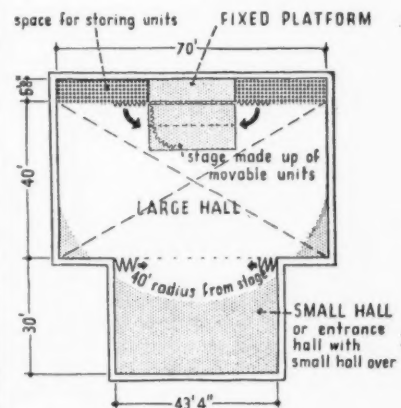
\*Calculated on the basis set out in Circular 209.



This layout for an assembly hall is an economical arrangement, but stage would be made up of movable units which would temporarily reduce area for education.

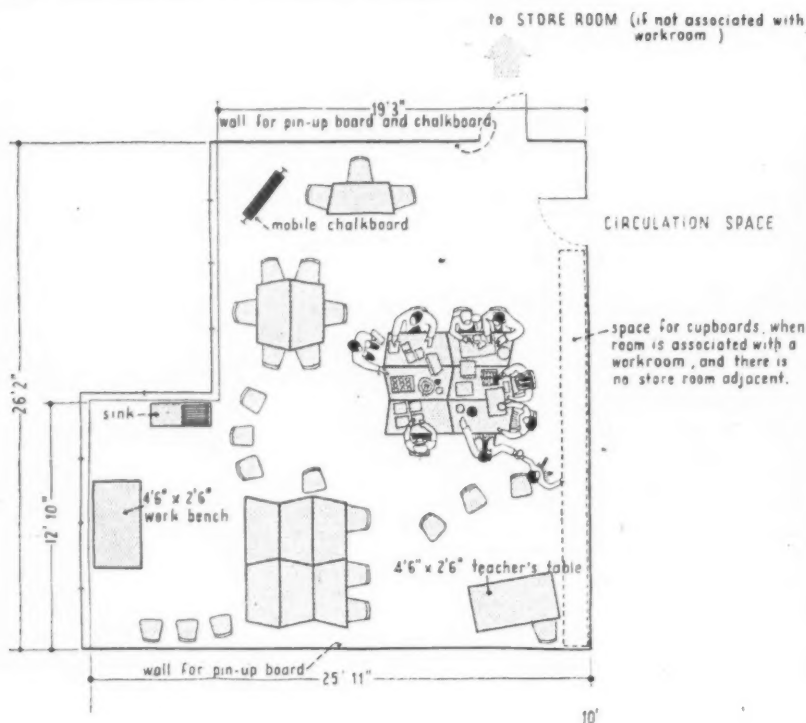


Variation of above has same disadvantage. "Aisle" area, in which stage units would be stored, could, however, make an attractive extension to hall at higher level.

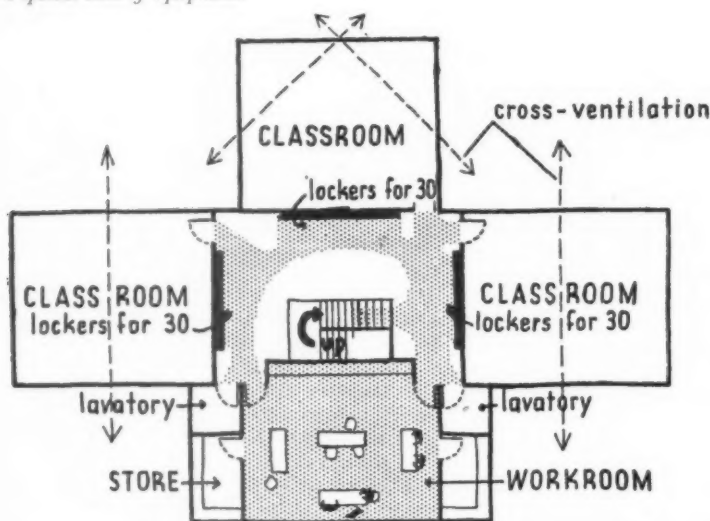


Good conditions for acting and for audience. 390 people could sit in semi-circle within 40 ft. of front of stage. Small fixed platform would be provided outside area needed for gym, which could be used for school assembly. By addition of movable units stage could be extended to width of 23 ft. and depth of 16 ft. 6 in.





This diagram shows an informal arrangement of dual tables for 30 pupils grouped to form large working surfaces where necessary. A bay is useful for a work bench and a sink, or a special item of equipment.



These plans of classrooms with work rooms are intended to show planning principles, and might have to be modified to take account of precautions against fire (such as alternative means of escape and the treatment of the staircases), which can only be considered in relation to the school plan as a whole.

schools started in 1949 was about £320 per place; in October, 1949, it was announced that for schools started in 1950 a cost of only £290 per place would be looked for; now, four months later, we know that for schools started in 1951 the cost per place must not exceed £240.

The Bulletin concentrates on space economy. Something has to be done quickly, and as an immediate measure this is probably the only realistic

method. As the authors point out, "in the country as a whole" (and we might as well say in the whole country) "an insufficient contribution is being made," in economies in building technique. It is a pity however that the Bulletin does not put more emphasis on the really desperate need to find cheaper ways of building, and it is to be hoped that the Ministry will be able to do something in assessing and publicizing the breakdown of present costs and in suggesting

lines of action which might be taken to reduce them. Here is material for whole hosts of future Bulletins. They are needed quickly.

#### SPACE ECONOMY

But space economy is a necessary start, and as we have to go in that direction it is well to step off on the right foot. The Bulletin states that in the characteristic post-war secondary schools that have been analysed the proportion of space that is not directly of use for teaching purposes is nearly 60 per cent. of the total area of the building, and that, of this 60 per cent, circulation space alone often eats up nearly one half. An examination of what goes on in the 40 per cent. of the building left for teaching reveals that numbers of rooms are used only for parts of the school day, and that there is a tendency to provide specially designed spaces for each activity—spaces which are consequently difficult to use for other purposes. It follows that the first aim should be to reduce those areas which cannot easily be used for teaching (it is hoped that they can be got down to 50 per cent. or even 45 per cent. of the total building), and that the second aim should be to get the maximum amount of use out of the maximum number of spaces which are available for teaching.

This is good sense, and the way in which the Bulletin puts us on the right road towards doing it is first class. It is not just a matter of squeezing the orange until the pips squeak, but of clear-headed analysis of what actual activities the various spaces in the school need to serve, and of the manner in which they can be of most service educationally. It is not the purpose of this review to describe all the suggestions in detail—at 2s. every architect ought to buy the Bulletin, whether or not he is concerned with schools—but the three principal suggestions it makes are these, apart, of course, from the reduction of circulation areas by more compact planning.

#### THREE MAIN SUGGESTIONS

First, increase the range of usefulness of classrooms. The 420 sq. ft. room, only big enough for formal teaching, is the most highly specialized of all teaching spaces. In a rather larger room, with sink and work bench, and desks designed for practical as well as book work, many of the simpler practical activities could be carried on that have hitherto had to be done in practical rooms, and there would be less need for duplication of space.

Second, reconsider the uses of the hall and the two gymnasias. It is suggested that the present large hall does not really earn its keep, and that a more economic arrangement, which would also be more useful educationally, might be to cut out one gymnasium altogether by using the hall for physical

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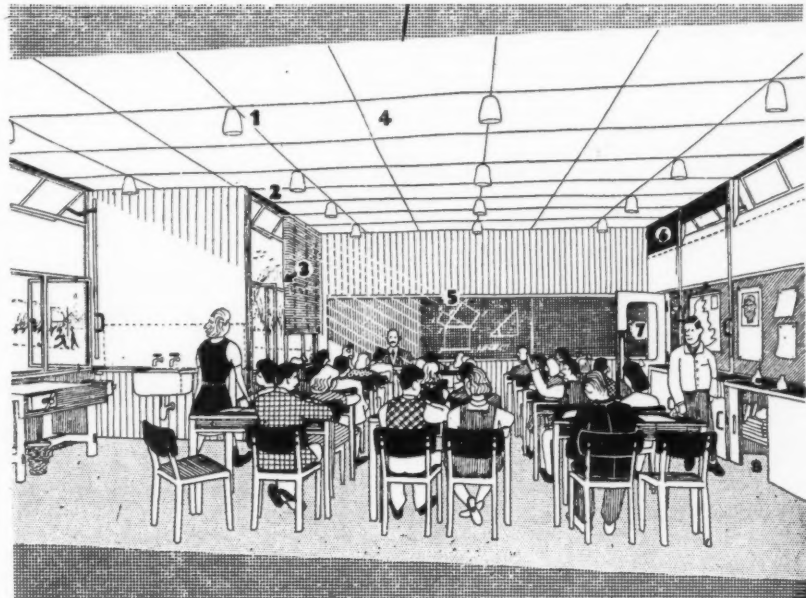
education and to compensate for the loss of part of the use of the hall by having a small dramatics room which might, by folding partitions, be thrown into the main hall for grand occasions. Here a lot obviously depends upon good acoustic insulation—as indeed do several other suggestions for dual uses elsewhere in the Bulletin. There is little evidence yet, and certainly none in the Bulletin, that this sort of thing can be done simply and cheaply, and it is no good holding out pious hopes. If school economy impels its development it will indeed be a blessing in disguise, but it is vitally important that the technical solution should be worked out and the results made known. This can best be done by the Ministry in conjunction with experts, such as BRS. Until it is done several of the major suggestions in the Bulletin could result in a good deal of criticism from the teachers, who have to live with the results.

#### CONTROVERSIAL PROPOSAL

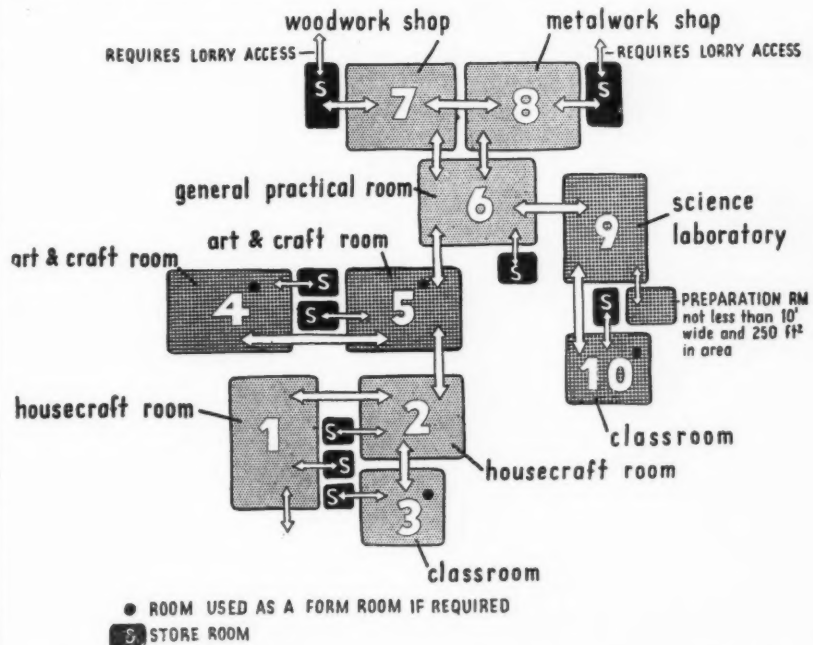
Third—and this proposal is the most likely, and perhaps with least reason, to arouse controversy—the suggestion that dining rooms should serve also as spaces for formal teaching. Providing the problem is properly and constructively considered (and the Bulletin gives sensible guidance) this surely is not such a very dreadful suggestion. If there is prejudice against it, it is most likely based on half-baked expedients in the past. If it means an additional three classrooms in every secondary school it is surely better to have the children at school, even if some of their time is spent moving furniture, than to have them roaming around knocking old ladies on the head with coshes. Just now we really cannot have our cake and eat it.

#### REVISION OF BUILDING REGULATIONS

We refer to these things as suggestions, for this is literally what they are. None of them is now prescribed in tidy little packets of so many square feet for this and so many for that. Instead it is proposed to revise the Building Regulations to prescribe simply a total figure in square feet for all teaching accommodation (which includes halls, gymnasiums, and dining rooms) and another total figure for teaching storage. Within these limits it is to be left to local authorities to decide on their own requirements for each school. It is to be hoped that authorities (and HMI's) won't just look up Bulletin No. 2 and gravitate into a comfortable rut, but that they will acquire instead something of the inquiring, analytical attitude of the Bulletin, combined with a dash of its bravery, and get down with their teachers, their caretakers and cleaners, their parents (and why not their children?) and even their architects and really try to figure out what they want,



Perspective showing classroom re-arranged for formal teaching. (1) Simple low-brightness light fittings. (2) Louvred blinds housed in ceiling. (3) Opening lights from sill to head level, with fixed pane over, and ventilator at ceiling level. (4) Sound absorbing and light-reflecting ceiling panels. (5) Strong contrast of light and dark avoided between chalkboard and background. (6) Blinds for dim-unt purposes. (7) Doors with glazed panel. (8) Cupboard forming working surface, with sliding doors down to floor.



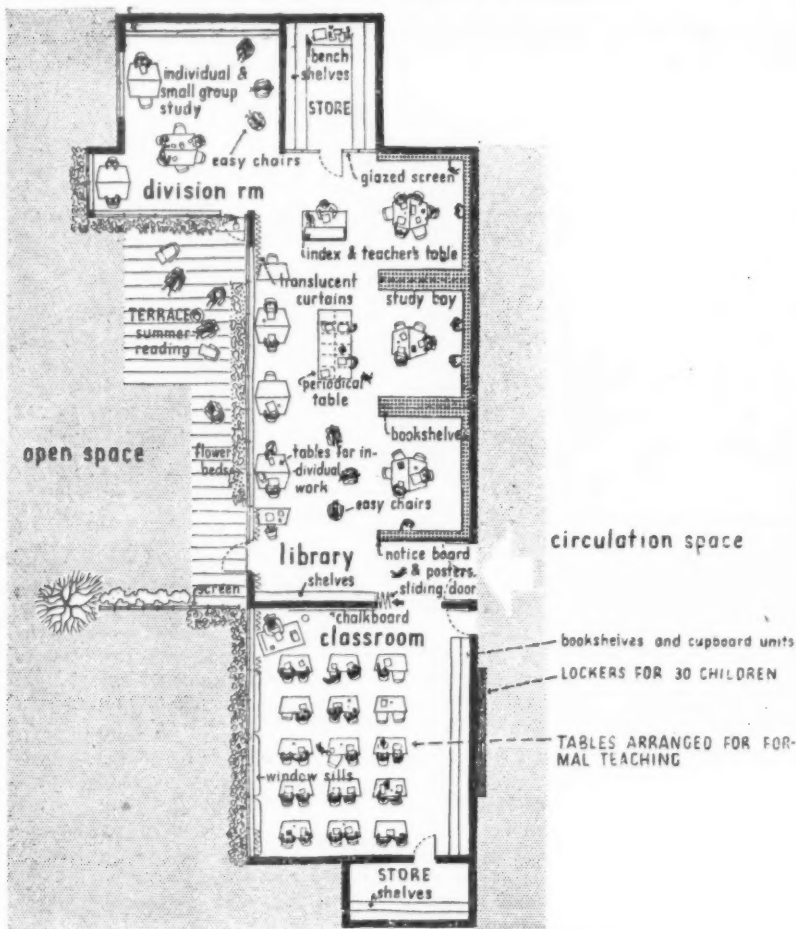
This diagram, which shows the relationship between practical rooms, is intended to indicate the general requirements of each room; the arrows show those rooms which need to be associated with one another. It shows that isolated rooms should be avoided so long as each activity does not suffer.

and if they are not sure, to experiment with alternatives. The opportunity is there; it would be a pity to lose it in the mere foothills of bureaucracy.

Although the Bulletin aims to give us suggestions only and is rightly concerned that it should not be regarded as a manual of data or instructions, it must be admitted that it does rather

fall between two stools. It is extraordinarily difficult, of course, to demonstrate planning possibilities in drawings without producing actual type plans, and the Bulletin has not entirely succeeded in avoiding the danger. And even when plans are called "diagrams" and we are clearly adjured not to read them literally it is impossible not to





This diagram is not to be read as a type plan, but is merely intended to show one possible relationship between the library, a classroom and a division room.

quibble about the position of a door if the authors insist on drawing it in. The drawings themselves, while mostly excellently lucid, miss the careless vigour of Bulletin No. 1, which contrived to convey the atmosphere of interim thought rather than final solutions. There is some lack of balance, too, between the degree of detail with which things are examined; the section on physical requirements particularly suffers from this, being neither a general outline with references for further study nor a real technical reference of practical use to architects. But these are minor defects, and they are not surprising considering the speed with which the whole Bulletin has been prepared.

#### THE DAYLIGHT FACTOR

On physical requirements it is worth remarking that the "daylight factor," which has tended to become too important a feature in some recent school designs, is now placed in a better perspective. Its importance is still recognized, but it clearly need not dominate the design.

The diagrams show many ingenious ways in which a reduction of area may be achieved, but we feel that the authors have not really produced any evidence

that the ration of square feet will necessarily result in the desired £240 per place. Nothing is said of the possible increase in price per square foot if plans become complicated or contain a high proportion of external wall. Perhaps such facts are assumed to be obvious to architects, but we would have liked to see some reference to them, and also to see some indication that there is sufficient evidence to prove that the figure of £240 is in fact a practicable possibility. Should it prove not to be, the waste of effort, and even more serious, the loss of time, may drastically hold up the 1951 programme.

A criticism which may be expected from some quarters is that although the Bulletin has obviously been written in close consultation with educationists, they are the wrong ones. While we do not share this view the difficulty remains that there is no orthodoxy among teachers, and that they speak with many voices. The result is that to some extent the Bulletin assumes educational principles and practices which are not in fact generally accepted. In some cases the assumptions are contentious and in others insufficient allowance seems to be made for the time it takes to get new ideas not merely accepted but

actually put into practice. This is a delicate matter, and we must be grateful that the Ministry has the courage to give vigorous leadership instead of working to the lowest common denominator; but it must be careful not to get too far ahead of its harassed flock trailing in the wake. While it is true that the first secondary schools built after the war were not only too expensive, but reflected the educational philosophy of an earlier decade, it must also be recognized that we cannot create new teachers with anything like the same ease that we can create new buildings.

#### IDEALIZING THE CHILDREN

Besides this tendency to take too much for granted in educational philosophy there is also a danger of idealizing the children. This is not to belittle the belief that we should have faith in them, or that a better environment will create its own response. But the faith must not be blind; human error no less than logistics is a factor in school planning, and human error means big Bill shoving tiny Tim out of the way at the highly economical lockers, and Master A dating Miss B in the conveniently unsupervised workrooms. Perhaps it does not matter, but let us recognize it will happen. The architects of many schools in the past seem to have been obsessed with sin, in so far as they appear to have felt deeply about anything in their buildings: the too ready assumption of virtue may also have its dangers, albeit less dingy.

#### A PRACTICAL MANIFESTO

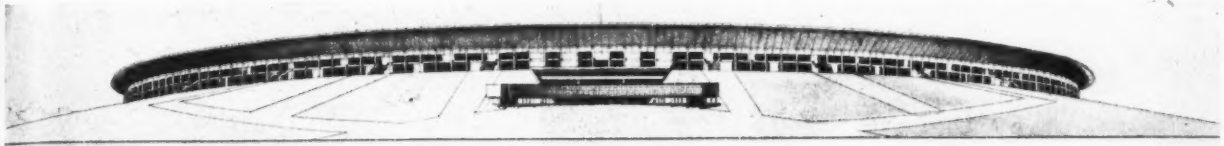
For all this the Bulletin remains a brave and brilliant document. It has done an immense amount of preliminary thinking for us, and done it lucidly where many of us would have floundered. And more than this, and certainly just as important, it shows a method of thinking about school buildings, or for that matter about architecture generally, that is still unhappily all too rare. It is a practical manifesto of an approach to architecture, and sponsored by one of architecture's most influential clients.

Yet it must be said again and again that nobody should get the idea that the Ministry has solved our problems for us. The inescapable fact remains that the policy the Bulletin announces is no real solution at all. It is but an expedient, excellent in many ways though it may be. All over England there is a desperate need for schools, and they are needed quickly and cheaply. As an industry we have failed to provide a cheaper building fabric, and so we must cut our coat according to our cloth. The problem remains, and it is a challenge to us all.

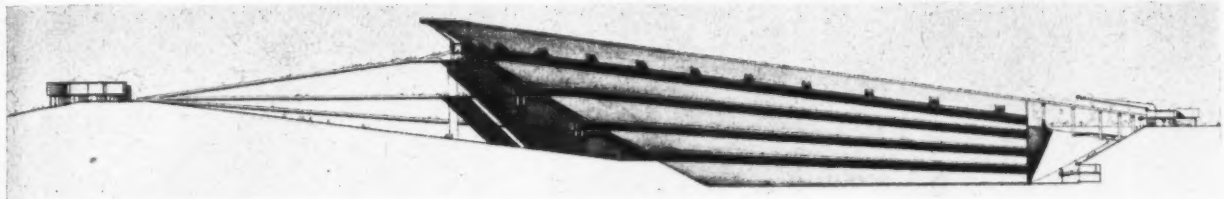
*Balbus murum aedificavit.* It sounds very simple. But today all our combined ingenuity has so far been incapable of doing it adequately at a price we can afford.



## WINNING DESIGN : THE ALEXANDER THOMSON STUDENTSHIP ; 1949



The south elevation

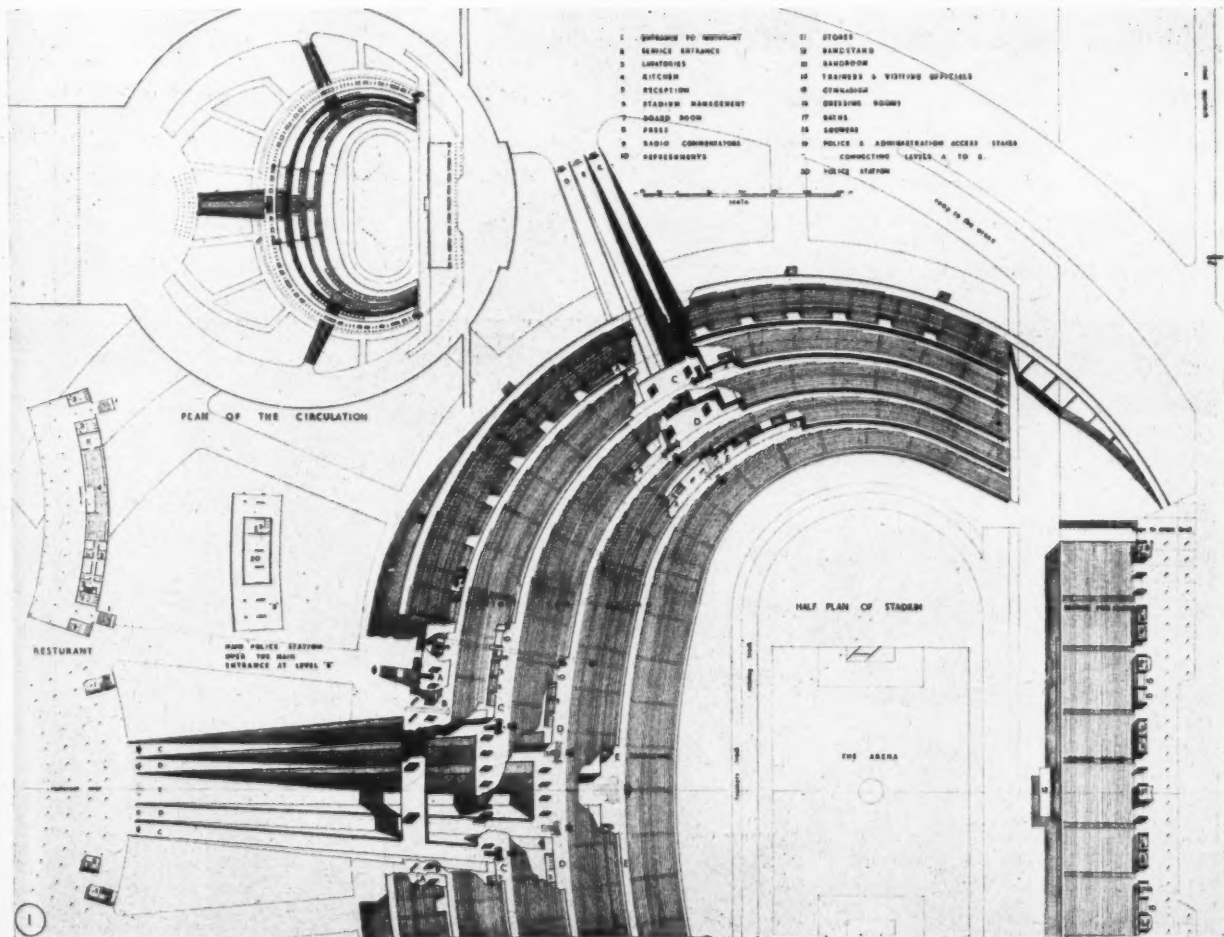


Section from south to north



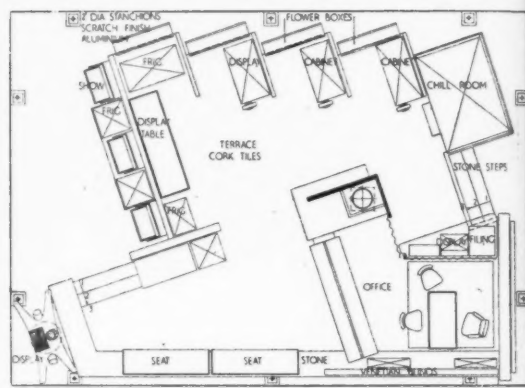
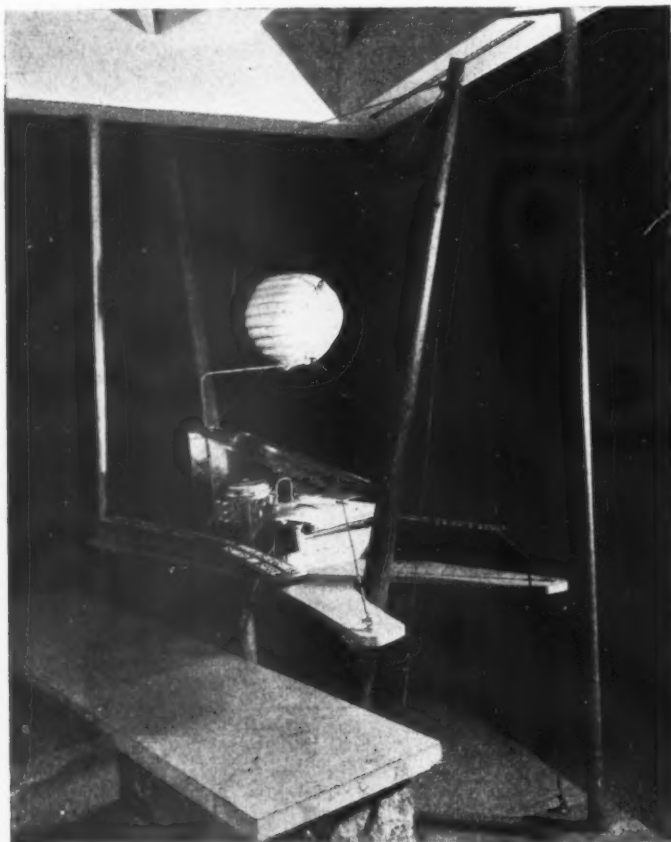
Perspective view from south-west

The Alexander Thomson travelling studentship is awarded every third year by the trustees, who are the Council of the Glasgow Institute of Architects. The studentship is open to any architectural student between the age of 19 and 28. The design has to be based on the study of the Greek Classical Architecture and an interpretation of the Greek spirit as it might be applied to the subject of the competition. The subject this year was a sports stadium, and the prize £100. On this page we illustrate the winning design submitted by Peter L. A. Williams, of the Glasgow School of Architecture.





# HOUSES AND DISPLAY STANDS AT IDEAL



Plan

[Scale: 1/8" = 1'0"]

Messrs. Frigidaire's stand, designed by Arcon, has a ceiling of painted timber framing with hardboard filling and panels of ribbed glass to diffuse fluorescent lighting. The screens are plywood backed and faced with acoustic tiles, and the flower boxes are of polished hardwood. The wall, seen below, is of

Staffordshire stone with a blue York stone coping, and the steps are of York stone. The floor is of natural polished cork tiles. The office is screened outside by venetian blinds. The photograph above, left, shows the internal workings of a refrigerator. The general contractors were Maple & Co., Ltd.







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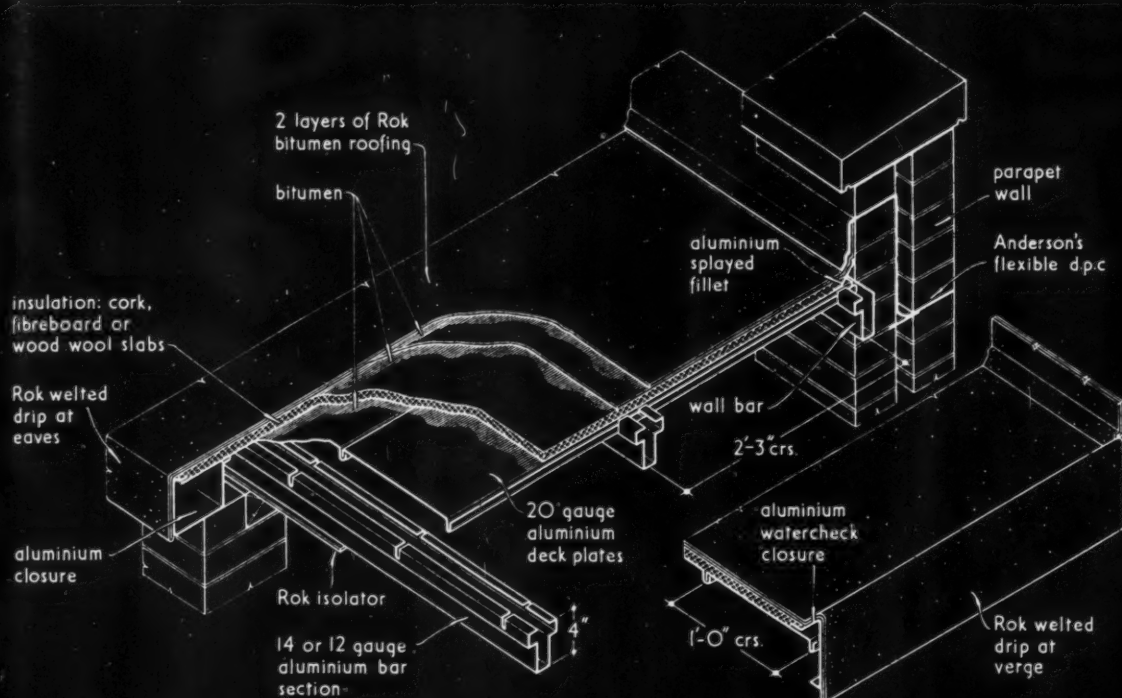




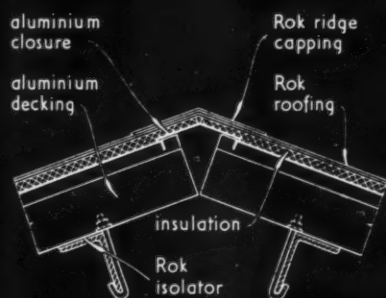
## ROOFS | COMPOSITE

20. Z5

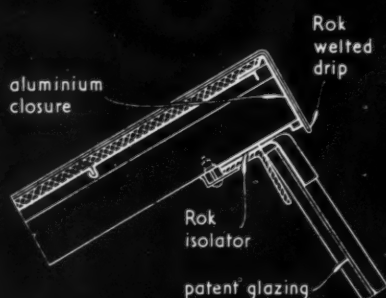
The Architects' Journal Library of Information Sheets 259. Editor: Cotterell Butler, A.R.I.B.A.



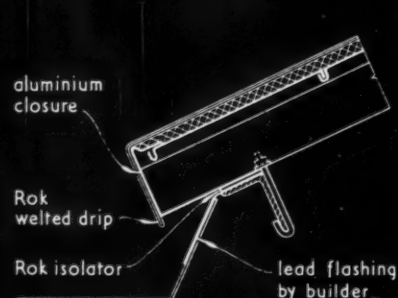
GENERAL ASSEMBLY OF ROOF SHOWING TYPICAL TREATMENTS AT PARAPET WALL, VERGE AND EAVES.



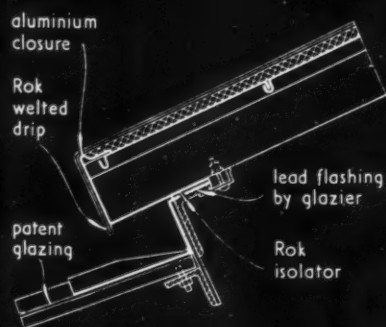
RIDGE (PITCHED ROOF).



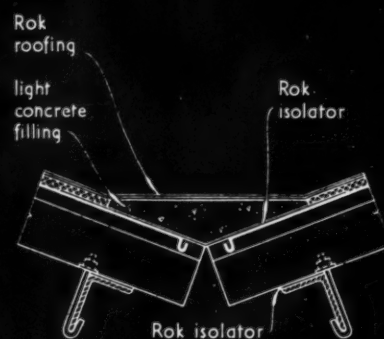
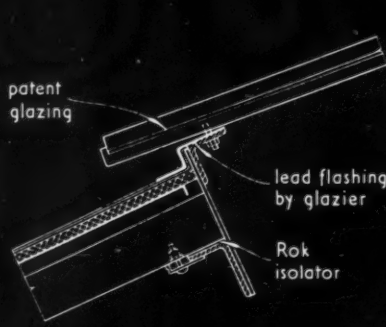
RIDGE (NORTHLIGHT).



EAVES GUTTER.



ROOFLIGHT: FINISHES ABOVE AND BELOW GLAZING.



VALLEY GUTTER.



## 20.25 'THERMOLOK' INSULATED ALUMINIUM ROOF DECKING

This Sheet describes a composite roof built up from aluminium alloy decking, rigid insulation and Rok bitumen roofing which is adaptable to flat, pitched or vertical constructions.

The system is based on the joist and boarding principle, the joists being in the form of heavy gauge aluminium alloy bar sections to which are secured aluminium alloy deck plates. The bar sections are first fitted in position and secured to steelwork or other supports with hook bolts or cleats. The deck plates are then pressed home engaging slots in the flange of the bar section where they are firmly held by means of a locking device contained in the rib of the plate. A layer of insulation board, cork or wood-wool slab and two layers of Rok bitumen roofing bonded to each other and to the decking with hot bitumen complete the roof. The total weight of the roof is  $3\frac{1}{2}$  lb./sq. ft. for flat or pitched roofs.

## Thermolok Bar Section

## Characteristics :

Bar depth (in.)	Metal thickness (B.w.g.)	Moment of inertia (in. <sup>4</sup> )	Section modulus (in. <sup>3</sup> )
4	12	2.36	1.14
5	12	4.24	1.63

**Weight :** 1.11 lb./ft. run for flat and pitched roofs.

**Size :**  $3\frac{1}{2}$  in. wide by 4 in. deep in lengths of 10 ft. maximum (standard bar section).

**Spacing :** The standard spacing is 2 ft. 3 in. centres (2 ft. and 2 ft. 6 in. centres are also available).

**Span :** The maximum span for 4 in. deep standard weight sections is 10 ft.

**Joints :** These are formed with steel connecting shoes which are supplied sherardised in 14 B.w. gauge. Sections of heavier weight and depth can be produced to suit special requirements and the bar sections can be used as purlins to span from truss to truss and replace steel purlins.

Bar sections of 5 in. depth can be used on flat roofs for spans up to 12 ft. and on pitched roofs up to 14 ft.

The bar sections are isolated by Rok bitumen pads, from steelwork or other supports.

## Thermolok Deck Plates

**Weight :** 0.635 lb./sq. ft. for 20 B.w. gauge.

**Size :** The deck plates have an effective covering width of 1 ft. and are supplied in lengths of up to 10 ft.

## Closure Pieces

Standard aluminium alloy closure pieces are available for finishes at eaves, verges, walls, lights, gutters, etc.

## Safe Load-Span Tables

The safe working loads in the following tables are based on:

Maximum bending stress 11,200 lb./sq.in. Deflection limited to  $1/250$  span.

The loads shown are dead plus live (i.e., deduct weight of roof to ascertain maximum live loads permissible).

4-in. deep bars :

Span (ft.)	Bars at 2 ft. crs.		Bars at 2 ft. 3 in. crs.	
	Max. safe load (lb./sq. ft.)	For deflection $1/250$ span (lb./sq. ft.)	Max. safe load (lb./sq. ft.)	For deflection $1/250$ span (lb./sq. ft.)
5	170	171	151	151
6	119	118	106	105
7	88	73	78	65
8	67	50	59	45
9	53	36	47	32
10	43	26	38	23

5-in. deep bars :

Span (ft.)	Bars at 2 ft. crs.		Bars at 2 ft. 3 in. crs.	
	Max. safe load (lb./sq. ft.)	For deflection $1/250$ span (lb./sq. ft.)	Max. safe load (lb./sq. ft.)	For deflection $1/250$ span (lb./sq. ft.)
8	95	91	85	81
9	75	63	67	56
10	61	47	54	42
11	51	35	45	31
12	43	28	37	25

## Thermal Transmittance

The thermal transmittance (U) value for the complete roof without ceiling below is 0.30 B.th.u./sq. ft./hr./°F.

Compiled from information supplied by :

D. Anderson & Son Ltd.

Head Office : Stretford, Manchester.

Telephone : Longford 1113.

Telegrams : Roofing Stretford.

London Office : Roach Road, Old Ford, E.3.

Telephone : Amherst 3214.

Birmingham Office : Suffolk House, Suffolk Street, 1.

Telephone : Midland 4988.

Nottingham Office : 4, Low Pavement.

Telephone : Nottingham 45165.

Leeds Office : 25, Bond Street, 1.

Telephone : Leeds 21403.

Glasgow Office : Queen Elizabeth Avenue, Hillington, S.W.2.

Telephone : Halfway 2514.

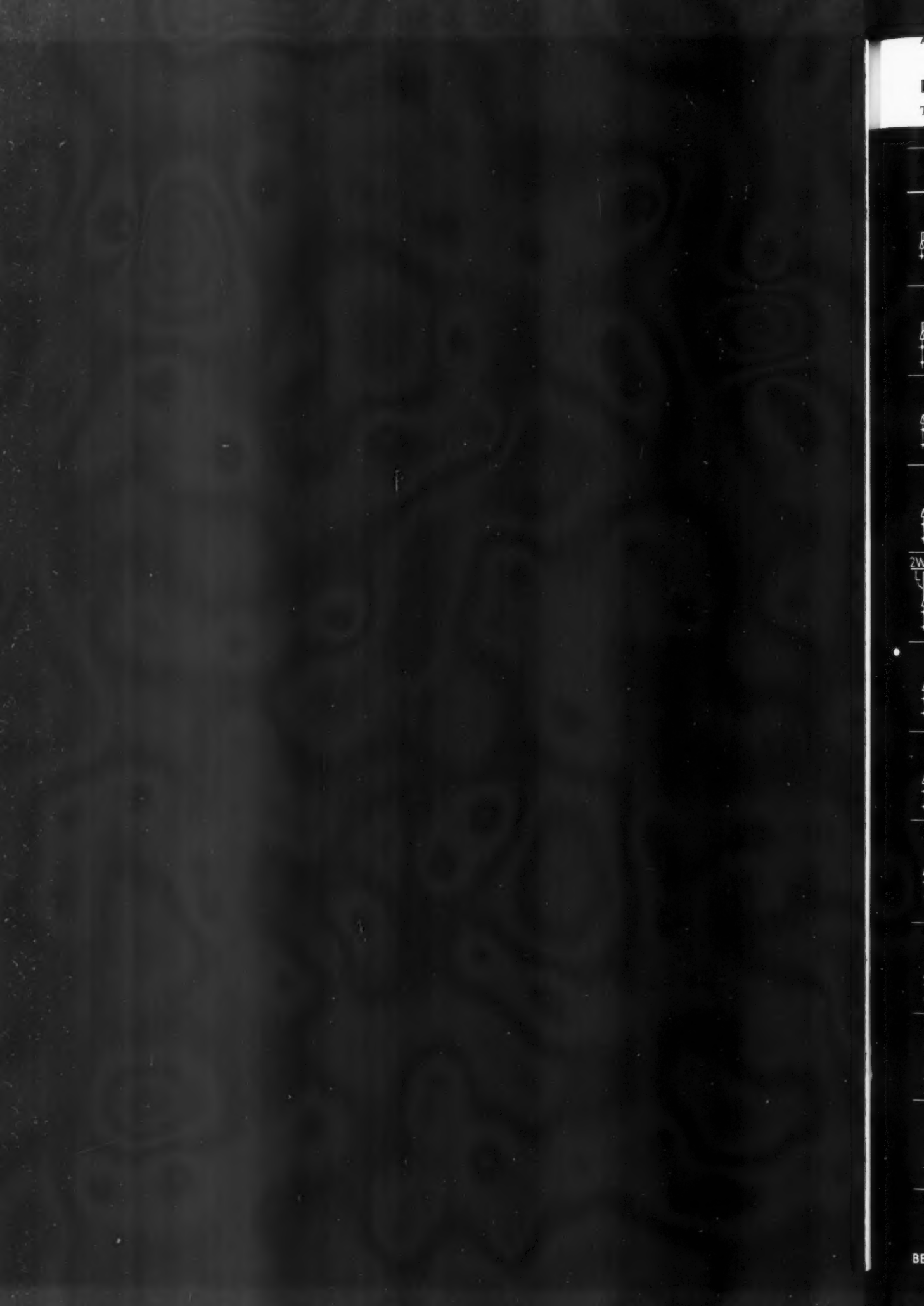
Belfast Office : Short Strand.

Telephone : Belfast 57143.







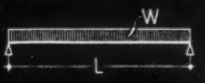

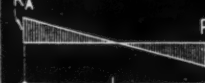
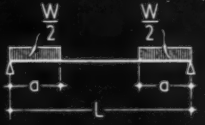


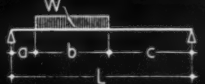
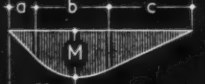
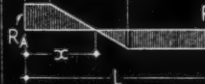
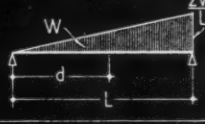
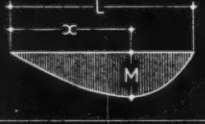
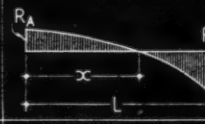
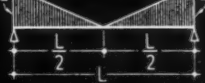

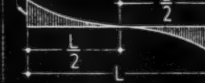
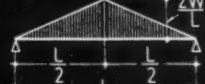
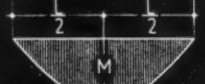
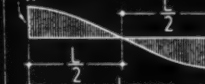
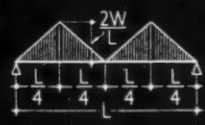

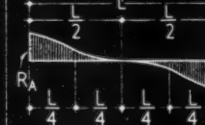
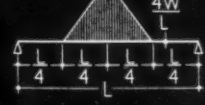

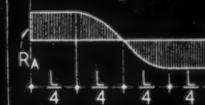


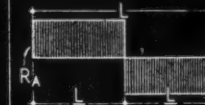
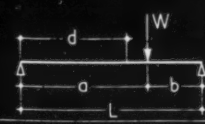
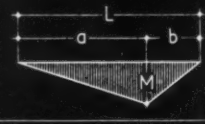
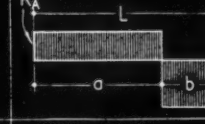
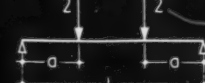
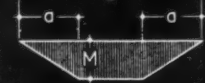





## BUILDING SCIENCE MECHANICS

2.B2

The Architects' Journal Library of Information Sheets 260. Editor: Cotterell Butler, A.R.I.B.A.

type of beam and type of loading	bending moment diagram	maximum bending moment $M$	shear diagram	reactions $R_A$ and $R_B$	maximum deflection $\delta$
		$M = \frac{WL}{8}$		$R_A = R_B = \frac{W}{2}$	$\delta = \frac{5}{384} \cdot \frac{WL^3}{EI}$
		$M = \frac{Wa}{4}$		$R_A = R_B = \frac{W}{2}$	$\delta = \frac{Wa(3L^2 - 2a^2)}{96EI}$
		$M = \frac{W}{b} \cdot \left( \frac{x^2 - a^2}{2} \right)$ $x = a + \frac{R_A b}{W}$		$R_A = \frac{W}{L} \cdot \left( \frac{b}{2} + c \right)$ $R_B = \frac{W}{L} \cdot \left( \frac{b}{2} + a \right)$	—
		$M = 0.128 WL$ $= \frac{WL}{8}$ $x = 0.577 L$		$R_A = \frac{W}{3}$ $R_B = \frac{2W}{3}$	$\delta = \frac{0.01305 WL^3}{EI}$ $= \frac{5WL^3}{384 EI}$ at $d = 0.5193 L$
		$M = \frac{WL}{12}$		$R_A = R_B = \frac{W}{2}$	$\delta = \frac{3WL^3}{320EI}$
		$M = \frac{WL}{6}$		$R_A = R_B = \frac{W}{2}$	$\delta = \frac{WL^3}{60EI}$
		$M = \frac{WL}{8}$		$R_A = R_B = \frac{W}{2}$	$\delta = \frac{7WL^3}{512EI}$ $= \frac{5.25WL^3}{384EI}$
		$M = \frac{5WL}{24}$		$R_A = R_B = \frac{W}{2}$	$\delta = \frac{151WL^3}{7680EI}$ $= \frac{7.55WL^3}{384EI}$
		$M = \frac{WL}{4}$		$R_A = R_B = \frac{W}{2}$	$\delta = \frac{WL^3}{48EI}$
		$M = \frac{Wab}{L}$		$R_A = \frac{Wb}{L}$ $R_B = \frac{Wa}{L}$	with $a \geq b$ $\delta = \frac{Wab(L+b)\sqrt{3a(L+b)}}{27LEI}$ at $d = \sqrt{\frac{a(L+b)}{3}}$
		$M = \frac{Wa}{2}$		$R_A = R_B = \frac{W}{2}$	$\delta = \frac{Wa(3L^2 - 4a^2)}{48EI}$



## 2.B2 BEAM CALCULATIONS FOR VARIOUS CONDITIONS OF LOADING

This Sheet sets out the formulæ for beam calculations for various conditions of loading. It deals with beams simply supported with distributed loads and beams simply supported with point loads. Sheet 2.B3 deals with beams simply supported at one end and fixed at the other, cantilever beams and beams fixed at both ends.

### Assumptions, Symbols and Convention of Signs

The beam is assumed to have the same cross section throughout its length. *W* is the total superimposed weight. The dead weight of the beam has been neglected; for long spans it should be taken into account by applying the formulæ for uniformly distributed load as given in the table.

**Symbols:** The symbols and the nomenclature conform to B.S. 560: 1934 *Engineering Symbols and Abbreviations*, Amendment PD 396, September, 1945.

**Convention of signs:** A *positive* bending moment produces tension on the underside and compression on the top of a beam. A *negative* bending moment produces compression on the underside and tension on the top of a beam.

In the bending moment diagrams the positive bending moment is shown below the horizontal line and the negative bending moment is shown above.

### Procedure for Beam Calculations

Procedure is as follows:

1. Determine the span of the beam, the type of support (simply supported, fixed at one or both ends,

cantilever, etc.), the type of loading (distributed or point loads).

2. Select from the table the type of beam, with its maximum bending moment and shear forces.

3. Substitute the numerical values for span *L* and total load *W* into the formulæ for *M* and *R<sub>A</sub>* (*R<sub>B</sub>*).

4. Calculate the required section modulus using the formula  $Z = \frac{M}{f}$  (where *f* is the permissible working stress in bending for the material of the beam).

5. Select the section which has a *Z*-value not smaller than that given by (4). (*Z*-values are given in various handbooks.)

6. Check this section for shear and deflection using the formulæ on the face of this Sheet.

### Modulus of Elasticity (E) for Different Materials

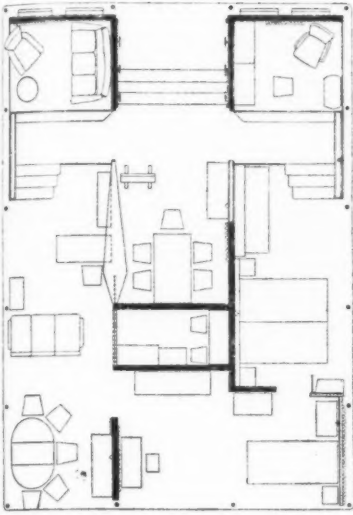
The data given in this Sheet apply equally to any material, e.g., steel, timber, concrete, light alloys. The modulus of elasticity (*E*) or Young's modulus, has, however, a different value for different materials, e.g.:

Steel	..	..	..	<i>E</i> = 30 million lb./sq. in.
Concrete	..	..	..	<i>E</i> = 2 million lb./sq. in.
Timber	..	..	..	<i>E</i> = 1.2 million lb./sq. in.
Light alloys	..	..	..	<i>E</i> = 10 million lb./sq. in.

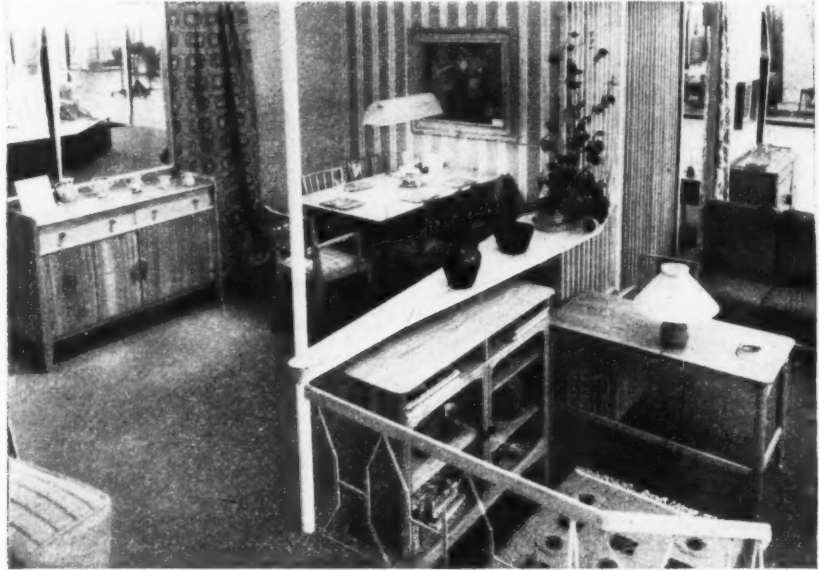
These *E*-values are required when calculating the deflection of the beam from the formula in the last column.



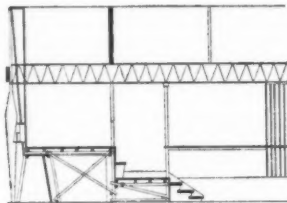
HOME EXHIBITION, OLYMPIA, LONDON



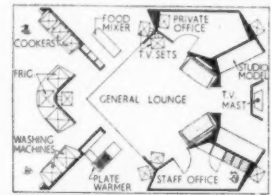
Plan of stand on right  
[Scale:  $\frac{1}{4}$ " = 1'0"]



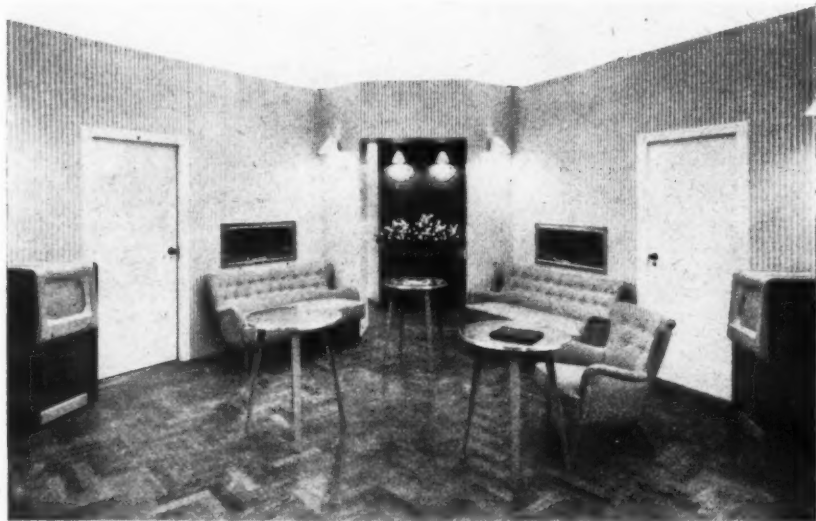
The stands at the east end of the Grand Hall are roofed by three barrel arches running longitudinally and advantage has been taken of this on Messrs. Heal and Son, Ltd.'s stand, seen above; left, and below left, where internal walls form furnished rooms each a third of the stand in width. The stand has two raised platforms at one end, seen in the photograph, left and section, below, under which goods are displayed. The stand was designed by A. J. Milne and Christopher Heal. Below, plan and photograph of English Electric Co.'s stand, designed by Sergei Kadleigh for Cockade Ltd. The general contractors were Russell Bros. (Paddington), Ltd.



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

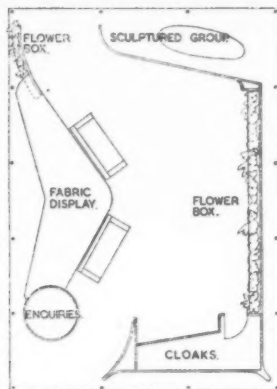
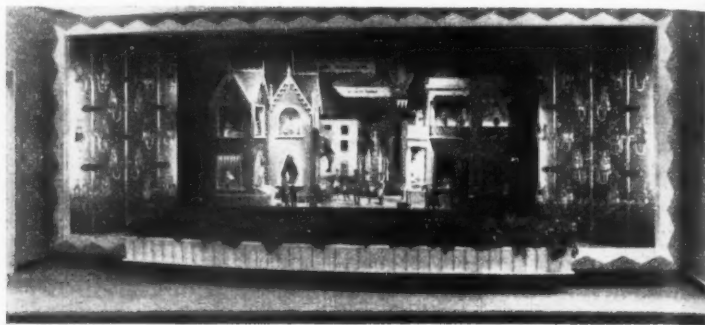
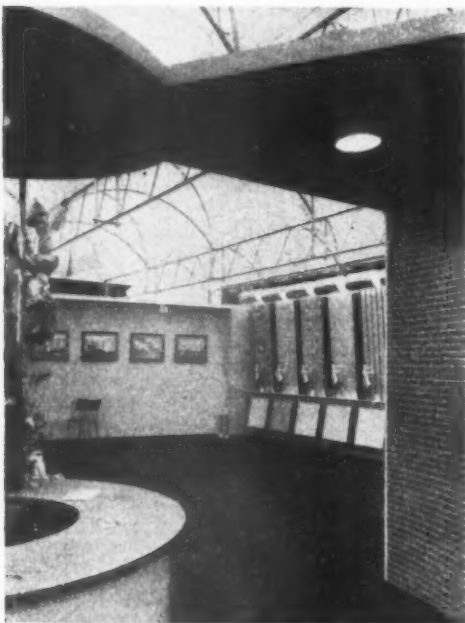


Plan of stand below  
[Scale:  $\frac{1}{12}$ " = 1'0"]

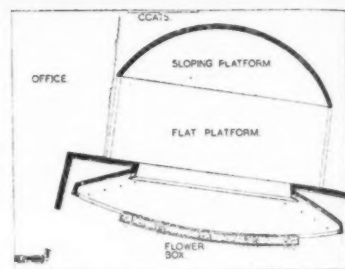




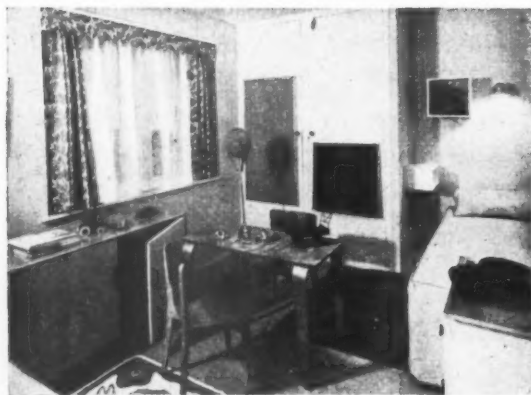
# HOUSES AND DISPLAY STANDS AT IDEAL HO



Plan of stand above, left  
[Scale:  $\frac{1}{4}$ "=1'0"]



Plan of stand above [Scale:  $\frac{1}{4}$ "=1'0"]



Above left, the stand designed by Hulme Chadwick for Messrs. Arthur Sanderson and Sons, Ltd., decorated by figures in cut paper and papier-mâché. Top of page, bottles are made into figures among model houses on Messrs. Schweppes Ltd.'s stand, designed by Christopher Ironside and Rita Casson for Cockade Ltd. Left, boys' bedroom and below left, living room of the Unity House, designed by Kendrick Findlay and Partners, with furnishing and decoration by John Hill, for the Council of Industrial Design.



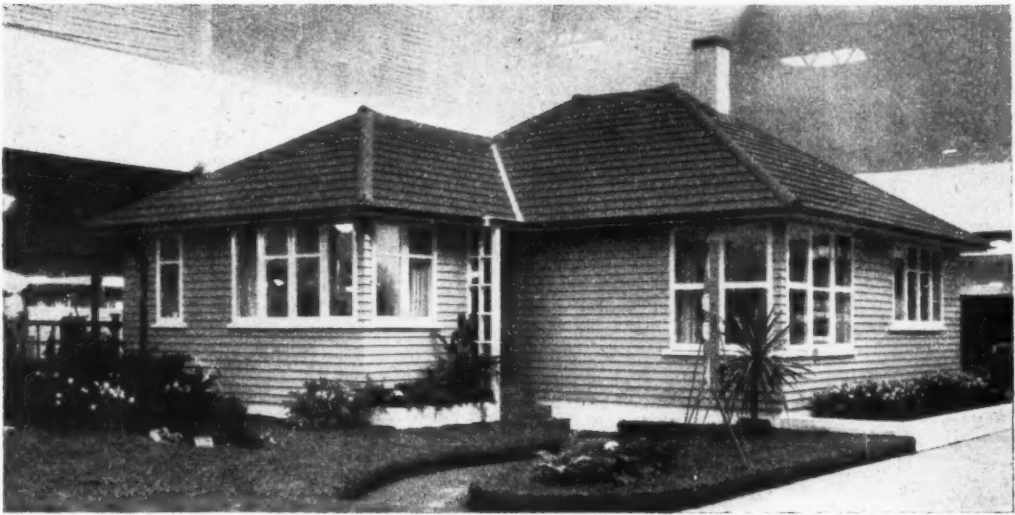
Above, Messrs. Dunn of Bromley's stand. The sideboard is designed by Jacques Groag, the chairs are by Geoffrey Dunn and the lamps are by Roger and Robert Nicholson.

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Plan



## HOME EXHIBITION, OLYMPIA, LONDON



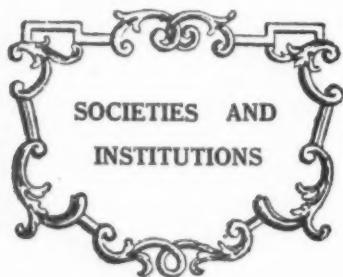
The New Zealand house at Olympia, shown above, is typical in its structure, general finish and layout of thousands erected since 1935 by the State in New Zealand, where there are numerous varieties of plan, detail and finish of two to four bedroom bungalows. These houses are built by private builders under contract to the Government, normally on sites 100-200 ft. deep, with a 50-60 ft. road frontage and an area of  $\frac{1}{4}$  to  $\frac{1}{5}$  of an acre. The sizes of the bedrooms are slightly in excess of those normal in Council houses in England, but the third bedroom, which can also be used as a study, opens off the living room, below right, to save corridor space. There is no separate larder, but a three-compartment fitting in the kitchen has ventilation upwards into

the roof space and the laundry is a typical feature of houses in New Zealand. These houses are in no way prefabricated, but use a traditional timber frame construction with weatherboarding outside and plaster board inside. The timber floor is kept 2 ft. above the ground on joists carried on concrete blocks poured in situ with a brick or concrete wall up to 2 ft. 2 in. from the ground. The weatherboarding is dressed with a matt paint and the pitched roof has concrete tiles, flat roofs having proved unsatisfactory in New Zealand. The New Zealand architect who supervised the construction at Olympia was I. B. Reynolds. The general contractors were E. & L. Berg, Ltd. The architect to the exhibition is Douglas L. Dick.

Plan

[Scale:  $\frac{1}{8}" = 1'0"$ ]





*Speeches and lectures delivered before societies, as well as reports of their activities are dealt with under this title, which includes professional societies, trade associations and government departments. To save space they are represented by their initials—see front cover. Lectures cannot usually be reported in full, but the extracts given are in the speaker's own words.*

RIBA

## Hugh Casson

March 7, at 66, Portland Place, W.1.  
Extracts from paper on THE 1951 EXHIBITION.

**Hugh Casson:** The Festival theme, as devised, is that the British contributions to civilization result from a combination of two forces, the initiative of the British people and the resources of their land. The background against which this thesis is unfolded is the living working world of today, a particular aspect of which gives the title to each pavilion. It was further agreed that the Exhibition should tell a continuous story throughout the whole of its extent, and that a total area of 400,000 square feet of covered exhibition space was to be aimed at.

One of our first tasks was to break this total figure down into appropriate allotments for each chapter. By August, 1948, this had been done in broad outline, and the South Bank site, too, seemed to be an almost certain bet. With the script in one hand and a map of the site in the other the Design Group retired to get out a plan. The group consisted—and happily, if surprisingly, still consists of two display designers, James Holland and James Gardner, and three architects, Misha Black, Ralph Tubbs and myself.

As the days went by increasing complications appeared. Half the site, it seemed, was on lease to the Ministry of Works, who were about to start work on an office block. On the other half the London County Council was engaged in the building of a concert hall. Across the full river frontage a contractor was going to build a new embankment. Beneath the railway bridge were a number of snugly housed tenants whose leases and rights of access did not expire for what seemed to be a ridiculously long time, and through the heart of the site ran an uncloseable public right-of-way. Finally, practically the entire site had been allotted to the contractors already working there for their offices, huts, canteens and plant. Obviously there was not a moment to lose. Constant,

almost daily, meetings took place between the most interested authorities concerned, in particular the London County Council, the Railway Executive and London Transport, the Police and the Port of London Authority. Within a few weeks the situation seemed a little tidier. The Ministry of Works had agreed to postpone starting work on the office block; the right-of-way was to be piped through at high level across the site; the working areas allotted to contractors were revised, preliminary drafting of all the special legislation necessary was in hand, and the Ordnance Survey had agreed to rush through a survey of the site.

### PLANNING PROBLEMS

When not engaged in these negotiations we sat in our attic bedroom while the sheets of tracing paper piled above our knees. The planning problem presented peculiar difficulties, for, as you remember, this was to be a unique Exhibition in that it had to be told in narrative form, chapter by chapter. This meant that each pavilion had not only to be of a certain size, but also had to be placed in correct relationship to those which preceded and followed it. We had, so to speak, a number of counters, each of a certain size—so many square feet for agriculture, so many square feet for industry, etc., and only so long as the size of each counter and its relation to its neighbour in the narrative was maintained, were we free to adopt any system of architectural grouping.

Certain physical practicalities, however, governed our choice. Shipbuilding, for instance, had surely to be by the river front, and transport by the railway bridge, and at times the difficulties seemed insoluble. Why all the fuss, you may ask. This is the normal problem facing any architect; all planning is no more than the graceful and imaginative arrangement of defined areas within a determined circulation. Well, it is true that in our student days perhaps it would not have taken us long! A few weeks collecting the necessary statistics upon tidal flow, tram accidents, and in comparing the population structure of Lambeth with the unemployment figures for Merthyr Tydfil, followed by a couple of days on the board, and the thing would have been done!

As it was, it took us several weeks to define our first ideas. To begin with, we took four simple basic if arbitrary decisions (i) that the site should be linked visually and, if possible, physically, with Trafalgar Square, and thus with the very heart of London; (ii) that the central dominating structure should be a saucer Dome, which of course must be the largest dome in the world; (iii) that since the theme was divided into two chapters, the railway bridge should act as a dividing agent; (iv) that since the site was so small, no "grand manner" plan was conceivable. Impressive vistas and monumental compositions we agreed were out of the question in an area which could be crossed on foot in a few minutes and whose extent could be wholly comprehended in a single glance.

Armed with these four weapons, we set upon the problem. We soon discovered that we were not the first to think of a link with Trafalgar Square. A correspondent made such a suggestion to the *Builder* in 1857: "planned," he says, "to relieve with facility the overdegree of traffic clogging the streets, to clear the South Bank area, at present a hotbed of moral and physical disease."

Weapon No. 2, the Dome, was also double-edged. Was it practicable? The first experts consulted said it was not. Was there room for it? It seemed doubtful, because in a fit of exhibitionism we had decided it must be 365 ft. across and we clung to that dimension with pathetic assurance. Weapons Nos. 3 and 4, however, looked like being of some assistance, and nervously the first lines went down on paper.

If the Dome was in fact to be of this size, there was only room for it in one place. Navigational demands determined the placing of the new Thames footbridge. The position of the existing Waterloo Tube Station sited the new subway and escalator link without question. As for the main entrances, apart from river piers, only two frontages, the police advised us, were available, so choice was limited and decision comparatively simple.

January, 1949, was spent in consulting with myriad authorities concerned upon the layout and in getting the approval and comments of the various authorities within the Festival office, including the Architecture Council, and by February (a month otherwise only notable for the centenary celebrations of the Inland Revenue Department) we were ready for the next and vital step, the dividing of the site into separate zones and, after that, the choice of architects who were to be recommended to the Festival office for appointment.

Before doing this a design policy had to be agreed. Broadly speaking, there were three courses before us: (i) to make use of previously designed prefabricated buildings available from stock, and re-adapting them where necessary to our use; (ii) to lay down one or more modular systems of construction, which all architects would be instructed to follow; (iii) to brief the architects as carefully as possible with our needs and budget, and to leave them alone to develop their designs within the minimum of limitations.

Rightly or wrongly, we adopted the last course, fully realizing the risk that coherence and homogeneity would be the more difficult to obtain but confident that the chances of visual excitement would be more probable. This, after all, was to be a British exhibition, and the British are notoriously anarchist. As long ago as 1667, remember, a French observer remarked that "the English nation is of very irregular and fantastical temper," and no one who studies our plan could deny that these adjectives are equally applicable today!

### FAIR SHARE FOR ARCHITECTS

We also took three more decisions at this stage. The first was that at least two or more zones should be subject to competition, second, that no architect should, if possible, be given more than one assignment in 1951 upon any Festival project, and, third, that an attempt should be made to commission at least some designers whose reputations had yet to be made.

Not all these aims were achieved. Competitions were an early casualty of the stringent time programme, and only two survived. Some of the younger, lesser known, but most promising architects whose names were considered could not in the end be recommended because we feared they would be unable to maintain the hair-raising timetable. There were other considerations too. This was a team job, and the site was constricted. Time was short; tempers must not be. We wanted men of genius, but could not afford men of temperament. It was something like casting a West End comedy in which all the players were stars and everybody must be allowed a fair share of the best lines. By February 1, however, the list was ready for approval by the Architecture Council and other Council's concerned, and by March 1 the architects had been given their briefs, their building lines, their budgets and our blessing.

By April 1, some progress had been achieved. The architects had been formally commissioned, and suggested contractual procedures were under discussion and, best of all, our consultant engineers, Messrs. Freeman, Fox & Partners, were already at work. To this firm, direct descendants of those who carried almost equal responsibilities in 1851, we entrusted the triple task of preparing detailed building estimates, consultancy for all structural design, and the organization of contracts and site work. To



the Design Group, as you can imagine, this appointment was most welcome. Not only could we empty a toppling pile of in-trays into somebody else's lap, but we had found in Sir Ralph and his associates, engineers who were never alarmed by the unorthodox, nor overwhelmed by the magnitude and complexity of the task before them.

March was a good month and we were undismayed by a letter received from a Midland firm asking if room could be found on the South Bank for a discreet supply of shrouds.

April was spent in continuing negotiations with the various authorities, including the Raw Materials Committee and the Royal Fine Art Commission (both very helpful), and in almost daily discussions with the commissioned architects. By May 1 the architects' first sketch plans were in. There were no disappointments, though in a number of cases enthusiasm had outrun practicability, the budget, or even the building line.

Some weeks passed, while the drawings were studied in detail by the Festival Office and its advisers. Estimates had to be re-prepared, structural systems examined, alterations suggested, and drastic cuts occasionally imposed. The architects bore up well under this process. They had been well schooled in democracy which, as our Director-General recently reminded us, is a system under which you say what you like, when you like and where you like; but you do as you're damn well told!

Meanwhile, although the concert hall and river wall were moving well, already the chill winds of delay were perceptible about our festival ears. We had opened negotiations with contractors, who, not unnaturally, had raised eyebrows at the curious design of some of the buildings set before them and at the fantastic shortness of the time available in which to construct them.

As the estimates came in and were totted up, it became clear we would be over spending our budget, and in June, to make things worse, the whole project was cut by a million and a half pounds, a cut which was unkind, but hardly more merciless than the remark from a speaker at the National Assembly of Local Authorities who said that in his opinion those working on the Festival project were all far too old. Still, as Mr. Swangle said to Mr. Pickwick "a gentleman expects reverses," and we struggled on. By July the architects' estimates were all in, and in some cases, with the help of the Chairman of the Architecture Council, the designs had to be drastically amended. There was, however, one encouraging event this month, the letting of the contract for the upstream section to Messrs. Richard Costains Ltd. On July 26, 1949, a great day for all of us, and, exactly to the day, a century since 1851, work on the site was started.

#### DESIGN GROUP'S AGENDA

August, however, opened dispiritedly with a strike of dockers in London, and the *Evening Standard* launched an assault upon what it called "Mr. Morrison's multi-million pound baby." Meanwhile, the master plan was being revised and service runs replanned, and the agenda of the Design Group was as crowded as ever. Here are a few items from this month's minutes: Helicopters, site passes, experimental canvas, women's uniforms, coloured asphalt, contractors' hoardings, visual symbolism, balloons, baby slings, typography, pyrotechnics. The display designers, who had been appointed some weeks before, were now working with the architects and theme conveners, and the hottest arguments were in full swing. The smallest decision on Exhibition content seemed to affect everything else. One more cow, for instance, in the Agriculture pavilion meant not only reassessment of the cost of feeding, carting manure, veterinary fees and insurance, but even the position of gully traps and manholes.

By September, however, the working drawings were trickling in, although nothing like fast enough of course. Messrs. Cubitts had been appointed contractors for the downstream section, later to be joined by Messrs. Kirk & Kirk, and main service runs had been agreed with the LCC who were to carry out the work on our behalf.

In October the Festival received its second financial cut. Again the effect upon our work was serious, for in some cases plans had to be entirely recast, though to some members of the public the cut seemed modest enough and in fact was described by one commentator as "saving the cost of one bun to a white elephant." In November the South Bank plans were published in the Press where, generally speaking, they met with a kindly, if puzzled, reception. We received a broadside from Mr. Tom Braddock and, in December, an inaccurately aimed volley of what I must call gripe-shot from Professor Richardson, a critic who has never let accuracy stand in the way of enthusiasm. The year 1949 closed with a strike. Contractors were soon at work again, however, and in January, 1950, a good time—or should I say a good time and a half?—was had by all.

#### CAPACITY OF BUILDINGS

Such is the story of the first eighteen months' work on the South Bank Exhibition, only one, I must again remind you, of the projects upon which the Panel is engaged. So far as the Exhibition site itself is concerned, the number of people who can be safely contained within it is reasonably controllable. With the help of experts we are working out the capacity of each building and assessing upon the best evidence available what is the maximum number of people who can be let in at any one time and who can still see the Exhibition in reasonable comfort. We are installing a mechanism, similar to that used in football stadiums, which simultaneously records the entry and exit of any person from the site, so that the manager is continuously aware of the position and can give orders to close the gates when, in his opinion, the capacity attendance has been reached. This, of course, transfers the problem to the perimeter and approaches, and thus, strictly speaking, beyond the control and responsibility of the Festival office. But here again we are working with the experts on possible solutions.

So far as wheeled traffic is concerned, a plan has been worked out, with the help of the Ministry of Transport, which is designed to improve the flow of traffic in this area. A further contribution will be made by the new layout of Parliament Square.

So far as pedestrians are concerned, we are discussing with the police, London Transport and other authorities methods for ensuring that when the Exhibition is full the public is diverted to other centres of attraction. This is not as easy as it sounds, for it involves, of course, re-routing of river boats, special notices at all Tube stations and similar devices. We are, of course, well aware of the seriousness of the whole problem, which is aggravated by the fact that no estimate of attendance can at present be more than guesswork; but we are confident that the measures we are taking with the help of our technical advisers are the best that can be devised.

Related to the problem of crowd control is, of course, that of safety precautions generally within the Exhibition. The Festival office is responsible for seeing that all its projects are planned, erected, maintained and managed in such a way that the safety of the public is ensured. Under the Festival of Britain Act we are technically exempt from LCC bye-laws and regulations under the London Building Acts, or such of them as apply, but the Government has rightly insisted that the standards of safety throughout the Exhibition should in no case be inferior to those which are legally applicable to normal buildings. In some cases, in fact, they will be more stringent.

The number of exits provided, width of gangways, etc., is carefully studied on all drawings by our safety precautions officer, and questions of dispute are referred to a tribunal under the chairmanship of Mr. Howard Lobb. We have been fortunate, too, in obtaining the constant advice of the expert technical officers of the LCC. And the whole layout has been planned to ensure adequate open circulation between structures and to provide for rapid dispersal from individual buildings and easy approach for fire appliances. A comprehensive alarm system will be installed, under the guidance of police and fire brigade authorities, and ample patrol staff will be on duty, in addition to the fire and police stations on the site.

#### SERVICE REQUIREMENTS

The Exhibition site already contains a network of services, most of which were due for extension and elaboration under the long-term plans for redevelopment of this area. All planning of roads, gas, water and electricity services, therefore, has been carefully co-ordinated with the LCC, so that as much work as possible will have long-term value after the Exhibition has been dismantled. Electrical services are of particular complexity on this site, including such special demands as special illuminations, public address systems and BBC sound and television services, and to assist in the layout of these and in the siting of substations we have been working with our consultants, Messrs. McLellan & Partners. Mr. Wilson and his colleagues at the Ministry of Works have also rendered valuable assistance in the design and costing of all decorative water fountains and pumping machinery.

Some fourteen restaurants and cafés, ranging from main meal service types to cafeterias and snackbars, will be included in the Exhibition grounds, many of them sited along the river front and taking full advantage of views of London and the Thames. There will also be a mobile tea service, and numerous kiosks, and one of the two large restaurants in the LCC concert hall will be open to Exhibition visitors. Here is something we hope to do better than 1851. For the Crystal Palace, remember, was dry, and the fact that 1,000 gallons of pickles were eaten by its visitors is not the best evidence of good catering.

It has been difficult to find proper statistics on the matter of lavatories, but all authorities seem to agree that there are never enough lavatories and that the proportion of women's to men's is, because of children, nearly always under-estimated. Since lavatories are among the most expensive of structures to build, it has been tempting at times to economise upon these rather than upon Exhibition and display. Our advisers, however, have been adamant, and we hope supply will equal demand.

Everything provided for public use in the Exhibition will be regarded as being on show, and will be chosen as representative of the best that is being made. The selection of these items, as of the exhibits, will be made with the assistance of the Council of Industrial Design, which is responsible for seeing that the best products of British industry are properly represented.

Finally, and also most important of all, the fine arts and landscaping. The impermanence of the exhibition buildings encourages an uninhibited, even playful, approach to design which has a lasting value, not only because it loosens up minds constrained by more normal problems, but also because it introduces to each other—often for the first time—our fellow artists. It is particularly in exhibitions that we can achieve that close harmony of sculpture and building, of landscape and mural painting, of colour play and typography—that harmony which we all strive for in our more permanent work, and have such difficulty in persuading our clients to pay for.

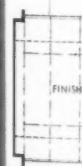
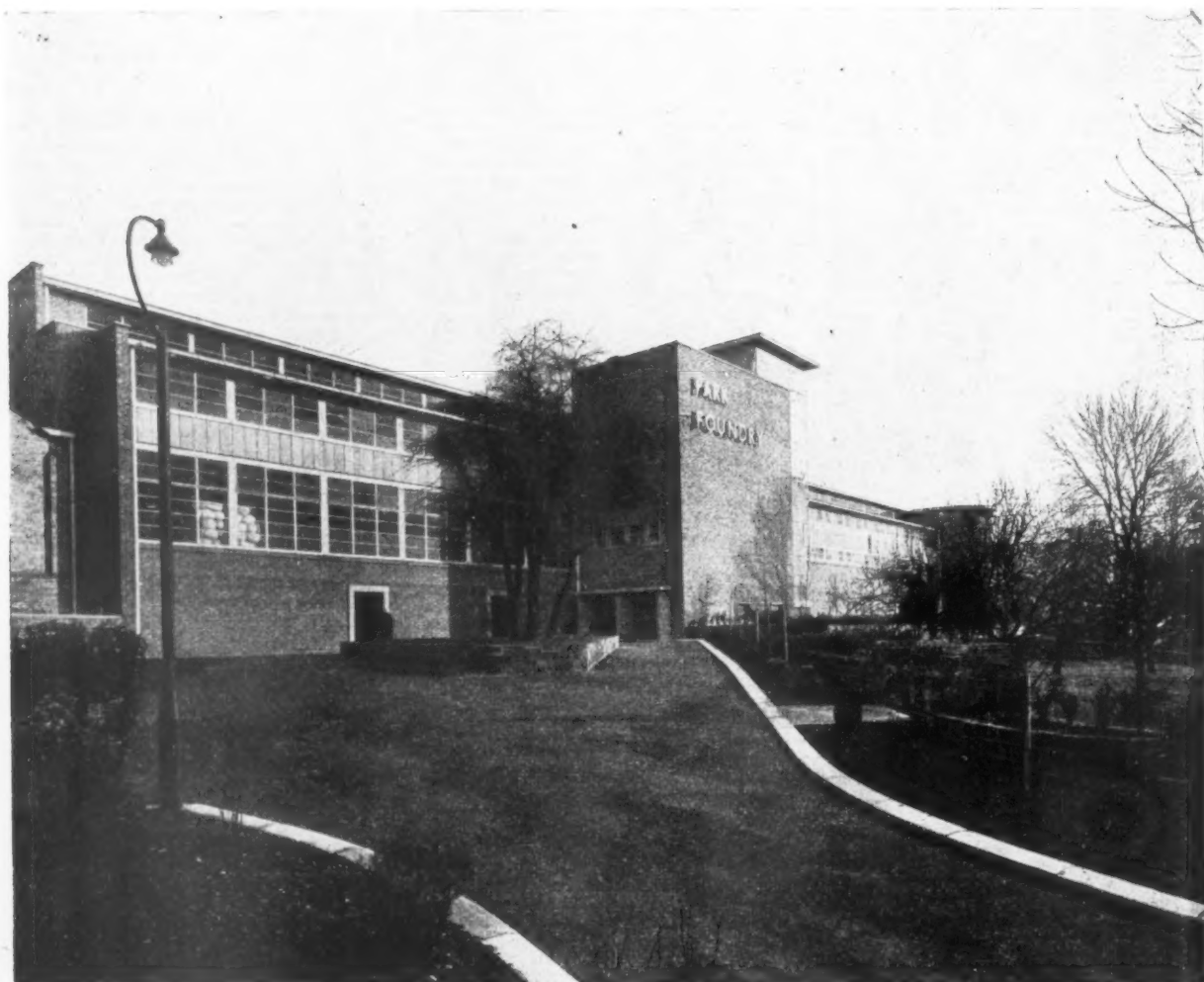


## FOUNDRY

at BELPER, DERBYSHIRE  
designed by CECIL HOWITT and PARTNERS

The Radiation Group, owners of the Park Foundry (Belper) Limited, has decided on a complete reorganization of the foundry, which has been in continuous operation for fifty years. Prior to being taken over by the Radiation Group, the foundry had received very little maintenance or reconstruction. Two major sections of the master plan, the despatch department and the main assembly building, have now been completed.

*The west front.*



First floor

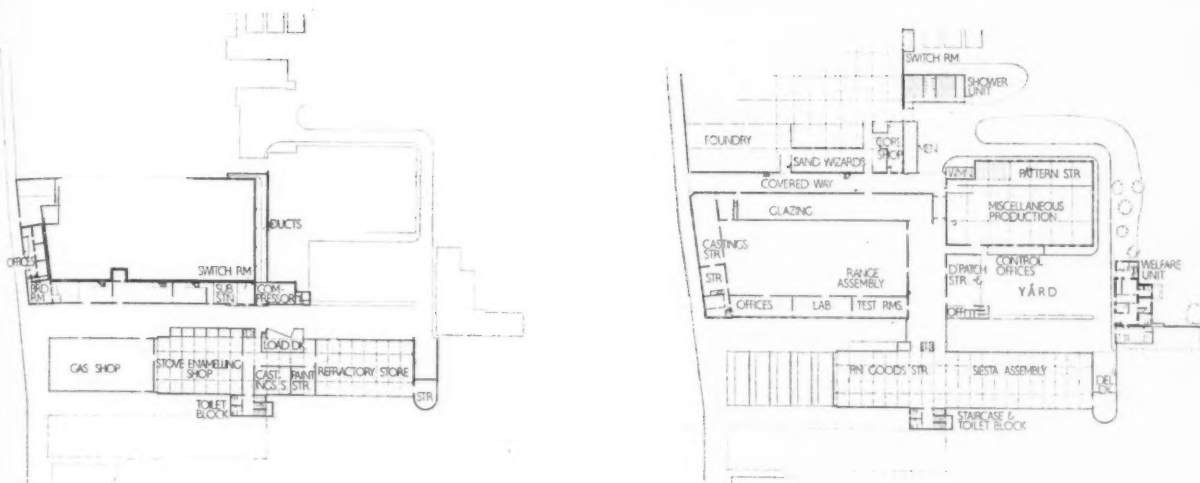


Ground fl



Lower gro





Master plan at ground floor and first floor levels

[Scale: 1/16" = 1'0"]

**SITE.**—The steeply sloping site overlooks the Derwent valley to the West. A special effort has been made to preserve the view over the valley and open country beyond from the new buildings.

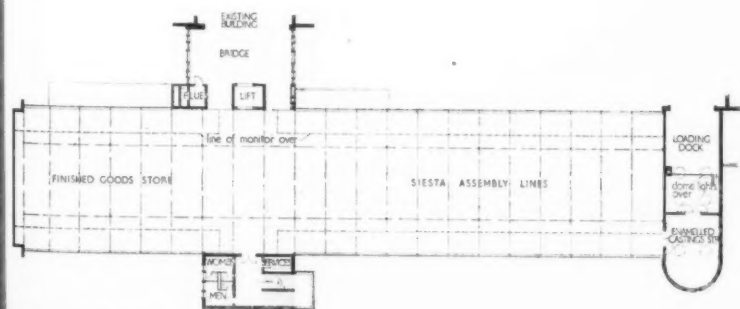
**PLAN.**—Planning was seriously limited by the existing buildings, the extremely steep slope of the site and rather complicated production sequences. It was necessary to keep the foundry in operation throughout the period of reconstruction. In

addition to the present buildings it is hoped in the future to provide a new and separate canteen block, a shower unit for the moulding shop workers, on the pithead bath principle, and eventually an office block and centralized boiler plant.

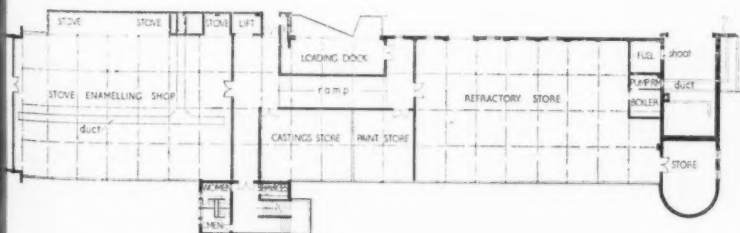
**CONSTRUCTION.**—The main assembly building is steel framed, with precast concrete beam floors and a steel deck roof. The roof is of monitor type construction.

**EXTERNAL FINISHES.**—The external walls are faced with Loscoe red-brown brindle facings and artificial stone dressings of light brown Derbyshire stone. Riser panels below the ground floor windows are of precast concrete construction, with an exposed aggregate of a tone similar to the Derbyshire stone. The two external signs are designed so as to be visible both by day and night from the road (200 ft. away) and railway line (1,000 ft. away) which run across the Derwent valley. The solid letters are painted cream, and the lettering on glass will be silhouetted by lighting reflected from behind. Window frames are painted cream in colour.

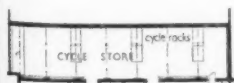
**INTERNAL FINISHES.**—Internal wall surfaces are brick finished. Staircases are of artificial stone. Internal doors are metal faced throughout. Side wall areas in the assembly shops up to dado level are painted light blue-grey in colour, and end walls are primrose yellow. Concrete ceilings are painted broken white, and the underside of the steel roof deck is painted aluminium. Main structural steelwork members are Indian red in colour; window frames are light blue, and doors dark blue-grey.



First floor of completed section



Ground floor of completed section

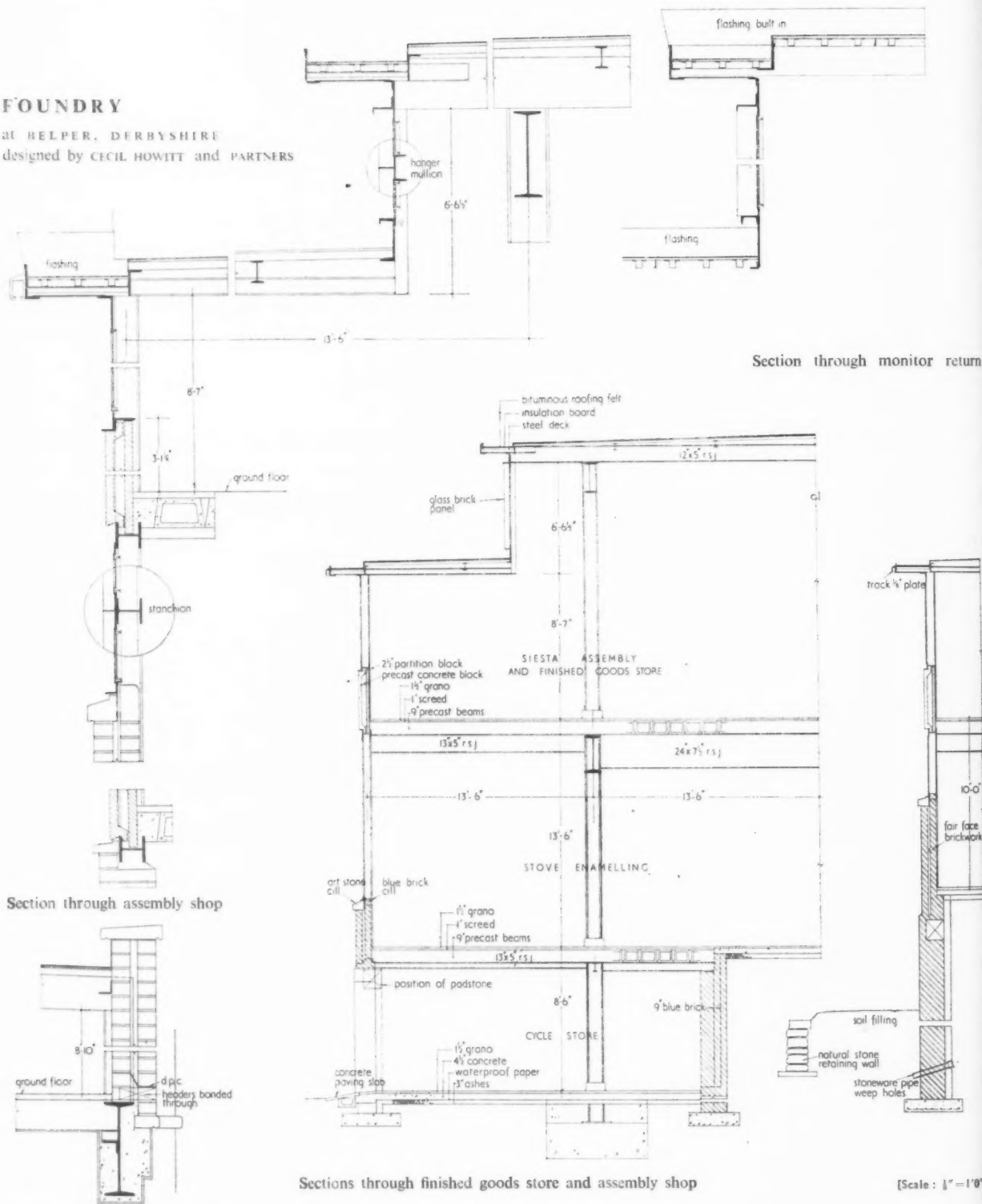


Lower ground floor of completed section [Scale: 1/16" = 1'0"]



# FOUNDRY

at BELPER, DERBYSHIRE  
designed by CECIL HOWITT and PARTNERS



Section through wall of bridge  
[Scale: 1" = 1' 0"]

**SERVICES.**—Heating is entirely by luminous gas panel heaters.

The general contractors were Messrs. Bowmer and Kirkland, of Heage, Derbyshire. For a list of sub-contractors see page 382.

*Facing: the west front and staircase block. At night the upper sign will be silhouetted. The lighting fittings will be fixed to the concrete curb and the light reflected by the inclined back board.*



turn

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## FOUNDRY

at BELPER, DERBYSHIRE

designed by CECIL HOWITT and PARTNERS



*The west front. The main road is two hundred feet away from the factory.*



*The assembly shop on the first floor, showing the monitor type construction of the roof.*



*The east front with ramp leading down to the loading dock.*



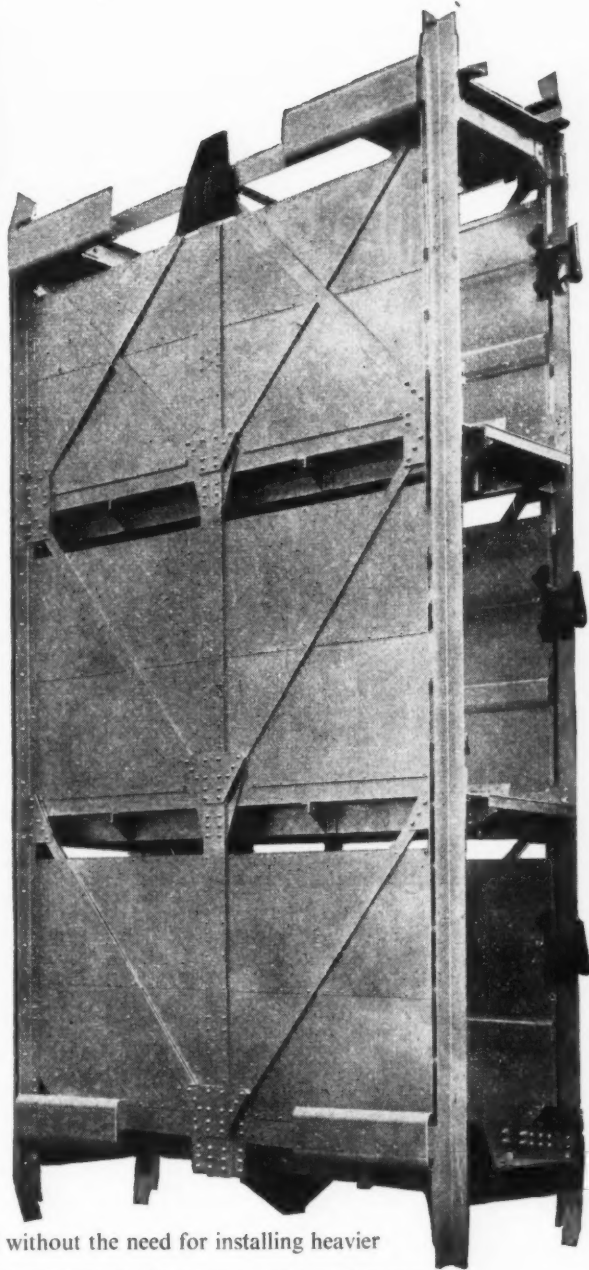
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*The Canteen at the British Electricity Authority's power station, Kingston, Surrey.*

*Photograph by courtesy of the British Electricity Authority*



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QUESTIONS AND ANSWERS · CURRENT TECHNIQUE  
THE INDUSTRY · PRICES · TECHNICAL ARTICLES

## TECHNICAL SECTION

*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. Headings below.*

### INFORMATION CENTRE

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, SPECIFICATION. 9 DESIGN: General. 10 DESIGN: Building Types. 11 MATERIALS: General. 12 MATERIALS: Metal. 13 MATERIALS: Timber. 14 MATERIALS: Concrete. 15 MATERIALS: Applied Finishes, Treatments. 16 MATERIALS: Miscellaneous. 17 CONSTRUCTION: General. 18 CONSTRUCTION: Theory. 19 CONSTRUCTION: Details. 20 CONSTRUCTION: Complete Structures. 21 CONSTRUCTION: Miscellaneous. 22 SOUND INSULATION-ACOUSTICS. 23 HEATING, VENTILATION. 24 LIGHTING. 25 WATER SUPPLY, SANITATION. 26 SERVICES EQUIPMENT: Miscellaneous. 27 FURNITURE, FITTINGS. 28 MISCELLANEOUS.

#### 11.20 materials: general WEIGHTS OF MATERIAL

*Schedule of Weights of Building Materials.* (BS 648:1949. British Standards Institution. 3s.)

Revised edition of BS 648. Additional information given in appendices, notably about various gauge systems applied to wire and sheet metal. A useful document to have in the office.

#### 13.54 materials: timber TIMBER INSECTS

*Household Timber Insects.* Ronald C. Fisher. (The Sanitarian, Nov., 1949, pages 62-84.)

Very detailed article about infestation of timber by insects, with discussion about recognition, prevention and control.

An unusually well illustrated and documented "paper" which could with advantage be added to the FPRL Bulletins, etc., on the subject as a guide and reference.

The paper was presented to members of the Sanitary Inspectors' Association as a guide to Inspectors who are frequently called upon to deal with infestation by all means of insect pests. Dr. Fisher points out that information about cockroaches, silverfish, flies, etc., is still scanty, but that advice about the control and prevention of fungal and insect attack on timber is readily available from the FPRL and that information on the structure of buildings in relation to the prevention of dry rot is available from the BRS.

The valuable services offered by these departments should be made full use of in the interests of the public, but in order to avoid unnecessary delays and overburdening of the respective staffs, it is obviously an

advantage if those whose work brings them into contact with problems of infestation are able to recognize the dangers from the innocuous species of insects and to appreciate to what extent, if any, damage may develop. Dr. Fisher's article admirably fulfils the purpose of giving the necessary background to the subject and should enable intelligent enquiries to be addressed to the FPRL when necessary.

The subjects specifically dealt with in the article are:

Characteristic features of insect attack. Principal types of insect attack in household timbers and furniture. (The notes under this heading include a diagnosis of the damage and a general description of the behaviour of the insects.)

Other insects associated with household timber.

Discussion of remedial and preservative measures.

Conclusion. (A note on the FPRL with a selected bibliography on insect attack, fungal attack, and wood preservation.)

The whole subject is treated in a most practical manner throughout, and important observations are made on the degree of infestation in certain areas by the various insects described: notably the infestation in Camberley and elsewhere in Surrey by the House Longhorn Beetle.

Apart from the usefulness of the text and the excellence of the accompanying illustrations, the article is very well set out and a model of clarity.

#### 13.55 materials: timber MOISTURE IN TIMBER

*The Moisture Relations of Wood.* H. E. Desch. (Wood, Nov., 1949, pp. 350-352.)

A description of the behaviour of wood as it is affected by moisture: a detailed analysis of the data on which moisture contents of wood for various purposes are based.

Several interesting points are mentioned in the article which are of practical value, notably:—

1. The mean equilibrium moisture contents of wood under different service conditions vary with different species.

2. The equilibrium moisture content for any given set of atmospheric conditions varies according as to whether equilibrium is reached as a result of further drying, or of further absorption of moisture.

3. There is a marked range in total shrinkage, in different timbers, and in the ratio of radial to tangential shrinkage.

Both these factors may affect the choice of timber for various uses.

4. Absolute differences between radial and tangential shrinkage are probably the most reliable guide to stability of seasoned timber in service.

#### 13.56 materials: timber TEAK SUBSTITUTES

*Substitution of Hardwoods.* J. E. Desch and D. Phil (Building, Nov., 1949, pp. 407-408.)

A short article describing a number of substitutes for teak which are licence free and which are mostly available in this country.

A valuable guide in that a selection is made by an authority on the subject, enabling architects to specify with confidence some of the less familiar timbers which are now being imported mainly from Africa and whose names appear to be legion.

The general characteristics of teak are summarized, and those of some substitutes are assessed comparatively. Kokrodua is singled out as having the greatest likeness to teak, but unfortunately even the warnings as to difficulties of supply contained in this article are optimistic, since the timber cannot, it appears, be obtained at the present; all supplies having gone to the shipbuilding yards. Some of the timbers mentioned, Muninga, Marbau, Afzelia, Dodrodua, Freijo, are more readily available.

It is a pity that invaluable information of this kind is not to be issued in the same form as the BRS Digests and made available to the profession in the same way.

#### 14.28 materials: concrete REFRACTORY CONCRETE

*Refractory and Heat Resistant Concrete.* S. B. Macdonald. (Ceramic Digest, July, 1949, pp. 226-230.)

Report of a paper from the "Journal of the Canadian Ceramic Society" about the development and possibilities of using concretes where resistance to heat or actual refractory properties are required.

The author points out that concretes are now being much more widely used for refractories than formerly, and that it will not be long before they are a commonplace. He quotes by way of example the construction of a 150-ton refractory furnace dome used at the phosphate plant of the Tennessee Valley Authority at Wilson Dam, Alabama.

A distinction is made between heat resisting and refractory concretes: the former maintain a sufficient part of their original hydraulic strength within a range of temperatures up to about 1,200°F., while the latter, consisting of crushed firebrick aggregate develop a "fire-bond" within a range of from 1,600°F. to about 2,450°F. Both types of concrete depend for their heat resisting property upon the use of calcium-aluminate cement.

The advantages of cast-in-place refractory concrete over standard brick are cited and examples of its use are described.

An interesting article for the specialist, and not without point for anyone wishing to produce specially shaped fire backs which are not easily procurable through normal channels: e.g. the Rumford fireback described in *Principles of Modern Building*.

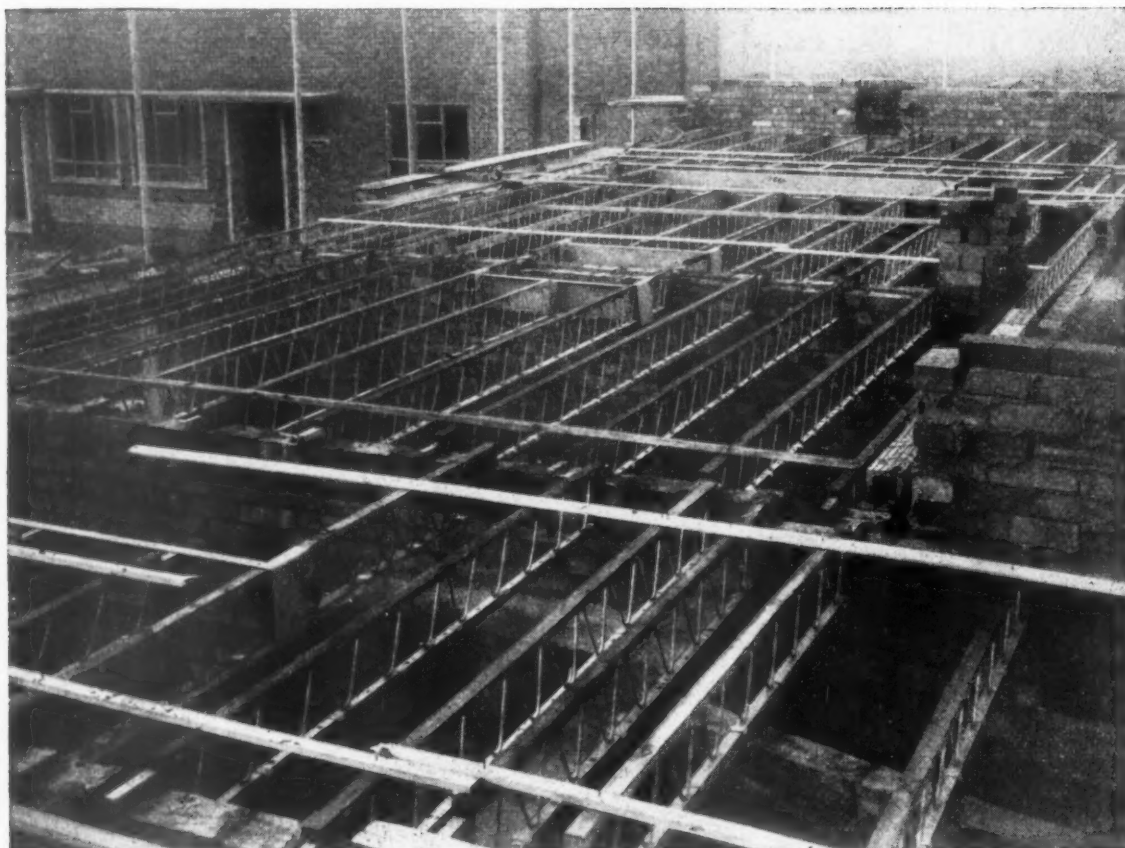


### THE LIBRARY OF INFORMATION SHEETS

#### 28.A1 REFERENCE BACK

*The surface coefficients given on this Sheet conform to those set out in the publication of the Institute of Heating and Ventilating Engineers, "The Computation of Heat Requirements in Buildings."*





*Presweld construction in War Memorial village at Derby*

*Honorary Architect : Thos. W. East, F.R.I.B.A.*

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**15.70 materials: applied finishes and treatments**  
**SCREEDS**

*Laying Screeds as an Underlay for Floor Coverings.* Ministry of Works Advisory Leaflet No. 5, (MOW, 1949.)

Admirable, brief information on requirements for screeds.

Again this series of leaflets has produced a winner. Although intended primarily for the man on the job the information is of real use to architects—perhaps of most use to those who think they know all about this small and everyday problem. It states the problems clearly and gives the answers under headings of Preparation of the Sub-Floor, Thickness, Marking off levels, Damp Courses, Cold Weather, Tests for adhesion and Floor Coverings requiring Screeds.

**15.71 materials: applied finishes and treatments**  
**PLASTER ON METAL LATH**

*Plastering on Metal Lath.* (Building Research Station Digest No. 14, 1950.)

Description of types of metal lathing; advice as to fixing; notes on mixes and application of plaster.

Plastering on metal lathing can be successful, but if failures such as cracking, unevenness, shelling of the finishing coat from the undercoat, etc., are to be avoided, consideration must be given to:

- (a) Type of lathing used.
- (b) Protection of lathing against corrosion.
- (c) Method of fixing lathing.
- (d) Choice of plaster mixes for undercoats and finishing coats.

The digest, which is illustrated with diagrams showing the types of lathing classified in BS 1369, gives detailed information on these points, notably on methods of fixing and on plaster mixes, with special reference to the necessity of including a proportion of

lime in undercoat mixes based on calcium sulphate plaster.

It is stated that galvanized lathing should be used if there is risk that "occasional dampness may arise, e.g., by condensation on ceilings, under unheated attic spaces." This condition would surely be equally, if not more common, with ceilings suspended from flat concrete roofs.

The digest does not discuss the copper-wire and burnt clay type of lath.

A really useful and typically sensible BRS document.

**20.177 construction: complete structures**  
**STEEL ARCH HANGAR**

*Der Erste Hangar des Züricher Flughafens in Kloten.* (The first hangar of the Zürich Airport at Kloten.) (Schweizerische Bauzeitung [Switzerland], Jan. 7, 1950.)

250 ft. clear span hangar with novel features. Close collaboration of architects and structural engineers. 5 pp., 12 illustrations.

Among the architectural requirements were: fitting in with the existing airport buildings; ample daylight without glazing in the arched roof; framework to be fireproof up to 20 ft. above floor. Poor subsoil required a design with the minimum horizontal thrust from the arches. The solution was a three-hinge latticed steel arch, with the third hinge not at the apex as usual but at about a quarter of the span, in the top chord. The thrust was thus only about  $\frac{1}{3}$  of its normal value, and this considerably reduced the cost of the foundations on 60 ft. long timber piles. Broad flange beams form the lattice work of the main arches, welded into 70 ft. assemblies in the shops and bolted on site. Tubular members of  $3\frac{1}{2}$  in. outer diameter are used as rakers and bracing diagonals. The roof has light alloy corrugated sheeting, only 1 mm. thick, on 2 in. insulating boards supported by 4-in. by 8-in. timber rafters. The weight of roofing is 10 lb. per sq. ft., that of the steel arches with purlins and bracing only 6 lb. per sq. ft. A somewhat unusual sight are the narrow strips of plaster of Paris required for fire protection, attached to the underside of the arched trusses and emphasizing their peculiar silhouette. It is interesting to note that thin shell concrete designs were not considered because they could only compete for more than one roof when the same centering can be used at least twice.

**24.132 lighting**  
**INDUSTRIAL COLOURING**

*Colour in Industry—Its Effect on Working Conditions.* Anon. (Industrial Welfare Division of the Australian Department of Labour and National Service. May, 1949.)

Terminology; recommended colours; recommended practices; maintenance. Examples, colour systems and bibliography. Good. Not illustrated, but with colour samples.

This is a short neo-styled publication describing, in good plain language, the requirements for good conditions for vision in factories and the uses of colour in providing them. The terminology section is surprisingly good and interesting, and covers colour, lighting and vision. The discussion of colour practice centres around a group of ten colours, six in a range of higher reflection factors (60-71 per cent.) and four in a lower (25-40 per cent.)

The commended practice has much on the credit side. It is emphasised that colour values for walls and machinery must not be too light, the optimum being a little darker than the work. The value of creating deliberate simple backgrounds for machines

when the work is seen against confusion is recognized. They also recognize a system of "grading" for factories according to whether the work is clean or dirty, and adjust colour values somewhat to this scale. There is the usual brief but inevitably helpless note about floors, and a good warning against the indiscriminate use of catchphrase ideas. Examples of colour schemes for clean and dirty industries are given.

All the way through there is a straightforward note of objectivity refreshing in this subject. If one is to judge by the high standards this document invites, then it seems fair to comment that the colours recommended seem a little too far on the "drab" side of "safe." This may be wise if the job is to be done by laymen; but it is not if the job is to be handled by professionals because there is a disadvantage of recommended colours in that they tend to get manufactured to the exclusion of others. Another possible defect is the emphasis on decoration of the walls rather than the machines. It is always a problem to balance the local scene and the general, but the local scene is very important to the chaps whose scene it is.

**24.133 lighting**  
**TELEVISION LIGHTING**

*How Do You Light a Room for Television?* B. W. Combery. (Architectural Record [USA], Nov. 1949, p. 145.)

Differences in viewing cinemas, theatre and television; pattern, texture and illumination around the picture. Useful illustrations.

This gives a good, clear picture of the lighting conditions required for good televising. The problem is analysed, and examples of good treatments are given. The picture is far brighter than cine pictures and the room should therefore be brighter. Visible sources of light must be avoided, and lighted backgrounds are probably best. Figured patterns should be avoided behind the picture but a low texture is desirable, such as given by folded drapes. Lighting from behind the set is one of the most sensible ways of controlling the background.

*This feature answers any question connected with building confidentially and free of charge. Questions to the Technical Editor, The Architects' Journal, 9, 11 and 13, Queen Anne's Gate, S.W.1.*

**QUESTIONS AND ANSWERS****3017 STADIUM SEATING**

**Q** In designing tiers of seats around a playing field I am trying to determine the optimum rise for each tier. I have heard that it is often the practice to curve the total seat section by increasing the riser heights in the case of those seats higher up the tier. Is there any advantage in this? What is a satisfactory riser height?

**A** Assuming that the average eye level of a spectator is 6 in. below hat level and that a satisfactory view is obtainable if a spectator can see over the head of those in the second row in front, the minimum riser for each tier should be 3 in.

With a curved seat section (assuming that the angle of sight of each spectator is identical) each seat in the section has a common focal point but the value of this is possibly more theoretical than practical.

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

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## Announcements

The Stock Brick Manufacturers' Association announce that, in spite of many difficulties, last year was one of progress. During the earlier months the demand for Common Bricks, which had fallen considerably during the autumn of 1948, gradually increased, so that by early summer stocks of these bricks had been greatly reduced, and are still low. Throughout the year the demand for Facing Stocks was sustained, and difficulty was experienced in meeting all requirements of these bricks. Trade for Red and Multi-coloured Facings was very quiet until the summer, when there was a sudden revival of sales, and stocks were quickly reduced. The research work, undertaken at the direct request of the Association by the British Ceramic Research Association, has continued, and a considerable amount of work has been carried out on the firing of Stock Bricks in a continuous car tunnel kiln. The previous research work has been consolidated in actual works practice, and highly satisfactory results have been obtained at several works. Much additional research remains to be done, and it is hoped that further work will be carried out during the current year.

The BOT announce that after discussions with the timber trade it has been decided to continue in future the provisions in the current Softwood Prices Order which permits sellers to add to the "ex ship" price for landed softwood a charge which is reasonable in relation to the average costs incurred between taking delivery "ex ship" and loading on to a conveyance. The following arrangements, therefore, have been agreed between Timber Control and the Timber Trade Federation:—(a) to agree with local Sections and Associations of the TTF:

Normal Maximum Charges which may be added to the basic price for softwoods delivered at the various stages between ex-ship and implementing the terms of the Order; (b) to obtain an undertaking from the Timber Trade Federation that it will give its full support to the Control in securing that these charges are not exceeded subject only to the provisions of the imported Softwood Prices Order, 1949; (c) to set up special sub-committees locally to deal with complaints of over-charging and to advise the Control thereon. These arrangements have now been implemented and schedules of charges approved in conformity with (a) above have been distributed to softwood dealers. Copies of the schedules are available also for supply to consumers and users of softwoods generally on application to the Timber Control Area Office appropriate to the port (s) concerned, who will also deal with any points arising out of the schedules.

On and after April 1 the address of the Society of Industrial Artists will be 7, Woburn Square, W.C.1.

## Buildings Illustrated

Bus Enquiry Office, Market Hall Station Road, Redhill, Surrey. (Page 359.) Architects: Thomas Bilbow, G. C. Manly (Section Architect), D. J. Routley (Assistant Architect), of London Transport Executive. General Contractors: E. Pollard Ltd. Sub-contractors: Terra-cotta, Shaws Glazed Brick Co.; tiles, Carter & Co. (London) Ltd.

Park Foundry (Belper), Ltd. (pages 374-378.) Architects: Cecil Howitt & Partners. General Contractors: Bowmer & Kirkland. Sub-contractors: Steelwork, Geo. Sands & Son Ltd.; windows, window sashes, staircase windows, Crittall Manufacturing Co. Ltd.; plymax doors, Venesta Ltd.; hollow

floor beams, Croft, Granite, Brick & Concrete Co. Ltd.; Evanstone hollow beams, hollow floor beams (part A), backing slabs, Evans Bros. Ltd.; electric light, Mikijohns Ltd.; sanitary fittings, Doulton & Co. Ltd.; window cleaning gear, P. C. Henderson Ltd.; lifts, Evans Lifts Ltd.; roller shutters, Shutter Contractors Ltd.; fire fighting equipment, Minimax Ltd.; ironmongery, Lewis & Grundy Ltd.; domelights, Pilkington Bros. Ltd.; flats to roof, Val de Travers Asphalte Co. Ltd.; steel roof deck, Ruberoid Co. Ltd.; gas connections and internal mains, Derby Gas, Light & Coke Co. Ltd.; cycle parking blocks, Stelcon Industrial Floors Ltd.; polished copper hand-railing, Ford & Weston Ltd.; lettering to lavatory block, The Lettering Centre; four doormats, Royal Midland Institution for the Blind.

## Corrections

In the progress report on the LCC Concert Hall, which we published on March 16, it was stated that photographs were loaned by Blair Knox Ltd. This should have read Blaw Knox.

On page 284 of our issue for March 2, the sentence "one side is faced with acoustic aluminium tiles" should have read "one side is faced with aluminium and acoustic tiles."

On page 292 of the same issue we omitted to mention Messrs. Korkoid Decorative Floors as sub-contractors for supplying and laying the Accotile Flooring for offices for Swan, Hunter and Wigham Richardson Ltd.

It was incorrectly stated in our issue for March 16 that C. C. Handisyde and D. Rogers Stark were appointed as architects for Trinity Congregational Church, Poplar, by the LCC. They were, in fact, appointed as private architects by Trinity Congregational Church.

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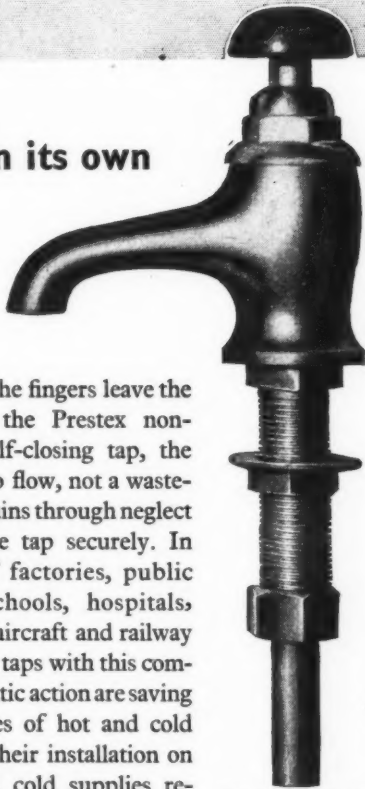
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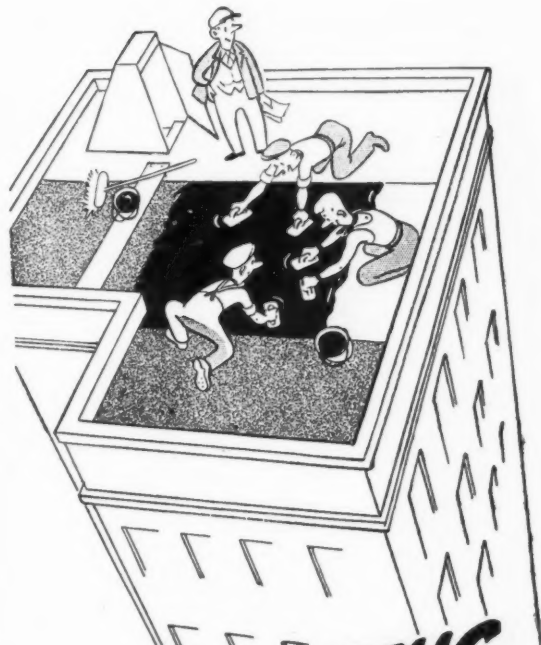
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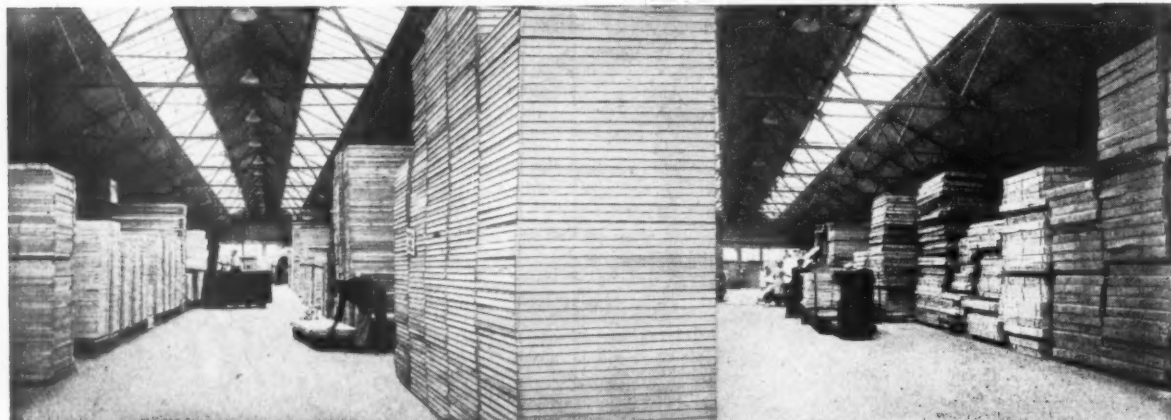


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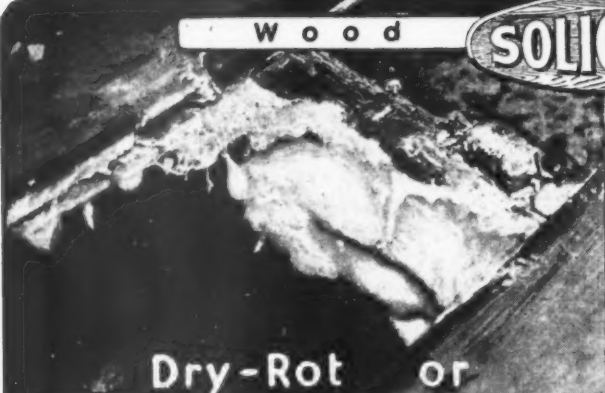


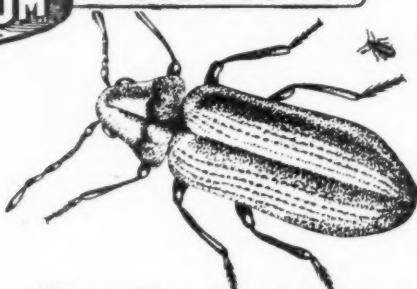
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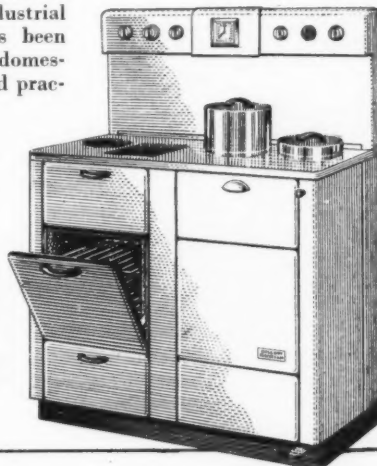
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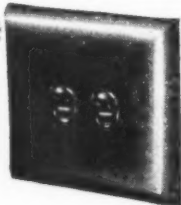


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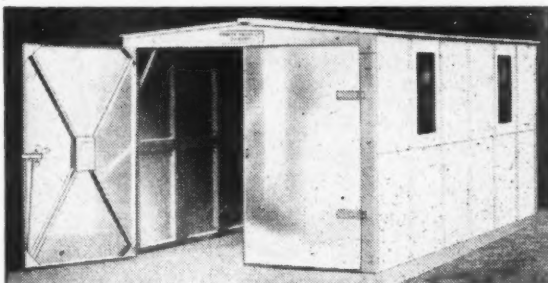


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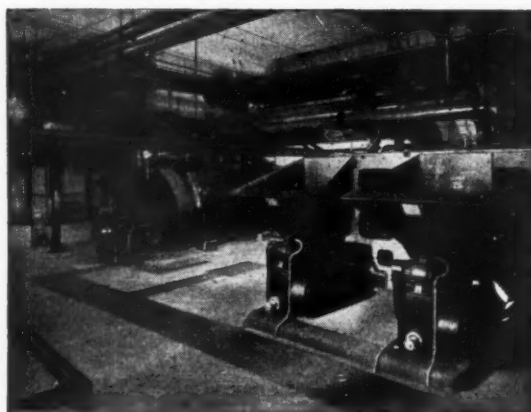
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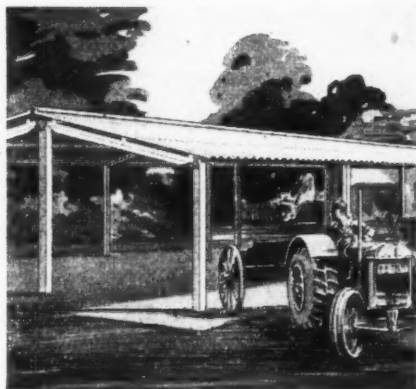
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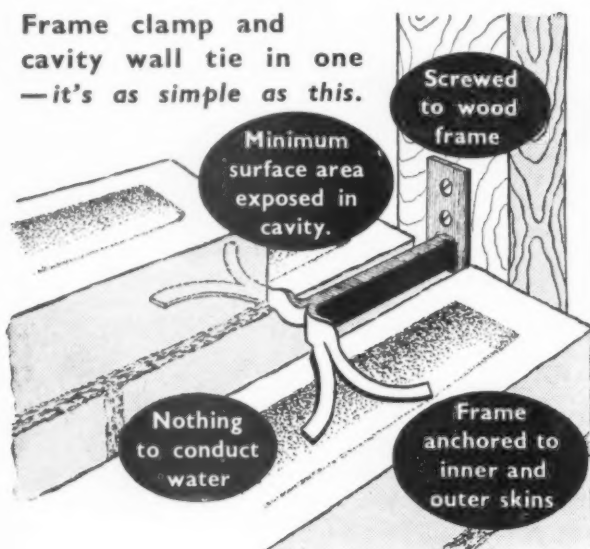
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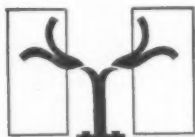
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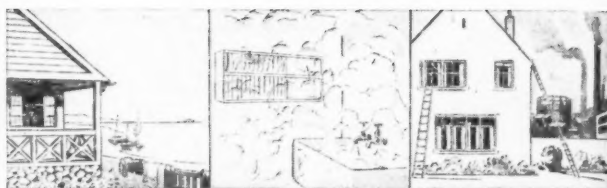
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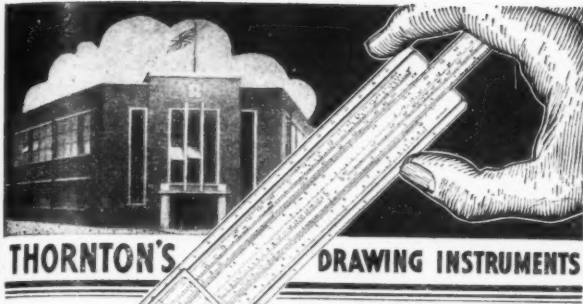
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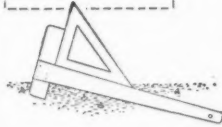


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**CLASSIFIED ADVERTISEMENTS**

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 Announcement**

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

**THE INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS** maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. ADDRESS: EMPLOYMENT REGISTER, WARREN PARK, WHYTELAKE. Tel.: Uplands 0935. 991

**LONDON COUNTY COUNCIL.**

Applications are invited for unestablished positions of (i) **ARCHITECT**, Grade III (salaries up to £700 a year) and (ii) **ARCHITECTURAL ASSISTANTS** (salaries up to £580 a year), in the Housing and Valuation Department. Commencing salaries in either grade will be determined according to qualifications and experience. Engagement will be subject to the Local Government Superannuation Act, and successful candidates will be eligible for consideration for appointment to the permanent staff on the occurrence of vacancies.

Successful candidates will be required to undertake the design, layout and preparation of working drawings for housing schemes (cottages and multi-storey flats), and will be employed in the Housing Architect's Division. Preference will be given to candidates holding a recognized professional qualification.

Forms of application may be obtained from the Director of Housing, The County Hall, Westminster Bridge, S.E.1 (stamped addressed envelope required, and quote Ref. G.R.3). Canvassing disqualified. (2269) 1046

**CORPORATION OF THE CITY OF ABERDEEN.****TOWN PLANNING DEPARTMENT.**

Applications are invited for the following posts in the Town Planning Department:—

(a) **DEVELOPMENT ASSISTANT.** Salary scale £595, rising by annual increments to £660 per annum.

Applicants must possess one or other of the following qualifications, viz., A.R.I.B.A., A.R.I.C.S., A.M.I.C.E., A.M.I.Mun.E., or A.M.T.P.I. The successful applicant will be required to assist the Senior Development Assistant in dealing with development applications made to the Corporation under the Town and Country Planning (Scotland) Act, 1947, and the Aberdeen City Act.

(b) **PLANNING ASSISTANT.** Salary scale £595, rising by annual increments to £660 per annum.

Applicants must hold one or other of the qualifications referred to in (a) above, and should have had considerable planning experience. The successful applicant will be required to assist in the preparation of the Statutory Planning Proposals for the City.

(c) **JUNIOR PLANNING ASSISTANTS (TWO).** Salary scale £390, rising by annual increments to £570 per annum.

Applicants should preferably hold one of the qualifications referred to above, and must at least have passed one or other of the Intermediate examinations leading to these qualifications. Placing in the combined salary grade will be in accordance with qualification and experience.

The appointments are supernumerary and are subject to the passing of a medical examination.

Application forms (which should be submitted in duplicate) may be obtained from the Director of Town Planning, 5, Bon-Accord Crescent, Aberdeen, to whom they should be returned on or before 31st March, 1950.

J. C. RENNIE,

Town Clerk.

Town House, Aberdeen.

2nd March, 1950.

3727

**BOROUGH OF REIGATE.****APPOINTMENT OF SENIOR ARCHITECTURAL ASSISTANT.**

Applications are invited for the appointment of Senior Architectural Assistant on the staff of the Borough Engineer and Surveyor, at a salary in accordance with Grade V of the A.P.T. Division of the National Scale of Salaries (£520-£570 per annum). Applicants should have previous experience in connection with the design of buildings, estate development and the conversion of existing properties into flats. The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and to the passing of a medical examination. Housing accommodation will be provided, if required, for the successful candidate if he is a married man.

Forms of application may be obtained from Mr. George G. Sanderson, A.M.I.C.E., Borough Engineer and Surveyor, Town Hall, Reigate. Applications, endorsed "Architectural Assistant," and accompanied by copies of three recent testimonials, must reach the undersigned not later than Saturday, April 1, 1950.

HEBER DAVIES,

Town Clerk.

Town Hall, Reigate.

March, 1950.

3764

**CORPORATION OF LONDON. APPOINTMENT OF PRINCIPAL ARCHITECTURAL ASSISTANTS.**

Applications are invited for the following appointments:—

**PERMANENT STAFF: PRINCIPAL ASSISTANT.**

This appointment requires good general experience in design, building construction, specification writing, contract management, and sound general business administrative ability.

The salary will be within the range of Higher Grade VI, £750×£825-£900. The commencing salary will be arranged according to age, qualifications and experience. Applicants should be Associate Members of the Royal Institute of British Architects and should be between 35 and 45 years of age.

**AUXILIARY STAFF: PRINCIPAL ASSISTANT.**

This appointment requires good practical experience in the preparation of working drawings, ½ in. and full size details, a sound knowledge of building construction and contract management. The Assistant will be in charge of the Drawing Office and other assistants in connection with the reconstruction of the Central Criminal Court, Old Bailey, E.C. The salary will be within the range of Higher Grade V, £700×£725-£850. The commencing salary will be arranged according to age, qualifications and experience. Applicants should be Associate Members of the Royal Institute of British Architects and be between 30 and 40 years of age.

Previous experience with a local Authority is not essential in either case. Temporary service, in the event of establishment to the permanent staff, will count for the purposes of superannuation. Appointed officers will be required to pass a medical examination and to contribute to the Superannuation Fund of the Corporation.

Applications, giving full personal details, particulars of qualifications, experience, age, past and present appointments, and the names of two persons to whom reference may be made, should be sent to the City Surveyor, Corporation of London, 55-61, Moorgate, London, E.C.2, not later than the 31st March, 1950.

**CITY OF BRADFORD. CITY ENGINEER AND SURVEYOR'S DEPARTMENT.****APPOINTMENT OF SENIOR ASSISTANT ARCHITECT (TOWN PLANNING).**

Applications are invited for the position of Senior Assistant Architect (Town Planning), in the City Engineer and Surveyor's Department, in accordance with Grade A.P.T., VII, of the National Scale of Salaries, i.e., £655 to £710 per annum.

Candidates should be Associates of the Royal Institute of British Architects and hold a University Degree or Diploma in Architecture, and possessing a high standard of contemporary design. Preference will be given to candidates with experience in Town Planning and Civic Design. Practical experience in Housing and Estate Development will be an advantage.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

Applications, stating age, past and present appointments, qualifications and experience, and accompanied by copies of not more than three testimonials, should be received by the undersigned not later than the 31st March, 1950. Canvassing will disqualify, and an applicant who is related to a member of, or a senior officer of, the Council must disclose the fact in his application.

W. H. LEATHEM, Town Clerk.

Town Hall, Bradford.

3718

**THURROCK URBAN DISTRICT COUNCIL. ENGINEER AND SURVEYOR'S DEPARTMENT.****APPOINTMENT OF ARCHITECTURAL ASSISTANT, GRADE IV.**

An Architectural Assistant is required on the staff of the Engineer and Surveyor, Mr. C. S. H. Hawkes, A.M.I.C.E., M.I.Mun.E., M.R.San.I., at a salary in accordance with Grade IV of the A.P.T. Division of the National Scale of Salaries, i.e., £480 per annum, rising, by three increments of £15, to £525 per annum.

General architectural experience is necessary, and candidates must be capable of preparing detailed plans and specifications and supervising housing schemes.

Candidates should have passed some part or parts of the Associate Membership Examination of the Royal Institute of British Architects.

Housing accommodation, if necessary, will be provided for the successful candidate if he lives beyond twenty miles from the Thurrock Urban District.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and the successful applicant will be required to pass a medical examination.

Applications, endorsed "Architectural Assistant, IV," stating age, qualifications and experience, and quoting three references, should reach the undersigned not later than the first post on Monday, 27th March, 1950.

Canvassing will disqualify, and applicants must disclose in writing any relationship to any member or senior officer of the Council.

A. E. POOLE,

Clerk of the Council.

Council Offices,

Whitehall Lane, Grays, Essex.

3716

**DENBIGHSHIRE COUNTY COUNCIL. COUNTY PLANNING DEPARTMENT.**

The above Council invite applications from suitably qualified persons for the following appointments to the Staff of the County Planning Department:—

(a) **SENIOR COUNTY PLANNING ASSISTANT** for the Headquarters' Office at Ruthin, and

(b) **SENIOR COUNTY PLANNING ASSISTANT** for the East Area Office at Wrexham.

Consolidated salary for each of the above-mentioned appointments in accordance with A.P.T., Grade V, £520-£570 per annum. Applicants must have obtained previous experience in Town and Country Planning and should be Associate Members of the Town Planning Institute.

(c) **COUNTY PLANNING ASSISTANT** for the Headquarters' Office at Ruthin, and

(d) **COUNTY PLANNING ASSISTANT** for the East Area Office at Wrexham.

Consolidated salary for each of the above-mentioned appointments in accordance with A.P.T., Grade III, £450 to £495 per annum. Applicants should have passed the Intermediate Examination of the Town Planning Institute.

(e) **JUNIOR PLANNING ASSISTANT** for the Headquarters' Office at Ruthin.

Consolidated salary in accordance with Misc. Div., Grade I, £315-£360 per annum.

(f) **SURVEYOR AND DRAUGHTSMAN** for the Headquarters' Office at Ruthin, and

(g) **SURVEYOR AND DRAUGHTSMAN** for the East Area Office at Wrexham.

Consolidated salary for each of the above-mentioned appointments in accordance with A.P.T., Grade II, £420-£465 per annum. Applicants must be competent surveyors and expert draughtsmen. Previous experience in Ordnance survey work is essential.

(h) **TWO DRAUGHTSMEN** for the Headquarters' Office at Ruthin. Consolidated salary for each appointment in accordance with Misc. Div., Grade II, £375-£420 per annum. Applicants must be expert draughtsmen and colourists, and should be able to undertake the preparation of perspective drawings.

The appointments will be subject to the terms and conditions of service applying to the administrative, technical and clerical officers of the County Council, and will be terminable at the end of any month by one month's notice in writing on either side. The successful applicants will be required to pass a medical examination and will be subject to the Local Government Superannuation Act, 1937. Applicants should indicate the appointment applied for and should state whether they wish to be considered for more than one appointment.

Applications, stating age, whether married or single, qualifications, present position and salary, previous positions, and full details of experience obtained, accompanied by copies of not less than two recent testimonials, must be sent to me the undersigned, suitably endorsed, by not later than the 31st March, 1950.

W. E. BUFTON,

Clerk of the County Council.

County Offices, Ruthin, Denbighshire.

8th March, 1950.

3759

**BURGH OF HAMILTON.****CHIEF ASSISTANT PLANNING OFFICER.**

HAMILTON TOWN COUNCIL invite applications from suitably qualified Architects, Civil Engineers or Chartered Surveyors, for the permanent appointment of Chief Assistant Planning Officer. Applicants must have a knowledge of Town Planning Law and Practice.

The salary will be Grade A.P.T., VI (£595-£660) or, if the successful applicant holds A.M.T.P.I., A.P.T., VII (£635-£710). A house will be made available to the successful applicant, if required.

The appointment is subject to the Local Government (Scotland) Act, 1937.

Applications, stating age, full particulars of qualifications and experience, together with copies of recent testimonials, should be lodged with the undersigned not later than Friday, 31st March, 1950.

Canvassing, either directly or indirectly, will be a disqualification.

JOHN R. McLEAN,

Town Clerk.

The Town House, Hamilton.

16th March, 1950.

3820

**COUNCIL OF THE COUNTY OF ABERDEEN. PLANNING DEPARTMENT.**

Applications are invited for a post of **ASSISTANT COUNTY PLANNING OFFICER** Salary £595 to £760 per annum, with placing as may be determined by the Council. Applicants should have a qualification in Town and Country Planning. The appointment is subject to the Local Government Superannuation (Scotland) Act, 1937, and the successful candidate will require to pass a medical examination.

Conditions relating to the appointment and form of application may be obtained from the undersigned, with whom completed application forms should be lodged not later than 12 noon on Monday, 3rd April, 1950.

Canvassing members of the Council, directly or indirectly, in connection with the appointment, will disqualify the candidate.

CHAS. HORNAL,

County Clerk.

County Buildings,

22, Union Terrace, Aberdeen.

14th March, 1950.

3818



**BOROUGH OF SOUTHALL.  
APPOINTMENT OF ARCHITECTURAL  
ASSISTANT.**

Applications are invited for the above appointment on the permanent staff of the Corporation. Salary in accordance with Grades A.P.T. IV and V, of the National Scheme (£480-£570), plus appropriate London weighting, the commencing salary being dependent upon qualifications and experience.

Candidates should have passed the Intermediate Examination of the R.I.B.A. and have had previous Local Government experience. The appointment is subject to one month's notice on either side and to the provisions of the Local Government Superannuation Act, 1937. The successful candidate will be required to pass a medical examination. Applications, on forms to be obtained from the Borough Engineer, Town Hall, Southall, must be returned to him not later than 11th April, 1950.

J. S. SYRETT, *Town Clerk.*

Town Clerk's Offices, Southall, Middlesex. 3771

**CITY OF NOTTINGHAM.  
CITY ENGINEER'S DEPARTMENT.  
ARCHITECTURAL ASSISTANTS (GRADES  
VI, VII AND VIII).**

Applications are invited for the appointment of ARCHITECTURAL ASSISTANTS in Grade VI, £595-£660; Grade VII, £635-£710; Grade VIII, £685-£760. The commencing Grade will be in accordance with the candidate's qualifications and experience.

Applicants should be Associate Members of the Royal Institute of British Architects, with at least three years' experience since passing the Final Examination, preferably in the design of Schools and Public Buildings.

The appointment is subject to the provisions of the Local Government Superannuation Acts, and the successful candidate will be required to pass a medical examination.

Forms of application may be obtained from R. M. Finch, Esq., O.B.E., M.I.C.E., City Engineer and Surveyor, Guildhall, Nottingham, to whom they should be returned by not later than Monday, 10th April, 1950.

J. E. RICHARDS, *Town Clerk.*

Guildhall, Nottingham. 3803

**MINISTRY OF WORKS.**

Vacancies exist for SENIOR and LEADING ARCHITECTURAL ASSISTANTS in London, at Risley (Warrington) and at Capenhurst (Cheshire), for drawing office duties in connection with important Research Establishments.

Candidates should be of British nationality and have had a recognised Architectural training and good experience.

There are also vacancies for first-class DRAUGHTSMEN in the Senior Architectural Assistant Grade.

Salary:—Senior Architectural Assistants: London, £625-£750 per annum; Risley and Capenhurst, £595-£720 per annum.

Salary:—Leading Architectural Assistants: London, £500-£625 per annum; Risley and Capenhurst, £470-£595 per annum.

Hostel accommodation, for men, at reasonable cost is available at Risley, and there is a possibility of housing being available in the near future at Capenhurst.

Apply in writing, stating locality desired, age, training and experience, to Chief Architect, W.G.10/A.N., Ministry of Works, Abell House, John Islip Street, London, S.W.1. 3801

**COUNTY BOROUGH OF ROTHERHAM.**

**ARCHITECTURAL ASSISTANTS.**

Applications are invited for the undermentioned appointments in the office of the Borough Engineer, at salaries in accordance with the stated Grades of the A.P. and T. Division of the National Scale of Salaries:—

(1) SENIOR ARCHITECTURAL ASSISTANT (Grade VI). Applicants must be Associate Members of the Royal Institute of British Architects.

(2) ARCHITECTURAL ASSISTANT (Grade V), or JUNIOR ARCHITECTURAL ASSISTANT (Grade II, III or IV).

This appointment will be made in Grade V only if the selected applicant is already a Registered Architect and otherwise will be made in one or other of the Junior grades in accordance with the experience and qualifications (which must include the R.I.B.A. Intermediate Examination or its equivalent) of the selected applicant.

Each post is superannuable and a candidate selected for appointment will be required to pass a medical examination. The appointment will be subject to the conditions of service adopted by the Council and based on the National Scheme of Conditions of Service. It will be determinable by one month's notice on either side.

Applicants must state whether they are related to any member or officer of the Rotherham County Borough Council. Deliberate omission to disclose any such relationship will disqualify any candidate. Canvassing of members of the Council, whether direct or indirect, will disqualify.

Applications, endorsed "Architectural Assistants," stating age, qualifications and experience, accompanied by copies of three recent testimonials, should be delivered to the undersigned not later than the 12th April, 1950.

JOHN S. WALL, *Town Clerk.*

Municipal Offices, Rotherham. 3787

**BOROUGH OF SOUTHGATE.  
BOROUGH ENGINEER AND SURVEYOR'S  
DEPARTMENT.  
TECHNICAL STAFF.**

Applications are invited for the following permanent and superannuated appointments in the Department of the Borough Engineer and Surveyor:—

(a) SECOND ARCHITECTURAL ASSISTANT. A.P.T., Va-VI.

(b) SENIOR ARCHITECTURAL ASSISTANT. A.P.T., Va-VI.

(c) TWO ARCHITECTURAL ASSISTANTS. A.P.T., IV-V.

(d) TOWN PLANNING TECHNICAL ASSISTANT. A.P.T., IV-V.

In all cases the appropriate London weighting will be paid.

For appointments (a) and (b), applicants should be Associate Members of the Royal Institute of British Architects, and for appointment (c) preference will be given to applicants who are in possession of the Intermediate Examination of that Institute, although applications from persons who are undergoing a regular course of study for the above mentioned examination will be considered.

Appointment (b) is primarily in connection with the Maintenance of School Buildings, and preference will be given to applicants who have had previous experience of such work.

For appointment (d), applicants must at least be in possession of the Intermediate Examination of an appropriate Professional Institution, and preference will be given to those who have had previous experience in a Planning Office.

Forms of application may be obtained from the Borough Engineer and Surveyor, and should be returned to the undersigned not later than 9 a.m. on Monday, the 3rd April, 1950.

Canvassing, directly or indirectly, will be a disqualification.

GORDON H. TAYLOR, *Town Clerk.*

Town Hall, Palmers Green, N.13. 3762

**SCOTTISH GAS BOARD.  
EDINBURGH GROUP.  
DRAUGHTSMAN/TECHNICAL ASSISTANT.**

Applications are invited for the position of Draughtsman/Technical Assistant, at a salary scale £480, rising to £525 per annum. Applicants, age 25 to 35 years, should have good experience in surveying and in the layout and design of Buildings and Engineering Structures, and should possess a Higher National Certificate of the Institution of Civil Engineers or a similar qualification.

Detailed applications, stating present appointment and accommodation position in the case of married candidates, together with names of three referees, should be addressed to the undersigned, to arrive not later than 29th April, 1950. The successful candidate will be required to pass a medical examination, and will be subject to the provisions of any Superannuation Scheme which the Board may introduce.

DAVID BEAVIS, *Group Manager.*

15, Calton Hill, Edinburgh, 1. 3777

**BUCKS COUNTY COUNCIL.**

The County Architect invites applications from qualified ASSISTANT ARCHITECTS who possess a keen and energetic enthusiasm for their profession. Candidates should preferably have been trained at a recognised School of Architecture.

Grade IV, £480-£525 p.a.; Grade VI, £595-£660 p.a.

A vacancy also exists for:—

ONE ASSISTANT BUILDING SURVEYOR, Grade IV, Salary £480-£525 p.a.

Further particulars and form of application may be obtained from the County Architect, County Offices, Aylesbury, to whom they must be delivered by 31st March, 1950. 3742

**CITY OF BRADFORD.  
CITY ENGINEER AND SURVEYOR'S  
DEPARTMENT.  
APPOINTMENT OF ARCHITECTURAL  
ASSISTANTS.**

Applications are invited for the appointment of Three Architectural Assistants: (a) Grade A.P.T., VI, £595 to £660; (b) Grade A.P.T., IV, £480 to £525, and (c) Grade A.P.T., III, £450 to £495.

Candidates for appointment (a) should be Associates of the Royal Institute of British Architects or its equivalent, and preferably have had experience in design of houses, flats and shops for Corporation Housing Estates.

Applicants for post (b) should have passed the Intermediate Examination of the Royal Institute of British Architects or its equivalent, and candidates for appointment (c) should have had at least two years' practical experience in an Architect's or Municipal Engineer and Surveyor's office. Practical experience in the design of houses will be an advantage.

The appointments are subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidates will be required to pass a medical examination.

Applications, stating age, past and present appointments, qualifications and experience, and accompanied by copies of not more than three testimonials, should be received by the undersigned not later than 31st March, 1950.

Canvassing will disqualify, and an applicant who is related to a member of, or a senior officer of, the Council must disclose the fact in his application.

W. H. LEATHERM, *Town Clerk.*

Town Hall, Bradford. 3719

**WEST SUFFOLK COUNTY COUNCIL.  
COUNTY ARCHITECT'S DEPARTMENT.**

Applications are invited for the following appointments in the County Architect's Department. Salaries as indicated in accordance with the National Joint Council Salary Scales, position on scales according to qualifications and experience, viz:—

(a) QUANTITY SURVEYOR. A.P.T., Grade VII (£635-£710).

(b) TWO SENIOR ASSISTANT ARCHITECTS. A.P.T., Grade VII (£635-£710).

(c) ARCHITECTURAL ASSISTANT. A.P.T., Grade V (£520-£570).

Applicants in respect of (a) should have had experience in the preparation of Bills of Quantities, Interim valuations, settlement of final accounts, and estimating for all classes of building work, including new works and improvements to existing buildings. Preference will be given to those who are Associates of the Royal Institution of Chartered Surveyors (Quantities Division).

Applicants in respect of (b) appointments should be Associates of the Royal Institute of British Architects, with not less than three years' office experience, and have a sound knowledge of architectural design and construction, be quick and accurate draughtsmen, capable of preparing sketch plans, working drawings, and specifications in respect of new schools, police, health and other building work normally undertaken by a Local Authority.

Applicants in respect of (c) should have passed the Final Examination of the R.I.B.A. or equivalent examination, and have sound general experience in architectural work.

The appointments will be terminable by one month's notice in writing on either side, and will be subject to the provisions of the Local Government Superannuation Act, 1937. The successful candidates will be required to pass a medical examination.

Forms of application may be obtained from the undersigned, by whom applications, together with the names of two referees, should be received not later than fourteen days after the date of publication of this advertisement.

L. G. H. MUNSEY, *Clerk of the County Council.*

Shire Hall, Bury St. Edmunds. 3796

**CITY OF BIRMINGHAM EDUCATION  
COMMITTEE.  
APPOINTMENT OF ASSISTANT CLERKS OF  
WORKS.**

Applications are invited for appointment as Temporary Clerks of Works in the Architect's Branch. Salary Miscellaneous II (£375-£415-£420).

Applicants should have had a good technical training and experience in building construction and materials.

Application forms, which may be obtained from the undersigned on receipt of a stamped addressed envelope, must be returned not later than three weeks after the appearance of this advertisement.

E. L. RUSSELL, *Chief Education Officer.*

Education Office, Margaret Street, Birmingham, 3. 3794

**BOROUGH OF POOLE.**

**BOROUGH ENGINEER'S DEPARTMENT.**

Applications are invited for the appointment of an ARCHITECTURAL ASSISTANT, A.P.T., Grade V (£520-£570).

Applicants must be Registered Architects, and have had experience in the design and construction of schools.

The appointment is on the permanent establishment and will be subject to the provisions of the Local Government Superannuation Act, 1937, and to the passing of a medical examination.

The Council are prepared to make available living accommodation, if necessary.

Applications, giving the names of three referees, must be submitted to the undersigned in an envelope suitably endorsed, by not later than Friday, the 31st March, 1950.

WILSON KENYON, *Town Clerk.*

March, 1950. 3792

**COUNTY BOROUGH OF EAST HAM.  
BOROUGH ENGINEER'S DEPARTMENT.**

Applications are invited for the undermentioned appointments:—

ESTIMATOR (Temporary Appointment) (Grade A.P.T., V). Salary £520 to £570 per annum.

ARCHITECTURAL ASSISTANT (Grade A.P.T., I). Salary £390 to £435 per annum.

The appropriate London weighting is paid in addition to the above salaries, and salaries in excess of the Minima of the grades may be paid according to the qualifications and experience of successful candidates.

The Council will be prepared to consider applications for a subsistence allowance in appropriate cases from persons appointed should they be unable to obtain suitable housing accommodation.

Full particulars of the duties, terms and conditions of appointment and form of application (which must be returned by Monday, the 3rd April, 1950) may be obtained from the undersigned.

Canvassing in any form will disqualify.

H. A. EDWARDS, *Town Clerk.*

Town Hall, East Ham, E.6. 3793

**COUNTY OF  
TECHNICAL**

Principal: Required Architectural A.R.I.B.A. Required ing subject of the Royal and prefer can lecture The Co full-time R.I.C.S. for Intermedia Burnham tions, full-t The success devote at there may Application be obtained Education pool, on re and should appearance

**LUNESDA**

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**Council Of**

14th Mar

**COUNT**

**BOROUGH**

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Application particulars with the ence may Assistant" Surveyor, 9 a.m. on

**Town Hall**

15th Mar

**CITY**

Application persons for permanent (a) SENI Salary A.P. (b) ASSIS (c) ARCE A.P.T. Div. The select a medical will be su Government Previous is not esse Suitable available to ment (a). Application of training recent test Figgott, Stoke-on-T appointment 4th April,

**Town Hall**

16th Mar



COUNTY BOROUGH OF BLACKPOOL.  
EDUCATION COMMITTEE.  
TECHNICAL COLLEGE AND SCHOOL OF  
ART.

Principal: M. W. GARRIDE, B.A. (Hons. Lond.)  
Required: A Full-time LECTURER to the  
Architectural Courses. Applicants must be  
A.R.I.B.A. or F.R.I.B.A.

Required: A Full-time LECTURER in Surveying  
subjects. Applicants must have Membership  
of the Royal Institution of Chartered Surveyors,  
and preference will be given to applicants who  
can lecture on Builders' Quantities.

The College is an R.I.B.A. Listed School for  
full-time studies, and is also recognised by the  
R.I.C.S. for the training of full-time students to  
Intermediate level. Salaries will be to the  
Burnham Scale, with allowances for qualifica-  
tions, full-time training, and business experience.  
The successful applicants will be required to  
devote at least 24 hours a week to lectures, and  
there may be extra payment for evening classes.

Application forms and further particulars may  
be obtained from the Chief Education Officer,  
Education Department, 3, Caunce Street, Black-  
pool, on receipt of stamped addressed envelope,  
and should be returned within 14 days of the  
appearance of the advertisement.

TREVOR T. JONES.

Town Clerk.  
3810

LUNESDALE RURAL DISTRICT COUNCIL.  
Applications are invited for the appointment  
of an ARCHITECTURAL ASSISTANT, in the  
Council's Architect's Department, at a salary in  
accordance with Grade II of the National Joint  
Council Scale, viz., £420-£465.

The successful applicant will be required to  
work under the supervision of the Architect,  
primarily in connection with the preparation of  
Bills of Materials, the Measurement of Executed  
Works, and the settlement of Contractors' accounts.  
He will also be required to render such other  
assistance in the general work of the  
department as may reasonably be required of  
him.

The appointment is definitely for the purpose  
of the Housing Capital Construction Works and  
necessity of a temporary nature.

The appointment will be subject to the Local  
Government Superannuation Acts, 1937 and 1939,  
and to the National Joint Council's Scheme of  
Service Conditions, and will be determinable upon  
one month's notice on either side.

Applications, giving particulars of age, ex-  
perience and qualifications, accompanied by three  
recent testimonials, should be forwarded to the  
undersigned, to be received not later than 10 a.m.  
on the 30th day of March, 1950.

J. M. ARROWSMITH.

Clerk to the Council.  
Council Offices, Hornby, near Lancaster.  
14th March, 1950.

COUNTY BOROUGH OF ROCHDALE.  
BOROUGH SURVEYOR'S DEPARTMENT.  
PLANNING ASSISTANT.

Applications are invited for the appointment of  
a Planning Assistant, at a salary in accordance  
with the Grading of Special Classes of Officers  
of the National Joint Council within Grade I  
to Grade V, according to qualifications.

Candidates should have had experience in a  
Planning Office.

The appointment will be subject to the provisions  
of the Local Government Superannuation  
Acts, and to the selected candidate passing a  
medical examination.

It should be clearly understood that the  
Corporation cannot provide housing accommoda-  
tion.

Applications, stating age, qualifications, full  
particulars of experience, present salary, together  
with the names of two persons to whom refer-  
ence may be made, and endorsed "Planning  
Assistant," must be delivered to the Borough  
Surveyor, Town Hall, Rochdale, not later than  
9 a.m. on Monday, 3rd April, 1950.

K. B. MOORE.

Town Clerk.  
Town Hall, Rochdale.  
15th March, 1950.

CITY OF STOKE-ON-TRENT.  
CITY ARCHITECT'S DEPARTMENT.

Applications are invited from suitably qualified  
persons for the following appointments to the  
permanent staff:—

(a) SENIOR ASSISTANT ARCHITECTS. Salary A.P.T. Div., Grade VII, £635-£710.

(b) ASSISTANT ARCHITECTS. Salary A.P.T. Div., Grade VI, £520-£570.

(c) ARCHITECTURAL ASSISTANTS. Salary A.P.T. Div., Grade I, £390-£430.

The selected applicants will be required to pass  
a medical examination, and the appointments  
will be subject to the provisions of the Local  
Government Superannuation Act, 1937.

Previous experience of Local Government work  
is not essential.

Suitable housing accommodation can be made  
available to the successful candidates for appoint-  
ment (a).

Applications, giving date of birth, particulars  
of training, experience, etc., with copies of two  
recent testimonials, should be received by J. R.  
Piggott, F.R.I.B.A., City Architect, Kingsway,  
Stoke-on-Trent, endorsed with the title of the  
appointment applied for, not later than Tuesday,  
4th April, 1950.

HARRY TAYLOR, Town Clerk.

Town Hall, Stoke-on-Trent.  
14th March, 1950.

3822

SINGAPORE IMPROVEMENT TRUST.  
The Singapore Improvement Trust invites  
applications for the following appointments:—

(a) ASSISTANT PLANNING OFFICER  
(Applications).

(b) ASSISTANT PLANNING OFFICER  
(Liaison).

(c) ASSISTANT PLANNING OFFICER  
(Engineering).

(d) ASSISTANT ESTATES OFFICER.

Candidates should not be over 32 years of age.  
Appointment would in the first instance be on a  
three years' agreement.

Applicants for the respective posts must be  
qualified as follows:—  
(a) Associate Member of the Town Planning  
Institute, with at least three years' experience of  
Statutory Planning with a local Planning  
Authority.

(b) Associate Member of the Town Planning  
Institute and holder of another qualification,  
preferably Associate of the Royal Institute of  
British Architects.

(c) Associate Member of the Institution of  
Civil Engineers, with at least three years' Local  
Authority experience in Town Planning.

(d) Passed the Final Examination of the Royal  
Institute of Chartered Surveyors or the Chartered  
Auctioneers' and Estate Agents' Institute, or  
holding an equivalent University degree with ex-  
perience in an Estates Department of a Local  
Authority or a Firm of Estates Agents, and  
general experience in all branches of Estates  
Management.

For posts (a) to (c) the normal commencing  
salary is \$500 per month each, but a higher  
commencing salary may be paid if justified by  
the age, qualifications and experience of the  
applicant. For post (d) the commencing salary  
is \$500 per month. Expatriation allowance (if  
applicable) \$110 per month on commencing  
salary. Cost-of-living allowance at 60 per cent.  
on the first \$200 a month of basic salary, plus (i)  
single officers 20 per cent. on the next \$500 a  
month of basic salary, (ii) married officers with  
no dependent children 35 per cent. on the next  
\$500 a month of basic salary, (iii) married officers  
with one or more dependent children 55 per cent.  
on the next \$500 a month of basic salary. Trans-  
port allowance as appropriate will be granted.  
All allowances are subject to revision. \$1  
(Malayan) equals 2s. 4d. At the initial salary  
and allowances offered single applicants for posts  
(a) to (c) would receive the equivalent of sterling  
amounting to £1,207 per annum, and on the same  
basis applicants for (d) receive the equivalent of  
sterling amounting to £1,106 per annum.

Strict medical examination. Provident Fund,  
to which the appointees must contribute 7½ per  
cent. of salary; the Trust contributes a minimum  
of 7½ per cent., rising by stages to 20 per cent.  
after 20 years' service. Leave and passages in  
accordance with regulations.

Quarters (with  
heavy furniture) are provided at a rental of 8 per  
cent. of salary, or a housing allowance (12 per  
cent. of salary) paid in lieu.

Applications, stating whether married or single,  
giving age and birth place, with details of educa-  
tion, qualifications, training and experience,  
accompanied by copies of three recent testimo-  
nials (in duplicate), should be lodged with  
Messrs. Peirce & Williams, Chartered Civil  
Engineers (Agents to the Trust), 1, Victoria  
Street, Westminster, London, S.W.1, not later  
than Wednesday, the 12th April, 1950.

3789

WELSH BOARD OF HEALTH, CARDIFF.

The Civil Service Commissioners invite applica-  
tions from Registered Architects for one per-  
manent appointment as SENIOR ARCHITECT  
in the Welsh Board of Health.

Salary scale £1,280-£1,478 (man). The scale for  
a woman is somewhat lower.

Applicants must be at least 35 years of age on  
1st January, 1950.

Candidates must be Registered Architects by  
examination or Registered Architects, who since  
registration have passed any professional exami-  
nation in architecture recognised by the  
Architects' Registration Council of the United  
Kingdom as qualifying for registration under the  
Architects' (Registration) Acts. They should  
have Associateship of the Royal Institute of  
British Architects or other recognised qualifica-  
tions, and must have a wide experience in housing  
and estate development, hospital planning, and  
with new forms of construction. A knowledge of  
Welsh is also desirable.

Particulars and application forms from Estab-  
lishment Officer, Welsh Board of Health, Cathays  
Park, Cardiff; completed forms must be received  
by him by 30th April, 1950.

3812

COUNTY BOROUGH OF WALLASEY.  
APPOINTMENT OF ARCHITECTURAL  
ASSISTANT AND ASSISTANT QUANTITY  
SURVEYORS.

Applications are invited for the following  
appointments:—

ARCHITECTURAL ASSISTANT. Grade  
A.P.T. VI (£595-£660).

ASSISTANT QUANTITY SURVEYOR. Grade  
A.P.T. V (£520-£570).

TWO ASSISTANT QUANTITY SURVEYORS.  
Grade A.P.T. IV (£480-£525).

Forms of application and conditions of  
appointment may be obtained from the Borough  
Architect, Town Hall, Wallasey, to whom com-  
pleted applications should be returned by not  
later than Saturday, 1st April, 1950.

EMRYS EVANS.

Town Clerk.  
3795

COUNTY BOROUGH OF SUNDERLAND.  
Applications are invited from suitably qualified  
persons for the following permanent appoint-  
ments in the Borough Architect's Department:—

(a) CHIEF ASSISTANT ARCHITECT (Grade  
VII).

(b) ASSISTANT ARCHITECT (Grade VI).

(c) CHIEF ASSISTANT QUANTITY SUR-  
VEYOR (Grade VII).

(d) SENIOR QUANTITY SURVEYING  
ASSISTANTS (Grade V).

Full details and forms of application may be  
obtained from Harvey C. Bishop, A.R.I.B.A.,  
Borough Architect, Grange House, Stockton  
Road, Sunderland, to whom completed applica-  
tion forms should be forwarded not later than  
Wednesday, 5th April, 1950.

G. S. MCINTIRE.

Town Clerk.  
3799

BOROUGH OF ASHTON-UNDER-LYNE.  
BOROUGH SURVEYOR'S DEPARTMENT.  
APPOINTMENT OF SENIOR ARCHITEC-  
TURAL ASSISTANT.

Applications are invited for the appointment of  
Senior Architectural Assistant, at a salary in  
accordance with Grade V of the Administrative,  
Professional and Technical Division of the  
National Scales, commencing at £520 per annum  
and rising, subject to satisfactory service, to a  
maximum of £570 per annum.

Applicants must have had considerable experience  
with local authorities in connection with  
Housing and Public Buildings.

The successful candidate will be required to  
pass satisfactorily a medical examination and  
to contribute to the Corporation's Superannuation  
Fund.

Housing accommodation will be available for  
the successful candidate if required.

Applications, endorsed "Senior Architectural  
Assistant," giving age, qualifications, experience,  
details of training, present and previous appoint-  
ments, and the names and addresses of two  
persons to whom reference may be made, should  
be received by the undersigned not later than  
the 3rd April, 1950.

Applicants should state in their applications  
whether or not they are, to their knowledge,  
related to any member of, or the holder of any  
senior office, under the Council.

Canvassing, either directly or indirectly, will  
be a disqualification.

G. A. MALONE.

Town Clerk.  
14th March, 1950.

3790

WELSH REGIONAL HOSPITAL BOARD.

Applications are invited for the following per-  
manent posts on the Board's Headquarters  
Staff:—

ARCHITECT'S DIVISION:

(a) ASSISTANT ARCHITECT. Salary A.P.T.  
Grade VIII (£685-£760).

(b) ASSISTANT ARCHITECT. Salary A.P.T.,  
Grade V (£520-£570).

Applicants for posts (a) and (b) must be  
registered architects and have passed the Final  
Examination of the R.I.B.A. They should have  
had wide experience in planning and construc-  
tion, and in the preparation of working draw-  
ings for important hospital buildings.

The appointments are subject to the provisions  
of the National Health Service (Superannuation)  
Regulations, 1947 and 1948.

Applications, stating age, qualifications and ex-  
perience, together with the names of two referees,  
should be addressed to the Secretary, Temple  
of Peace and Health, Cathays Park, Cardiff, so  
as to reach him not later than 10th April, 1950.

3798

KINGSBRIDGE URBAN DISTRICT COUNCIL.

TEMPORARY ARCHITECTURAL ASSISTANT.

Applications are invited for the above appoint-  
ment for a temporary period of two years. Grade  
A.P.T. II, salary commencing at £450 per annum.  
Applicants must have had good general archi-  
tectural experience in connection with Municipal  
housing, including site supervision.

Applications, stating age, qualifications and ex-  
perience, together with copies of three recent  
testimonials, should be delivered to the under-  
signed not later than noon on the 4th April, 1950.

GEO. H. KEMP.

Clerk to the Council.  
Council Chambers, Kingsbridge.

3817

LANCASHIRE COUNTY COUNCIL.

SENIOR PLANNING ASSISTANTS  
(ARCHITECTURAL).

Senior Planning Assistants (Architectural) re-  
quired at Preston, Liverpool, Bury and  
Manchester Offices of the County Planning De-  
partment. Commencing salary £595-£650 p.a.,  
according to qualifications and experience.

Applicants should possess a Degree in Archi-  
tecture and/or be Corporate Members of the  
Royal Institute of British Architects.

Previous planning experience not essential, but  
preference will be given to persons with general  
experience in preparing Town and Country  
Planning Schemes and administering relevant  
Acts and Orders.

Appointments are subject to the National Joint  
Council Scheme of Conditions and to the Local  
Government Superannuation Act, 1937.

Applications, giving names and qualifications  
of two referees, and indicating for which appoint-  
ment application is made, to be forwarded to the  
County Planning Office, County Offices,  
Preston, by 8th April, 1950.

3814



**CAERNARVONSHIRE COUNTY COUNCIL.**  
**PLANNING DEPARTMENT.**  
 Applications are invited for the following appointments:—  
 (a) **ASSISTANT COUNTY PLANNING OFFICER, A.P.T.,** Grade VIII (£665-£760); and  
 (b) **PLANNING ASSISTANT, A.P.T.,** Grade IV (£480-£525).  
 Applicants for (a) must be Corporate Members of the Town Planning Institute, and preference will be given to those who possess an additional professional qualification. A wide practical experience in the preparation of planning schemes for urban, rural and coastal areas is essential. Applicants must be good administrators, having a sound knowledge of current planning law and practice, and be capable of assuming responsibility for the control of staff.  
 Applicants for (b) must be fully conversant with current planning practice, including survey for Development Plans in town and country.  
 Forms of application can be obtained from the undersigned, to whom they should be returned, duly completed, by not later than the 22nd April, 1950.

**GWILYM T. JONES,**  
*Clerk of the County Council.*  
 County Offices, Caernarvon,  
 17th March, 1950. 3834

**BERKSHIRE COUNTY COUNCIL.**  
 Applications are invited for the following appointments in the County Architect's Department:—  
 (a) **ASSISTANT HEATING AND VENTILATING ENGINEER,** Salary Grade VI, £595-£660. Candidates must be Associate Members of the Institution of Heating and Ventilating Engineers, and should have a wide experience in the design and supervision of heating, hot water supply, and electrical installations.  
 (b) **CLERK OF WORKS,** Salary Grade II, £420-£465. Candidates should have a sound practical experience in the design, installation and maintenance of one or more of the following:—  
 1. Low pressure hot water heating, domestic hot and cold water services.  
 2. Steam boilers and services as applicable to Cooking and Laundry equipment.  
 3. Electrical installations in buildings, and all applicants should be able to inspect, test, advise and report on both the installation of new works, and the maintenance of existing systems.  
 Application forms and further particulars can be obtained from the County Architect, Wilton House, Parkside Road, Reading, to whom they should be returned completed by noon on Saturday, 15th April, 1950.

**H. J. C. NEOBARD,**  
*Clerk of the Council.*  
 Shire Hall, Reading,  
 March, 1950. 3841

**CARSHALTON URBAN DISTRICT COUNCIL.**  
**ARCHITECTURAL ASSISTANT.**  
 Applications are invited for the appointment of **ARCHITECTURAL ASSISTANT** in the Engineer and Surveyor's Department, at a salary in accordance with Grade A.P.T., V, of the National Scales (£520-£570), plus London weighting.  
 Applicants must hold the Final Examination Certificate of the R.I.B.A. and be Registered Architects. They must be competent in design and construction and have had sound experience in the architectural work of a Local Authority.  
 The appointment will be subject to (1) the provisions of the National Scheme of Conditions of Service, (2) the passing of a medical examination for Superannuation purposes, and (3) one month's notice on either side.  
 No special action will be taken to provide the successful applicant with housing accommodation.

Applications, on forms obtainable from the undersigned, must be returned, together with the names of three referees, not later than the 17th April, 1950. Canvassing in any form will be a disqualification.  
**J. W. WRIGHT,**  
*Clerk of the Council.*  
 District Council Offices,  
 The Grove, Carshalton, Surrey,  
 March 1950. 3836

**WARWICKSHIRE COUNTY COUNCIL.**  
**COUNTY PLANNING DEPARTMENT.**  
 Applications are invited for the post of **PLANNING ASSISTANT, Grade A.P.T., V** (£520-£570).  
 The person appointed will be engaged on the County Development Plan and will be stationed at Warwick. Applications will be welcomed from persons who have had an architectural training and hold an appropriate qualification.  
 The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and the successful applicant will be required to pass a medical examination. He will also be required to provide and maintain a motor car, for which travelling and subsistence allowances will be paid in accordance with the Council's scale.  
 Applications, together with the names and addresses of two persons to whom reference may be made, should be forwarded to J. J. Brooks, M.I.Mun.E., M.T.P.I., County Planning Officer, Northgate, Warwick, not later than Thursday, 6th April, 1950.  
 Canvassing, directly or indirectly, will be a disqualification.  
**L. EDGAR STEPHENS,**  
*Clerk of the Council.*  
 Shire Hall, Warwick,  
 17th March, 1950. 3824

**COUNTY COUNCIL OF THE WEST RIDING OF YORKSHIRE.**  
**COUNTY PLANNING DEPARTMENT.**  
 Applications are invited for the following permanent appointments to the staff of the County Planning Department, in each case at a commencing salary within the scale applicable to the post, according to the experience and qualifications of the successful candidate:—  
 (a) **ASSISTANT AREA PLANNING OFFICER (THREE).** Salary scale £760-£850-£910 per annum.  
 (b) **CHIEF PLANNING ASSISTANT.** Salary scale £685-£720-£760 per annum.  
 (c) **SENIOR PLANNING ASSISTANT.** Salary scale £595-£625-£670 per annum.  
 (d) **PLANNING ASSISTANTS (TWO).** Salary scale £450-£520-£570 per annum.  
 (e) **JUNIOR PLANNING ASSISTANTS (NINE).** Salary scale £390-£415-£465 per annum.

The successful candidates for appointments (a) will be assigned for duty to the Area Planning Offices at Skipton, Harrogate and Huddersfield, and applicants may express a preference for one of these places. Applicants should be Corporate Members of the Town Planning Institute and/or possess a recognised qualification in Civil Engineering, Surveying or Architecture, and should have had considerable planning and administrative experience.  
 The successful candidate for appointment (b) will be attached to the Headquarters of the Department at Wakefield, and applicants should have had a wide experience in town and country planning and possess a knowledge of current planning practice and legislation. They should also be Corporate Members of the Town Planning Institute or possess a recognised qualification in Civil Engineering, Surveying or Architecture.  
 The appointment (c) is also to the Headquarters staff at Wakefield. Applicants should be Corporate Members of the Town Planning Institute or possess a recognised qualification in Civil Engineering, Surveying or Architecture, and should have considerable experience in a Planning office.

The successful candidates for appointments (d) will be assigned for duty at the Harrogate and Pontefract Area Offices respectively, and applicants may express a preference for one of these places. Applicants should have received training in Town Planning, Civil Engineering, Surveying or Architecture, and have passed the Intermediate Examination of one of the recognised professional institutions.

The appointments (e) will be to the Area Offices at Skipton, Harrogate, Huddersfield, Pontefract, Barnsley and Doncaster, and a preference for one of these places may be expressed. Applicants should have had training in Civil Engineering, Surveying or Architecture, and preference will be given to candidates having a knowledge of town and country planning.

Consideration will, however, be given to applicants who possess a University degree in Economics, Geography or allied subjects.

The appointments will be subject to the provisions of the Local Government Superannuation Act, 1937, as amended by the West Riding County Council (General Powers) Act, 1948, and the successful applicant will be required to pass a medical examination.

Applications, stating age, qualifications and experience, should be accompanied by copies of two recent testimonials or should give the names and addresses of two referees, and must reach the undersigned not later than 12th April, 1950.

**ARTHUR BATES,**  
*County Planning Officer.*  
 County Planning Department,  
 7, Bond Street, Wakefield. 3833

**CHESHIRE COUNTY COUNCIL.**  
**COUNTY PLANNING DEPARTMENT.**  
**NORTH-EAST CHESHIRE AREA PLANNING COMMITTEE.**

**APPOINTMENT OF PLANNING STAFF.**  
 Applications are invited for the following appointments on the permanent establishment of the North-East Cheshire Area Planning Department, which is situated at 80, Churchgate, Stockport.

The posts are subject to the Local Government Superannuation Act, 1937, and the successful applicant will be required to act under the direction of the Area Planning Officer in the preparation of a Development Plan for the County and the Control of Development under the Town and Country Planning Act, 1947.

(a) **PLANNING ASSISTANT.** Salary A.P.T., III-IV (£450-£525).  
 Applicants for this position should have obtained the Intermediate Examination (or equivalent) of one of the recognised professional institutions, and preference will be given to candidates who have had training in architecture and some experience in town planning.  
 (b) **JUNIOR PLANNING ASSISTANT.** Salary A.P.T., I-II (£390-£465).

Applicants for this position should have had training in a planning, architectural, surveying or engineering office.

Forms of application, together with details of the duties and conditions attaching to the appointments, may be obtained from me on receipt of a stamped and addressed foolscap envelope, and applicants should state which form they require.

The last date for the receipt of completed applications is Saturday, the 15th April, 1950.  
**KENNETH O. MALE,**  
*County Planning Officer.*

Bridgegate House, Lower Bridge Street,  
 Chester. 3825

**COUNTY COUNCIL OF THE WEST RIDING OF YORKSHIRE.**  
**COUNTY PLANNING DEPARTMENT.**  
 Applications are invited for the appointment of an Area Planning Officer on the permanent staff of the County Planning Department, at a salary of £960 per annum, rising subject to satisfactory service by annual increments of £30 to a maximum of £1,050 per annum.  
 The successful candidate will be required to take charge of the Huddersfield Area Planning Office and to be responsible for the carrying out of such planning duties as may be assigned to him. Applicants should be Corporate Members of the Town Planning Institute and/or possess a qualification in Civil Engineering, Surveying or Architecture, and should have had considerable planning and administrative experience in a position involving the control of staff.  
 The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, as amended by the West Riding County Council (General Powers) Act, 1948, and successful applicants will be required to pass a medical examination.

Applications stating age, qualifications and experience should be accompanied by two recent testimonials or give the names and addresses of two referees, and should be received by the undersigned not later than 12th April, 1950.

**ARTHUR BATES,**  
*County Planning Officer.*  
 County Planning Department,  
 7, Bond Street, Wakefield. 3832

B.B.C. invites applications from Registered Architects for two architectural posts in Building Department, London. (a) Assistant 1 (Architectural). Candidates must be experienced in building surveys, general planning and preparation of detail drawings for office-type buildings. Age 30/45. Starting salary dependent on qualifications and experience and in a grade with annual increments of £40 and a maximum of £890 per annum, with prospects of promotion. (b) Assistant IV (Architectural). Applicants should have a sound knowledge of building construction and at least three years' practical experience in an office. Age 25/30. Preference will be given to applicants trained in an architectural school. Starting salary dependent on qualifications and experience and in a grade with annual increments of £25 and a maximum of £580 per annum, with prospects of promotion. The posts are permanent, and the successful candidates will be eligible for consideration for admission to the Established Staff (Contributors' Pension Scheme) after a qualifying period of two years. Applications stating age, qualifications, details of past and present employment and the post applied for, should reach the Engineering Establishment Officer, Broadcasting House, London, W.1. within seven days of the appearance of this advertisement. 3831

**CITY OF CARDIFF.**  
**CITY SURVEYOR'S DEPARTMENT.**  
 Applications are invited for the following appointments:—

(1) **Architectural Assistant (General)** and  
 (2) **Architectural Assistant (Education)** A.P.T. Grade VI. Salary £595 per annum, rising by two annual increments of £20 and one of £25 to a maximum of £660.

(3) **Architectural Assistant (General), A.P.T. Grade V.** Salary £520 per annum, rising by two annual increments of £15 and one of £20 to a maximum of £570.

The Council will assist in finding housing accommodation for successful applicants who are married and have children.

Details of Conditions and Duties may be obtained from the City Surveyor, City Hall, Cardiff.

Applications appropriately endorsed "Architectural Assistant, Grade —", accompanied by the names and addresses of three persons to whom reference may be made, should be delivered to the undersigned not later than 10 a.m. on the 7th April, 1950.

**S. TAPPER-JONES,**  
*Town Clerk.*  
 City Hall, Cardiff.  
 13th March, 1950. 3829

## Competitions

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

### COMMONWEALTH OF AUSTRALIA. AUSTRALIAN WAR MEMORIAL COMPETITION.

The Australian Battlefields Memorial Committee invite entry by British Sculptors, Artists, Architects and Designers in a competition for the design of an Australian War Memorial, to be erected near Australia House, Strand, London, to commemorate all Australian Fighting Services and the Merchant Navy in the Second World War.

Prizes of £250, £150 and £50 (Australian) will be awarded for the designs judged respectively first, second and third by a panel of five Australian art experts, in consultation with a Designs Committee, subject to approval by the Cabinet of the Government of Australia.

The author of the design awarded the first prize will be commissioned to execute the construction and/or erection of the Memorial, unless in the opinion of the Assessors and the Designs Committee there is any valid objection to so doing.

Intending competitors must be British citizens and should register their names with the Secretary, Australian Battlefields Memorial Com-

mittee, 434 Australia.  
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## Architects

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**ASSISTANT**  
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mittee, 454, Collins Street, Melbourne, Victoria, Australia, before noon 1st April, 1950.  
Registration is not compulsory, but secures certain advantages as set out in the Conditions of the Competition, and failure to register will not disqualify entry to the competition, which will close on 1st September, 1950.  
Full conditions of the Competition can be obtained on application to the Official Secretary, Commonwealth of Australia, Room 115, Australia House, Strand, London, W.C.2. 3788

### Architectural Appointments Vacant

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

**ASSISTANT** required in busy Berkshire office, with work in all parts of the country; an opportunity for a man with initiative and drive to show his capabilities; good prospects for a capable man. Apply, with full particulars of experience and salary required, to Box 3342.

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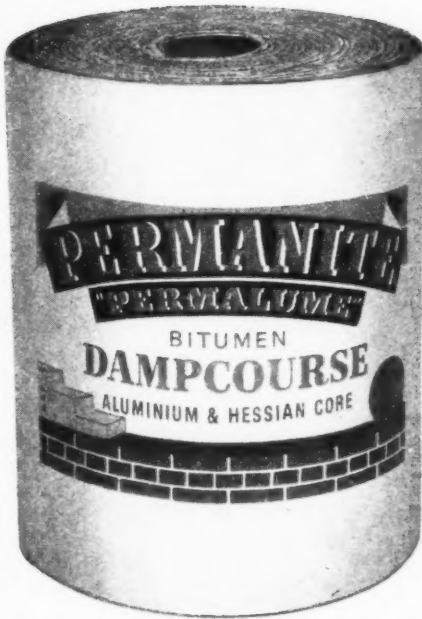


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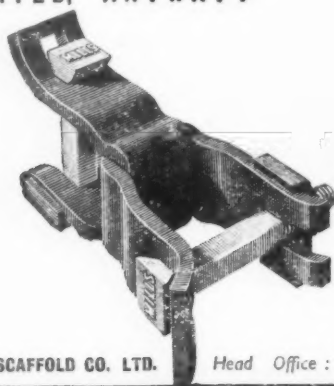
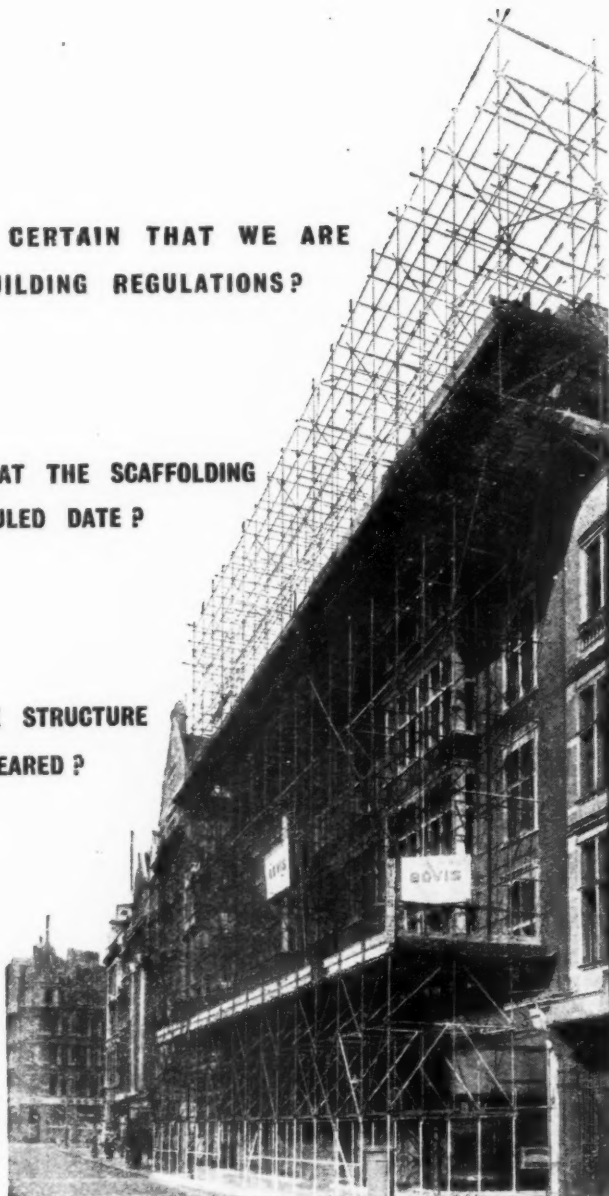
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