

# THE ARCHITECTS' JOURNAL

STACK



## standard contents

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

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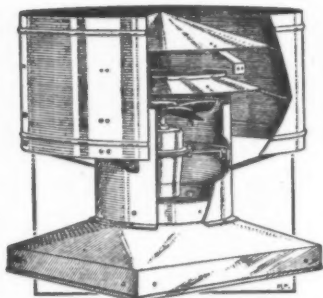
★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ie one week, Ig to Z the next. In all cases where the town is not mentioned the word LONDON is implicit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

IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266.
IHVE	Institution of Heating and Ventilating Engineers. 75, Eaton Place, S.W.1.	
IIBD	Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1. Euston 2450	Sloane 3158/1601
ILA	Institute of Landscape Architects. 12, Gower Street, W.C.1.	Museum 1783
I of Arb.	Institute of Arbitrators, 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197/5176
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
IWA	Inland Waterways Association. 11, Gower Street, W.C.1.	Museum 9200
LIDC	Lead Industries Development Council. Eagle House, Jernyn Street, S.W.1.	Whitehall 7264/4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3891
MARS	MARS Group (English Branch of CIAM). Secretary: Gontran Goulden, Building Centre, 9, Conduit Street, W.1.	Mayfair 8641
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. Whitehall, S.W.1.	Whitehall 4300
MOLNS	Ministry of Labour and National Service. 8, St. James's Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOTCP	Ministry of Town and Country Planning. 32-33, St. James's Square, S.W.1.	Whitehall 8411
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94-98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record. 37, Onslow Gardens, S.W.7.	Kensington 8161
NCBMP	National Council of Building Material Producers. 10, Princes Street, S.W.1.	Abbey 5111
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives, Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies. 13, Suffolk St., S.W.1.	Whitehall 1693
NHBRC	National House Builders Registration Council. 82, New Cavendish Street, W.1.	Langham 4341
NPL	National Physical Laboratory. Head Office, Teddington.	Molesley 1380
NSA	National Sawmilling Association, 14, New Bridge Street, E.C.4.	City 1476
NSAS	National Smoke Abatement Society. Chandos House, Buckingham Gate, S.W.1.	Abbey 1359
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Whitehall 9936
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Edinburgh 20396
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George St., S.W.1.	Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 22A, Queen Anne's Gate, S.W.1.	Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Trafalgar 2366
RSI	Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1.	Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1.	Victoria 2186
SCR	Society for Cultural Relations with the USSR. 14, Kensington Square, London, W.8.	Western 1571
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3.	Mansion House 3921
SIA	Structural Insulation Association. 14, Moorgate, London, E.C.2.	Central 4444
SIA	Society of Industrial Artists. 7, Woburn Square, W.C.1.	Langham 1984
SNHTPC	Scottish National Housing & Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen.	
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 75, Cannon Street, E.C.4.	City 4771
TGC	The Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815
TTF	Timber Trades Federation. 69, Cannon Street, E.C.4.	City 4444
WDC	War Damage Commission. Devonshire House, Mayfair Place, Piccadilly, W.1.	Mayfair 8866
WEDA	Welfare Equipment Development Association. 74, Victoria Street, S.W.1.	Victoria 5783
ZDA	Zinc Development Association. Lincoln House, Turl Street, Oxford	Oxford 47988

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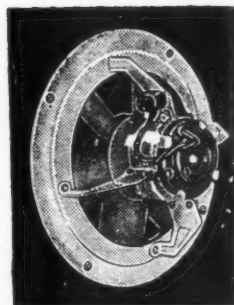
CUT-AWAY VIEW SHOWING FAN INSTALLATION IN DUAL-PURPOSE "MECHAVENT" NATURAL AND MECHANICAL ROOF VENTILATOR

## GREENWOOD-AIRVAC

FAN UNITS AND VENTILATING EQUIPMENT FOR HOUSING AND INDUSTRY

COMPLETE SYSTEMS OF SCIENTIFICALLY BALANCED VENTILATION FOR BUILDINGS TRUNKED HOODS WITH FANS FOR REMOVING UNWANTED HEAT, FUMES AND STEAM FROM THE KITCHEN EQUIPMENT OF SCHOOLS, HOSPITALS, CANTEENS, RESTAURANTS AND HOTELS EFFICIENT VENTILATION FOR KITCHENS AND CANTEENS

MECHANICAL AND STATIC EXTRACTORS AND INTAKES FOR ROOFS AND WALLS



RING MOUNTED WALL FAN WITH HOPPLA OR AUTOMATIC LOUVRES. A USEFUL EXTRACTOR FAN ASSEMBLY

GREENWOOD'S MULTI-LOUVRED "MAXAIRE" PANELS, "DIFUSEX", AND HIT AND MISS VENTILATORS



FOR CUPBOARDS, DOORS, WALLS, PARTITIONS, CEILINGS, AND FOR FITTING EXTERNALLY

### GREENWOOD'S AND AIRVAC VENTILATING COMPANY LIMITED

SPECIALISTS IN THE DESIGN AND MANUFACTURE OF VENTILATORS AND VENTILATING EQUIPMENT

BEACON HOUSE • KINGSWAY • LONDON, W.C.2.

AIRVAC, LONDON

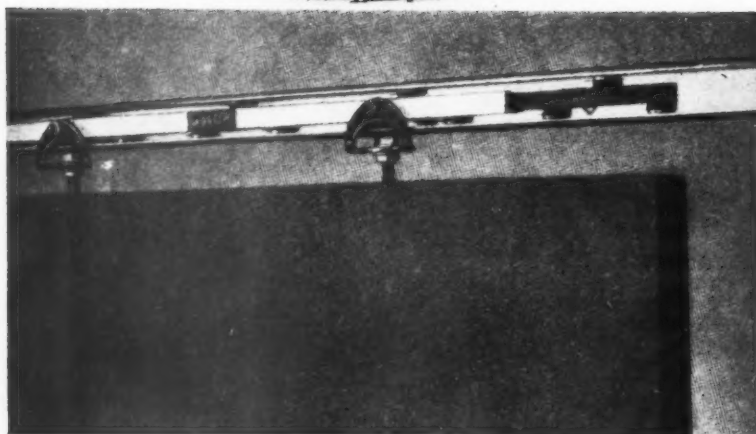
CHANCERY 8135/6/7



### BALL BEARING SLIDING DOOR GEAR

FOR INTERIOR USE IN

LOUNGE • DINING ROOM • KITCHEN  
BATHROOM • LARDER • WORKSHOP  
OFFICE • HOSPITAL • FLATS • CINEMAS • ETC



### THE SPACE SAVER

- BALL BEARINGS
- LOW COST
- NO MAINTENANCE
- SILENT ACTION
- LONG LIFE
- NON-CORROSIVE

Full size drawings, illustrated and descriptive literature available on request from :—

## THE BRITISH TROLLEY TRACK CO. LTD.

COBURN WORKS, COPPERFIELD STREET, LONDON, S.E.1. Tel. WATERloo 4311 (3 lines)





EAR

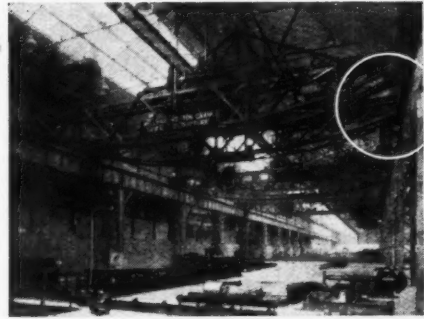
TCHEN  
KSHOP  
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TD.

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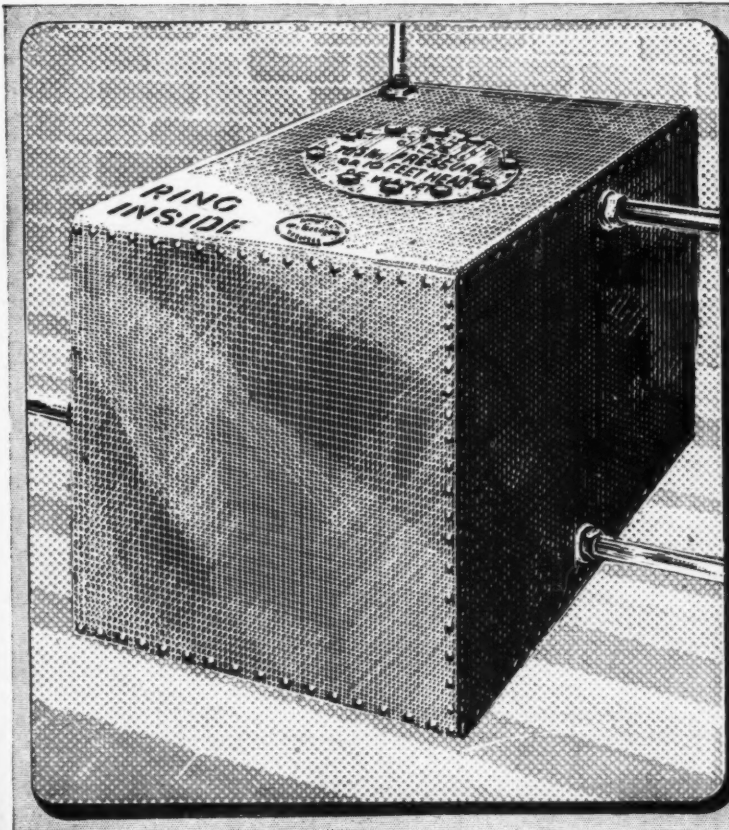


"Noral" aluminium was used for the construction of Wellman crane girders, for installation at the Rogerstone Works of Northern Aluminium. Prefabricated by Head Wrightson Aldean to meet specific needs, they combine lightness with great strength and durability. Lighter girders allow a corresponding increase in the actual load, thus saving both time and power, as well as reducing freight charges, handling and erecting costs. Moreover, the construction of aluminium alloy girders is not hindered by shortage of material. This development in the application of aluminium alloy is one of many made by the Head Wrightson Aldean Organisation.

**H-W-A**  
HEAD WRIGHTSON ALDEAN LTD

Photograph by courtesy of  
Northern Aluminium Co. Ltd.

Enquiries to : HEAD WRIGHTSON ALDEAN LTD., THORNABY-ON-TEES



**TO THE ARCHITECT -  
SURVEYOR AND BUILDER**

**Yours the problem -  
Harveys the answer!**

Whenever the question of where-to-get, not only Tanks, but Cisterns and Cylinders arises—remember Harveys. Our illustration shows a typical "Harco" product—unsurpassed for soundness of construction and galvanized after manufacture for lasting use. Get all supplies from your Builders' Merchant. For full information of all ranges write for Pocket List A.J.713.

**Harvey**

**G.A. Harvey & Co. (London) Ltd.**  
Woolwich Rd. London. S.E.7

GH/GH32/46

GH/GH32/46



## For luxury bar



Photo: J. W. Mellish & Co.

The buff counter top and green front in WARERITE cigarette-proof material enhance this snack bar at the famous 'Cock Tavern', Fleet St., London. Green WARERITE materials also provide the flush door facings.  
Architect: Leonard J. Multon, F.R.I.B.A.  
Contractors: Fullers (Builders) Ltd.

## ... or humble pub

WARERITE materials offer smart colours or friendly patterns to match any decorative scheme. Individual designs may be incorporated in them if required, and they include a cigarette-proof grade. Whether used constructionally as panelling or to surface a bar counter, WARERITE materials always look right. Throughout years of spilt drinks and wear and tear, a damp cloth suffices to clean them.



# WARERITE

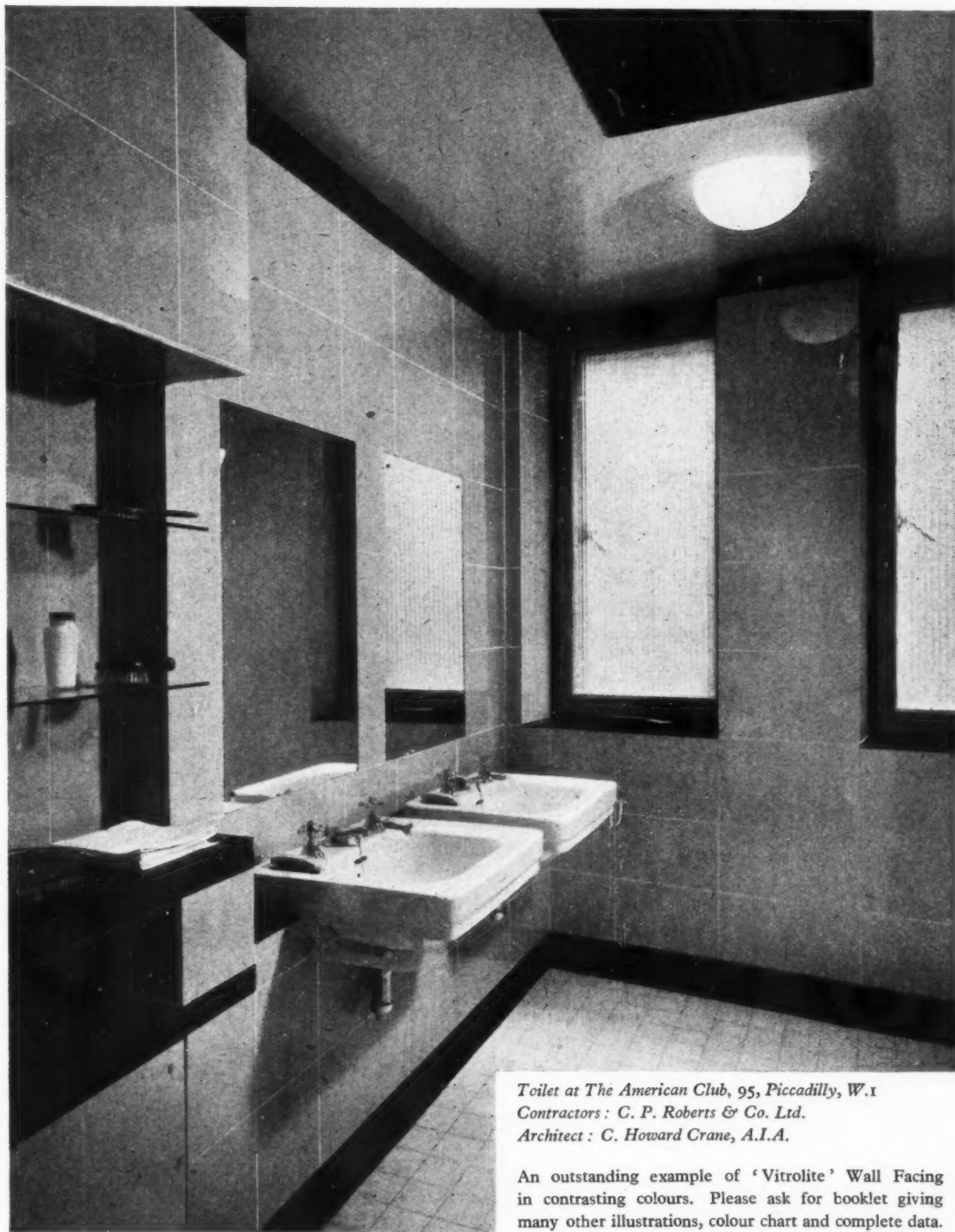
TRADE MARK

## LAMINATED PLASTICS

Made by WARERITE LIMITED · WARE · HERTS Manufacturers of decorative laminates for 20 years

UNIT OF BAKELITE LIMITED · Phone: Ware 502 · Grams: Warerite, Ware

# *Immaculate* ALWAYS — THANKS TO *Glass*



*Toilet at The American Club, 95, Piccadilly, W.1  
Contractors : C. P. Roberts & Co. Ltd.  
Architect : C. Howard Crane, A.I.A.*

An outstanding example of 'Vitrolite' Wall Facing in contrasting colours. Please ask for booklet giving many other illustrations, colour chart and complete data.

## **JAMES CLARK & EATON LTD.**

(Amalgamating James Clark & Son Ltd., and Eaton, Parr & Gibson Ltd.)

SCORESBY HOUSE • GLASSHILL STREET • BLACKFRIARS • LONDON S.E.1

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# SEALOCRETE AND SEALANTONE

CASE HARDENED · WATERPROOF  
DUSTPROOF & COLOURFUL

MAKE  
CONCRETE  
OR CEMENT  
WHAT IT  
SHOULD BE

INFORMATION SHEET ON

## SEALOCRETE CEMENT RETARDER

*A liquid composition for use on Wood or Metal  
Shuttering*

**WHAT IT IS** A spiritious compound which is chemically reacted upon by the alkalinity in cement or concrete.

**WHAT IT DOES** Enables shuttering to be so treated that cement work coming into contact with it is reacted upon, leaving a surface which upon light wire brushing, exposes the aggregate leaving a surface ready for rendering without the costly process of hacking.

**WHAT TO USE IT FOR** To produce a surface which when wire brushed, will accept a rendering.  
To produce a surface which, when wire brushed, will expose the aggregate.  
To produce a surface which, when wire brushed, will be ready for plastering.

**WHAT TO USE IT ON** Wood, Metal or any rigid form of shuttering.

**HOW TO USE IT** By brush or spray application.

FURTHER PARTICULARS OF THIS AMAZING PRODUCT ON APPLICATION TO:—

Inventors & Sole Manufacturers:

**SEALOCRETE PRODUCTS LTD**

ATLANTIC WORKS, MACBETH STREET, LONDON, W.6

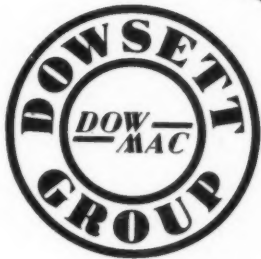
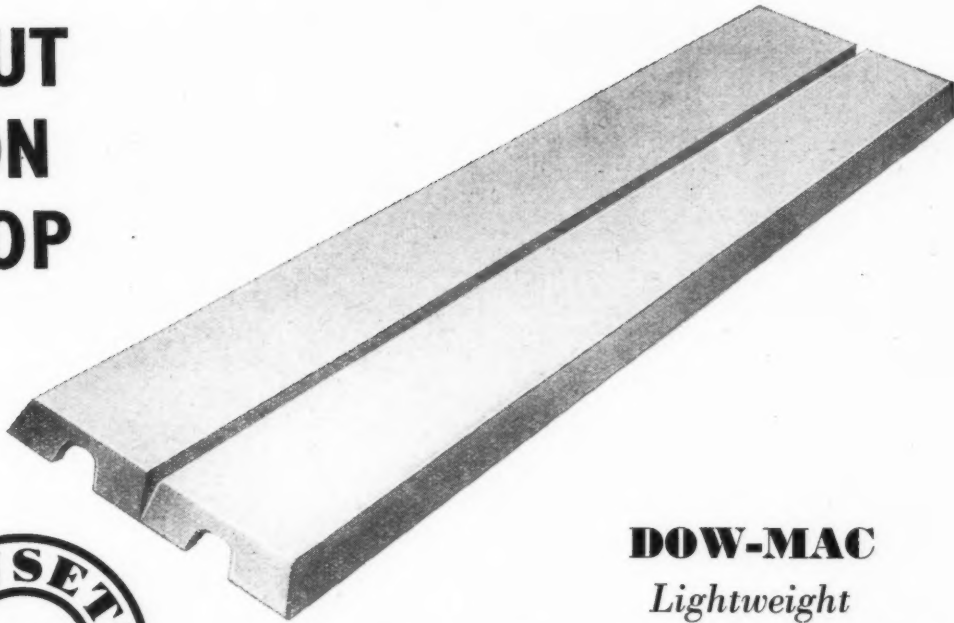
Tel.: RIVerside 2686, 2687, 7275.

Telegrams & Cables: "EXPLOITURE, LONDON"

S.5.

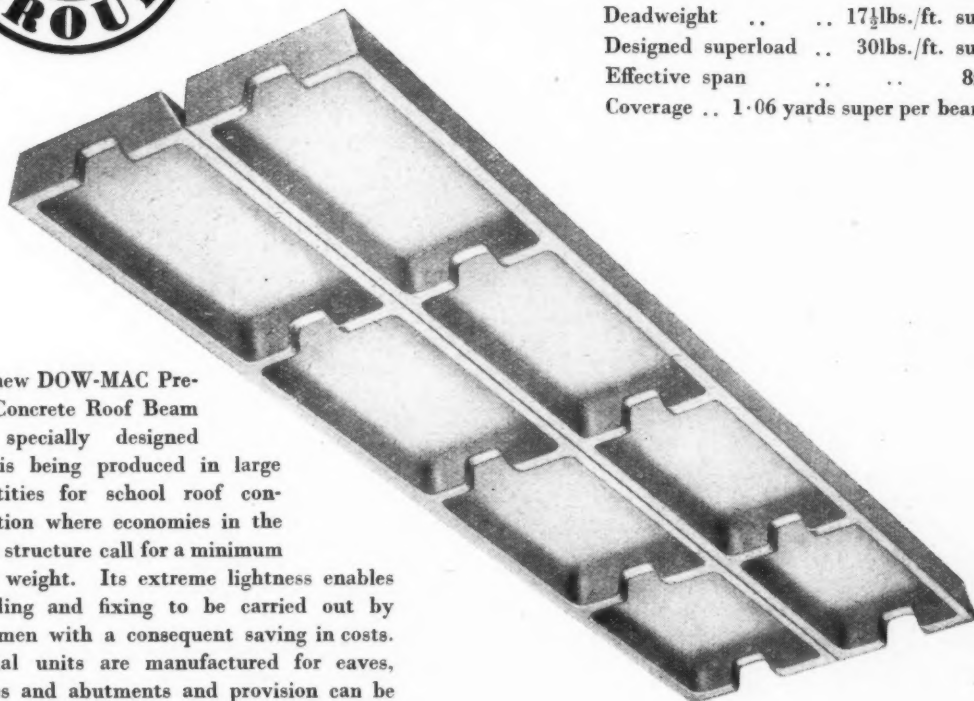


**OUT  
ON  
TOP**



**DOW-MAC**  
*Lightweight*  
**ROOF BEAMS**

Deadweight .. .. 17½lbs./ft. sup.  
Designed superload .. 30lbs./ft. sup.  
Effective span .. .. 8ft.  
Coverage .. 1.06 yards super per beam.

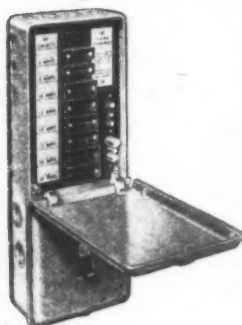


The new DOW-MAC Precast Concrete Roof Beam was specially designed and is being produced in large quantities for school roof construction where economies in the main structure call for a minimum dead weight. Its extreme lightness enables handling and fixing to be carried out by two men with a consequent saving in costs. Special units are manufactured for eaves, verges and abutments and provision can be made for fixing fascias and soffits.

*Sole Manufacturers:* **DOW-MAC (PRODUCTS) LTD** *Precast and*

*Prestressed Concrete Specialists, Tallington, Stamford, Lincs.*

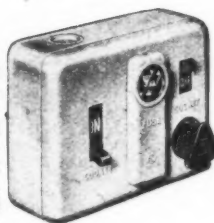
## ELECTRICAL ACCESSORIES & CONTROL GEAR



### "SANDSBURY" CONSUMERS ELECTRICITY CONTROL UNIT

Primarily for use in small houses, and intended for mounting adjacent to the incoming supply. Provides in one die-cast aluminium case, main switch, and fuseboard with domestic type cartridges, giving two 5 amp. four 15 amp. and two 30 amp. S.P. & N. circuits. To BS. 1454. List Price 42/8. Overall size  $14\frac{1}{2}" \times 5\frac{3}{4}" \times 3\frac{1}{2}"$ . Weight 6 $\frac{1}{2}$ -lbs. List No. ES.816.

Folder 143 relates.



### "SANDELLA" COOKER CONTROL UNIT

Pressure die-cast zinc base alloy case stove-enamelled cream. Arranged for mechanical and pilot light indication. Sub-circuit outlet socket and plug 5 amp. to BS. 546, or 13 amp. to BS. 1363. All controlling switches of quick make and break type. Size  $7\frac{1}{2}" \times 5\frac{1}{4}"$  projection 3". List No. C.310 with 5 amp. outlet. List No. C.313 with 13 amp. outlet. List price for either type 22/4 (excluding lamp).

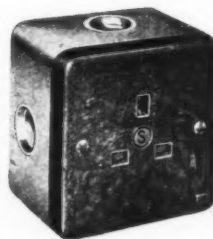
Folder 142 relates.



### "SANDEENA" COOKER CONTROL UNIT

Standardised unit in pressure die-cast aluminium case stove-enamelled cream. A.C. controlling switches with mechanical indication only, and 13 amp. socket to BS. 1363. Size  $6" \times 5\frac{1}{2}" \times 3\frac{1}{4}"$  projection over plug. List price 14/- List No. C.3313.

Folder 147 relates.



### IRONCLAD SURFACE SOCKET

with or without switches for use with Fused Plugs to B.S. 1363. Intended for surface mounting and direct conduit entry.

List No.	Description	List Price
YY. 313	Switch Socket only	58/- doz.
ZZ. 313	Socket only	41/- doz.
PF. 313	Fused Plugs Only	19/8 doz.

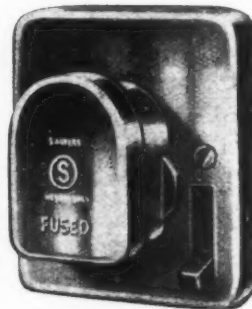
Folder 146 relates.



### "SANDERS" SAFETY SOCKET AND FUSED PLUG

Sunk Pattern without switch to BS. 1363. Size over plate  $3\frac{1}{2}" \times 3\frac{1}{2}" \times 1\frac{1}{2}"$  projection over plug. Cartridges for plug are to BS. 1362, 3 amp., 7 amp. and 13 amp. List No., Switch Socket only, QD. 313. List price 21/- DOZEN. List No. Fused plugs only, PF. 313. List price 19/8 DOZEN.

Folders 144 and 146 relate.



### "SANDERS" SAFETY SWITCH SOCKET WITH A.C. CONTROLLING SWITCH & FUSED PLUG

To BS. 1363 where applicable. Sunk type. Size over plate  $3\frac{1}{2}" \times 3\frac{1}{2}" \times 1\frac{1}{2}"$  projection over plug. Cartridges for plug are to BS. 1362, rated at 3 amps., 7 amps. or 13 amps. List No., Switch socket only, GG.313. List price 38/- DOZEN. List No., Fused Plugs only, PF.313. List price 19/8 DOZEN.

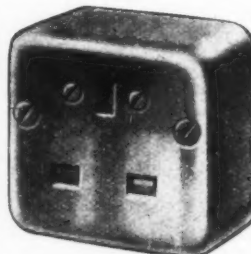
Folder 146 relates.



### "SANDERS" SAFETY SWITCH SOCKET WITH A.C. CONTROLLING SWITCH & FUSED PLUG

To BS. 1363 where applicable. Surface type, overall size  $2\frac{1}{2}" \times 2\frac{1}{2}" \times 2\frac{1}{2}"$  projection over plug. Cartridges for plug are to BS. 1362 rated at 3 amps., 7 amps. and 13 amps. List No., Switch Socket only, LL.313. List price 43/- DOZEN. List No., Fused Plugs only, PF.313. List price 19/8 DOZEN.

Folder 146 relates.



### "SANDERS" SAFETY SOCKET AND FUSED PLUG

Surface pattern without switch to BS. 1363 where applicable. Overall size  $2\frac{1}{2}" \times 2\frac{1}{2}" \times 2\frac{1}{2}"$  projection over plug. Cartridges for plug are to BS. 1362, rated at 3 amps., 7 amps. and 13 amps. List No. Socket only, RA.313. List price 21/8 DOZEN. List No., Fused Plugs only, PF.313. List price 19/8 DOZEN.

Folder 146 relates.

PRICES ABOVE ARE BASIC PRICES WHICH AT PUBLICATION DATE BEAR AN ADVANCE OF 110%

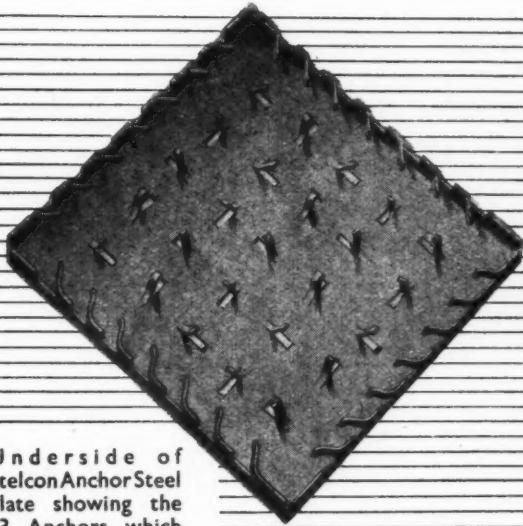
## SANDERS WEDNESBURY

WM. SANDERS & CO. (WEDNESBURY) LTD., WEDNESBURY, STAFFS.

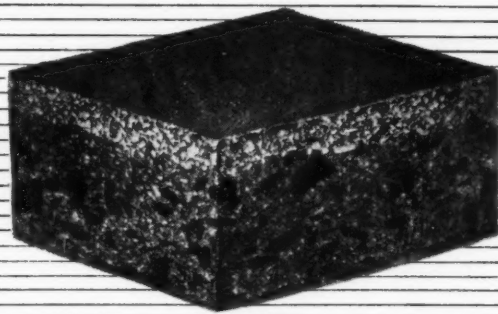
# *Stelcon*

## INDUSTRIAL FLOORS.

The exceptional qualities of STELCON floors are helping production in a great many factories because they enable important savings to be made in a variety of ways. We hope, therefore, you will bring your flooring problems to us, when our experience will be placed at your disposal.

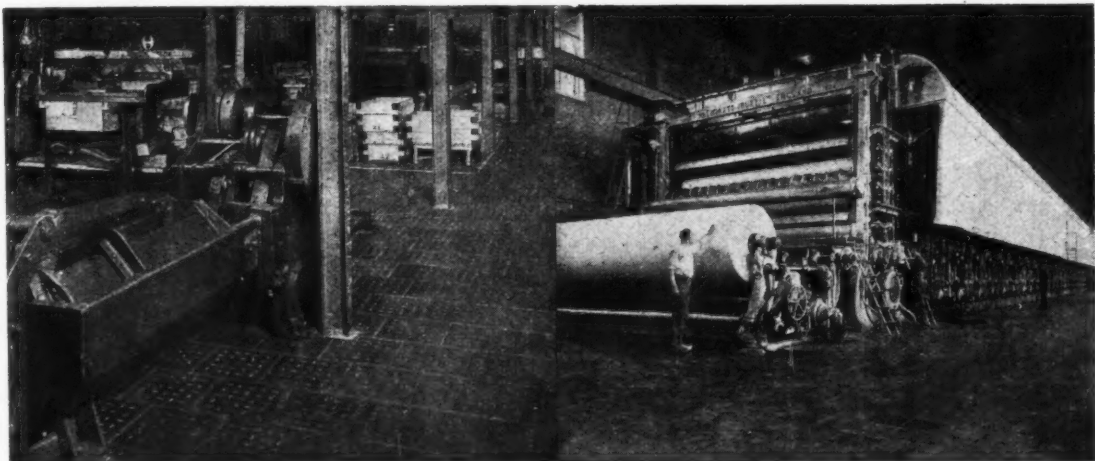


Underside of Stelcon Anchor Steel Plate showing the 53 Anchors which grip the concrete.



Section of a Stelcon Steel Clad Flag which shows clearly its great density.

STELCON (INDUSTRIAL FLOORS) LIMITED  
CLIFFORDS INN LONDON, E.C.4.  
Telephone: HOLborn 2916







HINTS ON FIXING PLASTERBOARD No. 2

- |  |   |
|--|---|
| <b>1. For easier and speedier erection</b> | <b>2. Less joints, and cracks minimised</b> |
| <b>3. Increases fire resistance.</b>       | <b>4. Less jointing scrim and nails</b>     |

1. Select a big board size which will avoid wasteful off-cuts. Sizes—Lengths available from 6ft. to 12ft., widths 3ft. or 4ft.

2. These big boards can be plastered, but fewer joints reduce possibility of cracks and permit direct decoration—paint, wall-paper, lining paper, distemper and plastic paint.

3. PPG Plasterboards (Made to BSS.1230:1945) are in the highest officially recommended class of materials for resistance to surface flame spread. Fewer joints mean less gaps for fire to penetrate to structural timbers.

4. Fewer joints mean less labour and materials (nails and scrim) in fixing and hiding joints. Make subsequent decoration or plastering quicker, more simple, better and cheaper.



Full details and suggested specifications on request.

**PLASTER PRODUCTS [GREENHITHE] LIMITED**

THE MAKERS OF PLASTERBOARD

GREENHITHE, KENT

GREENHITHE 138-140



# SAFE

— for years  
to come

ON STAIRS FOR PUBLIC USE, safety is essential: a surface that can't wear slippery, and a good clear edge to the steps.

Ferodo Stairtreads meet both requirements—handsomely. The gleaming aluminium nosing outlines each tread, and the inlaid strips of Ferodo fabric are non-slip through and through. They give a safe, comfortable grip to hurrying feet, even where shoes may be wet. They seem to absorb endless wear without themselves wearing appreciably, and last for many years under heavy traffic.

There are both single and double channel types, in various widths and profiles. As an alternative to Ferodo fabric, the strips may be of Ferodo composition, giving a non-slip surface in red, white, or grey.

Ferodo Stairtreads are being increasingly installed

in hotels, stores, offices, and other buildings. They are easily fitted to existing stairs of any type, are easily cleaned, and need no other maintenance. The various models, including a plain steel-backed industrial type, are described and illustrated in our catalogue No. 732KK, gladly sent on request.

## FERODO STAIRTREADS

FERODO LIMITED  
CHAPEL-EN-LE-FRITH

A Member of the Turner & Newall Organization



# THE MOST SATISFACTORY FLOOR FOR NEW HOUSING TODAY



Armstrong's Accotile Flooring is laid throughout the five blocks of Forty Lane Flats, recently completed by Wembley Borough Council. The architects are Robert Atkinson & Partners, 13 Manchester Square, London, W.1, and the contractors William Old Ltd., 533 Pinner Road, North Harrow, Middlesex.

## WHAT IS ACCOTILE?

*Armstrong's Accotile is a composition of inert asbestos fibres and ground rock fillers, fadeless mineral pigment, and asphalt or resin binders, supplied in accurately-cut tiles, border strips, etc. It was originally made by our American Company and is widely used in the U.S.A., where 20 years of successful experience have proved its merits. Since the war it has been manufactured in England at the Tyneside factory of the Armstrong Cork Company Ltd.*

**P**RESENT-DAY conditions strictly limit the choice of flooring available for new housing. It must be inexpensive, yet satisfactory when laid direct on base concrete; it should be attractive in appearance; it must wear well, and be easily and cheaply maintained.

*Armstrong's Accotile Flooring fulfils these needs perfectly, and offers other advantages as well.*

## LAI'D DIRECT ON CONCRETE— NO DAMP-COURSE

Accotile can be quickly laid on any sub-floor—concrete, wood, or metal. It is especially suitable for use on concrete direct to earth since it is unaffected by alkaline moisture. Damp-proofing is not essential unless actual water pressure is suspected.

## INEXPENSIVE

Accotile installed costs considerably less than good quality linoleum, and is competitive with any other flooring laid direct on concrete.

## OUTSTANDINGLY DURABLE

Accotile withstands hard wear. It stands up to the hard usage frequently met with in Council property and will, in most cases, long outlast more expensive floors. Many local authorities have found repair costs, too, much reduced by Accotile installations. Accidental damage is easily and cheaply made good. Broken tiles are quickly replaced.

Accotile durability is proved. Accotile floors laid in England twelve years ago can be inspected. They are still in excellent condition.

## DECORATIVE—UNLIMITED CHOICE OF DESIGN

With Accotile there is unlimited scope for decorative effect. The tiles are made in a wide range of plain and marbled colours and can be laid in any design. The colours are fast since they are an integral part of the tile.

## EASILY MAINTAINED— NON-STAINING

Accotile is kept fresh and new-looking indefinitely by normal sweeping and washing, but may be polished if an extra high finish is desired. It offers good resistance to most acids and, being non-absorbent, does not stain. Even marks made by smouldering cigarettes are easily removed.

## ALSO FOR SCHOOLS, HOSPITALS, PUBLIC BUILDINGS, AND COMMERCIAL PREMISES

**A**CCOTILE is quiet and comfortable to walk on, warm and non-slip. For schools, hospitals, and public buildings, Accotile flooring is economical both in first cost and in maintenance.

Armstrong's Top-set Coved Skirting, available in Pompeian Red and Plain Black, gives an added finish.

Business offices, shops, restaurants, and licensed premises, are among places that exploit to the full the advantages of Accotile. In existing buildings, it is laid in a matter of hours and can be used immediately, so that occupation of the room is disturbed for the minimum time.

## INSTALLATION

To ensure satisfaction, Accotile is laid only by skilled personnel trained in Armstrong's Laying School, where particular attention is paid to workmanship and the correct method of setting out.

# ARMSTRONG'S ACCOTILE<sup>★</sup> FLOORING

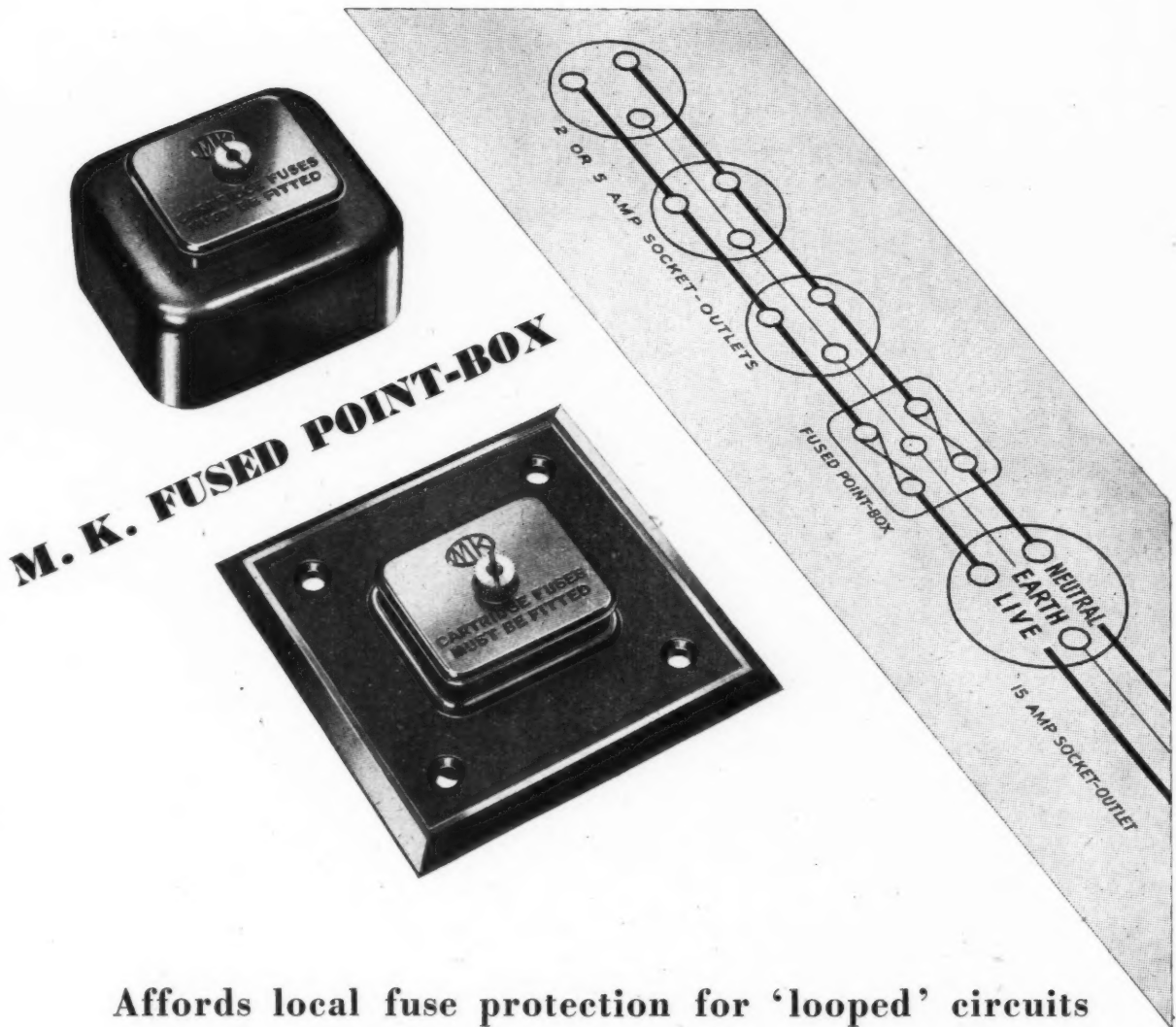
THE LOW-COST FLOOR WITH THE LUXURY LOOK

ARMSTRONG CORK COMPANY LIMITED, FLOORING DEPARTMENT  
IMPERIAL BUILDINGS, 56 KINGSWAY, LONDON W.C.2. TELEPHONE: CHANCERY 6281

SCOTTISH BRANCH: 5 OSWALD STREET, GLASGOW C.1 • TELEPHONE: CENTRAL 5703

★ British Registered Trade Mark 683698. Armstrong Cork Co. Ltd., Registered Users





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A safe and extremely convenient local fuse-box primarily designed to protect light duty circuits looped from 15 amp. socket-outlets.

It is simpler and far cheaper (particularly when making extensions to existing installations) to loop 2 or 5 amp. socket-outlets from a 15 amp. socket-outlet rather than wire separate circuits to a fuseboard. The point-box should be fixed

immediately adjacent to the 15 amp. socket-outlet to protect and also limit the load of the looped circuit whatever number of 2 or 5 amp. socket-outlets are connected thereto.

Double pole cartridge fuse-links to B.S.646:1944 Type A (5 amp. current-rating) are embodied in a removable carrier which is permanently secured by an unobtrusive finger nut.



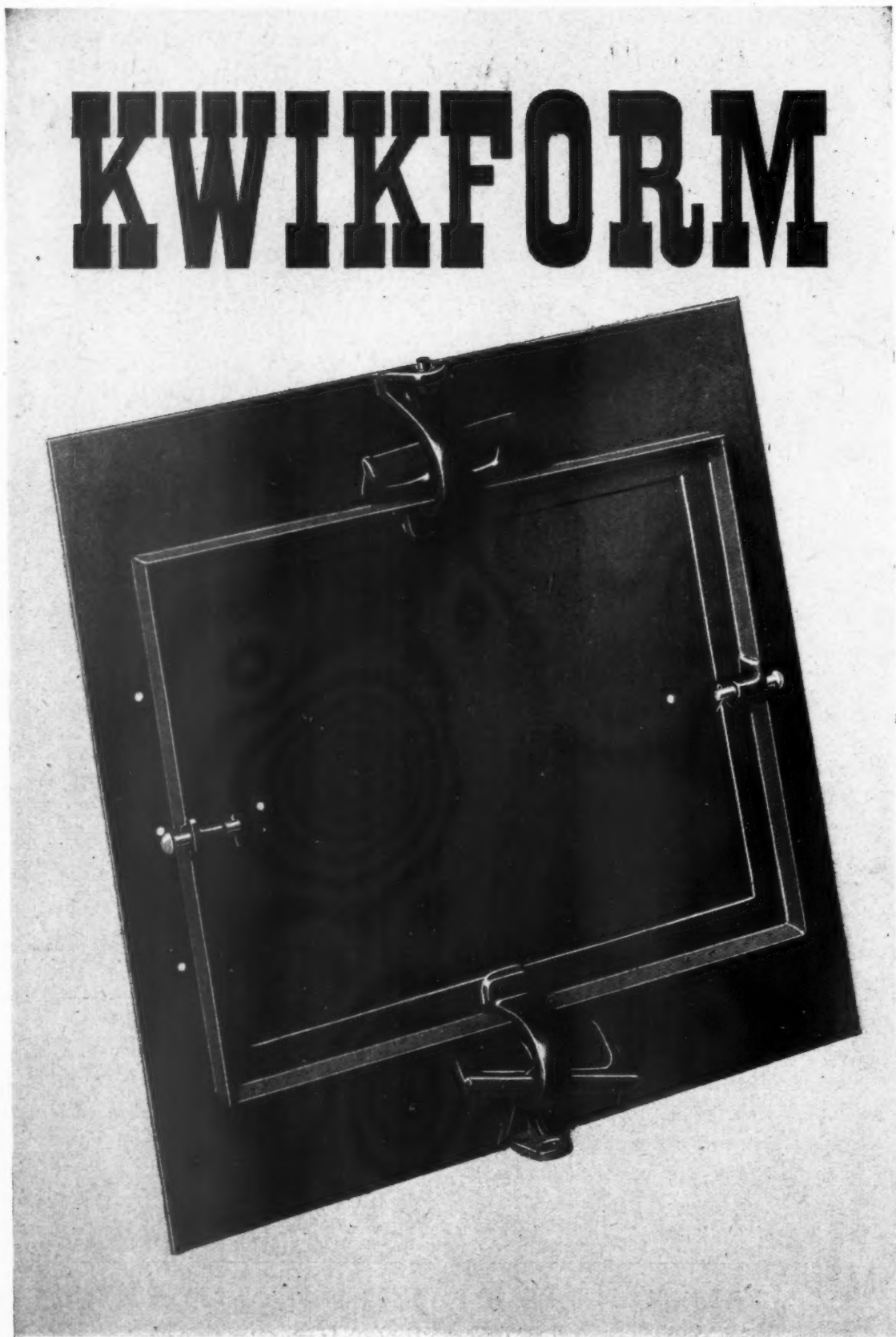
**M. K. ELECTRIC LIMITED**

WAKEFIELD STREET • EDMONTON • LONDON • N.18

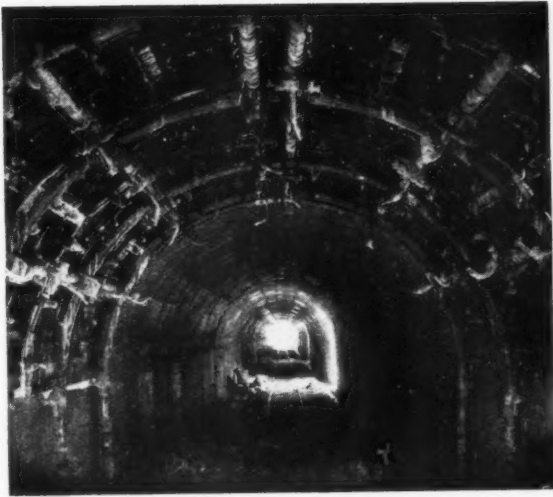
Telephone : Tottenham 5151 (6 lines)

Telegrams : Multicon, Southtot, London

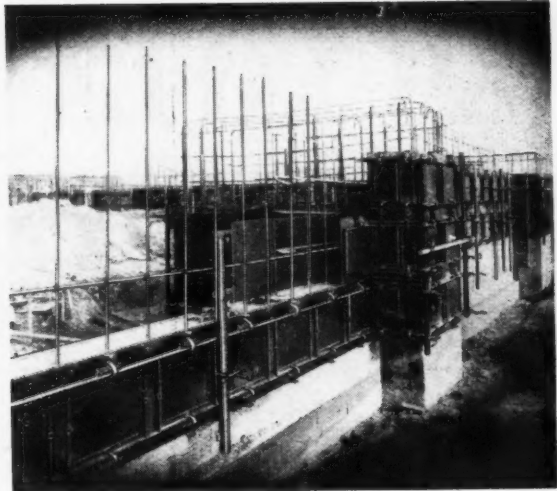
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Service tunnel constructed with standard formwork.



Foundation works for large Midland Iron Works.

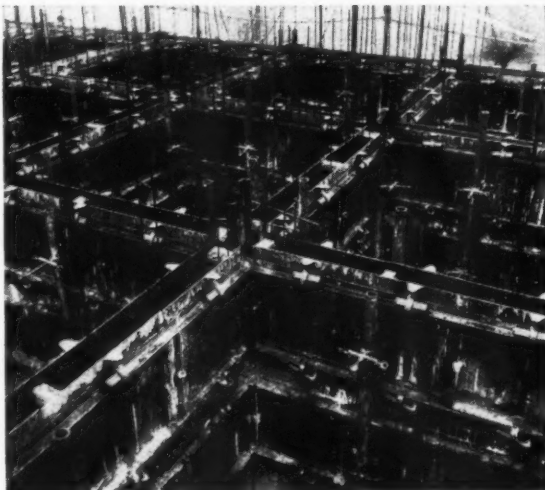
## *...the adaptable concrete formwork*

is designed to meet the widest possible variety of uses: Double or Single Face work, Columns, Beams, Piers, Battered retaining walls, etc., etc.

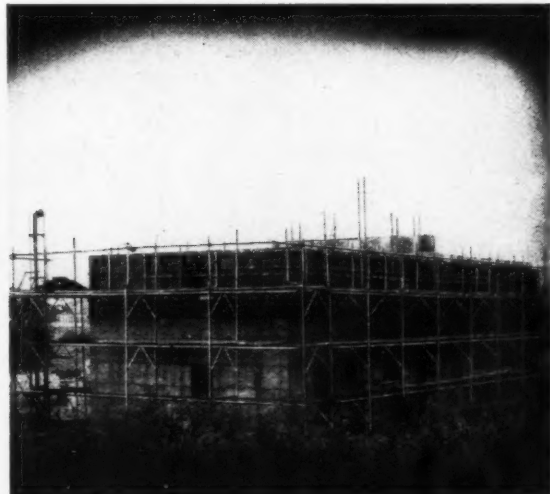
Patents granted or pending in all principal countries of the world.

Descriptive schedule No. 2599 with terms for hire or purchase will be sent on request.

Formwork erected for construction of Silos.



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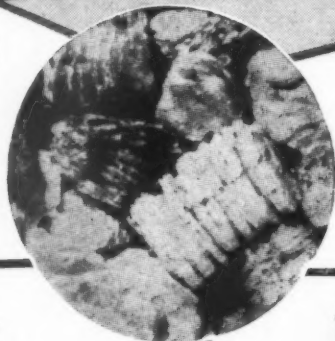
# KISOL VERMICULITE CONCRETE

An aluminium-magnesium-silicate whose laminae expand and exfoliate under heat reducing its bulk density to some 5 lbs. per cu. ft.



Vermiculite roofing at Yorkshire Copper Works, Nr. Leeds

**GOOD INSULATOR  
LOW IN COST  
LIGHT WEIGHT**



## **COSTS**

The light weight and high insulation value of Kisol as a roofing material, (with vermiculite used as an aggregate)—

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*William Kenyon supply correct aggregate grades to specification*

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MAINS  
INSULATION**

## **PROPERTIES**

### **Weight**

24 lb. per cu. ft. (6—1 mix)

### **Good Insulation**

Thermal conductivity ('K') is only 0.65 B.T.U.s per sq. ft. per 1" thick per 1°F per hour.

### **Fire Resistance**

Up to 2,000°F.  
Classified 'Incombustible.'

### **Sound Treatment**

Average transmission loss 42.5 db.

### **Workability**

Can be mixed in an ordinary mixer and poured like any other concrete, sprayed on walls and wallboards, pre-cast into blocks, roofing-slabs or curved sections.

### **Stability**

Low shrinkage on drying.  
Unaffected by heat, moisture, frost or acids.

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SIMPLEX ELECTRIC COMPANY LTD OLDBURY BIRMINGHAM & BRANCHES

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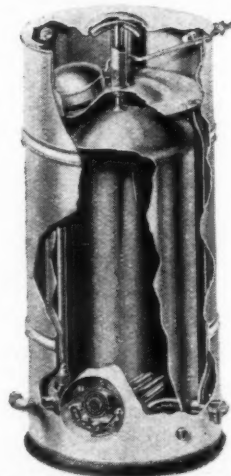
The coal-electric Sadia makes the best use of available fuel supplies. In summer, when electricity is plentiful, it acts as an electric water heater, and the user has all the convenience of cool, clean, automatic water heating. In the colder weather, when the fire is wanted for space heating, the coal-electric Sadia acts as a storage tank for the boiler.

The small illustration shows how there is a substantial saving in plumbing costs with the coal-electric Sadia, by the elimination of expansion pipes. A common down-service pipe supplies water from a storage tank in the roof to all the cold water taps, in addition to the ball valves of the Sadia water heaters.

**SADIA**

HOT WATER BY  
ELECTRICITY

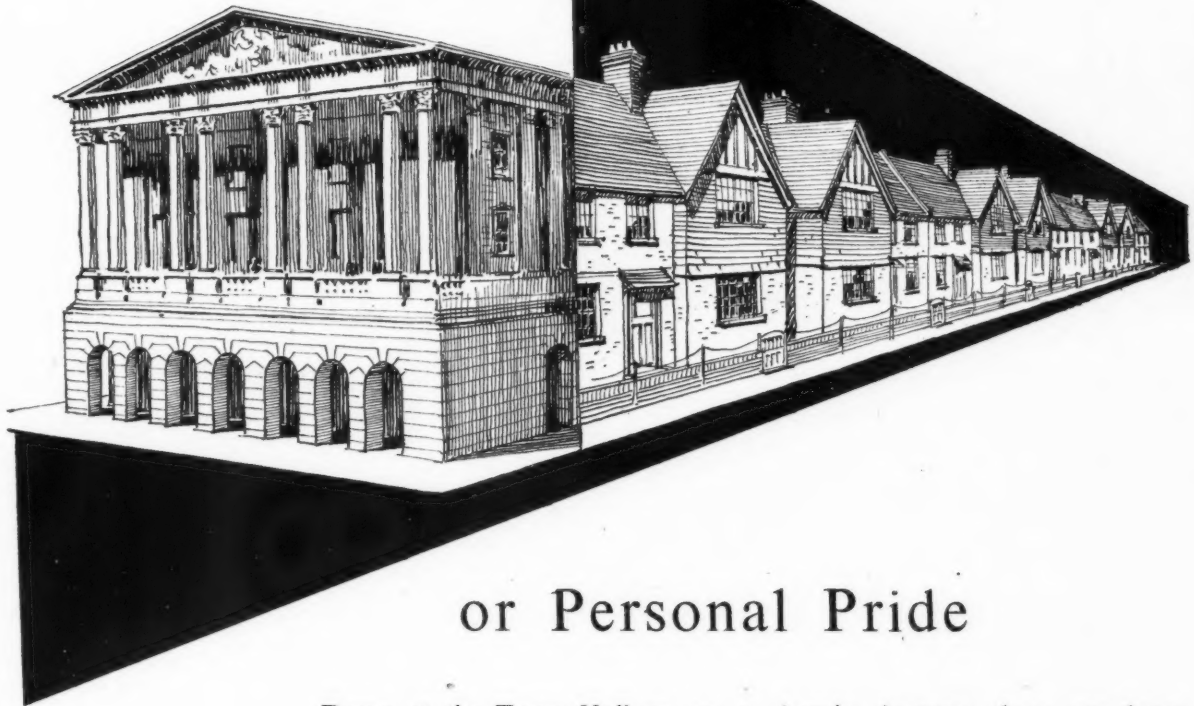
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Sadia Type C.E.L. Coal-Electric Water Heater (with ball Tank)



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Designs and estimates submitted on request.

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## BRABY

P R O D U C T S



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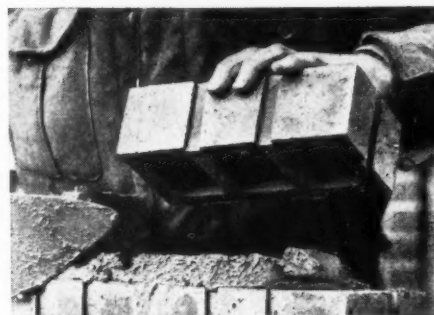
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When it is known that a brick wall will be rendered or plastered, it is common sense to provide the best possible key for the material which is to be applied. This prompted experiments by London Brick Company Limited which finally resulted in 1927 in the production of a brick, equal in strength to the Phorpres Common brick, but with dovetail keys on one stretcher and one header face. This innovation proved so successful that now when it is considered desirable to provide a mechanical bond to reinforce the normal suction bond developed as the plaster sets, it has become standard practice to specify



*Phorpres bricks are available in a very wide range of standard specials. Particulars of these may be obtained from the Technical and Research Department, who are at your service for information or advice on brickwork problems.*

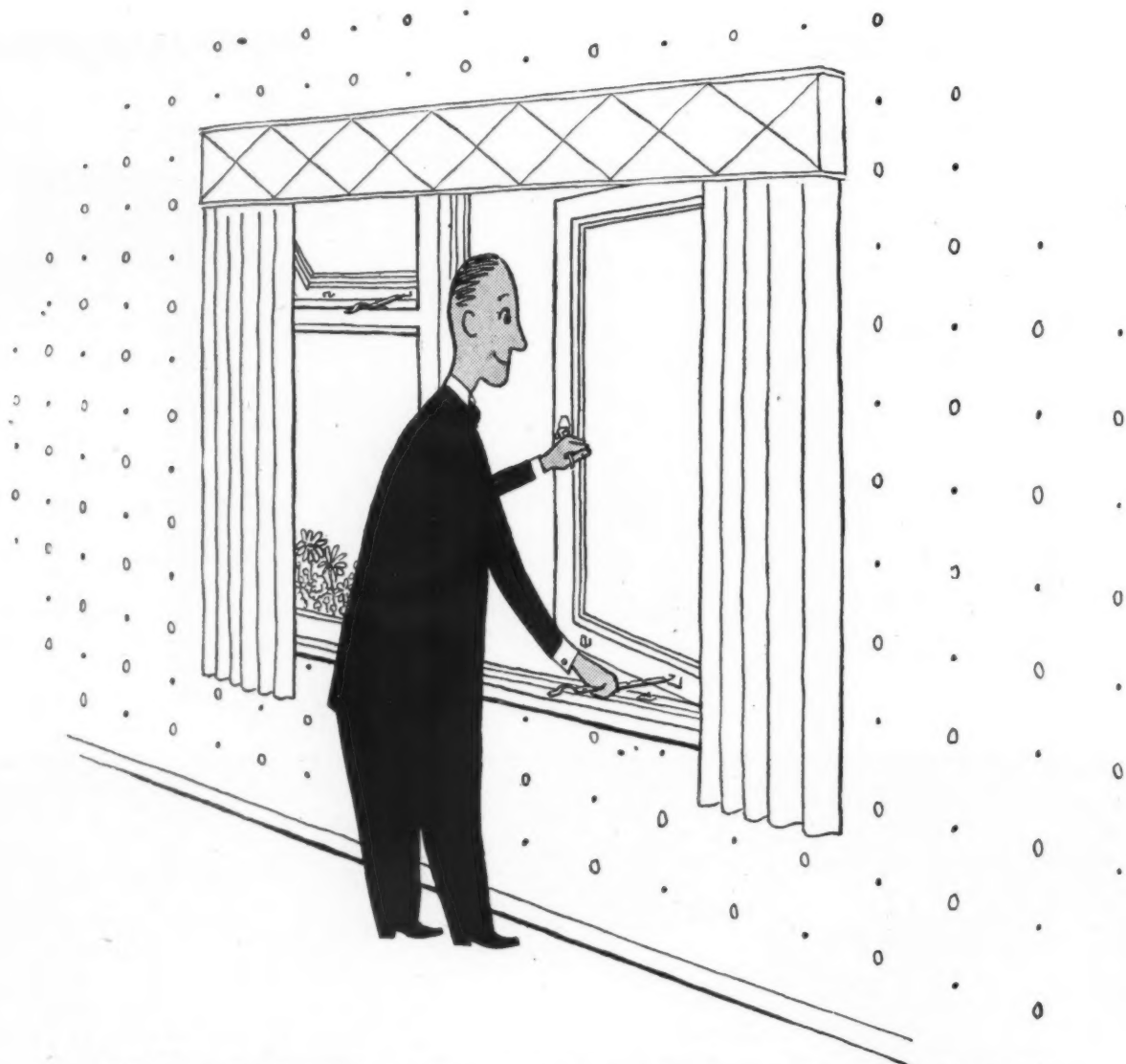
### the PHORPRES keyed brick



**LONDON BRICK COMPANY LTD** Head Office: AFRICA HOUSE, KINGSWAY, LONDON, W.C.2 Telephone: Holborn 8282. Midland District Office: Prudential Buildings, St. Philip's Place, Birmingham, 3 Telephone: Colmore 4141. South Western District Office: 11 Orchard Street, Bristol, 1 Telephone: Bristol 23004/5. Northern District Office: Gascoigne Street, Boar Lane, Leeds, 1 Telephone: Leeds 20771







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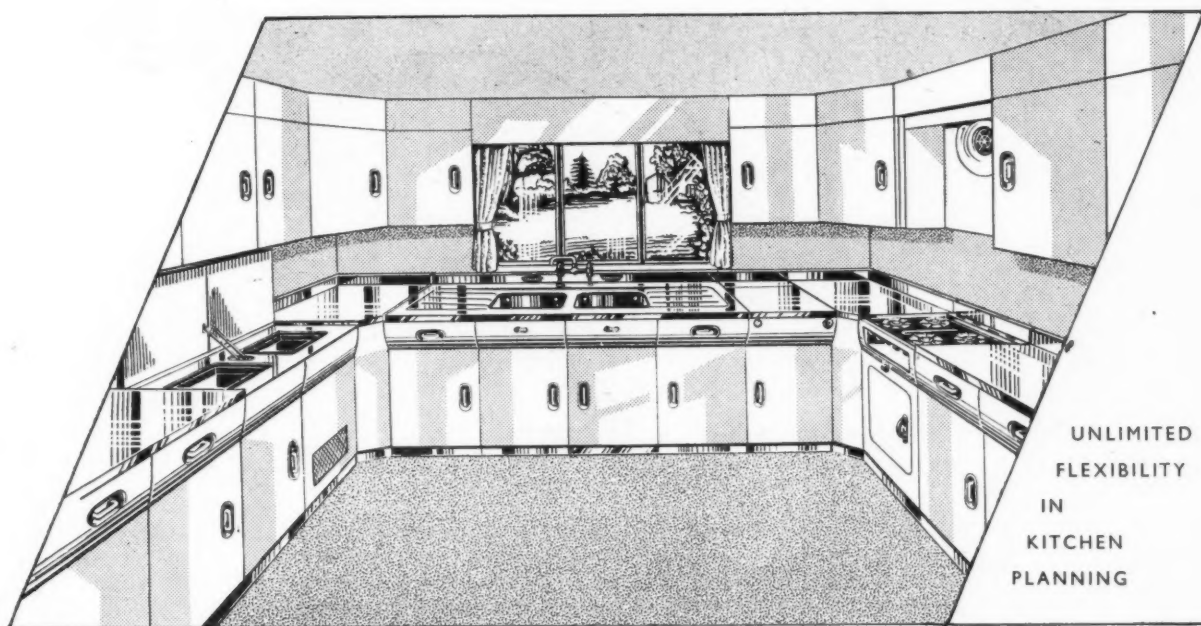


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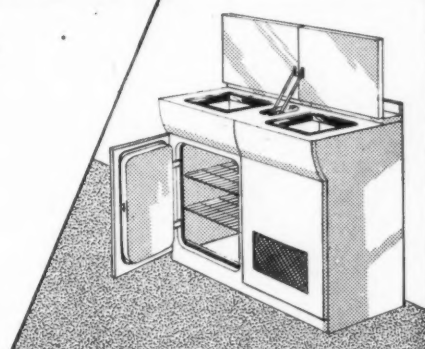
Designed on the unit principle to give unlimited flexibility in planning and to suit any size or shape of room.



UNLIMITED  
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The continuous working surface is of stainless steel. The drawers, cabinets and wall cupboards are of pyluminised aluminium finished in hard baked cream, green or white enamel. The curved front allows a natural working posture and eliminates fatigue from bending and stretching. A stainless steel toe piece runs the entire length of the assembly.

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- Special anti-splash rim to sound-deadened sink.
- Normal and zero refrigeration.
- Domestic and space heating and hot water supply.
- Flavel "English Rose" styled gas cooker.
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- Air conditioning by "English Rose" Vent-Axia Unit.



THE "ENGLISH ROSE" No. 50 DUAL FREEZE REFRIGERATOR has been specially designed for the storage of frozen foods at zero temperature and other food and drinks at normal refrigeration temperatures.

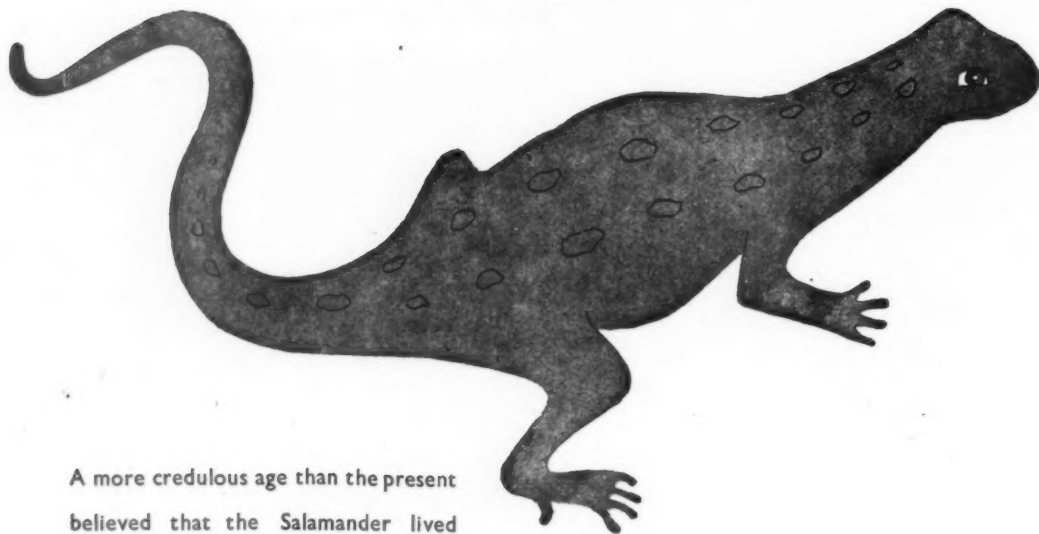
- Zero storage compartment which holds approximately 40 lbs. of frozen food.
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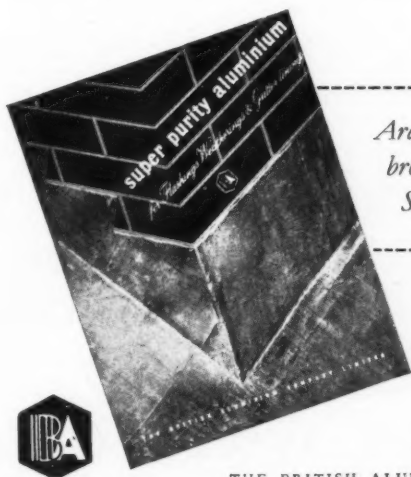
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*Flashing . . . Weatherings . . . Gutter linings*

**DUCTILITY . . .** Super purity aluminium offers the builder a ductility and ease of working not obtainable from lower purities of aluminium, and compares very favourably in this respect with other flashing metals.

**DURABILITY . . .** Super purity is even more durable than commercial purity aluminium which has a proved record as a building material.

**ECONOMY . . .** Super purity aluminium is considerably cheaper than other flashing metals.



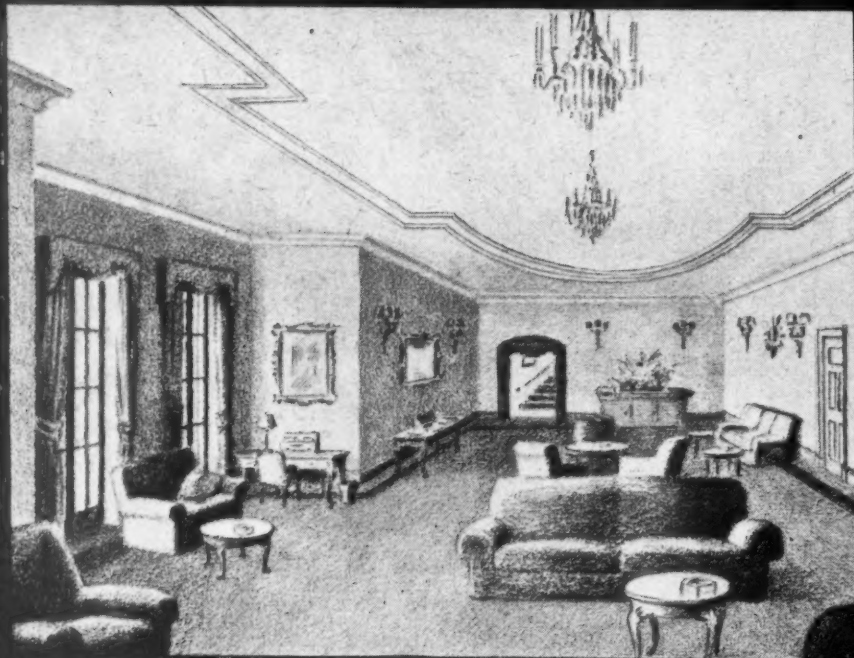
*Architects and Builders are invited to write for the brochure illustrating applications and a sample of Super Purity Metal.*

## British Aluminium



THE BRITISH ALUMINIUM COMPANY LIMITED SALISBURY HOUSE LONDON EC4

A TRADE MARK AS  GOOD AS A BOND



THE HOTEL LOUNGE

## **FAROMAT** *completes the picture*



FAROMAT provides the ideal wall decoration for any well appointed Hotel. There are warm tints for north aspects, and beautiful cool pastel tints for sun-trap rooms. The lovely matt surface creates a soft and restful effect, plus a desirable atmosphere of spaciousness.

FAROMAT is the interior decorator's ideal finish. There is nothing fugitive about FAROMAT charm. All the listed shades are fast to light, and washable. It dries with an exquisite velvety surface. FAROMAT has immense hiding and covering capacity. It is easy in application, remaining "open" sufficiently long enough to enable the painter to brush a large area without help.

FAROMAT has an "After-Flow" unprecedented with this type of paint.

FAROMAT is particularly suitable for use in such places as MUNICIPAL BUILDINGS, HOSPITALS, SCHOOLS, CHURCHES, HOTELS and CLUBS, as well as PRIVATE HOUSES.

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*A really superb*

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Architect :  
Felix Holt, A.R.I.B.A.

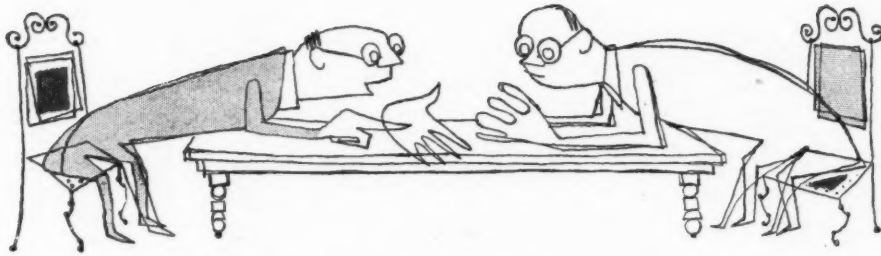
*'Good plain brickwork  
composed of finely coloured  
and textured bricks needs  
no embellishment'*

— THE HOUSING MANUAL, 1949

**BRICK**

FOR BEAUTY  
AND PERMANENCE

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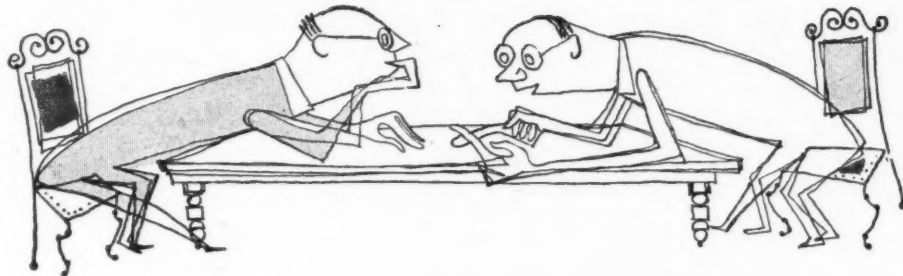
## Cooks and Conferences

The Hydro Hotel, Harrogate, is famous for its cooking and popular for Conferences and Conventions.

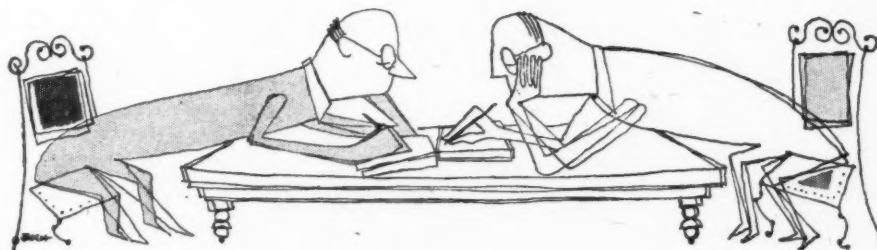
Like many another first-class hotel, its kitchens were planned and completely equipped by Radiation Large Cooking Equipment, Ltd.

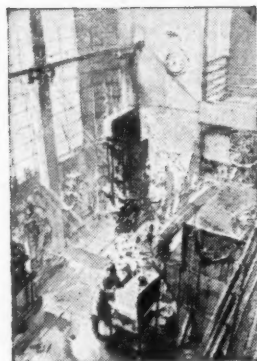
The services of Radiation engineers are available to all who are or may be concerned in the planning and equipping of kitchens for schools, hospitals, hotels, restaurants, canteens and similar establishments.

Please send a note of your requirements to either of the addresses shown below.



<p><b>Radiation</b></p> <p><i>Large Cooking Equipment, Ltd.,</i></p> <p>PALATINE WORKS, WARRINGTON LANCs.</p> <p><i>London Offices &amp; Showrooms: 7 &amp; 8 Stratford Place, W.1.</i></p>	
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*This view of the Mechanical Test Laboratory at Reliance Works, Chester was drawn by Will Nickless for Williams and Williams Ltd.*

Do you ask awkward questions about metal windows before you specify them? "Have these sections been tested?" or "How was the breaking strain of your frame-welding tested?" If you do ask such pertinent questions, Williams and Williams can answer them. For the staff of the Mechanical Test Laboratory at the Reliance Works, Chester, are there to guard both the client's interest and the firm's reputation in precisely such matters. They are well equipped and possess, as the artist's drawing shows, a machine (right) for carrying out tests under wind pressure. Architects who specify Williams and Williams windows can rely on the scientific integrity of the men in the Mechanical Test Laboratory.

W I L L I A M S   &   W I L L I A M S

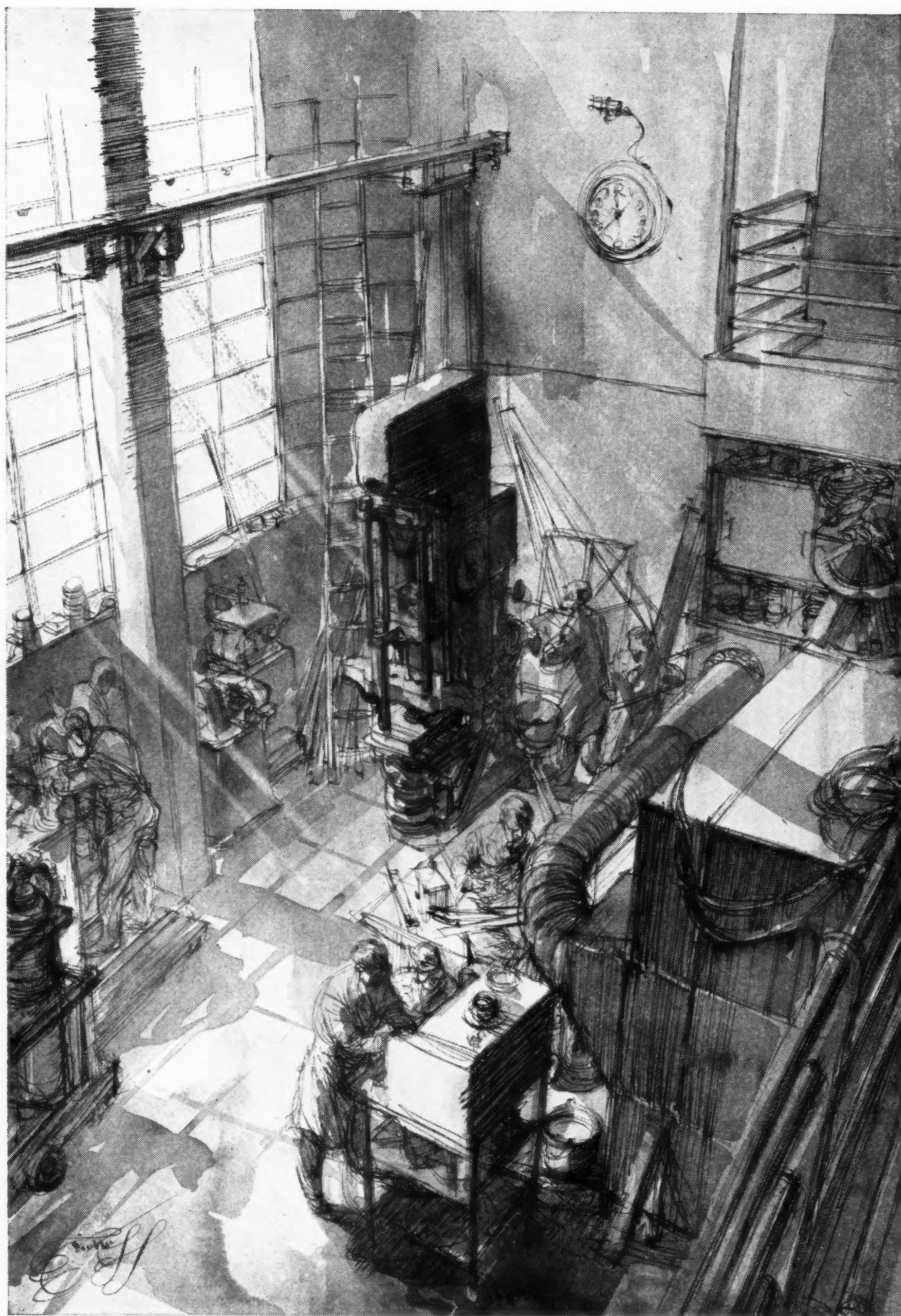
*Metal Window and Door Manufacturers*

RELIANCE WORKS • CHESTER

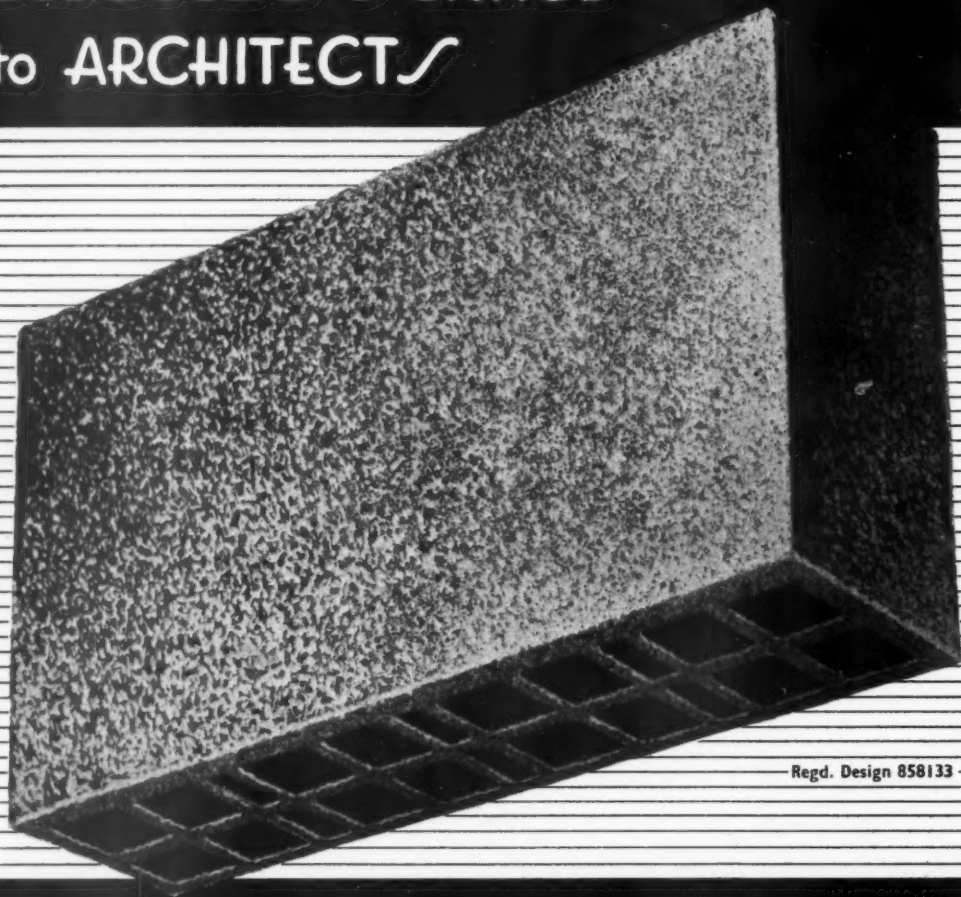






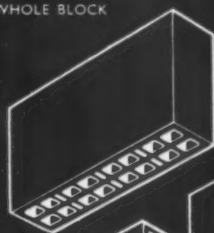


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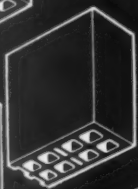
Regd. Design 858133

WHOLE BLOCK

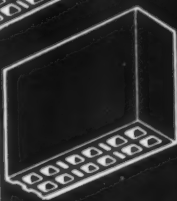
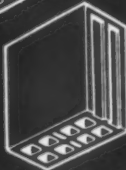


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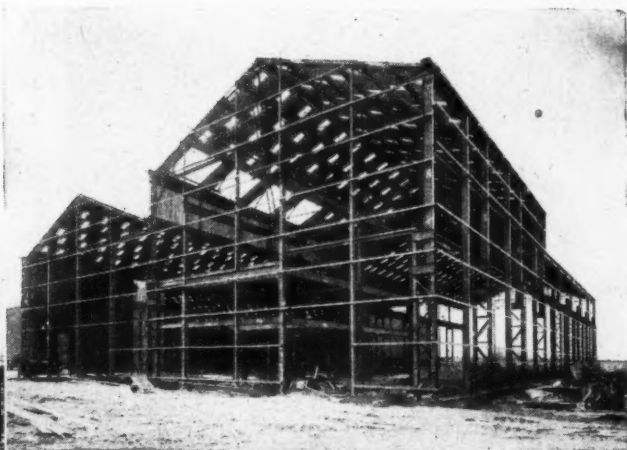
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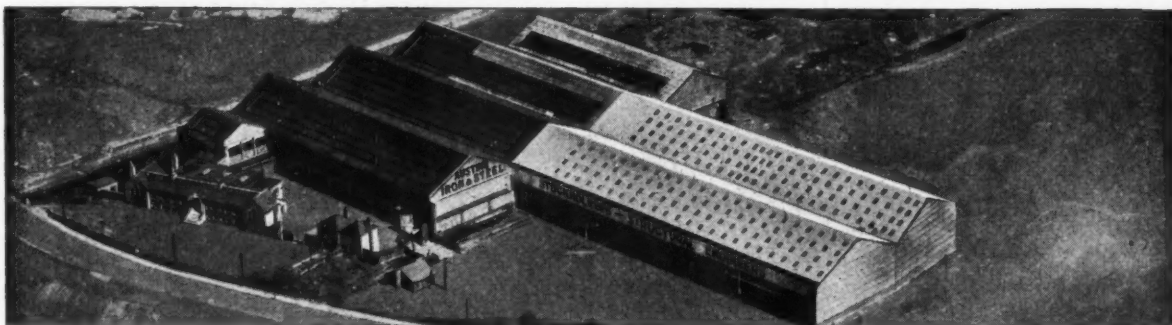
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CENTENARY YEAR 1850-1950



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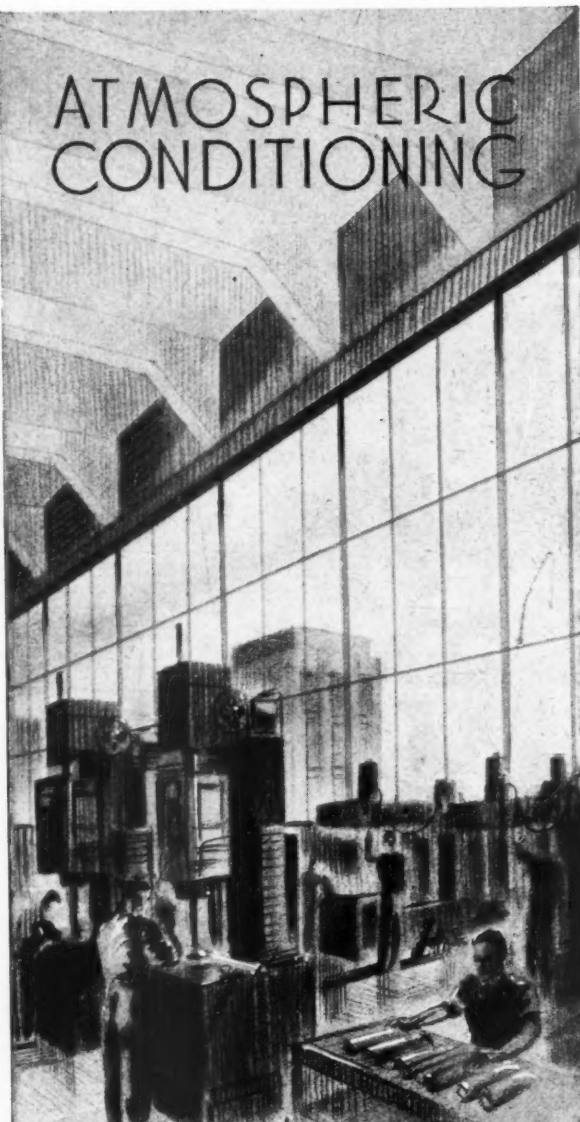


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S.T.4.



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**Tygan** woven fabric, which is immensely hardwearing, is washable and can be had in a wide choice of colourful designs, is the ideal upholstery material for use in catering establishments. Its smart appearance invites custom . . . its durability saves substantially in maintenance.

**TYGAN WEARS AND WEARS**  
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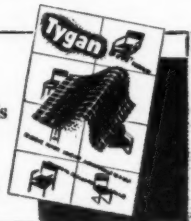


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Tygan can be wiped clean with a damp cloth as easily as a glass-top table. Being non-absorbent it is never damp.

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Send today, to the address below, for this free folder giving fuller details and patterns of Tygan. Please quote Ref. H1.



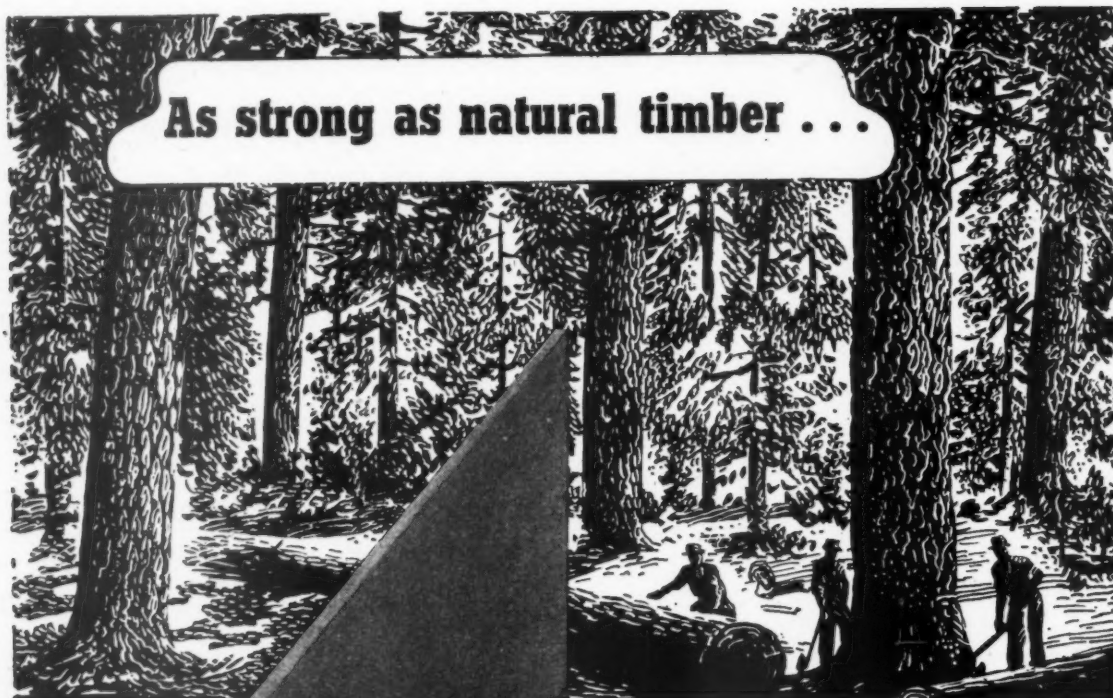
**Tygan**

**woven fabric**

*smart looking, easily cleaned, long lasting*

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**As strong as natural timber . . .**

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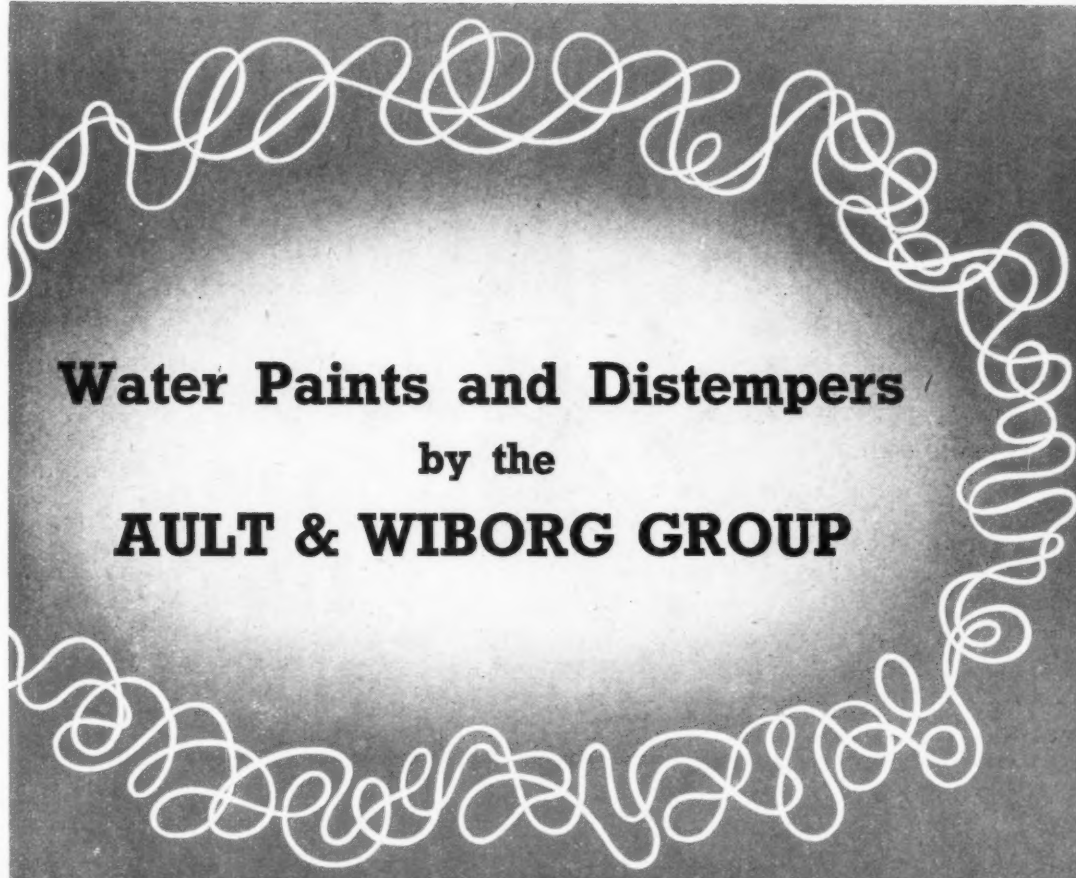
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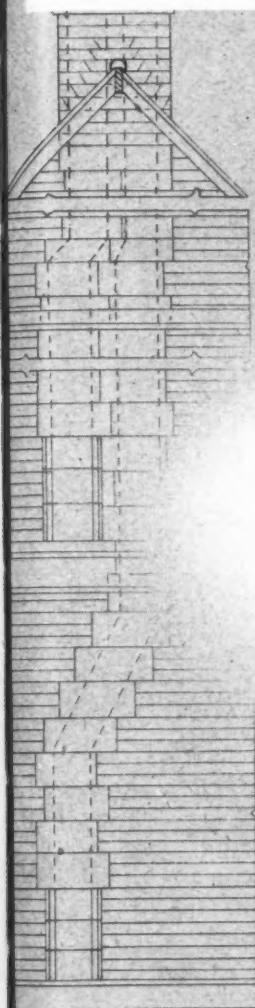
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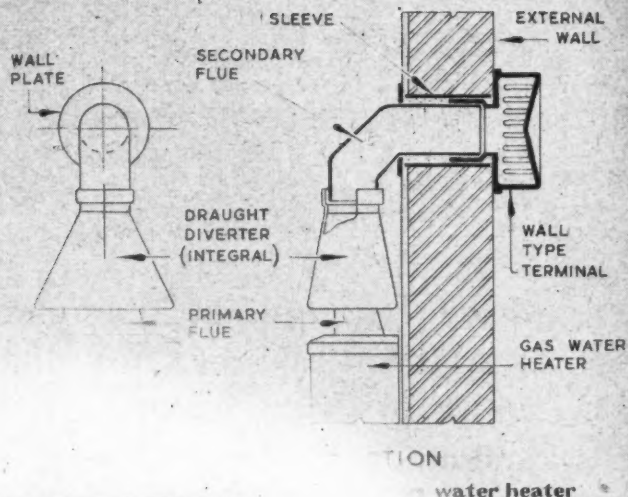
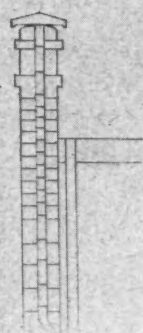
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Fig 4. Pre-cast concrete flue blocks



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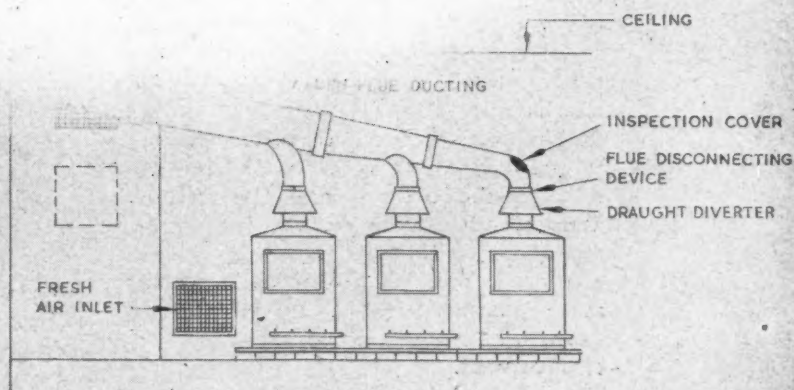


Fig 8. Common flue (large scale unit)

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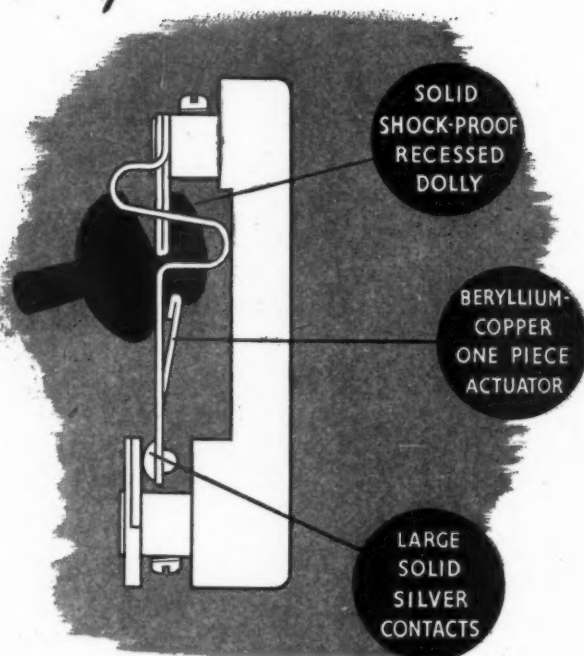
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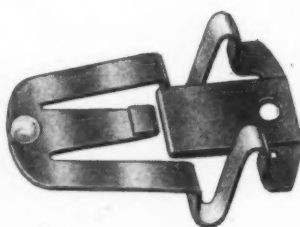
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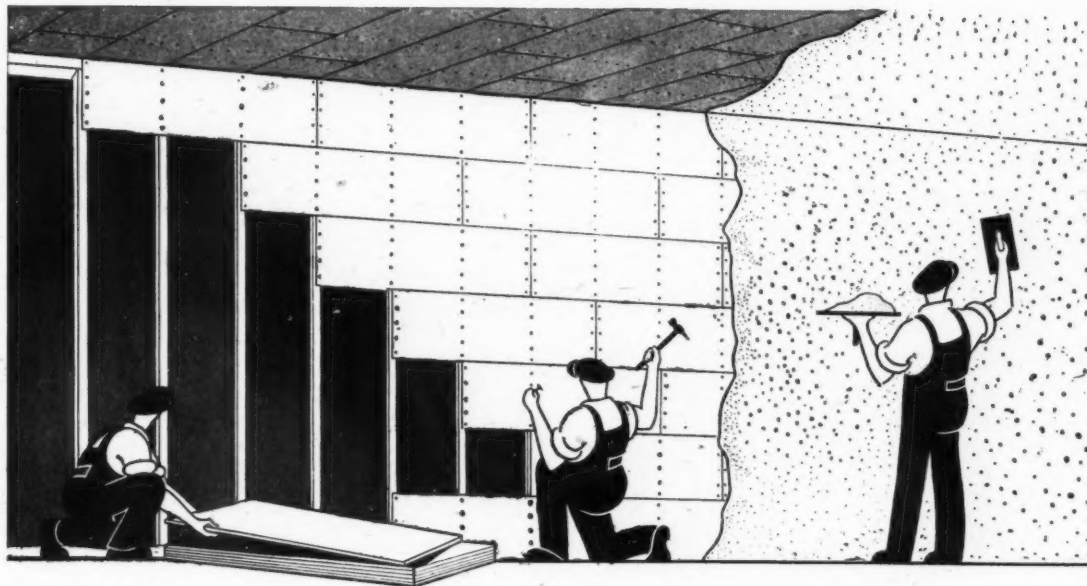
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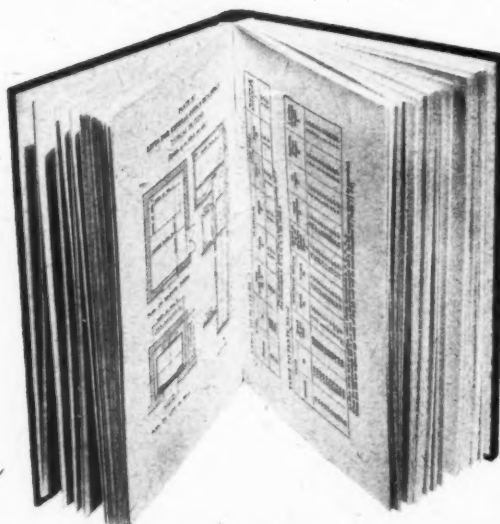
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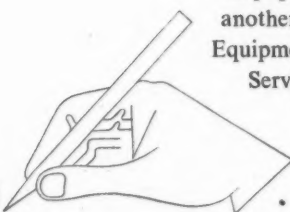
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THE ARCHITECTS' JOURNAL

No 2892 13 July 1950 VOL 112

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ERNST MAY

I wrote recently about some of the famous architects from abroad who are now visiting London or are shortly expected. Since then another name has been added to the list: that of Ernst May, who is specially to be welcomed as he has become almost a stranger to the modern generation, and this will be the chance to show him that his contribution to modern architecture in its early days is not forgotten.

He was one of the leading German architects of the generation of Gropius and Mies van der Rohe, and as Director of Housing at Frankfurt he made that city the most important centre of housing progress in Europe. He, more than anyone else, established the close relationship between housing and the new social art of town-planning.

When the Nazis came he left Germany and went to Russia for a bit as a town-planner. Afterwards he went to East Africa and took up farming, but inevitably the call of architecture was too strong and he started private practice in Kenya, where he has been busy ever since.

We shall learn something of what he has been doing in Kenya when he lectures at the RIBA on July 20. The lecture has been arranged by the MARS Group. It takes place at 6 p.m. and there should be a full house.

## A LESSON IN INCENTIVES

An Exhibition, rather vaguely entitled "The Historical Treasures of Poland," has just opened at the Royal Watercolour Society. It is in fact devoted almost entirely to illustrations of the achievements of post-war Poland in restoring her national buildings and relating them to new town plans. Despite the devastation, an immense amount of work seems to have been done already. The exhibition is not of plans and models, but of photographs, all telling the same story—buildings before the war, immediately afterwards, in a state of partial restoration, and as they are now. Already built, in addition, is Warsaw's new east-west road-tunnel by-passing the historic central area and allowing it to be rebuilt almost as it was.

Looking at it all, one begins to ponder. Poland's housing problem surely must be even more acute than our own. Yet here is an official policy of expending labour and materials on the restoration of such things as cathedrals. Does this slow up the housing drive? I suspect quite the reverse. It seems to have given the Poles enthusiasm and determina-

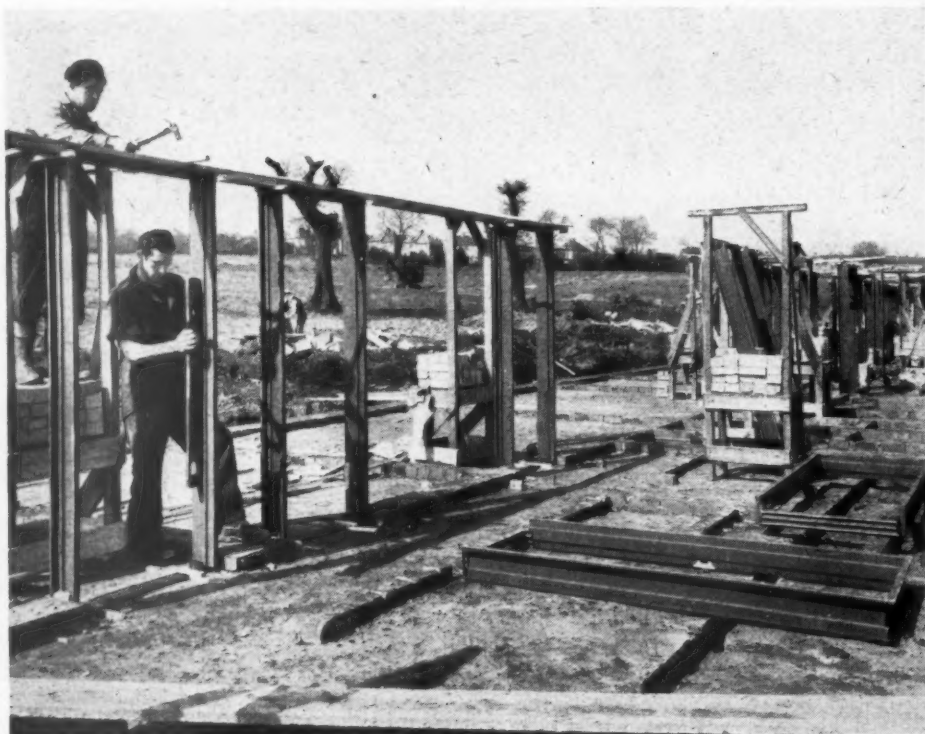
tion to re-build and to improve their way of life with an energy unknown here.

The public have become active participants in it all rather than disgruntled spectators on a housing list. Such an incentive is altogether missing from our building programme in which, for example, our system of control and license can give no priority, even to the building of a new altar and baldachino in St. Paul's Cathedral.

## CANADIAN SURVEY

In 1949, according to last week's editorial in *The Builder*, Canada's construction industry carried out an "all-time high." This phrase appears a little incongruous in the pages of what is usually a dignified publication. But it was probably written with the gum in the cheek, for *The Builder's* editor and executive director have only recently returned from a tour of Canada, and this editorial is a preface to a survey they have prepared on conditions in the building industry over there.

The survey was carried out because it was felt that it was the duty of every industry which manufactures exportable goods to take part in the fight to close the dollar gap, and that UK manufacturers of building materials and equipment should be given some idea of what they can do in this respect. The survey makes it clear that the amount of construction being carried out continuously in Canada is such as to offer encouragement to UK manufacturers to consider exporting to that country on a long-term basis, thereby securing for Britain a larger share of the building commodities which Canada imports from elsewhere at the moment.



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*The Builder* stresses five major factors that must be taken into consideration by manufacturers with an eye on the Canadian market. They should:— make a careful study of Canadian needs and find out how necessary adaptations of British styles can be made; realize that a sales organization must be backed by adequate deliveries and service; accept the problems presented by Canada's extremes of climate and her territorial size, which lead to special technical and distribution difficulties; investigate opportunities offered by group marketing designed to spread interest and share cost (a samples building, on Building Centre lines, with sales and servicing organization added, is suggested). And finally, they should investigate the possibility of using the Great Lakes waterway for direct shipment from the UK to Port Arthur.

*The Builder* is to be congratulated on its comprehensive survey, which can undoubtedly be of great service to the country and to individual firms if its findings are given the attention they deserve.

#### ANOTHER CUT

At the moment many people are renewing the pleasant experience of a canal holiday. But, at the same time, more and more of these artificial waterways are being threatened with extinction. Consider some of the facts. The Barnsley canal burst four years ago. It has not been repaired, in spite of local protests and petitions. The Stratford canal, below Wilmcote, is still unnavigable. The river Witham, through Lincoln, has been closed until September, just when it will be needed by voyagers to the big Market Harborough Festival, which I mentioned recently. And worst of all, some eight miles of the Kennet and Avon Navigation have been closed "until further notice." This is particularly disgraceful because here, for the first time in thirty years, the carrying trade is showing signs of a lively revival. Firms along the Navigation are once again taking to this form of transport.

One of the carriers has calculated that the carrying potential was one quarter of a million tons per year. Now the Navigation has been closed

and they have no guarantee for the future. The Docks and Inland Waterways Association say that it has been closed because it is dangerous. Are they doing anything to make it less so? Apparently not.

If you look at the map you will see that the old GWR line runs parallel



to the Kennet and Avon for its entire length. Is the old rivalry between canal and rail still going on? It is impossible to prove that this is the case, but with the dice so heavily loaded in favour of rail, evidence suggests that it is so. Now that trans-

port has been nationalised, such strife seems absurd—until one remembers that Government departments are run by human beings who must present annual accounts which look as good as possible—on paper.

#### PALACE AID

National monuments, we all agree, should be accessible to all members of the public. That they should also be intelligible to them is something which is often forgotten—or at least not often acted upon. All hail! therefore, to the new booklet on Hampton Court,\* which has recently been issued by the Ministry of Works.

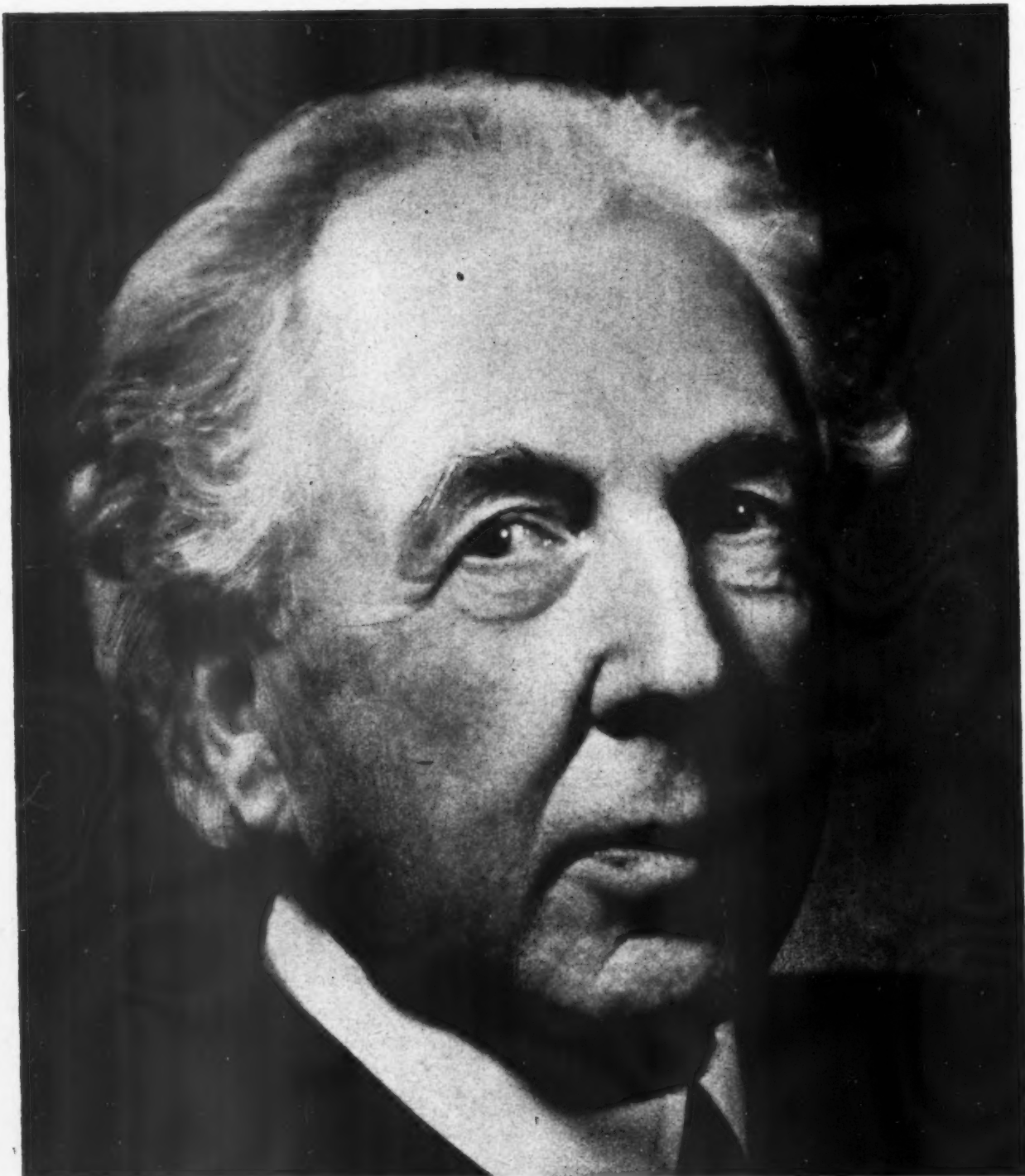
Of course, there have been guides to Hampton Court before, but this one, at the price of a shilling, should appeal to a new class of purchaser. The text by G. H. Chettle is just right for anyone making a first visit to the palace or rubbing up his recollections of it, and the booklet is prettily produced in an oblong crown quarto format (10 inches by 7) which allows of the reproduction of some excellent photo-

\* *Hampton Court Palace*, by G. H. Chettle, F.S.A. Prepared by the Ministry of Works and the Central Office of Information. H.M. Stationery Office. 1s.



We regret to announce the death of Eliel Saarinen, Honorary Doctor of Architecture and City Planning of the University of Michigan, and Director of the Department of Architecture and City Planning of the Cranbrook Academy of Art. Saarinen, who was awarded the RIBA Royal Gold Medal for Architecture earlier this year, worked in Finland from 1900-1923, and had worked in America since then. He was 76 years of age.





### *The Old Master*

Frank Lloyd Wright's enterprise and energy at the age of 83 is greatly to be admired. The grand old man of American architecture arrived with Mrs. Wright on the "Queen Elizabeth" last Thursday for a visit of a little more than a week into which, after a quiet week-end in the West of England, they are packing a remarkable number of engagements. On Monday Mr. Wright was entertained to lunch by the British Council and to dinner by a group of architects at the Reform Club. On Tues-

day he was given lunch by the RIBA Council. On Wednesday afternoon he joined in a discussion meeting with the AA students, and in the evening he and Mrs. Wright attended a performance of "This Way to the Tomb" by the AA Dramatic Society. This morning he records his impressions of Britain at the BBC, and this evening he and Mrs. Wright are the guests at a dinner of the Architecture Club. Tomorrow he presents prizes at the AA and leaves later for America.

graphs to a reasonable scale. There are also two plans of the main floors.

The sub-title, I notice, is *Historic Buildings in the Charge of the Ministry of Works (GB)*. Does that plural, *buildings*, imply that we are going to be offered similar guides to the rest of them? That would be good news, indeed, and perhaps, in these enlightened times, is not too much to hope for.

#### AMERICAN HOUSING

The third United Nations Bulletin on Housing and Town and Country Planning (February, 1950) contains an article by Raymond M. Foley, United States Housing Administrator, who considers the USA needs  $1\frac{1}{2}$  million new dwellings a year for 10 years. The bulletin summarizes the housing history of the USA since the slump of 1929-33, and deals in particular with post-war achievements.

Considering war-time upsets and migrations, post-war house building got off to a fairly good start, and in 1948, 930,000 non-farm dwellings were built. Unfortunately, production then fell off, chiefly, one gathers, because rising costs put the dwellings beyond the reach of the ordinary man, even though the Federal Government extended its scheme of insuring mortgage repayments.

The Housing Act of 1949 has brought legislation into line with that existing in this country. Financial assistance is to be given for clearance of slums and blight, to local authorities for re-housing slum populations, and for the improvement of farm dwellings. The Act does not embrace a straight subsidy of houses for everyone, but seems to be feeling its way gingerly towards it. For example, "following passage of the Act, Congress was giving consideration to additional improvements in the financing aids to private housing, including liberalization of the FHA (mortgage) insurance programmes and . . . proposals for low interest, long-term direct loans to co-operatives and non-profit corporations financing . . . housing."

ASTRAGAL

## The Editors

### TIMBER SUBSTITUTES

THIS week we publish details (prepared by the DSIR) of substitutes for timber which can be used for floors and roofs of houses. It is gradually becoming apparent that there is a world shortage of timber, and it is very much open to question whether we shall ever revert to pre-war conditions which enabled the United Kingdom to take its pick of the world's timber at a moderate price.

However, the DSIR shows us that there are plenty of substitutes for a considerable proportion of types of timber used in housing which mainly use indigenous materials not calling for dollars or any other hard currencies. It is true that the house building industry, as now constituted, would be hard pressed entirely to substitute other forms of construction for timber at short notice. It is equally true, however, that there is an abundance of initiative in the industry and plenty of productive capacity for alternatives to timber.

There are two ways of solving problems arising from shortage of any commodity. One is the production of substitutes for that commodity and the other is an economic use of the scarce material. We therefore hope to follow our account of the facts about timber substitutes with details of the economy to be derived from intelligent and up-to-date engineering principles applied to the use of timber.

### LONDON'S TRAFFIC PROBLEM

The recent announcement by Mr. Dalton in the House of Commons that the proposed ring road round London had been abandoned, came at a time when the traffic congestion in London and elsewhere had been considerably aggravated by the abolition of petrol rationing. Mr. Dalton, when he made this statement in reply to a question, added, "other plans for road improvements in London will be studied by the Minister of Transport in consultation with myself and the LCC." This is a good moment, therefore, to draw attention to an illuminating memorandum on the traffic problem which was prepared six years ago by Bertram Carter and is illustrated by a map and diagrams on pages 34 and 35 of this JOURNAL.

The principal factor in Bertram Carter's proposals is an irregular grid system of trunk roads which follow, as closely as possible, existing borough boundaries and provide an artery to each side without unduly severing any borough. A further point of importance is that these trunk roads, which would not be subject to speed limit and would be completely separated from local road plans, would, where possible, follow existing railway lines. Properties immediately adjoining railway lines are generally of a poor character, unsuited to community life and the acquisition of land should be relatively

economic. Railways generally run along valleys or on the first contours bordering the Thames-side marshes; thus the rail-road lanes would serve the heavy industrial areas on the one hand and the living communities on the other, while forming an appropriate boundary between the two. There would be four east-west and three north-south arteries, the latter following the Thames tributaries, the rivers Lea, Fleet, Ravensbourne and Wandle, with roads at different levels, elevated, level, in cuttings or tunnelled as the topography suggests. Where the Thames-side boroughs are now denied access to the river, existing parks would be extended over the trunk roads.

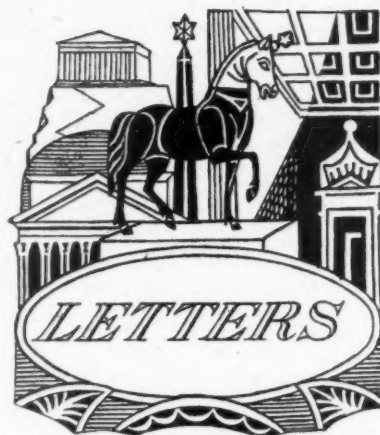
Although this memorandum, if adopted in its complete form, would prove costly and would take a long time to put into effect, some method could surely be found to make these trunk roads pay for themselves. In America similar high class trunk roads for fast moving traffic have a small toll of 6d. or 1s., which the private motorist or long distance commercial driver is willing to pay in order to reach his destination easily and quickly.

In Britain today there are nearly three million motor vehicles, and the ensuing chaos in and around large centres of population costs the nation considerable sums of money and loss of life. During 1949, 565 people were killed in the London metropolitan police area (excluding the city). Those seriously injured numbered 3,835 and 28,484 were slightly injured. Measures to combat the mounting toll of life and property have so far proved unsuccessful. This indicates that more drastic efforts, either on the lines indicated here or in some other way, will have to be made in the future.

## PRACTICE ABROAD

Following the recent study on this page of the condition of architectural practice in this country, the JOURNAL has made an attempt to get some comparable facts from other countries. The first results, dealing with Switzerland, Holland and Spain, appear in this issue. Others will be published later. Architects in each country were asked four questions: first, the number of architects; second, whether entry into the architectural profession was controlled by examination; third, on what basis fees are calculated; and fourth, the system of training employed.

From the figures given it is apparent that Switzerland, with a wide reputation for good design, has the highest proportion of architects to population: one to every 1,500 people. In Holland the proportion is one architect to 3,600 people, and in France (which will be among countries to be dealt with later) one architect to 4,800 people. The proportion in Great Britain, therefore, of one architect to every 3,200 people, would appear to be a fairly average one. The implication that the higher the proportion of architects to population the higher the quality of design is not one which can be substantiated without considerable further study.



R. A. Jensen, F.R.I.B.A.

*Reinforced Concrete Designers and Engineers*

## Building Methods

SIR,—The letter published in your issue of June 22 from "A Reader," has been of some gratification to me, since the primary intention of my own earlier letter was to stimulate discussion and thought on the vital problems to which I then referred, on proper and rational lines. It is obvious that many architects and planners must have arrived at similar conclusions to my own for some time past, and have most useful contributions to offer towards a solution of the problems. The letter from your correspondent clearly shows this to be the case, and I believe that the sooner we cease paying lip-service to many of the accepted "plans" on which we are supposed to base the bulk of our outlook and development for the next generation or so, the better it will be.

The reply to "A Reader's" query in his penultimate paragraph is, I am afraid, that higher residential densities in the Metropolitan area will not in themselves produce a speeding-up of construction. In the first place, quite the contrary is likely to be the position, and this will continue until contractors in this country learn to adopt the sort of methods which are used in the United States; and which have been so pointedly referred to in the Productivity Team's report. They will, moreover, have to receive with far more open minds in the future new ideas on unorthodox systems of construction, and not be content to freeze out these unfamiliar methods, as has been their wont in the past by submitting quite ridiculous tenders for this type of scheme. There is no doubt whatever, in my mind, that a greater degree of site assembly of prefabricated units must ultimately prevail, in spite of the very great set-back so-called prefabrication has had, with the various types of bungalow erected since the war. There is no other alternative answer in the long run to the now otherwise insoluble difficulties of "bottle-necks" in the traditional trades, and a very clear general lowering of standards of skill in these trades, due to the non-replacement of the older craftsmen.



I referred earlier to the obsolescence of the bye-laws; and, frankly, architects, engineers and contractors have only themselves to blame that this position still persists. There has been too much apathy all round, and too much desire simply to fall back on the easiest and the best-known traditional methods, irrespective of fundamental changes which have occurred, particularly since the war.

In addition to the conservatism in methods, of the professions and the contractors, a further factor is, of course, the operative. There may be some resistance to a greater degree of mechanisation on building sites. And there may also be resistance to a tendency towards a "building-mechanic" as against the traditional crafts. This will, however, be short-lived, as ultimately the operatives in the building trade will realise that the whole of their future lies in more efficient methods of building, which will produce a better job, very much more speedily carried out than by present methods. Neither will they remain content indefinitely to carry out the big proportion of their work in the open, subject to all the vagaries of the weather, as hitherto. When the building operative sees a lead being given in this direction, the beginning of the answer to the present low productivity may be found.

Pinner.

R. A. JENSEN.

## On Keeping Cool

SIR.—Your article in the technical section of the AJ for June 22, under the above heading, appears to deal with the paper published in May, 1950, by M. E. G. Leau, Ingénieur, as though the extraction of air from the earth for cooling and warming were a completely new idea.

It is common knowledge that the temperature of air contained in the earth is in the neighbourhood of 50° F. and only varies in winter and summer about 1° F. As long ago as August, 1940, application was made by our principal, E. A. Newton, and a British patent was granted to him on March 4, 1942, for a system of extraction of filtered air from the earth.

Since that date, experimental installations have been made with considerable success and while, in the winter, the outside temperature may be zero, the economies of the warming of air extracted from the earth at 50° F. up to 65° F. or 70° F. can readily be appreciated. In like manner, when the external temperature in the summer may be 90° F. the extraction and use of air from the earth at 51° F. provides obvious opportunities for cooling without expensive refrigeration plant.

In the meantime, we disagree with the statement of excessive depths considered necessary for collection gallery or extraction chamber mentioned in the paper and have found suitable sub-soil at depths from 5 ft. to 12 ft. where the air temperatures are just as constant as at much greater depths in this country and also the water problem is avoided or much reduced.

In this latter connection, the patent we have referred to also incorporates a method of controlling the water level in waterlogged strata by means of pump and float switch, thus allowing the air extraction chamber to operate without water interference.

REINFORCED CONCRETE DESIGNERS  
AND ENGINEERS.

(Name and address supplied.)

The EDITORS reserve the right to shorten letters from readers. Whenever possible, however, they are published in full.



## MOH

### Housing figures for May

The number of permanent houses completed in Britain during May was 17,030, compared with 14,862 in April. This brings the number of permanent houses completed during the year to date to 79,702. The total number completed under the post-war programme is 860,195 (703,049 permanent and 157,146 temporary). The number of permanent houses completed in Scotland during May was 2,056. Housing Subsidies Unchanged.—

### Housing Subsidies Unchanged

Exchequer subsidies and rate contributions for new houses built by local authorities in England and Wales are to be unchanged for the fifth successive year. They will remain at the level first fixed under the Housing (Financial and Miscellaneous Provisions) Act, 1946, and will be payable in respect of new houses completed before June 30, 1951. This decision was announced by the Minister of Health, Mr. Aneurin Bevan, in a White Paper published recently. The paper, which is entitled *Housing (Financial and Miscellaneous Provisions) Act, 1946: Report under Section 16(5) (England and Wales)*, may be obtained from HMSO, price 1d., post free 2d. Under the Housing (Financial and Miscellaneous Provisions) Act, 1946, the principal subsidies are:—*General Standard Subsidy*. Exchequer, £16 10s. per house per year for 60 years; local authority contribution, £5 10s. per house per year for 60 years. *Special Subsidy for Houses for Agricultural Workers*. Exchequer, £25 10s. per year for 60 years. Rates £3 per year (£1 10s. from the local authority and £1 10s. from the county council) for 60 years.

## FOB

### Omnibus Exhibition

The Festival of Britain authorities announce that they intend to send a London double-decker bus across Western Europe to show people something of the British way of life. The bus, which will contain displays of scenes such as an English cricket match and the opening of Parliament, will be one of four to leave the UK on July 28 on a 4,000-mile tour to publicise the 1951 Festival.

The equipment of the buses and the goods shown in them have been chosen from the CID's 1951 stock list of contemporary products, from which exhibits to be shown

in the 1951 official exhibitions, including the South Bank, will also be chosen.

The travelling exhibition is designed by Aitken C. Braven, who is also designing the Hydro-Electricity section of the 1951 Glasgow Exhibition.

## RIBA

### Council's Proposals for '51 Festival

The Council of the RIBA has approved the formation of a Festival Sub-Committee to co-ordinate the various activities proposed for the Institute in connection with the 1951 Festival. In this connection an exhibition "A Hundred Years of British Architecture," which would include a review of contemporary work, has been approved in principle and also the preparation of an information service dealing with English buildings.

### Golfing Society's Results

The annual summer meeting of the RIBA Golfing Society was held at Brancaster on July 1 and 2. This fixture was well attended by seventeen members, including the president, Sir Giles G. Scott. The President's Prize was won by W. R. F. Fisher, 37½ points; runner-up, A. V. Farrier, 35½ points. The Captain's Cup was won by W. R. F. Fisher, 84-9-75; runner-up, John Grey, 85-8-77. The Fourball Bogey Competition was won by R. Scott and F. T. Smith, with a score of 5 up. Runners-up were Alan Scott and H. St. John Harrison, with a score of 3 up.

## SCOTLAND

### Plea for more Terrace Houses

More terraced houses should be built in Scotland since they are just as satisfactory as the semi-detached type, and are more economical and more satisfying architecturally. This is among the recommendations made in "House Design," a leaflet which has just been issued to local authorities by the Department of Health for Scotland. These notes on house design are the first part to be issued of a handbook to be known as the "Scottish Housing Handbook," which will cover very briefly the various aspects of local authority house building with which the Department are concerned. Later parts will deal with such matters as economy in house building, siting and layout, roads and utility services and the equipment of normal houses. It is said that the complete handbook should provide local authorities with all the information they require about the standards to be adopted and the practice to be followed in the preparation of housing proposals. This, it is hoped, will enable local authorities to go ahead with their own housing programmes with the minimum of reference to the Department of Health.

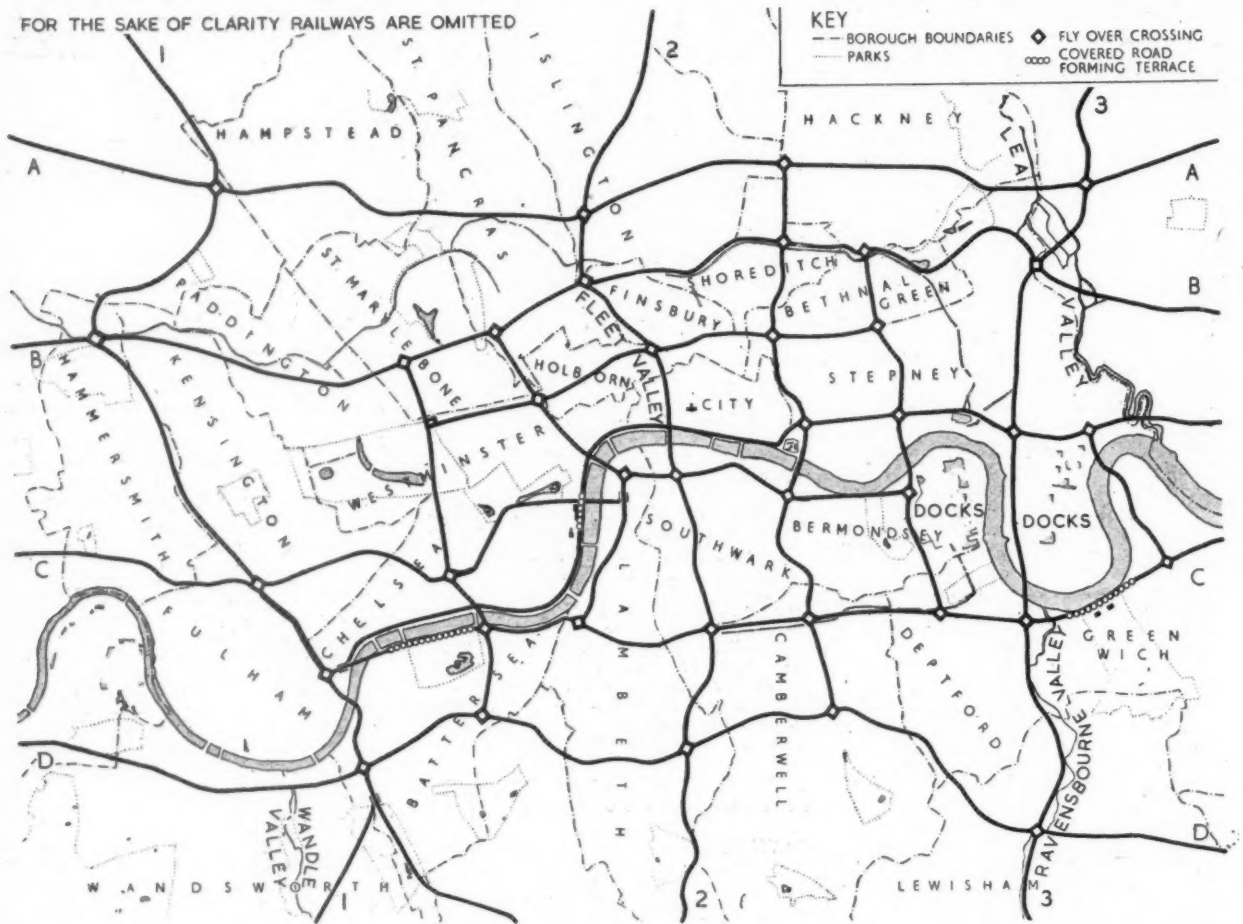
This first leaflet is intended to simplify the work of local authorities and their architects by describing in one short document the standards of design which are considered essential for the normal local authority house. Provided that its recommendations are observed and that a registered architect is employed in the preparation of plans and supervision of building, local authorities are now free to design the normal house types to suit their own requirements without consulting the Department.

A wide list of subjects is covered in the leaflet, ranging from the placing of out-houses to space standards.

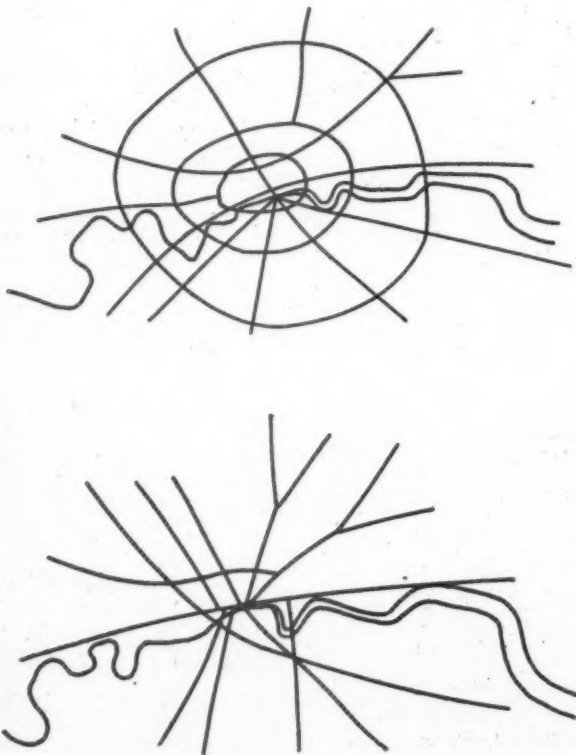


## A PROPOSAL TO RELATE THE SOLUTION OF LONDON'S

FOR THE SAKE OF CLARITY RAILWAYS ARE OMITTED



Map showing proposed grid system of trunk roads

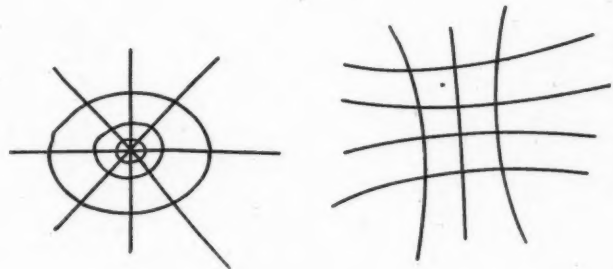
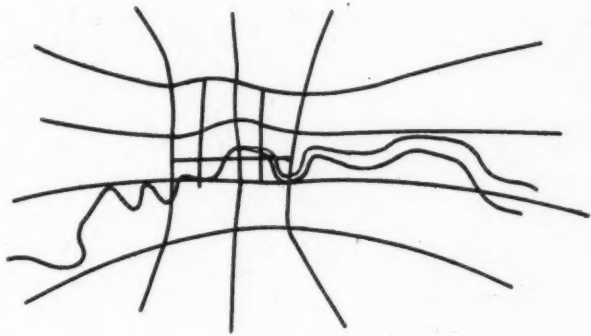


The following notes summarize Bertram Carter's memorandum on the 1943 County of London Plan (prepared six years ago) which is discussed in a leading article on page 31. The County of London plan, in its purely physical sense, imposes three rings upon an existing radial structure. (Left, top.) In this aspect it conforms to the principles of the Bressey Report. There seems to be an artificiality in this spider-web pattern which does not correspond with the desirable natural movement of traffic. It presents disadvantages, Mr. Carter suggests, that may prevent the proper realization of the principles of the County of London Plan. The main disadvantages appear to be the following:

1. It does not fit happily into (a) the community plan or (b) the open space plan based upon the existing topography. The purpose of roads is to serve the traffic requirements of communities, not to dominate or destroy them.
2. It cuts up the boroughs, especially inner ones, while leaving those outside inadequately served.
3. It directs traffic to a congested focal point.
4. It is not sufficiently related to the rail plan. At present some sixteen main roads converge upon London, as shown on the left (bottom). This is a rational outcome of centuries

## TRAFFIC PROBLEM TO THE COUNTY OF LONDON PLAN

of development and is an inescapable factor in planning. If as an alternative to the ring, a fluid grid-like pattern in the central area were adopted, the disadvantages of the rings might be avoided, as shown on the right, top. The routes generally follow the railways, which today form boundaries and where, generally speaking, the adjoining property is of a poor character, particularly unsuitable for housing. This alternative presents more favourable conditions with which to implement the London Plan and lends itself to: 1. (a) the proper development of the community principle, (b) continuous open spaces along the tributaries of the Thames; 2. individual borough planning without prejudice to the master plan, yet providing adequate transport facilities for each; 3. direction of traffic equally over the widest possible area, offering alternative routes and avoiding concentration at a focal point; 4. co-relation with the rail-plan. The spaces between the arteries in this pattern are borough-like in area and better calculated for economic planning. In principle, each is surrounded on its four sides by a major artery, with direct access to the whole country as well as to its neighbours and the cities of London and Westminster. Through traffic is segregated to the boundary arteries. The two small diagrams



above illustrate, in simple form, the spider's web pattern, which is liable to lead to congestion, and the grid system by means of which traffic is spread evenly over the central areas.

## MOTCP

*Aycliffe Development Corporation Re-appointed*

Hugh Dalton, Minister of Town and Country Planning, has reappointed all the members of the Aycliffe Development Corporation for a further period of two years. He has added to the Corporation Alderman J. R. S. Middlewood, an alderman of Durham County Council and vice-chairman of its finance committee. Mr. Middlewood is also Deputy-lieutenant of the County of Durham and vice-chairman of the Bishop Auckland Urban District Council.

## NATIONAL TRUST

*Gift of Cheshire Mill*

The National Trust announces the gift from Major and Mrs. J. A. Shelmardine, of Alderley Old Mill, Nether Alderley, which is 1½ miles from Alderley Edge on the Congleton Road. Although a water mill is recorded at Nether Alderley as early as 1391, the present structure dates from the 15th century. It is notable for the great sweep of its stone slated roof and its interesting dormer windows. The interior is remarkable for the fine carpentry of its oak beams, its wooden water wheels and machinery, which remained in use till 1939. The public may visit the Mill on Wednesdays, Saturdays and Sundays between 1 and 7 p.m. (The key can be obtained at these times from J. Owen, Old Hall Cottages, Congleton Road, Nether Alderley.) This arrangement will operate until the end of October, when new plans will be made.

## IRELAND

*Schools Building Trust*

The Northern Ireland Minister of Education (H. C. Midgley) said recently that he is examining, in conjunction with the Ministry of Finance, the possibility of establishing a Schools Building Trust. He said that if this could be accomplished the output on erection of intermediate schools could at least be doubled within the next ten years. If the local education authorities would agree to delegate the authority for the building of schools to this centralized authority (upon which all the local education authorities would be represented) for a period of ten years, he believed that the results would be so astonishing and beneficial that at the end of the decade there would be a united request for the carrying on of the work.

## COMPETITION

*A Measured Drawings Prize*

The Georgian Group offers a prize of £25 for the best set of measured drawings of a Georgian building. The purpose is to encourage the study of Georgian architecture and the measuring of buildings. The assessors will be Messrs. Godfrey Allen (nominated by the RIBA), Marshall Sisson (nominated by the President of the Royal Academy), and S. E. Dykes Bower (nominated by the Georgian Group). The competition will be open to any student of any School of Architecture in England and Wales recognized for exemption from the RIBA Intermediate Examination, or the RIBA Intermediate and Final Examinations, who on June 1, 1950,

had not passed the RIBA Final or equivalent Examination and was not over the age of 25. Drawings must be delivered to the office of the Georgian Group, 27, Grosvenor Place, London, S.W.1 (from where details are obtainable), not later than midday on October 16 next.

## DIARY

*Dry Rot and Woodworm Exhibition.* North-West Gas Board, Fishergate, Preston. (Sponsor, DSIR.) UNTIL JULY 20

*Exhibition of Students' Work.* School of Architecture, Polish University College, 21, Princes Gate, S.W.7. Daily, 10 a.m.-7 p.m., except Sundays. UNTIL JULY 20

*Exhibition: William and Mary and Their Time.* At V and A Museum. (Sponsor, Arts Council.) Weekdays, 10 a.m. to 6 p.m.; Sundays, 2.30 p.m. to 6 p.m. UNTIL AUGUST 20

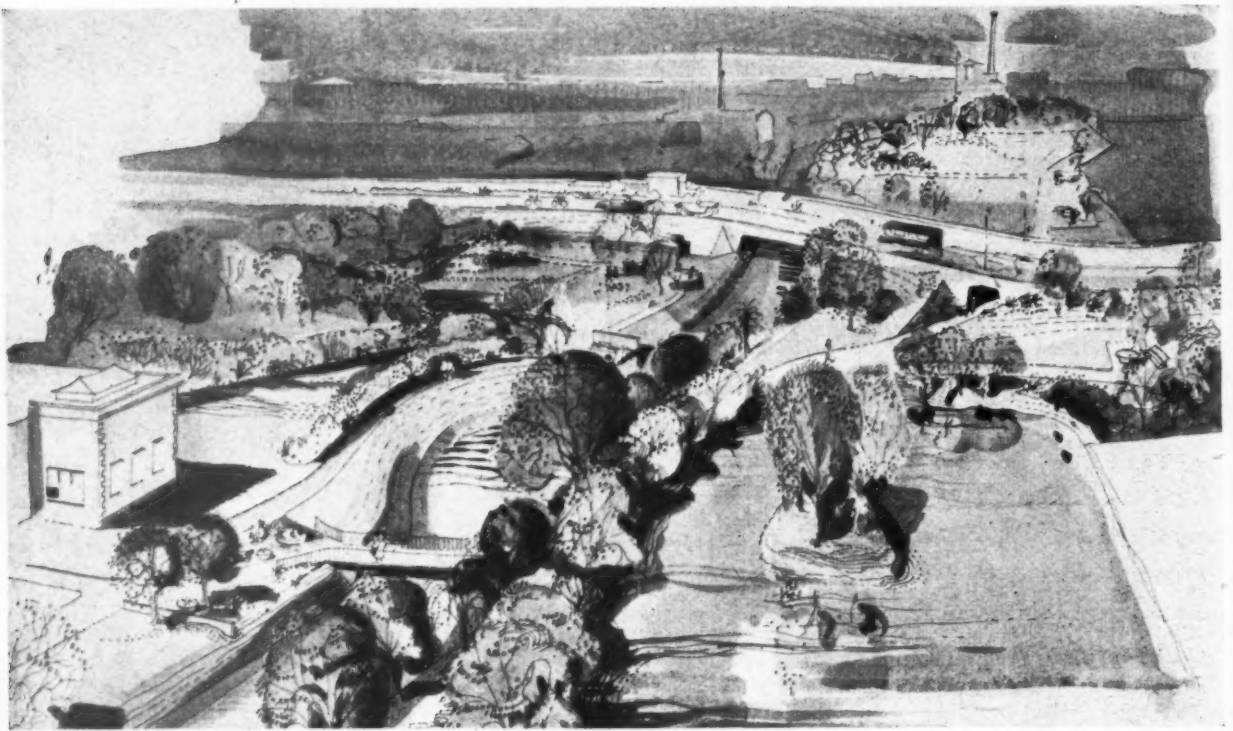
*This Way to the Tomb.* Play by Ronald Duncan. At 34, Bedford Square, W.C.1. Presented by AA Dramatic Society. 7.30 p.m. JULY 13

*Annual Prizegiving at AA.* Prizes to be presented by Frank Lloyd Wright. 3.30 p.m. Exhibition of students' work. Daily, 10 a.m.-6 p.m. Saturdays, 10 a.m.-2 p.m. Open until July 27, 34, Bedford Square, W.C.1. JULY 14

*Exhibition of Work by Students and Staff of the Royal College of Art.* At RBA Galleries, Suffolk Street, S.W.1. Daily, 10 a.m. to 5 p.m., except Sundays. Admission 1s. JULY 14-29

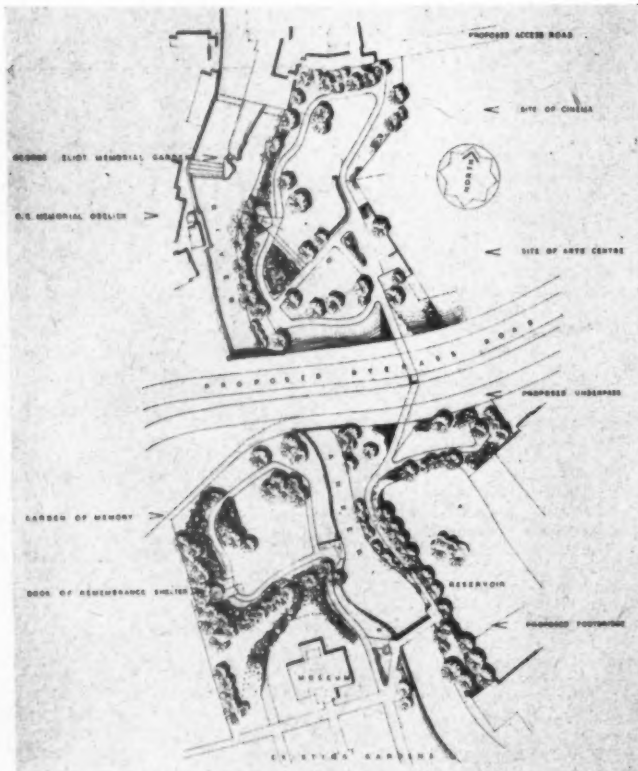
*Lecture by Ernst May.* At RIBA, 66, Portland Place, W.1. (Sponsor, MARS Group.) 6 p.m. JULY 20

PRIZE WINNING DESIGNS IN COMPETITION

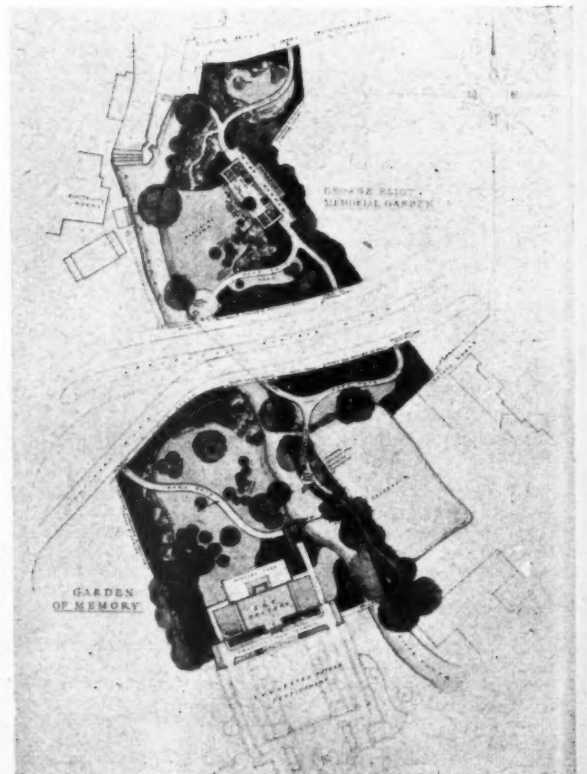


First prize winning design: sketch

First prize winning design: plan



Second prize winning design: plan





## FOR MEMORIAL GARDENS AT NUNEATON

Nuneaton Borough Council has decided to construct public gardens as part of a redevelopment scheme for the central area of the town, for which Frederick Gibberd has already prepared plans. The gardens will comprise two main sites and two smaller sites. The main sites will be used for a George Eliot Memorial Garden [the borough's contribution to the 1951 Festival of Britain] and a Garden of Memory, which will be a memorial to the men and women of the district who lost their lives during the war. The two main sites are to be divided by a new bye-pass road. It is hoped that constructional work will be commenced in the autumn on the scheme which won first prize of £150 for Mary Braendle, Dip. Hort. (Reading), and Ronald Sims, A.R.I.B.A., A.A. Dip. (Hons.), student members of the Institute of Landscape Architects, in the recent competition sponsored by the Institute for its members. The assessor, H. F. Clark, called attention, in his report, to the fact that these competitors had been aware that the view to the new art centre and the future development of Church Street was of greater importance than that across the river. The designers were right, he said, to screen the river area and to

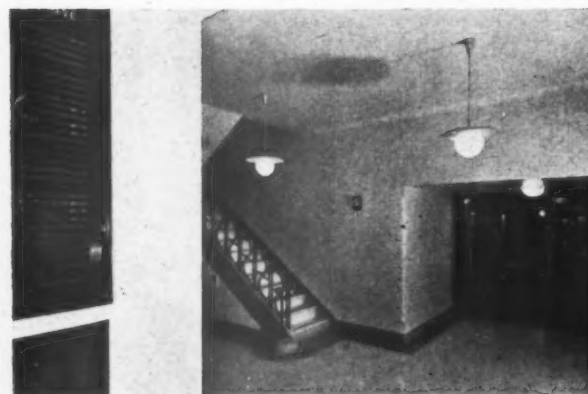
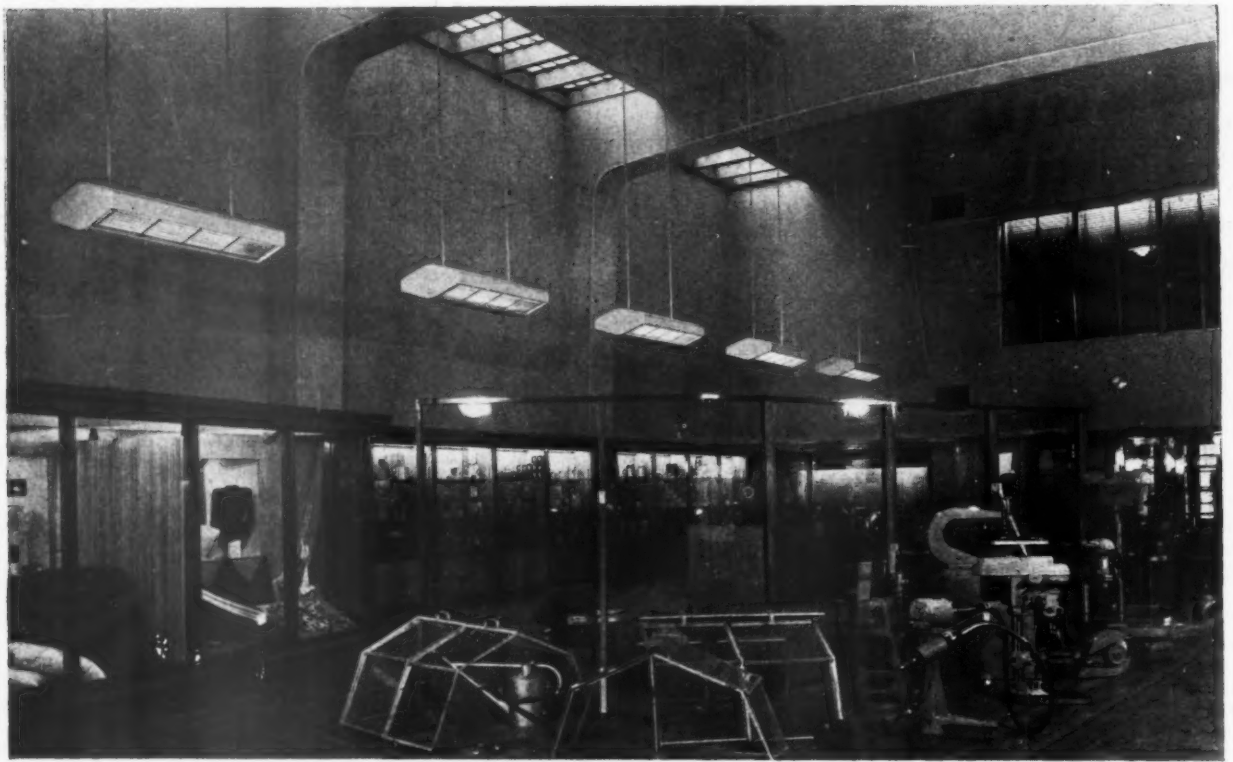
site the George Eliot garden to face eastwards. In his opinion the second prize winning design, for which A. Hedley Richmond, A.I.L.A., was awarded £75, was almost equally commendable. The plans were accompanied by a rendered isometric projection of the whole site which expressed the designer's intentions with great skill. But the assessor placed the entry second because the cost of constructing the garden might have been higher than the Council's estimate, and the George Eliot garden was incorrectly sited. He considered that the third design, which won £25 for Brenda Colvin, F.I.L.A., and Sylvia Crowe, F.I.L.A., was sensitively conceived and executed but its detailing and planting were not so interesting as those proposed by the winner of the first premium. Leonard J. Batten, M.A., A.I.L.A., and Frederick Hill, F.R.I.B.A., A.M.T.P.I., A.I.L.A., each won £5 for highly commended designs. In general, wrote the assessor, it should be said that though the sites chosen presented considerable difficulties, the standard of entries was extremely high, and the winners displayed imagination and ingenuity in overcoming these difficulties.

Third prize winning design: plan





# CONVERSION OF BUILDING IN BERKELEY

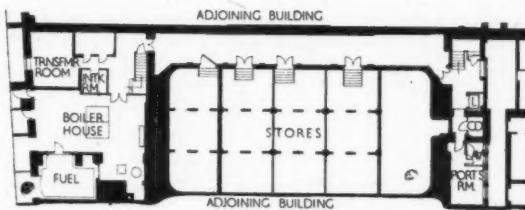
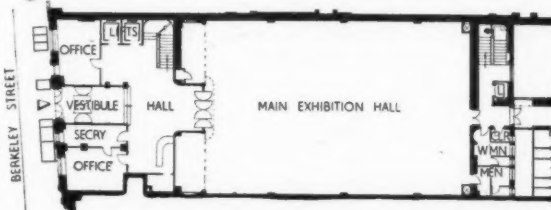
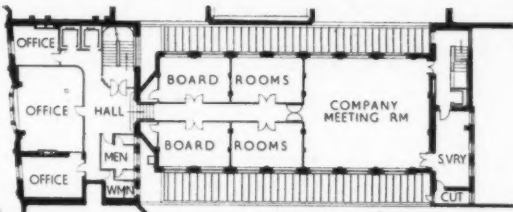
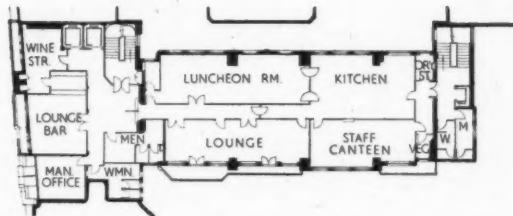


The old Bath Club premises fronting on to Berkeley Street and Dover Street have been acquired by Slough Estates, Ltd., as offices and a marketing centre for the industrial products of their estates. The conversion of the premises, which were burnt out during the war, has been carried out by Welch and Lander, in association with Brian O'Rorke. Considerable alterations and reinstatement were necessary within the area of the original building to render it suitable for its new use. The large exhibition hall, seen above, which was required for the display of manufactured goods, occupies the space originally filled by the swimming bath, balconies have been removed and the bath has been covered over, thus providing basement stores. The clients required showcases and stands of various sizes and depths to give the greatest flexibility for a changing display of industrial products. A recessed bay beside the main entrance doors forms a reception office for the exhibition hall manager. Other accommodation required included a conference room, company meeting rooms, club and canteen, as well as individual company offices, such as the reception office on the fifth floor, shown centre left. In the exhibition hall the curved ceiling and main truss forms are false, constructed in light metal framing and plaster, but arranged in such a way that they conceal existing steelwork. The showcases generally are constructed with the solids of African mahogany, the most easily obtainable wood at the time, and the panelling and linings are of  $\frac{3}{8}$ -in. resin bonded birch plywood.

## STREET, LONDON, W. 1.



Longitudinal section



Above (from top to bottom) seventh floor, second floor, ground floor and basement plans. [Scale:  $\frac{1}{4}$ " = 1'0"]

sent as a gift from a Canadian firm. The walls are distempered ivory, the centre lowered ceiling pale yellow, the surrounds to the ceiling lights pale blue and the close carpeting is mushroom. The hall is heated through floor panels and by warm air from the plenum ventilation system. The entrance hall, bottom left, has a cream terrazzo floor with a green border. The managing director's office, top right, has putty coloured walls, brown upholstery and carpet and furniture of Australian walnut. One

of the two passenger lifts, below centre, is one of the few examples of all-British gearless traction machines and has a speed of 500 ft. per minute. The practice of employing a large slow speed motor directly coupled to the traction sheave originated in the USA and a number of these lifts of American origin have been installed in this country. The machinery accommodation has been carefully planned in a very clean lift motor room at the top of the building (right bottom). The general contractors were Harry Neal, Ltd. For list of sub-contractors see page 50.



*Recent discussion on the organization and prospects of the architectural profession in Britain has aroused interest in how things are done abroad. Below is a first instalment of a brief survey of foreign practice in the form of the replies to four questions which were sent by the AJ to architects or organizations in the countries concerned. The questions were:—(1) How many architects are there in your country? (2) Is entry to the architectural profession controlled by examination and are there any regulations to prevent people calling themselves architects and practising as such? (3) On what basis are architects fees calculated? (4) What is the mode of training for the profession and are the number of entrants for training limited?*

## PRACTICE ABROAD

### Switzerland, Holland and Spain

#### SWITZERLAND

(1) According to the census taken in 1941 there are 1,863 practising architects (including 7 female) and 931 architectural assistants (including 12 female) in the country.

(2) Anybody in Switzerland may call himself an architect, even a charwoman. The only protection is the mention of a diploma from the Swiss Federal Institute of Technology, Zürich (Dipl.Arch. ETH).

There have been many efforts to secure protection for the title of architect, but all have been in vain. And it does not seem that any practical solution will be found in the near future.

(3) The SIA (Schweiz. Ingenieur- und Architektenverein), in collaboration with the BSA (Bund Schweizer Architekten) issued a regulation a long time ago which gave the basis for architects' fees. It is just being revised.

As work is different from that of an English architect, fees cannot be compared. There are no quantity-sur-

veyors; architects do this work themselves. The basis on which architects' fees are calculated is either the total building cost or, in special cases, the hours of design work employed.

(4) The number of entrants to the profession is not limited. It is possible to train at the ETH (Swiss Federal Institute of Technology), or at the art schools; there is also the possibility of becoming an architect by going to any technical college. (There are about a dozen.) After some years of practical work a man may call himself an architect—if he has anything to build.

There is always a number of good architects who have been trained, not in schools, but by working on the job, and there are, at the same time, very poor architects who passed all possible examinations with distinction.

#### HOLLAND

(1) Since March, 1946, the BNA (Bond Van Nederlandsche Architecten) has undertaken the registration of Dutch architects. So far about 2,400 architects are registered, of whom about 1,170 architects are also members of the BNA. As this registration was compulsory only for members, it may be that a number of architects did not give their names. This number cannot be considerable. The register has authority in the country and so the architects realize the value of being on it. The approximate total of Dutch architects may amount to 2,500. This number includes both practising and assistant architects. (The members of the BNA are practising architects, i.e., private architects, members of private architects' firms or official architects.)

(2) Entry to the architectural profession is not controlled by examination and there are no regulations to prevent unqualified persons from calling themselves architects and from practising. A bill for the regulation of the profession was introduced into the Estates-General in January, 1949. It has not yet been publicly read there. If the bill is passed, only those persons who are State registered will be allowed to call themselves architects and to design. For registration by the government (as now by the BNA) certain qualifications (capacities, experience, professional morals) will be necessary. The BNA's private register is meant to be a forerunner of the national register.

(3) The architects' fees are calculated as percentages of the building costs. For higher building costs the percentages are lower. Only for housing which is subsidized by the government is the fee often based on the number and size of the houses.

(4) One can be trained as an architect at the Technical High School, in the university of Delft. In order to gain admittance to this institution previous practice in an architect's office or any theoretical knowledge of building is

not required. But applicants should have a certificate of a secondary school where mathematics, physics, chemistry, languages, etc., are taught. Studying at Delft is full-time work. It takes about six years.

Furthermore, there are nine academies in the country where architecture is taught on Saturdays and at night. Most students are employed by architects as draughtsmen. Only those who have the theoretical knowledge which is required for a young draughtsman, and some years of practical experience are admitted. After three years, an average student is sufficiently trained for everyday architecture, e.g., houses, shops, etc. Students can continue their training under the same conditions for two years in Amsterdam or Tilburg in order to have an all-round education. The Technical High School at Delft is a national institution. The nine academies were founded by private societies of architects. Their activities are co-ordinated by the BNA and they are subsidized by the government.

#### SPAIN

(1) There are only about 2,000 practitioners in Spain for a population of 28,000,000.

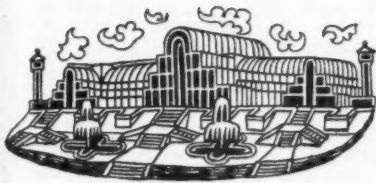
(2) There are two schools of architecture, one in Barcelona and one in Madrid. To become an architect one must go through one of these schools. No person who is not an architect is allowed to practise as one; in other words, no drawing can be passed by a builder unless it is signed by an architect.

(3) All architects are members of their Institute, which takes charge of all their contracts. The architect who is making a contract with a client will do it through the Institute. He submits to it all preliminary designs for a job and it has the right to veto them.

The Institute also collects all fees. Architects like this arrangement. They say it saves them a good deal of embarrassment. If a client is a friend he remains a friend; there is no sordid business of money changing hands between client and architect. The Institute also deals with members' income tax. (But architects and other followers of the liberal professions are taxed at a lower rate than business men.) From the money which the Institute collects in fees for architects it deducts something like six or eight per cent. for insurances. (When an architect dies his funeral expenses are covered, his children are educated free and his widow gets a pension.) If an architect is ill, he gets sickness benefit.

(4) The competition to get into either of the two schools (which each contain only 150 students) is very strong. They admit only 20 students a year; although hundreds apply. Some applicants have been trying to get in for six or seven years.





The present maximum allowance of softwood timber is 1.6 standards per house of 1,000 sq. ft. of floor space in England and Wales; about two-thirds of this amount are normally used in the first floor and roof. This paper by O. J. Masterman\* sets out the main existing alternatives to timber for suspended floors and roofs and gives comparative quantities and prices.

## O. J. MASTERMAN Timber Substitutes in Houses

For many centuries timber has been one of the principal materials used for building houses in this country. It has always figured prominently in the floors and roofs. Timber has, in the past, been a natural choice for domestic building because its ready availability and its cheapness were combined with such natural properties as high strength, attractive appearance, ease of working, warmth, etc. In recent years it has become scarcer and the cost difference between timber and the alternatives for building house floors and roofs has narrowed so that alternative roof constructions can now compete in cost, although alternative suspended floor constructions generally remain, at present, more expensive.

Two-thirds of the present maximum allowance of 1.6 standards per 1,000 sq. ft. of floor area normally go into the first floor and roof. The remaining one-third has to cover all the other softwood needs, including staircases, doors, windows, cupboards and other interior fittings. These latter items provide little scope for timber saving, while substantial economies may be secured from the suspended floor and roof which together account for a whole standard of timber per house.

This paper discusses, with cost comparisons, some timber alternatives which could be used for suspended house floors and roofs. In making substitutions on any large scale it would be necessary to use as many different types of construction as possible so as to avoid forcing up costs by overloading any one process or material. This paper is presented as a factual examination of the possibilities of alternative constructions at prevailing prices. It should not be taken to indicate any change in policy from that expressed in Timber No. 2 (Use of Timber in all Building Work) issued by the Ministry of Works.

\* The work for this paper was carried out as part of the programme of the Chief Scientific Adviser's Division of the Ministry of Works, for which responsibility has now passed to the Department of Scientific and Industrial Research. (Crown copyright reserved.)

## FLAT ROOFS (Table A)

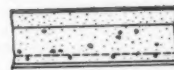
Showing the amount of timber saved per house compared with average traditional requirements of 0.5 standards. The quantities and prices are for 70 sq. yds. of roof, including overhang. Price ranges cover complete roof construction, including 2½ in. (average) lightweight screed to falls, precast overhang and gutters, roofing felt and ceiling, as detailed. For comparison, the traditional pitched roof price range is £140—£190.

### TYPE I; INSITU SLABS; Require centering for erection.

#### SOLID SLABS

##### REINFORCED LIGHT WEIGHT CONCRETE A1

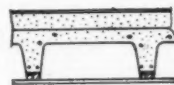
Roofing felt, light weight topping, light weight reinforced concrete, mesh reinforcement, plaster.



#### RIBBED SLABS

##### REINFORCED CONCRETE A2

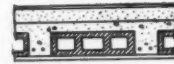
Roofing felt, light weight topping, light weight or normal-reinforced concrete, rod reinforcement, timber battens, plasterboard.



#### HOLLOW SLABS

##### REINFORCED CONCRETE AND CLAY TILE B1

Roofing felt, light weight topping, reinforced concrete, rod reinforcement, hollow clay blocks, plaster.



##### REINFORCED CONCRETE AND PRECAST BLOCK B2

Roofing felt, light weight topping, light weight hollow blocks, jointing, rod reinforcement (two-way), plaster.



### TYPE II; PRECAST; No centering required.

#### HOLLOW BEAMS

##### PRESTRESSED CONCRETE A1

Roofing felt, light weight topping, prestressed hollow beam, high tensile wire, jointing, plaster.



##### REINFORCED CONCRETE A2

Roofing felt, light weight topping, precast hollow beam, rod reinforcement, jointing, plaster.



##### REINFORCED CONCRETE (LIGHT WEIGHT) A3

Roofing felt, light weight topping, light weight hollow beam, rod reinforcement, jointing, plaster.



#### HOLLOW-FORMING BEAMS

##### PRESTRESSED CONCRETE B1

Roofing felt, light weight topping, prestressed beam, high tensile wire, plaster.



Per house			Price range
Timber saved			
Stds.	%	£	
0.50	100		114 to 128
0.47	94		
0.50	100		142 to 156
0.50	100		
0.50	100		
0.50	100		153 to 172
0.50	100		
0.50	100		170 to 187



## THE AVAILABLE ALTERNATIVES

There are numerous concrete floor and flat roof constructions now available and in general use in buildings other than houses, which could be adopted in place of traditional timber house floors and roofs. These alternative concrete constructions fall mainly into three groups, namely, slabs cast in place, precast units laid side by side, and composite designs formed with precast elements such as joists and filler blocks.

Table "A" gives details of some alternative constructions for floors and roofs, with quantities and prices. It is emphasized that these are given merely as typical examples and that many other variants are possible. The pitched roof designs include interlocking tiles only, since plain tiles add substantially to the framing cost by requiring closer supports and steeper pitch. Figures are also given for asbestos coverings. It will be noted that, because of their high insulating value, the lightweight concretes are reserved for the roofs, leaving the normal concretes for the floors.

The prices per house for floors and roofs cover the complete constructions, including all finishes, except in the case of floors, the surface finishes for which are shown separately in Table "D." The prices for traditional roofs cover everything above wall plate level (except rainwater goods), including ceiling, gable walls and insulation, and are based on a sample from each of 50 sites of Local Authority houses under construction in 1949.

For the alternative constructions, figures are based mainly on actual prices quoted by commercial firms in the Autumn of 1949, and the corresponding schedule of basic prices of materials and labour is given in Table "C." Overall prices per house are based on a floor area of 950 square feet, excluding outhouses and covered way.

**Flat Roofs.**—Concrete flat roofs can be built as cheaply as traditional roofs and provide the best means of saving timber because the whole of the roof timber can be replaced.

**Pitched Roofs.**—The timber content of pitched roofs can be substantially reduced by replacing the timber roof-members with steel. If the trusses and purlins only are in steel the timber saving amounts to about a quarter of a standard per house. At some extra cost, but still within the acceptable price range, the saving can be increased to about one third of a standard if the rafters and battens are also replaced by steel. Prefabricated reinforced concrete trusses made up of standard units bolted together can be used to reduce the amount of steel.

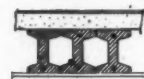
Wholly steel-framed roofs covered with asbestos sheeting also save about one third of a standard of timber, and where they are acceptable would form the cheapest type of roof substitution at date. In all the pitched roof alternatives given in Table "A," gabled roofs are assumed, since framing is more costly in hipped roofs.

**Floors.**—Concrete floors normally cost more than timber floors mainly because of the surface finish which must be added. Figures for alternative floor constructions are given in Table "A." On steeply sloping sites, if the average depth of fill is more than about 2 ft. 6 in., it may be cheaper to use suspended concrete floors than solid slabs on the ground (see Chart "B").

Although many of the concrete floors listed in Table "A" have been in use for years, it

## REINFORCED CONCRETE B2

Roofing felt, light weight topping, precast beam, rod reinforcement, plaster.



## TROUGH BEAMS

## PRESTRESSED CONCRETE C1

Roofing felt, light weight topping, prestressed trough unit, high tensile wire, jointing (light weight) timber batten, plasterboard, skim coat plaster.



## REINFORCED CONCRETE C2

Roofing felt, light weight topping, precast trough unit, rod reinforcement, jointing, timber batten, plasterboard.



## REINFORCED CONCRETE WITH LIGHT WEIGHT CONCRETE INFILLING C3

Roofing felt, light weight infilling, precast trough units, rod reinforcement, jointing, plaster.



## TYPE III ; COMPOSITE ; No centering required.

## JOISTS AND BLOCKS

## PRESTRESSED CONCRETE JOISTS A1

Roofing felt, light weight topping, prestressed joist, high tensile wire, jointing, light weight hollow block, plaster.



## REINFORCED CONCRETE JOISTS A2

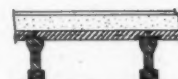
Roofing felt, light weight topping, precast joist, rod reinforcement, jointing, light weight hollow block, plaster.



## JOISTS AND SLABS

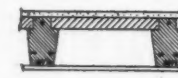
## PRESTRESSED CONCRETE JOISTS AND SLAB B1

Roofing felt, light weight topping, precast slab with mesh, prestressed joist, high tensile wire, timber batten, plasterboard (1/4 in.), skim coat plaster.



## REINFORCED CONCRETE JOISTS AND SLAB B2

Roofing felt, light weight topping, light weight precast slab, precast joists, rod reinforcement, timber batten (cast in), plasterboard.



## PRESTRESSED CONCRETE JOISTS AND TILE B3

Roofing felt, light weight topping, roof tile, prestressed joist, high tensile wire, timber batten, plasterboard (1/4 in.), skim coat plaster.



## REINFORCED CONCRETE JOISTS AND SLAB B4

Roofing felt, light weight topping, light weight precast slab, precast joists, rod reinforcement, plasterboard.



Per house		
Stds.	Timber saved	Price range
	%	£
0.50	100	170
		to
		187
0.48	96	
0.47	94	157
		to
		171
0.50	100	
0.50	100	160
		to
		176
0.50	100	
0.48	96	
0.47	94	
0.48	96	166
		to
		183
0.50	100	

has not been usual to employ them in low cost houses, because timber has been cheaper. The increased price of timber has now made it possible for flat roofs to compete and, if the price of timber rises further, some of the floors may come near to competing.

If that happens it may be economical to replace the timber in both the floor and the roof with alternatives. Indeed, selection of the most economical alternatives should enable this to be done even at present-day prices where a saving on the roof may be made to balance an increase on the floor; and the advantage that concrete floors have over timber floors, such as freedom from rot and vermin troubles, higher fire resistance and rather better sound insulation, are points in their favour.

### SUMMARY

The figures in Table "A" show that flat concrete roofs provide the greatest timber saving, amounting to almost half a standard per house, and that the next best timber saver is the pitched roof with a frame of steel or concrete in place of timber. This alternative saves from one-fifth to a third of a standard per house and is cheapest when covered with asbestos sheeting, the next cheapest covering being interlocking tiles. The price ranges for each of the alternative constructions are given and these compare with an average price of £168 per house for a traditional roof. The prices given are based on a schedule of rates shown in Table "C" which were current in the autumn of 1949.

Similar savings in timber can be made in floors, but at some additional cost except on steeply sloping sites.

### TECHNICAL NOTES ON THE ALTERNATIVE MATERIALS

The alternatives advocated are concrete, burnt clay and steel. The concrete may be reinforced, prestressed or lightweight. Two materials, foamed slag and clinker, are important as aggregates for lightweight concrete in certain districts. These latter have the valuable property of high thermal and fire resistance in addition to light weight and should be used to the greatest possible extent in flat roofs to prevent undue loss of heat through the roof.

Clinker is a cheap aggregate, but care should be taken to see that it complies with the appropriate British standard, as excess of unburnt coal gives rise to expansion troubles. It is not recommended in reinforced work owing to corrosion danger. It is particularly suitable for hollow floor or roof blocks, lightweight fillings and insulation screeds. Development of a clinker cleaning process is well advanced.

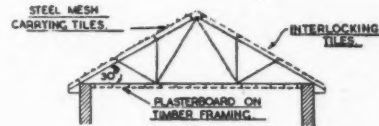
Foamed slag is a cheap aggregate in the neighbourhood of production centres which at present are Middlesbrough, Scunthorpe, Staveley and Glasgow. The common rules governing the mixing and water content of normal concrete do not apply to foamed slag concrete in which more water is required and the amount of fine material should be at least as much as the coarse. The water should be added to the mix before the cement. For indoor work this material is satisfactory as an aggregate for reinforced concrete. Foamed slag concrete, though weak compared with dense concrete, has ample strength for floor slabs in which the compressive stresses are not high. Quite high strengths can be developed if required, using sand in place of the fines, but this increases the weight. Hollow beams of foamed slag would be very suitable for flat roofs, being light to handle and hoist and giving good heat insulation, provided they were adequately protected from access of moisture.

## PITCHED ROOFS (Table A continued)

Timber saving per house compared with average traditional requirements of 0.5 standards. Quantities and costs are for 66 sq. yds. of covered area, including overhang. Price ranges per house cover complete construction above eaves, including gable and party walls, ceiling insulation, and interlocking tiles, and compare with traditional price range of £140—£190.

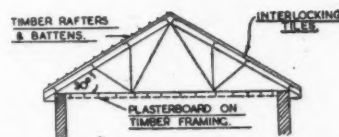
### TYPE I

STEEL TRUSSES AND PURLINS WITH STEEL MESH



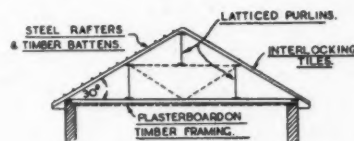
### TYPE II

STEEL TRUSSES AND PURLINS WITH TIMBER RAFTERS AND BATTENS



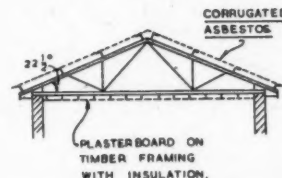
### TYPE III

STEEL LATTICED PURLINS, STEEL RAFTERS AND TIMBER BATTENS



### TYPE IV

STEEL TRUSSES AND PURLINS WITH CORRUGATED ASBESTOS SHEETING



NOTE.—Steel saving can be effected by the use of cold rolled sheet in place of hot rolled sections and by welding instead of bolting. These alternative methods of fabrication are not yet in wide general use, so figures above are based on bolted hot rolled sections.

Per house		
Timber saved	Price range	
Stds.	%	£
0.35	70	150 to 165
0.22	44	135 to 150
0.24	48	150 to 165
0.35	70	120 to 135

## FLOORS (Table A continued)

Timber saving per house compared with average traditional requirements of 0.5 standards. Quantities and prices are for 50 sq. yds. of 1st floor in a house of 950 sq. ft. total floor area (excluding outhouses.) Price ranges cover complete floor construction including ceiling and 1-in. screed, but not surface finish. For comparison the timber floor price range is £61—£80.

### TYPE I ; INSITU SLABS ; Require centering for erection.

#### SOLID SLABS

REINFORCED CONCRETE A1

Screed, reinforced concrete, mesh reinforcement, plaster.

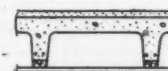


0.50 100

#### RIBBED SLABS

REINFORCED CONCRETE A2

Screed, reinforced concrete, rod reinforcement, timber battens, plasterboard.



0.47 94

63 to 76

*Normal Concrete and Burnt Clay* are materials in such general use for floors and roofs as to require no special note.

*Prestressed Concrete* requires special care in the making and must be of much higher quality than normal reinforced concrete. Prestressed hollow floor beams are on the market and numerous firms are in a position to produce prestressed joists.

*Steel* in the form of bars or fabric is widely used for normal reinforced work and in the form of hot rolled sections for roof trusses and purlins. Cold formed sheet steel sections for trusses show a great saving in metal compared with standard hot rolled sections, but the difficulty of giving adequate protection from corrosion makes them expensive under present regulations.

*Cold drawn wire* of very high strength in diameters up to one-fifth of an inch is in production for prestressed work and gives a saving of about 80 per cent. of steel against ordinary reinforcement. For small components 12 and 14 s.w.g. wire is convenient and gives reliable bond strength without any special surface treatment.

#### THE ALTERNATIVE CONSTRUCTIONS

**Flat Roofs.**—These are all of concrete and eliminate virtually the whole of the timber used in a traditional roof. The concrete may be dense or lightweight, normally reinforced or prestressed, and may incorporate burnt clay or other hollow blocks. Lightweight concretes are strongly recommended and should be used to the greatest possible extent in flat roofs on account of their high thermal insulation. The structural slab may be covered by a lightweight screed laid to falls on which is stuck three layers of roofing felt. The "U" value for the whole roof construction must not exceed .30, and values near .20 are desirable. Normal gutters can be fixed at the edges, but a flat roof generally requires an overhang. This can be conveniently arranged with precast units which incorporate both gutter and overhang as shown on Drawings No. 1 and 2 (page 47).

Suitable provision for expansion should be made in flat roofs extending over more than two houses.

**Pitched Roofs.**—The main alternative available for the roof framing is steel in the form of hot rolled sections. Prefabricated concrete trusses provide another alternative. Light alloy is too expensive, and trusses fabricated from cold rolled sheet, although economical in steel, require rather costly protection against rust. Replacement of the tiling battens and rafters can be made by using welded steel mesh.

To keep costs low it is best with pitched roof constructions to restrict them to interlocking tiles for the covering because these are lighter and cheaper than plain tiles and can be used at lower pitch. The cost figures given in Table "A" are based on a 30° pitch.

Asbestos roofs on steel framing are cheaper than any tiled roofs and can be laid at a pitch of 22½°.

It is not recommended to replace all the timber in pitched roofs because it is uneconomic to carry the first floor ceiling on metal framing, partly owing to the difficulty of fixing the plasterboard and partly owing to the higher cost of steel.

**Ground Floors.**—The case for using suspended concrete ground floors on steeply sloping sites is clearly shown by the graph on Chart "B," where it will be seen

#### HOLLOW SLABS

##### REINFORCED CONCRETE AND CLAY TILE B1

Screed, reinforced concrete, rod reinforcement, hollow clay blocks, plaster.



Per house		
Stds.	Timber saved	Price range
	%	£

0.50 100

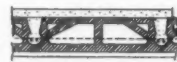
88

to

98

##### REINFORCED CONCRETE AND PRECAST BLOCKS B2

Screed, hollow blocks, jointing, rod reinforcement (two-way), plaster.



0.50 100

#### TYPE II; PRECAST; No centering required.

#### HOLLOW BEAMS

##### PRESTRESSED CONCRETE A1

Screed, hollow beam, jointing, high tensile wire, plaster.



0.50 100

##### REINFORCED CONCRETE A2

Screed, hollow beam, jointing, rod reinforcement, plaster.



0.50 100

81

to

100

##### REINFORCED CONCRETE A3

Screed, hollow beam, jointing, rod reinforcement, plaster.

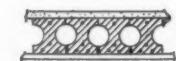


0.50 100

#### HOLLOW-FORMING BEAMS

##### PRESTRESSED CONCRETE B1

Screed, prestressed beam, high tensile wire, plaster.



0.50 100

##### REINFORCED CONCRETE B2

Screed, precast beam, rod reinforcement, plaster.



0.50 100

94

to

106

##### REINFORCED CONCRETE B3

Screed, precast beam, rod reinforcement, plaster.

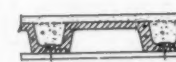


0.50 100

#### TROUGH BEAMS

##### PRESTRESSED CONCRETE C1

Screed, prestressed trough, high tensile wire, jointing, timber battens, plasterboard.



0.48 96

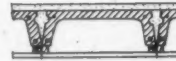
82

to

95

##### REINFORCED CONCRETE C2

Screed, precast trough, rod reinforcement, jointing, timber battens, plasterboard.



0.47 94



that with an average depth of fill exceeding 30 inches it becomes possible to save money by using a suspended concrete floor in place of an *in situ* slab on hardcore filling.

The chart shows prices of the suspended floors selected from Types II or III of Table "A," but with ceiling finishes omitted; the prices of the solid floors for various depths include for the necessary filling and for the concrete slab laid and finished with a smooth surface to receive a covering of pitchmastic.

**First Floors.**—The recommended floor constructions are virtually the same as those for the flat roofs. Both carry the same design load of 30 lb. per sq. ft.

A screed is included because all the surface finishes likely to be used require a smooth level surface as a base; in many cases, moreover, the screed is needed for concealment of electric conduits and water pipes and in the composite designs it helps to tie the component parts together. Although many of the floor designs are of hollow type, it is not in practice found very convenient to use the hollows for housing the services, but where false ceilings occur they may be run at ceiling level instead of on top of the floor.

**General.**—It is recommended that *in situ* suspended slab constructions should only be undertaken by floor specialists or builders who have stocks of telescopic or other centering and can bring the work out at a proper cost. With these reservations such constructions can be the cheapest of all.

All the floor and roof constructions should take full bearing on the inner  $4\frac{1}{2}$  in. leaf of external walls and whenever possible on the intermediate walls which support two spans. To effect this, joists should run by one another so that each obtains a full bearing. With some precast beams this is not possible but the intermediate wall can be corbelled out at the top or laid with a top course of splayed concrete units. Failing this a 2 in. bearing can be accepted, as bearing pressures are very low, but special care must be taken with the dimensions both of the brickwork and the precast beams. Continuity rods laid near the upper surface should be used over intermediate bearings as a tie and for crack control.

It is not considered necessary to supply any additional thermal or sound insulation for concrete first floors in houses. The acoustic (airborne) resistance of the concrete constructions will in any case be better than that of timber floors owing to the increased weight.

All the floor designs are expected to provide the necessary half-hour of fire resistance under standard test. The prestressed constructions have been specially tested. The prestressed joists with filler blocks stand up well, so do the hollow beams. Where joists are used with no infilling it will be seen that the plasterboard thickness has been increased from  $\frac{1}{2}$  in. to  $\frac{3}{4}$  in. It may be that further tests would show the  $\frac{3}{4}$  in. to be sufficient, but the skim coat of plaster is necessary.

Where tests of completed floors are required, it is recommended that the Load Factor tests be adopted which are given in "Structural Requirements for Houses 1948: Special Report No. 1 of the National Building Studies" published by HMSO.

The relevant tests for floors are the strength test, the stiffness test and the impact test. In the impact test the 100 lb. weight need not be used for first floors.

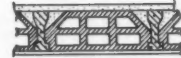
The author wishes to acknowledge the assistance and co-operation he received from colleagues in the Chief Scientific Advisor's Division of the MOW and in the MOH.

### TYPE III ; COMPOSITE ; No centering required.

#### JOISTS AND BLOCKS

##### PRESTRESSED CONCRETE JOISTS A1

Screed, prestressed joist, high tensile wire, jointing, hollow block, plaster.



Per house		Price range
Timber saved	£	
Stds.	%	

0.50	100	81 to 98
------	-----	----------

##### REINFORCED CONCRETE JOISTS A2

Screed, precast joist, rod reinforcement, jointing, hollow block, plaster.

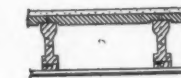


0.50	100	
------	-----	--

#### JOISTS AND SLABS

##### PRESTRESSED CONCRETE JOISTS AND SLAB B1

Screed, precast slab with mesh, prestressed joist, high tensile wire, batten (timber), plasterboard ( $\frac{1}{2}$  in.), skim coat plaster.



0.48	96	89 to 102
------	----	-----------

##### REINFORCED CONCRETE JOISTS AND SLAB B2

Screed, precast joist, rod reinforcement, batten (cast in), precast slab, plasterboard.

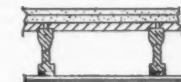


0.47	94	
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#### JOISTS, SLABS AND INSITU FILL

##### PRESTRESSED CONCRETE JOISTS AND TILE C1

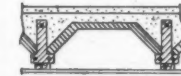
Screed, topping and mesh, roof tile, prestressed joist, high tensile wire, batten (timber), plasterboard ( $\frac{1}{2}$  in.), skim coat plaster.



0.48	96	89 to 104
------	----	-----------

##### REINFORCED CONCRETE JOISTS AND SLAB C2

Screed, fill and topping, precast arch slab, precast joist, rod reinforcement, batten (timber), plasterboard.



0.46	92	
------	----	--

## FLOORS (Table A continued)

For comparison purposes figures are given below for traditional floors and for a compromise construction using prestressed joists with a boarded surface.

### TRADITIONAL TIMBER FLOOR

#### JOISTS AND BOARDING

Joists, boarding, plasterboard, skim coat plaster.



Per house		Price range
Timber Req.	Timber saved	
Stds.	Stds.	£

0.50	Nil	61 to 80
------	-----	----------

#### JOISTS AND BOARDING

As above, but excluding skim coat.

0.50	Nil	58 to 77
------	-----	----------

### PRESTRESSED JOIST AND BOARD FLOOR

#### PRESTRESSED JOISTS AND BOARDING

Boarding, battens, prestressed joists, battens, plasterboard ( $\frac{1}{2}$  in.), skim coat plaster.



0.32	0.18	36 to 90
------	------	----------

TABLE B—PRINCIPAL MATERIALS REQUIRED FOR VARIOUS SUBSTITUTIONS PER 1,000 HOUSES

Substitution	Materials	Approximate Quantities
Flat roofs .. .. .	Mild Steel rod and fabric *High tensile wire .. Light weight aggregates .. Cement .. .. .	230 tons 5 tons 4,700 tons 1,900 tons
Pitched roofs. Types II or III ..	Interlocking tiles .. Hot rolled steel ..	6,700 squares 670 tons
Pitched roofs. Type I .. ..	Interlocking tiles .. Hot rolled steel .. Mild steel fabric ..	6,700 squares 670 tons 270 tons

\* Assuming about 20% of flat roofs would be prestressed.

## NOTE :—

Output of clay and concrete interlocking tiles in 1949 :

400,000 squares.

Approximate quantities of cement in concrete roof tiles per house of 950 sq. ft. floor area :

Plain tiles .. .. . 1.00 tons

Interlocking tiles .. .. . 0.66 tons

TIMBER SAVING FOR VARIOUS SUBSTITUTIONS  
PER 1,000 HOUSES

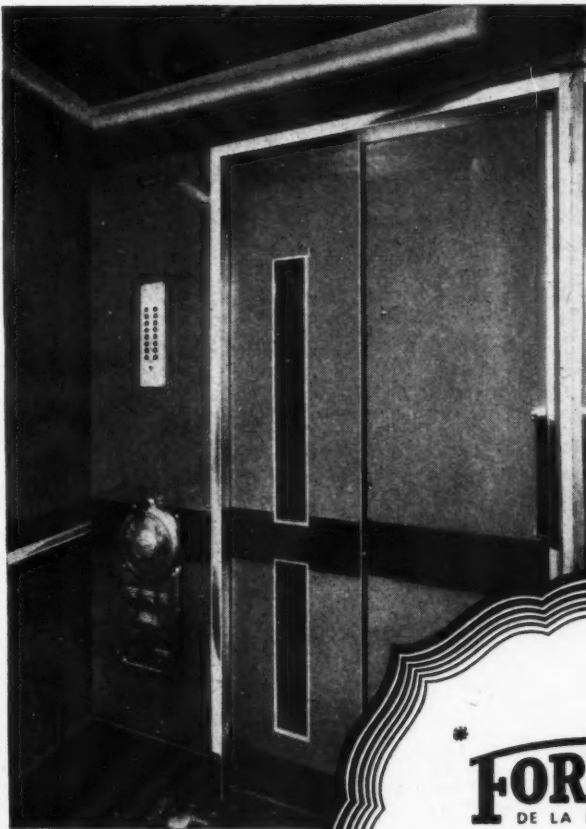
Substitution	Approximate timber saving, in standards
Flat roofs .. .. .	500
Pitched roofs. Types II or III .. .. .	250
Pitched roofs. Type I ..	340

TABLE C—PRICE SCHEDULE ON WHICH TABLE A PRICES ARE BASED

*Schedule of Material Rates (d/d site) and Labour Rates (Autumn, 1949)*

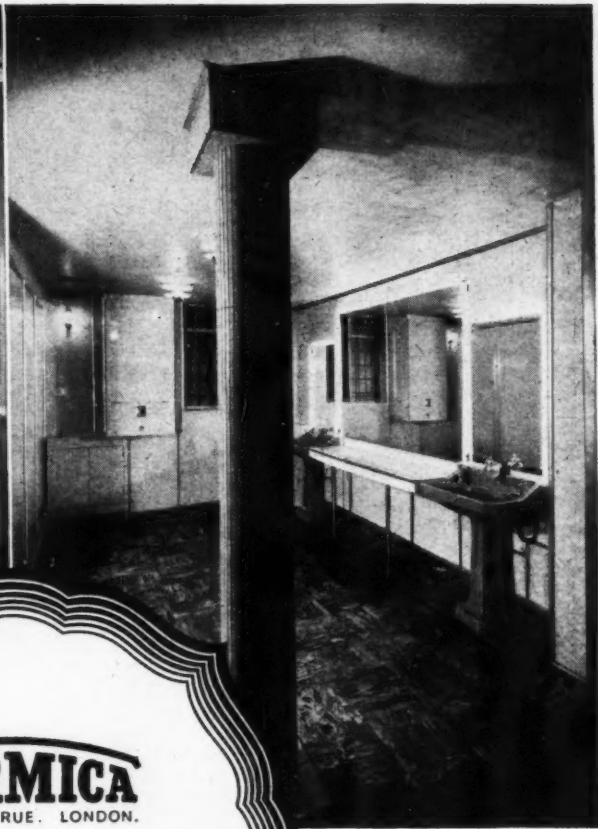
Materials	Unit	Rate
Stone aggregate .. .. .	cu. yd.	£ s. d. 14 6
Sand .. .. .	cu. yd.	13 6
Foamed slag—Coarse .. .. .	ton	49 0
Foamed slag—Fine .. .. .	ton	51 0
Graded clinker .. .. .	cu. yd.	9 6
Cement (including bags) .. .. .	ton	71 6
Lime .. .. .	ton	81 6
Sirapite .. .. .	ton	104 3
Mild steel reinforcement rod .. .. .	cwt.	24 0
No. 6 steel fabric reinforcement .. .. .	sq. yd.	2 10½
Steel in roof trusses .. .. .	cwt.	65 0
Steel in purlins and rafters .. .. .	cwt.	32 6
½-in. plasterboard .. .. .	sq. yd.	1 11½
¾-in. plasterboard .. .. .	sq. yd.	2 5½
¾-in. flat asbestos cement sheet .. .. .	sq. yd.	2 4
Two-ply roofing felt—Supply and fix .. .. .	sq. yd.	6 0

Materials	Unit	Rate
Carcassing timber .. .. .	Std.	£ s. d. 70 5 0
T. & G. flooring—¾-in. Nom. .. .. .	square	65 0
T. & G. flooring—1-in. Nom. .. .. .	square	77 6
Bricks—Fletton Commons .. .. .	1,000	85 0
Fletton Sand Faced .. .. .	1,000	115 0
Roof tiles—Concrete—Interlocking .. .. .	1,000	17 0 0
5½-in. by 2-in. prestressed concrete Joists .. .. .	ft. run	1 6
Hollow light weight concrete filler blocks:		
14½ in. by 9 in. .. .. .	each	9
16 in. by 9 in. .. .. .	each	11½
1½-in. reinforced concrete floor slabs .. .. .	sq. yd.	9 0
2-in. reinforced concrete floor slabs .. .. .	sq. yd.	10 6
Labour :		
Craftsmen .. .. .	hour	2 11
Labourers .. .. .	hour	2 4



Lift at Mount Royal Hotel, London, finished throughout in 'FORMICA.' Fabricated by Pernatops Ltd.

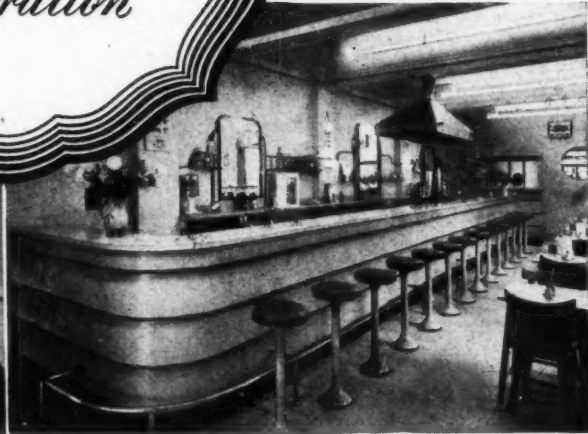
'FORMICA' counter and table tops in Fenwick's of Bond Street, London. Fabricated by Stainless Kitchen Equipment Ltd.



Ladies' Room at the London Palladium, finished in Grey Onyx 'FORMICA.' Designed by H. Inness. Fabricated by William T. Clements Ltd.

Gardner's Mill Bar, Birmingham. Counter faced and topped with 'FORMICA.' Fabricated by Gaskell & Chambers Ltd., Birmingham

**FORMICA**  
DE LA RUE. LONDON.  
*Inspiration for  
Decoration*



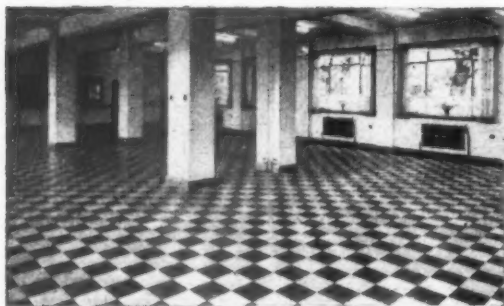
'FORMICA' laminated plastic in sheet form possesses the hardest surface in the field of decorative laminated plastics. It is heat and abrasion-resistant, is unaffected by spilt food and drinks, and the hygienic surface cleans with a wipe. From the standpoint of long term economy, the saving in maintenance and labour overheads make it well worth specifying. But 'FORMICA'

also combines great beauty with utility. It is available in a wide range of colours and finishes and in two distinct grades — STANDARD and CIGARETTE PROOF. Please write for literature.

\* \* \*  
**THOMAS DE LA RUE & CO. LTD.**  
(Plastics Division)  
Imperial House, 84/86 Regent Street, London, W.1.

\* 'Formica' is a registered trade mark and De La Rue are the sole registered users.





*Semastic decorative floor tile installation for the British Electricity Authority, Surrey.*



*Semastic decorative tile flooring installed in the canteen of Joseph Terry & Sons Ltd., York.*



*The reception room of the Standard Motor Co. Ltd., Coventry, equipped with Semastic decorative floor tiles.*



*Semastic decorative tile flooring in the foyer of the Essoldo Cinema, Kilburn, London, N.W.6.*

**Nation-wide floor installation  
service is offered by expert  
Approved Contractors**

*for*

**SEMASTIC**

**DECORATIVE TILES**

*A product of a Dunlop Company*



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*Country-wide installation service is provided by the following leading floor-laying specialists who represent the highest standard of experience and workmanship available in the country.*

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- PILKINGTON'S ASPHALTE CO. LTD.    ● SEMTEX LTD.    ● THE LIMMER & TRINIDAD LAKE ASPHALT CO. LTD.
- THE PENMAENMAWR & TRINIDAD LAKE ASPHALT CO. LTD.    ● THE WESTERN TRINIDAD LAKE ASPHALT CO. LTD.

TABLE D—FLOOR COVERINGS SUITABLE FOR CONCRETE FLOORS

Coverings	Warmth grading	Colours available	Price laid per sq. yd.
			(Autumn, 1949)
<i>Jointed</i>			<i>s. d.</i>
Super hardboard ..	Good	Brown ..	From 6 6
Coated bitumen-felt	Good	Grey, black, red ..	" 7 0
Thermoplastic tile ..	Good	Various & marbled ..	" 11 6
Linoleum ..	Good	Various ..	" 13 6
Rubber sheet and tile ..	Good	Various & marbled ..	" 22 9
Corktile ..	Very good	Brown ..	" 25 0
Composition block	Fair	Various, rather dark	" 30 0

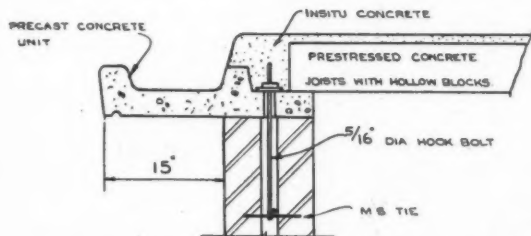
Coverings	Warmth grading	Colour available	Price laid per sq. yd.
			(Autumn, 1949)
<i>Jointless</i>			<i>s. d.</i>
Pitchmastic ..	Fair	Black or red-brown	From 9 8
Cement-bitumen ..	Fair	Black or dark red ..	" 14 0
Cement-rubber latex ..	Fair	Various and terrazzo finishes	" 14 6
Magnesium Oxychloride	Fair	Various and terrazzo finishes	" 15 6
Cement—P.V.A. (polyvinyl acetate)	Fair	Various, light colours and patterns	" 15 9

FOR COMPARISON, THE COST OF TIMBER BOARDING LAID IS 10s. 9d.

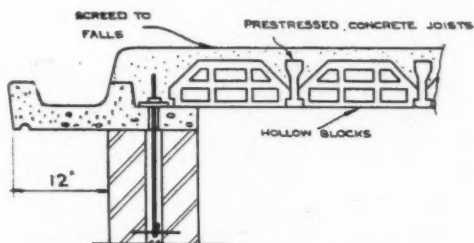
NOTE.—The adopted warmth gradings are very good, good, fair, poor, very poor. Cork and softwood rank as very good, and near the other end of the scale granolithic and terrazzo rank as poor.

## EAVES DETAILS

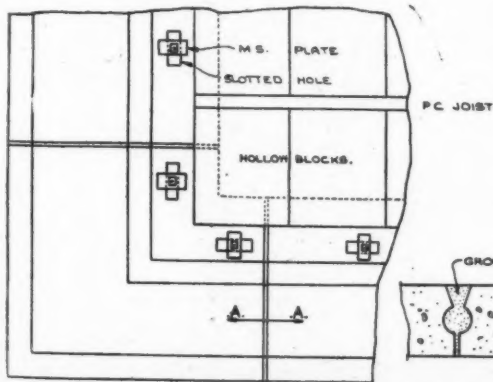
### 1: FLAT ROOF OF PRESTRESSED CONCRETE



SECTION THROUGH FRONT AND BACK EAVES

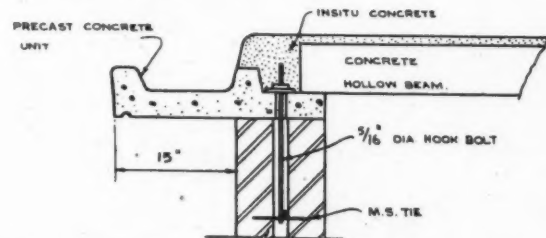


SECTION THROUGH GABLE EAVES

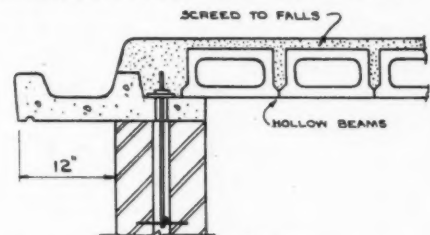
PLAN OF CORNER  
(IN SITU CONCRETE OMITTED)

DETAIL A-A

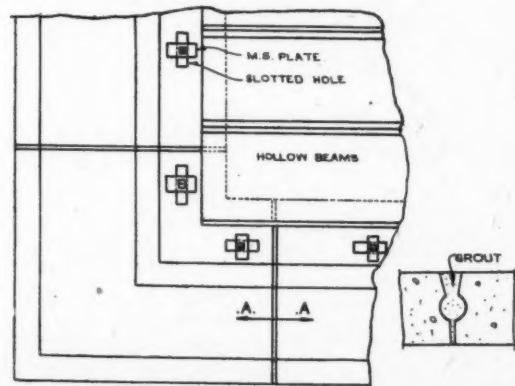
### 2: FLAT ROOF OF REINFORCED CONCRETE HOLLOW BEAMS



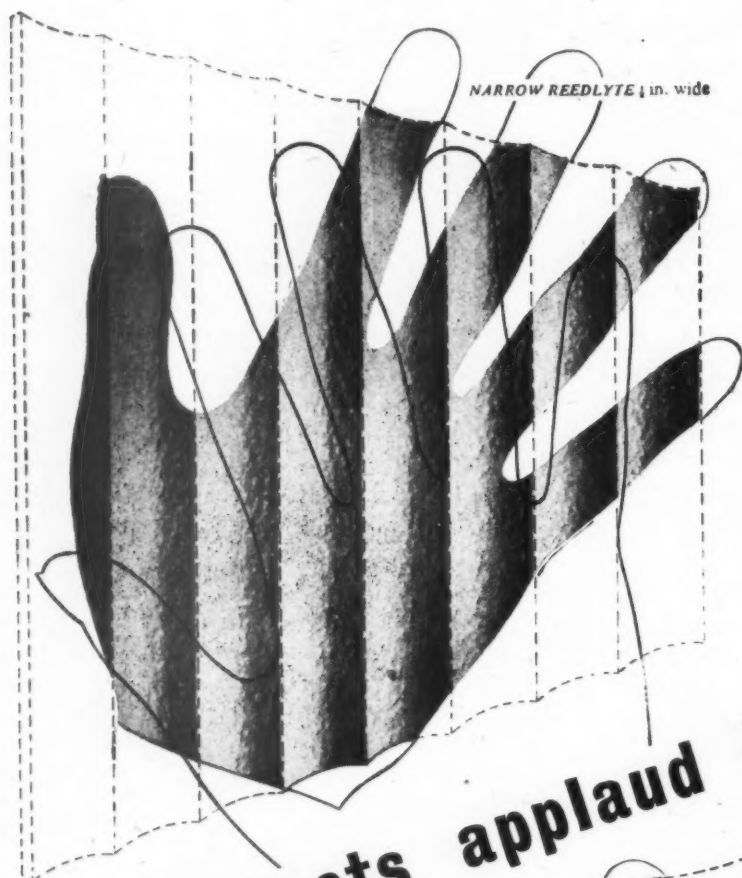
SECTION THROUGH FRONT AND BACK EAVES



SECTION THROUGH GABLE EAVES

PLAN OF CORNER  
(IN SITU CONCRETE OMITTED)

DETAIL A-A



Reedlyte has all the attributes of normal Reeded Glass . . . plus greatly increased obscuring power. It is available at the same price and in the same sizes and thicknesses as Reeded Glasses and is supplied in two patterns; NARROW  $\frac{1}{4}$  inch and BROAD  $\frac{7}{8}$  inch reeds.

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bent into troughs.

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where privacy is essential.

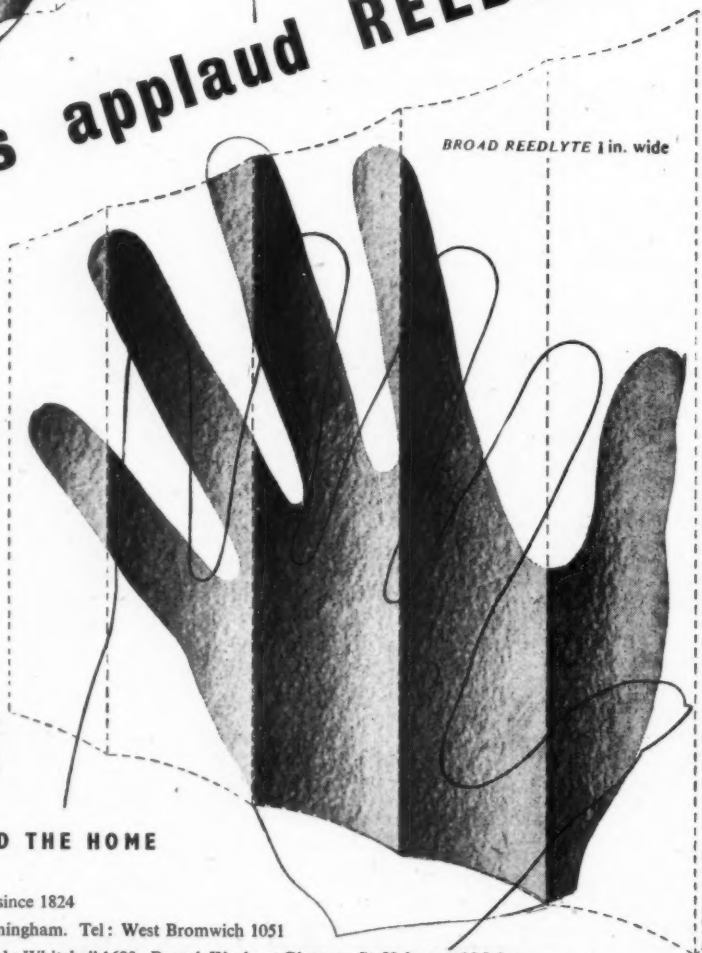
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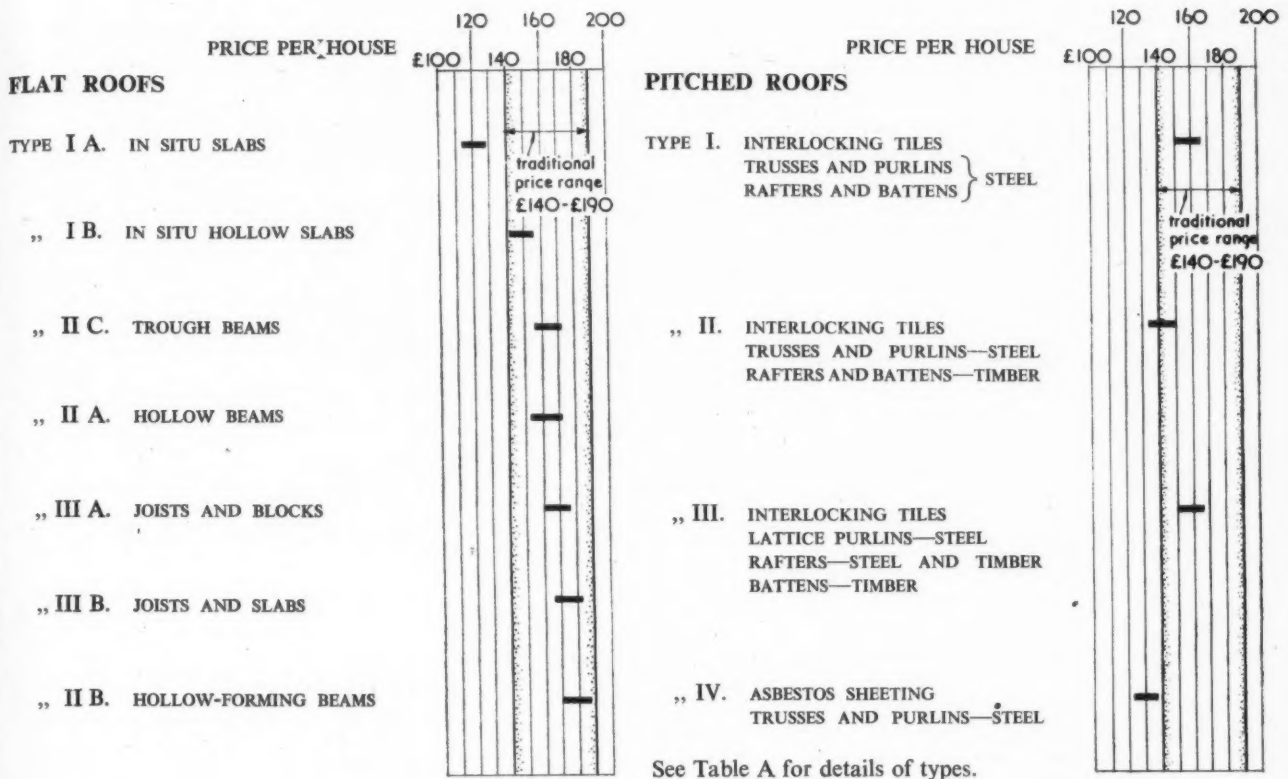
Head Office : Glass Works, Smethwick 40, Birmingham. Tel : West Bromwich 1051

London Office : 28 St. James's Square, S.W.1. Tel : Whitehall 1603. Branch Works at Glasgow, St. Helens and Malvern



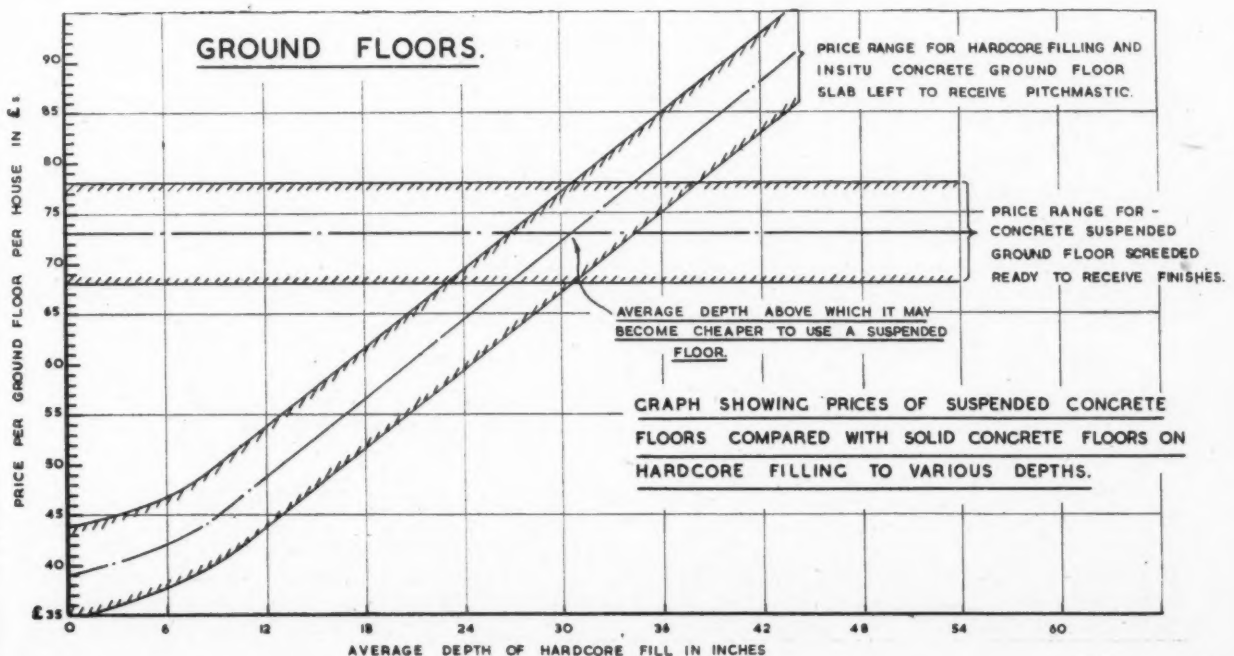


# CHART A: GRAPHICAL COMPARISON OF PRICES



NOTE.—The short horizontal lines denote the price ranges for each alternative type. It will be seen that they fall below or within the traditional price range.

## CHART B: FLOORS ON SLOPING SITES



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

## ENQUIRY FORM

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

Please ask manufacturers to send further particulars to:—

NAME

PROFESSION or TRADE

ADDRESS

A.J. 13.7.50

## Announcements

The firm of W. H. Ansell, F./P.R.I.B.A., and Arthur Bailey, O.B.E., F.R.I.B.A., of 5, Verulam Buildings, Gray's Inn, W.C.1, has been dissolved by mutual consent. The practice is being continued by Mr. Bailey under the style of Ansell & Bailey. Mr. Ansell will continue to be associated with the practice as consultant.

Mr. B. Hallwood Lingard, A.R.I.B.A., DIP. ARCH.(MANC.), has opened a practice at Rhydysbardyn, Llangefni, Anglesey.

Mr. Humphrey H. Goldsmith, F.R.I.B.A., A.A.DIPL., 7, Bridge Street, Bath, has moved his office. All communications should be addressed to 18, Gay Street, Bath (tel.: Bath 60257/8).

Mr. Edgar C. Turney, General Manager of Permanite Ltd., was elected Chairman of The Association of British Roofing Felt Manufacturers for a further period of twelve months, at the Association's annual general meeting held at The Trocadero on June 1.

Messrs. Cruickshank & Seward, chartered architects and surveyors, of 16, Princess Street, Manchester, 1, have recently opened additional offices at Ashbourne House, 334, Wellington Road North, Stockport (tel.: Heaton Moor 5229).

Mr. J. V. T. Scott (practising in Belfast, Northern Ireland) and Partner, D./DIPL., ARCH.A./A.R.I.B.A., DIPL.T.P., A.M.T.P.I., announce that they have opened an office at 15, West View, Douglas, Isle of Man, where trade literature, etc., will be welcome.

The BOT announce that price control has been removed from all veneers with the exception of certain home-manufactured veneers of birch and maple. Details are contained in The Veneer Prices (Birch and

Maple) Order, 1950 (SI 1950, No. 653), obtainable from the Sales Office of HMSO, price 2d.

## Buildings Illustrated

Offices in Berkeley Street, W.1 (pages 38-39). Architects: Welch and Lander, F.F.R.I.B.A., [in association with Brian O'Rourke, A.R.A., F.R.I.B.A.] Chief Assistants: E. C. Hughes, A.R.I.B.A., and C. Mills. Quantity Surveyors: C. E. Ball and Partners. General Contractors: Harry Neal Ltd. for Exhibition Hall showcases; Hampton and Sons Ltd. Sub-contractors: Asphalt, The International Asphalt Co.; structural steel, Smith, Walker Ltd.; fireproof construction, F. Bradford and Co.; roof lights, The British Challenge Glazing Co.; pavement and "Glaccrete" lights, J. A. King and Co.; terrazzo, Art Pavements and Decorations Ltd.; rubber flooring, North British Rubber Co.; central heating, ventilation, J. Jeffreys and Co. Ltd.; kitchen equipment, The Falkirk Iron Co. Ltd.; boilers, Ideal Boilers and Radiators Ltd.; electric wiring, bells, electric light fixtures, electric heating, Troughton and Young (Lighting) Ltd.; sanitary fittings, John Bolding and Sons Ltd.; Fred Hodge Ltd.; door and window furniture, Yannides and Co. Ltd., and Fred Hodge Ltd.; iron staircases, Allen and Greaves Ltd.; metalwork, W. Pickford Ltd.; joinery, Harry Neal Ltd., and Hampton and Sons Ltd.; furniture, desks, and tables (not built in), Finewoods Products Ltd.; chairs, William Birch Ltd.; lifts, Marryat and Scott Ltd.; external cleaning, A. Dreyfus Ltd.

## Correction

In our second leader on July 6 we referred to Mr. S. A. W. Johnson-Marshall as chief architect of the MOW. He is, in fact, chief architect of the MOE.



## NEW PIECES by the STORY DESIGN GROUP

This Bureau has been specially designed as an addition to the STORY "HEPPLE" RANGE OF FURNITURE, and is obtainable in Australian Walnut or Queensland Maple. A sliding mirror can be fitted rendering it a dual purpose Bureau-Dressing Table. Size of Bureau 2' 9" by 1' 6" by 3' 9" high. The chair is in oak, with Sycamore slats, and has a stuffed hair seat. Both these pieces are within the Utility Range and are free of P.T.

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\* \* \* \* \*

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\* \* \* \* \*

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FOR STEEL TUBES AND  
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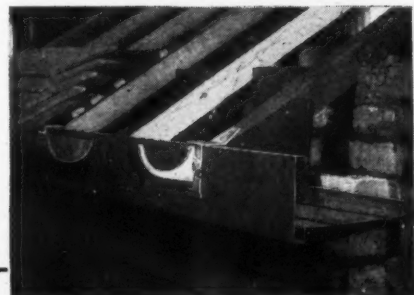
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and county surveyors  
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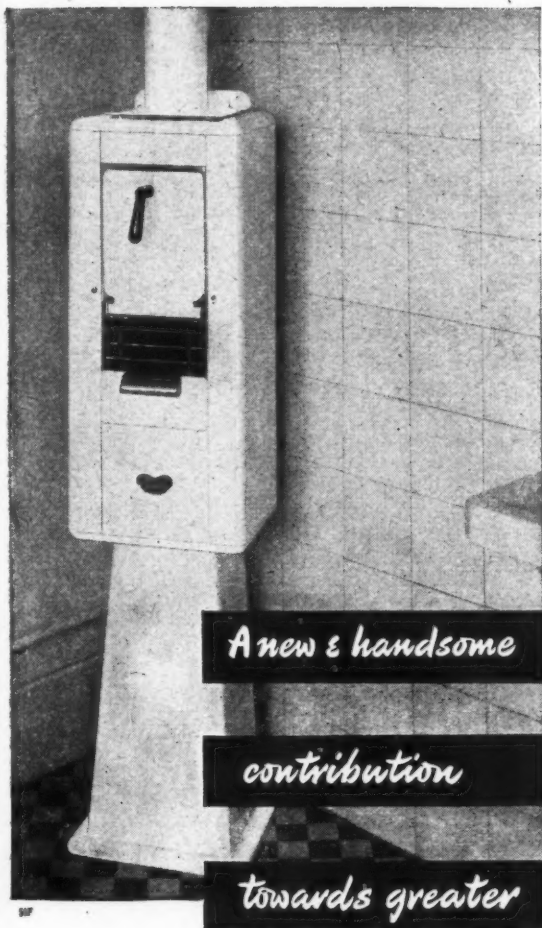


Contracts carried out by us include Romsey Abbey, Bank of England, City Corporation, Canterbury Cathedral, Winchester Cathedral, Chichester Cathedral, Wellington College, Devonshire Club, Piccadilly, London Museum. Enquiries will receive immediate attention.

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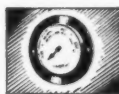
## ALL THIS *and handsome too!*



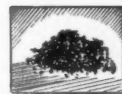
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Constant Hot Water



Exact Oven Temperature



Burns any Solid Fuel



Large Hot Plate

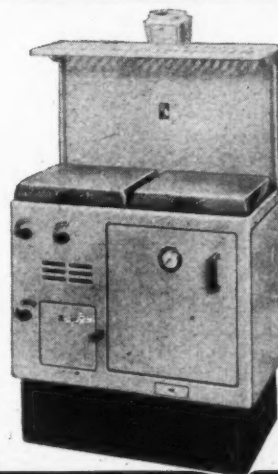


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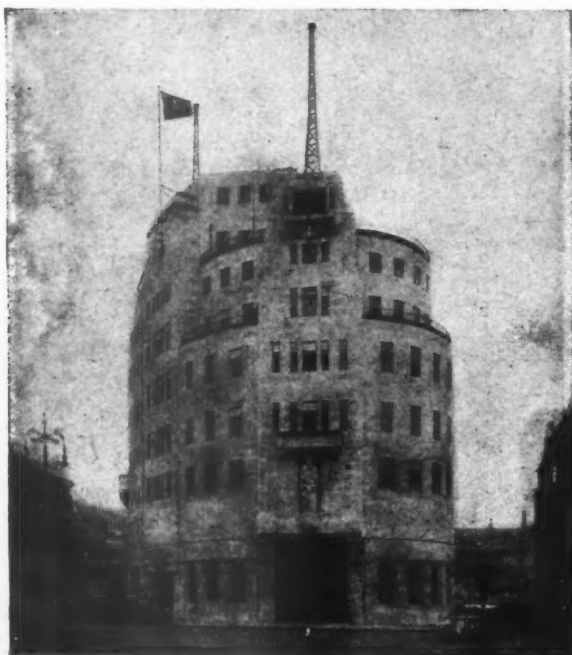
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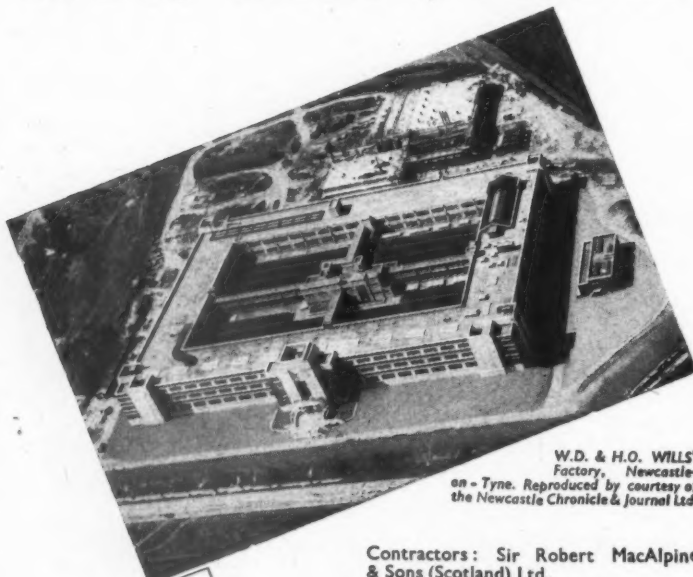
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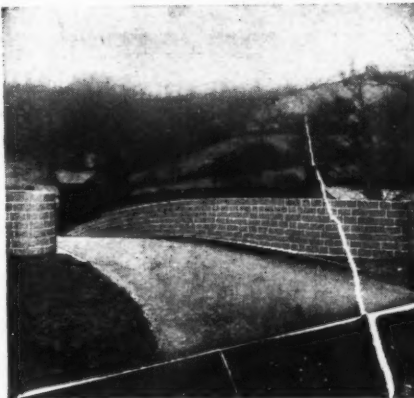
Institution of Municipal Engineers,

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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, WREN PARK, WHYTELEAF. Tel.: Uplands 0935. 991

### NORTH THAMES GAS BOARD.

Applications are invited for the following appointment in the Architects' Section of the Chief Engineer's Department of Westminster: SENIOR ARCHITECTURAL ASSISTANT, minimum starting salary £550 per annum.

Applicants, who must be Registered Architects and should be studying for or have passed the Final Examination of the R.I.B.A., should be capable of preparing working and detailed drawings and specifications, and supervising and controlling the work on contracts. Experience in design and planning of industrial buildings would be an advantage.

The appointment is of a permanent nature, and pension arrangements will be discussed with short list candidates.

Applications, stating age, qualifications, and particulars of previous appointments held, must be submitted to the Staff Controller, North Thames Gas Board, 30, Kensington Church Street, London, W.8, quoting reference 9757. 4541

### LONDON COUNTY COUNCIL.

Applications are invited for positions of ARCHITECTURAL ASSISTANT (salaries up to £580 a year) in the Housing and Valuation Department. Commencing salaries will be determined according to qualifications and experience. Engagement will be subject to the Local Government Superannuation Acts, 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 assist in 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.

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 reference A.A.1). Canvassing disqualifies. (816) 4558

### COUNTY BOROUGH OF MIDDLESBROUGH. EDUCATION COMMITTEE. ARCHITECTURAL STAFF.

Applications are invited for posts of ASSISTANT ARCHITECTS and ARCHITECTURAL ASSISTANTS, in the Education Architect's Sub-Department of the Education Offices, offering excellent opportunities in the design and construction of modern school buildings.

The posts are at grades of salary within the range A.P.T. IV, to A.P.T. VI, and in the case of the senior appointments, housing accommodation can, if necessary, be provided by the Authority.

Forms of Application and Conditions of Service may be obtained from the Director of Education, Education Offices, Woodlands Road, Middlesbrough, to whom they should be returned within two weeks of the appearance of this advertisement.

E. C. PARR.  
Town Clerk. 4693

### CORPORATION OF LONDON. APPOINTMENT OF ARCHITECTURAL ASSISTANTS.

#### AUXILIARY STAFF.

Applications are invited for the appointment of TWO ARCHITECTURAL ASSISTANTS, in connection with the design and construction of large buildings following war damage, and the supervision of the contracts.

Applicants require to have good practical experience in the preparation of surveys, working drawings, 1-inch and full size details, and a sound knowledge regarding the conducting of contracts.

The salaries offered will be within the range of £600 × £25—£750 per annum and £700 × £25—£850 per annum. The commencing salaries will be arranged according to qualifications and experience. Applicants should be Associate Members of the Royal Institute of British Architects or Registered Architects, and should be between 30 and 45 years of age.

The appointed officers will require to pass a medical examination and to contribute to the Corporation's Superannuation Fund as maintained under the City of London (Various Powers) Acts, 1931 and 1950.

Applications, giving full personal details, particulars of qualifications, 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 Monday, the 17th July. 4706

**LONDON COUNTY COUNCIL. ARCHITECT'S DEPARTMENT.**  
Applications are invited for positions of ARCHITECT, Grade III (£550-£700) and TECHNICAL ASSISTANT (up to £580) for work on new housing, schools, and other public buildings. The positions are superannuable. Candidates for Grade III positions should possess professional qualifications. Application forms from the Architect (AR/P/S), The County Hall, Westminster Bridge, S.E.1, enclosing stamped addressed foolscap envelope. Canvassing disqualifies. (384) 3914

**LONDON COUNTY COUNCIL. ARCHITECT'S DEPARTMENT. PLANNING STAFF.**  
Applications are invited for positions of PLANNING OFFICER, Grade I (£240-£260), Grade II (£200-£240), Grade III (£150-£200), and TECHNICAL ASSISTANT (up to £580). The positions are superannuable. Candidates for Grade I positions should have architectural and town planning qualifications, and will be engaged on Reconstruction Areas and Detailed Planning. Candidates for Grade II and III positions should have architectural or surveying qualifications with town planning qualifications in addition, and will be engaged on Development Plan, Development Applications and Detailed Planning. Technical Assistants are required for work on Development Applications and Detailed Planning. Particulars and application forms from the Architect (AR/P/S), The County Hall, Westminster Bridge, S.E.1, enclosing stamped addressed foolscap envelope. Canvassing disqualifies. (385) 3915

**BURGH OF KILMARNOCK. BURGH ARCHITECT'S DEPARTMENT.**  
Applications are invited for the following appointment: ASSISTANT ARCHITECT. Salary: Top of Grade A.P.T. V (£570). The above salary scale is inclusive of war bonus, which has now been consolidated with the salary. Applicants for the appointment must be Registered Architects, preferably with previous Municipal and housing experience. Applicants must not exceed 45 years of age unless they are already contributory employees under the Local Government and Other Officers' Superannuation (Scotland) Act, 1937, but those who have been on war service may, if necessary, deduct the period of such service from their present age to satisfy the condition as to age limit.

The person selected for appointment will require to pass a medical examination, and on satisfying this condition will become a contributory employee under the above mentioned Act.

Applications, accompanied by one copy of each of three testimonials, and giving full details of age, qualifications, experience, and previous appointments held, should be lodged with the Burgh Architect, 64a, Bank Street, Kilmarnock, not later than Monday, the 31st July, 1950.

W. L. WALKER.  
Town Clerk. 4777

Council Chambers, Kilmarnock. 4th July, 1950.

### LANCASHIRE COUNTY COUNCIL. COUNTY PLANNING DEPARTMENT.

Applications are invited for the following permanent appointments:—

(a) SENIOR PLANNING ASSISTANTS (ARCHITECTURAL), Preston, Accrington, Lancaster and Manchester.

Applicants should possess a Degree in Architecture or A.R.I.B.A. Planning experience would be an advantage. Salary £595-£660.

(b) PLANNING ASSISTANTS (RURAL), at Preston.

Duties: To assist in the preparation of the Development Plan for rural areas and development control. Candidates should have passed the Intermediate Examinations of the T.P.L., R.I.C.S. (Land Agency), or Land Agents' Society. Salary between £390-£495.

(c) PLANNING ASSISTANTS (ENGINEERING), at Lancaster, Accrington, Bury and Manchester.

Duties: To assist in the preparation of the Development Plan at all stages (with special attention to civil engineering problems), and to consider civil engineering matters arising out of development control. Candidates should possess an Engineering Degree, A.M.I.C.E., or A.M.I.Mun.E. Salary between £390-£570.

Applications, giving names and qualifications of two referees, and stating for which appointments application is made, should reach the County Planning Officer, County Offices, Preston, by 22nd July, 1950. 4757

### CITY OF CARDIFF. CITY SURVEYOR'S DEPARTMENT.

Applications are invited for the following appointments:—

(a) ARCHITECTURAL ASSISTANT (General).

A.P.T. Grade V.

(b) ARCHITECTURAL ASSISTANT (Education). A.P.T. Grade IV.

(c) ARCHITECTURAL ASSISTANT (Education). A.P.T., Grade III.

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

Applications endorsed "Architectural Assistant, Grade —, as the case may be, should be delivered to me not later than 29th July, 1950.

S. TAPPER-JONES.  
Town Clerk. 4780

City Hall, Cardiff. July, 1950.

### ROTHWELL URBAN DISTRICT COUNCIL (YORKS). APPOINTMENT OF TEMPORARY ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of temporary Architectural Assistant in A.P.T., Grade II, of the National Scale of Salaries (£420-£465). Preference will be given to applicants who have had practical experience in housing and general architectural work, and who are at present studying for the qualifying examinations of the Royal Institute of British Architects.

Applications, stating age, present and previous appointments, qualifications and experience, together with copies of three recent testimonials, must reach the undersigned not later than Saturday, 29th July, 1950.

ALLEN T. S. ROBERTSON,  
Clerk of the Council.

Civic Buildings, Rothwell, Leeds. 4707

### COUNTY BOROUGH OF HUDDERSFIELD. BOROUGH ARCHITECT AND TOWN PLANNING OFFICER'S DEPARTMENT.

Applications are invited for the appointment of TWO ASSISTANT ARCHITECTS, at a salary in accordance with Grade VI of the A.P.T. Division of the National Scale of Salaries (£595-£660 per annum).

Applicants should be Associate Members of the Royal Institute of British Architects, and have had experience in the architectural works of a local authority.

Housing accommodation will be made available, if necessary, and candidates are requested to state in their application if such accommodation is required.

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

Applications should be submitted, together with names of three referees, to reach Mr. S. M. Richmond, F.R.I.B.A., A.M.T.P.I., Borough Architect and Town Planning Officer, High Street Buildings, Huddersfield, not later than 24th July, 1950.

Canvassing of members of the Council, either directly or indirectly, will be a disqualification.

HARRY BANN,  
Town Clerk. 4691

Town Hall, Huddersfield.

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

Applications are invited for the following appointments to Established posts in the Department:—

(1) ASSISTANT ARCHITECTS. A.P.T., Grades III-IV. Salary £450 to £525 per annum.

(2) ASSISTANT ARCHITECTS. A.P.T., Grades II-III. Salary £420 to £495 per annum.

The appointments will be subject to one month's notice in writing on either side; to the terms of the National Joint Council's Scheme of Conditions of Service, and to the provisions of the Local Government Superannuation Act, 1937. The successful applicants will be required to pass a medical examination.

Application forms may be obtained from the County Architect, A. G. Chant, F.R.I.B.A., Column House, London Road, Shrewsbury, to whom they must be returned, accompanied by copies of not more than three recent testimonials, not later than Saturday, 22nd July, 1950.

G. C. GODBER,  
Clerk of the Council.

Shrewsbury. June, 1950. 4730

### STAFFORDSHIRE COUNTY COUNCIL. EDUCATION COMMITTEE.

Applications are invited for the following appointments on the Staff of the Architect's Department:—

(1) SPECIFICATION WRITER.

(2) MEASURING SURVEYOR.

Salary for both appointments will be in accordance with Grade IV of the A.P.T. Division of the National Scales (£480 × £15—£525 per annum). The appointments will be subject to the provisions of the Local Government and Other Officers' Superannuation Act, 1937, and successful candidates will be required to undergo a medical examination. The appointments will also be subject to the Scheme and Conditions of Service of the National Joint Council for Local Authorities' Administrative, Technical and Clerical Services.

A lodging allowance of 25s. per week, and return railway fare home every two months, will be paid for a maximum period of six months where the successful candidates are married and have to continue to maintain their homes outside the geographical county while seeking housing accommodation.

Canvassing, either directly or indirectly, will operate as a disqualification, and candidates must disclose in their applications whether to their knowledge they are related to any member or senior officer of this Council.

Applications, endorsed according to the particular post in respect of which consideration is desired, should be addressed to The Director of Education (A), County Education Offices, Earl Street, Stafford, stating age, qualifications and previous experience, and should be accompanied by copies of two recent testimonials.

All applications are required to be received not later than first post on Monday, 17th July, 1950.

T. H. EVANS,  
Clerk of the County Council. 4731

## CITY OF COVENTRY ARCHITECTURAL AND PLANNING DEPARTMENT.

The following vacancies exist in the above Department on the permanent staff. The contracts in hand in the Department are various and interesting, and this extra assistance is needed so that building works may commence in the immediate future.

- (a) ASSISTANT QUANTITY SURVEYOR. Grade A.P.T. VII (£2635-£710).  
 (b) QUANTITY SURVEYING ASSISTANT. Grade A.P.T. IV (£480-£525).  
 (c) QUANTITY SURVEYING ASSISTANT. Grade A.P.T. III (£450-£495).  
 (d) HEATING AND VENTILATING ENGINEERING ASSISTANT. Grade A.P.T. V (£520-£570).  
 (e) HEATING AND VENTILATING ENGINEERING ASSISTANT. Grade A.P.T. III (£450-£495).

Housing accommodation may be made available in certain circumstances to the successful applicant for post (a), if so desired. Applications should be made on a form obtainable from the undersigned. Closing date Saturday, 22nd July, 1950.

DONALD GIBSON, M.A., A.R.I.B.A.,  
M.T.P.I.

City Architect and Planning Officer.  
14, Warwick Row, Coventry. 4708  
6th July, 1950.

## COUNTY BOROUGH OF GATESHEAD. CHIEF ARCHITECT'S DEPARTMENT.

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

- (a) ASSISTANT ARCHITECTS. Salary A.P.T., V (£520-£570 p.a.).  
 (b) JUNIOR ARCHITECTURAL ASSISTANTS. Salary A.P.T. II to IV, according to experience (£420-£525 p.a.).  
 (c) ESTIMATING AND COST CLERK. Salary A.P.T. IV (£480-£525 p.a.).  
 Candidates for (a) must be Registered Architects, and should be Corporate Members of the Royal Institute of British Architects. They should have a sound knowledge of construction and experience on schools, housing or public buildings.

Candidates for (b) must have passed the Intermediate Examination of the Royal Institute of British Architects, and should be quick and neat draughtsmen. The salary in this case will depend upon the length of experience after passing the Intermediate Examination.

Candidates for (c) should have had considerable experience in the preparation of estimates and costing of large capital and maintenance works, and should be capable of taking charge of a staff engaged on this work.

All these appointments will be subject to the Local Government Superannuation Act, 1937, and to one month's notice on either side. The successful applicants will be required to pass a medical examination.

Applications, to be made on forms obtained from the Chief Architect, should be returned, together with copies of three recent testimonials to H. J. Cook, A.R.I.B.A., M.I.Struct.E., Chief Architect, Municipal Buildings, Swinburne Street, Gateshead, 8, not later than Monday, 24th July, 1950.

J. W. PORTER,  
Town Clerk. 4738

## COUNTY COUNCIL OF THE COUNTY OF RENFREW.

Applications are invited for the following appointments in the County Engineer's Department:—

- (a) SENIOR ARCHITECTURAL ASSISTANT. Salary scale A.P.T. V-VI (£520-£660 p.a.).  
 (b) INTERMEDIATE ARCHITECTURAL ASSISTANT. Salary scale A.P.T. I-II-III (£390-£495 p.a.).

Applicants should have wide experience of Local Authority Housing and Public Buildings. Preference will be given to Members of the R.I.B.A. and the R.I.A.S.

The appointments are subject to the provisions of the Local Government Superannuation (Scotland) Act, 1937. Applications, stating age, qualifications and experience, together with copies of two recent testimonials, should be lodged within ten days with the County Clerk, County Buildings, Paisley. 4743

## GLENROTHES DEVELOPMENT CORPORATION.

Applications are invited from suitably qualified persons (under 45 years of age) for the appointment of PLANNER. Salary £570-£780 per annum.

Applicants should be Corporate Members of the T.P.I. and also have an appropriate Architectural or Engineering qualification; they should have a sound knowledge of town planning, with particular reference to the problems of new town development.

The post will be superannuable under the Local Government (Scotland) Act, 1937, and successful candidates will be required to pass a medical examination.

Canvassing directly or indirectly, of members of the Corporation will constitute an absolute disqualification.

Applications, giving full particulars of the candidates' qualifications and experience, together with copies of not more than three recent testimonials, must reach the Secretary, Glenrothes Development Corporation, Auchmuty House, Markinch, not later than 22nd July, 1950. 4742

## CITY OF PLYMOUTH. CITY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments on the established staff, subject to the Conditions of Service of the National Joint Council for Local Authorities, Administrative, Professional, Technical and Clerical Services, the Local Government Superannuation Act, 1937, and one month's notice on either side for termination.

- (c) SENIOR ASSISTANT ARCHITECT. A.P.T. Grade VII (£635-£710).  
 (b) TWO SENIOR ASSISTANT ARCHITECTS. A.P.T. Grade VI (£595-£660).

The Department is responsible for the Corporation's Architectural work, including Housing, Education and General Municipal Buildings.

Candidates must be Registered Architects, and preference will be given to Members of the R.I.B.A.

Successful candidates will be required to pass a medical examination.

Applications on forms obtainable from the undersigned, accompanied by copies of not more than three recent testimonials and/or names of persons to whom reference may be made, should be received at my office not later than Wednesday, 19th July, 1950.

The Corporation may make housing accommodation available to the successful candidate if required.

E. G. CATCHPOLE, A.R.I.B.A.,  
City Architect. 4671  
Seymour Road, Plymouth.

## STAFFORDSHIRE COUNTY COUNCIL. EDUCATION COMMITTEE.

Applications are invited for the following appointments on the Staff of the Architect's Department:—

- (1) CHIEF ASSISTANT ARCHITECT. Grade IX (£750×£50-£900 per annum).  
 (2) SECTION ARCHITECTS (TWO). Grade VIII (£685×£25-£760 per annum).

The successful candidates would normally be placed on the minimum of the appropriate Grade, but consideration will be given to experience and qualifications in deciding the commencing salary.

Applicants for (1) are required to be Fellows or Associates of the R.I.B.A., and should have a wide experience in the design and construction of all types of school buildings and be fully conversant with Ministry of Education regulations relative to such buildings. The successful candidate must have had experience in control of staff and must be in possession of a car, in respect of which mileage allowance will be payable in accordance with the County Scale.

Applicants for (2) are required to be Fellows or Associates of the R.I.B.A., and must have experience in the preparation of schemes for the construction of all types of school buildings and be fully conversant with the Ministry of Education regulations relative to such buildings. The successful candidates will be required to supervise the work of a section of the Drawing Office.

These appointments will be subject to the provisions of the Local Government and Other Officers' Superannuation Act, 1937, and successful candidates will be required to pass a medical examination before taking up the appointment. The appointments will also be subject to the Scheme and Conditions of Service of the National Joint Council for Local Authorities' Administrative, Technical and Clerical Services.

A lodging allowance of 25s. per week, and return railway fare home every two months, will be paid for a maximum period of six months where the successful candidates are married and have to continue to maintain their homes outside the geographical County while seeking housing accommodation.

Canvassing, either directly or indirectly, will operate as a disqualification, and candidates must disclose in their applications whether to their knowledge they are related to any member or senior officer of this Council.

Applications, endorsed according to the particular post in respect of which consideration is desired, should be addressed to The Director of Education (A), County Education Offices, Earl Street, Stafford, stating age, qualifications and previous experience, and should be accompanied by copies of two recent testimonials.

All applications are required to be received not later than first post on Monday, 24th July, 1950.

T. H. EVANS,  
Clerk of the County Council. 4695

## BOROUGH OF COLNE. ARCHITECTURAL ASSISTANT (GRADE V).

Applications are invited for this permanent whole-time appointment in the Borough Engineer and Surveyor's Department. Salary A.P.T. Grade V (£520 to £570 per annum). Appointment subject to medical examination. Housing accommodation is available. Applicants must be experienced in the preparation of Plans, Specifications and Quantities, with particular reference to housing development, and should have had a thorough training in design and building construction. Previous Municipal experience is not essential. Preference will be given to holders of a recognised examination qualification. Applications, endorsed "Architectural Assistant," stating age, qualifications, full details of experience, and names of two referees, to be delivered to the undersigned by the 24th July, 1950. Canvassing in any form will disqualify.

L. A. VENABLES,  
Town Clerk. 4762

## BOROUGH OF BRENTFORD AND CHISWICK. APPOINTMENT OF TEMPORARY ARCHITECTURAL ASSISTANT.

BOROUGH SURVEYOR'S DEPARTMENT. Applications are invited for the appointment of a Temporary Architectural Assistant, at a consolidated salary according to A.P.T. Division, Grade V, of the National Scheme (£520 to £570 p.a., plus London weighting, commencing 1st year), the appointment to be determinable by one month's notice on either side.

Applicants should have passed the Intermediate Examination of the Royal Institute of British Architects (or hold a similar qualification), but consideration will also be given to applicants intending shortly to take the Intermediate Examination.

Applicants should have had experience in general architectural work and possess a sound knowledge of design and construction of housing estates, including the preparation of working drawings and specifications. It may be possible to provide housing accommodation for the successful applicant.

Applications for the above-mentioned appointment must be made on the prescribed form (which contains particulars and conditions of appointment), obtainable from the undersigned, to whom applications should be sent not later than the 24th July, 1950.

W. F. J. CHURCH,  
Town Clerk. 4759  
Town Hall, Chiswick, W.4.

## ESTON URBAN DISTRICT COUNCIL. ENGINEER AND SURVEYOR'S DEPARTMENT.

## APPOINTMENT OF QUANTITY SURVEYING ASSISTANT.

Applications are invited for the appointment of a Quantity Surveying Assistant, at a salary in accordance with Grade A.P.T. III, IV or V, of the National Scales (£450-£495, £480-£525, or £520-£570), according to experience and qualifications.

Applicants must be capable of preparing specifications for housing schemes, taking off and billing Quantities, measuring up works on site, preparing interim and final certificates and settling contractors' final accounts. Preference will be given to candidates who have passed some parts of the examinations of the Royal Institute of Chartered Surveyors or the Royal Institute of British Architects.

Housing accommodation for the successful candidate will be provided by the Council if required.

The conditions of service are those formulated by the National Joint Council. The appointment is subject to the passing of a medical examination and to the provisions of the Local Government Superannuation Act, 1937.

Applications, giving full details of training, experience, qualifications, and copies of two recent testimonials, should reach me not later than the first post on Wednesday, 19th July, 1950.

N. C. HARRISON, A.M.I.C.E.,  
M.I.Mun.E.,  
Engineer and Surveyor.

Normanby Road, South Bank, Middlesbrough.  
29th June, 1950. 4740

## BOROUGH OF HORNSEY. ENGINEER AND SURVEYOR'S DEPARTMENT.

## APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the following temporary appointment:—

- ARCHITECTURAL ASSISTANT, Grade VI (A.P.T. Division of the National Scale), at a salary of £595-£660 per annum, plus London weighting allowance of £30 per annum. Commencing salary according to experience.

Candidates should preferably be Associate Members of the Royal Institute of British Architects.

Applications, stating age, present and previous appointments, technical training, qualifications, experience, etc., together with the names of three referees, must be delivered to Mr. J. H. Melville Richards, A.M.I.C.E., M.I.Mun.E., Borough Engineer and Surveyor, Hornsey Town Hall, N.8, not later than the 24th July, 1950.

Candidates must disclose in writing whether, to their knowledge, they are related to any member or officer of the Council.

Canvassing, either directly or indirectly, will disqualify.

H. BEDALE,  
Town Clerk. 4768  
Town Hall, Hornsey, N.8.  
3rd July, 1950.

## CUMBERLAND COUNTY COUNCIL. Applications are invited for the following appointments on the permanent establishment of the Architect's Department:—

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

- (b) ARCHITECTURAL ASSISTANT. A.P.T., Grade IV (£480-£520).

- (c) JUNIOR ARCHITECTURAL ASSISTANT. A.P.T., Grade III (£450-£495).

Forms of Application and further particulars and conditions of appointment may be obtained from John H. Haughan, F.R.I.B.A., County Architect, 15, Portland Square, Carlisle. Completed application forms must be received by him not later than Thursday, 10th August, 1950.

G. N. C. SWIFT,  
Clerk of the County Council. 4757  
July, 1950.



**BOROUGH OF CHELMSFORD.  
ARCHITECTURAL ASSISTANT, GRADE  
A.P.T. V(a).**

Applications are invited for the appointment of Architectural Assistant, at a salary in accordance with Grade A.P.T. V(a). Applicants must be suitably qualified and experienced in the design and construction of houses and flats.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, and will be terminable by one month's notice on either side. The selected applicant will be required to pass a medical examination. A house will be available for the successful applicant, if required.

Applications, stating age, qualifications, experience, present and previous appointments (with salaries), together with the names and addresses of two referees, are to be delivered to the Borough Engineer, Surveyor and Architect, Municipal Offices, Duke Street, Chelmsford, not later than Wednesday, 26th July, 1950. Applicants must state whether to their knowledge they are related to any member of or holder of any office under the Council.

B. A. FRANCIS,

Town Clerk.

Municipal Offices, Duke Street, Chelmsford.  
6th July, 1950. 4785

**BOROUGH OF LEYTON.  
APPOINTMENT OF SENIOR ARCHITECTURAL ASSISTANTS (TWO)  
and**

**JUNIOR ARCHITECTURAL ASSISTANT (ONE).**  
Applications are invited for the established appointments of Two Senior Architectural Assistants (Grade A.P.T. VI) and One Junior Architectural Assistant (Grade A.P.T. I) in the Department of the Borough Engineer and Surveyor. Candidates for the two senior positions must possess a recognised architect's qualification. Canvassing will be a disqualification, and candidates must disclose in their application whether they are related to any member or senior officer(s) of the Council.

Applications, stating age, details of qualifications and experience, with copies of not more than three testimonials, should be delivered to the Borough Engineer and Surveyor, Town Hall, Leyton, E.10, not later than 31st July 1950.

D. J. OSBORNE,

Town Clerk.

Town Hall, Leyton, E.10.  
30th June, 1950. 4772

**COUNTY BOROUGH OF SWANSEA.  
BOROUGH ARCHITECT'S DEPARTMENT.  
Applications are invited for Established Staff appointments as hereunder:—**

- (1) SENIOR ASSISTANT QUANTITY SURVEYOR (Grade VII). £635-£710 per annum.
- (2) TWO JUNIOR ASSISTANT ARCHITECTS (Grade II). £495-£495 per annum.
- (3) TWO JUNIOR ASSISTANT QUANTITY SURVEYORS (Grade III). £450-£495 per annum.

For the post of Senior Assistant Quantity Surveyor, Associateship of the Royal Institution of Chartered Surveyors (Quantity) must be held, and for the posts of Junior Assistant Quantity Surveyor and Junior Assistant Architect, a certificate of having passed the Intermediate Examination of the Royal Institution of Chartered Surveyors or the Royal Institute of British Architects as appropriate, must be produced.

Candidates must be under 45 years of age, unless in Local Government Service. The appointments will be subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidates will be required to pass a medical examination.

The appointments may be terminated by one month's notice on either side.

Forms of application may be obtained from the Borough Architect, Mr. H. T. Wykes, F.R.I.B.A., Guildhall, Swansea, and are to be returned, accompanied by three recent testimonials, to the undersigned, not later than Thursday, 20th July, 1950.

Canvassing, directly or indirectly, will disqualify.

T. B. BOWEN,

Town Clerk.

Guildhall, Swansea.  
30th June, 1950. 4771

**DERBYSHIRE COUNTY COUNCIL.  
COUNTY PLANNING DEPARTMENT.**

Applications are invited from those with experience of statutory planning or related work for the following permanent appointments in the County Planning Department:—

**JUNIOR ASSISTANTS, A.P.T., Grade II.** One for the Headquarters staff at Derby, and one for the Peak Area Planning Office at Bakewell.

Candidates should have passed the Intermediate Examination of the Town Planning Institute or one of the allied professional bodies.

The appointments will be subject to medical examination, the Council's General Conditions of Service, and the Local Government Superannuation Act, 1937.

Canvassing, either directly or indirectly, will be deemed a disqualification, and candidates are required to disclose whether or not they are to their knowledge related to any member or senior official of the Council.

Applications, stating age, qualification and experience, accompanied by one recent testimonial, and the names of two persons to whom reference can be made, should be addressed to and reach the County Planning Officer, 8a, Bold Lane, Derby, not later than 21st July, 1950.

M. J. HELLIER,

County Planning Officer.

4761

**DEVON COUNTY COUNCIL.  
COUNTY ARCHITECT'S DEPARTMENT.  
Applications are invited for the undermentioned appointments on the permanent staff. Conditions of service and salaries are in accordance with the National Joint Council Scheme for Local Authorities:—**

**ASSISTANT ARCHITECTS.** Grade A.P.T., VIII (£685-£760 per annum).

**ASSISTANT ARCHITECTS.** Grade A.P.T., VII (£635-£710 per annum).

**ASSISTANT ARCHITECT.** Grade A.P.T., VI (£595-£660 per annum).

**ASSISTANT ARCHITECT.** Grade A.P.T., V (£520-£570 per annum).

Subject to approval by the County Council at their next meeting, a weekly allowance of 25s. and bi-monthly return fare home will be paid for six months to newly appointed married officers unable to find housing accommodation, subject to full details as to their position in this respect being supplied to the Authority and to monthly review of same thereafter.

Application forms, with full particulars of qualifications and experience required for the various posts, are obtainable from the County Architect, 97, Heavitree Road, Exeter, and must be returned to him by Saturday, the 29th July, 1950.

Canvassing, directly or indirectly, will disqualify.

H. A. DAVIS,

Clerk of the County Council.

The Castle, Exeter.  
4th July, 1950. 4769

**CITY AND COUNTY OF THE CITY OF  
EXETER.**

Applications are invited for the following appointments on the permanent staff of the City Architect's Department:—

(a) **ARCHITECTURAL ASSISTANT.** Salary A.P.T., Grade V (£520 to £570 per annum). Candidates must be Associate Members of the Royal Institute of British Architects or hold equivalent qualification.

(b) **ARCHITECTURAL ASSISTANT.** Salary A.P.T., Grade IV (£480 to £525 per annum). The appointments will be subject to one month's notice on either side, and to the provisions of the Local Government Superannuation Act, 1937.

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

Canvassing will disqualify, and candidates must disclose whether, to their knowledge, they are related to any member of the Council or to the holder of any senior office under the Council.

Applications, stating age, qualifications, previous and present appointments and salaries, full details of experience, and the earliest possible date when available, together with copies of recent testimonials, should be sent to H. B. Rowe, F.R.I.B.A., A.M.I.Struct.E., City Architect, Municipal Offices, Exeter, not later than the 24th July, 1950.

C. J. NEWMAN,

Town Clerk.

Exeter.  
July, 1950. 4741

**ROBERT GORDON'S TECHNICAL COLLEGE,  
ABERDEEN.**

**GRAY'S SCHOOL OF ART,  
SCHOOL OF ARCHITECTURE AND DEPARTMENT OF BUILDING.**

Applications are invited for the following full-time posts:—

(a) **SENIOR ASSISTANT** (Senior Lecturer and Studio Instructor). Salary £700-£725-£800 (Men).

(b) **ASSISTANT, Grade I** (Lecturer and Studio Instructor in Architectural Design and Construction Subjects). Salary £450-£520-£700 (Men).

Commencing salary in each case according to qualifications and experience. War service will be considered in placing on scale.

The School is recognised for purposes of exemption from the R.I.B.A. Intermediate and Final Examinations.

Candidates must be Associates of the Royal Institute of British Architects, and should possess the Degree or Diploma of a Recognised School of Architecture.

Members of the staff of the School are normally afforded reasonable opportunities for practice and research.

Applications, accompanied by three recent testimonials and the names of two referees, should reach the undersigned (from whom further particulars may be obtained) not later than Tuesday, 25th July, 1950.

A. C. WEST,

Director.

4767

**SOUTH-EAST METROPOLITAN REGIONAL  
HOSPITAL BOARD.**

**ARCHITECTURAL ASSISTANT.**

Applications are invited for the above appointment in the Regional Architect's office within the A.P.T. Salary Scales (II-III), ranging from £420 to £495 a year, plus London weighting allowance of £20 or £30 a year, according to age.

The post is superannuable under the National Health Service (Superannuation) Regulations, 1950.

Applicants should have had experience in architect's office, capable of scale drawings and details, surveys and routine drawing office duties. Hospital experience is desirable but not essential.

Applications, stating age, present salary, qualifications and experience, together with copies of two recent testimonials, should be addressed to the Secretary of the Board, 11, Portland Place, W.1, not later than 22nd July, 1950. 4770

**KENT COUNTY COUNCIL.**

Applications are invited for appointments in the Buildings Department of TWO ASSISTANT ARCHITECTS, at salaries within A.P.T., Grades V(a)-VI (£550-£660).

Applicants, who must be Members of the Royal Institute of British Architects, should, for preference, have completed a full-time course at a recognised school of architecture and be conversant with methods of research. In addition, they should have good experience in the design and supervision of both large and small building schemes, and be capable of taking charge of such schemes.

Previous experience with a local authority is not essential, but experience on school buildings will be an advantage.

The posts are superannuable, and the successful candidates will be required to pass a medical examination.

Applications, on forms obtainable from the County Architect, Springfield, Maidstone, should be delivered to him not later than 14 days after the appearance of this advertisement.

W. L. PLATTIS,

Clerk of the County Council.

County Hall, Maidstone.  
23rd June, 1950. 4716

**STAFFORDSHIRE COUNTY COUNCIL.  
COUNTY EDUCATION ARCHITECT'S  
DEPARTMENT.**

Applications are invited for the appointments of ASSISTANT ARCHITECTS. Salary will be in accordance with A.P.T., Grades IV to VI, of the National Scales, subject to qualifications and experience, and otherwise as set out below:—

Assistants who have passed the R.I.B.A. Intermediate Examination, or its equivalent at a recognised School of Architecture, and have worked in an architectural office for a period of two years. A.P.T., Grade IV (£480-£525 per annum).

Assistants who have passed the Final Examination of the R.I.B.A., or its equivalent at a recognised School of Architecture, but who have had no experience in an architectural office. A.P.T., Grade V (£520-£570 per annum).

Assistants who are Associates or Fellows of the R.I.B.A., and who have had experience in an architectural office in the preparation of drawings and schemes for the construction of all types of school buildings. A.P.T., Grade VI (£595-£660 per annum).

The appointments will be subject to the provisions of the Local Government and Other Officers' Superannuation Act, 1937, and successful candidates will be required to undergo a medical examination before taking up their duties.

A lodging allowance of 25s. per week, and return railway fare home every two months, will be paid for a maximum period of six months where the successful candidates are married and have to continue to maintain their homes outside the geographical County while seeking housing accommodation.

Canvassing, either directly or indirectly, will operate as a disqualification, and candidates must disclose in their application whether to their knowledge they are related to any member or senior officer of this Council.

Applications, endorsed "Appointment of Assistant Architects," stating age, qualifications and previous experience, and accompanied by copies of two recent testimonials, should be addressed to the Director of Education (A), County Education Offices, Earl Street, Stafford, and should be received not later than first post on Monday, 31st July, 1950.

T. H. EVANS,

Clerk of the County Council.

4758

**WESTERN AUSTRALIAN GOVERNMENT  
RAILWAYS COMMISSION.  
VACANCY FOR PROFESSIONALLY  
QUALIFIED ARCHITECT.**

Applications are invited for the following vacancy:—

**ARCHITECT** (Civil Engineering Branch). Assistant Engineer, Class I. Salary range £956-£727 (Australian currency).

Applicants should be Associate Members of the Royal Institute of British Architects or be Registered Architects.

Employment will be governed by the Award of the Commonwealth Court of Arbitration to the Association of the Railway Professional Officers of Australia.

Subject to satisfactory service, advancement in range is yearly. In the grades of Assistant Engineer, promotion is automatic to the maximum of Assistant Engineer, Class I for Chartered Engineers, and to Class II for lesser qualifications.

Free sea passages to Western Australia will be provided for successful applicants and dependants, and half pay allowed from time of departure from United Kingdom to arrival in Western Australia.

Departmental medical examination must be passed before leaving the United Kingdom.

Housing accommodation in newly constructed modern Government rental houses will be arranged for married appointees.

Applications (in duplicate) should be addressed to the Agent-General for Western Australia, Savoy House, Strand, London, W.C.2, and reach him not later than 31st July, 1950. Applications must be accompanied by copies of three testimonials as to character and include a clear and concise statement of age, nationality, marital state, dependants, academic qualifications and experience, particularly railway experience, also war service (if any). 4779



# BASILDON NEW TOWN.

Applications are invited for the following posts on the staff of the Chief Architect and Planner, N. Tweddell, A.R.I.B.A., to work as a group immediately on the design, layout, and erection of large housing schemes. A variety of work in connection with the development of the New Town will be available later:—

(a) ARCHITECT (£2750-£1,000 p.a.). First-class experience of house design and of supervision of contracts is essential.

(b) TWO ASSISTANT ARCHITECTS (£650-£750 p.a.).

(c) TWO ARCHITECTURAL ASSISTANTS (£550-£650 p.a.).

Applicants for posts (b) and (c) must have experience of house design and preparation of working drawings. For all posts preference will be given to applicants with a fine appreciation of contemporary design and a knowledge of Town Planning in view of work that will be available later.

Appointments, which are superannuable, will be made within the salary range stated, according to age, qualifications and experience. Sub-sistence allowances are payable in addition to salary in approved cases (up to a maximum of 6 months) until arrangements are made for family accommodation within 10 miles of the Corporation's offices. The appointments are subject to the Corporation's conditions of service. Applications should be made (on the special form obtainable from the Chief Architect) to the General Manager, Basildon Development Corporation, Gifford House, Pitsea, Essex, by 27th July, 1950.

# BASILDON NEW TOWN.

Applications are invited for the post of ASSISTANT ARCHITECT-PLANNER (£650-£750 p.a.) on the staff of the Chief Architect and Planner, N. Tweddell, A.R.I.B.A., to work on the completion and later development of the Master Plan for the New Town.

Applicants should be Corporate Members of the T.P.I. or Members of the R.I.B.A., with Town Planning training and experience.

The appointment, which is superannuable, will be made within the salary range, according to age, qualifications and experience. Sub-sistence allowances, in addition to salary, are payable in approved cases (up to a maximum of 6 months), until arrangements are made for family accommodation within 10 miles of the Corporation's offices. The appointment is subject to the Corporation's conditions of service.

Applications should be made (on the special form obtainable from the Chief Architect) to the General Manager, Basildon Development Corporation, Gifford House, Pitsea, Essex, by 27th July, 1950.

# BOROUGH OF FINCHLEY. HOUSING AND TOWN PLANNING DEPARTMENT.

Applications are invited for the appointment of Temporary JUNIOR ARCHITECTURAL ASSISTANT, in the above Department, at a salary in accordance with Grade II, A.P. and T. Division (£420-£15 to £465, plus £30 per annum London weighting).

Candidates must be suitably qualified and have had practical experience in housing or general architectural work.

The appointment is subject to the provisions of the National Scheme of Conditions of Service.

Applications, giving full particulars of qualifications and experience and accompanied by copies of two testimonials (of which one at least should be recent), should be sent to the Borough Housing and Town Planning Officer, The Avenue, Finchley, N.3, by not later than first post on Friday, the 28th July, 1950.

R. M. FRANKLIN,  
Town Clerk.

Municipal Offices, Finchley, N.3.

# METROPOLITAN BOROUGH OF SHOREDITCH.

Applications are invited for ARCHITECTURAL ASSISTANTS, on the permanent staff of the Council, within the following salary grades:—

(a) £665-£740 per annum (A.P.T. VII).  
(b) £580-£650 per annum (A.P.T. Va and VI).  
(c) £450-£495 per annum (A.P.T. II).

Applicants should have had a recognised architectural training and good experience, and be competent to undertake the design of Municipal buildings, including multi-storey flats.

Applications, stating age, qualifications and experience, with the names of two persons to whom reference may be made, should be submitted to the undersigned not later than Friday, 21st July, 1950.

C. A. JAMES,  
Town Clerk.

Town Hall, Old Street, E.C.1.

# MINISTRY OF WORKS—DIRECTORATE GENERAL OF WORKS.

Applications are invited for filling vacancies in the South-Eastern Regional Office at Tunbridge Wells.

ARCHITECTURAL ASSISTANTS, having had a full period of recognised training and experience in the preparation of drawings for good class building work. The work is varied and not confined to standard schemes. Starting pay will be assessed according to age, qualifications, and experience within a scale rising to £495 per annum.

Applications, stating age, present and previous appointments, training qualifications, etc. should be sent to the Assistant Regional Director (Administration), Ministry of Works, Government Buildings, Hawkenbury, Tunbridge Wells. 4241

Office of the Receiver for the Metropolitan Police District, New Scotland Yard.

The Chief Architect and Surveyor invites applications from Architects and Surveyors for appointments to groups engaged in the preparation of plans for houses, flats, maisonettes, hostels, police stations, garages and workshops, etc.

Vacancies are open in the following grades:—  
ARCHITECTS AND SURVEYORS. Men, £750-£1,000; women, £650-£850.  
ASSISTANT ARCHITECTS AND ASSISTANT SURVEYORS. Men, £475-£750; women, £475-£650.

LEADING ARCHITECTURAL ASSISTANTS. Men, £500-£625; women, £425-£500.

ARCHITECTURAL ASSISTANTS. Men, £240-£525; women, £240-£450.

DRAWING OFFICE ASSISTANTS. Men, £175-£250; women, £175-£300.

Entrant salary is dependent on age and experience.

The appointments are temporary, but the programme is expected to last for some years. Hours and conditions of service are similar to those in the Civil Service. An additional allowance is paid for hours worked in excess of the normal week.

Applicants for Architectural posts should be Corporate Members of the R.I.B.A. by examination. Those for Surveyor posts should be Corporate Members of the R.I.B.A. or R.I.C.S. (Building Section) by examination.

Applications, giving full details of age, nationality, qualifications and experience, etc., should be sent as soon as possible. Testimonials should not be sent with the applications, which should be addressed to Chief Architect and Surveyor, New Scotland Yard, London, S.W.1. Envelopes should be marked "Appointments."

# COUNTY BOROUGH OF GATESHEAD. CHIEF ARCHITECT'S DEPARTMENT.

# APPOINTMENT OF ASSISTANT HEATING AND VENTILATING ENGINEER.

Applications are invited for the position of Assistant Heating and Ventilating Engineer in the above Department. Candidates should have had considerable experience in the design and supervision of erection of all classes of New Heating, Hot Water Supply and Ventilation Systems and alterations or extensions to existing systems.

The salary will be in accordance with the National Scales for Technical Assistants, according to qualifications: (a) Unqualified, but fully trained Assistants below 30 years of age; (b) unqualified, but fully trained Assistants above 30 years of age; (c) fully qualified Assistants (i.e., A.M.I.H.V.E. by examination). (a) Grade I, £390-£15 to £435 per annum; (b) Grade III, £450-£15 to £495 per annum; (c) Grade IV, £450-£15 to £555 per annum.

Preference will be given to candidates who have passed the Final Examination of the Institution of Heating and Ventilating Engineers. The person appointed will be required to contribute to the Local Government and Other Officers' Superannuation Fund and to pass a medical examination.

Applications, on forms to be obtained from H. J. Cook, A.R.I.B.A., M.I.Struct.E., Chief Architect, Municipal Buildings, Swinburn Street, Gateshead, 8, County Durham, accompanied by copies of not more than three recent testimonials (not returnable), must be received by the above by 10 a.m. Monday, 24th July, 1950. Canvassing will be a disqualification, and applicants must declare their relationship to any member or senior officer of the Council.

J. W. PORTER,  
Town Clerk.

Town Hall, Gateshead, 8.

29th June, 1950.

# BOROUGH OF WEDNESBURY. APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of an Architectural Assistant, in the Borough Engineer and Surveyor's Department, at a salary in accordance with A.P.T., Grade VI (£595 to £660 per annum).

Applicants must be Associate Members of the Royal Institute of British Architects, and be experienced in the design, erection and maintenance of houses, flats and public buildings.

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, qualifications and experience, and enclosing copies of two recent testimonials, are to be received by the Borough Engineer and Surveyor not later than 29th July, 1950.

G. F. THOMPSON,  
Town Clerk.

Town Hall, Wednesbury, Staffs.

10th July, 1950.

# KENT EDUCATION COMMITTEE. MEDWAY COLLEGE OF ART, EASTGATE, ROCHESTER.

# DEPARTMENT OF ARCHITECTURE.

STUDIO MASTER (Design and Building Construction) required to commence in September next, or as soon after as possible. Burnham Technical Scale salary, with additions for degree (A.R.I.B.A.), approved training, professional and/or teaching experience. In addition, for suitable candidate, post will carry responsibility allowance up to a maximum of £100 per annum. Apply by letter to the Principal of the College.

# CROWN AGENTS FOR THE COLONIES.

BUILDING SURVEYOR required by Hong Kong Government Public Works Department for three years, with prospect of permanency. Salary, including expatriation pay, payable in local currency, equivalent at the present Government rate of exchange to £784 a year, rising to £1,365 a year, plus cost-of-living allowance at present equivalent to between £274 and £637 a year, according to salary and dependants. Commencing salary according to qualifications and experience. Free passages. Liberal leave on full salary. Candidates not over 45 years of age, must be Chartered Surveyors, and have had at least five years' experience in a City Engineer's or similar office dealing with the approval of plans for the construction of building, including reinforced concrete framed structures. Apply at once by letter, stating age, full names in block letters, whether married or single, and full particulars of qualifications and experience, and mentioning this paper, to the Crown Agents for the Colonies, 4, Millbank, London, S.W.1. quoting M/N/23704/3A on both letter and envelope. The Crown Agents cannot undertake to acknowledge all applications and will communicate only with applicants selected for further consideration. 4802

# BOROUGH OF KETERING. APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of an Architectural Assistant, in the Borough Surveyor's Department of the Borough of Kettering, at a salary within Grade IV of the A.P.T. Division of the National Scale of Salaries, namely, £480 per annum, rising, subject to satisfactory service, by annual increments of £15 per annum to £525 per annum.

Applicants must have passed the Intermediate Examination of the Royal Institute of British Architects and have had a minimum of two years' experience in an Architectural office. A good knowledge of building quantities would be an advantage, and applicants should have had experience of local authority housing schemes.

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

Applications, stating age, qualifications, present and previous appointments and experience, together with the names of three referees, must be delivered to the undersigned not later than the 5th August, 1950.

D. DUNSFORD PRICE,  
Town Clerk.

Town Clerk's Office, High Street, Kettering.

8th July, 1950.

# NATIONAL COAL BOARD—EAST MIDLANDS DIVISION.

# STAFF VACANCY—ARCHITECT'S BRANCH.

Applications are invited for the appointment of CHIEF CLERK in the Divisional Architect's Department.

This appointment will be graded as Assistant Staff Officer, on a salary scale of £410, rising by annual increments, subject to satisfactory service, to £590 per annum. Commencing salary according to experience and qualifications.

Applicants should preferably have had experience of the work of an Architect's or Surveyor's Office, and be conversant with applications to Local Authorities, Committee Work, Contracts, Accounts, and general office routine.

Applications, stating age, experience, etc., should be forwarded within 14 days of the publication of this advertisement, to

The Secretary,

National Coal Board,

East Midlands Division,

Sherwood Lodge,

Arnold, near Nottingham.

Envelopes to be marked "Chief Clerk." 4800

# HERNE BAY URBAN DISTRICT COUNCIL.

# ARCHITECTURAL ASSISTANT.

Applications are invited for the above appointment in the Department of the Engineer and Surveyor, at a salary in Grade Va of the A.P.T. Division (£550-£610 p.a.). Applicants must be Registered Architects, and have had sound experience in architectural work.

The appointment will be subject to the National Scheme of Conditions of Service; to the provisions of the Local Government Superannuation Act, 1937; to the successful passing of a medical examination, and to one month's notice on either side.

Canvassing in any form will disqualify. Form of application may be obtained from the undersigned, to whom applications should be returned not later than Monday, 24th July, 1950.

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Tender documents will be dispatched on or about 3rd July, 1950, and should be returned to the Town Clerk, Burnley, in the envelope provided not later than noon on 31st July, 1950.

Drawings and Conditions of Contract may be inspected during normal office hours either at the Office of the Architects or at the Borough Engineer and Surveyor's Office, Burnley.

C. V. THORNLEY,  
Town Clerk.  
4784

### Architectural Appointments Vacant

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**ARCHITECT AND SURVEYING ASSISTANT** required, of senior standard, for general commercial work in London. Write, stating age, experience, qualifications, salary, etc., to Waite & Waite, 36, Cavendish Square, W.1.  
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**ARCHITECTURAL ASSISTANT** required, a varied general practice. Apply in writing, stating age, experience and training. Jack Cotton, Ballard & Blow, Architects and Surveyors, Northam Road, North Shields.  
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**ARCHITECTURAL ASSISTANTS** required immediately; good salary and prospects; 5-day week. Write to Messrs. J. M. Sheppard & Partners, 38, Bedford Place, W.C.1, giving particulars of age, qualifications, experience, and salary required.  
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**JUNIOR ARCHITECTURAL ASSISTANT** required, up to R.I.B.A. Intermediate standard, for London office; capable of executing working drawings, etc.; to start immediately; interesting work, and scope for applicant showing initiative; commencing salary £200-£250 per annum. Apply in writing, stating age, training, experience, and salary required, to: Elie Mayorcas, F.R.I.B.A., 13, David Mews, W.1.  
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**Cecil Howitt & Partners**, Architects, of St. Andrew's House, Mansfield Road, Nottingham, have vacancies for additional **ARCHITECTURAL ASSISTANTS**. Applications should be made in writing, giving particulars of experience, qualifications, and salary required.  
4700

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**ARCHITECTURAL ASSISTANT** required, of Inter. R.I.B.A. standard, in small office where work is varied. Apply in writing, stating age, experience, and salary required, to Cyril Adler, A.R.I.B.A., 31, King's Road, Chelsea, S.W.3.  
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4747

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4798

**ARCHITECTURAL ASSISTANT** wanted; salary A.P.T. V (£250-£570); superannuable. Applications, with particulars of qualifications and experience, and names of two referees, should be lodged by 31st July with the Secretary, Northern Regional Hospital Board (Scotland), Raigmore Hospital, Inverness.  
4797

**ARCHITECTURAL ASSISTANT** required, up to R.I.B.A. Intermediate standard; apply, giving particulars of training, age, salary required and position in relation to National Service, to Gutteridge & Gutteridge, Chartered Architects, 45, Westwood Road, Southampton.  
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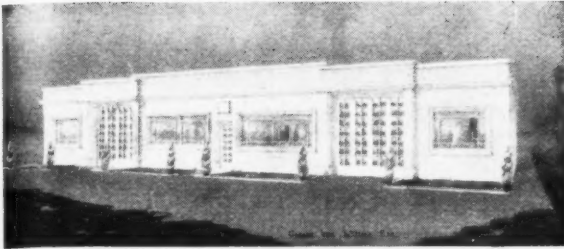
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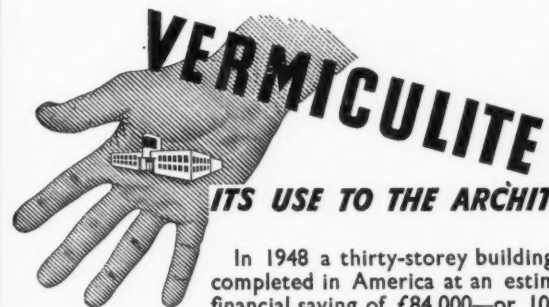
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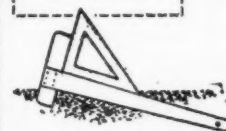
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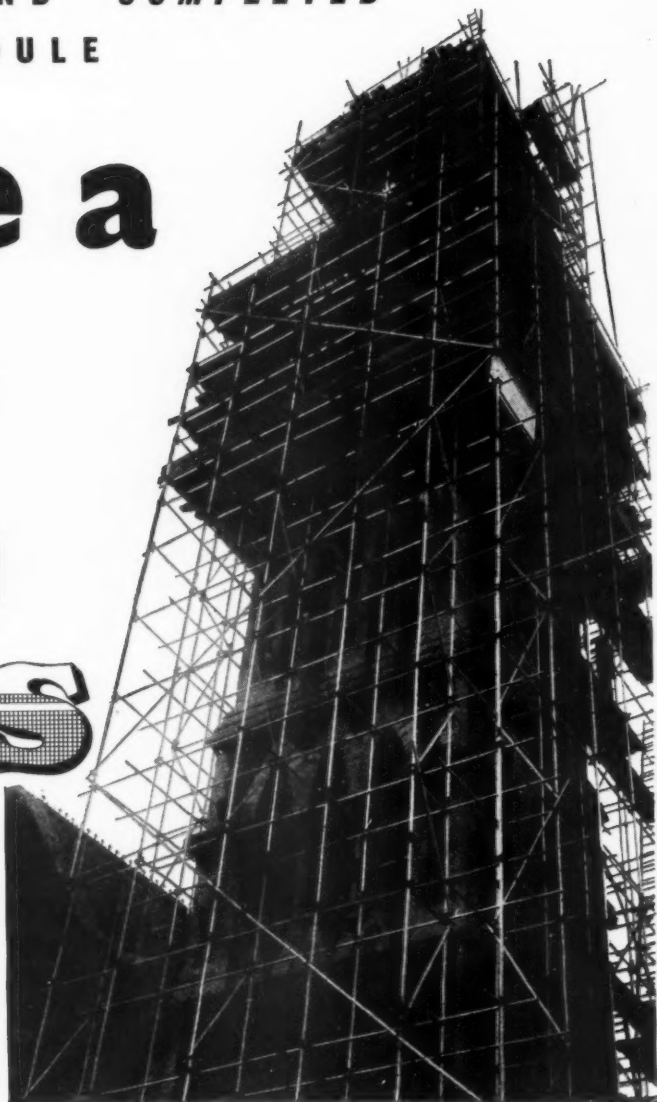
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