

THE ARCHITECTS' JOURNAL



standard contents

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

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No. 3360]

[Vol. 130

THE ARCHITECTURAL PRESS

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★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to I one week, I1 to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy.: W. L. Stevenson, College of Art, Hope Street, Liverpool 1.	Royal 1826
ABS	Architects' Benevolent Society. 66, Portland Place, W.1.	Langham 5533
ABT	Association of Building Technicians. 1, Ashley Place, S.W.1.	Victoria 0447-8
ACGB	Arts Council of Great Britain. 4, St. James's Square, S.W.1.	Whitehall 9737
ADA	Aluminium Development Association. 33, Grosvenor Street, W.1.	Mayfair 7501/8
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Langham 5861
BAE	Board of Architectural Education. 66, Portland Place, W.1.	Langham 5721
BC	Building Centre, 26, Store Street, Tottenham Court Road, W.C.1.	Museum 5400
BCC	British Colour Council. 13, Portland Square, W.1.	Welbeck 4185
BCCF	British Cast Concrete Federation. 105, Uxbridge Road, Ealing, W.5.	Ealing 9621
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. 10, The Boltons, S.W.10.	Fremantle 8494
BE	Building Exhibition. 11, Manchester Square, W.1.	Hunter 1951
BEDA	British Electrical Development Association, 2, Savoy Hill, W.C.2.	Temple Bar 9434
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	Glasgow Central 2891
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Chancery 7772
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Whitehall Gardens, Horseguards Avenue, Whitehall, S.W.1.	Trafalgar 8855
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 4040
BSA	Building Societies Association. 14, Park Street, W.1.	Mayfair 0515
BSI	British Standards Institution. British Standards House, 2, Park St., W.1.	Mayfair 9000
CABAS	City and Borough Architects Society. C/o S. A. G. Cook, A.R.I.B.A., Borough Architect and Director of Housing, Town Hall, High Holborn, W.C.1.	Holborn 3411
CAS	County Architects' Society. C/o S. Vincent Goodman, F.R.I.B.A., Shire Hall, Bedford.	Bedford 67444
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Belgravia 6661
CDA	Copper Development Association. 55, South Audley Street, W.1.	Grosvenor 8811
COID	Council of Industrial Design. 28, Haymarket, S.W.1.	Trafalgar 8000
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.1.	Sloane 4280
CUC	Coal Utilization Council. 3, Upper Belgrave Street, S.W.1.	Sloane 9116
CVE	Council for Visual Education. 12, Suffolk Street, Haymarket, S.W.1.	Reading 72255
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Whitehall 0540
EJMA	English Joinery Manufacturers' Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Regent 4448
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	
FAS	Faculty of Architects and Surveyors. 68, Gloucester Place, W.1.	Welbeck 9966
FASS	Federation of Associations of Specialists and Sub-Contractors, 14, Bryanston Street, W.1.	Welbeck 1781
FBBDO	Fibre Building Board Development Organization Ltd. (Fidor), Stafford House, Norfolk Street, W.C.2.	Covent Garden 3008
FBI	Federation of British Industries. 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission. 25, Savile Row, W.1.	Regent 0221
FCMI	Federation of Coated Macadam Industries. 37, Chester Square, S.W.1.	Sloane 1002
FDMA	The Flush Door Manufacturers Association Ltd. Trowell, Nottingham.	Ilkeston 623
FLD	Friends of the Lake District. Pennington House, nr. Ulverston, Lancs.	Ulverston 201
FMB	Federation of Master Builders. 33, John Street, W.C.1. Tel.: Chancery 7583 (6 lines)	
FPC	The Federation of Painting Contractors, St. Stephen's House, S.W.1.	Whitehall 3902
FRHB	Federation of Registered House Builders. 82, New Cavendish Street, W.1.	Langham 4341
GPDA	Gypsum Plasterboard Development Association. 11, Ironmonger Lane, E.C.2.	Monarch 8888
GC	Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
GG	Georgian Group. 2, Chester Street, S.W.1.	Belgravia 3081
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors. 29, Belgrave Square, S.W.1.	Belgravia 3755
ICA	Institute of Contemporary Arts. 17-18, Dover Street, Piccadilly, W.1.	Grosvenor 6186
ICE	Institution of Civil Engineers. 1, Great George Street, S.W.1.	Whitehall 4577
IEE	Institution of Electrical Engineers. Savoy Place, Victoria Embankment, W.C.2.	Temple Bar 7676
IES	Illuminating Engineering Society. 32, Victoria Street, S.W.1.	Abbey 5215
IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266
IHEV	Institution of Heating and Ventilating Engineers. 49, Cadogan Square	Sloane 1601/3158
IIBDID	Incorporated Institute of British Decorators and Interior Designers, 100, Park Street, Grosvenor Square, W.1.	Mayfair 7086

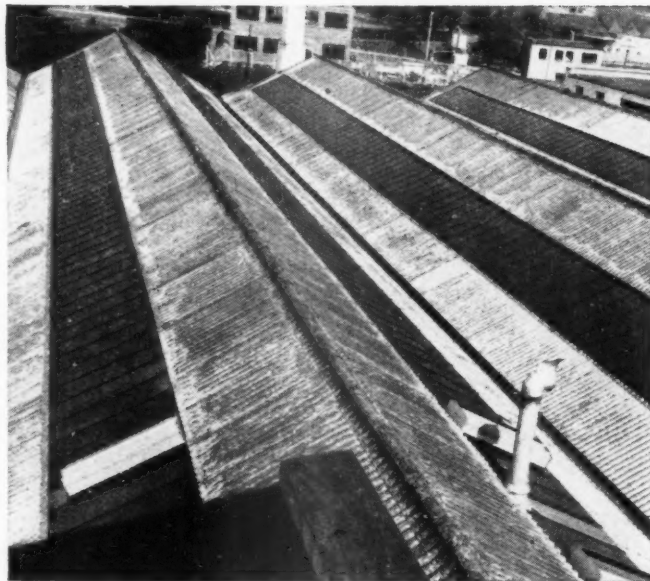
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1 lb.	— 11" x 11"
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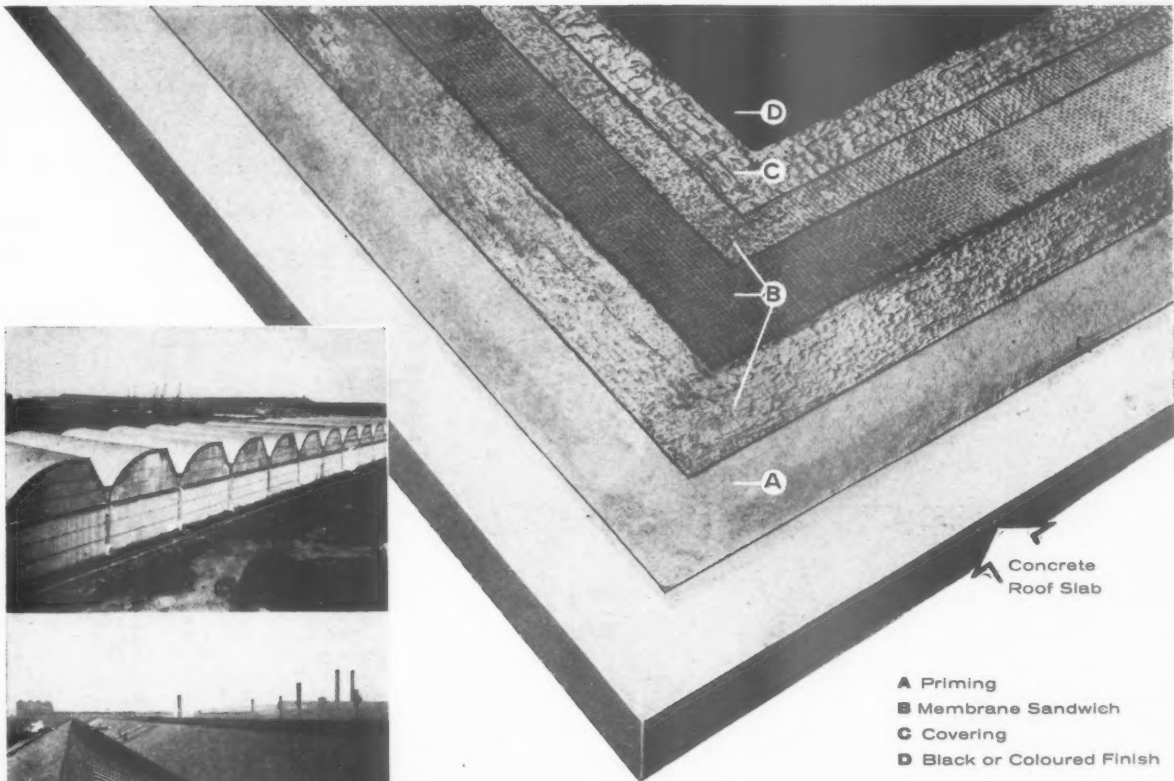
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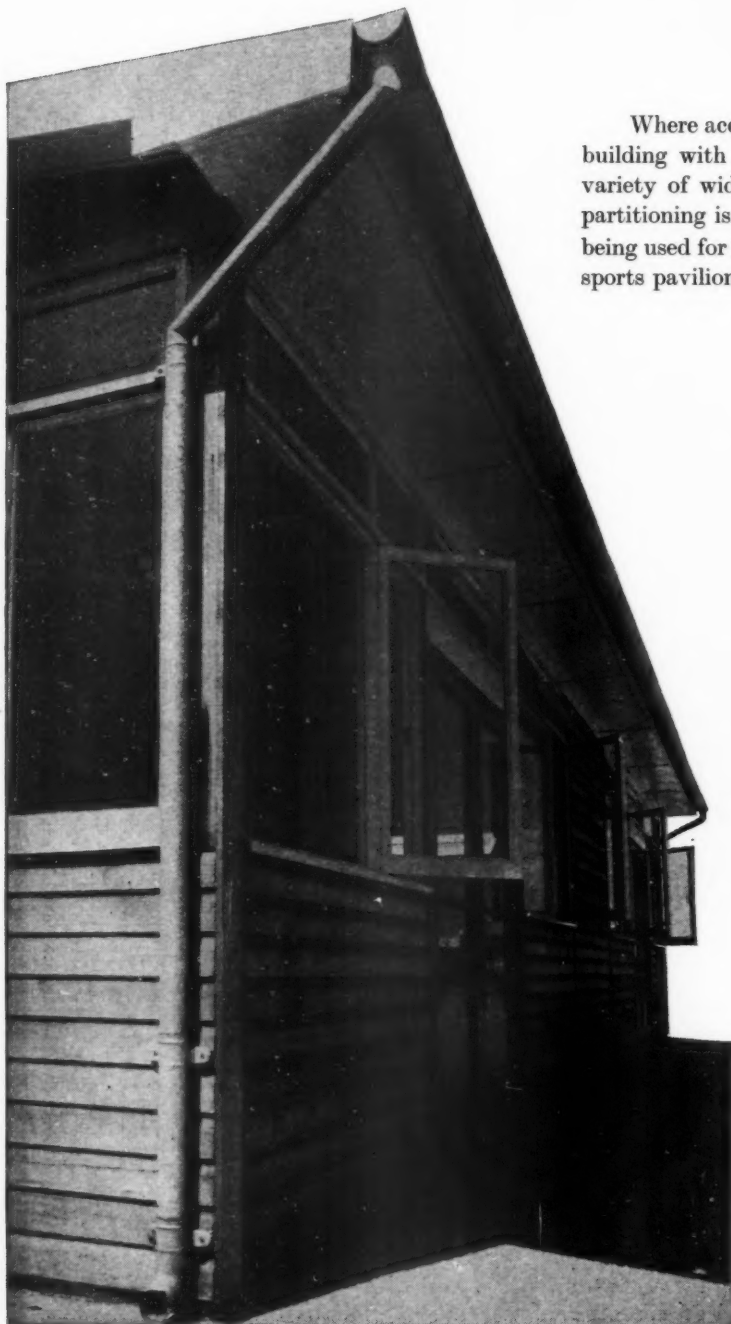
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London Office: 82 VICTORIA STREET, S.W.1. Telephone: ABBey 4622 (3 lines)

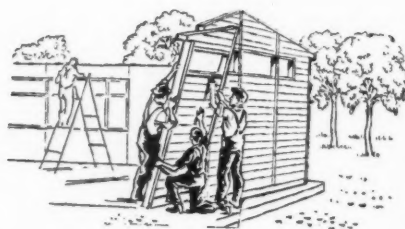
H-W.100

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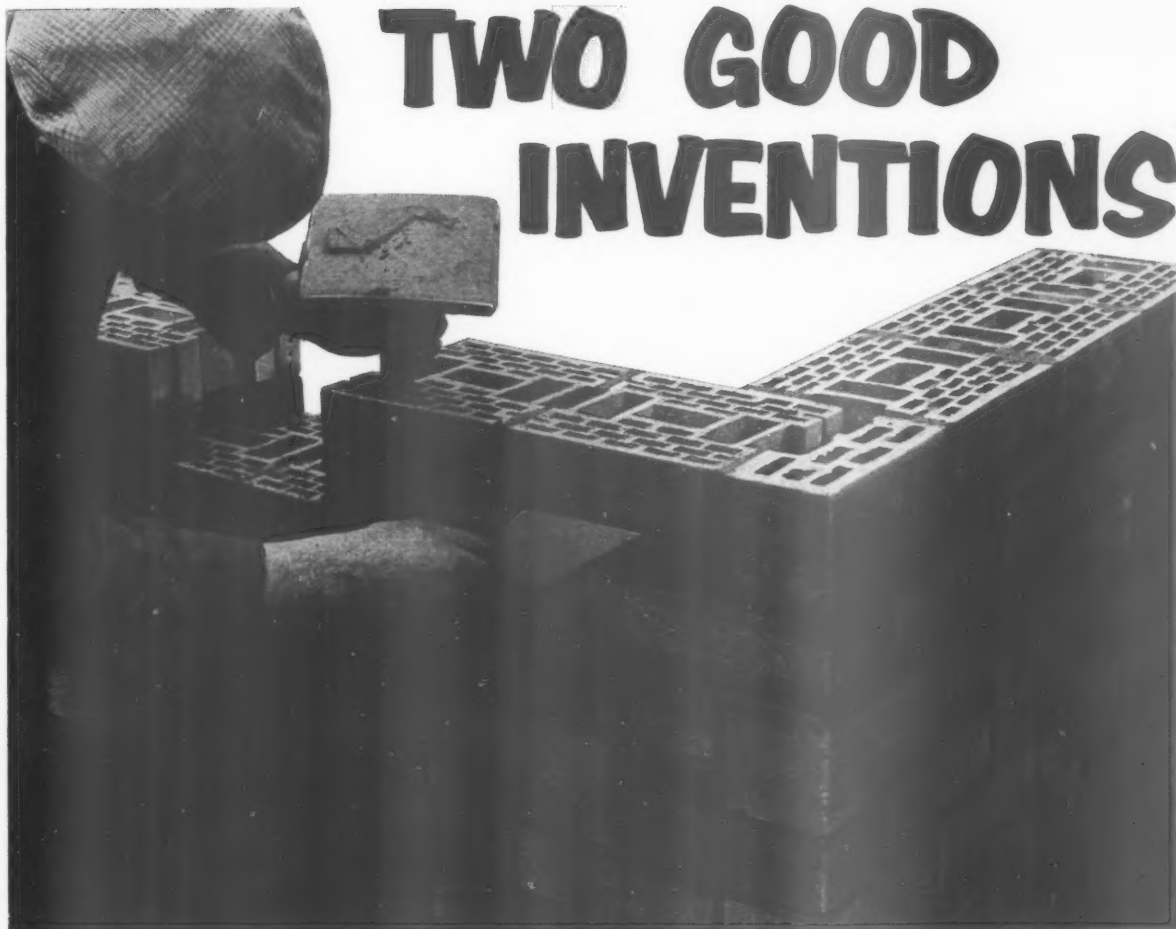
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Messrs. Morris Builders (Oxford) Ltd., are constructing the first buildings in this country with the new type of B.R.S. brick and another good invention is being used in erection in the shape of Febmix Admix Mortar Plasticiser.

Invented by FEB (Great Britain) Ltd., pioneers of mortar plasticisers, Febmix Admix is imparting to the mortar the properties needed with this type of brick of good plasticity with the mortar "hanging together well" and spreading with ease.

FOR MORTAR AT ITS "BUTTERMOST"

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MORTAR PLASTICISER



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LIQUID BITUMEN PROOFING

for damp-proof membranes in concrete floors

1. WATERPROOF

AQUASEAL No. 5 Liquid Bitumen Proofing possesses perfect waterproofing and protective properties. Within a few hours of application it forms a firm, jointless waterproof coating.

2. FIRMLY ADHERENT

AQUASEAL is highly tenacious and will adhere to any clean surface.

3. DURABLE

Like the bitumen from which it is made, AQUASEAL is almost imperishable.

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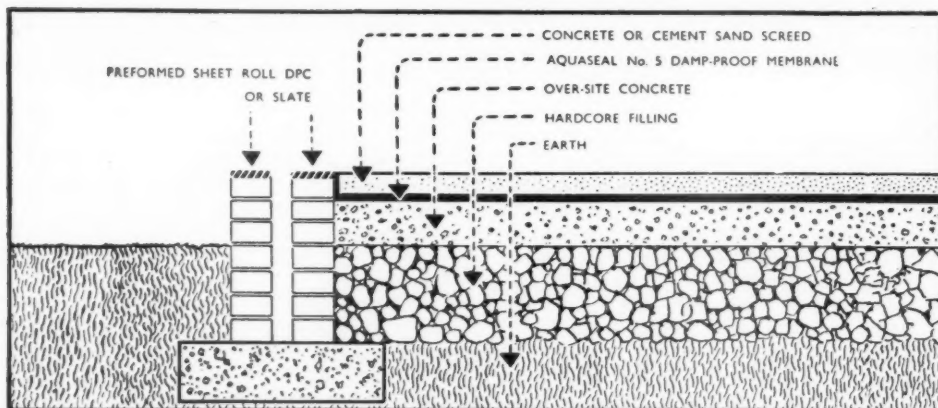
Successive sections merge into a continuous coating.

5. RESILIENT

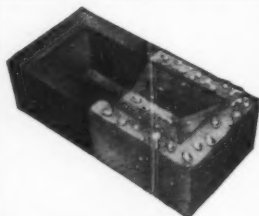
AQUASEAL remains flexible, enabling it to take up any slight movement in foundations.

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Applied straight from the container on to dry or damp concrete, it is simply spread on with fibre brooms or brushes.



AQUASEAL Liquid Bitumen Proofing has been used by the Building Trade for over 30 years.



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COLOURLESS SILICONE WATER REPELLENT

Keeps walls dry; treated walls keep cleaner. It also protects surfaces against weathering, frost spalling and cracking. Easily applied by brush or spray, it penetrates the pores of the material and lines without sealing them, so the masonry can still breathe. It does not alter the appearance of surfaces treated.

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advises on the use of Lead in building work. Most of the many uses are detailed in the Association's publications, and in addition the Bureau's technical officers are always glad to give individual assistance.

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A brush-on waterproofing that contains **rubber...**

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Synthaprufe is the ideal sandwich layer in concrete sub-floors. It is also the ideal fixative for linoleum and wood-blocks.



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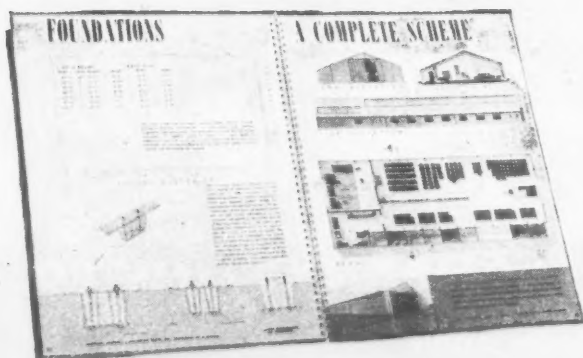
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COSELEY

An impressive view from the loading platform down the length of a Coseley Building supplied to Flowers & Sons Ltd., Reading. A lean-to span at the right houses offices, mess rooms, cloaks and keg equipment store. Provision has been made for future extensions which will not interrupt work in this building.



economy with quality



From the initial design to the completed building this scheme was carried out entirely by the Coseley group of companies, thus minimising overall costs and ensuring the shortest possible interval between placing the order and completing the building.

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If any CELMAC moulded plastic seat should prove defective under normal usage—it will be replaced without question.

This is a development which we have been seeking for many years. Now that we have absolute confidence in our new raw materials, we are proud to offer this warranty.

Celmac moulded plastic toilet seats have been leaders in their field for many years. This latest development puts them further ahead.

A Range of Forty Colours to Choose From

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Double lightweight 4 buffer full size seat and domed cover, made from guaranteed material. The best value for money on the market. Available with full range of fittings.

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Double medium weight seat and cover for competitive work. Solid underbase, four buffers, manufactured from B.S.S. guaranteed material. Available with full range of fittings.

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Double seat and cover, badged B.S.S. Four buffers. Manufactured from B.S.S. guaranteed material. This seat is unbeatable for value and quality.

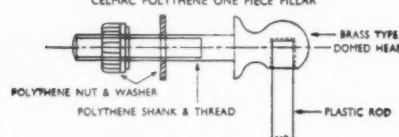


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This ALL Polythene one-piece pillar is the latest development in the trade. Absolutely corrosion free, no metal at all—and cheaper than any other fitting. The flexibility of this fitting is an added safeguard against accidental breakage.

All Celmac seats are available with this fitting, or with moulded pillars, chromium pillars, all with various rods and spacers.

NON CORROSIVE CELMAC POLYTHENE ONE PIECE PILLAR



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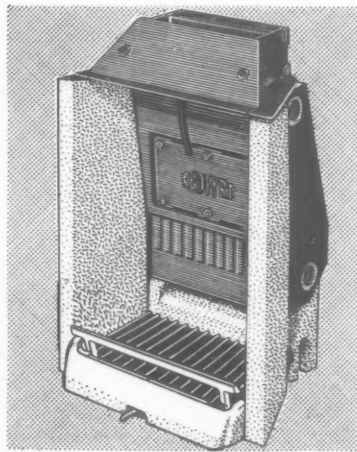
There's nothing to touch a Redfyre Bacboiler for successful low-cost water heating



THAT'S WHAT MAINTENANCE PEOPLE SAY — and that's why huge numbers go into new homes every week. And now there are two new Ministry-approved Bacboiler fires—the Hearth Redfyre with under-floor air-feed; and the low-cost Redfyre 60, a controlled-burning fire accepted by the Council of Industrial Design. Both have exceptionally pleasing modern lines. And both (like all the Bacboiler range) supply ample hot water *and* heat one or two radiators—or up to four if hot water isn't needed. May we send you full details?



Redfyre 60

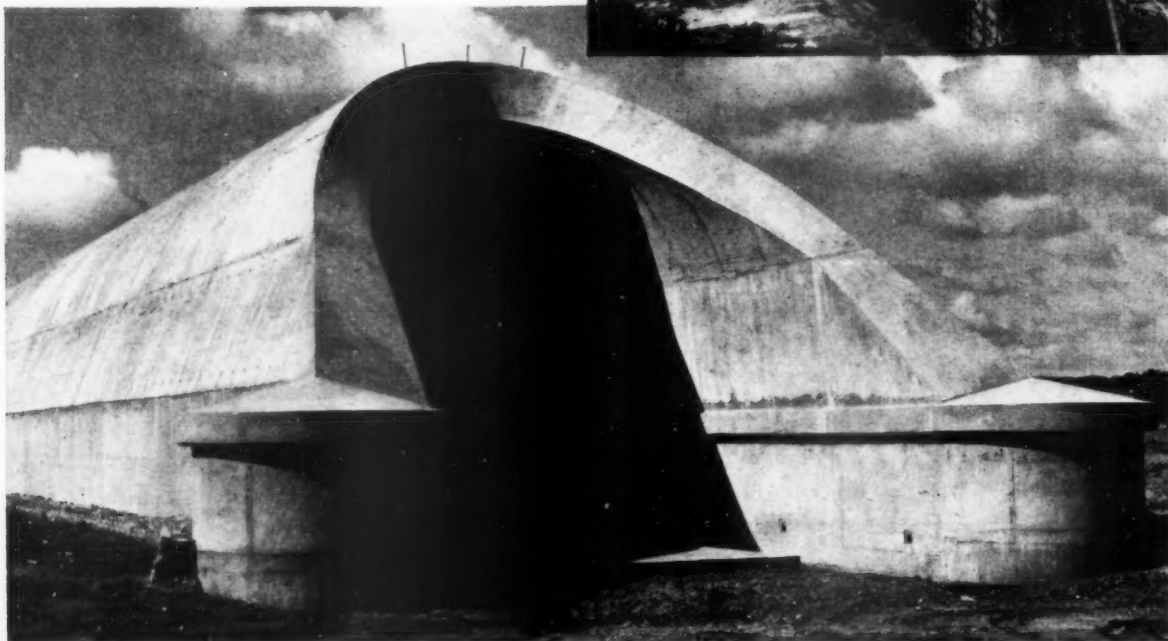


Hearth Redfyre



NEWTON CHAMBERS & COMPANY LIMITED Redfyre Products Thorncliffe Sheffield

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Contractors: John Laing and Son Limited
Consultant Engineers: Sir Owen Williams and Partners

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The job called for a material that was strong, tough and flexible — yet light and easily handled. Seaboard Canadian Fir Plywood met all these requirements — and more!

Used in flat or slightly curved forms (as in the concrete slab decking of bridges), 3/4"-

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The verdict: "Canadian Douglas fir plywood has proved eminently suitable for re-usable formwork and sound economies have been achieved."

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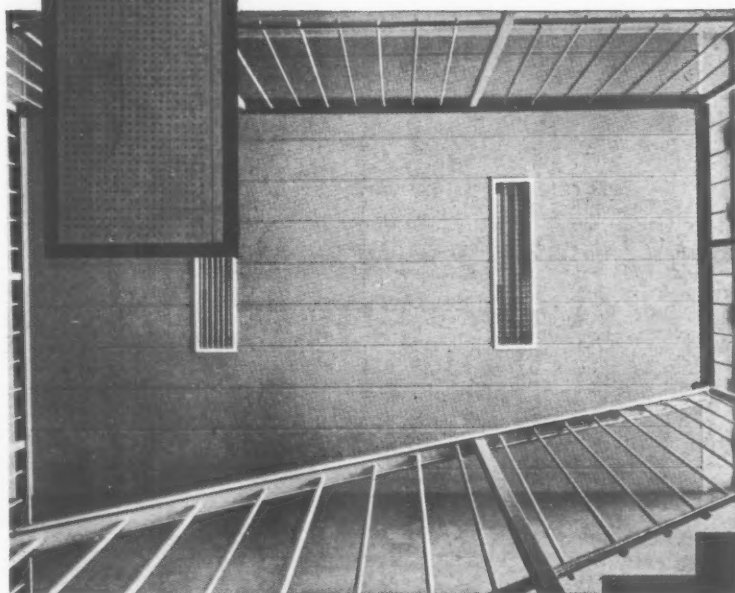
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Ankarboard has been chosen by many leading companies because it eliminates noise-stress and improves working conditions. Ideal for board-room and stairway alike, it cuts extraneous noise to the minimum while providing limitless opportunity for pleasing decorative effects.

ANKARBOARD can be supplied treated to Class 1 for spread of flame B.S.S. 476/53

ACOUSTIC BOARDS

$\frac{1}{2}$ " or $\frac{3}{4}$ " thick, are available in 12" or 16" widths and in lengths up to approx. 18'. Grooved and ship-lapped for easy fixing. (Also available unperforated as insulation "longboards").

ACOUSTIC TILES

$\frac{1}{2}$ " or $\frac{3}{4}$ " thick in sizes 12" x 12", 16" x 16", 24" x 24", 12" x 24", 16" x 32", and 32" x 32". Tiles are bevelled on all four edges.

PERFORATIONS FOR BOARDS AND TILES

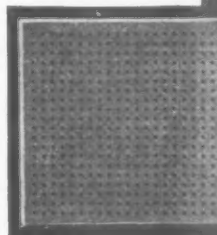
4 m.m. holes at 15 m.m. centres. Depth of holes is arranged for maximum acoustic effect while corner holes are bored to half thickness, thus ensuring good grip when tiles are screwed or nailed to fixing grounds.

Random perforations also available.



Ankarboard Acoustic Boards and Tiles fitted throughout the new offices of Thos. Parsons and Sons Ltd., Mitcham.

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Staff Architect
Messrs Clutton 'London' SW1.
General Contractor:
F.G. Minter Ltd., London.
Ceilings by: Insulatall Services Ltd., London WC2.



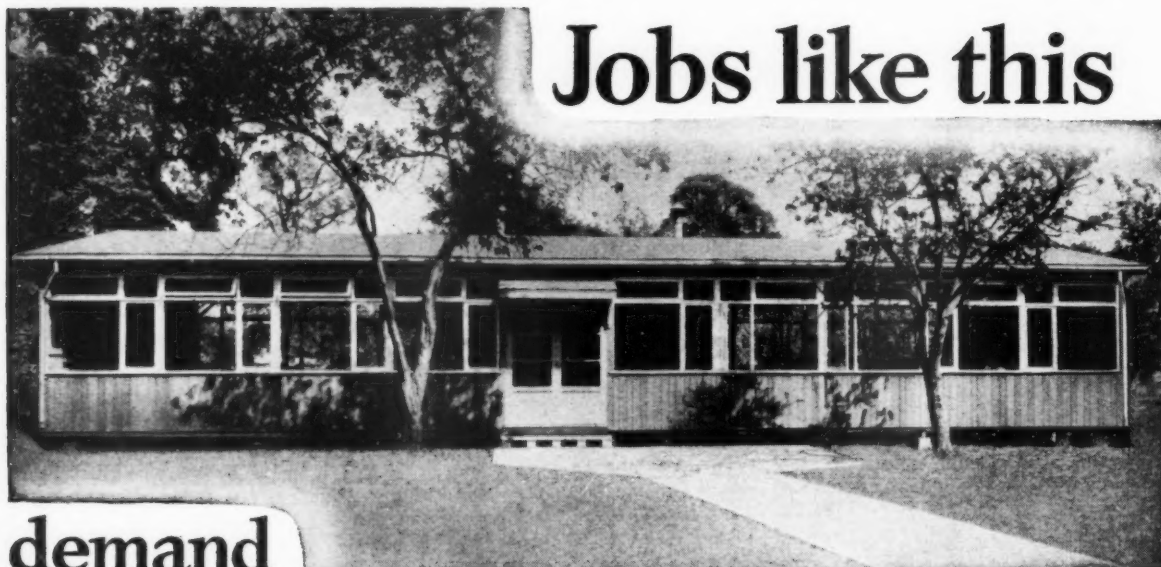
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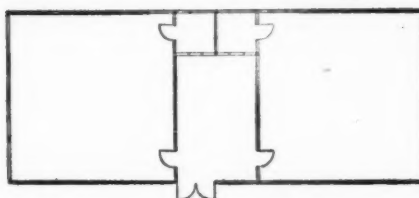


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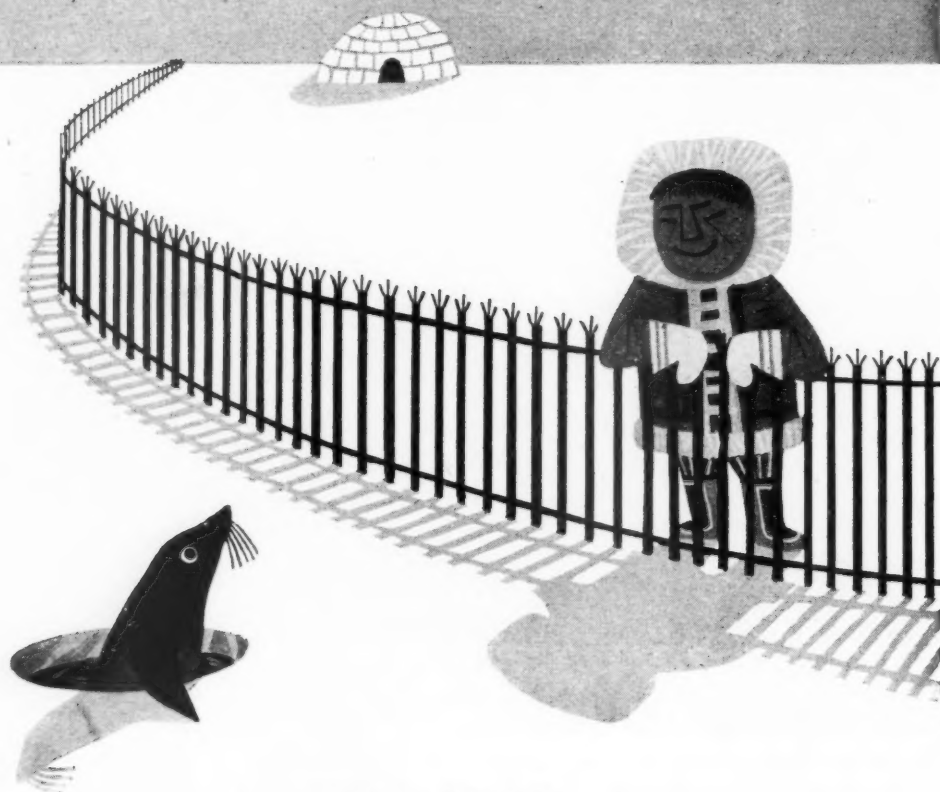
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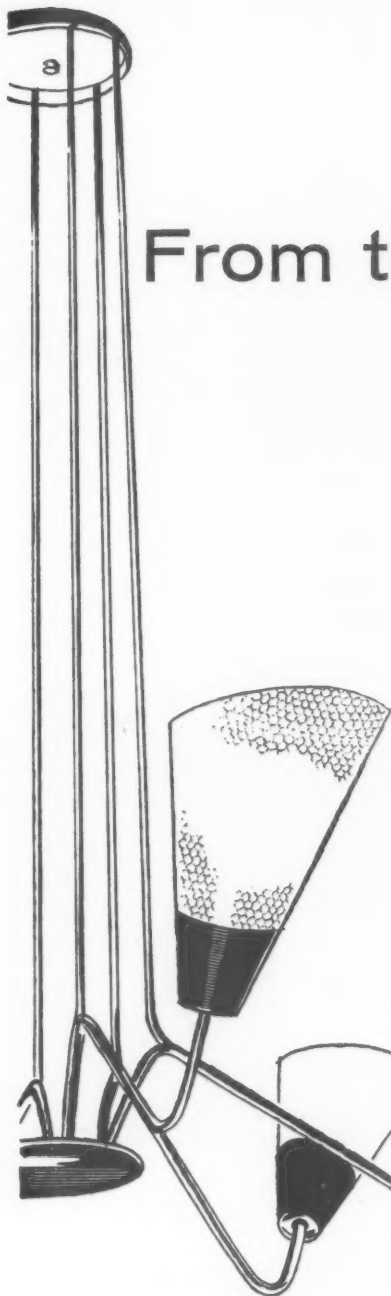
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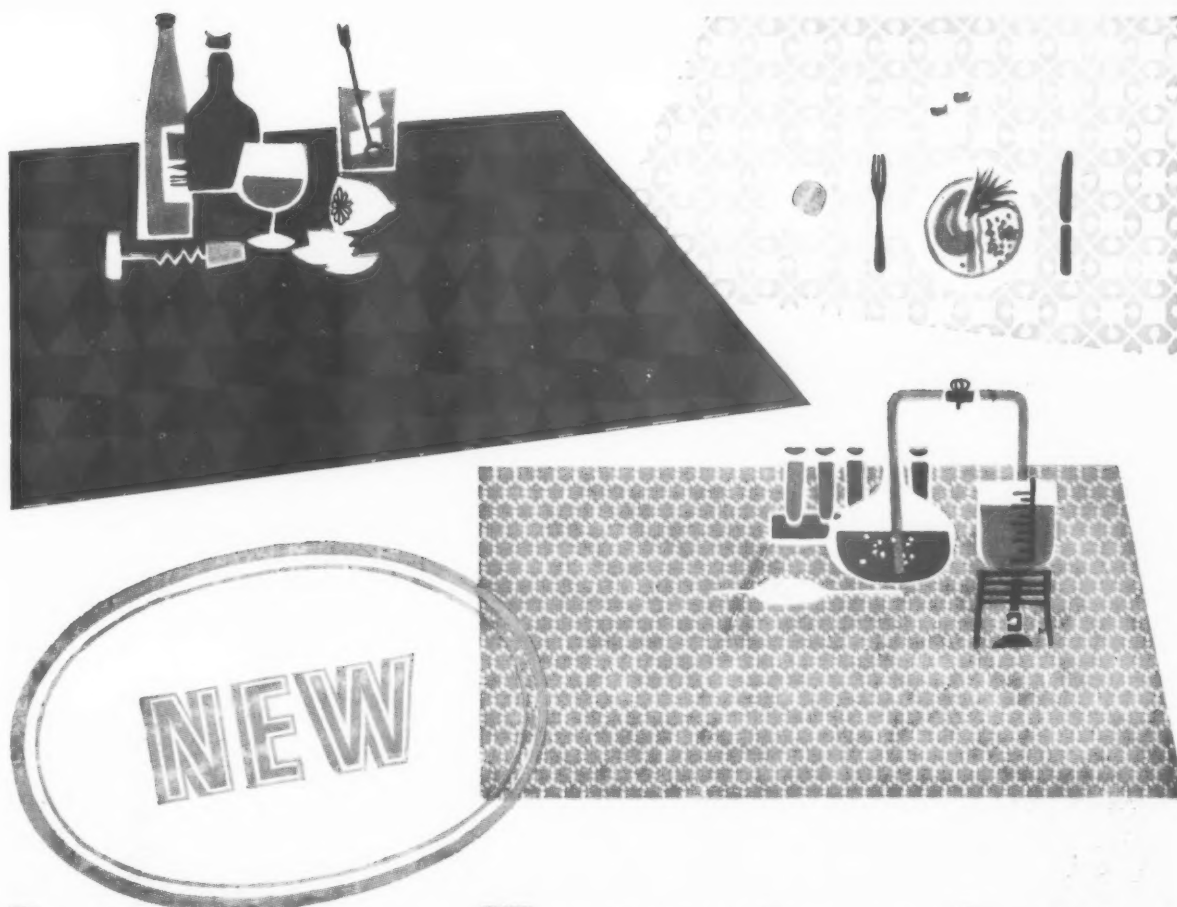
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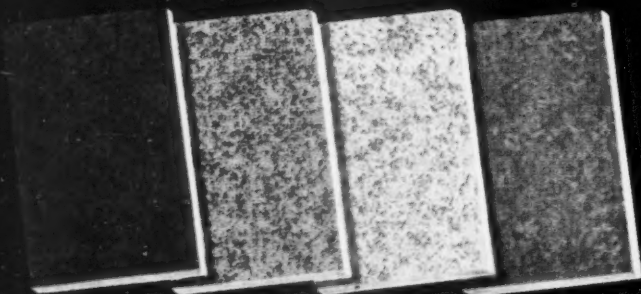
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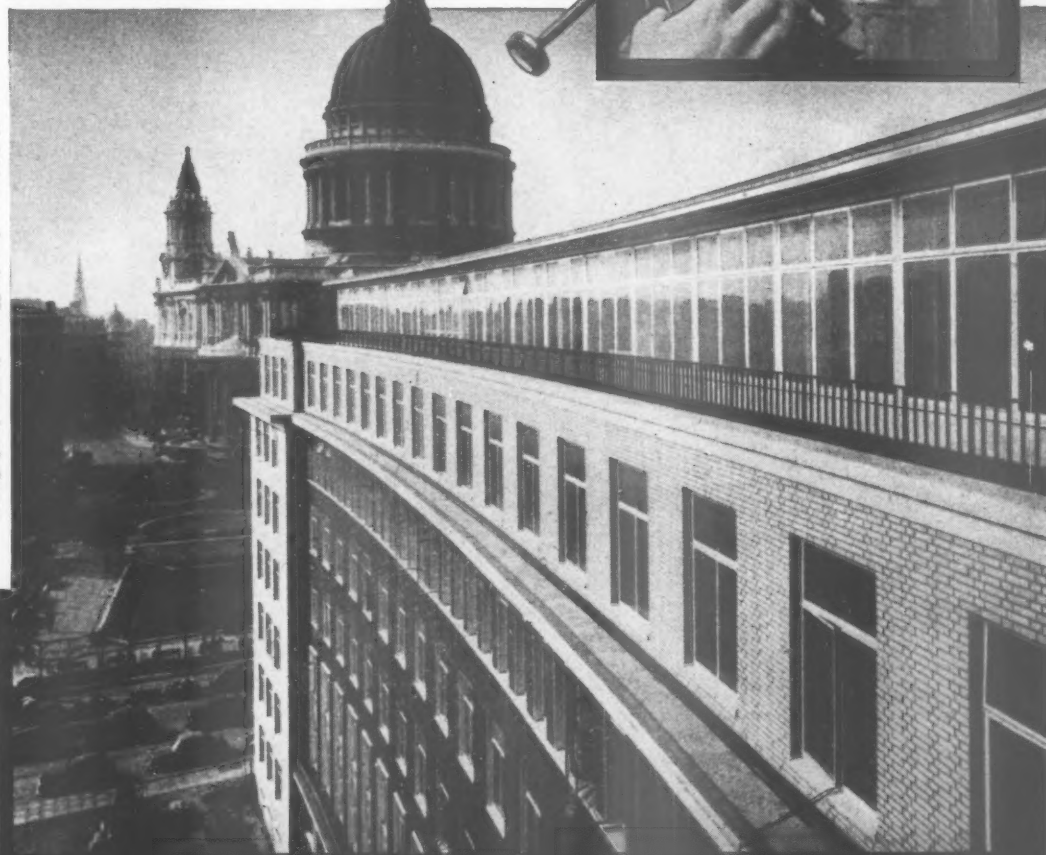
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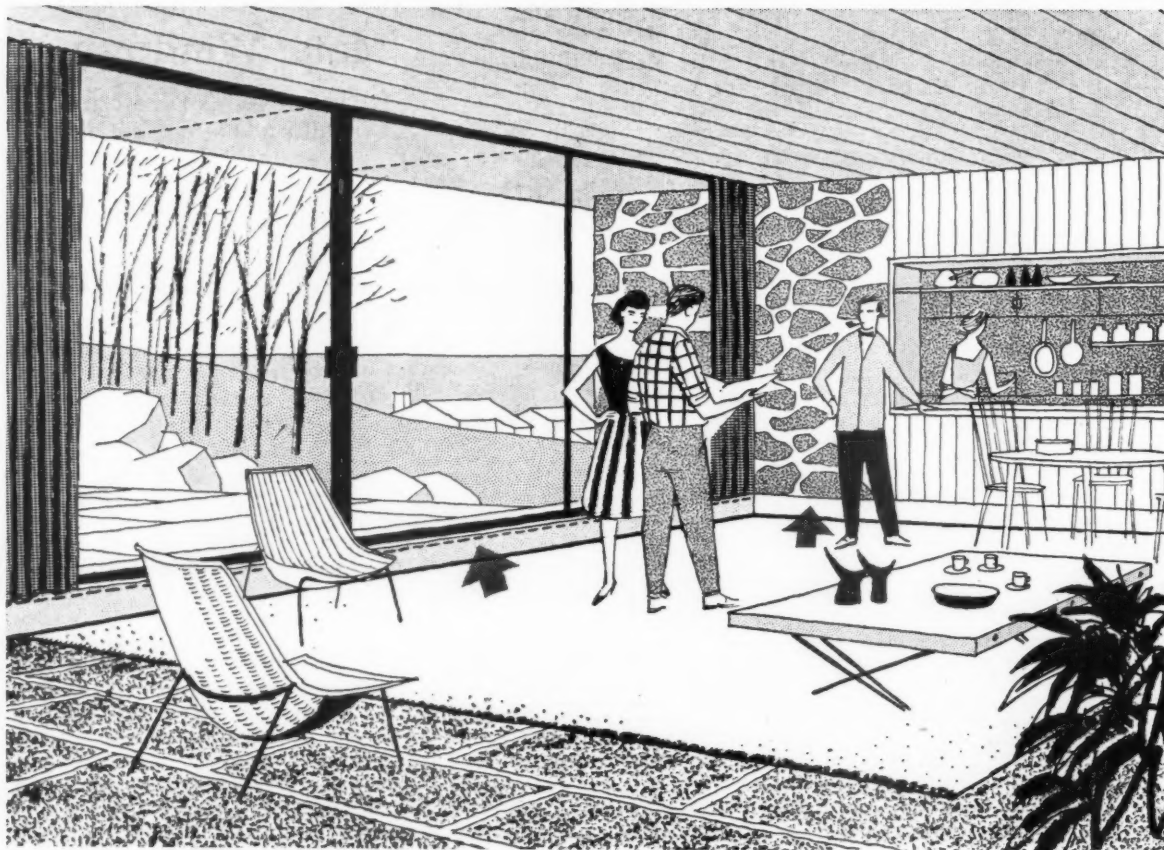
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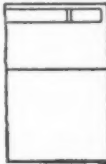
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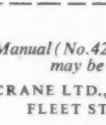




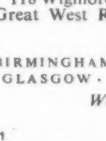
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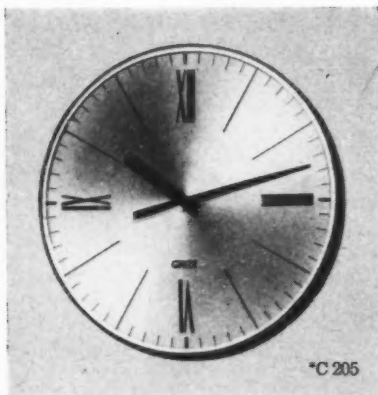
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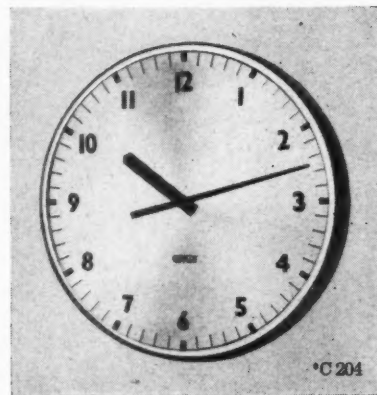
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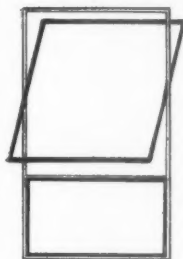
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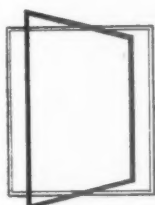
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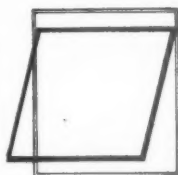
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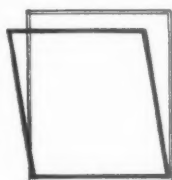
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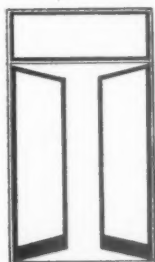
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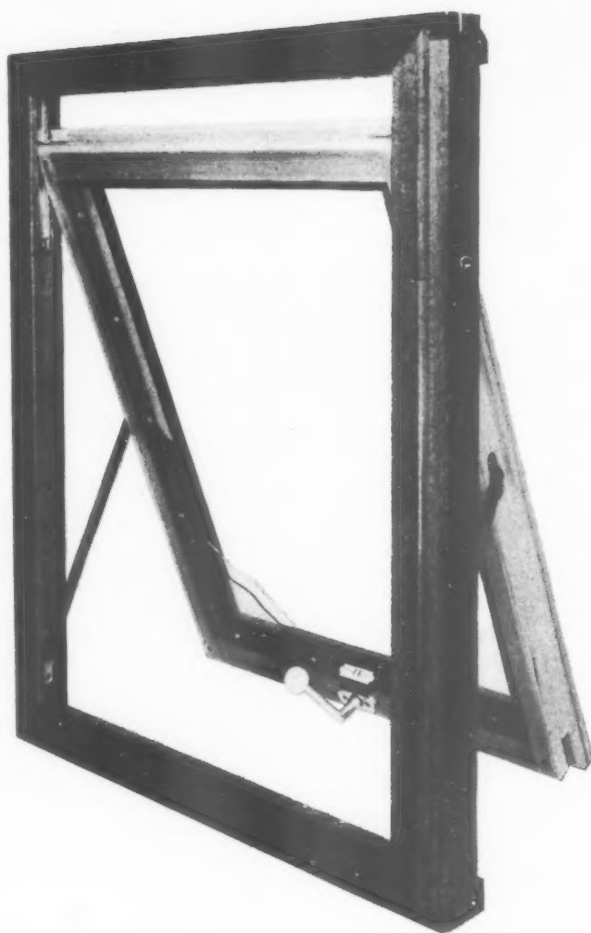
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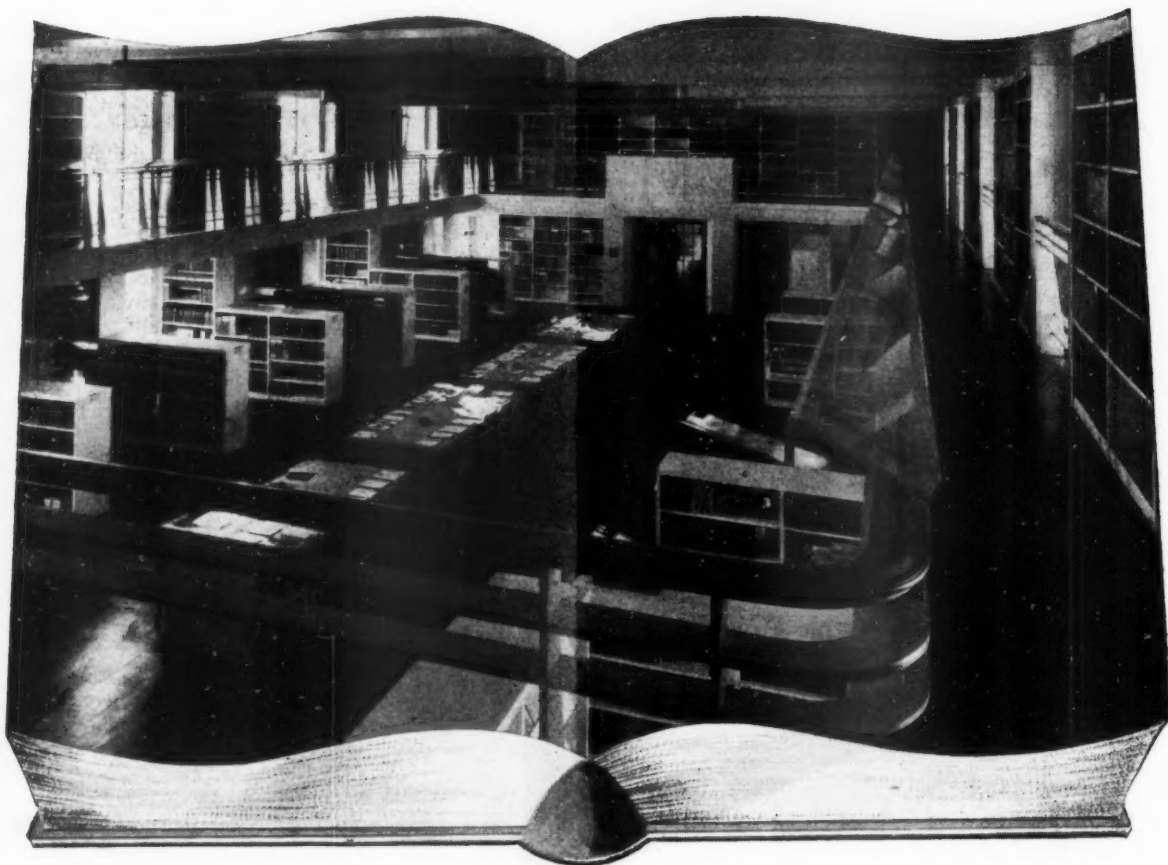
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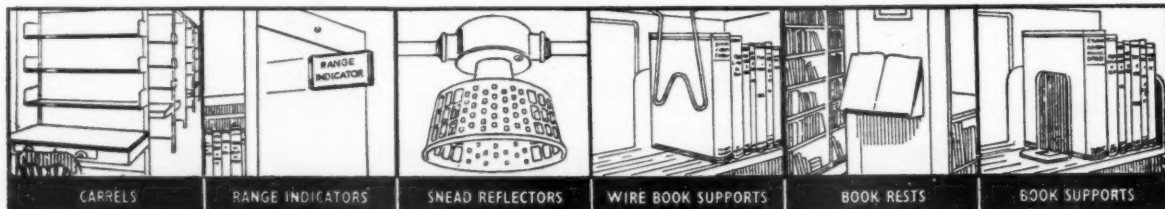


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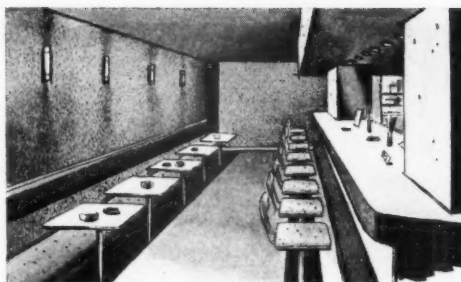
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55°F	0.48

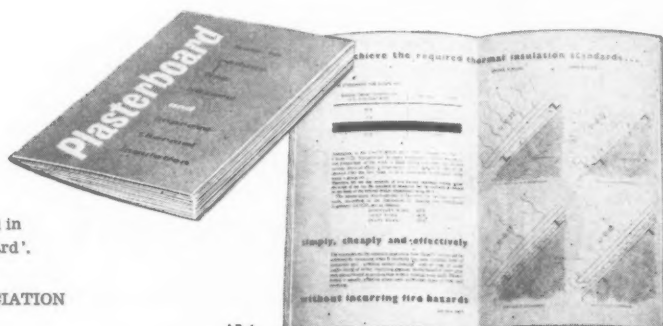
Since the lower the 'U' value, the higher the standard of thermal insulation, 'Maximum "U" Value' here means the *minimum* permissible standard of thermal efficiency.

Although 0.30 is often quoted as the "Maximum 'U' Value" for the proposed regulations, this figure only applies in the rare cases where an Internal Temperature of 70°F, 5 ft. from floor level, is envisaged. In fact, for the *vast majority* of all factory buildings coming within the scope of the Act, the standard of insulation will be defined on the basis of an *internal temperature of 60°F*. This latter standard can be met, adequately and cheaply, by straightforward insulation with *Insulating Gypsum Plasterboard*, which conforms on both faces to B.S.476 as a Class I material of very low flame spread, *without requiring additional treatment*

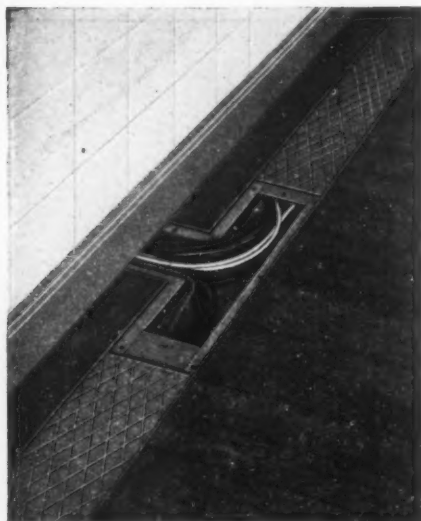
THESE AND OTHER RELEVANT

FACTS AND DIAGRAMMS, regarding the Thermal Insulation (Industrial Buildings) Act, are contained in a special supplement to our standard publication 'Plasterboard'. Write today, stating the number of copies you require, to:

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AB.4



Rising Mains, Underfloor, Floor & Skirting Trunking.

FLOOR TRUNKING

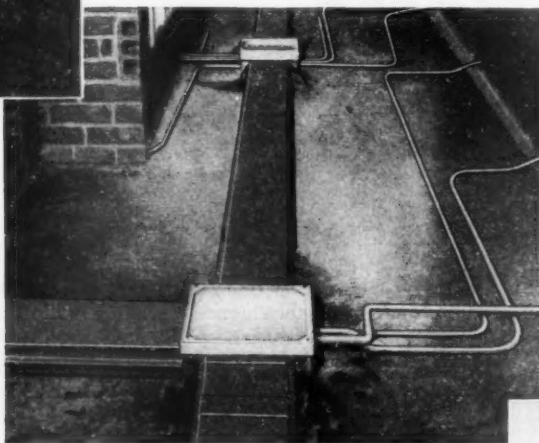
Choice of Covers: Available with chequer plate cover and gasket joint, or with recessed cover to carry any flooring medium—wood blocks, linoleum, tiles, etc.

Construction: With exception of chequer plate, Zinc coated steel is used throughout.

Sizes: Standard sizes available. Special sizes made to order.

Finish: Zinc coated natural finish or Grey Enamel.

Fittings: Elbow. Rising Elbow. Tee Piece. Four-way Box. End Bush. Blank End.



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Floor Traps: Cast or fabricated, in 1-way, 2-way, 3-way and 4-way forms.

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Sizes: As above.

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Fittings: Rising Elbow. Elbow. Tee Piece. Four-way box. End Bush. Blank End.



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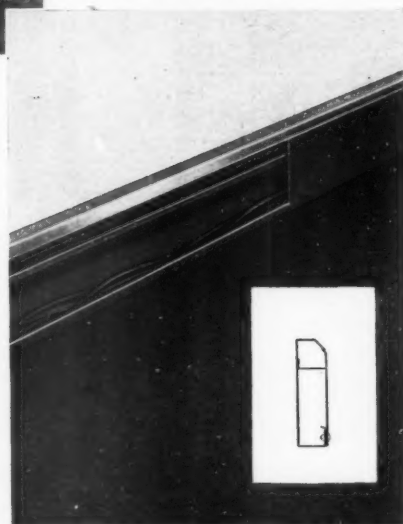
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Construction: Zinc coated steel, with dividing fillets embodied as required.

Sizes: As above.

Finish: Grey Enamel.

Fittings: Elbow. Rising Elbow. Tee Piece. Four-way Box. End Bush. Blank End.



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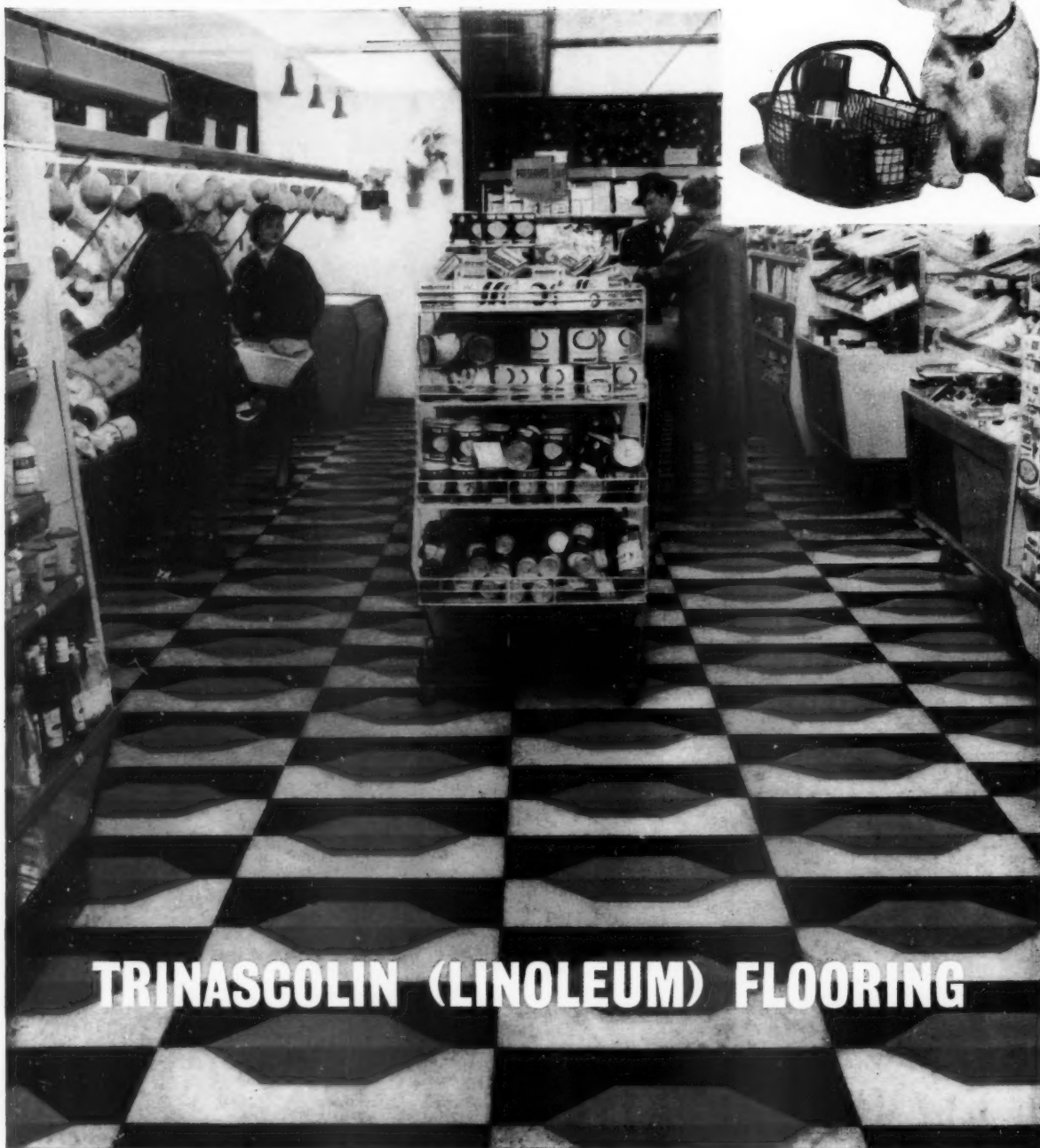
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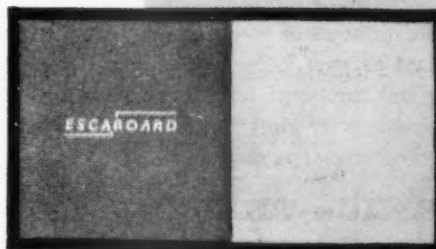
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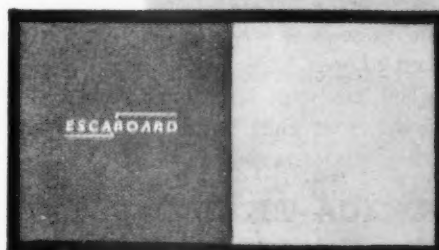
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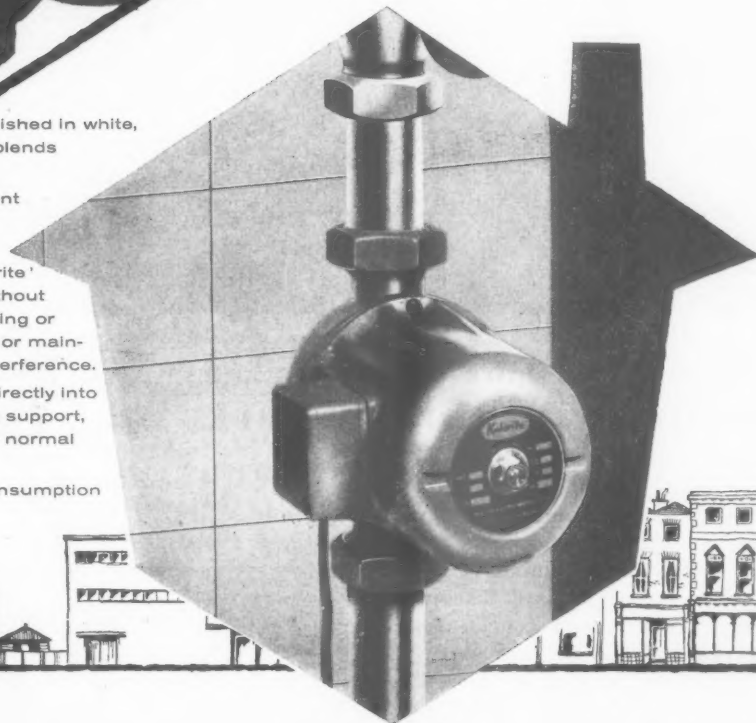
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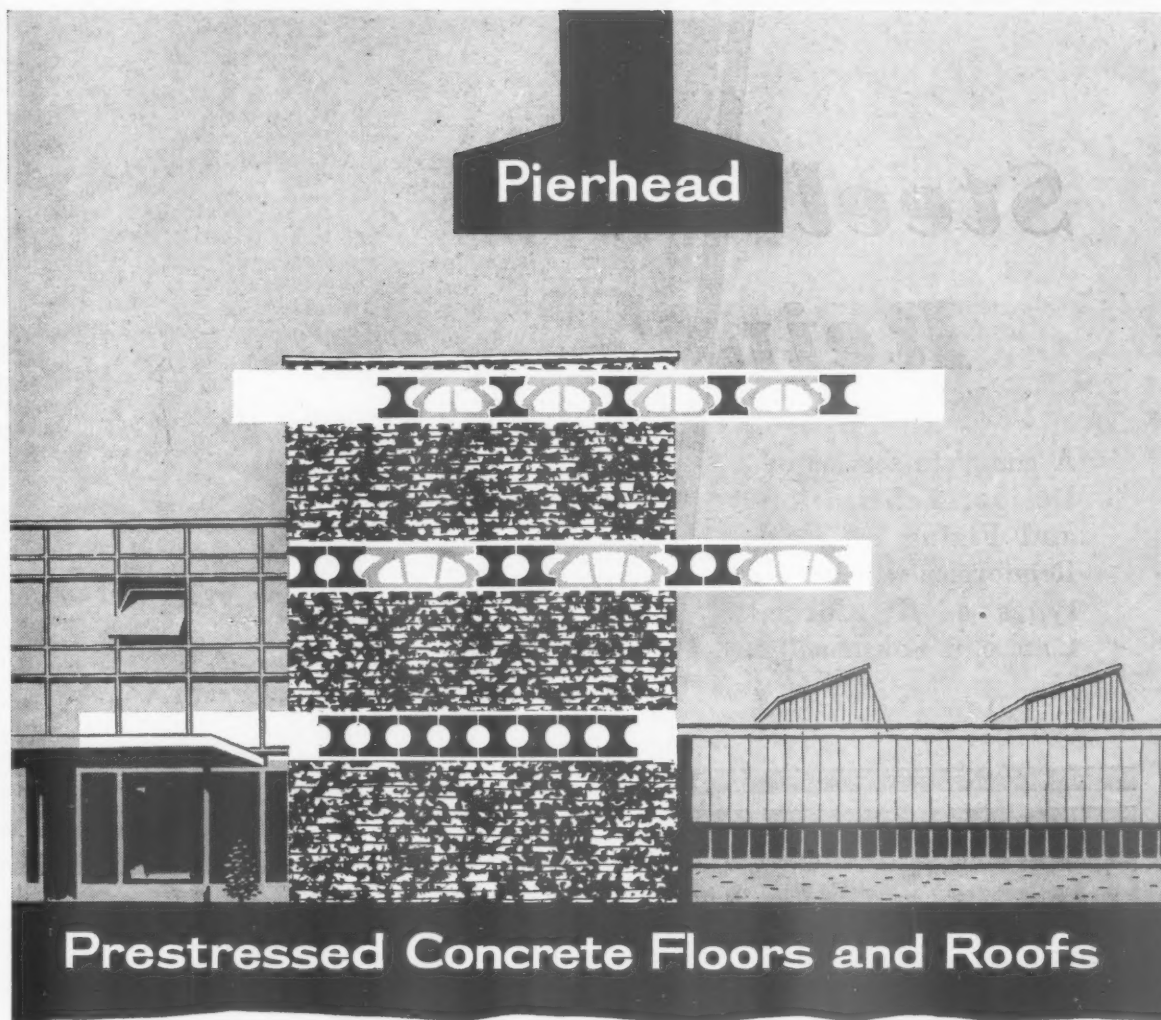
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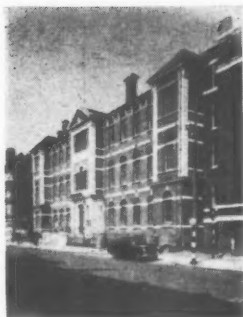
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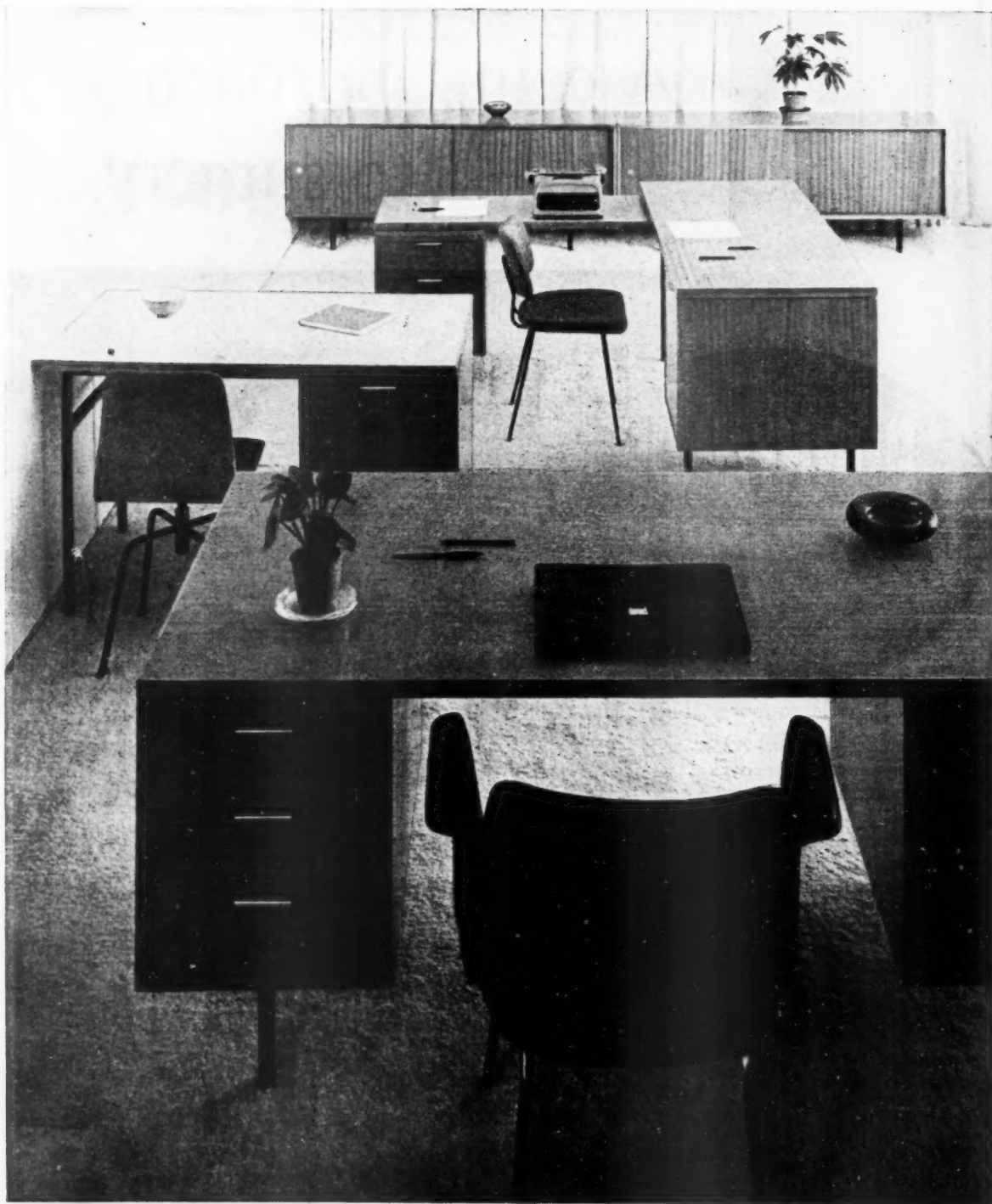
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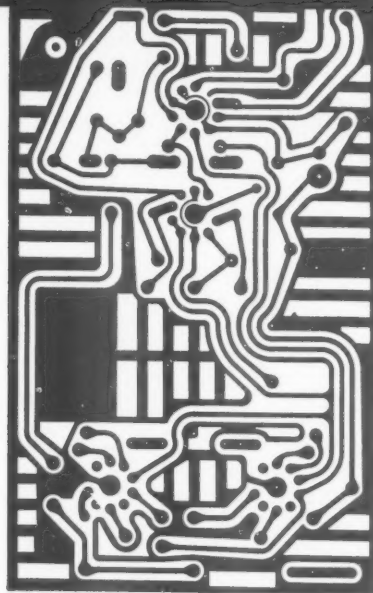




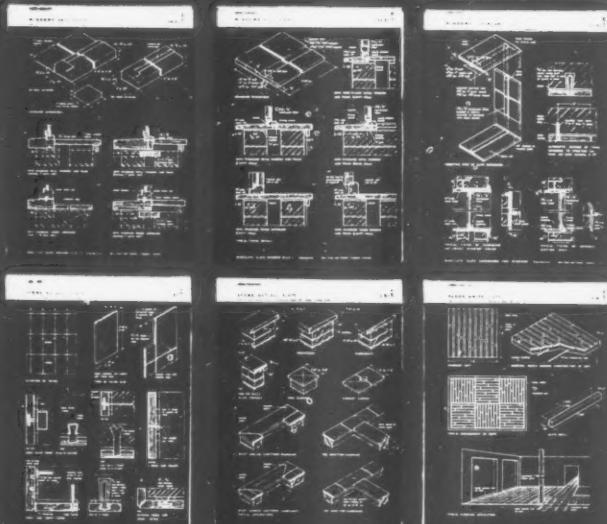
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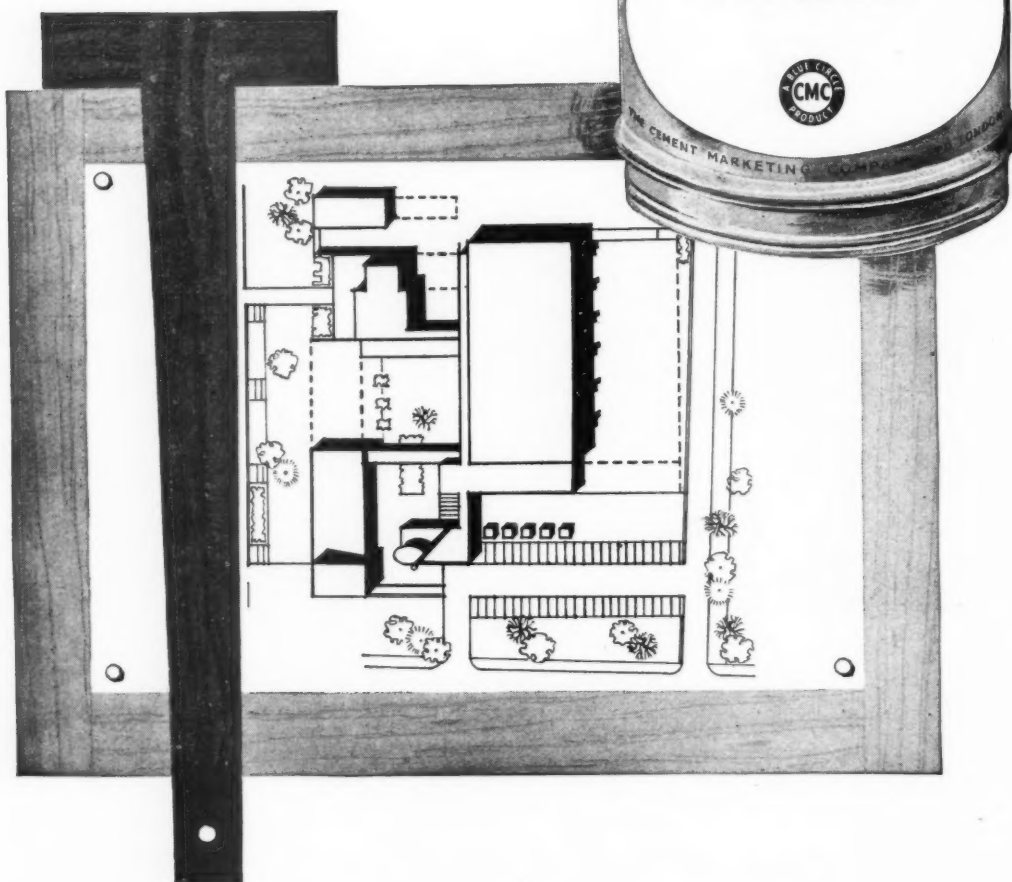


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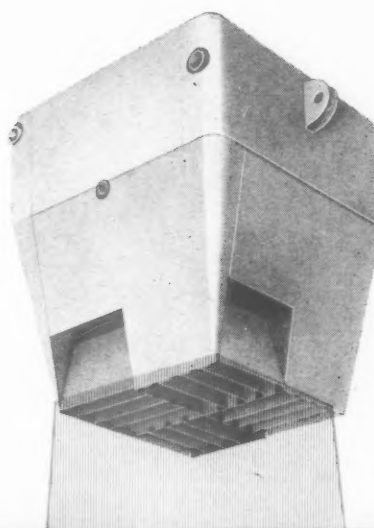
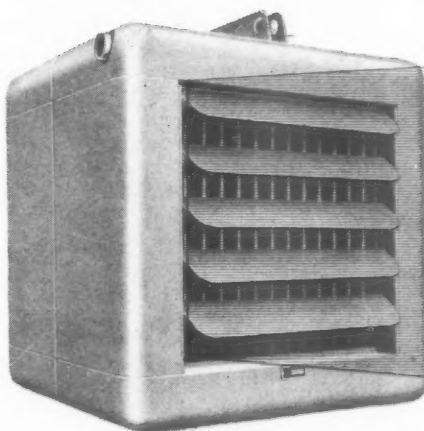
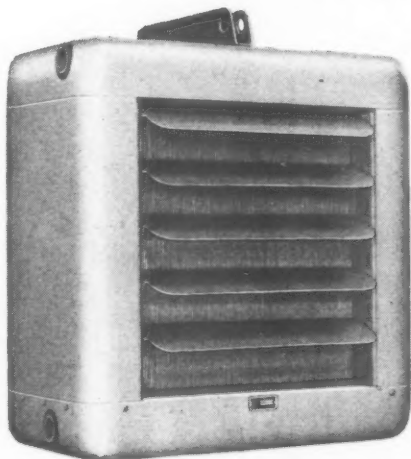


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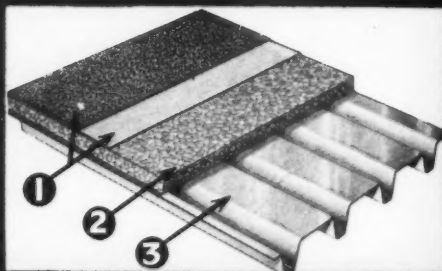
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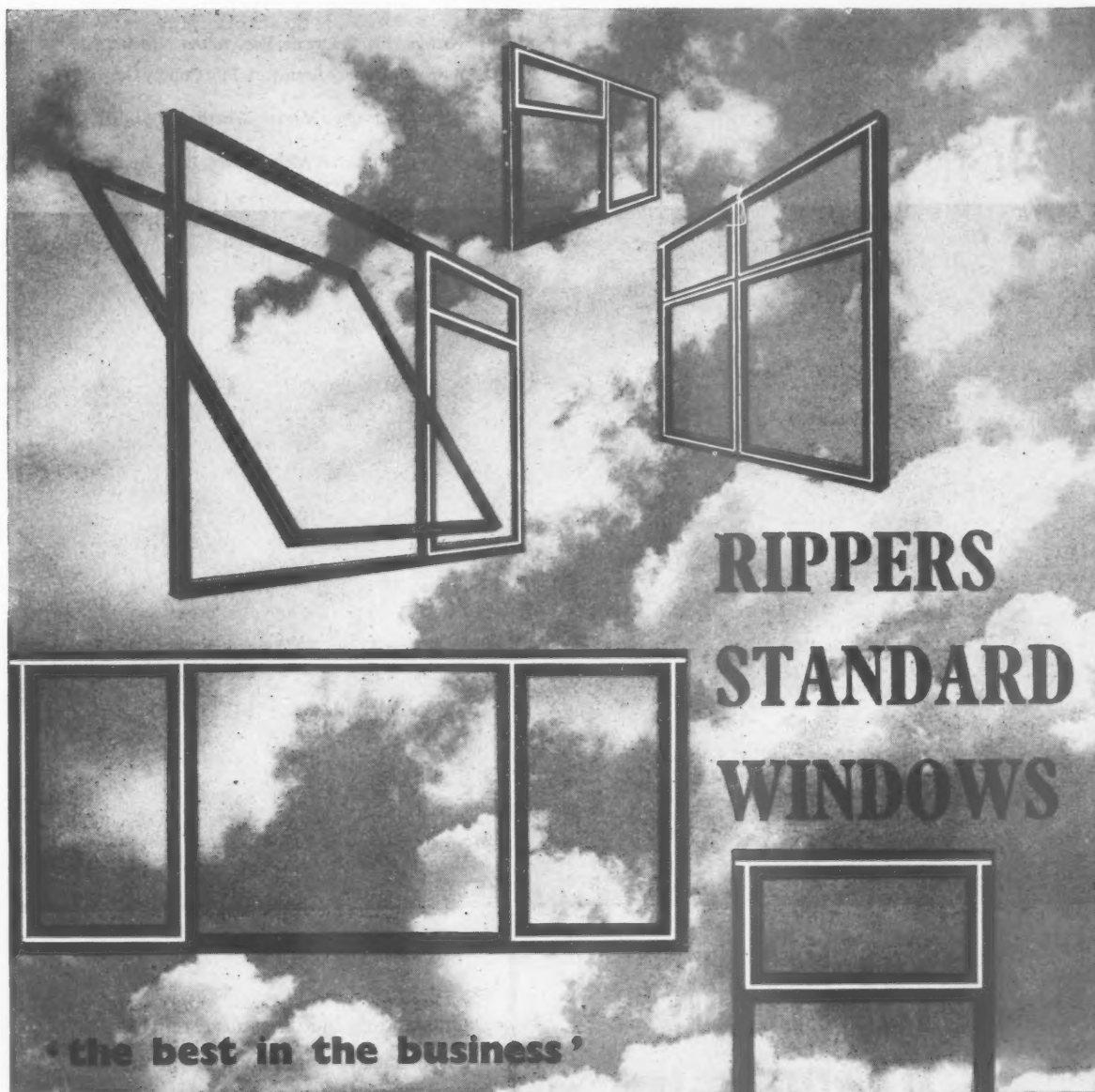
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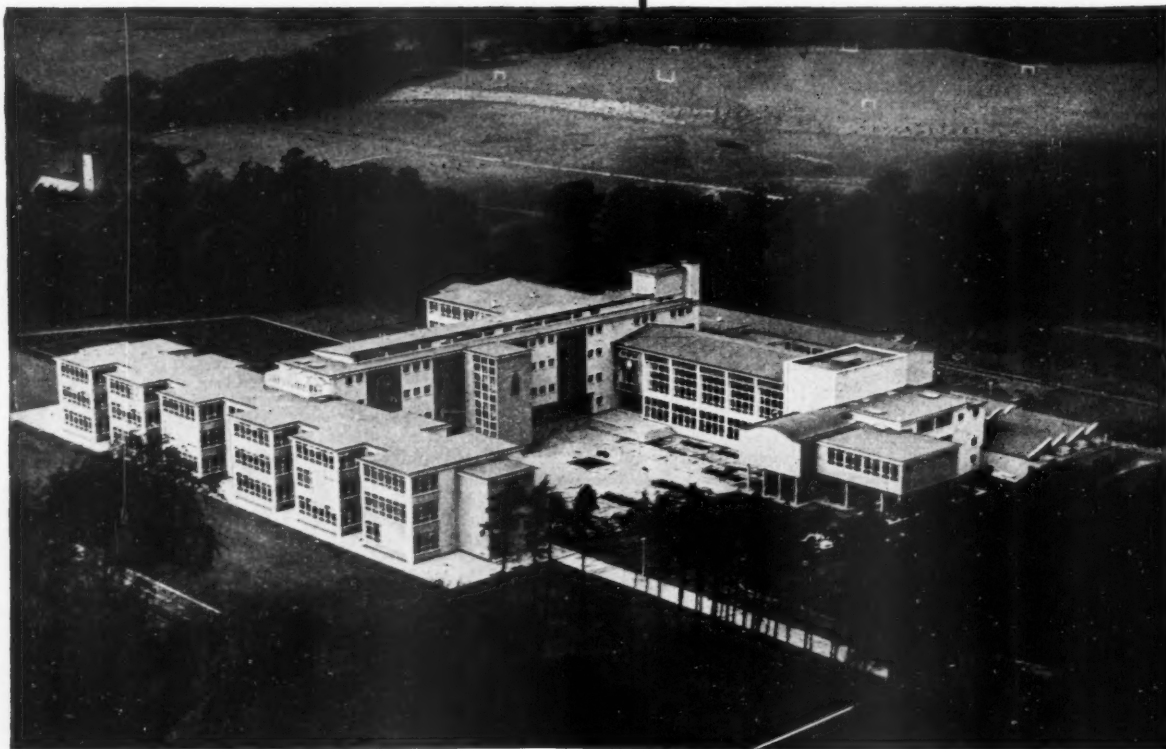


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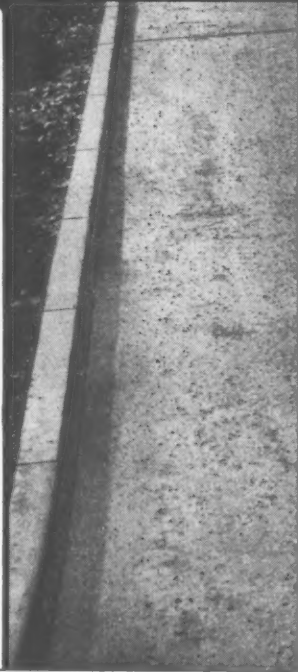
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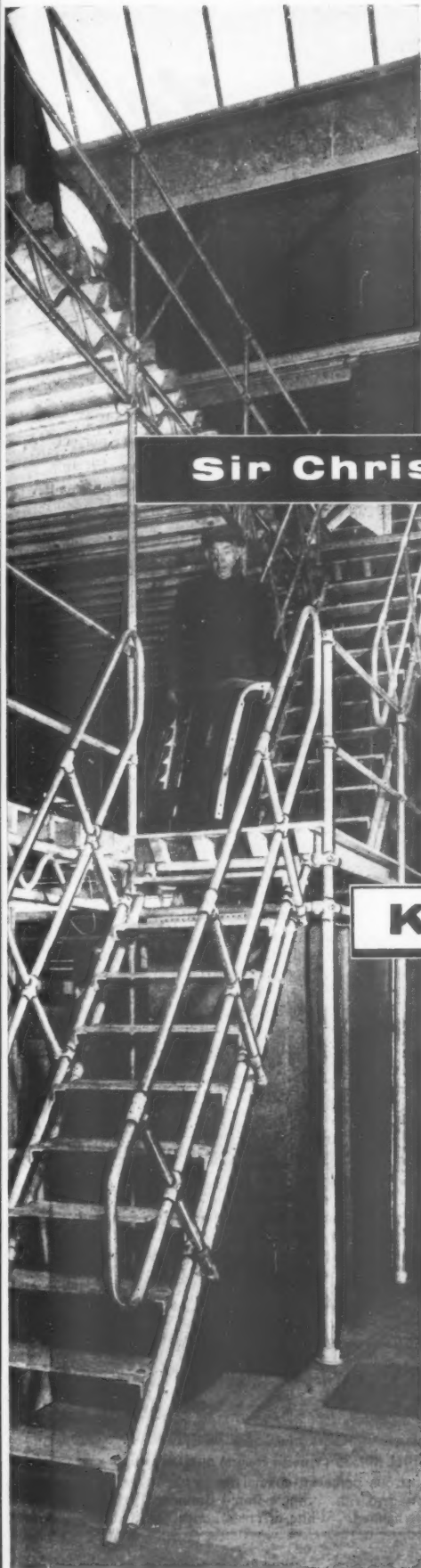


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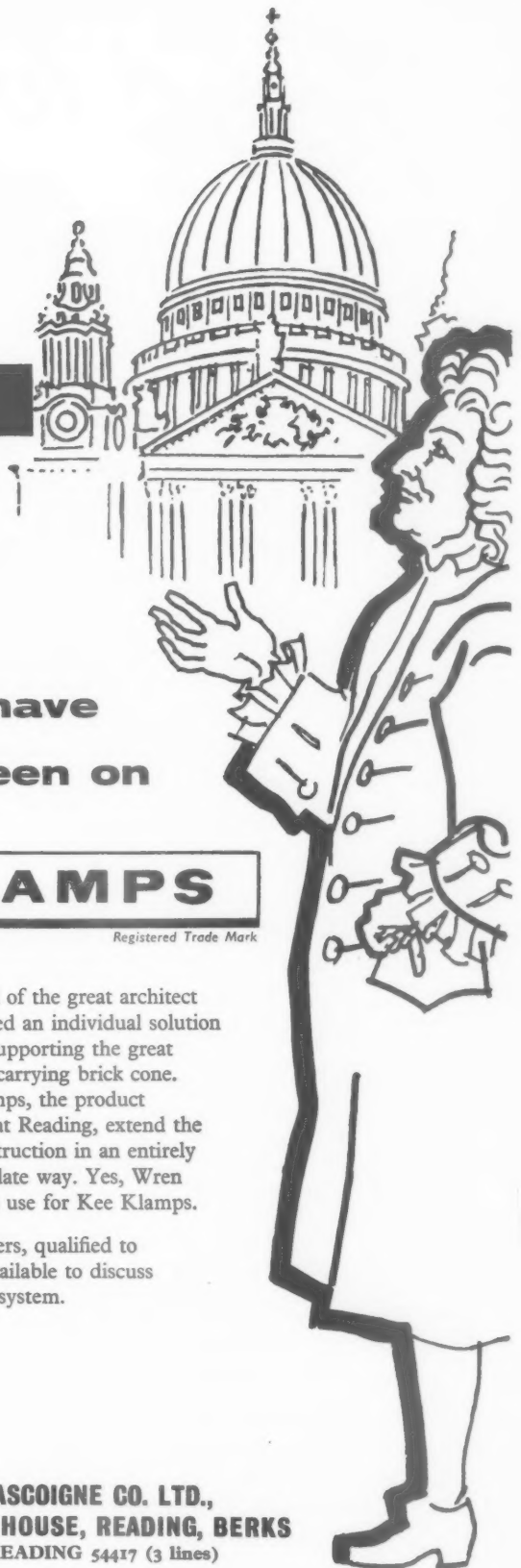
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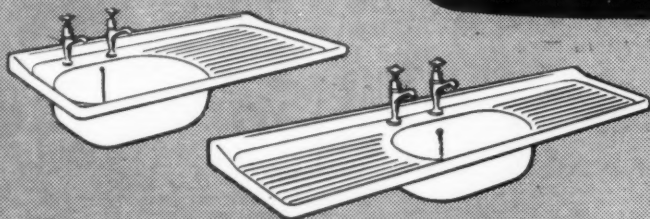
Kee Klamp Engineers, qualified to advise, are freely available to discuss applications of this system.

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Lustrous porcelain-enamel on pressed steel with deep splash-back. Streamline fluted drainers. Large capacity bowl - single drainer right or left handed. Colour choice of white, cream, pale blue or eau-de-nil.

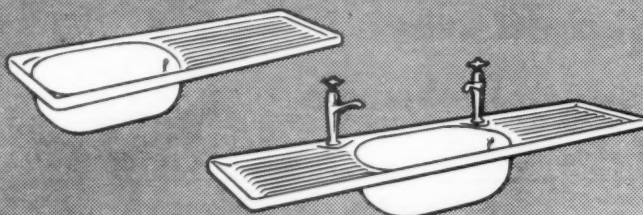
MODEL E 63 21T (Vitreous Enamel)
DIMENSIONS 63" X 21"

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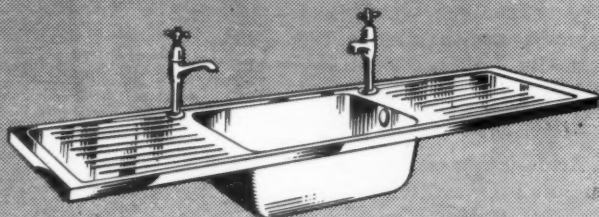


MODEL MP 42 18 (Vitreous Enamel)
DIMENSIONS 42" X 18"

Lustrous porcelain-enamel on pressed steel with bevelled anti-drip rim. Streamline fluted drainers. Large, almost oval bowl. Double drainer has off-set tap positions. Single drainer right or left handed. In white or cream.

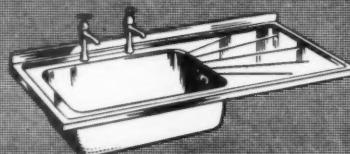
MODEL MP 54 18T (Vitreous Enamel)
DIMENSIONS 54" X 18"

Lustrous porcelain-enamel on pressed steel with bevelled anti-drip rim. Streamline fluted drainers. Large, almost oval bowl. Double drainer has off-set tap positions. Single drainer right or left handed. In white or cream.



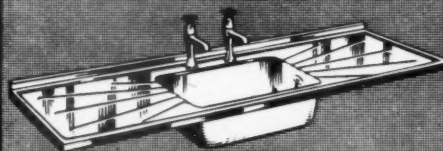
MODEL MPS 54 18 T (Stainless Steel)
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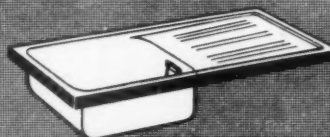
MODEL S 11 (Stainless Steel)
DIMENSIONS 42" X 21"

Gleaming stainless steel with anti-drip rim and rear flange for wall bedding. Right or left handed.



MODEL S 17 (Stainless Steel)
DIMENSIONS 63" X 21"

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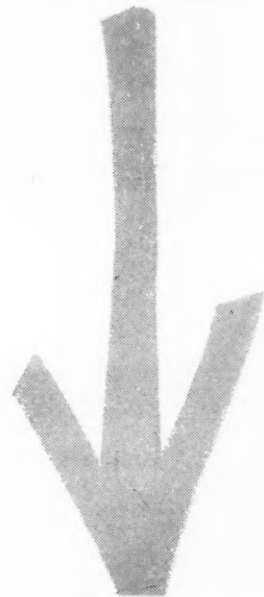


MODEL ROL 36 (Vitreous Enamel) DIMENSIONS 36" X 18"

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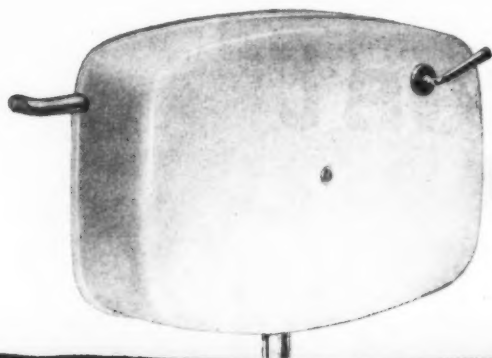
For Architects. "Central Heating for Houses." This 120-page survey of solid fuel central heating outlines the various systems available, from the open-fire-and-back-boiler to the latest small-pipe system. Copies 2/6 each. Write to the Coal Utilisation Council, 3 Upper Belgrave Street, London, S.W.1, for this booklet or any of the following publications:

List of Approved Domestic Solid Fuel Appliances, Warmer Homes with Solid Fuel, Fuel Stores for Houses and Flats, Building for Warmth—all free; and for 1/6—Correct Fixing of Domestic Solid Fuel Appliances.



Compare the Running Costs! This table shows typical comparative costs for different fuels. These have been calculated for a 3 bedroom house of some 1000—1,200 square feet and are those of an *average* week's heating and hot water supply during the 30-week heating season. Fuel prices vary, of course, and local costs can easily be calculated from those given. If you would like the data on which these figures are based, write to the Coal Utilisation Council, 3 Upper Belgrave Street, London, S.W.1.

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*Gas and Electricity costs exclude Standing Charge		

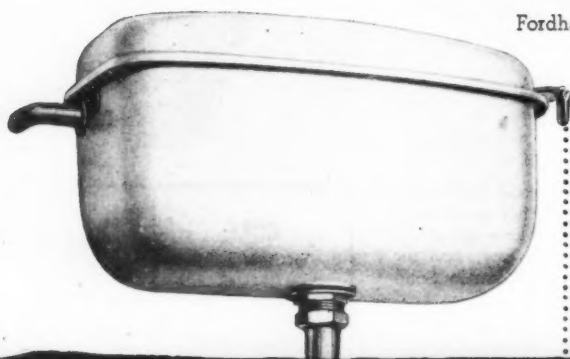


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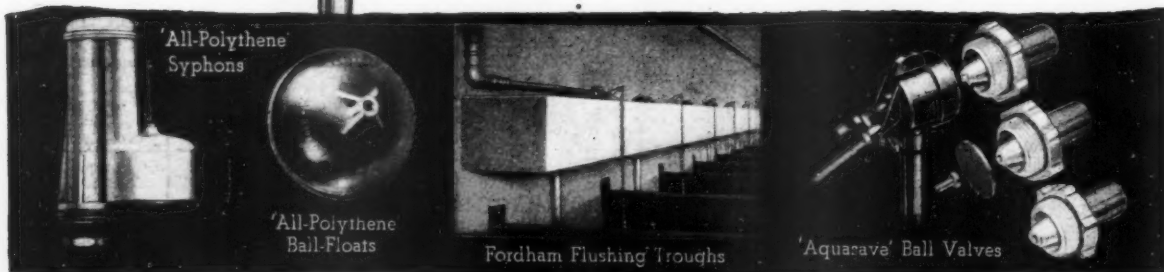
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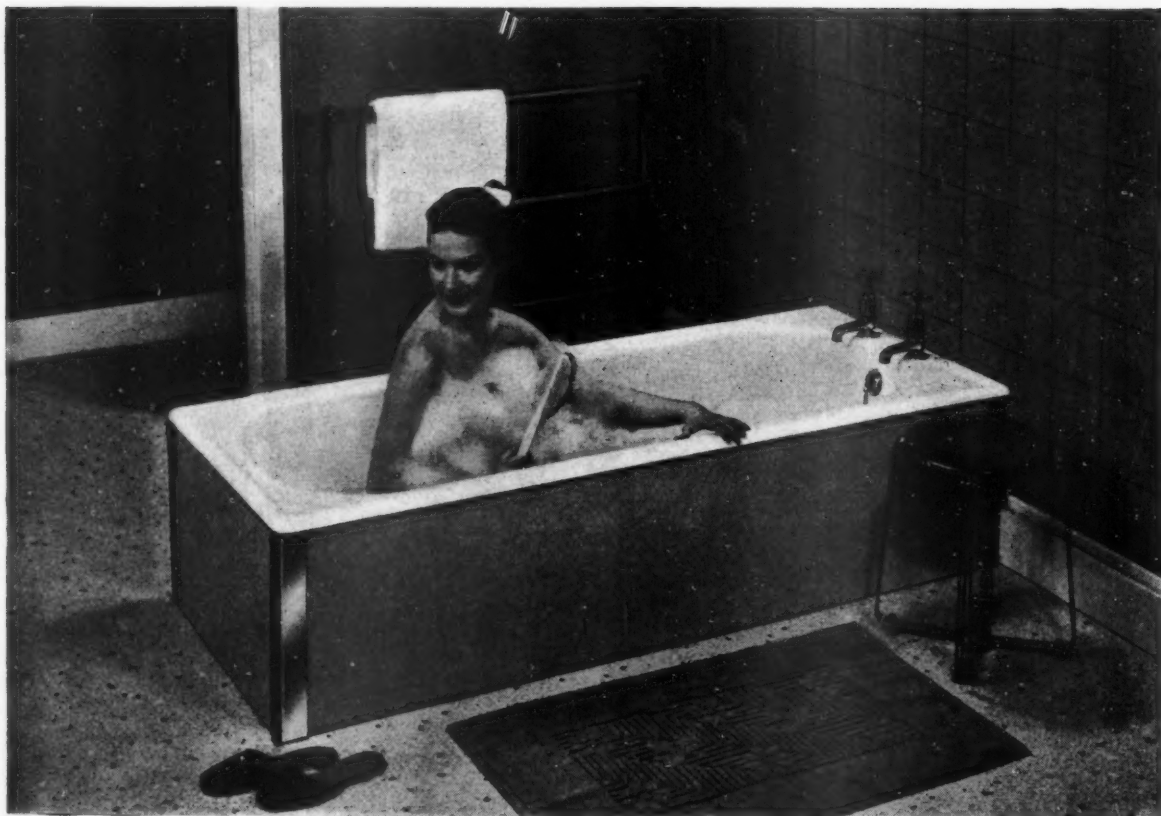
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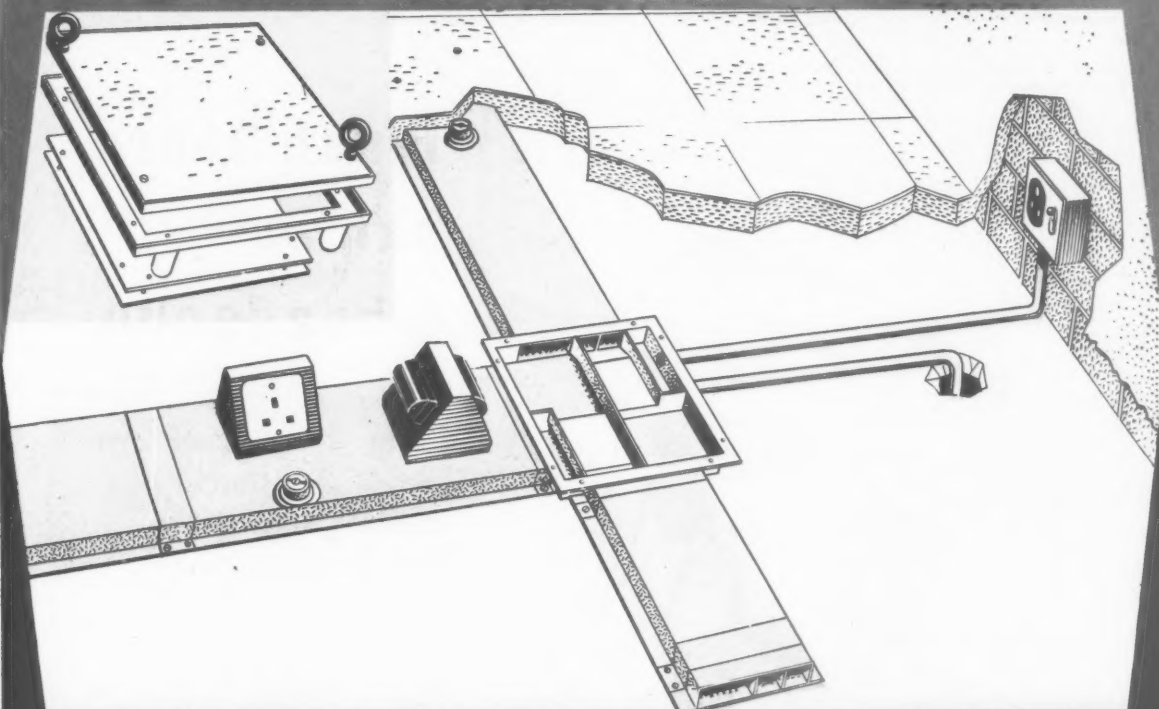
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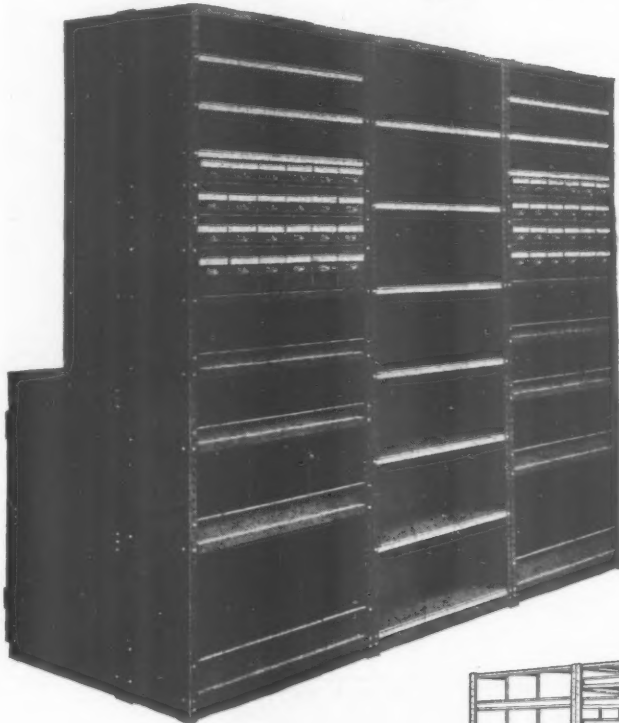
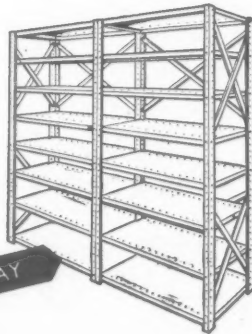
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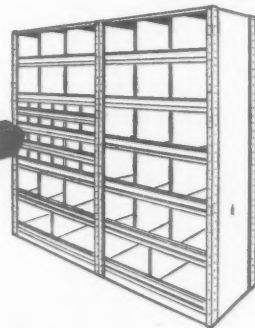
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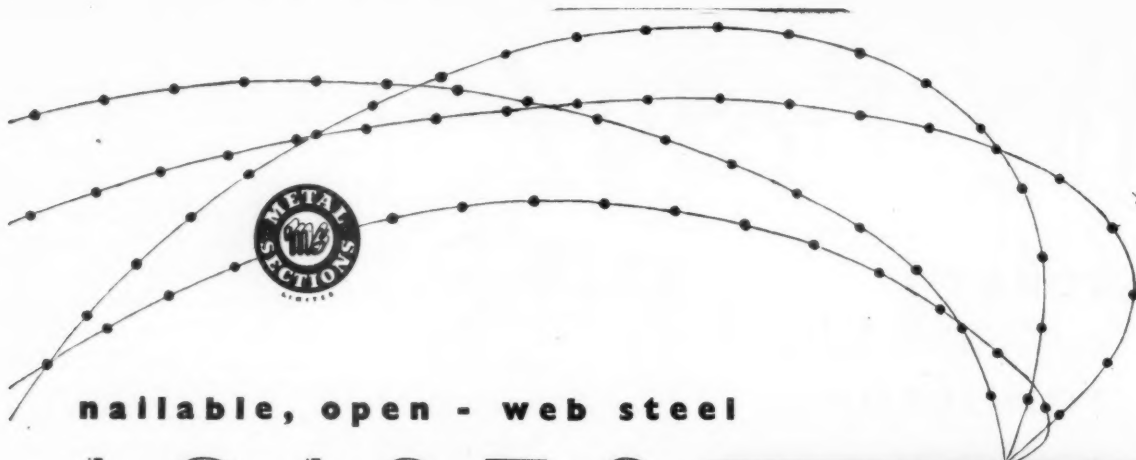
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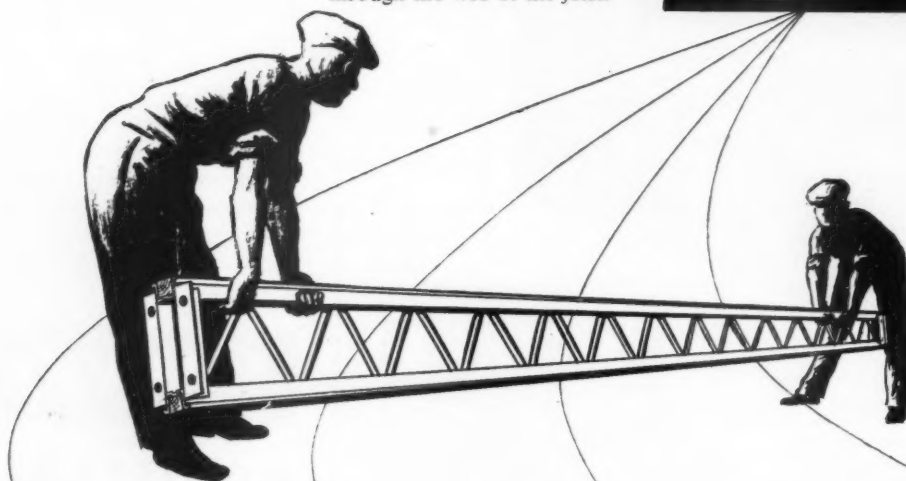
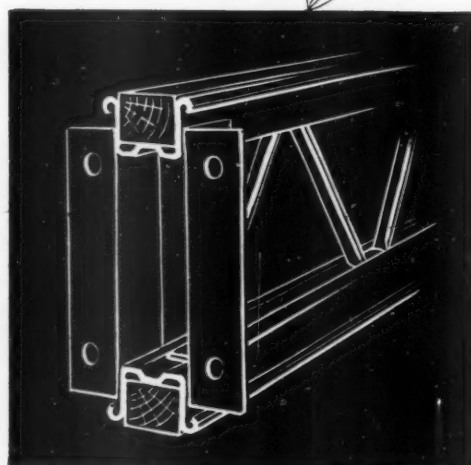


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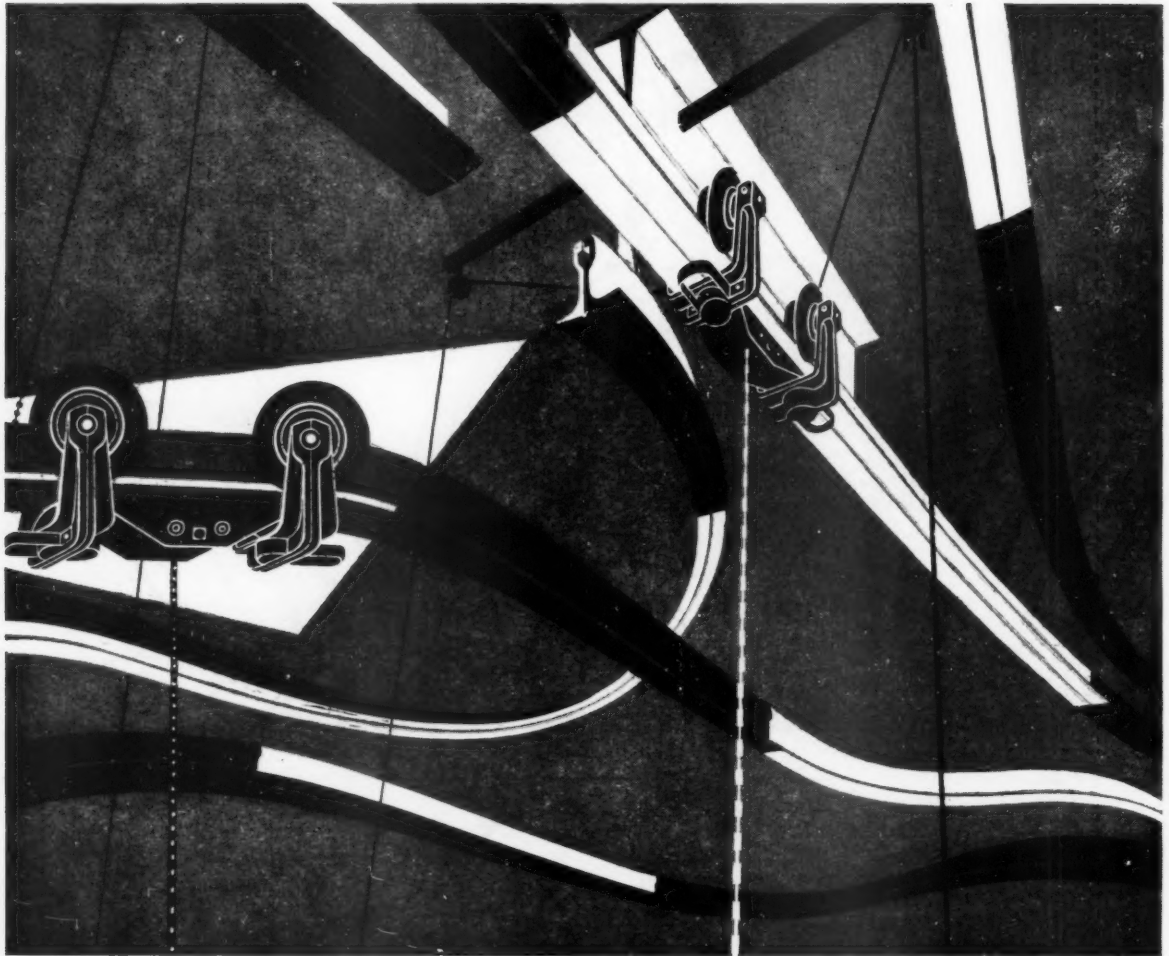
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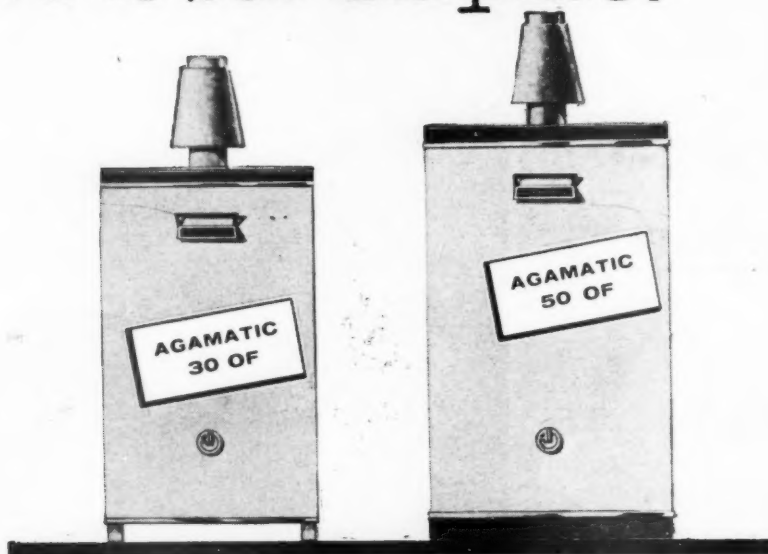


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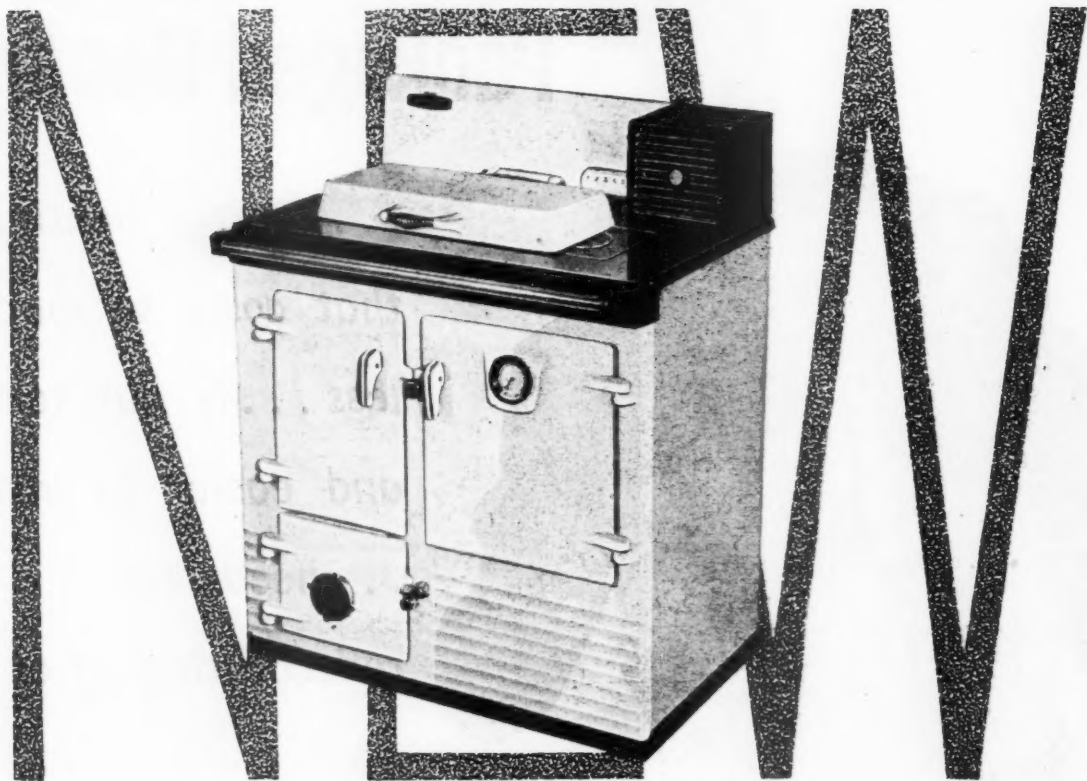
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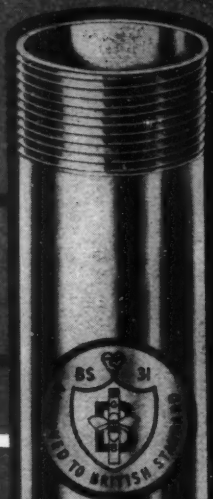
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The height of SPUR brackets can be altered without the use of tools whenever storage needs change. Alignment is automatic. Both right-angled and slanting brackets are available.

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No upright supports at front or side are needed with SPUR. This means a more pleasing design as well as easier access to shelves.

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Uprights are available in lengths up to 94½ in., and brackets are supplied in seven standard sizes up to a maximum of 18½ in. Loadings have been calculated for each size, and the largest will support 1½ cwt.



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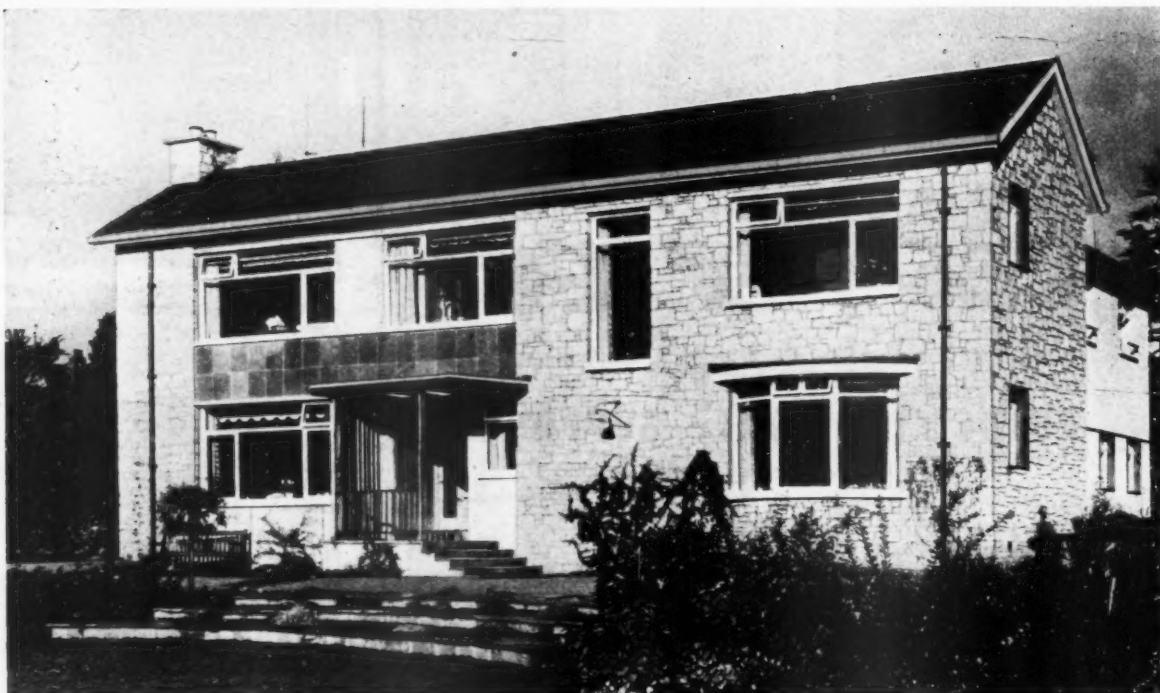
The uprights are easily screwed to walls, but where free standing units are required with shelves both sides—in libraries or storerooms for example—double-sided uprights can be used. Special collars are available for fixing uprights to the floor and ceiling.

ATTRACTIVE FINISH

SPUR uprights and brackets are attractively finished in four standard colours: Willow Grey, Terra Cotta, Frost White and Jet Black. Alternatively they can be nickel or chromium plated, zinc sprayed or galvanised when required for special service.

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A full range of accessories such as shelf straps and book supports give the SPUR system added flexibility.



'Rose Hall', Dunbartonshire, is the home of Mr. W. B. Gardner Henderson. However severe the weather, 'Rose Hall' is always beautifully warm—oil fired heating was chosen to make sure of that. Fuel for the oil fired system is supplied by Scottish Oils and Shell-Mex [Ltd., through their local Authorised Distributor.] **ARCHITECT:** Baron Bercott, B.Arch. Dip. C.D., A.R.I.B.A., A.M.T.P.I.

Modern throughout— Rose Hall, Dunbartonshire has oil fired heating

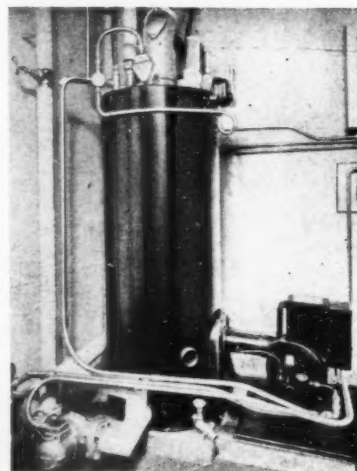
'ROSE HALL' gives its owner, Mr. W. B. Gardner Henderson, a glorious view of the Firth of Clyde. And plate glass windows have been fitted to ensure that there is no distortion of this magnificent view. The house owes its name to one of Mr. Gardner Henderson's main hobbies, the cultivation of roses. Modern in every possible way, 'Rose Hall' is kept warm and clean by the most modern of all heating systems. It has *oil fired* heating.

Oil firing in this house provides warmth efficiently and with no trouble at all. Room temperatures are controlled automatically. And the same boiler (see small illustration) supplies all the domestic hot water. During the summer the central heating can be turned off, still leaving the hot water supply in operation. With oil there is, of course, no stoking—instead the oil is gravity fed from storage tank to boiler.

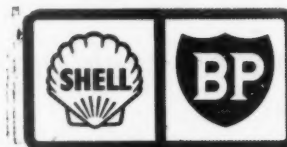
Oil is a clean fuel. When it is supplied by a Shell-Mex and B.P. Authorised Distributor it is supplied promptly. Bought in bulk, oil is a surprisingly economical fuel. Running costs for oil fired automatic heating are normally very low in comparison with those of other fuels doing the same job.

Oil firing is suitable for nearly all homes, regardless of size or age. It is ideal for full central heating, partial central heating, or for hot water supply only. There are two grades of fuel oil for domestic heating, Shell Domestic Fuel Oil which is correct for the 'pressure-jet' type boilers and BP Domesticol for the 'vaporising' type units.

If you are interested in the construction, design or modification of any house or public building and would like to know more about the costs and practical application of fuel oil, please write to Shell-Mex and B.P. Ltd., Sales Promotion Dept. AJ.26, Shell-Mex House, Strand, London, W.C.2.



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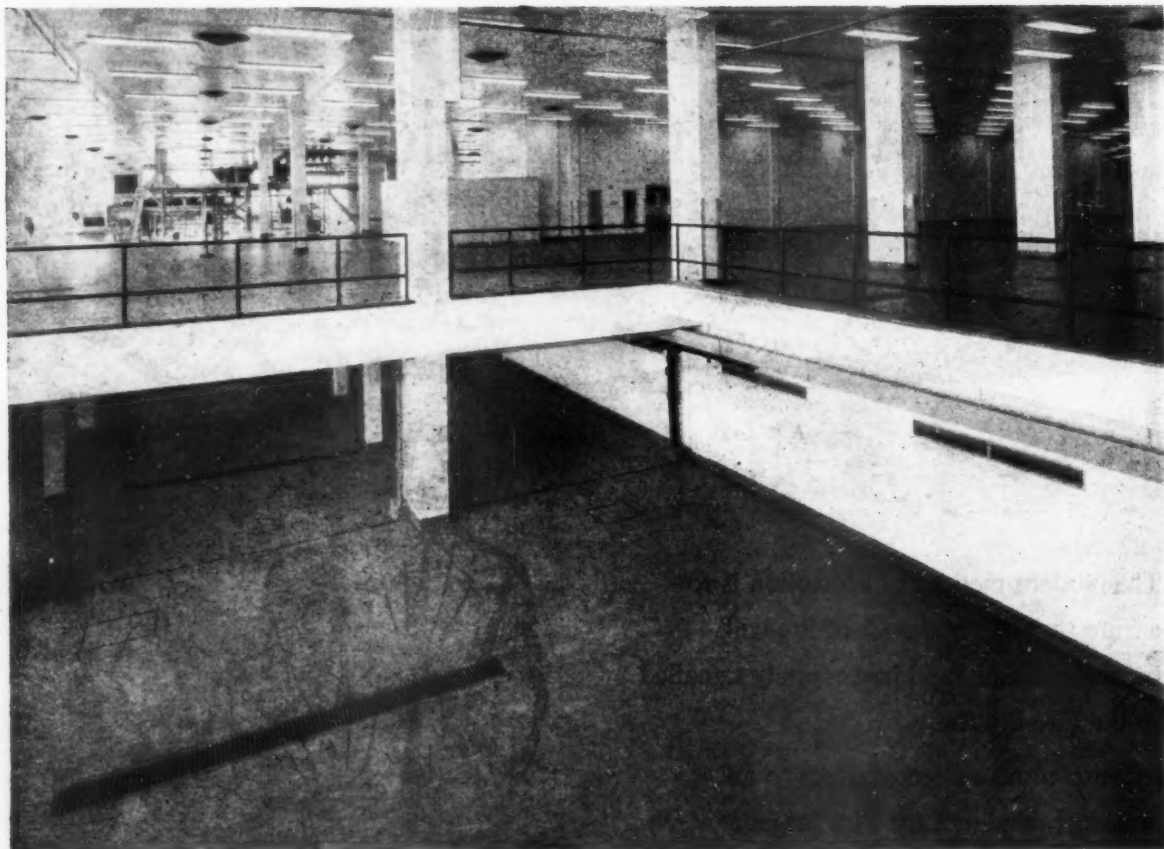
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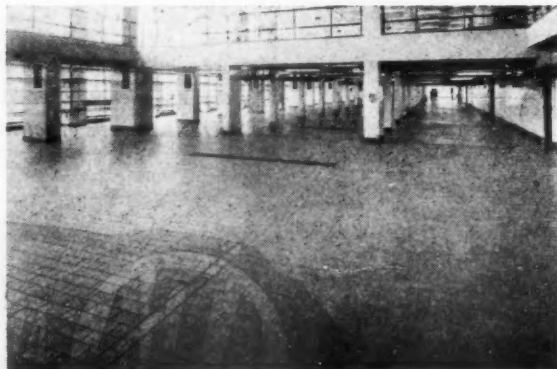
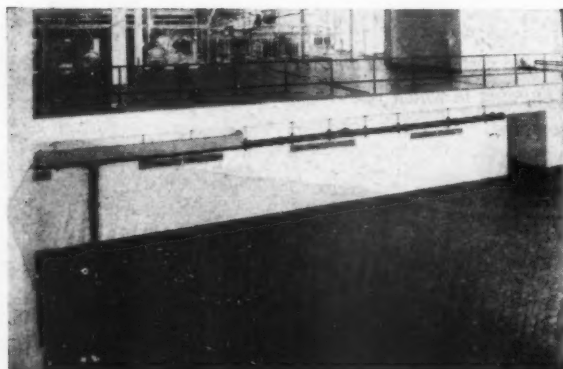
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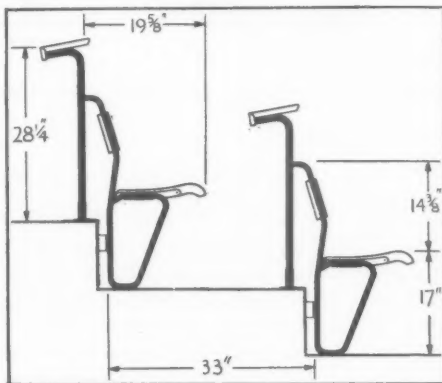
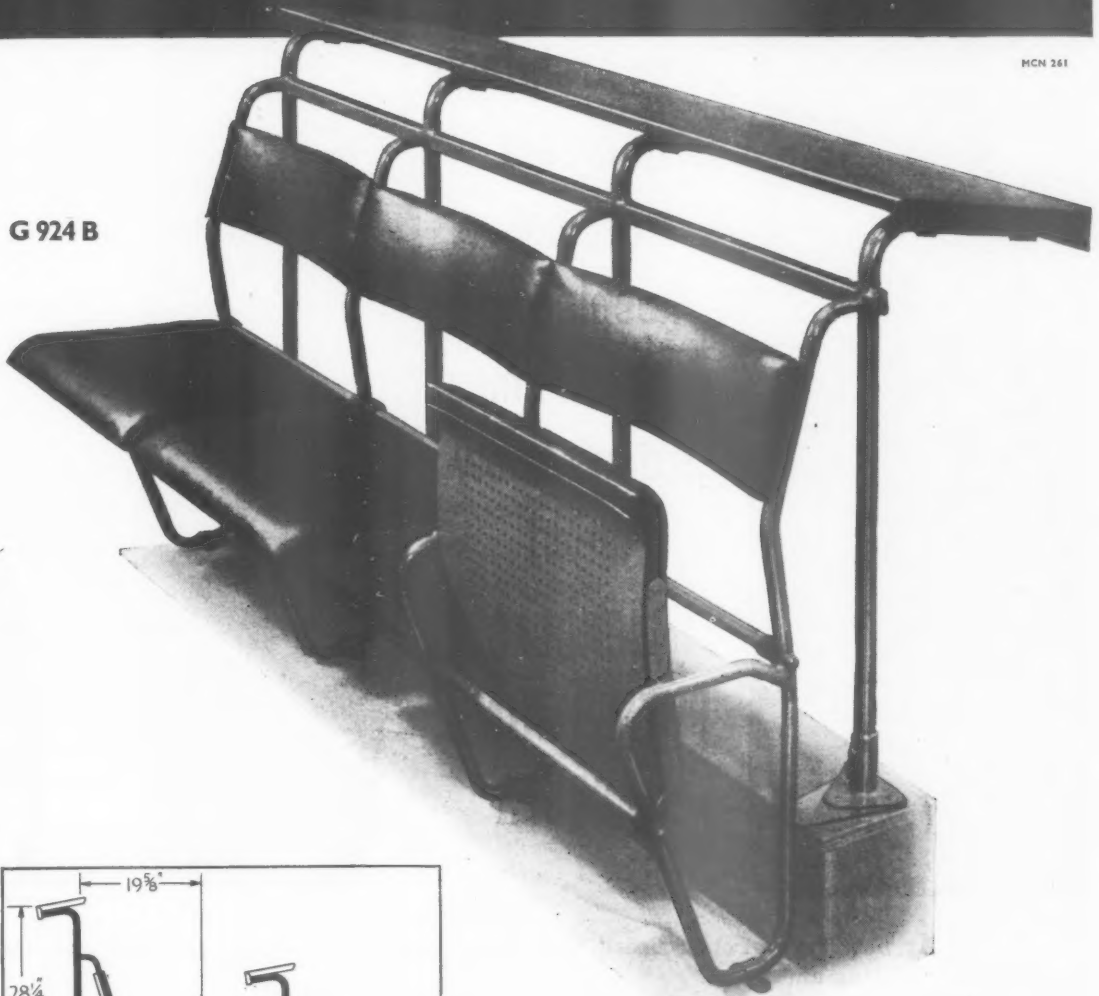
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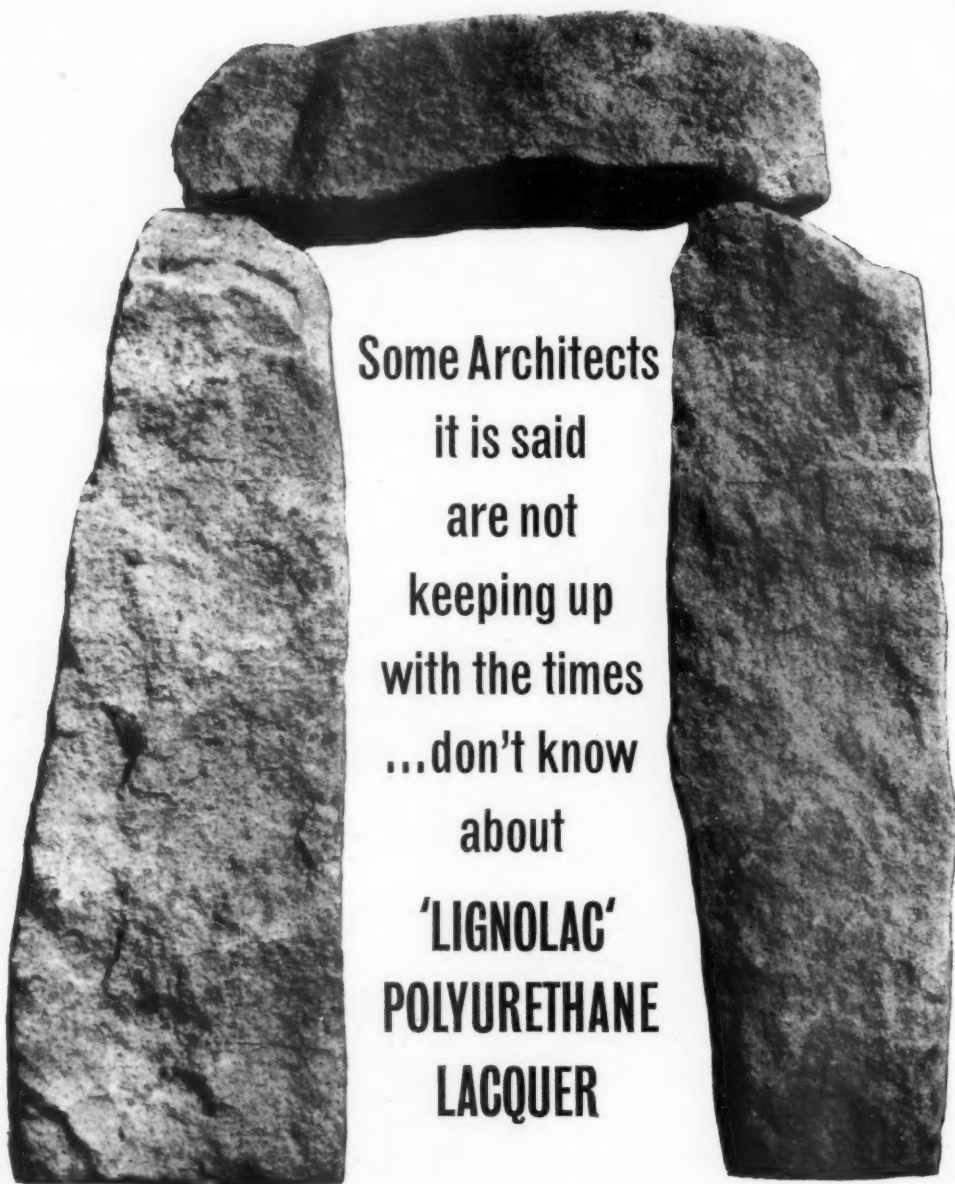


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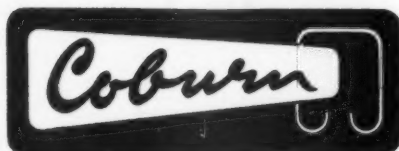
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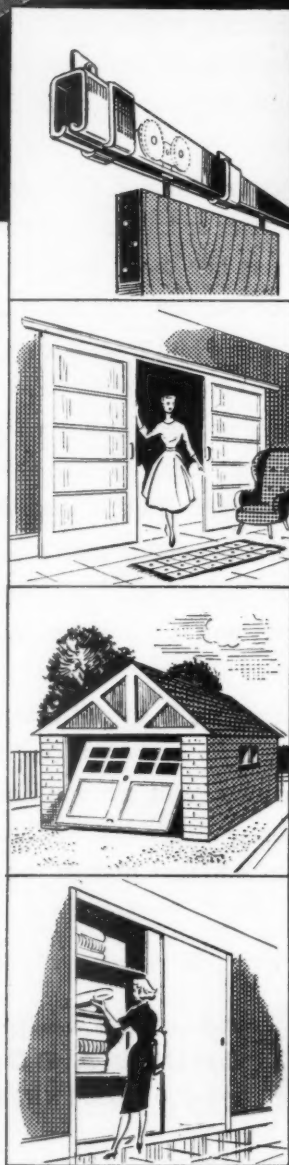
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It is illogical to ignore the local brickworks when there is a glut of cheap bricks and expect to find them still ready to execute orders when the supply position gets difficult.

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Give preference to your local brickworks when they need your orders, and they will be there to serve you when you really need them.



Issued by The National Federation of Clay Industries, Drayton House, London, W.C.1

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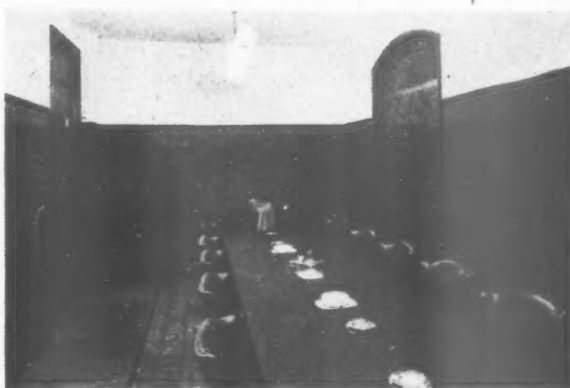
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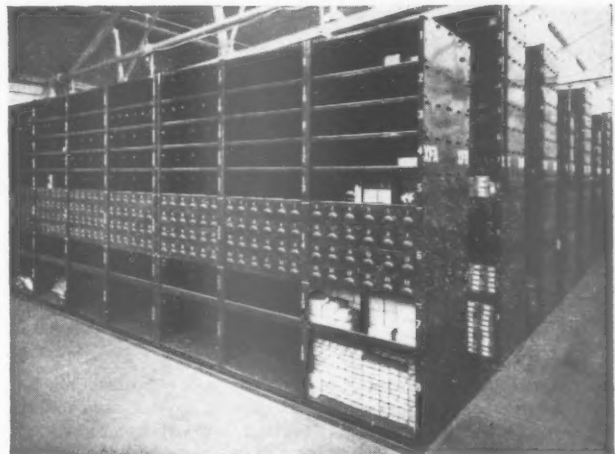
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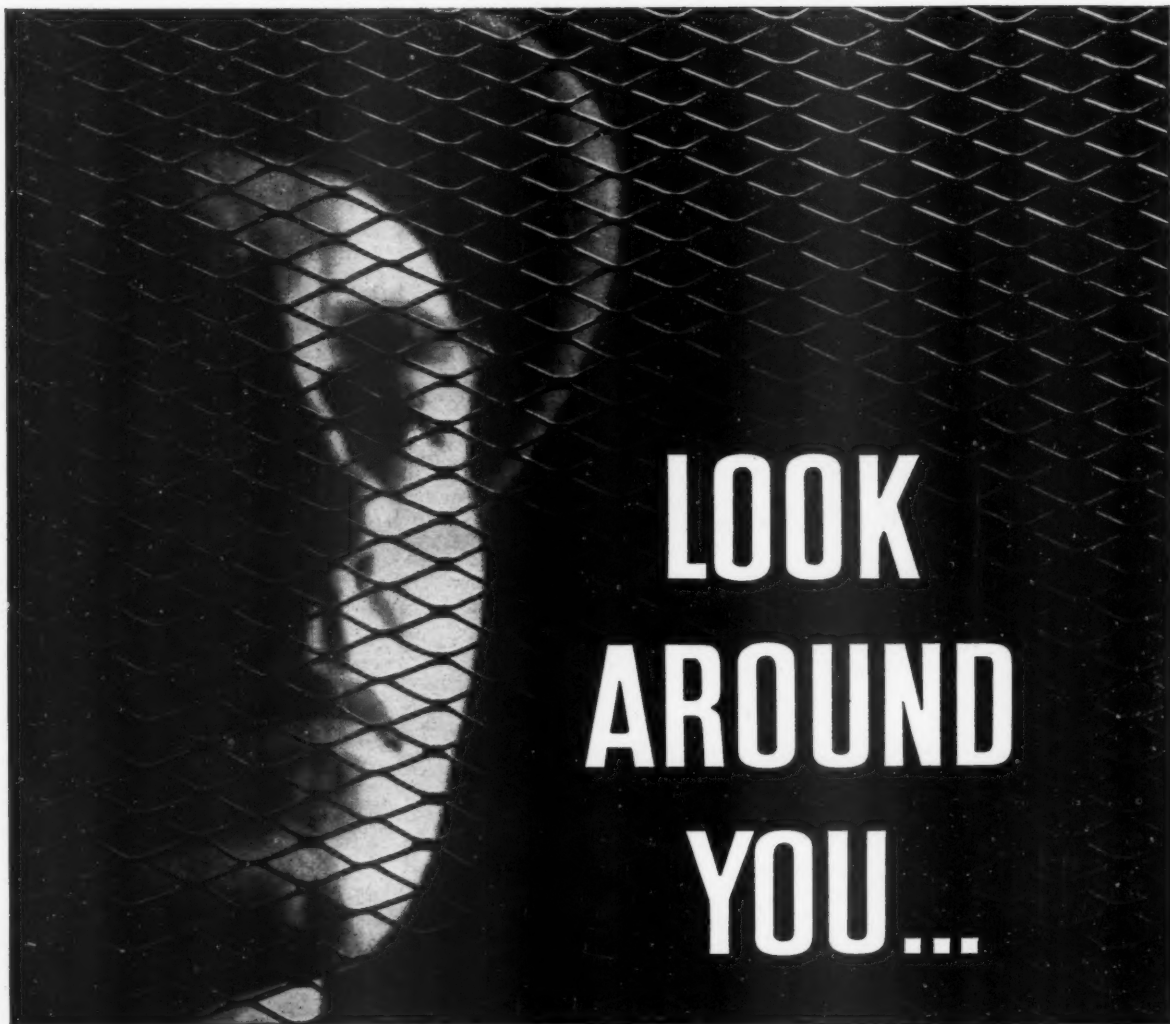
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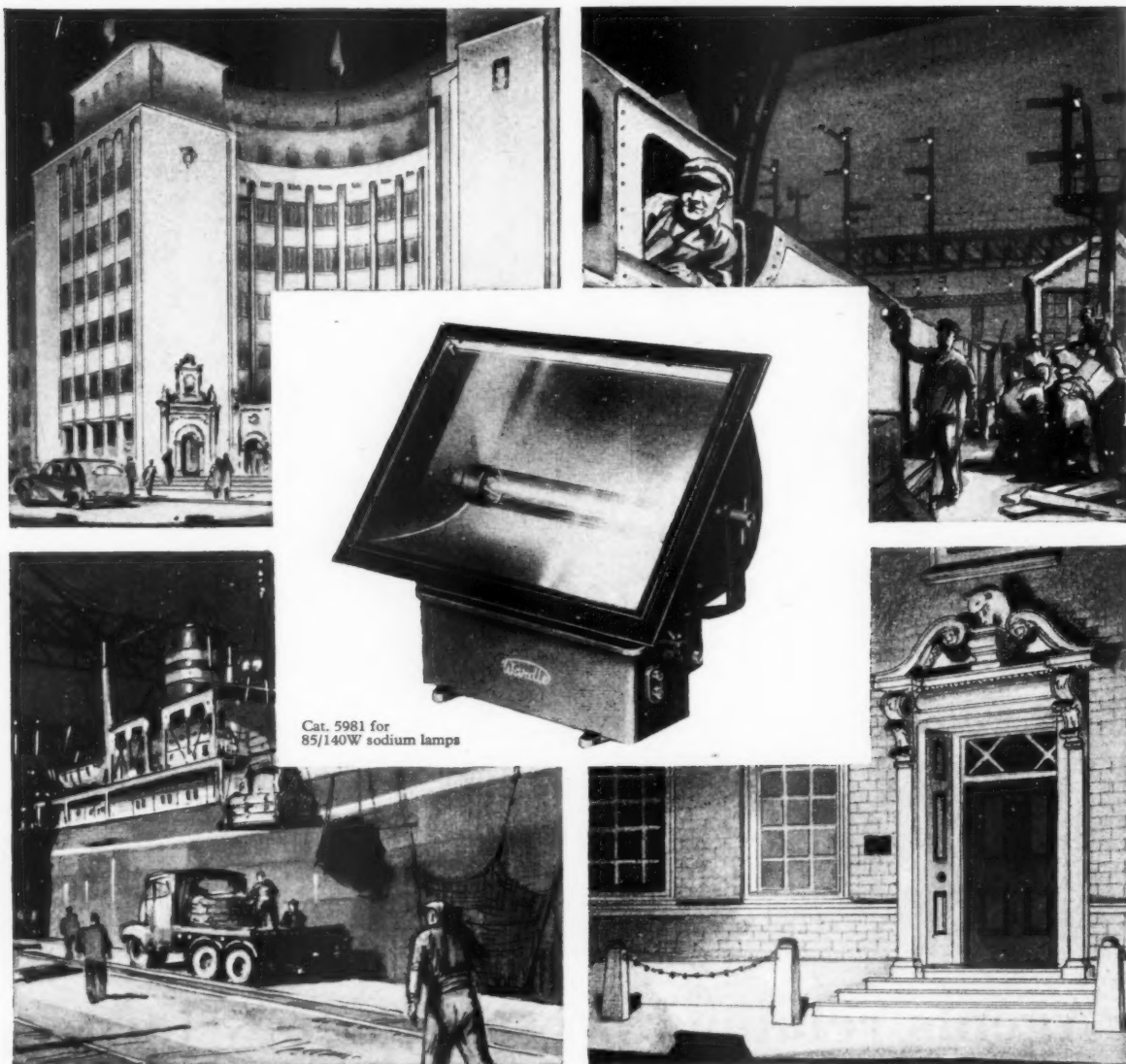
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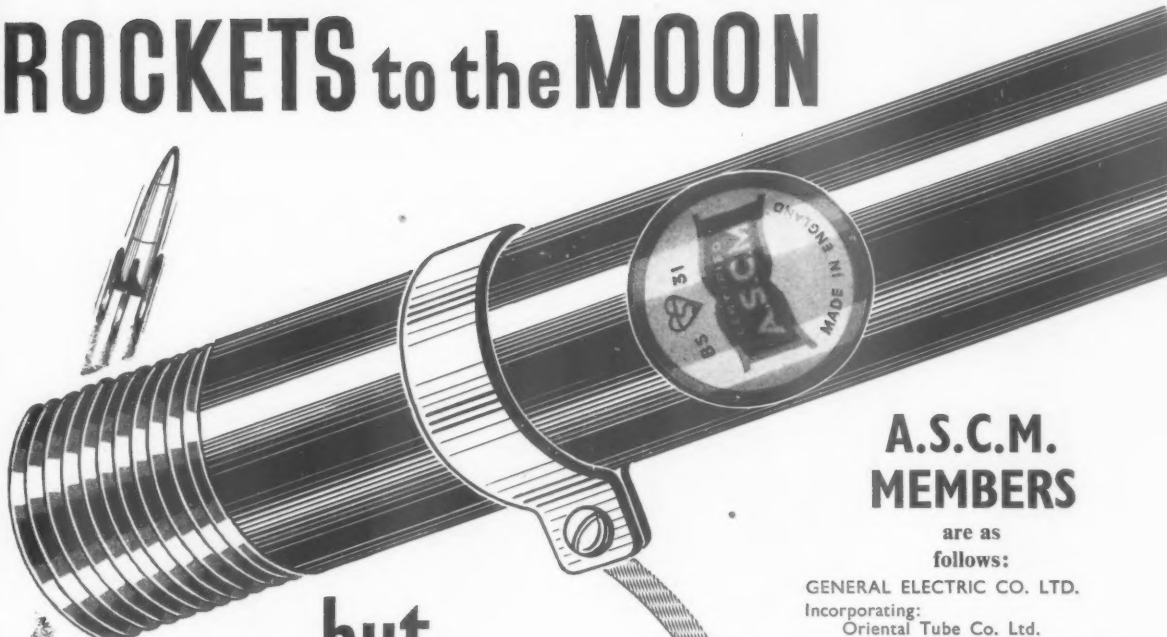
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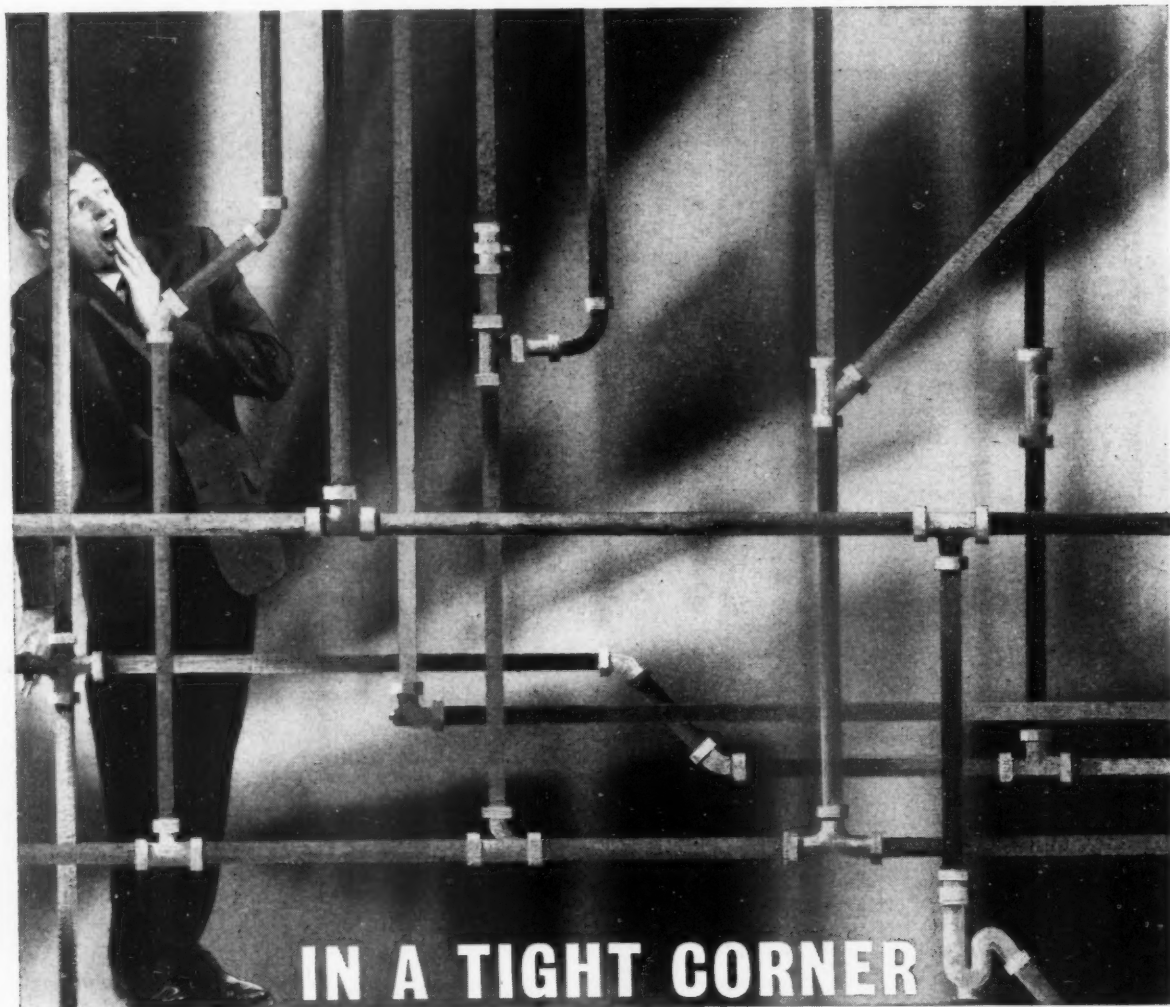
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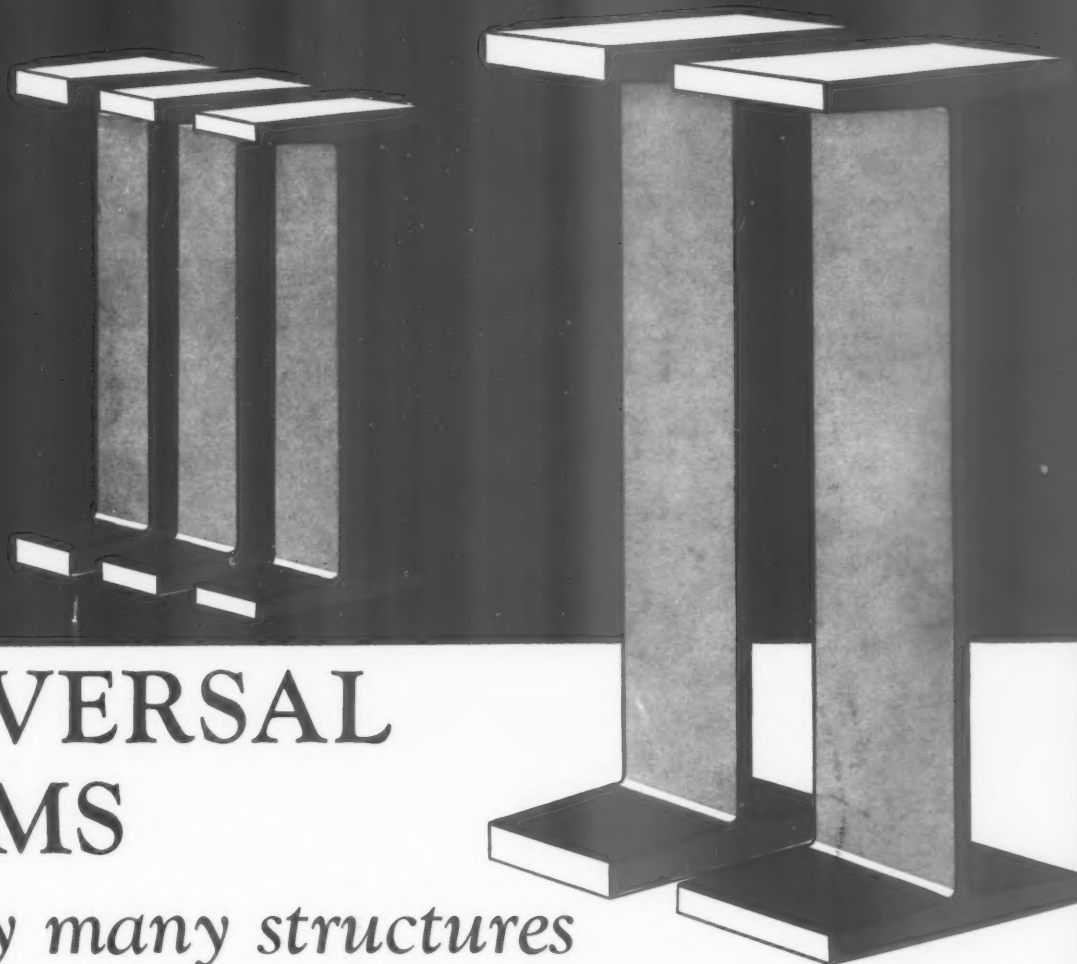


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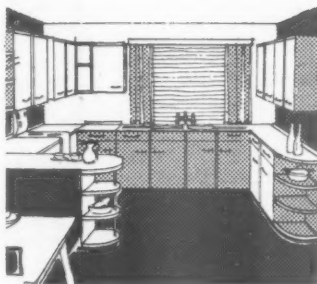
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The Architects' Journal

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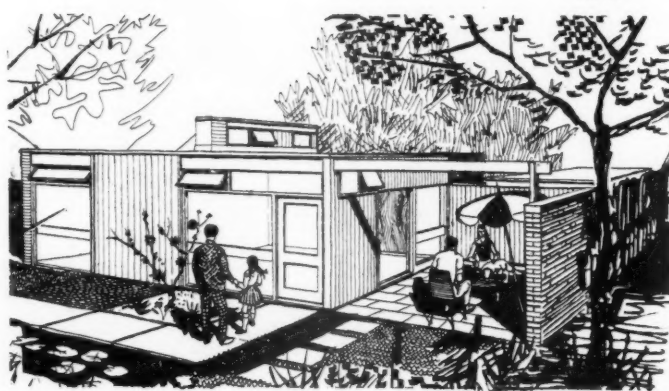
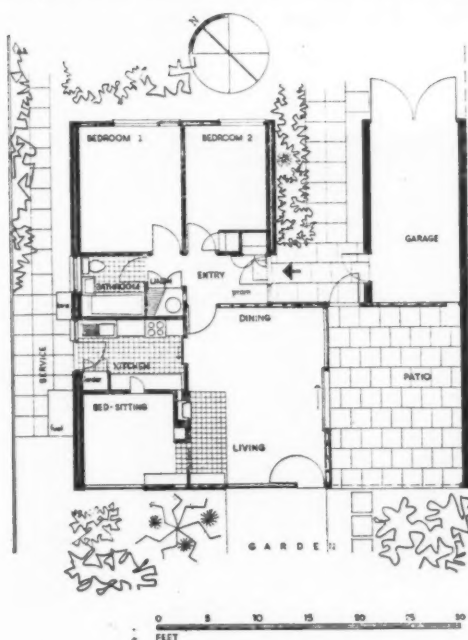
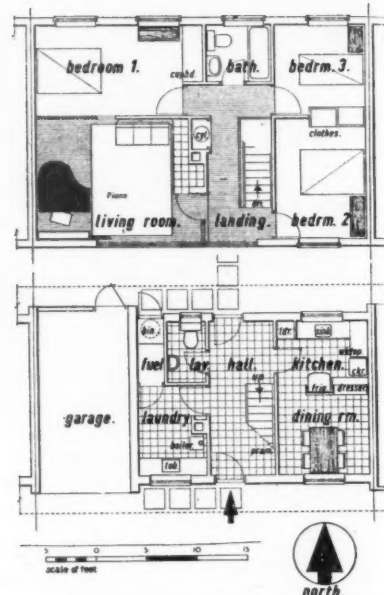
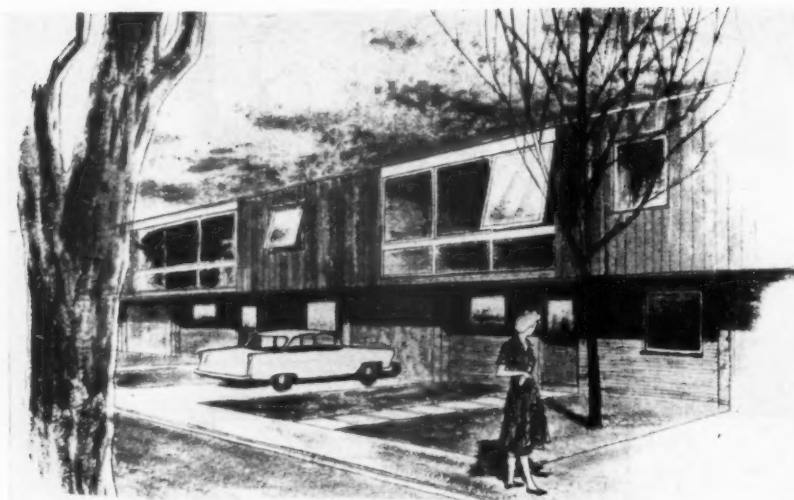
What Are They Talking About?



Sir John Summerson and Osbert Lancaster discussing a knotty point in the history of Regency architecture—or, alternatively, trying to work the five-cigarette-trick.

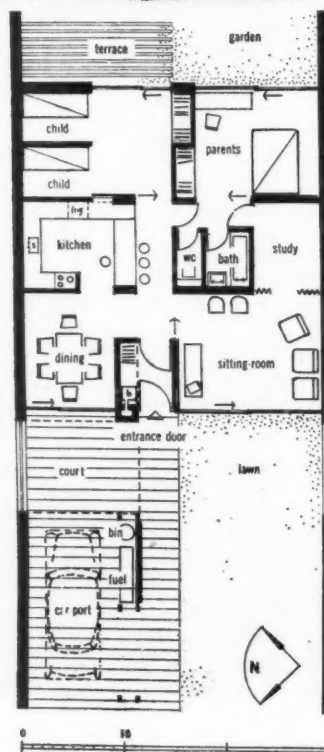
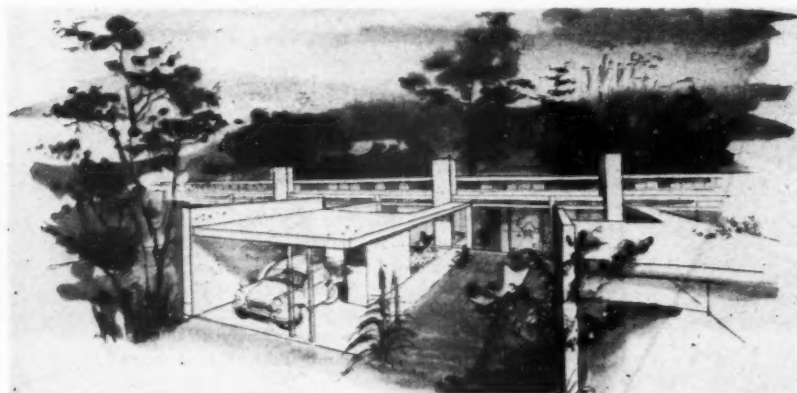
I speak from the country. By the "country" I mean the actual village green, the smell of tractor fuel and the call of the cuckoo.

There must be many others like myself who have long since ceased to travel regularly to and from the big city. Student days are past, the voices of the great are restricted for us to the odd lecture on the Third and Sir Hugh Casson at the local meeting place. Our thoughts of tremendous fame and timeless architecture have slipped back into the inner recesses of our spinal disks and tenderly we flourish, only just, on alteration work and hopefulness. What then is there to bring us contemporarily up to date during those brief moments of time when



A New House and a New Way of Life

The houses shown on this page, taken from among the 30 winners of the RIBA/Ideal Home small house competition (see also Leader, opposite and pages 152 and 153) illustrate the two kinds of contribution which the competition has made to small house planning. The one at the top, by James Watson, rationalizes the traditional house—in this case the terrace house. The one above, by Kevin Campbell and the one below, by J. M. Austin-Smith and Partners, offer with their internal views and enhanced privacy what is really a new way of life.



there is unaccountable silence from the telephone and floor space free of linoleum samples?

The answer is the weekly appearance of that tubular piece of mail, the AJ. Consider a typical issue, J. M. Richards presents a new expression, it is Academy time again, Dargan Bullivant is still at it. And what about those photographs of pubs—no not those—I mean the ones with architects in them and planners and Catenary Wilhelmsson the latest sensation from Central America.

Those conversations interest me no end. What are they talking about? Is Wilhelmsson really telling Basil Spence how his first concrete office furniture came to pieces in his hands because the natives flogged the cement content to the insurgents? Of course he isn't, the subject is clearly yachting. What has Frederick Gibberd so hurriedly stuffed into his jacket pocket? Could it be the sketch plans for Reykjavik engine sheds or is it, as I suspect, a packet of Carter's early flowering verbenas? Have a look at Donald Gibson—the photographers assistant was pretty quick there wasn't he? Notice the hands. You think he is making some weighty architectural point don't you. I suggest that exactly one second before the plate was exposed that upraised hand held a tin of a little known brand of shoe polish. W. Tatton Brown has clearly never heard of it and is sceptical. Cleeve Barr, I am afraid, has seen the trick before and would rather be elsewhere.

And what about that curvilinear tracery in the background, that row of bottles on the high shelf, that dampish mirror. Haven't we seen them all before?—get out the old photographs—but yes of course *The Pride of Finmark* that admirable haven, that ghastly drain on the Editor's expense account.

But wait my dears you must not look so abso-bloomin-lutely parabolic. These are the thoughts of a country mouse who simply loves to see the genuine gossip in *ASTRAGALIAN* print and inter-tavernal pictograph.

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Exhibition of Work by Gwyther Irwin. At Gimpel Fils, 50 South Molton Street, W.1.

FROM SEPTEMBER 16

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* To preserve freedom of criticism these editors as leaders in their respective fields, remain anonymous.

The Editors

DESIGN FOR SPECULATIVE HOUSING

LAST week ASTRAGAL upbraided the assessors in the RIBA—*Ideal Home* small house competition for having issued a rather negative report, which gave an unfortunate impression by saying far more about the devastating faults of the losers than about the virtues of the winners. This week, as our report on page 152 shows, we are able to congratulate the assessors on having selected designs which prove indisputably that the better architects can design very much better houses than speculative builders, even when the latter employ architects.

It is significant, however, that of the ten designs so far selected by builders who are erecting the show houses to be exhibited by *Ideal Home* in the spring, only two are of the class which make a real departure from traditional suburban conceptions. We hope that *Ideal Home*, the RIBA, and the Federation of Registered Housebuilders will exercise such influence as they command to get all the 30 winning designs built. It would be a tragedy if the conservatism of the builders frustrated the aims of the promoters of this competition.

There is still much that can be done to ensure that the competition marks a real break through in the speculative housing market. The Building Societies' Association should, without delay, state that it is recommending all its members to grant maximum mortgages on all the *Ideal Home* designs. The MOHLG could also indicate that, subject to satisfactory siting and layout, none of the designs should be rejected by local planning authorities on aesthetic grounds. *Ideal Home*, we hear, may advise all those who buy the designs that an architect should be responsible for layout on the site and for supervision of construction. This is admirable, and if it were made a condition of sale would take us appreciably nearer the day when all estates are both designed and laid out by architects. The greatest weakness disclosed by the competition is the failure of the architect to emerge as a great saver of cost. The demand for houses is so great that the spec. builder can sell almost anything if he gets his prices low enough. The competitors concentrated on the higher price range, and the prices quoted are necessarily suspect until prototypes have actually been built. Only when the architect is the leader in cost, as he is in the US, will the spec. builder decide that he cannot afford to do without the architect.



BELOW THE BELT

Nobody but an architect would want to look at the thousand or more plans in the *Ideal Home* exhibition of small house competition designs at the Building Centre. But a rival show last week—the *Homefinder* new homes display at Central Hall—was organized by spec. builders for the house-buying public, and brisk business was being done. Although the standard of design was well below that of the winners of the *Ideal Home* competition it was clear that more and more builders are employing architects, modern clichés or (rather timidly) advanced designs. There was, for example, an agreeable, well-landscaped block of two-storey flats to be built at Wokingham to the design of H. Werner Rosenthal.

*

The worst thing about the exhibition was the evidence of continued suburban sprawl. The catalogue listed about 200 estates, giving for each the travelling time from London and the season ticket rate. The green belt may be more or less intact, but as the commuters leapfrog over it the country beyond it is rapidly filling up

ERIC, OR BATTLE BY BATTLE

In spec. building there is no one to beat Span Development whose latest houses, by Eric Lyons, were shown to the Press last week. These well-landscaped houses at Hallgate, Blackheath,

have some new selling points, such as electric underfloor heating, and as usual sales came quickly on the announcement of building.

*

I do feel, however, that people who are paying nearly £4,000 are entitled to rather better detail and finish than was to be seen in the show house. It was amusing to see Span and Eric Lyons thumbing their noses at authority in Keith Godwin's sculpture "The Architect in Society" (see pictures), although not clear what brilliant solutions the town planners had placed beyond Eric Lyons' embattled reach.

WHAT WERE YOU DOING?

The spate of nostalgic reminiscences on the 20th anniversary of the beginning of the World war prompted me to glance over the AJ for September 7, 1939, our first wartime issue. The AJ had lost no time in getting into uniform, beginning with a leader exhorting architects to keep cheerful and do something useful for the war effort in the days ahead of "no work and exceptionally small incomes." The editorial and advertisement departments had taken refuge in the supposedly safe region of Cheam, while ASTRAGAL had joined the Auxiliary Fire Service, and noted that the appearance of many municipal buildings was greatly improved by the application of sandbags—a treatment, he hoped, that might be retained after the war.

*

The years of controls were ushered in with the Iron and Steel Control Order, and a circular on the repair of war damage was published. There was a topical note on a British Standard Specification for chemical closets in air raid shelters and a photograph of "the new Consol shelter"—a steel sentry box affair. Reading the list of current market prices has much the same effect today as reading a pre-war Fortnum and Mason's catalogue. The buildings illustrated, a police station at Tooting and a block of flats at Hampstead, were appropriate to the end of an epoch, and the Working Detail (an ingenious world mercantile shipping map by Mischa Black for the New York World Fair, with 9,638 model ships on it) looked ideal for Winston Churchill at the Admiralty, however little relevance it may have had for war-time architects.

NOT THE OTHER PLACE

I was glad to hear John Betjeman putting in a good word for that pleasant, bustling city, Glasgow, in the Home Service last Sunday. I wish, though, he had given his own word picture of the place, instead of being caught up in a too-rehearsed conversation with a local journalist, Jack House. I know the BBC thinks it is more tempting for people to listen in to someone else's conversation than to be talked to themselves. But I found it very irritating to hear Mr. House and Mr. Betjeman forgetting to pretend they hadn't got to know each other very well before the programme. And when Mr. House threw in some of that coy, local-pride stuff—"We claim to have vulgarity in Glasgow all right"—I almost began to dislike the place.

*

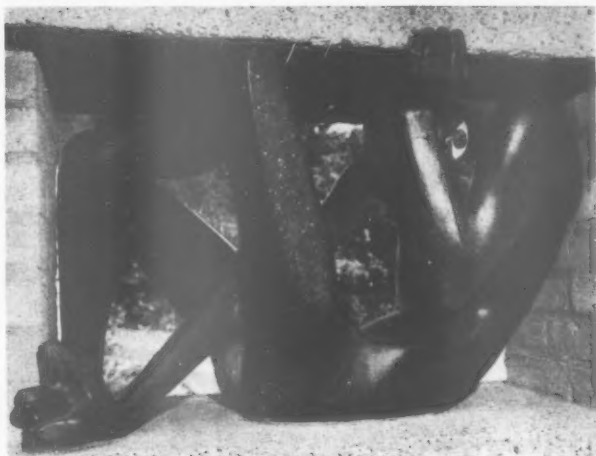
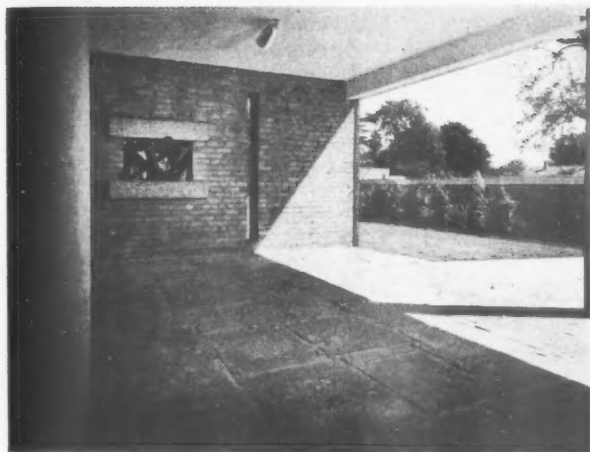
However, Mr. Betjeman managed to work in a lot of facts about the "influence" of Gibbs, Comper and Burnett (Selfridges was cited) on English architecture, by which I suppose he meant simply that these Scots designed buildings for England. He ended with a nice description of Glasgow as the "epitome of the two sides of life." I'm sure a lot of people who don't know the city will have been surprised by this enthusiastic quarter hour. I should like to hear a repeat performance—a solo one from Mr. Betjeman, so he doesn't have to ask for architectural dates he knows very well himself.

CRIT CENTRE

I've mentioned before that the Institute of Landscape Architects intends to establish a landscape design centre at its new headquarters in Portland Place. I find that the term "design centre" is really too ambitious. What it means is that senior members will give a crit once a fortnight to students working—either individually or in teams—to an agreed programme. This would help university students studying for their final (Peter Youngman's course at London University College doesn't go further than Inter standard) and would be especially helpful to students working on their own. It is a useful beginning and I hope bigger things will follow, including a centre where landscape design could be effectively shown.

BUT NOT HEARSE FOLLOWERS?

"Compared to the medical profession, we are no longer the diagnosticians,



but rather the ambulance chasers." That is what architect Edward Stone told his audience at the annual convention of the American Institute of Architects, in a talk which included an "action programme." One of the best points he made was on the question of motorways. "Why," he asked "should the great oil and automotive industries of this country not try to resolve some of the problems they have created? Why cannot they be shamed into planning studies of our countryside, our villages, and our cities? To such great corporations the financing of such studies would be peanuts. They could be induced by us to finance such studies since the destiny of the individual and the future usefulness of the motor car are deeply involved." That is sensible stuff and, with the possible exception of the peanuts, the same questions should also be asked in this country.

CANNED WISDOM

It was a good idea of Eric Bird and the Building Centre to send tape recordings and a film strip, instead of lecturers, to the furthest corners of the British Isles. The lecturers themselves will last longer if they don't have to travel so much and a great deal of tiresome social rigmarole can be done away with. The first talk to be canned in this way was by Basil Spence on Coventry Cathedral. The second contains an up-to-date version of Bill Allen and Edward Mills doing a cross-talk act on curtain walls. Listening to this last ASTRAGAL asked himself the question, "Is this entertainment or instruction?" But that is the question which allied societies of the RIBA are always asking themselves anyway.

Span Developments commissioned this (realistic?) piece of sculpture by Keith Godwin which has been installed in their new Blackheath estate. According to the blurb "it depicts with rare and wry humour the architect's real position today under pressure on the one side by the needs of a society, on the other by the restrictions of planning authorities. And with his clear uncluttered vision of what should be poised Tantalus-like out of his reach." The poor chap looks, however, as if he's trying to grab his foot with that elongated arm and hand—no doubt in order to put it in his mouth. Any other interpretations?

The talk rolls agreeably on without making great demands on listeners: there are perhaps rather too many slides and too little relation between what is being shown and what is being said, but the thing is well done and worth doing. At one stage Eric Bird's gravelly voice chips in with the question, "If curtain walls are so much trouble, are they worth it?" This puts the speakers into quite a tizzy. Allied societies or anyone wanting to borrow a copy must supply a record player or radio gramophone and a 35 mm. projector and must pay return postage. Otherwise there is no charge.

SEEING NONSUCH AS SUCH

Three or four years ago Professor Pevsner set out to follow up a proposal, by another architectural historian, that something should be done about excavating the site of Nonsuch Palace at Cheam, Henry VIII's comic-opera summer residence. From official bodies he got the customary stony answers. "I went to various places to ask informal questions. None could regard itself as responsible for such a dig. They all said private funds would have to be appealed for," he wrote at the time.

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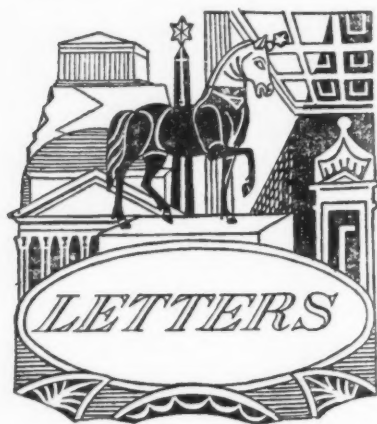
Now, suddenly, the Ministry of Works—one of the official bodies he approached—announces that it has excavated the foundations of the eastern half of the palace, which just goes to

show that it isn't a complete waste of time to go round badgering government bodies. Since the palace was mostly a lath-and-plaster affair, the portable loot from the dig has not been spectacular, but at least the extraordinary ground-plan that can be deduced from the old prints, complete with round towers at the corners, has been confirmed, and in spite of the demolition of the whole building a century or so after its construction, a good deal of its surface detailing has been found—moulded plaster, slate and so forth—as well as a good haul of Royal domestic rubbish such as pots and pans, glass and other sundries. In view of the general popularity of the much-married monarch, as well as the peculiar importance of Nonsuch as England's first complete Renaissance building (1538), it would be a popular move if the Nonsuch Excavation Committee, which has Sir John Summerson for its chairman, would make its conclusions public. This should be done in the form of a rendered perspective (a best-selling post-card?) that would give non-specialist, non-archaeologist eyes an idea of what the palace actually looked like in its hey-day.

APOLOGIA

A word of apology to Alison Smithson: she was, of course, co-designer of the Churchill College competition entry attributed last week to her husband Peter.

ASTRAGAL



B. A. Hodges

R. A. Locke

John Whitehead, Student R.I.B.A.

C. J. R. Ratcliff, A.R.I.B.A.

Cyril G. Runnicles, A.R.I.B.A.

S. W. Milburn, F.R.I.B.A.

The Engineers

SIR: Your correspondent whose letter appeared in the JOURNAL for August 27 has reached a set of conclusions based on misguided assumptions and it would seem essential to correct any false impressions given; more so since Mr. Howells has taken upon himself to speak for "We Troubled Engineers."

Nobody would quarrel with his desire for an engineering Utopia in which all present and future engineers would enter their profession with qualifications of a Mitchell and an Einstein rolled into one. However, I do not believe that even Mr. Howells is willing to send his students on a course of training which would take some nine to 10 years. Such time being the present day requirement if the student is to qualify as a member of one of the Big Three and subsequently join one of the more specialist bodies.

His suggestion that other professional bodies follow the example of the Institution of Water Engineers has no constructive merit at all in that the water engineers having no qualifying examinations of their own must, therefore, have recourse to the examinations and qualifications required by another body. This in my opinion does not make for a specialist.

The IHVE has been an examining body for 38 years and its examinations are on subjects not covered by any other professional body large or small, except in the most elementary manner. It is for that reason that the Institution as a specialist body cannot

accept as a qualification for membership, membership of one of the larger engineering Institutions.

Mr. Howells must face the fact that either the specialist must specialize early on in his training or he must extend his training for a further period after qualifying in some general branch of engineering. The first method is the current approach to the problem and as an earlier correspondent, Mr. Benham, pointed out, the heating and ventilating industry has evolved a system of training second to none.

Developments in science and engineering have been such as to make the general engineer a thing of the past and I believe that no prophetic powers are needed to forecast that the trend will be even greater specialisation in the future. This trend is, I think, being accepted with reluctance by the larger Institutions who are coming to realise that their members can no longer claim to be experts in every field of engineering. Thus it would seem that the smaller professional bodies have, in the future, a larger part to play in ensuring that their members have reached a satisfactory level of education, training and experience in their chosen specialist field. Unity has always existed amongst the professional bodies and this unity can be knit even closer as soon as it is realised that the day of the specialist is here and the general engineer must use those specialists and have recourse to the appropriate professional body when this is called for.

B. A. HODGES

London

What Price Insulation?

SIR: Your comments regarding the relative costs of overhead and underground lines is of importance not only to architects, but also to electrical engineers.

It would seem that the prices quoted are the initial costs of installation. What really matters from an economic standpoint is the cost of maintenance and depreciation. The Minister of Fuel and Power's case would be far more convincing if he gave the relative initial costs of both a 66 and 132 kV oil filled cable system and of similar overhead line systems, which have been in operation for about 20 years, and in addition quoted the cost of maintenance in the two cases, the number of outages and the loss of revenue due to shut downs on the cable and overhead line system.

R. A. LOCKE

Locke and Beal, Consulting Engineers.
London

Why Have a Policy?

SIR: I see that the AJ having finished for the time being with part-time students has started a campaign against competitions. Why must you have an "Editorial Policy"? I would prefer the AJ to be a normal technical journal instead of the architects' *Daily Mirror*.

JOHN WHITEHEAD

London

THE EDITORS REPLY: Mr. Whitehead is quite wrong in thinking we have started a campaign against competitions: we have voiced some doubts about the value of the present competition system in certain circumstances. He is equally wrong in thinking that "normal technical journals" have no policy: and, until our brains are replaced by *in-situ* concrete, we always shall have policies as well as the best technical service we can provide.

Need for a PRO

SIR: A more telling argument for the creation of a Public Relations Officer to the profession than the latest "Panorama" television programme on the RIBA *Ideal Home* small house competition would be difficult to find.

Here is a programme deliberately aimed at the responsible adult viewing public, the very people who should be encouraged whenever possible to take an intelligent creative interest in our art—and what happens? Domestic architecture—the excuse for introducing the subject anyway was to boost the publication of the *Ideal Home* awards—was dismissed in the introduction as being "mainly of interest to women"; the script was superficial and bore little relation to the models shown, being mainly concerned with a red herring, the cost of a site; and the interview, or question-and-answer corner misrepresented the architect's job, his legal position, and the professional code of practice; all this in eight minutes!

It is a truism that society gets the sort of architecture it deserves, but what has the profession done to deserve such off-hand treatment? What it has *not* done yet is to appoint a Public Relations Officer.

C. J. R. RATCLIFF

Preston

Local Authorities without Chief Architects

SIR: Catching up on my reading, I was interested in the list supplied to you by the RIBA and published in your issue of May, 21, 1959.

Would you please note that the Borough of Harrow, population 216,000, has no chief architect as an independent officer? The Borough Engineer and Surveyor, a Registered Architect, is required under the Council's Standing Orders to act as Architect, and has a Principal Assistant Architect in his department.

CYRIL G. RUNNICLES

Pinner

Churchill College

SIR: I regret, in writing to you about the result of the Churchill College Competition, I made a mistake in referring to Brazzaville. I, of course, intended to refer to the National Competition for Brazilia.

S. W. MILBURN

Sunderland



TCPA

Housing Standards

Improved space standards for houses and flats are recommended by the Town and Country Planning Association in its evidence to the special committee appointed by the Minister of Housing and Local Government on the standards of design and equipment of family dwellings. The TCPA says that the space standards recommended by the Ministry's handbook *Houses*, 1953, are "much too low in houses and very much too low in flats," and suggests minimum standards of 900 sq. ft. for a four-person dwelling and 1,050 sq. ft. for a five-person dwelling. "Given a realistic view of the standards of comfort and convenience people should be able to enjoy and will rightly expect to obtain as real incomes rise, the recommended minimum space provision could well be higher."

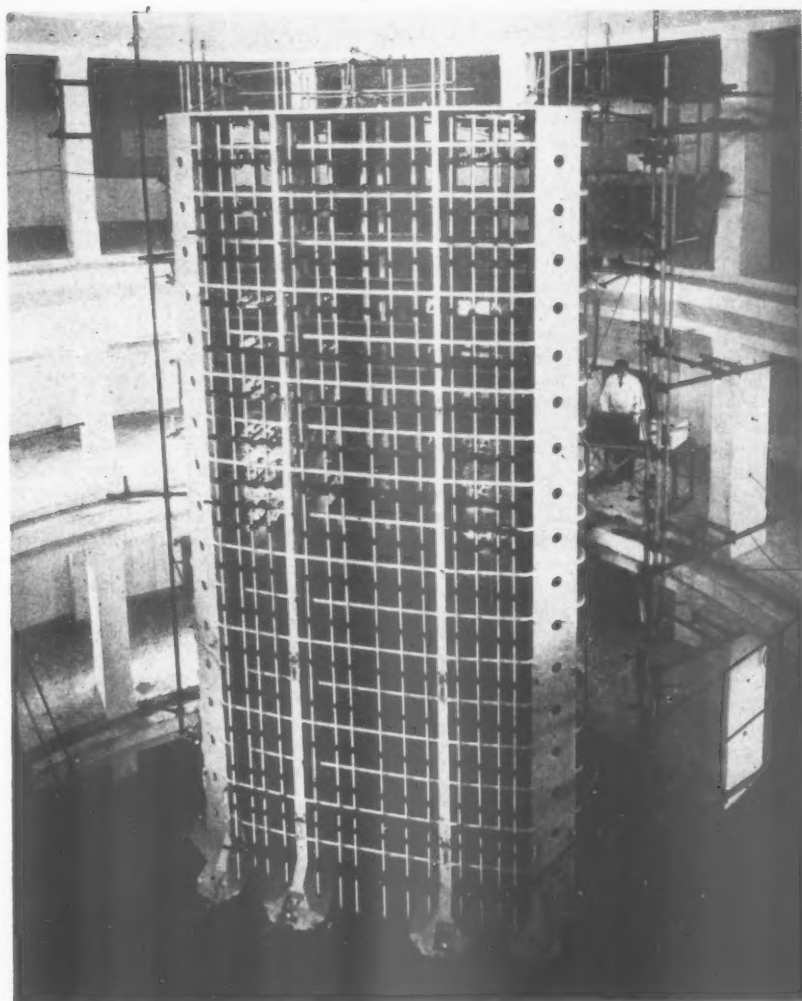
The evidence also recommends: one garage (or car space) per dwelling; bigger kitchens to hold washers, spin driers, refrigerators, etc.; more use of central heating; more fitted cupboards in bedrooms; more generous circulation space; more space for storage; greater attention to privacy in back gardens; minimum back garden depth of 60 ft.; minimum frontage width (two-bedroom houses only) of 20 ft., larger houses 25 ft.; better sound insulation and far more outdoor play space for children of all ages living in flats.

ICE

Symposium on Models

The Symposium on Models held at the Institution of Civil Engineers on July 29 followed the pattern of the previous symposiums organized by the Cement and Concrete Association in being a success generally and in overflowing the lecture hall. It must give considerable satisfaction to this go-ahead organization who have generated such interest in not only concrete but structures generally in the post-war years.

Technically there is little direct achievement from the papers presented, but the object is presumably to put across the fact that models have a great value in modern structural engineering where we are depart-



Model of the Pirelli skyscraper in the large experimental tower at the Istituto Sperimentale Modelli e Strutture, Bergamo, Italy.

ing more and more from the old beam and slab approach. Dimensional analysis was merely mentioned as the basis of the tests. This analysis gives the condition of similarity between the model and the actual structure and allows the materials, shape and dimensions, magnitude and distribution of the loading to be chosen. The range of materials includes perspex, xylonite, rubber and plastic products and reinforced mortar. Professor Oberti of Italy, Professor Benito of Spain and Mr. Rowe of C & CA, each described the work of their organizations and provided some interesting slides of the models and testing procedure. Mr. Rowe announced that C & CA will shortly be able to test models for a fee though this will probably be limited to structures which are outside the range of normal calculations. In the afternoon Richard Sheppard attested to the value which he and his office derived from models.

AA

Tropical Architecture

Lectures on all aspects of architecture, housing and planning in the tropics will be given in connection with the AA post-

graduate course on tropical architecture at 5 p.m. on Mondays, Wednesdays and Fridays, beginning on October 5, 1959. The lectures are open to architects, engineers and others interested in the rapidly developing countries of the tropics. Fees for the full series of lectures lasting two terms will be £25.

There are also a few vacancies left for qualified architects who wish to attend the full-time course on Tropical Architecture. Lecture programmes and other information can be obtained from the Tropical Department, 36, Bedford Square, W.C.1.

Overseas Visitors

Architects and students from overseas who are on holiday in London are invited to the Architectural Association, 36, Bedford Square, W.C.1, on Friday, September 18, at 6.15 p.m., when members of the following practices will illustrate and discuss some of their work—Architects' Co-Partnership; Chamberlin, Powell & Bon; Leonard Manasseh & Partners. Tickets should be obtained not later than September 17, by calling at the AA, or by telephoning Museum 0974.

RIBA AND *Ideal Home* MAGAZINE*Small House Competition*

Last Tuesday the winning designs of the small house competition organized jointly by the RIBA and the *Ideal Home* magazine were put on show at the Building Centre. With them are a fair proportion of the remaining 1,493 designs, which are to be shown in rotation so that in the end all will have been exhibited. What is the worth of the designs submitted and of the designs selected? How far is the venture as a whole likely to fulfil the RIBA's dual purpose of improving popular taste and increasing the influence of the architect?

It is inevitable that, in so large an entry, there should be some grisly reminders of the uneven membership of our profession. But before we can judge whether the competition is heading towards success or failure, it is necessary to restate the criteria in rather different terms to those set by the RIBA. What is the most important service which architects can give to the income group which customarily employs a speculative builder? The answer, surely, is to give this income group a design not merely for a house but for a way of life which will at once correspond to their reasonable aspiration and which can be realized within the limitations of space and siting to which they must usually submit. In order to understand the meaning of this brief we must recall that the present suburban concept of the small house fails because it is no more than a drastically cut-down version of the great country house standing in its own grounds and that it in consequence produces a visual aspect which is frankly silly and an existence which suffers from a serious lack of privacy. It is largely because of this tremendous architectural mistake that suburban living has become associated with a sense of human failure.

If this is the first duty of the architectural profession, it would be unrealistic not to recognize that not all clients who approach an individual architect (or an individual speculative builder) will be prepared to receive a new way of life at his hands, even when the client receives full encourage-

ment from so influential a paper as *Ideal Home*. If the architect has a duty to suggest a better way of life, he has no duty to enforce it. For this reason there is room for the promulgation of a class of small house design which will represent a rationalization of the old way of life: giving people the kind of accommodation they are accustomed to, but making full use of new techniques of construction and servicing and giving some of the advantages of more recent ideas of space planning.

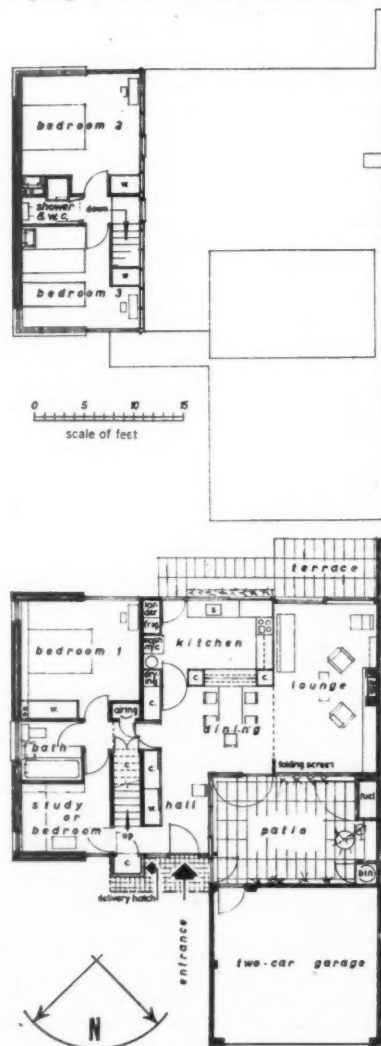
An examination of the 30 winning plans show that the assessors have given approximately equal weight to these two broad approaches to the problem. The critical planning difference which distinguishes the new style of suburban living from the old is the use of enclosed outdoor space. The use of this space recognizes that the idea of indoor/outdoor living has come to stay and that sufficient privacy is not to be got by facing all rooms on to adjoining property. It also recognizes that the larger view may not always be satisfactory and must be compensated by an inwards view over which the householder has an absolute control.

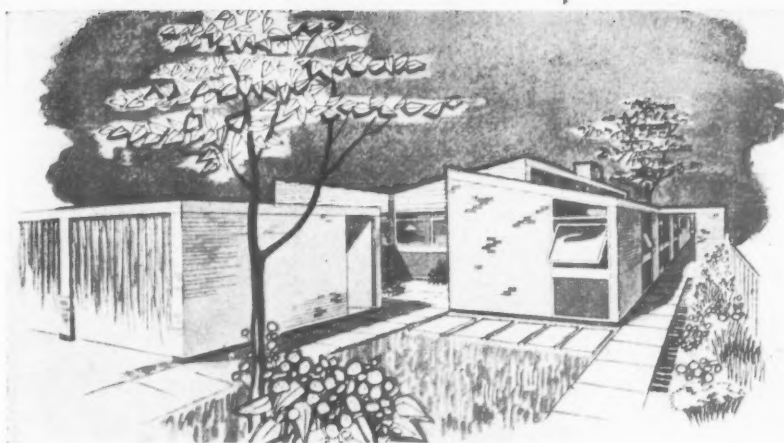
If this is the criterion, it is found that 13 of the plans offer a new way of living to the occupants and that the remaining 17 offer what we may generally consider to be a more rational ordering of the traditional way of life. This seems a reasonable balance and we may say that the profession has made an adequate response to the competition and that the assessors have, in their choice, done all in their power to secure its success. Ultimate success, of course, depends equally on the response of builders and clients, and with these the issue is still in doubt. It was an essential part of the scheme that *Ideal Home* should get all thirty winning houses built as soon as possible so that they could serve for show purposes. To this end they have been trying to get builders to take them on in advance of the main publicity. Unfortunately they have so far met with

considerable sales resistance on the part of the builders. To date only ten out of the thirty houses have found builders and of these, two only are in the class which offers a new way of life. This is not surprising, nor is it in any way final. But before we can count the competition a success, it is necessary for most of the thirteen new type houses to have been built and for them to have attracted a sizeable response from the public.

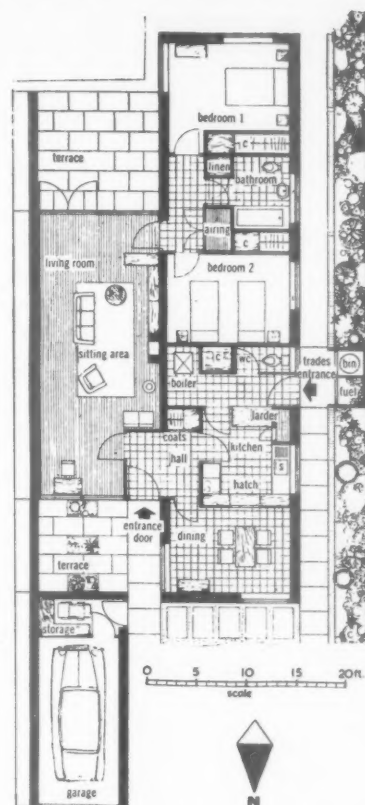
Commenting on the entries as a whole, the assessors deplored the fact that insufficient attention was given to the lower end of the cost range and to houses for the smaller site. In this they are certainly correct. Once you top the £3,000 figure you are reaching the upper limits of the greater part of the speculative market; yet the average figure for the thirty winning designs was £3,445. On the whole, the desire to keep cost down seemed insufficiently in the minds of competitors. Too many among the winners, for instance, ignored even such unobjectionable price cutting dodges as using only 4½-in. structural walls for the garage with piers to carry the roof. The strength of the speculative builder lies in his ability to give brick-for-brick value for money. If the architect is going to enter this domain in earnest,

South elevation and floor plans of house by Alan R. Deaves.





North elevation (above) and floor plan (right) of house by Denis Serjeant.



he must enter through a sort of cost doorway, the head of which is considerably lower than he at present imagines.

The other question concerns site size. Here architects may be forgiven in that the average site size today is probably larger than our society as a whole can really afford. If we are to avoid excessive sprawl, we must learn to make better use of smaller plots. In the book illustrating the thirty designs each is headed (American-wise) by a sentence characterizing its achievement. One (by David Oliver of Bath) is described as "Two-bedroom house for a narrow site." But the width of the site is 37 ft. Is this really a narrow site by the standards to which we should accustom ourselves? The answer is that, for the traditional free standing suburban house, 37 ft. is quite narrow, but that the inward looking house can do very nicely with much less.

It remains to say something about the thirty plans themselves and their contribution to planning techniques. Taking the terrace houses first, it is interesting to compare the best of the rationalized traditional as expressed, say, in James Watson's house or A. W. Strutt's with Austin Smith's new-way-of-life version (all on frontispiece). The first two use our new techniques of lightweight construction to give a better use of space and a higher standard of amenity than the wholly traditional versions they hope to replace; but the life they pre-suppose is not greatly different to the life which has always been lived in terrace houses. The Austin Smith house, on the other hand, while preserving the terrace form, attempts to give the occupants an entirely different relationship to their surroundings. By using clearstorey light the terrace has been reduced to a single storey and the garage (demoted, admittedly, to a car port) has been converted from a ghastly embarrassment into a screen for an internal court.

It is, incidentally, interesting to notice how important the garage is in the change-over from one concept to another. When the garage first came to us it was, like the bathroom before it, a nuisance to be tacked on as best we could; next it was found to be useful in helping to form a convenient approach to the dustbins and the back door; finally, in the single-storey building

on a confined site, it is used to form an internal court screened against the road. In general it is put, on an indifferent plan, where it will be of least nuisance: on a good plan where it can be of most help. None of the thirty plans could be said to contribute anything which is absolutely new to domestic planning. The house which comes nearest to this is the one by Brian Cobb. This makes the living room into an enclosed court, flanked to left and right by bedrooms and the kitchen, lit by glazed screens on the other two sides and ventilated through a clearstorey. In the middle of the living room is a free standing fireplace. It is to the credit of the assessors that they picked so radical a solution. At the same time the design reminds us of the truth that every design must stand the test of being lived in and that this one must go to the public as an architect's speculation, not as the fruit of the profession's collective experience. This brings us to the point that there is all too little consumer research by architects and too little reporting back on the practical validity of some of the solutions they propose. A case in point is the "open plan." This is essentially an architect's gimmick and, in fact, nearly all of the

thirty winners use it in some form or another. But what studies have been made to test how well it works in practice? Here again we suspect that, when inserted into the framework of a traditional house (particularly one designed for a family), it throws everyone too much on top of one another, but that when there are internal courts this becomes less of a problem. This is speculation: what is certain is that the "ideal home" for our period is only to be found by the joint experience of architects, builders and house owners, and that this competition should provide an excellent point of departure for their search.



Floor plan of the house by Brian Cobb.

The London Y

England's first major motorway is now nearing completion. Earlier this summer (this article has, unfortunately, been delayed by the recent printing dispute), we asked Miss Sylvia Crowe, then President of the Institute of Landscape Architects, and the engineer Alan Harris, B.Sc. (Eng.), M.I.C.E., to inspect the road and to comment on what they saw. Large portions of the road were complete, so our authors were able to obtain an accurate impression of the quality of landscaping and of the engineering structures along a fairly typical stretch of the road towards the southern extremity near Luton: an area where the land changes, geologically, from chalk to clay. This dual carriageway road is 55 miles in length, contains 132 bridges, and is costing £16 million. The formation width of 105 ft. covers two 8-ft. wide hard shoulders, two 36-ft. carriageways with a 1-ft. marginal haunch each side, and a 13-ft. central reserve. Gradient: less than 1 in 50. Service areas: every twelve miles approximately. Motorists will only be able to join the motorway at six two-level junctions. Construction: 6-in. granular sub-base; 14-in. lean rolled concrete, 22 to 1 mix; 2½-in. asphalt base course; 1½-in. hot rolled asphalt wearing course. The consulting engineers, responsible for the design of the road and bridges, are Sir Owen Williams and Partners. The contractors are John Laing & Son Ltd.

The sheer bulk of a motorway is vividly captured by this aerial view in which the two railway tracks on a high embankment are just appreciably narrower than the motorway under construction, right. In the centre, diminutive and pastoral, lies the earliest form of mass transport: a canal. Whereas roads and field boundaries fit neatly together in the landscape (as top left) railways and motorways drive crudely through it. Our admiration for the magnificent engineering of both should not blind us to the need for the greatest care in alignment and landscaping so that the effect, whether in harmony or in contrast with the surroundings, is a stimulus to the eye.

The extent to which the London-Yorkshire motorway achieves this, in general terms of landscaping and in particular in the form of bridges is assessed in the following article. (The canal is the Grand Union, the scene is near Weedon. The pilot was Ian Nairn and the photographer W. Toomey, to whom we owe the aerial views in the accompanying article.)



n York MOTORWAY





THE LONDON/YORK MOTORWAY

A landscape architect's view

by Sylvia Crowe

The problem of the new motor-ways in the landscape differs from that of other roads not only in degree but in kind. Their insulation from all other traffic makes them more akin to railways.

The fact that every intersection must be carried either twenty feet above or twenty feet below road level, means that far from clinging as closely as possible to the natural contours, the road must often deliberately cut across them to get the necessary head room. While in hilly country the necessary twenty feet can probably be obtained while still following the broad scale contours of the ground, on the relatively flat terrain crossed by the first section of the London/York motor-way, 20 ft. constitutes a major elevation (Fig. 2).

The cuttings and embankments thus become a dominant part of the composition. From the surrounding country particularly the embankments cut harshly across the views of small hills and shallow valleys. There are other reasons which make this type of country perhaps the most difficult in which to reconcile road and landscape.

Although in the main the line of the road flows easily and pleasantly, there are occasions where the flatness of the ground has caused the curves to be on so wide a radius as to appear almost as straight (Fig. 3). Absence of cross-fall gives no opportunity to run the carriageways at different levels, a device which is being used in more hilly country and which does much to reduce the scale and parallelism of the road. The high agricultural value of the land has naturally lead to the minimum width curtilage being acquired. The number of farms, villages and bye-roads has made frequent bridges and cattle-passes necessary, which in their turn have increased the need for cuttings and embankments.

Where, on less cultivated land, it might be possible to run the two carriageways on different alignments, on this road the central reservation has had to be kept to the minimum. A large diversion would sever farm holdings and make even more bridges necessary, while slight widenings would take more land, and would achieve little since the carriageways would have to come together again at every crossing.

These limiting factors rule out many of the techniques which are used on other terrains, and must be borne in mind in criticizing a result which in the main is impressive. Nevertheless there are ways in which a greater sympathy with the landscape could have been achieved, had this aim been part of the basic design and terms of reference.

Since about 80 per cent of the road is either in cutting or on embankment the relation of the ground-shaping




Fig. 2 (above). The motorway often cuts across contours instead of running with them, so as to ensure that it is sufficiently (20 ft.) above or below existing roads to avoid cross roads. The spoil from a cutting is calculated, as far as possible, to be the fill for the next embankment. The principle is clearly shown in this stretch near Chalton, north of Luton. In the foreground is one of Laings' site offices.

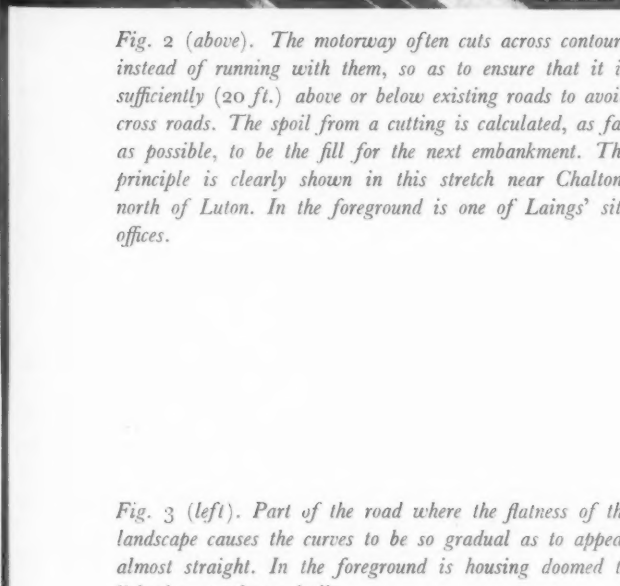
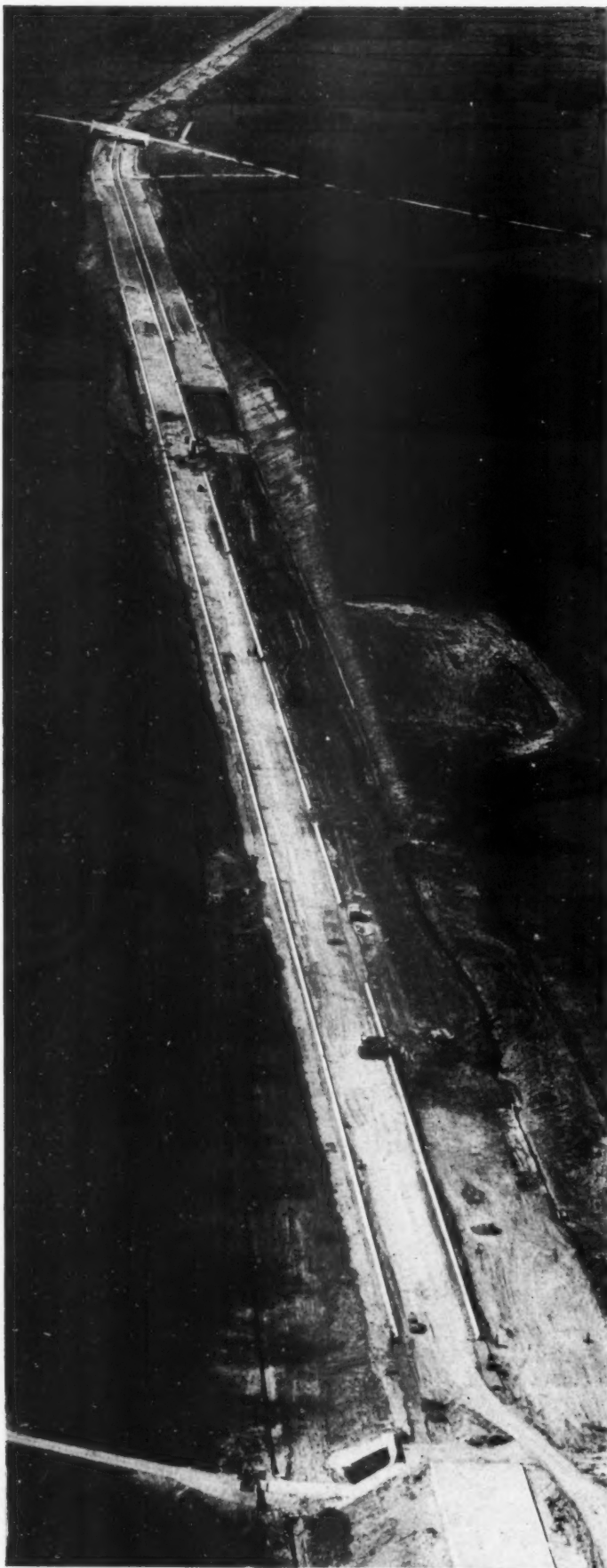


Fig. 3 (left). Part of the road where the flatness of the landscape causes the curves to be so gradual as to appear almost straight. In the foreground is housing doomed to "back on to the tracks."



to the surrounding contours is one of the biggest factors in the road landscape. For reasons of land economy and cost the banks are graded to the angle of minimum repose, $1:1\frac{1}{2}$ or $1:2$. The arbitrary line thus formed where the top of the cutting meets the natural contours ignores the subtleties of the surrounding ground (Fig. 4).

In places the resulting line is extraordinarily ugly and out of tune with the rhythm of the natural land-form. Unfortunately the same line usually becomes the curtilage of the road, since farming operations are brought as near as possible to the top of the embankment without extending down it. The line is therefore accentuated by the fence, which will later be reinforced by a hedge (Fig. 5).

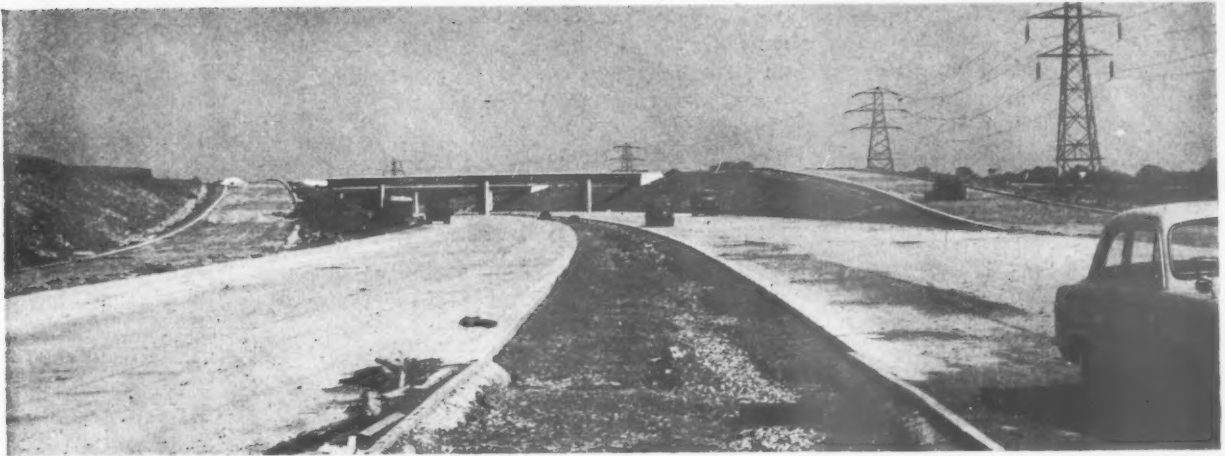
It is obvious that the present line is the logical result of applying the simplest, speediest and most economical engineering technique to the problem, regardless of other factors. The need for adjustment to meet the landscape, occurs only on limited stretches, and even then involves only a comparatively narrow area on each side of the curtilage line. Admittedly it would also in some cases involve carrying the curtilage line a few feet further into the farmland, but to compensate for this, there appear to be other places where the curtilage could well be closer to the road. In most cases only slight additional shaping is needed to merge the top of the cut into the surrounding land, or at least to produce a line which would accord with the landscape.

The curtilage line, emphasized as it will be by a continuous hedge, is the strongest line in the landscape composition, and for this reason should have the most careful consideration. It will be possible occa-



Fig. 4 (left). For reasons of land economy and cost, the banks are graded to an angle of minimum repose, $1:1\frac{1}{2}$ or $1:2$. This results in an arbitrary wavy line at the top of the cutting. As the ground level view above (Fig. 5) shows, the top of the embankment is emphasized by a fence, later to be reinforced by a hedge. Slight additional shaping would merge the top of the cut with the farmland beyond (view near Eversholt).

sionally to lose its inner line by masking it with planting within the curtilage, but its outer line, on the farm boundary, will remain strong and clear-cut. While the need for adjustment of the curtilage at the top of cuttings is most obvious from the road itself, the same need applies to the toe of the embankment when seen from the surrounding country. In this case there is the triple line of embankment toe, ditch and fence-with-hedge.



The heavy lines of the bridges are not sympathetic to the landscape, and their embankments, especially those carrying slip roads (Fig. 6, above) form major and often clumsy shapes in the view (road near Chalton, and Fig. 7, below, the Pepperstock junction, an elevated roundabout south of Luton).



Fencing

It is a great relief to find the curtilage marked by a wooden post and rail fence, rather than one of concrete posts and chain link, and the decision to plant quickset hedging throughout is also to be applauded. Nevertheless the fence is heavy enough in appearance to create a maze of posts and rails in those places where the boundaries of the motorway, side roads and slip roads are seen one behind the other. It raises the question whether a uniform type of fence is necessary or desirable in all cases. How

grateful we should be to the Ministry of Transport for the wooden fences which can be seen near Luton where some other body has erected a security fence (incidentally, easily climbable) between the road and some school playing fields.

Bridges

The heavy lines of the bridges are not sympathetic to the more subtle landscape compositions which may be seen through or over them (Fig. 6, 7). Their huge embankments, especially those carrying slip

roads, form major, and often clumsy shapes in the view. Solid woodland planting on the approaches and embankments, may do much to tie the bridges and their abutments into the landscape, but their bulk will remain incongruous with the small scale scene. This is particularly evident when they are seen against the small and very subtly shaped foothills of the Dunstable Downs.

The square-topped cattle creeps (Fig. 8) do not compare well in appearance with the best of their railway fore-runners, and detract from rather than add to the pastoral scene. The higher, arched version



Fig. 8 (above). A square-topped underpass, marked by a solid, ornamented parapet, and with stone-pitching at the sides. Fig. 9 (below). A higher, arched concrete cattle creep, used where head-room permits, which fits in more happily and is not quite so gloomy.



(Fig. 9), used where there is more head-room, fits in far more happily. The great length of some of the underpasses makes them gloomy in the extreme. One which leads to a school is particularly forbidding and is likely to become a noisy and unpleasant passage for the children. Where the difference in level is sufficient to warrant it, viaducts would often fit better into the landscape than embankments. They would cause less interruption to the flow, as well as allowing a considerable saving of agricultural land, with uninterrupted passage for farm operations.

Central reservation

The overall width of the central reservation includes hard shoulder and concrete haunches which reduce the effective planting width to 9 or 10 ft. This will give little opportunity for breaking the parallelism by staggered or drifted planting where planting is needed for anti-dazzle. The construction of this reservation may, incidentally, cause some planting problems, since it forms a 2-ft. deep trough from which the adjacent surface water is excluded.

In a road of this nature, through level and valuable land, it seems inevitable that parallelism should be accepted across the width of the two carriageways. It is beyond this that the great striped ribbon 105 ft. wide, will have to be reconciled with the existing landscape. Its scale is too great to be a minor incident within the existing pattern. It must be treated as a new element of some considerable weight. But it can be an acceptable element if it picks up and accentuates the character of whatever landscape it may be passing through. At present the road cannot be said to succeed in this, owing to the lack of sympathy of its land-shaping, curtilage and structures (Fig. 10). But much may still be done to redeem it. Various inlets of land are being added to the curtilage, which should improve the possibilities of interlocking the road with the landscape. One may hope that at least some minor shaping may still soften the worst cases of harsh transition, and finally the right planting in the right place would have an immense effect in uniting the pattern of the road to the pattern of the countryside. From both air and ground it is obvious how the pattern of hedgerows, copse and wood could be thickened and accentuated to hold the road and its bridges within a firm grasp.

Some ill effects can never be changed. The severing of complete landscape compositions (Fig. 11) by the great barrier of the road embankments is one of the most damaging and, except where viaducts are possible, the most unavoidable. It is certainly one of the factors which should be considered at the reconnaissance stage in settling the alignment, and could be a strong argument for avoiding the more beautiful tracts of scenery where any choice exists.

One adjunct of the road has not yet been designed. The service areas, several acres in extent, break back into the landscape on each side of the road, and their design will have the greatest effect on both the road and its surroundings (Fig. 12). They involve difficult and complex problems of land shaping. The present policy of putting them out to tender, rather than designing them as a part of the road architecture and landscape, is not re-assuring, and one awaits the results with anxiety.

The road at its present stage must impress as an efficient answer to its terms of reference, to produce a motor-way for unlimited speeds with the greatest possible dispatch and economy, and the least disturbance to existing land values. But if the terms of reference were widened to include aesthetic values as a basic part of the problem, something more than an efficient traffic way might result.

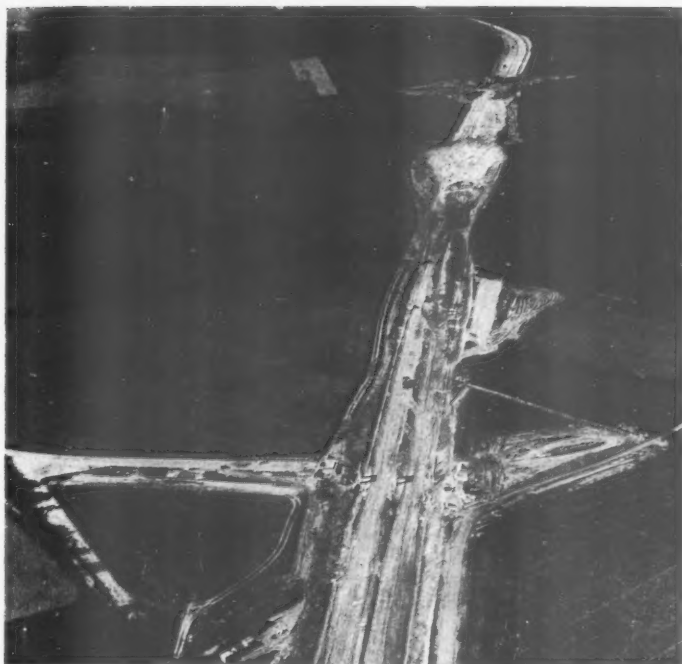


Fig. 10 (left). Part of the road near Redbourn, near Luton, showing the arbitrary cutting through fields, leaving odd triangles to either side which could be improved by planting.



Fig. 11 (above). The elevated roadway severs landscapes in two, as here near Woburn, leaving only chimney tops in sight to tantalise the traveller.

Fig. 12 (below). Service areas—the only places where drivers will be able to park, buy petrol and eat—have been agreed upon, but not designed. The site of one is indicated by the nearly symmetrical circle of fencing shown here: an assertive shape which all too realistically reflects the circles which indicate service areas on the Ministry of Transport's maps.



THE LONDON/YORK MOTORWAY

An engineer's view

by A. J. Harris

While the road is seen from the countryside, it is also seen from the road. Though a few countrymen have to live with their view of it, vast throngs will travel along it. A road is a flow channel; its virtues will be those of smoothness and easy flow—minimum changes of velocity in any direction. Its visual virtues will be similar; no abruptness, no interruption, no fussiness, until the road superimposes its own slow steady rhythm of turnout, service area and major destination on to the undertones of change of geology and land use. Three things affect this most: road furnishings, road structures and road shape.

The road furnishings will consist mostly of signals to the driver; some will be in writing and some will be in sign. The average highway is thronged with such, varying in tone from the indicative to the minatory, giving such a deafening volume of roadside chatter that in self-defence the average driver ignores them. The virtues to be sought in such signals are those of good typography, they must communicate easily; communication will be all the more effective for saying no more than is necessary. The signals indicating destination are not too difficult; there has been a good start on a new road in Oxfordshire. All the other signals remain to be invented; few of those which have done service on the country lanes and by-pass roads



Fig. 13. Where services are carried in ducts under pavements, the parapet walls become too low, so a rail is crudely added.

Fig. 14. "If a two span portal in reinforced concrete cast in situ is the right answer, it is difficult to see how it could be constructed more expeditiously."



which constitute our present road system are really suitable. It would be attractive to replace signboards by objects, sharply differentiated in shape and nature according to their message; Moses after all had his pillar of cloud by day and of fire by night, and it was not found necessary to spell out the word "Canaan." Indeed, there are many techniques which can be used to convey information to the driver; one might mention those paints which are so much clearer at night than the pointilliste effect of reflectors and the lightly ribbed concrete slabs which are laid in the road in America to produce a humming noise on contact with tyres at speed.

This motorway had not yet been furnished apart from the cats-eyes (admirable beginning); we continue to live in hope.

Good shape requires that all curves run fairly and sweetly into one another, the straight line being generally anathema. Such curves are built in three dimensions and drawn in two; to ensure that vertical and horizontal curves marry up well enough to avoid a broken-backed or kinked appearance and still to preserve sight lines is not easy. In this road admirable success has been achieved, the road is one piece of ribbon with no joins or breaks—a continuous function. Roads, rivers and railways cross the motorway and consideration of the manner of the crossing leads us directly into the department of fine arts.

Bridges! (Down sir, down! Stop that baying!) Most engineers and many architects feel the ambition of leaving their fingerprints on a major bridge; Pontifex Maximus is still the proudest of titles. They see a motorway as a lot of bridges; little gems each joined together by short lengths of consolidated muck. They will discuss endlessly the curve of an intrados, the reaction of site on structure, the proper use of ornament.

Now there were days when any bridge was a major feat in itself, when a stone clapper bridge gave its name to a town, and there are, of course, still bridges built of such a size that a major mustering of theoretical and practical resources is necessary to achieve success. There are bridges on the Ross Spur motorway, for instance, which approach this scale; on this motorway in particular there are none such and on any motorway there are few. It is moreover a very large bridge indeed which becomes more than a minor incident in the flow of a motorway; the vast majority are local proppings-up of a road surface, quite unworthy of the bronze plates and roman urns with which they were wont to be adorned. The break down of approximate contract costs on this particular motorway is of interest: surfacing 40 per cent, earthworks 25 per cent, bridges 10 per cent. It was slightly perverse of Freyssinet when he said that bridges cannot be made beautiful, but we can hope to make them unobtrusive; but it is true that if we seek unobtrusiveness we may achieve elegance.

Bridges under a motorway at least could satisfy this requirement as far as users are concerned, but not on this motorway. Even cattle creeps (Fig. 8) are marked by a short length of solid ornamental concrete parapet several feet high; the driver's attention is



thereby invited to cattle creeping, a spectacle which otherwise he might have missed. Why do this? Clearly there is a passage here from a high embankment to a sheer drop, but there are no pedestrians on this road, and however much greater the gravity of falling 20 feet than rolling 20 feet down a steep bank, the man in the driver's cab is unlikely to find any difference and what is good enough for one condition is good enough for the other.

For certain features of the bridges in general we must give a round of applause. In the first place standard solutions have been sought and found. Superficially, the proposition that a bridge over a road of standard width should itself be standard is obvious; in practice, it rapidly becomes less obvious. The bridge which is square to the road is soon seen to be a particular case of skew; heights differ, foundations differ, loads differ, breadths differ. Some bridges need large service ducts, others none. The advantages of different materials, steel, reinforced concrete, prestressed concrete, claim the designer's attention. Since the engineer's every instinct will be to have fun, to make the bridges all different and transform the road into a sort of shop window of bridge building, it requires considerable strength of mind to choose a material, work out a structural form of sufficient adaptability and then refuse to allow it to be varied.

Fig. 15. (Bridge near Ridgmont) . . . a close-up showing the poor concrete finish occurring occasionally.

In the second place, having chosen the material and the standard forms, everything has been done to facilitate the construction of those forms in that material. If a two span portal in reinforced concrete cast *in situ* is the right answer, it is difficult to see how it could be constructed much more expeditiously (Fig. 14).

Was it the right choice? The present writer can only say that to his mind the choice is wrong, which said, some justification is required.

The key decision was the use of *in-situ* reinforced concrete. There has been recently so strong a tendency towards precasting, notably under the impulse of prestressing, and as a result of the better control of quality made possible, the reduction of labour on site, greater independence of vagaries of weather, shorter erection time, etc., that we tend to forget that concrete is one of the few engineering materials that can be formed in its final position. One day, no doubt, *in-situ* concrete will become due for re-invention. But on a job consisting of a large number of bridges strung out irregularly over some 50 miles of road, and built under high pressure, *in-situ* work is surely seen at least advantage.

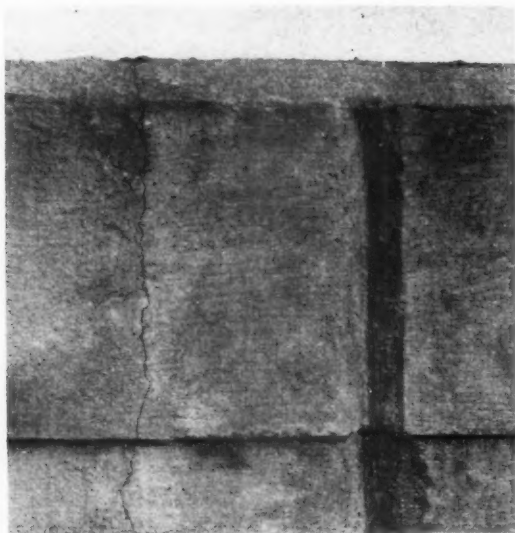


Fig. 16. A construction joint occurring only a few inches away from a deliberate dummy joint in a parapet wall.



Fig. 17. Precasting has been used in bridges over railway lines where it is essential to reduce the time of occupation of the track. The finish is good but the structural complication for so small a span is grossly exaggerated.

Fig. 18. The standard form of bridge . . . is propped in the middle by gigantic columns. In the foreground is the curving heavy curb to deflect passing vehicles.



Nothing useful can be said about cost, since the very full information needed to draw conclusions is not available; all one can do is to look at the result. *In-situ* concrete is as good as its supervision; supervision has clearly been lacking in some sections of this motorway (Fig. 15). Vast flat soffits with formwork marks running quite anyhow and the whole intersected by random construction joints; poor surfaces crudely "made good"; bush hammering which reveals irregular consistency of concrete and further random construction joints; other construction joints which occur incomprehensibly six inches from a deliberate dummy joint (Fig. 16). All these are old adversaries, mastered only by great care in details of construction and how can great care be everywhere exercised on this sort of contract? It is precisely for this reason that so many small and medium span bridges have in recent years been precast in this country, to the point that standardization of prestressed concrete bridge beams can be seriously discussed.

Precasting has indeed been used in the bridges carrying this motorway over railway lines, where it is essential to reduce time of occupation of the track to a minimum (Fig. 17). These bridges are in fact of a degree of structural complication so exaggerated for so small a span as to be positively comic, but the finish on the precast work is exceedingly good, far, far better than that on the *in-situ* bridges seen. If precasting here, why not elsewhere? Interruption of a railway line is extremely expensive; the interruption of free flow along a motorway under construction is also expensive, even though the cost may be hidden. Can it be that precasting leads inevitably to prestressing and that this technique was deliberately excluded? Was someone trying to prove something? And if so, has he?

The standard form of bridge so constructed consists of a quite slender slab (it is lively under the load of a passing lorry) monolithic with wing walls and propped in the middle by gigantic columns (Fig. 18). The wing walls are an interesting feature; while they may give least cost of structure (though this is by no means certain) they are on other motorways avoided by carrying the earthworks straight through at the normal batter and bringing the bridge back to the top of the bank with a side span, thereby avoiding some complication of earthworks in and around the wing walls and bridge approach. This four-span arrangement is certainly more attractive visually; the open side spans remove the effect of a tunnel and generally the bridge offers less apparent obstacle to the flow of traffic. As it is, the wing walls end in massive cylindrical pilasters around which the earth is allowed to spill; at most sites, for some reason, the slope was being stone pitched for a few feet away from the wing wall.

Certain bridges are in fact of four spans, apparently narrower and more lightly loaded structures. The only comment they excite is that they seem to be rigidly fixed at either end to massive supports buried in the fill. Is this not running the risk of a shrinking crack across the middle of the bridge? (Fig. 19.)

The standard bridges have solid *in-situ* parapets, like



Fig. 19. A bridle road bridge near Ridgmont, with four spans and massive buried supports.

the underbridges. These parapets have no open joints; they are therefore obliged to work with the deck slab producing high compressive stresses in mid-span and high tensile stresses over the supports. The former the concrete can probably accept by excessive compressive yield, the latter it cannot and in consequence it quite simply fissures; no one with an elementary knowledge of structures has any right to be surprised at the vertical cracks which regularly occur over the central columns, cracks which will soon in all likelihood further call attention to what concrete can and

Fig. 20. Some of the bridges are of simple mass concrete and are very impressive. This example is over the Newport Pagnell—Wolveston road.



cannot do by exhibiting reddish-brown streaks from corroding reinforcement.

If *in situ* reinforced concrete is the structural medium, the general conception of these bridges is concordant. They are conceived as an entity; wing walls are integral with deck slab and both help each other. They are three dimensional and avoid that glued cardboard look which weakens the appearance of many slab bridges. They have, moreover, that "boldness" which is reputed to appeal to commissions of Fine Art.

Nevertheless they are of surpassing ugliness. The solid parapets with their feeble detailing and generally poor finish do not help, but this is insufficient as an explanation; it must be something to do with the central columns. These are cylindrical and massive, with thick square capitals; they look like a piece of barbaric underpinning (Fig. 18). There is no reason for this enormous solidity; they are protected against out-of-control vehicles by heavy kerbs and in any case quite thin slabs are used as central supports in other parts of the world without catastrophe. One scents the intrusion of aesthetic theory; there was a time when highway engineers with architect friends were much disturbed by the unresolved duality of a two-span bridge; it is now becoming accepted teaching that the duality is resolved by the highway itself. Is this the memory to which these monuments are erected? With something in the middle more cognate with the sides the standard bridge would look like an honest piece of post-Maillart pre-Freyssinet structural concrete and not unshapely at that; as it is, it is two things swearing at one another.

Or is it more than that? Are these columns the result of a compulsive itch to make it look different? Perhaps the moral is that it is painful for a driver to be struck in the face at regular intervals by somebodies' aesthetic sensibility and the best advice to give to a young bridge designer is—keep your fingerprints off it.

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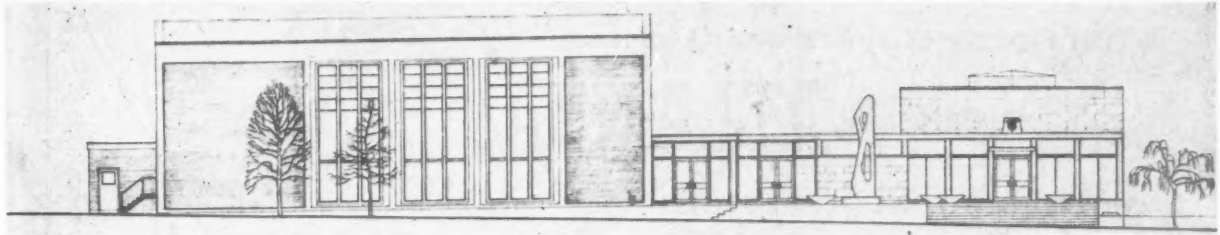
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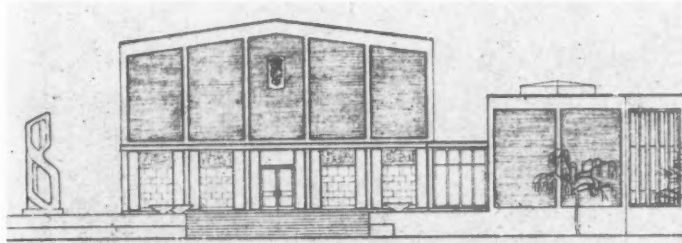
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MILNGAVIE TOWN HALL COMPETITION: WINNING DESIGN

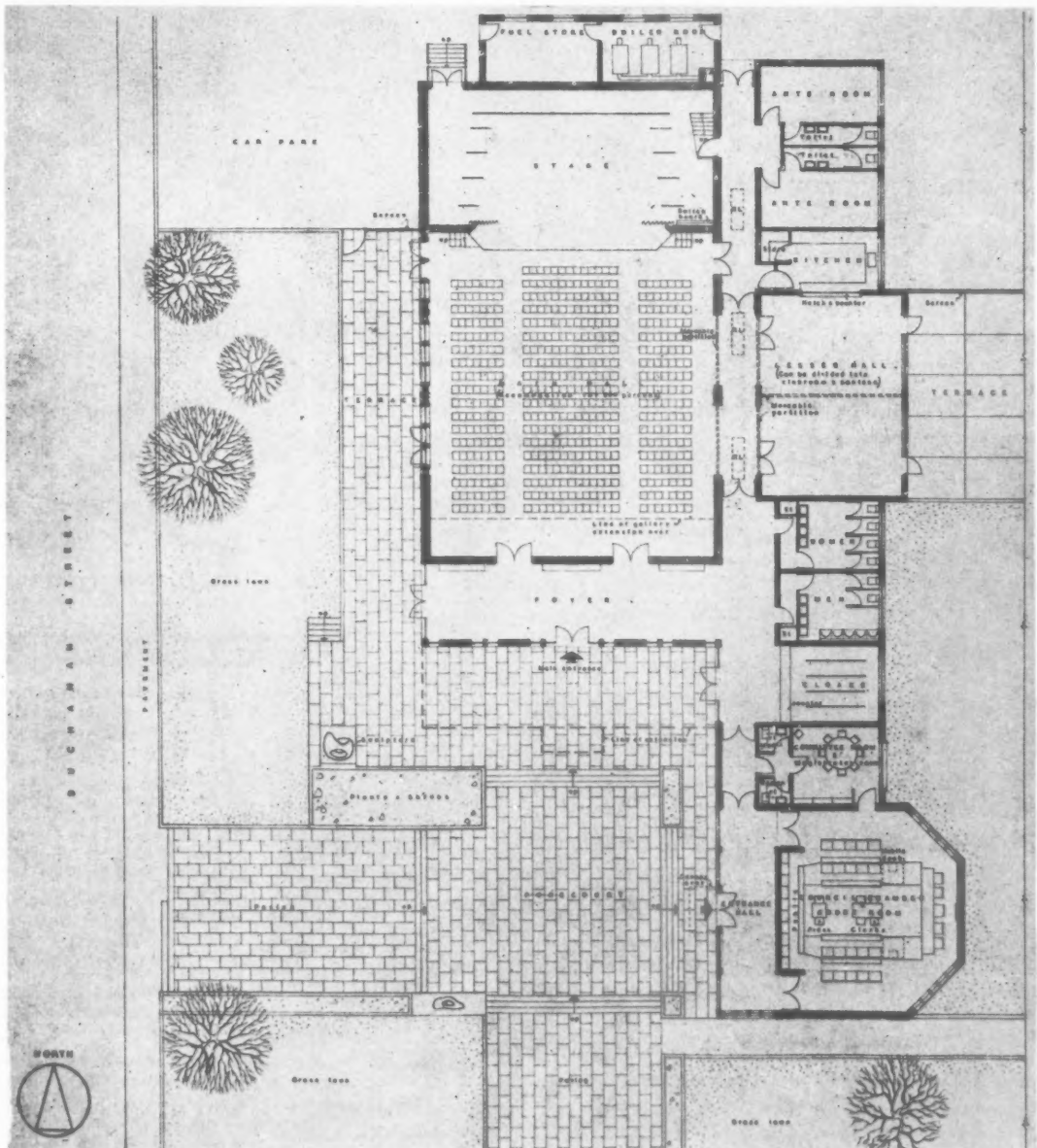


West elevation



South elevation

The winner of the first prize of £600 in the competition for a new town hall at Milngavie, Dumbartonshire, is Michael Bowley, of Holywood, County Down, whose design is illustrated on this page. Second prize (£400) was won by John D. Robertson, Kirkcaldy, and third prize (£200) by F. St. G. Higginson, Leatherhead. The accommodation to be provided included a council chamber and two halls. The assessor was W. A. P. Jack.

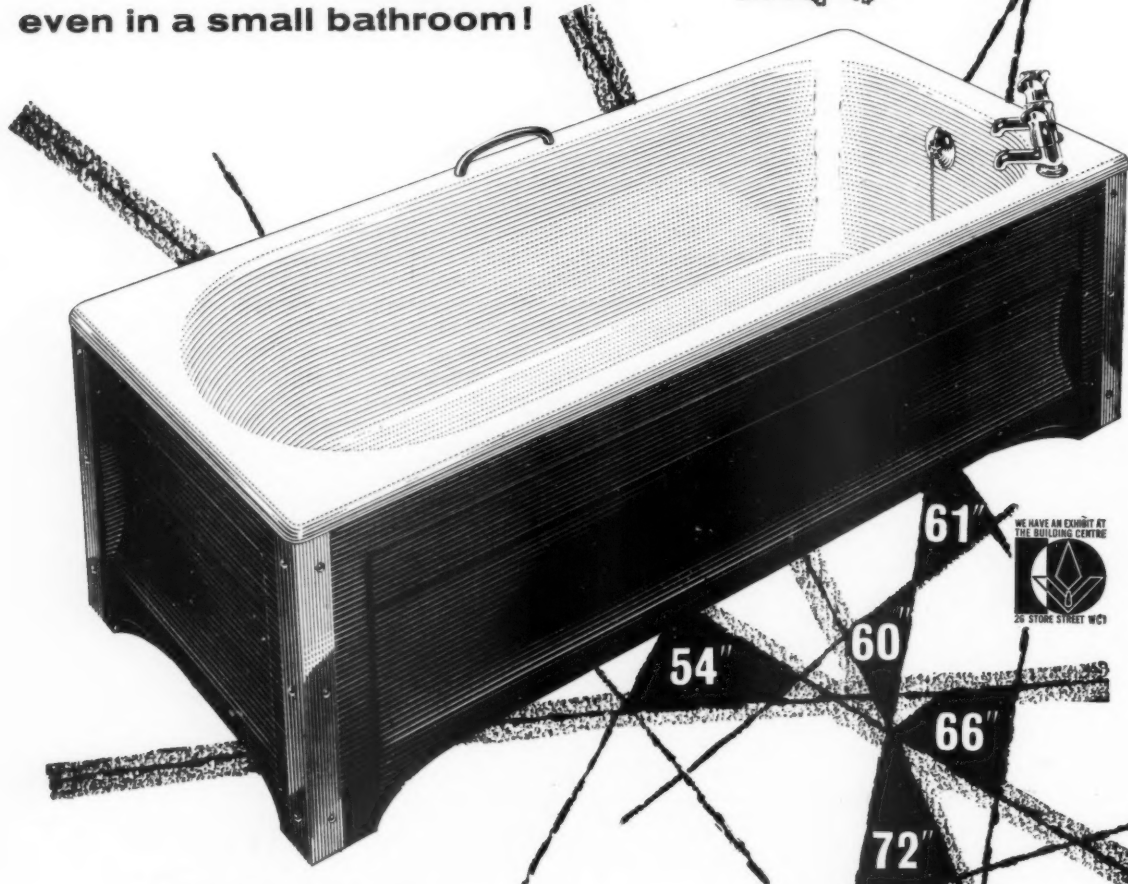


Ground floor plan

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THE INDUSTRY

This week Brian Grant describes a classified catalogue, a heating service, a new type of nail, sound absorbers and building boards.

Revolutionary catalogue

Universal Asbestos, aided by Edward Mills, have got quickly off the mark with the JOURNAL's Research Fellow, Dargan Bullivant, and have issued a new catalogue for their Standard Six Corrugated Sheeting. This is designed by Dargan Bullivant and is based on a system of classification which, I understand, is shortly to be published in the JOURNAL. It is the precursor of a complete re-designing of the trade literature for all UAM products. Like all pioneer ventures, it takes a bit of understanding, particularly since it sets out not merely to tell you about Standard Six Sheeting, but also and pre-eminently how you ought to think about Standard Six Sheeting. It remains to be seen how kindly the humbler elements of the building team take to this educational drive, but there is no doubt that this is the most interesting post-war departure in trade literature, to be watched with great interest and sympathy. UAM are certainly to be congratulated on having gone to architects for advice. Would that other firms would do likewise. They are also to be congratulated on giving prices. (*The Universal Asbestos Manufacturing Co. Ltd., Tolpits, Watford, Herts.*)

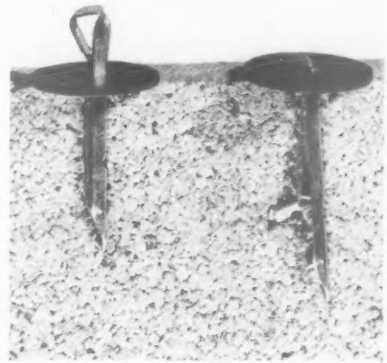
Selling solid fuel

Allied Ironfounders have just started an advisory heating service to provide proper technical advice for householders who wish to modernize their heating systems. Initial experiments have been carried out with Froys of Hammersmith, who were provided with a technician to deal with all heating queries, and it has been found, as one might have expected, that few householders have any idea of what they need, or even what fuel to use. Coupled with this plan is a deferred payments scheme which covers both the appliances and the installation costs, which can be

covered by an initial payment of about 10 per cent, with the balance spread over the next five years. Sigmund Pumps announced a scheme on much the same lines several months ago, and it is interesting to find that it can now be arranged without the use of any particular manufacturer's goods being compulsory.

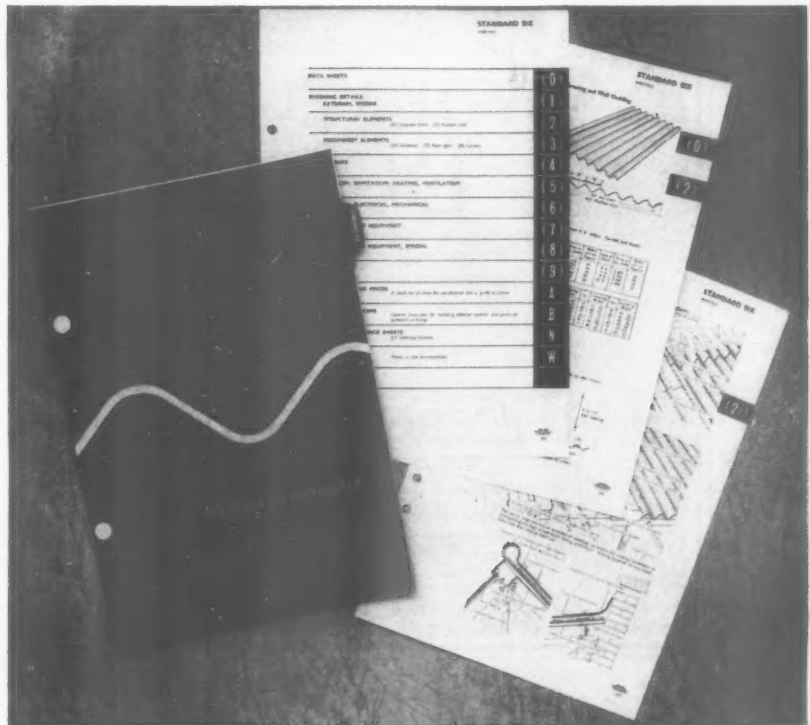
Fixing to low density screeds

The fixing of roofing felt or other sheet material to vermiculite or other lightweight toppings is something of a problem as the ordinary nail will not hold and it is generally necessary to apply a cement sand screed merely to hold the fixings. A likely looking answer is the Venale, shown in the illustration on the right. The nails are 1½ in. long, cadmium plated, and are split down the shank. When the head is flattened by the final hammering one half of the shank is partly withdrawn and the foot clinches itself within the screed, after which subsequent layers of roofing are bonded in the usual way. Holding strength in vermiculite con-



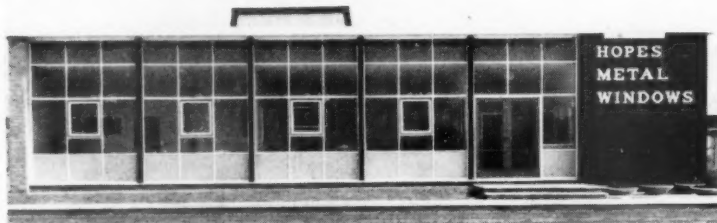
The Venale, split down the shank for fixing in screed.

The UAM corrugated sheeting catalogue, designed by Dargan Bullivant.



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technical section

crete exceeds 35 lb., and the nail is also suitable for use with lightweight blocks of all kinds. Price, with $\frac{1}{2}$ in. holed discs, is 13s. 6d. gross. (*Venables Ltd., 25, Whitmore Road, Birmingham 10.*)

Sound Absorbers

The Kulihat is a new kind of sound absorber made from perforated aluminium sectors which are assembled by clipping together flanges along the edge of each sector. Two sectors make an acute angled cone, 21-in. diameter, and three sectors an obtuse angled cone, 33-in. diameter. Assembly can be done without tools. The completed cones are lined with rockwool. Fixing to ceiling or wall is very simply done by a spring attached to a hook



The Kulihat sound absorber.

screwed into the mounting surface. The price is about £1 3s. each for the three-sector type, 17s. 6d. for the two-sector type. The cost of fixing should therefore be very low, and as the cost of the Kulihats per absorption unit compares with that of the cheapest form of normal sound absorbent tile, the overall cost of treatment should be attractive.

This form of treatment is useful for remedial noise reduction, especially where the installation of conventional acoustic ceilings or wall treatment is difficult or impossible and where, of course, the stalactitic effect is acceptable. (*P. B. Tennant & Co., 62, Drake Fell Road, S.E.14.*)

Data on Building Boards

Most architects would probably guess that a new type of fibreboard comes out about every month, but they would be wrong, because, according to *Timber & Plywood*, more than seventy new types have appeared during the past year. There are now, it seems, more than a thousand different boards available, and two hundred or more brands, all of which have now been listed in a useful little directory which seems cheap at 5s. The boards are classified under nine headings, and include asbestos cement and plastics, as well as plasterboard, wood wool and chipboard. By far the longest list, of course, is of insulating and hardboards, acoustic tiles and laminated boards, and it would in some ways be preferable to have them separately listed, but most of the producers make at least two types, and it saves some space to have them all together. All materials are listed under trade names, with information on type, sizes available, thicknesses and the necessary addresses, which are also re-classified in areas. (*Middlesex Publishing Co. Ltd., 194-200 Bishopsgate, London, E.C.2.*)

INFORMATION CENTRE

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

10.184 design: building types
TECHNICAL COLLEGES

Technical Colleges and Colleges of Further Education. Barbara Price. Batsford. 75s.

Between the end of the war and 1956, the Government allowance for the building and equipping of technical colleges was restricted to £5 m. per year, a hopelessly inadequate sum for a backlog of work dating from the beginning of the century.

The White Paper on Technical Education in 1956 outlined a 5-year plan for the spending of £100 m. For a student population which had expanded from 100,000 in 1850 to 1,200,000 by 1937 and has expanded very much since that date, this help appeared to be too little and to have arrived too late. Accommodation for technical education has never caught up with the demand and temporary, mis-used and outdated accommodation has been in use all over the country, since its inception. In one county at least, no new building was built specifically for this purpose in the fifty years preceeding 1956. To meet local demands such places as skittle alleys, disused mine heads and numerous private houses had to be adapted as permanent expedients.

Only in comparatively rare instances in the more industrialised areas was the proper accommodation provided and that largely through the drive of the L.A. and the initiative and co-operation of local manufacturers. It is not surprising, therefore, that very little has been written about the architectural problems connected with this advanced form of education and even now such writing must be largely based on the theoretical solutions of authorities inexperienced in the provision of new accommodation for this purpose.

The result of the 1956 White Paper has been the birth of innumerable ambitious plans of which only minor instalments can be built under the present financial restrictions. If the colleges were completed as they should be, both for economic and educational reasons, the allocation would be absorbed to the satisfaction of very few areas and at the expense of a vast majority.

Under the present system of providing large numbers of small instalments nobody is satisfied but everybody is happy in the knowledge that no one has more new

accommodation, in the vicinity, than they have.

It is against this background that Miss Price has written this most interesting book. The subject is enormous and no one volume, at this time, can do it justice.

Miss Price has given an overall picture of the problem as she is well able to do, having spent much time on ground research for one of the M.O.E.'s live projects in an area where the value of technical education has been long recognized. The knowledge she has gained coupled with a natural devotion to the problem has produced an excellent introduction which any architect or educationist new to this form of education would do well to read. It is a pity that it should have been produced at this late date, when many authorities have committed themselves to partially implemented schemes, evolved from little or no overall appreciation of the problem and yet this book would not have been so useful if this had not been so, as much of the space is devoted to solutions of authorities of areas where more is known about the subject than elsewhere.

The book is divided into two parts, the first giving an outline of the problems and the second twelve solutions.

Part one commences with an historical survey which traces the growth of technical education and is essential background information. Sir Harry Pilkington in his foreword says that the book fulfils a useful purpose in pointing out how much of the past architects should forget. It is only from the past that the architect can get the future problems in the right perspective. A visit to a 50 year old technical college in sound structural condition, as they invariably are, coupled with a review of the technical advances that have taken place since the college was built, will give him more insight into his problem than any natural creative instincts he may have, and it is from this viewpoint that this historical survey should be read.

Miss Price then touches on educational and financial controls which are more stringent than those for other types of schools.

Then follows the type of briefing information that will normally be available and the siting and town planning problems involved. An omission here perhaps is reference to the difficulty of getting detailed information from the part-time teachers who form the larger part of the teaching staff in many colleges.

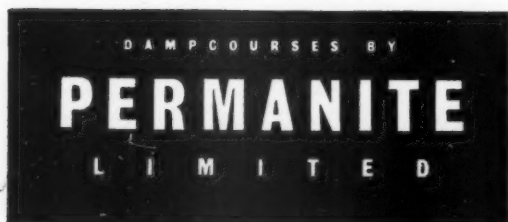
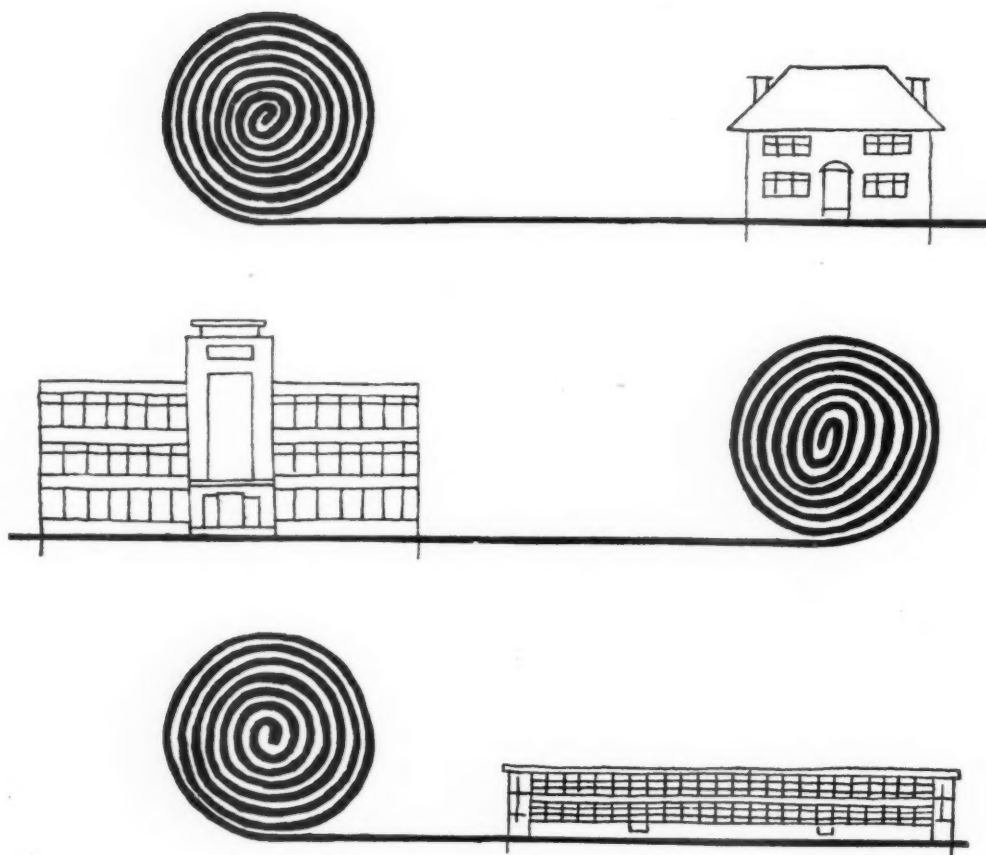
The various types of accommodation are then considered, together with some of the physical and technical problems.

Generally the information is based on full and careful research which is well referenced and indexed. Some of the solutions which are accepted by Miss Price, are far more involved than she has given credit for. A typical example is Cloak Spaces, the main problem of which she considers to be the coats, whereas a visit to a college in the evening will show that the waders and crash helmets of innumerable motor cyclists create very much more of a problem. Again, she advocates laboratories being on the

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10.18
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technical section

upper floor of multi-storey buildings because of ventilation problems, thereby presupposing that most gases are lighter than air and that complicated drainage systems in acid-resisting piping are cheaper per foot run than simple ventilation systems.

Although Miss Price has quite rightly concentrated on the overall problem at the expense of detail, the information is detailed enough for three omissions to be noticed. Firstly, she advocates flexibility as being essential but does not devote any space to the economics of flexibility which is a basic problem facing architects who have to work to a fixed cost target on a square foot basis. Secondly, no mention is made of furniture which should be designed or selected by the architect in toto and the third, not so fundamental omission, is the type of information that an architect should obtain, in proforma form before embarking on a project. This will give him the weights, sizes, services and financial responsibility for all the existing and new furniture, machines and equipment that the building will initially be required to contain. A well thought out proforma can cover all types of rooms in all types of colleges.

The second part of the book is entirely devoted to plans, photographs and descriptions of twelve colleges, some of which have been partially constructed.

There is so much good information in this book that minor criticisms are mentioned to show that the detail given has only penetrated the surface of the subject, but this does not detract from it being an excellent introduction to the problem.

It is to be hoped that it will be a forerunner to further books giving more detailed information.

JOHN REDPATH

10.185 design: building types CLEANING IN HOSPITALS

New Hospitals: design and planning in relation to maintenance. An unpublished report.

This is a report by Mrs. O. Snow, O.B.E., recently engaged upon the re-organization of the domestic administration of The London Hospital, which is exceedingly critical of current hospital planning from the point of view of those responsible for cleaning. The writer points out that this responsibility is being shifted from the senior nurses to the Household Department and that hospital authorities are experiencing great difficulty in obtaining and in keeping staff of a sufficiently high calibre owing to the many practical inconveniences caused by bad planning.

The first point is to ensure that sinks, sluices and storage are planned in relation to the spaces to be cleaned. The mechanization of cleaning requires that storage spaces should be large enough for large vacuum cleaners and other mechanical equipment and their fittings, that open drains should be provided for emptying machine water tanks, and power points should be placed on both sides of wards and passages to enable

one half to be cleaned at a time without interrupting traffic on the other side by electric leads. Floors of kitchens, bathrooms, lavatories, test rooms and sluice rooms should be of tile with an open runway on one side to allow of the squeegee method of cleaning. The ward kitchen should have adequate flat surfaces as well as easily accessible cupboards, and be so planned that it is clear of trolleys etc., when washing up is in process. Adequate centralized storage space with plumbing fittings suitable for their purpose is essential. Lastly, flush radiators whilst avoiding dust traps give much trouble in blackening walls: if used, then the surfaces above them must be easily cleaned.

13.143 materials: timber WOOD FLOORS

Wood Floors. Published by TDA. Free.

This is in the main a useful and certainly an elegant 30-page booklet which gathers what we know on this subject. It reprints (from the Forest Research Bulletin) the lists of woods suitable for three different grades of domestic traffic, for industrial floors, for gymnasias, ballrooms, skating rinks and floors where acids are spilt and where temperature and humidity vary to an exceptional degree. The remainder of the booklet is concerned with different floor constructions, including five versions designed to give added sound insulation. The value of these last is less than it should be, as the reader is not told what order of decibel reduction he might expect from each.

In general the technical advice given has that perfectionist quality which is always disturbing to the hard-pressed architect. There is at times an element of conflict in the advice given. Take, for instance, the question of the moisture content of softwood used for flooring. This, we are told (page 3), "need not normally be kiln dried except when used as a final surface. If, however, an impervious covering is to be used, care should be taken to ensure that the timber is dried out to less than 20 per cent moisture content." Later on the same page the writer says "The moisture content of wood flooring on delivery should not vary greatly from the average moisture content of use" which is given (for flooring) as 14 per cent for intermittent heating, 12 per cent for continuous heating. This, of course, sets the architect in a dither. For him the issue is "ought he to specify kiln drying or not?" The second sentence is so phrased as to suggest that, if he is going to put down linoleum he ought to kiln dry. If he is already knowledgeable, however, he will know that a minimum moisture content of 20 per cent can be relied on with air drying if the builder doesn't do anything silly—but the booklet doesn't say this. But the last piece of information floors him completely, because it suggests that, in fact, 14 or 12 per cent ought to be aimed at and this surely means kiln drying! The question now arises in his mind

of whether the writer wants to help or merely to impress with his learning.

There is one respect in which this booklet appears to add to constructional doctrine, namely on the question of impervious floor coverings. Where these are laid on a wood floor, the floor itself should be treated with preservative and the covering should rest on an underlay of bituminous felt, though it can be glued direct to the floor. "Felt or cork underlay" the writer goes on "are not so suitable as linoleum needs a firm base." This last is not the view of the Linoleum Manufacturers Association, but TDA may well be right.

Lastly, there is one minor but annoying discrepancy. On page 10 there is a table (5) classifying wood flooring types. This table describes "strip" as "up to 4 in. in width" and "board" as "over 4 in. width." This is splendid. But on page 5 there is a sentence which reads "Tongued and grooved boards up to 4 in. on face . . ."

18.204 construction: theory

CONCRETE CONSTRUCTION

Concrete Practice. Charles H. Hockley. Chatto and Windus, 1959. 12s. 6d.

This is another book written since the inception of the courses of lectures on concrete practice which are given in technical colleges throughout the country. Its object is to help those responsible for supervision of work on building sites to a better understanding of reinforced concrete. The basic contents of concrete are discussed, the cement, aggregates, the proportioning of the materials, mixing and consolidation. Formwork and reinforcement are discussed from the practical aspects and enough of the design is considered to indicate the reasons for placing the reinforcement in a particular way, the lengths, hooks, etc., employed.

19.221 construction: details STOVE HEARTHS

LCC Waiver for stove installation. Leaflet available from County Hall, Westminster Bridge Road, S.E.1. Free.

To enable people to fit closed (or openable) stoves into existing hearths (and thus conform to the requirements of the clean air act) at reasonable expense, the LCC have published a waiver to the two sections of the London Building Act (10.09, 10.13) which deal with this matter. Existing hearths will not project more than 1 ft. 6 in. in front of the hearth. This, joined to the fire opening at the back, will usually be deep enough to provide a base for the stove, but the existing regulations require that the stove base should be surrounded on plan by an area of concrete not less than 2 in. thick and projecting 12 in. in all four directions. The waiver reduces the side and back extensions to 6 in. and permits an $\frac{1}{8}$ -in. m.s. plate resting on a $\frac{3}{8}$ -in. asbestos board as a substitute for concrete. The justification for this waiver is that hot ash from the stoves rests, not on the hearth, but in a tray.

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structure study

A FRENCH METHOD OF MOVING BUILDINGS

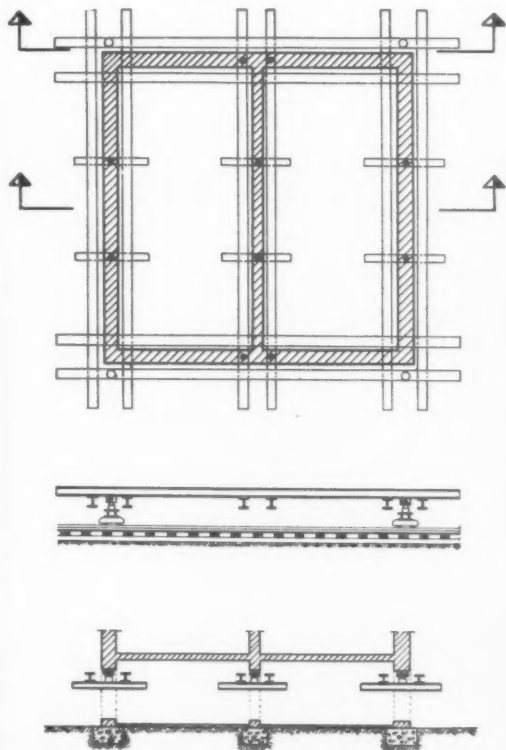


A French masonry villa on the move.

During the period 1951-57 the Paris branch of the engineering and contracting firm of Christiani and Nielsen have moved about seventy different buildings from one site to another, usually to make room for a new road. These buildings vary from brick built villas to a reinforced concrete warehouse, vary in weight from 100 tons to 2,500 tons, and include a structure over 400 years old: and these have been moved both up and down hill and round corners. To date there have been no failures.

Their technique depends on the use of hydraulic jacks whereby, no matter how many jacks are employed, the

Diagrams showing placing of beams and jacks.

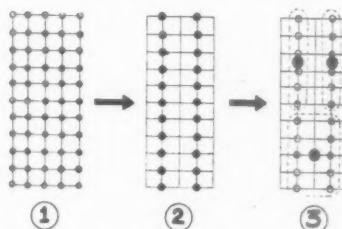


whole structure is reduced to a statically determinate 3-point support system. By linking jacks in this way, any unevenness in the bearing structure are instantly compensated.

The procedure is to place a grid of r.s.j.s (each usually from 8-12 in. deep) just below the bearing of the ground floor. Two main beams are placed on either side of each main structural wall. Cross beams are then passed through the wall, are secured to the bottom flange of the main beams and jacks are inserted between these cross beams and the underside of the wall to be lifted. Under normal brickwork jacks are placed at 12 to 15-ft. centres. They rest on carriages which in turn run on pairs of rails, laid to 4-ft. gauge. When a building has to be moved a long distance or round a corner, it is usually economical to reduce the number of lines to a minimum. To do this, one of two methods is used. Either the walls are prestressed by inserting cross beams between the ends of the two flanking r.s.j.s and inserting jacks horizontally between these cross beams and the wall end; or the jacks supporting the walls are carried, not on carriages but on beams and these beams are supported near their ends on main jacks resting on carriages (see drawing). The secondary jacks have capacity loads of 15 to 45 tons, the main jacks of 50 to 200 tons. In the early days of the technique it was customary to move the buildings by winch, but this gave an uneven motion and now hydraulic jacks are used. These are secured to the rails and bear against the cross beam on the carriage. Allowing for the need

to move each jack when its piston is fully extended, the average rate of progress is 4-5 yards per hour. Where a building has to change direction, a jack is placed between the rails at the point of intersection.

This raises the carriage sufficiently to



Distribution of jacks to provide 3 point system of support.

enable it to be turned and set on the new rails, but, since the rise is compensated by the jacks above, it does not bring the building out of true.

It has been found that more is saved in moving large and well built structures than small and old ones, and that the distance moved and the nature of the soil has a considerable effect on cost. The moving of the factory illustrated below cost two-thirds of the estimated cost of demolition and rebuilding; but had the distance been shorter, the cost could have been cut by a half. In general the cost of moving small houses varies between 50 and 100 per cent of the cost of rebuilding.

Reproduced by permission of the Council from the papers for the Fiftieth Anniversary Conference of the Institution of Structural Engineers.

Moving of factory. Note turntable to change orientation.



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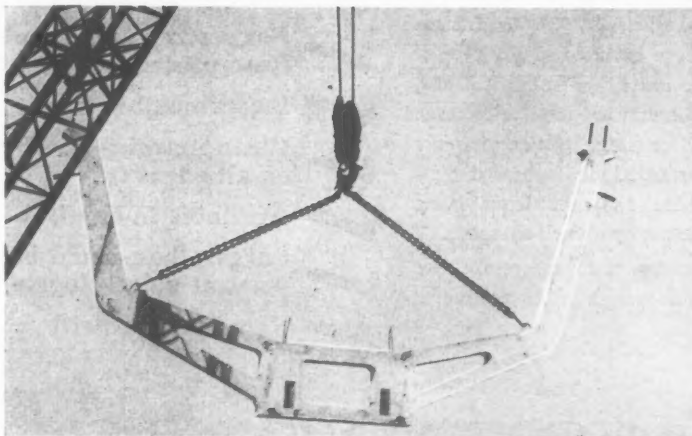
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structure study

PRECAST MONITOR ROOF IN FACTORY AT BATTERSEA




A concrete framed factory, at present nearing completion at Battersea, is an extensive exercise in dry construction, using precast structural members throughout. The monitor roof is of special interest.

The main factory block is two-storeyed, columns being spaced on a 38-ft. by 39-ft. grid at ground floor level and 38-ft. by 78-ft. at first floor. The main roof beams are at 38-ft. centres and span 78 ft. They comprise paired precast units with a gap of 3 ft. 7 in. between and are in six lengths of 11 ft. 10 in. each in the span of 78 ft., each length being temporarily supported in position on scaffolding until the post-tensioning is carried out. Between each length of beam is the precast U-shaped unit which forms the principal framing for the monitor roof. There are seven of these units forming six bays in the 78-ft. span. The main beams and the U units are jointed together and to the tops of the columns with high strength concrete. The main beams are post-tensioned externally, the wires being covered with concrete on completion. The post-tensioning wires, 100 to each pair of beams, are each 0.276 in. diameter. 12 in. deep by 8 in. wide precast beams span between the ends of the U units to form the monitor roof, and these carry 14-in. wide by 6-in. deep hollow precast purlins lying on their sides and asbestos cement decking units on which the bituminous felt roof covering is laid. Architects, L. D. Tomlinson & Partners; frames designed and erected by Concrete Ltd.

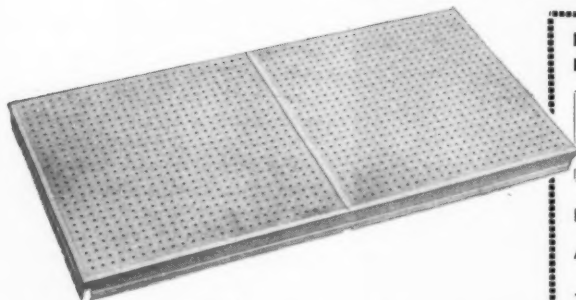


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HOSPITAL EXTENSION

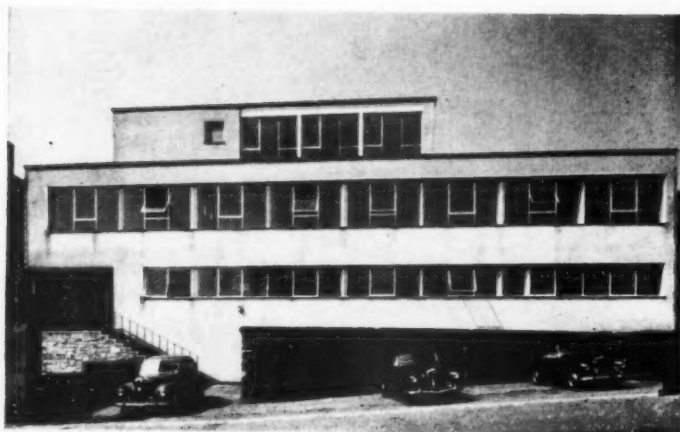
CASUALTY BLOCK, DUNFERMLINE & WEST FIFE HOSPITAL, DUNFERMLINE
 designed by JOHN HOLT, architect to the South Eastern Regional Hospital Board (Scotland)
 architect-in-charge J. PETERS; consultants (structure) BLYTH and BLYTH
 (engineering services) DONALD SMITH, SEYMOUR & ROOLEY; quantity surveyors JAMES GENTLES & SON

The Casualty Block at Dunfermline is the third building designed by John Holt for the Scottish South-East Regional Hospitals Board to be cost analysed in the AJ. Apparently less spectacular than the bronze-medalled radio-therapeutic block (AJ, December 12, 1956) and the low-cost nurses' home and training school (AJ, September 18, 1958), both for Edinburgh's Western General Hospital, this building is best assessed by the reader himself. Then he will appreciate how the planning problem was enormously complicated by difficulties of daylighting, the requirement to link with adjoining buildings, and by an extremely restricted, steeply sloping site.

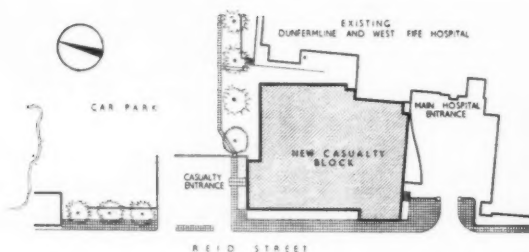
The new block from the south-west. Existing buildings are just in view on the right.



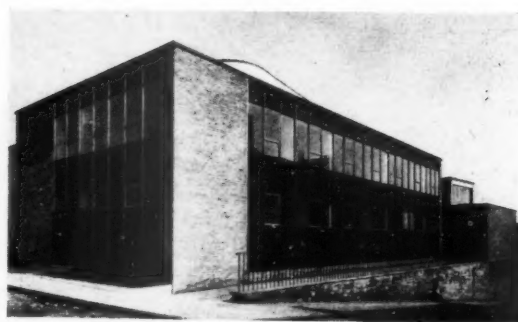
building illustrated



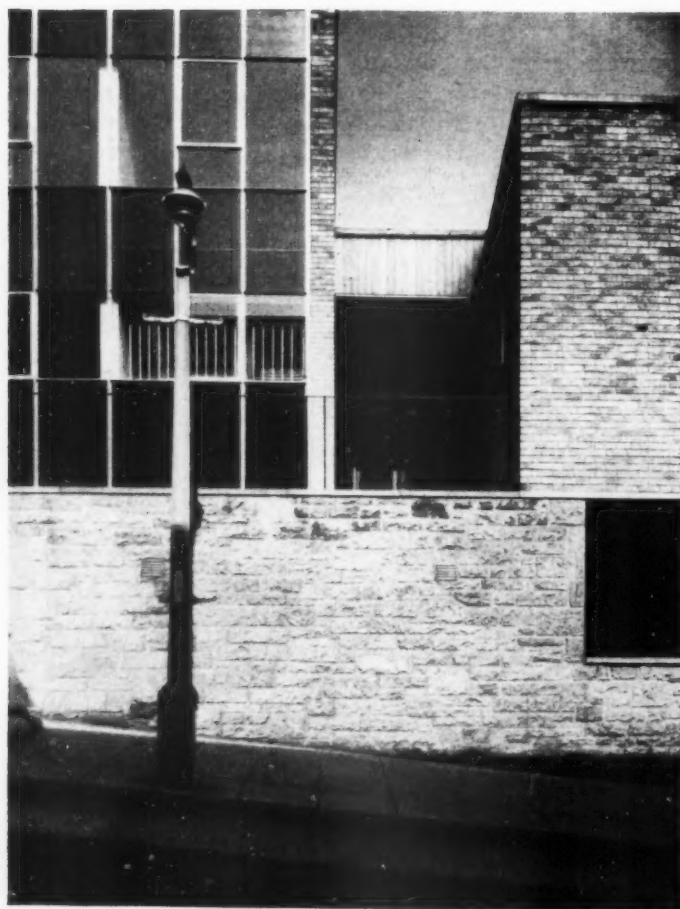
A variety of external wall finishes includes stone, rustic facing bricks, tyrolean rendering, glass and plastic panels. The architects have tried to make full use of the steeply sloping site while restricting the height of the building in sympathy with those already existing. Left, the south front, tyrolean rendered in pale grey. Steps on the left lead to the out-patients' entrance at the lower level. The elevations represent: on the lowest floor, left to right, waiting room, consultants' room, treatment room, staff room, calorifier room; main floor, waiting rooms (centre) with examination and consultants' rooms on either side; top floor, bedrooms for the house staff.



Site plan



Above, view from the north-west, showing the area of olive-green plastic panel curtain-walling on the west elevation. The main casualty entrance is through double doors on the left of curtain wall panel on north gable, while the ramped terrace leads to the main entrance for ambulance patients, visitors, etc., and links directly with the centrally placed waiting hall.



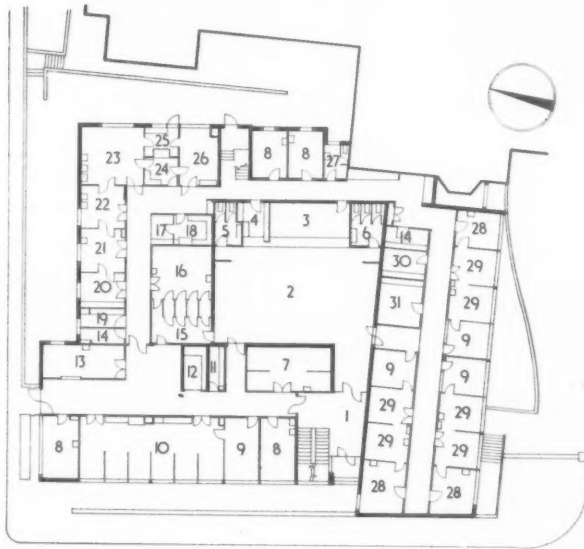
Main entrance at south end of ramped terrace, left. The lamp-post, expressive of urban "contemporary" urges, is in direct line with the main entrance staircase which is immediately behind the plastic panelled curtain wall at this point. The deeply shadowed void between the stone-faced base courses on the right (actually, 6-in. rubble facing on brick back-up wall) and the facing brick above is in fact the porch to the out-patients' entrance. The rubble walling is of stone salvaged from demolished buildings.

KEY

- First floor plan
1. Four-bed ward
 2. Two-bed ward
 3. Single-bed ward
 4. Sisters' room
 5. Nurses' station
 6. Kitchen
 7. Lift
 8. Linen store
 9. Patients' bathroom
 10. Patients' lavatory
 11. Utility room, dirty
 12. Utility room, clean
 13. HMC
 14. Nurses' cloaks
 15. Ward equipment
 16. Sitting room
 17. Bathroom
 18. Bedroom
 19. Day room



First floor plan



Ground floor plan

Ground floor plan

1. Entrance hall
2. Waiting hall
3. Reception and inquiries
4. Tea bar
5. Men's lavatory
6. Women's lavatory
7. Recovery cubicles
8. Staff room
9. Waiting room
10. Treatment cubicles
11. Splints
12. Lift
13. Reception and recovery
14. HMC
15. Waiting space
16. X-ray room
17. Wet view
18. Dark room
19. Linen store
20. Plaster preparation
21. Plaster room
22. Anaesthetic
23. Minor theatre
24. Sterilising room
25. Clean up room
26. Septic theatre
27. Male staff lavatory
28. Consultant
29. Examination cubicle
30. Side room
31. Eye treatment

Lower ground floor plan

1. Waiting area
2. Mens' lavatory
3. Womens' lavatory
4. Consultants
5. Treatment room
6. Staff room
7. Calorifier room
8. HMC
9. Store
10. Switch room
11. Emergency light battery
12. Lift



Lower ground floor plan [Scale: 1/8" = 1' 0"]

analysis

CLIENT'S REQUIREMENTS

A new building was required to house the Casualty and Consultative Out-Patient Department of the existing Dunfermline and West Fife Hospital. Hitherto, these services were restricted to a lower ground floor of the existing building, and patients waited for attention in the corridors. The hospital authorities required an adequate reception area for patients from which they could be directed to the various departments, and could wait for appointments informally and in comfort. From here the patients to have easy access to consulting suites comprising sub-waiting room, examination and consulting room. A treatment area with individual cubicles and an adjacent recovery room. Two theatres were needed for clean and septic work, with ancillary service rooms and with a plaster preparation, plaster and anaesthetic rooms completing the unit. Patients arriving by ambulance to have a separate entrance, close to the theatre suite. At lower ground floor level an individual suite to be provided, for storage, calorifier room, and lavatories, and on the first floor a nursing unit of 21 beds divided into male and female sections.

SITE

The only site available was a steeply sloping part of the hospital grounds on the western boundary beside the main entrance. The hospital stands in the centre of the town, bounded on all sides by buildings, mainly housing, but the steep slope affords views over the town to the south and the Forth estuary.

PLANNING AIMS

The Department is planned round a central waiting hall which is entirely top lit by glass lenses set in a parabolic reinforced concrete arch. The Casualty section, containing theatres and treatment rooms, forms the north and west sides of the building, the south side being occupied by out-patients' suite and the north by administrative offices. The main floor of the new block is at the level of the first floor of the existing hospital. The upper floor is linked to the casualty department by two stairs and a bed lift, and on this floor is a ward-unit of 21 beds with ancillary rooms, and four bedrooms for house staff. Access to a new ambulance turning space has been made at the highest part of the site.

SUMMARY

Ground floor area: 12,123 sq. ft.
 Total floor area: 21,327 sq. ft.
 Type of contract: Scottish National Building Code.
 Tender date: May 4, 1955.
 Work began: June, 1955.
 Work finished: April, 1958.
 Final contract price of foundations, superstructure, installations and finishes: £90,002.
 Final contract price of external works: £4,896.
 Total: £94,898.

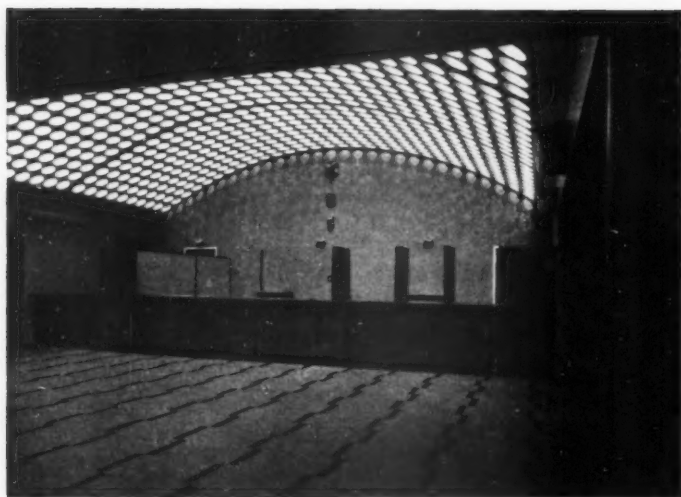
Preliminaries and insurances
 Contingencies nil

cost per sq. ft. s d
 5 1/2

Work below ground floor level
 Reinforced concrete pad foundations with columns cast monolithically and tanked brick retaining walls. 9-in. brick load-bearing walls.

6 10 1/2

building illustrated



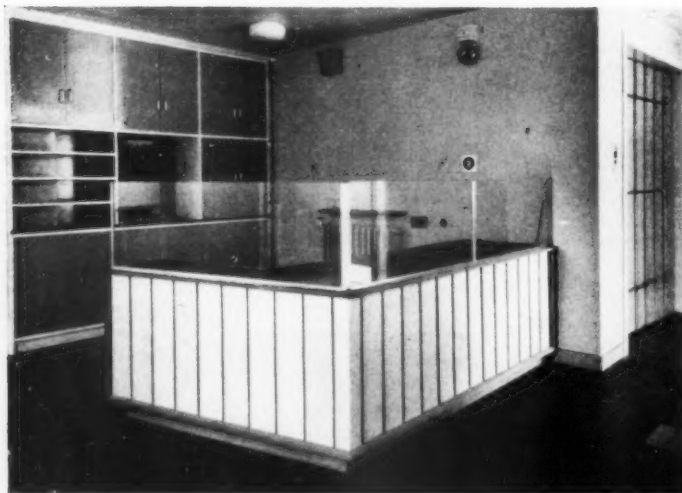
The main reception and waiting hall from the entrance doors. This space is central to all departments and is daylit overall through the precast concrete and glass lenses which compose the parabolic arched roof.



Looking south-east in the main waiting hall. The floor is of lino tile with black rectangular insets on a grey ground and the reception counter is fitted with a plate glass screen over the mahogany front.



View from the main waiting hall back towards the main entrance doors. Both ceiling and wall lights are used together in the circulation spaces generally.

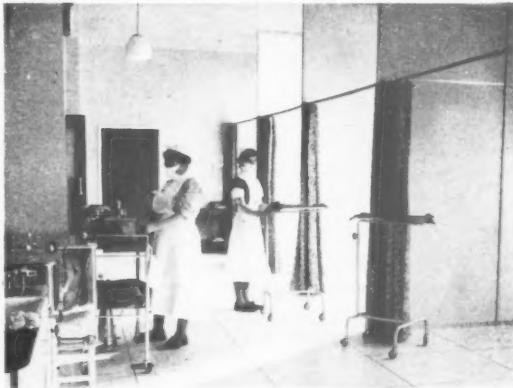


The nurses' station in a corridor bay at first floor level is seen left. This is mahogany framed and has a rubber counter top, sycamore veneer panelling on the front and ebony strips set vertically in the facing panels.

analysis

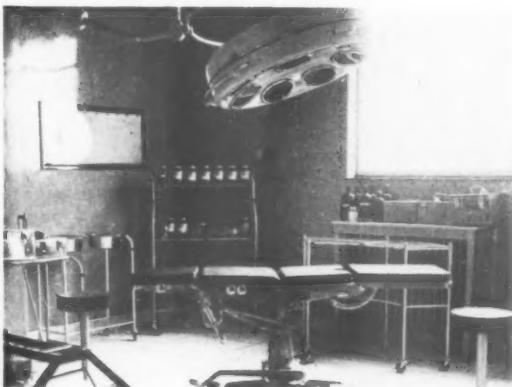


A typical 4-bed ward. Colours generally tend to be in the "cream and pastel" range, being a committee responsibility and outside the architect's sphere of influence.



The casualty treatment suite is immediately on the right of the main casualty entrance. The partitions dividing the cubicles are of medino board and the outer wall at this point is of plastic and glass panels with a 4½-in. brick back-up wall. Colours here are in pale shades with grey-green walls and alternating white and grey medino board partitions.

View of the operating theatre (and see north-east corner on ground floor plan, where it is grouped with septic theatre, plaster and X-ray rooms). The theatre has an anti-static terrazzo floor finish.



STRUCTURAL ELEMENTS

s d

Frame or load-bearing element

5 5

R.c. frame comprising columns and beams.

External walls

7 4½

11-in. common brick cavity wall, tyrolean harled externally.

11-in. cavity walls, with outer face of golden brown rustic wire cut bricks.

Cladding of plastic panels backed with 4½-in. brick at all levels.

$$\text{Ratio: } \frac{\text{solid wall}}{\text{floor area}} = \frac{0.506}{1}$$

Windows

2 0½

Hot-dip galvanized steel windows, with horizontally pivoted and projected type ventilators.

$$\text{Ratio: } \frac{\text{windows}}{\text{floor area}} = \frac{0.148}{1}$$

External doors

2½

Mahogany framed, fully glazed double and single doors. Double doors with floor springs.

$$\text{Ratio: } \frac{\text{doors}}{\text{floor area}} = \frac{0.007}{1}$$

Upper floors

5 2½

In-situ concrete, hollow tile ribbed slabs.

Staircases

9½

2-in. in-situ r.c. with treads and risers finished in terrazzo.

Width: 4 ft. 1 in. Total rise: one, 22 ft. 6 in., 14 ft. 4 in.

Roof construction

7 0½

Precast concrete hollow slab.

Hollow tile ribbed slabs.

Glass-concrete parabolic arch spanning the waiting hall, 3 ft. 9 in. × 32 ft. 4 in.

Rooflights

8½

Thirteen 4-ft. diameter cast glass domelights.

Seven cast glass rectangular domelights on metal ventilated upstand berbs.

Total area: 304 sq. ft.

Glazing

8½

Glazing: 32 oz. in small fixed lights; ½-in. rough cast in theatre suite; ¼-in. polished plate in large, pivot-hung windows.

Total of structural elements: 29s 6d

PARTITIONS AND FITTINGS

Internal partitions

2 0½

Generally 4½-in. brick. Area: 2,084 sq. yds.

Screens

1 1½

Plastics faced, cork core partitions, glazed in aluminium sections above doors, to form treatment cubicles.

Timber-framed glazed screens to waiting rooms.

Internal doors

1 5½

Skeleton framed single doors faced with gaboony plywood and finished liquid plastics. Ditto with glazed panel to wards, theatre, etc. Hardwood framed glazed double pass doors to corridors and waiting hall.

No of single doors, 96; no. of double doors, 36 pairs.

analysis

Ironmongery

Mortice deadlocks and latches. Lever handles, pull handles, kicking plates, and check action floor springs finished in satin chrome.

Fittings

Mahogany faced desk fitment at nurses' station and counter in waiting hall, with $\frac{1}{4}$ -in. linoleum top surfaces.
Cupboard fitments at nurses' station, utility rooms, linen store, kitchen, etc. Benching and shelving.

Total of partitions and fittings : 7s 8½d

FINISHES

Floor finishes

4·5-mm. lino tiles. Area 19,881 sq. ft., at 30s. per sq. yd.
Studded rubber tiles to ramped corridor leading to existing hospital.
Anti-static terrazzo in theatres, etc.

Wall finishes

$\frac{3}{8}$ -in. plaster on brick walls.
 $\frac{3}{8}$ -in. barium plaster in X-ray room.
Wall tiling to splash-backs of washbasins and sterilisers.

Ceiling finishes

$\frac{1}{2}$ -in. hardwall plaster on concrete ceilings.
Acoustic tiles on hung ceilings in corridors.

Roof finishes

3 layers of bituminous felt with granite chip finish.
Mineral finish felt dressed over precast copes.
Area: 10,878 sq. ft.

Decorations

BSS colour range used throughout.

Total of finishes : 11s 3½d

SERVICES

External plumbing

22 s.w.g. copper flashing at edge of precast copings, worked between layers of roofing felt.

Hot and cold water installation

Hot water storage capacity of 1,000 galls, from calorifiers heated from hospital steam mains.
Cold water storage, 3,500 galls.

Sanitary fittings

Type of fitting	No. of each type
Wash hand basins	47
Sinks	13
Slop sinks	5
Baths	3
W.c.s	15
Urinals	4
Plaster sinks	2

Heating and ventilation

Internal temperatures: 65 deg. F. inwards, 70 deg. F. in theatre
Air changes: 2 per hour in wards, 3 p.h. in theatre.
U of walls, 2·27. U of roof, 0·25.

Gas installation

Supply for bunsen burners, gas cooler and incinerator.
Medical gases are piped from central manifold.
9 points.

s d
1 8½

Electrical installation

Type of point	No. of each type
Tungsten	334
Fluorescent	15
Switch points	206
Switch sockets	139

1 4½

Lifts

1 bed lift.

s d
6 5½

Drainage

Cast iron. Cost covers only drainage beneath the building.

2 0½

2 6½

Total of services : 28s 7d

5 3½

External works

4 7

External paving, tarmac turning space. Rubble walls, etc.

Total per sq. ft. of floor area:

£90,002 (net cost excluding external works)	
21,327 sq. ft. (measured inside external walls)	= 84 4½

2 3½

COST COMMENTS

1 2½

Points to note in assessing this cost analysis are:

- Figures are based upon final cost.
 - The contract extended over three years which seems unduly long for a job of this size, so the final cost covers all fluctuations in cost.
 - The restrictive and sloping site conditions are reflected in the foundation costs, which include expensive retaining walls.
 - The various external wall finishes, including curtain walling, average out at 14s. 9d. per square foot of solid elevation, but this does not include anything for stonework, which was salvaged from the demolitions. The metal windows work out at 16s. per square foot, excluding glazing.
 - Special finishes and services peculiar to hospital work appear in the following elements: screens for inspection and treatment cubicles; special floor treatment in anti-static terrazzo to theatre; barium plastering to X-ray rooms; sanitary fittings include slop sinks and plaster sinks; electrical installation provides a high number of points and fittings; bed lift; high proportion of hot water storage.
 - The cost of built-in fittings at 1s. 4½d. per square foot is surprisingly low for an element in which one would expect higher expenditure for this form of building.
- This scheme as a whole has overcome difficult site conditions and achieved tight planning at a final cost which expresses value for money.

1 3½

4 11½

2 3½

CONTRACTORS

General contractor: Alex Fraser Ltd. Sub-contractors: Joinery: Bogie & Nicol Ltd. Plastering: J. R. & A. Adam Ltd. Plumbing: Maing & Co. Hollow tile floor: Costain Ltd. Precast floor and roof slabs: Concrete Ltd. Arched roof: Lenscrete Ltd. Wall cladding: Holoplast Ltd. Metal windows: Fredk. Braby & Co. Ltd. Linoleum tiles: Korkoid Decorative Floors. Hardwood tiles: A. M. McDougall & Son Ltd. Ironmongery: George Boyd & Co. Ltd. Screen partitions: John Weston & Co. Ltd. Heating services: Joseph Whittle. Domestic hot water: Allied Building Services (Glasgow) Ltd. Insulation: Scottish Insulation Co. Ltd. Electrical services: Lowdon Bros. & Co. (Engineers) Ltd. Lift: Shorts (Lifts) Ltd. Piped gases: British Oxygen Gases Ltd. Painting: Alex. T. Rolland Ltd. Landscaping: J. A. S. Lamberton.

7 10½

1 1½

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6 5½

2 0½

2 6½

4 7

84 4½

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Co. Ltd.
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o. (Engi-
British
d. Land-

working detail

ROOFS AND CEILINGS: 57

LOUVRED CEILING: COLLEGE AT ACCRINGTON

Grenfell Baines and Hargreaves, architects



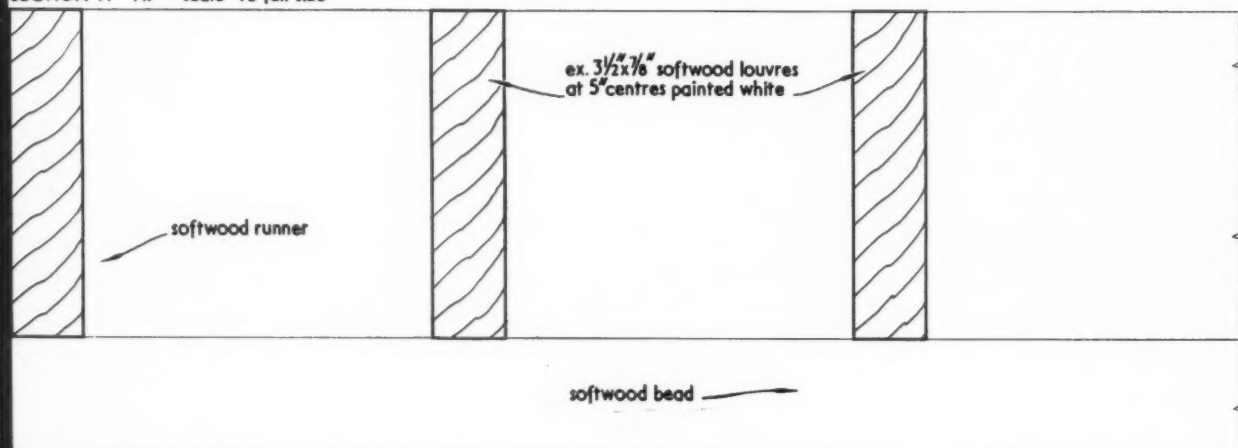
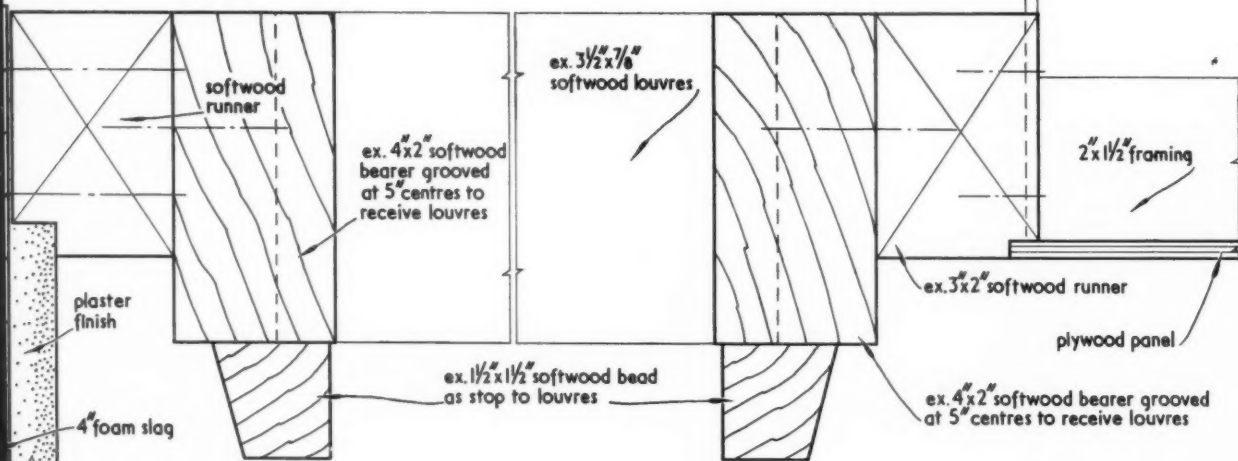
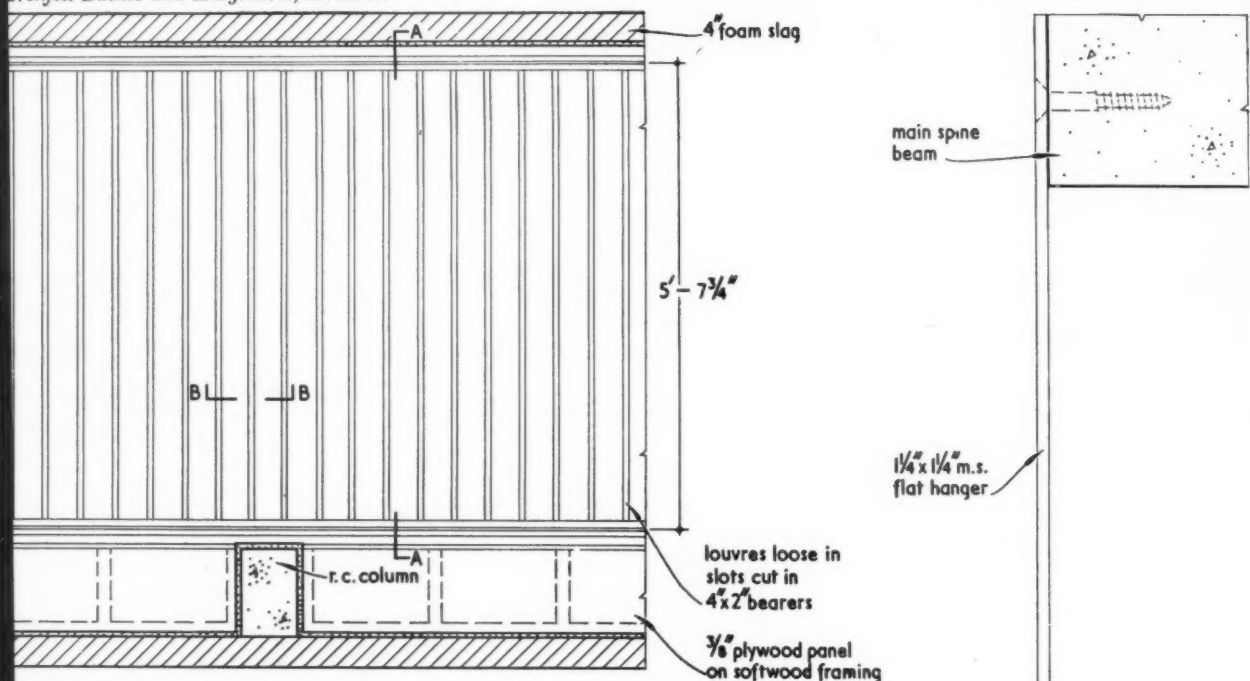
This louvred ceiling prevents glare, provides a more interesting pattern than eggcrate or flat-sheet diffusers and, by emphasising the short rather than the long dimension, gives an added sense of breadth to the passage. The louvres are designed to lift out to give access to the lights. The cost of the slats, the supporting system and the decoration was 5s. 8d. per foot super.

working detail

ROOFS AND CEILINGS: 57

LOUVRED CEILING: COLLEGE AT ACCRINGTON

Grenfell Baines and Hargreaves, architects



SECTION B-B. scale $\frac{1}{2}$ full size

working detail

STAIRCASES: 48

STAIRCASE: COLLEGE AT ACCRINGTON

Grenfell Baines and Hargreaves, architects



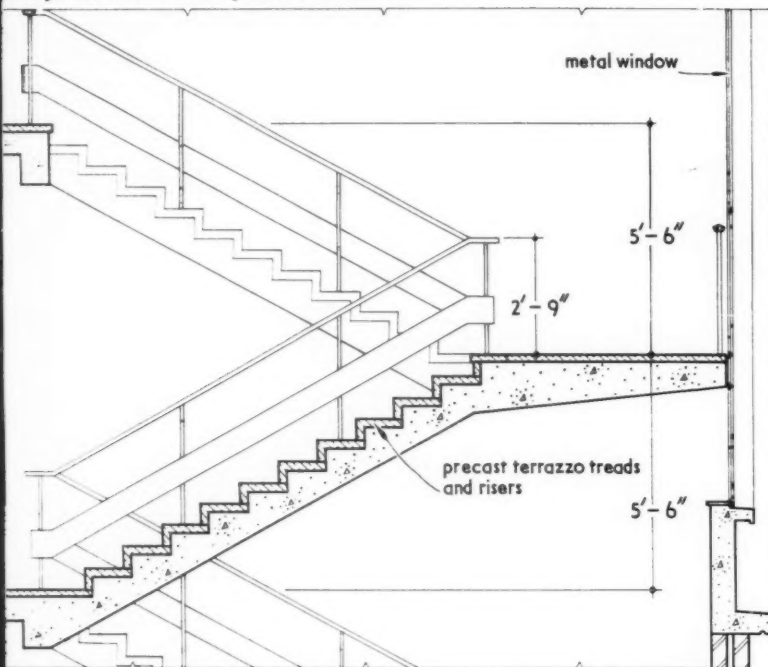
This is a good example of the careful use of finishes to lighten the effect of the "traditional" in-situ concrete stair. The breakdown of cost is of interest: the structural stair with landings cost £8 16s. per foot rise, the finishes (precast terrazzo treads and risers, in-situ terrazzo soffit) cost £18 10s. 5d. per foot rise and the handrail and balustrades £12 5s. 10d. per foot rise.

working detail

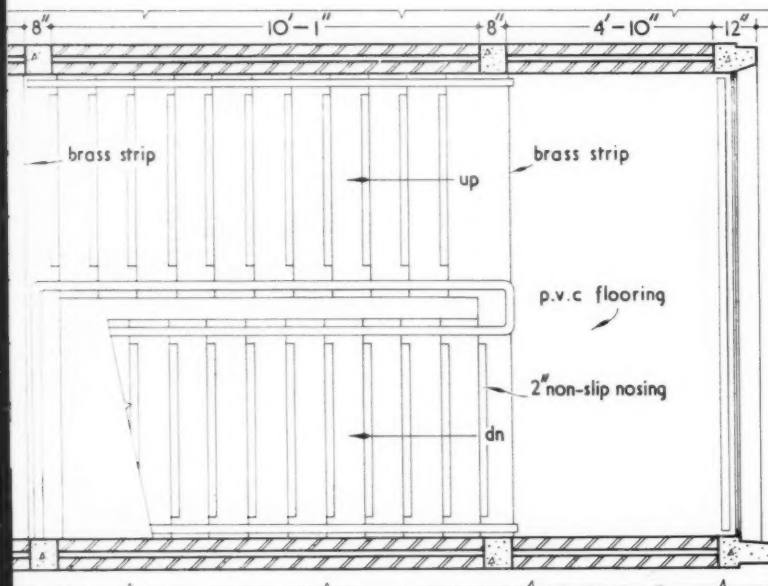
STAIRCASES: 48

STAIRCASE: COLLEGE AT ACCRINGTON

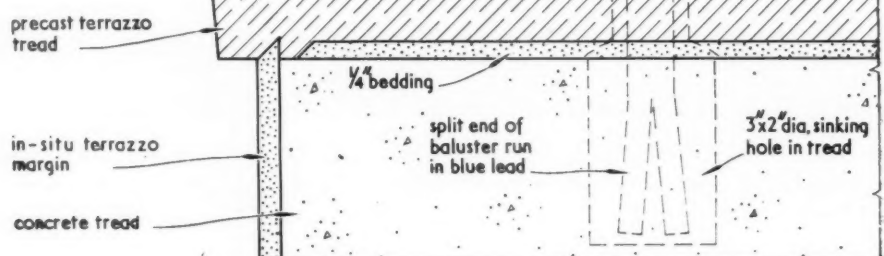
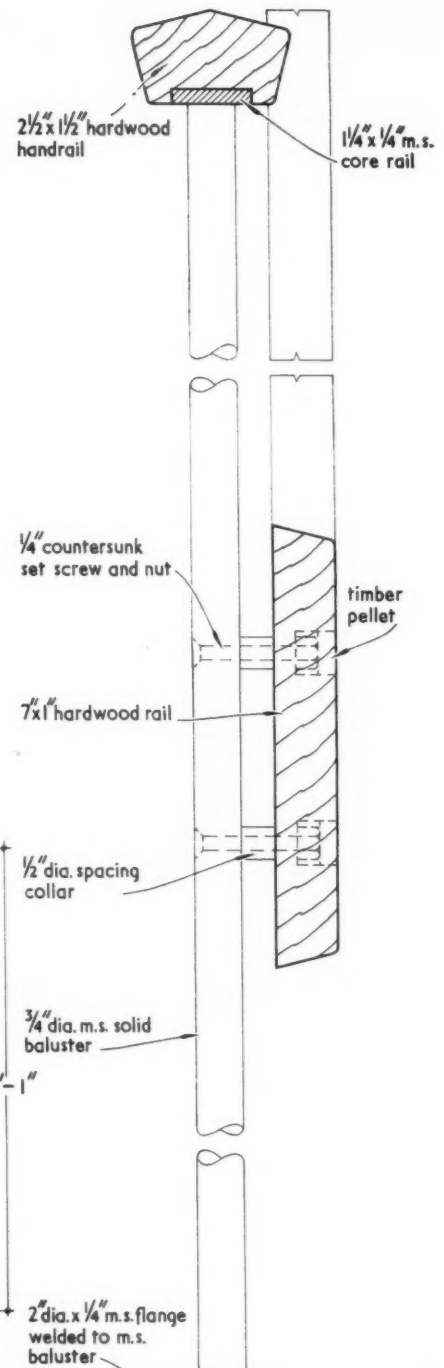
Grenfell Baines and Hargreaves, architects



SECTION. scale $\frac{1}{4}" = 1' - 0"$



PLAN. scale $\frac{1}{4}" = 1' - 0"$



DETAIL OF BALUSTRADE AND TREAD. scale $\frac{1}{8}$ full size

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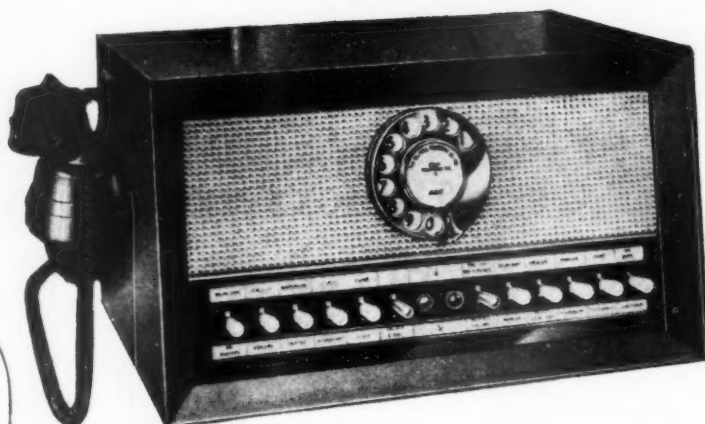
Advice on foundation design and construction is available and you are invited to write or telephone:

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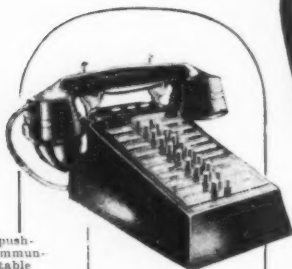
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BOOK REVIEW

Plan for Glasgow

Reshaping a City. By T. Brennan. Published by The House of Grant Ltd. for Glasgow University Department of Social and Economic Research, 25s.

Glasgow Corporation has embarked upon the most ambitious schemes for comprehensive redevelopment yet framed in this country, and Mr. Brennan could not have chosen a better moment to publish this study of the redevelopment problem of Glasgow, and the progress made so far. He concludes with some fairly severe criticisms of the Corporation's current overspill policy, which rests, he considers, on dubious statistics.

Until 1951 planning in Glasgow was the responsibility of the City Engineer. In 1952, the first City Architect, responsible both for architecture and planning, produced a report which showed that 135,000 houses were needed to rehouse the "overspill" population outside the City boundary. Until that time the corporation, unwilling to face the problems of decanting population outside the city, and firmly committed to building peripheral housing estates at low densities on all the remaining land within the city boundaries, had pursued a policy which, according to Mr. Brennan, was described by a councillor as "building houses and tae hell wi' plannin'." By 1951 this policy had led to a complete dead end, for the land was

nearing exhaustion. Today the corporation, which already owns 100,000 of the 300,000 houses in the city, and has built nearly 50,000 houses since the war, is planning to demolish 100,000 old tenement houses in 29 redevelopment areas within 20 years, and to resettle 300,000 people either in new or expanded towns all over Scotland.

Mr. Brennan's analysis of the policy hitherto pursued by the corporation is devastating. Until the present overspill programme was framed the corporation was squandering the limited area of vacant land by building low density estates without any conception of the ultimate solution to the housing problem, "Houses, and tae hell wi' plannin'," and the 12 houses to the acre outlook, have combined to produce housing estates, such as Pollok, that are new towns in population (50,000), but not in planning. Instead of a planning policy there were *ad hoc* decisions which, pieced together, added up to a policy of dumping people down on the outskirts without cinemas, pubs, dance clubs or halls, long distances from the small number of shops and from their work. It is a remarkable reflection on Glasgow's housing policy that for every three families rehoused from Govan—an old working-class area—one family returns to Govan from the new estates. The change from the old high density tenement housing to the new low density estates is, Mr. Brennan argues, more drastic in Glasgow than in an English city, the contrast in rent, accommodation, distance to the shops and so on much greater. However, this criticism relates to a past which is over: Glasgow is now committed

to redevelopment at relatively high densities in the centre, but existing densities are so high (or are thought to be so high) that for every three families living in the new clearance areas only one can be rehoused in Glasgow. Brennan, while not disputing the need for some overspill, challenges this policy at several points. In the first place he questions the population statistics, and charges Glasgow with seriously overestimating its overspill. For instance, the census population in the Gorbals-Hutchesontown redevelopment area was 26,800, and the plan proposes to reduce it to 10,179. But by mid-1957 the normal process of rehousing had already reduced the population to 19,800.

Mr. Brennan seems to be on much more shaky ground when he infers from this reduction in population that the central areas of Glasgow are no longer overcrowded. He argues that today the most densely populated areas of Glasgow (in terms of people per room) are not in the centre but in the new estates, and that to bring the housing provision in the central areas up to the standard aimed at in Gorbals redevelopment (1.1 persons per room) requires only 35,000 more rooms, or 10,000 houses. This argument entirely overlooks the fact that the density must be at least 300 to 350 to the acre, even allowing for a fall in population, that the rooms are in obsolete tenements lacking not only modern conveniences but a modern layout, and that a great deal of extra space is required to provide schools and other amenities to modern standards.

Mr. Brennan brushes these difficulties aside too easily: the fact that since the war slum

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tenants have done a great deal to improve their homes becomes an argument, in his hands, for proving that basically there is nothing wrong with the tenements or the life in them. Consequently, he suggests that the corporation should reconsider its plans for comprehensive development, and concentrate instead on improving the existing tenements to bring more immediate benefit to tenants. Arguing for this purpose the private agencies which have notoriously failed in the past to tackle such improvement schemes, and should be induced to do so now by being released from the Rent Acts. While there may be room for some action on these lines in areas that redevelopment cannot touch for many years, this is no alternative to the reconstruction of the city to modern standards.

In certain other respects, however, Mr. Brennan's criticisms seem better founded. For example, he points out that Glasgow, unlike London, has no stock of transplantable industrial concerns which can be moved out to new or expanded towns, and he fears that the movement of light industry would leave Glasgow once more heavily dependent on shipbuilding and other heavy industries. He also points out that many of the small firms that are being forced to move will in fact go out of existence: which surely points to the need for the inclusion of flatted factories or similar provision in the redevelopment areas. And the reader is left very puzzled to know how, in fact, it is going to be possible to transplant such vast populations such vast distances within the present

legal and financial framework in a country that has a serious unemployment problem. Mr. Brennan is probably right in thinking that far more serious thought is still required on density; and there seems to be a particularly good case in Glasgow for a Boston Manor operation in the older low density suburban areas. It might be cheaper than moving to Inverness.

M.M.

Announcements

PROFESSIONAL

Stanhope C. Hodson, Dip.Arch.(Leics), A.R.I.B.A., has commenced practice on his own account at 79, Upper Hanover Street, Sheffield, 3 (telephone Sheffield 26156), where he will be pleased to receive trade literature.

Nadine Beddington, A.R.I.B.A., F.R.S.A., M.S.I.A., has now moved to 301/307, Oxford Street, London, W.1 (telephone Hyde Park 1037).

Professor J. S. Allen has been elected President of the Town Planning Institute for 1959/1960 and will take office in November next on the expiration of the term of office of U. Aylmer Coates.

TRADE

Pyrok Limited have moved their Sales Organization and Technical Advice Service to Stanbrook House, 2/5, Old Bond Street, London, W.1 (telephone Hyde Park 1491).

H. Bramhill, F.R.I.B.A., Dipl. Arch. (Livpl.), has moved to 10, Gray's Inn Square, London, W.C.1 (telephone Chancery 2686).

The Chairman of Copperad Limited, A. Wilyman, has retired from the Chairmanship but will remain a member of the Board. He is succeeded by the Managing Director, E. B. T. Tanner, who will combine the posts of Chairman and Managing Director.

The new Chairman of the Association of Supervising Electrical Engineers is C. G. Aldridge.

The Zinc Alloy Rust-Proofing Co. Ltd. has changed its telephone number to Wolverhampton 27531 (5 lines).

British Paints Ltd. new London address is Northumberland House, 303/306, High Holborn, London, W.C.1.

Sir Gilmour Jenkins, K.C.B., K.B.E., M.C., lately Permanent Secretary of the Ministry of Transport and Civil Aviation, has joined the Board of GKN Reinforcements Ltd., a member firm of the Guest Keen & Nettlefolds group of companies.

Philips Electrical Limited have appointed E. A. Duller as a Lighting Division representative in the South East Region.

Formica Limited have appointed Mrs. Margot R. Newlands as Manager of the newly formed Market Research Department.

Concrete Limited have opened a regional office at 2, St. Andrew's Place, Cardiff (telephone Cardiff 28581).

The new address of The Lace Federation of Great Britain, London Publicity Office, will be 61, Carey Street, London, W.C.2.

Austins of East Ham Limited have appointed E. J. Kirby to represent the Company in Bedfordshire, Cambridgeshire, Hertfordshire and Huntingdonshire.

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Two innovations make Ruberoid Rubervent a built-up roof that is revolutionary in both design and effect: it *isolates* the weather-proofing from substructure surface hair cracks and *ventilates* the substructure so that vapour pressures may disperse through fully communicating spaces. Rubervent, using glass fibre based bitumen materials, is inorganic and inert. The first layer is coated on the underside with coarse mineral granules. These granules support it uniformly and isolate it from the substructure, thus allowing water vapour and gases to disperse over the entire roof area and ultimately to the exterior atmosphere. Any blistering which might otherwise result from this cause is prevented. All layers are bonded together and to the substructure simultaneously thus avoiding the risk of damp and dirt between the layers. Rubervent is based on the practical experience of associated Ruberoid companies in Europe.

UNDERSIDE VIEW

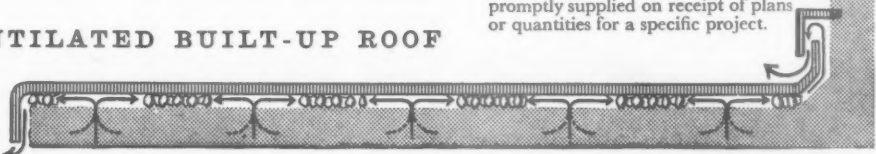
of Rubervent showing granule underside which allows dispersal of vapour to exterior, and the adhesion points which fix the entire specification to the substructure.

AUTOMATIC ADHESION

The Rubervent roof is fixed to the substructure by 'rivets' of bitumen the positions of which are determined during manufacture and not on site. This provides a rational system of adhesion points whilst maintaining substantial isolation from the substructure.

Rubervent

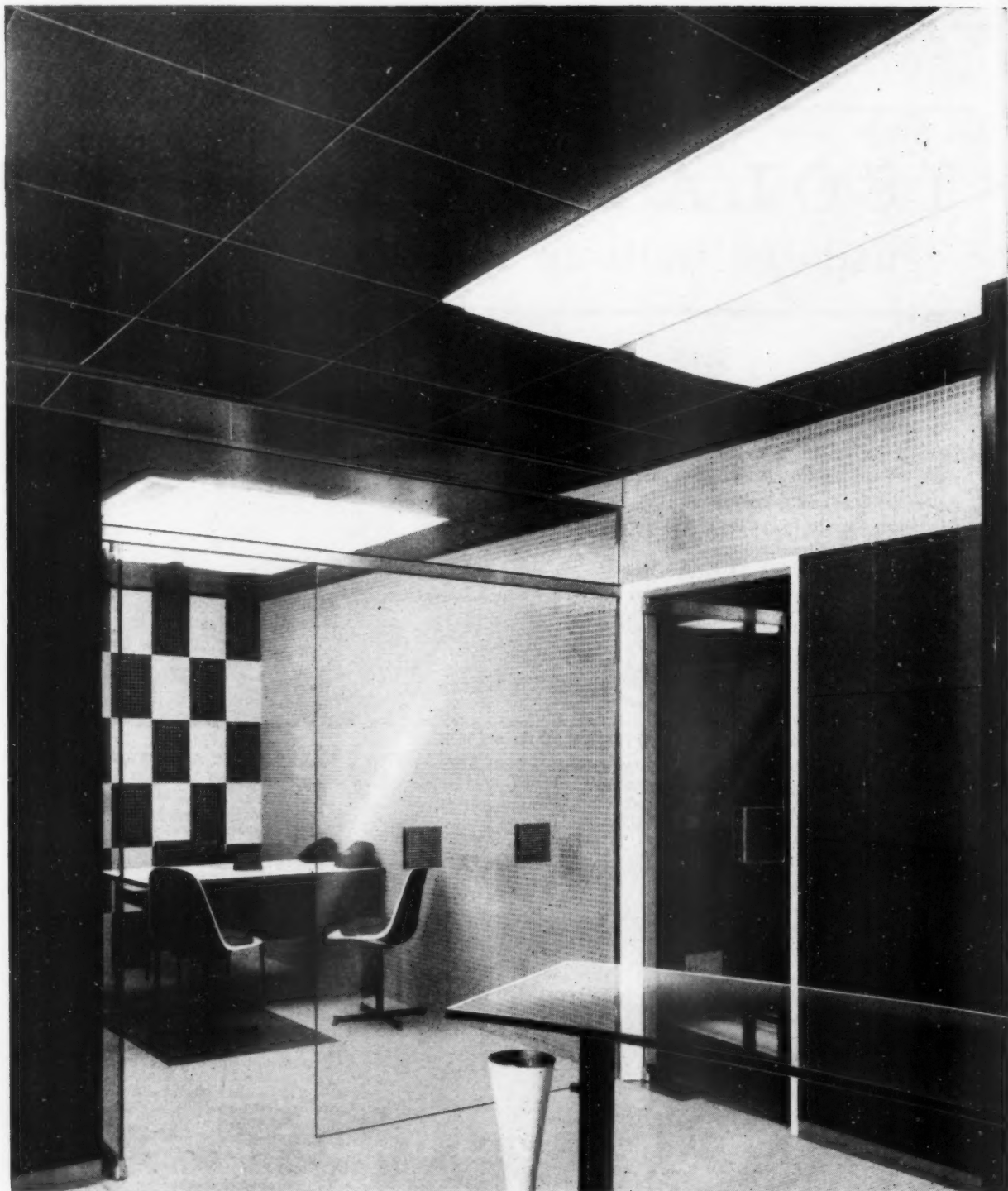
ISOLATED & VENTILATED BUILT-UP ROOF



For technical literature and model, write to

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CS17



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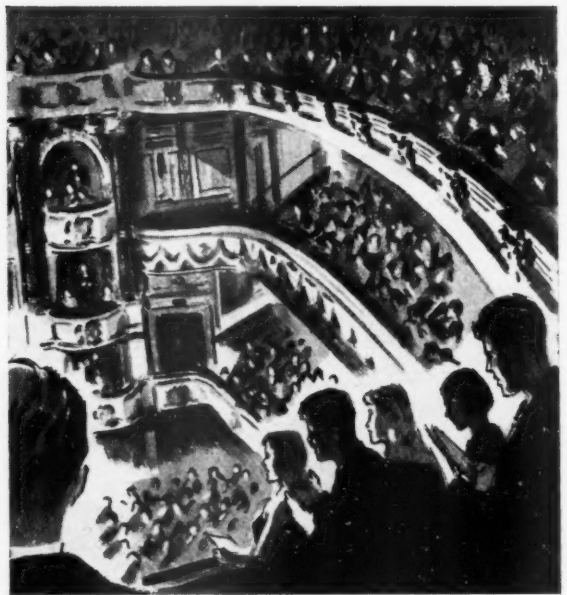
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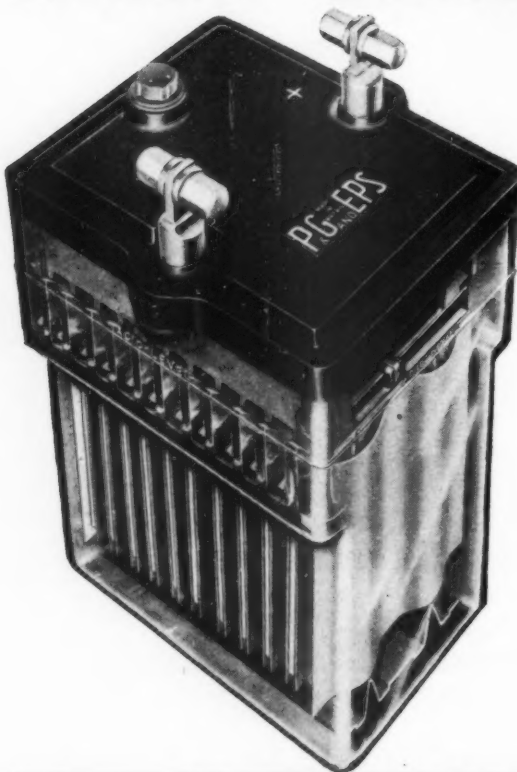


SWITCHGEAR OPERATION



EMERGENCY LIGHTING

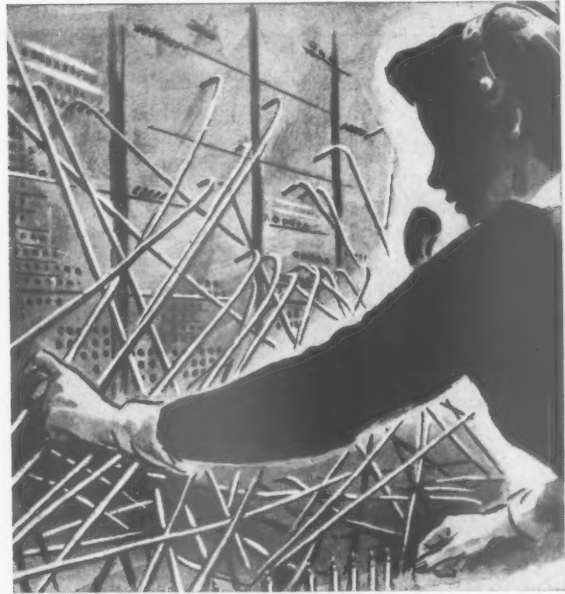
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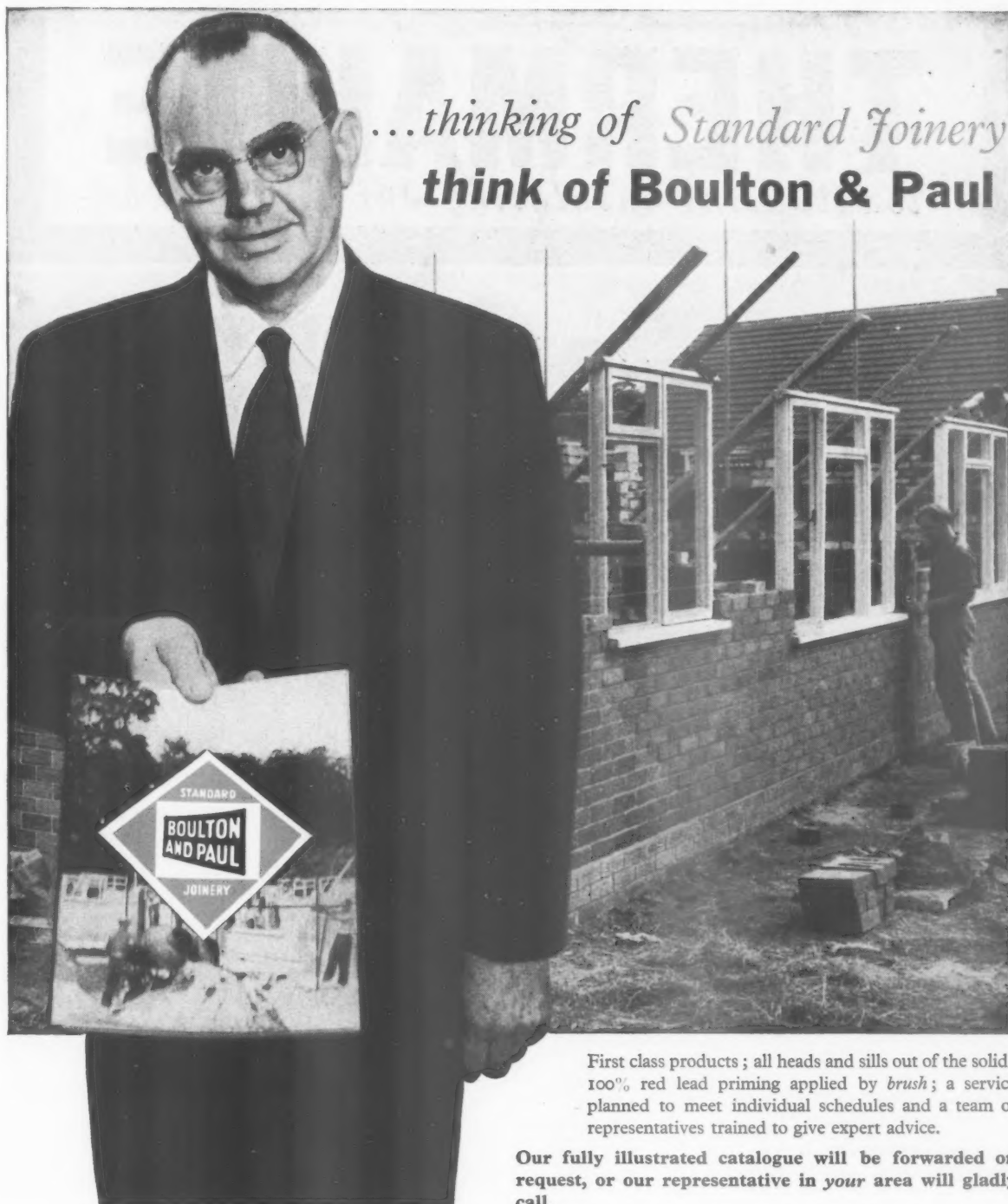
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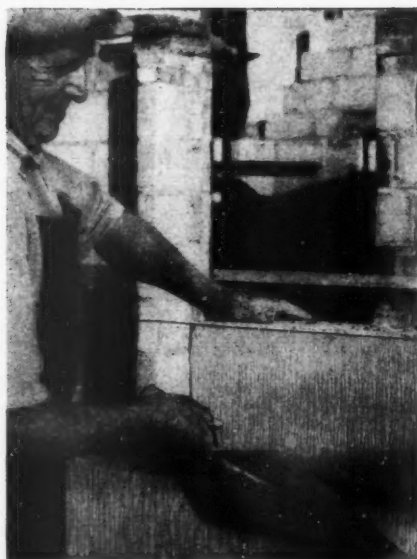
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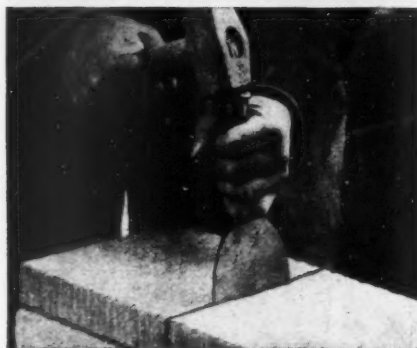
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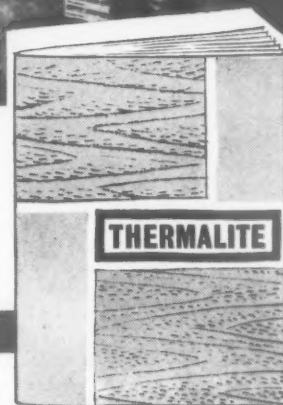
Roehampton Flats and Maisonettes. Architects: Hubert Bennett, F.R.I.B.A. (Architect to the London County Council) F. G. West, A.R.I.B.A. (Deputy Architect to the London County Council) Contractors: Wates Limited.

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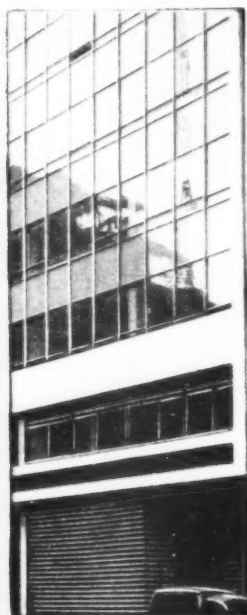
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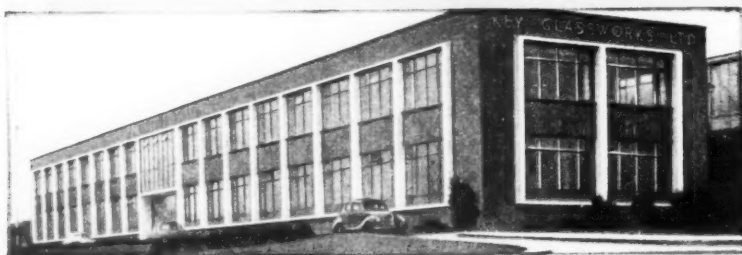
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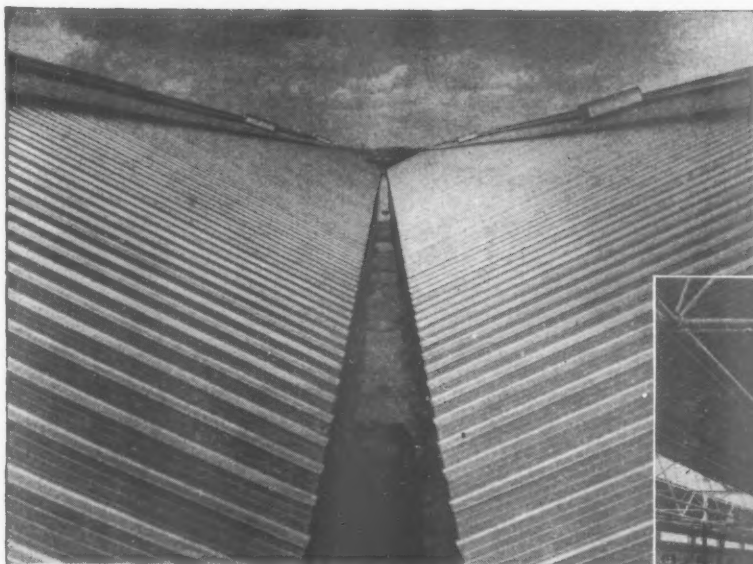
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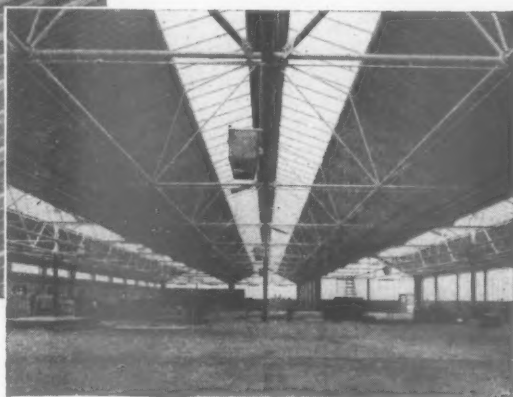
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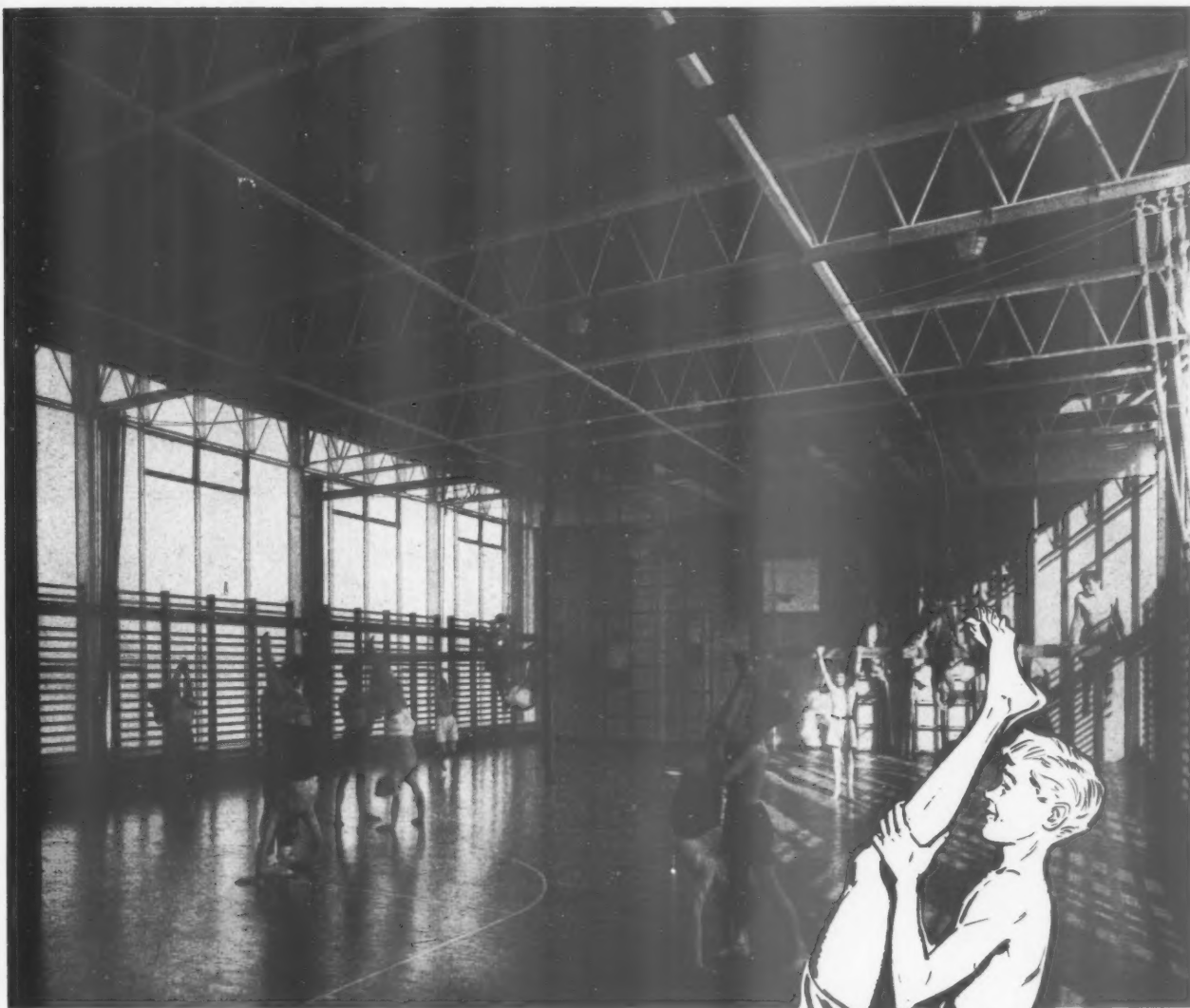


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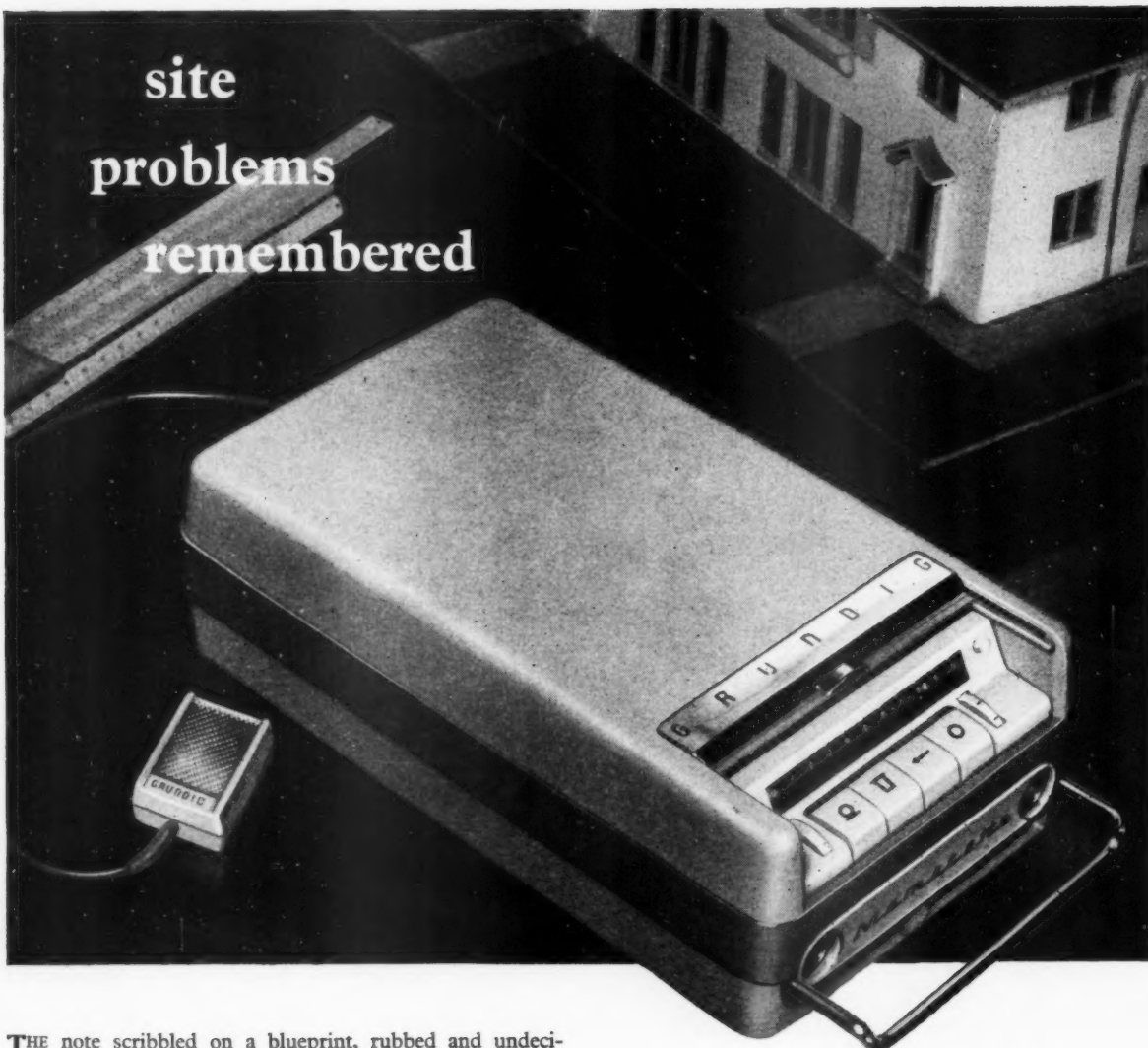
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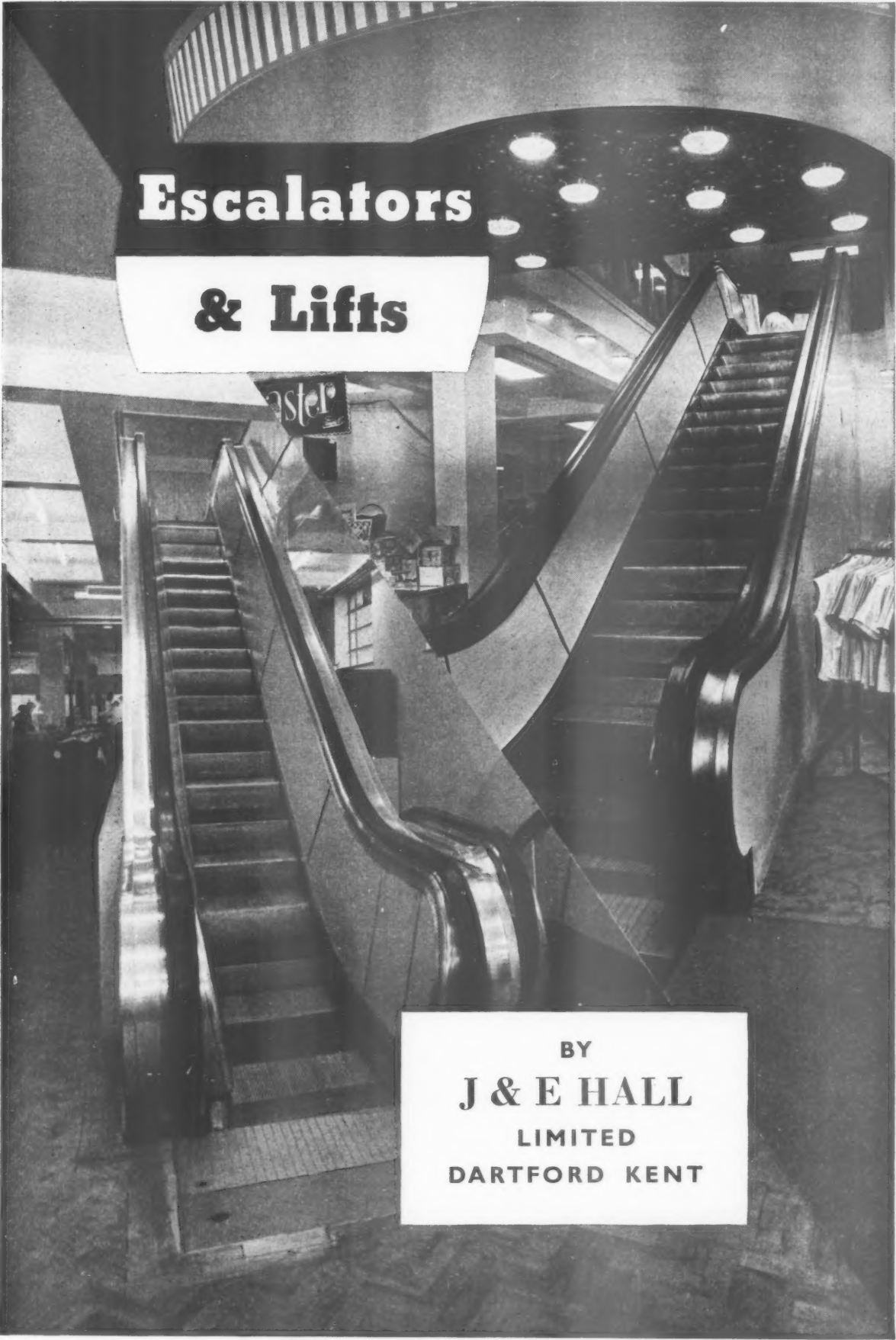


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AP 41

An increasing number of queries regarding the application of Sprayed 'Limpet' Asbestos as a functional element of Architectural Design is being received from Architects.

In this announcement we present the following elementary information to provide a firm platform for further detailed enquiries.



an architect asks questions about Sprayed 'Limpet' Asbestos by NEWALLS

REGD.



"What do you consider is the major advantage of Sprayed 'Limpet' Asbestos?"

Probably the most important element is that the 'Limpet' process gives intimate surface contact, sealing all joints, covering rivets, irregularities and protrusions in a continuous coat that entirely eliminates air spaces—a significant factor in itself.



"It seems too versatile for words. It's a Thermal and Acoustic Insulant, rotproof and verminproof, fire-resistant, prevents condensation, resists vibration . . . anything else?"

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"I understand that Sprayed 'Limpet' Asbestos has two insulating properties?"

Correct. In addition to providing a high degree of thermal insulation, it is an excellent material for absorbing sound. Indeed, many firms have specified the process for correcting acoustic distortions alone.



"Naturally. And if we did want Thermal and Acoustic Insulation—and Fire protection in one coating—I suppose it would cost the earth?"

Frankly—no. You see, the erection of timber grounds is not necessary. In application there is no cutting to waste, and the density and thickness is controllable to a very fine degree by highly efficient operators. It compares favourably with conventional insulation methods and materials.



"Being largely Asbestos, I suppose the process gives a measure of fire protection?"

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"Being porous, isn't the treatment liable to premature rotting where condensation exists?"

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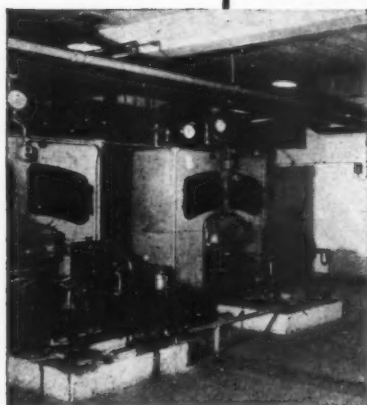
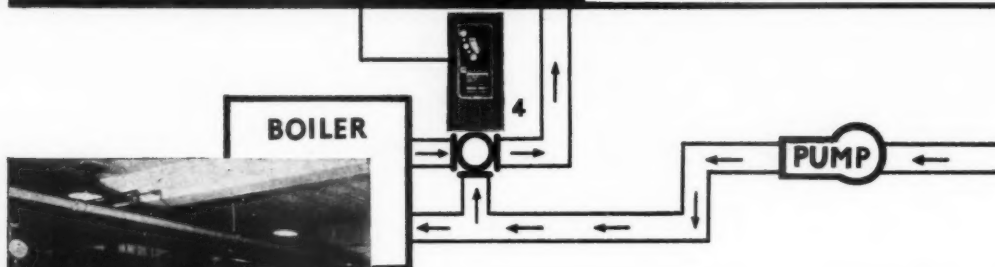
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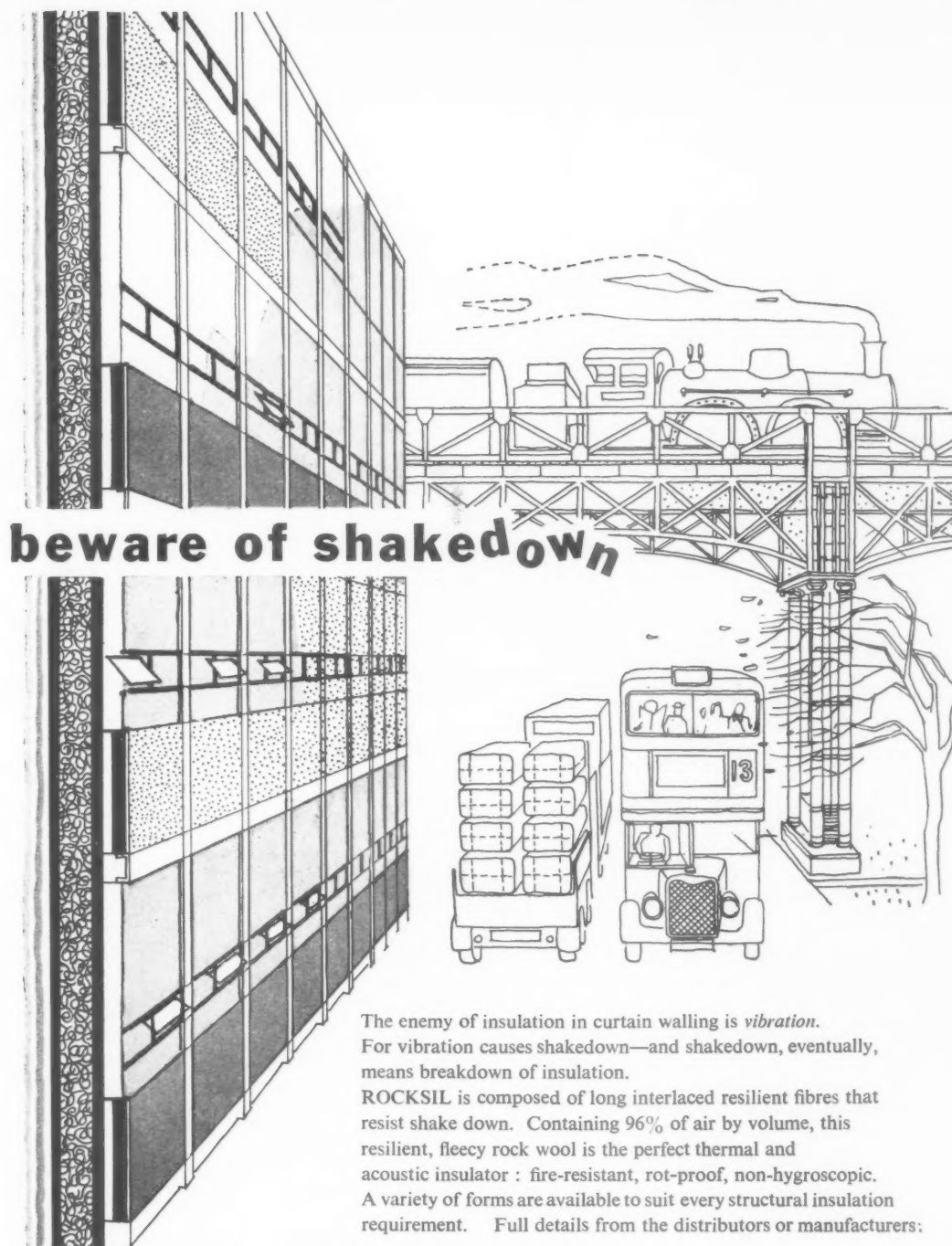
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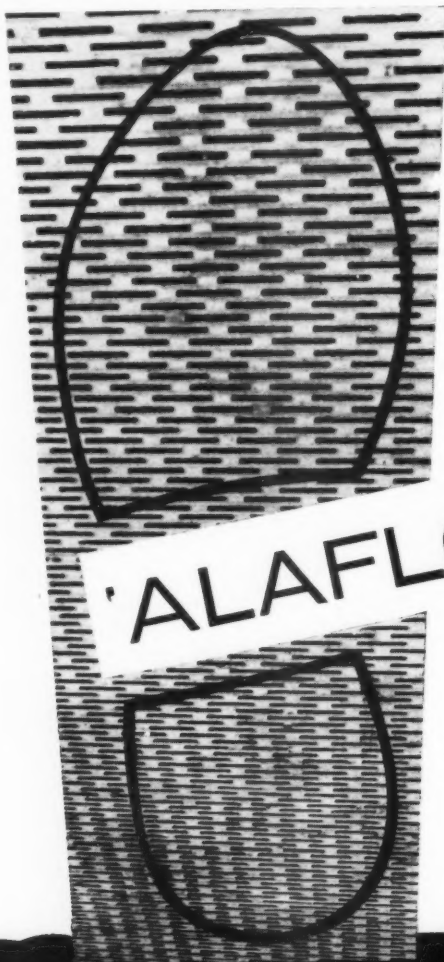
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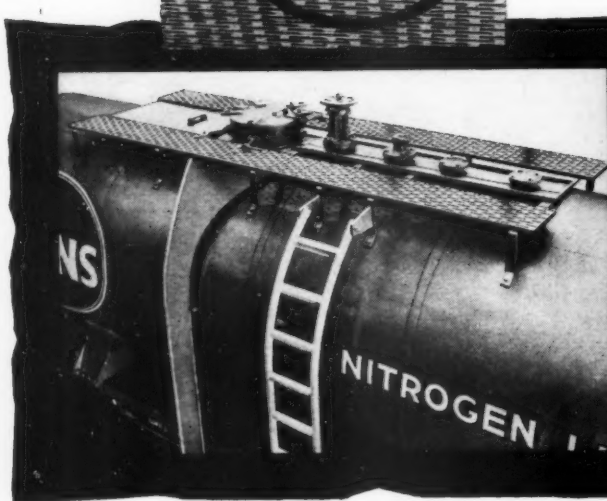
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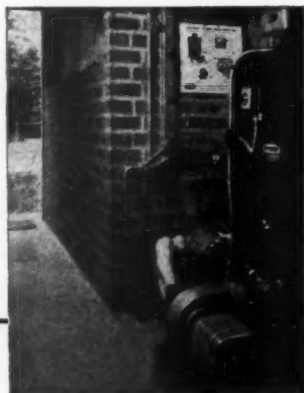
Mr. Brennand pays £68.13.1d. a year for "all the heating and hot water we could wish for"

Just over two years ago, Mr. R. O. Brennand had a 'Potterton' DOA Series Oil-Fired Boiler installed in his 4-bedroom house at Bushey, Hertfordshire. So happy is he with the boiler's running costs, that he wrote and told us about them. We quote from Mr. Brennand's letter:

"I have kept the record of the oil consumption as carefully as I can," he says. "We have certainly had all the heating and hot water we could wish for. I have calculated the cost of the oil at . . . £68.13s.1d. for the year to 25th March 1959. These figures are far less than I had bargained for, and I regard them as very reasonable."

The boiler was delivered to the site as a complete packaged unit, right down to the last nut and washer. From that day to this, Mr. Brennand's 'Potterton' Boiler—automatic as the sunrise—has never been a spot of bother and never will, due to a Planned Maintenance Service. Mr. Brennand is a very satisfied customer, and typical of 'Potterton' Boiler owners everywhere. To these people, Mr. Brennand's running costs come as no surprise. Nor to anyone else who knows the vast difference in thermal efficiency between a converted boiler and a 'Potterton' Oil-Fired Boiler, designed for the fuel it uses and nothing else.

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automatic—Mr. Brennand's
'Potterton' Oil-Fired
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the Key to comfort



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Mr. Brennand's is a cavity-walled house,
with double glazing to all windows and doors



Temperature is controlled at 70°
in the two main living rooms

DESIGN OF THE HOUSE It is a cavity-walled house, the inside skin being of Thermalite blocks. First floor ceilings are insulated with fibre glass in the loft. There is double glazing to all windows and doors. A separate lounge, dining room, kitchen, larder and cloakroom occupy the ground floor; four bedrooms and a bathroom occupy the first floor. Area of the house is 1,962 sq. ft.

Architect: Robert Neil, A.R.I.B.A.,
Dawe, Carter & Partners.
Builder: S. & K. Darvill Ltd.

INSTALLING THE HEATING SYSTEM All 7 rooms—plus the hall landing and downstairs cloakroom—have radiators. A small radiator (10 sq. ft.) is also in the linen cupboard and a towel rail is in the bathroom. The radiators have a total heating surface of 318 sq. ft. Temperature is controlled at 70° in the two main living rooms, and 65° in the bedrooms. The boiler has an electric pump and a Venner Time Switch.

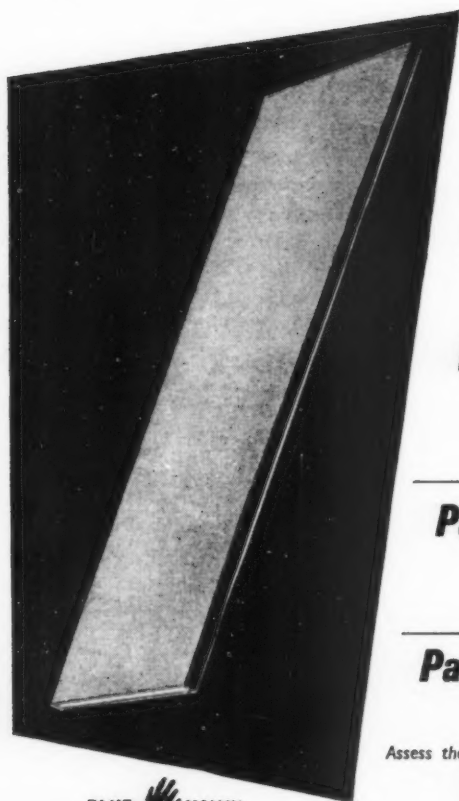
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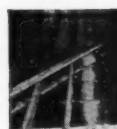
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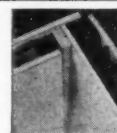
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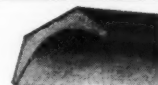
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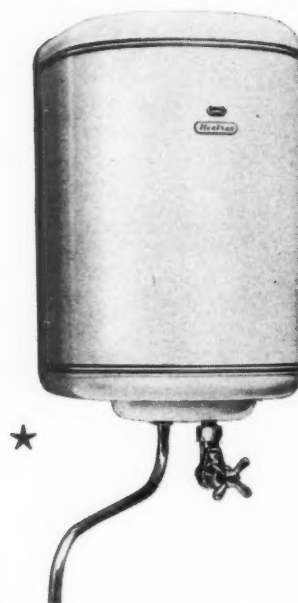
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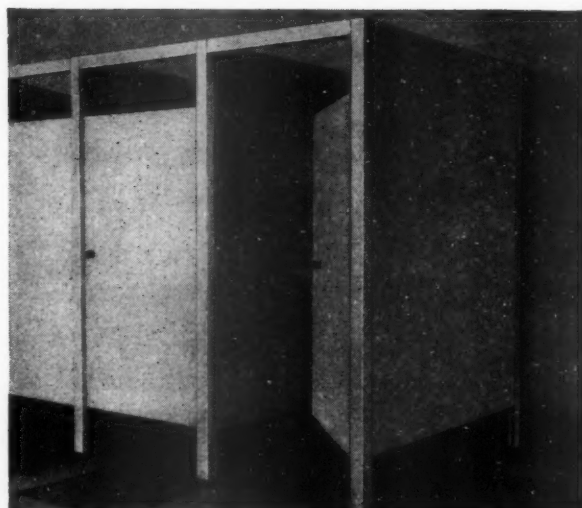
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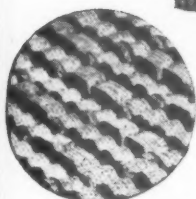
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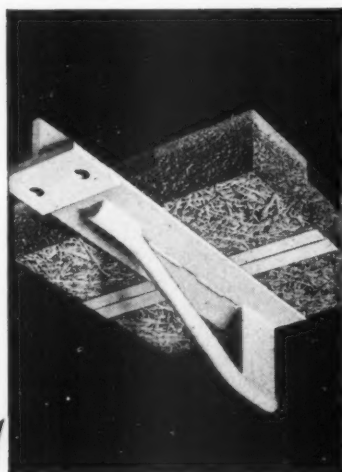
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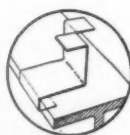
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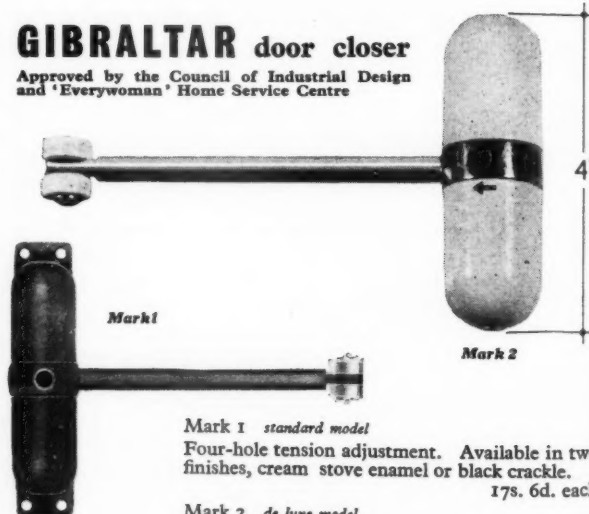
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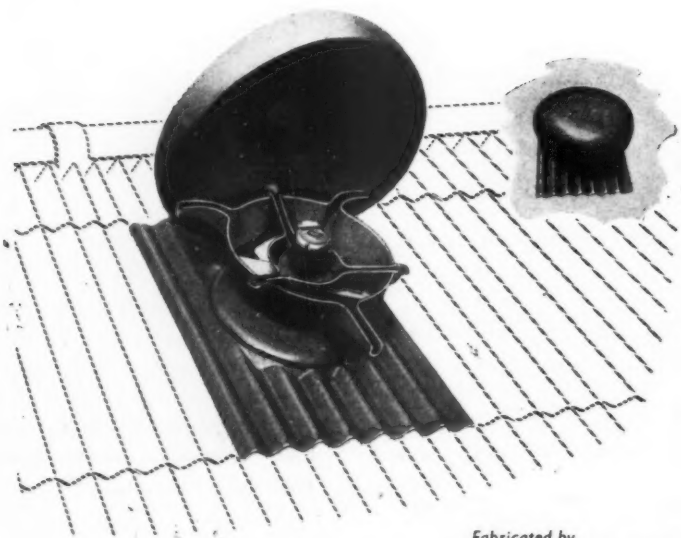
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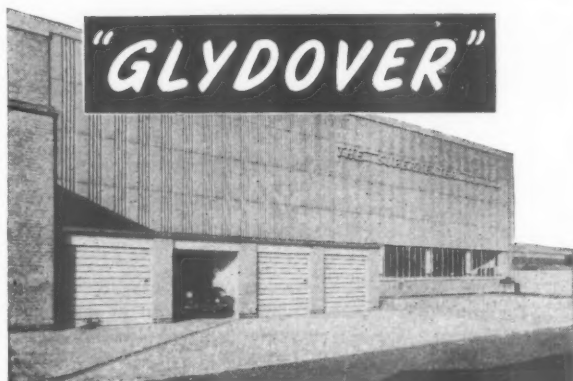
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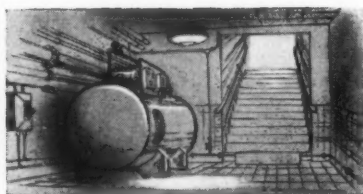
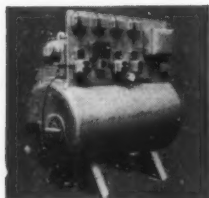
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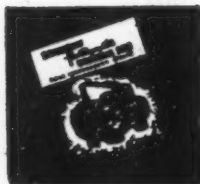
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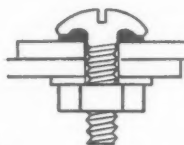
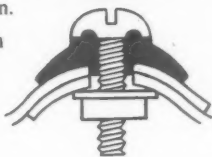
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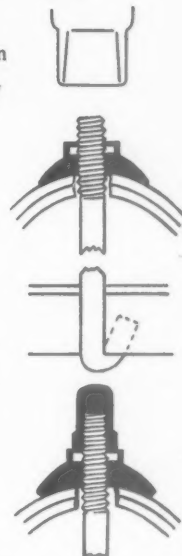
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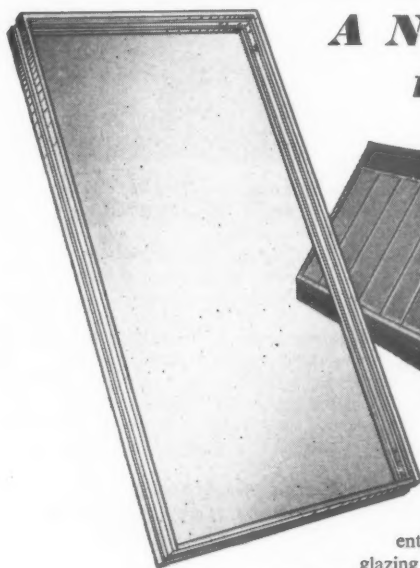


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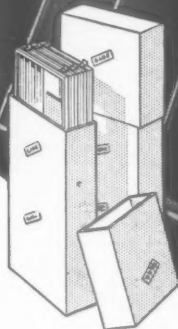
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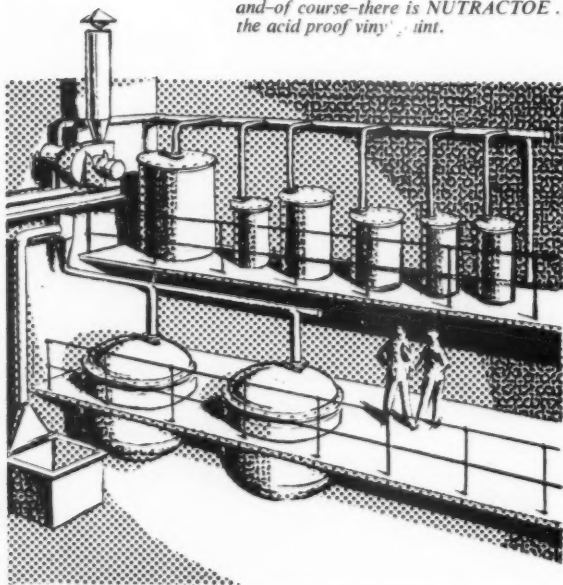
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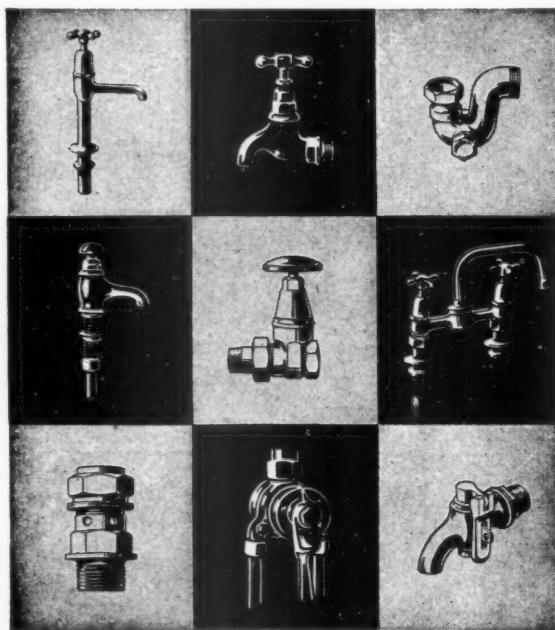
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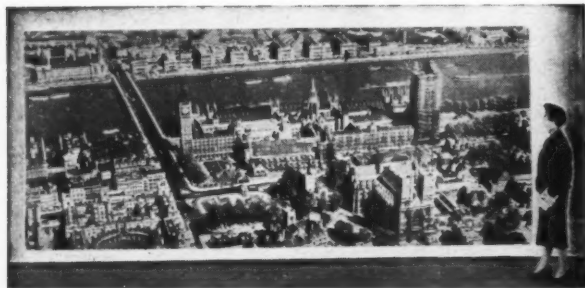
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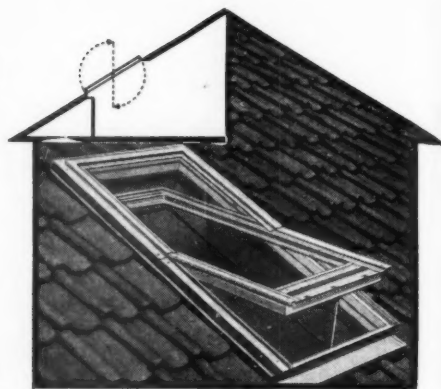
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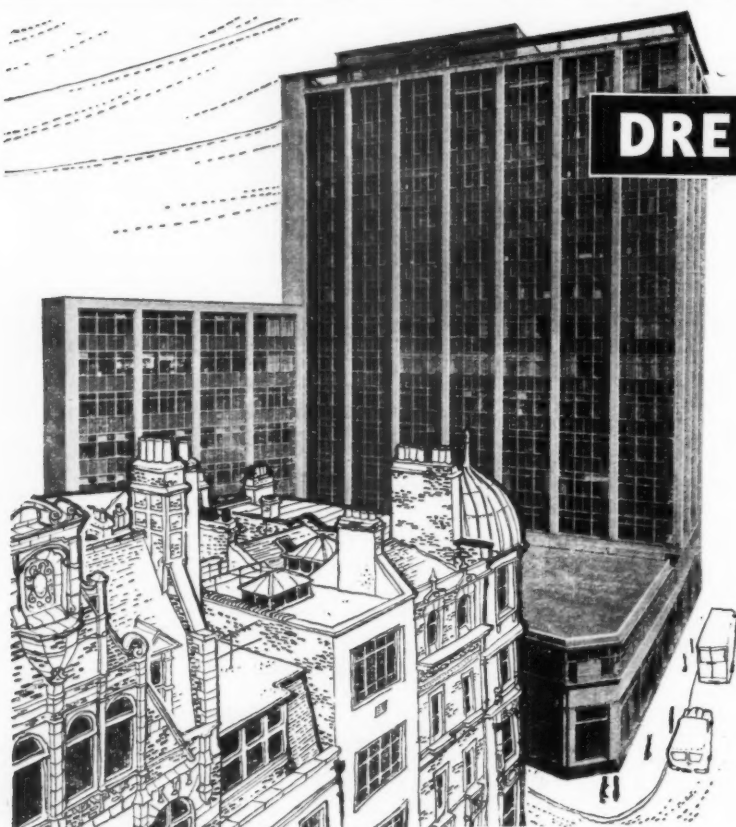
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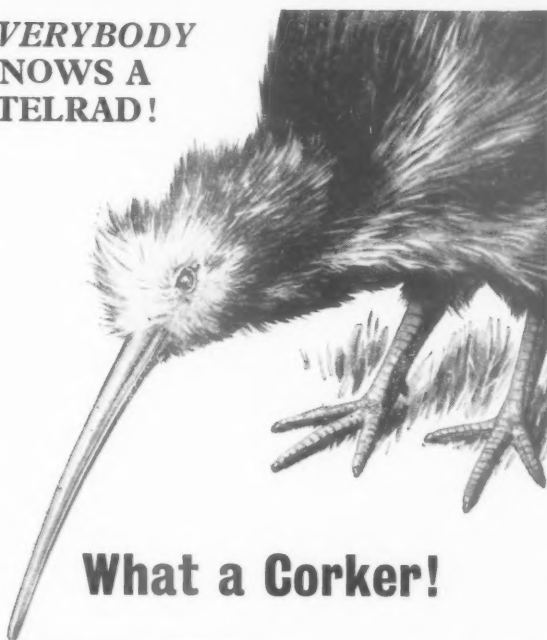
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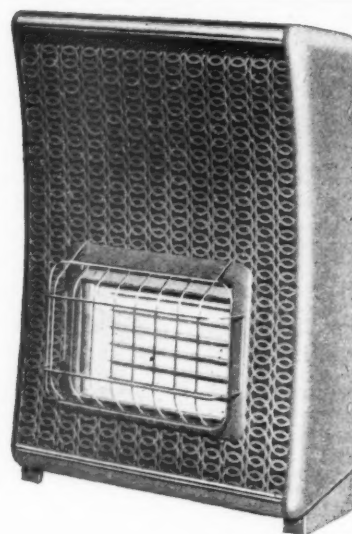
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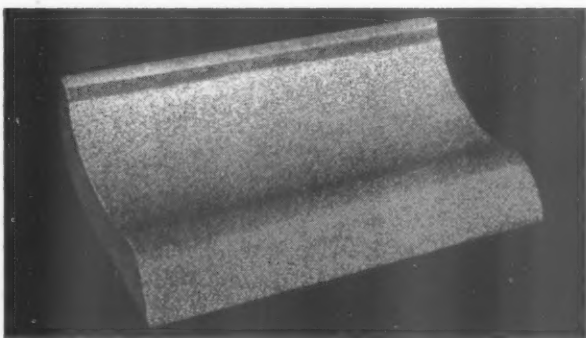
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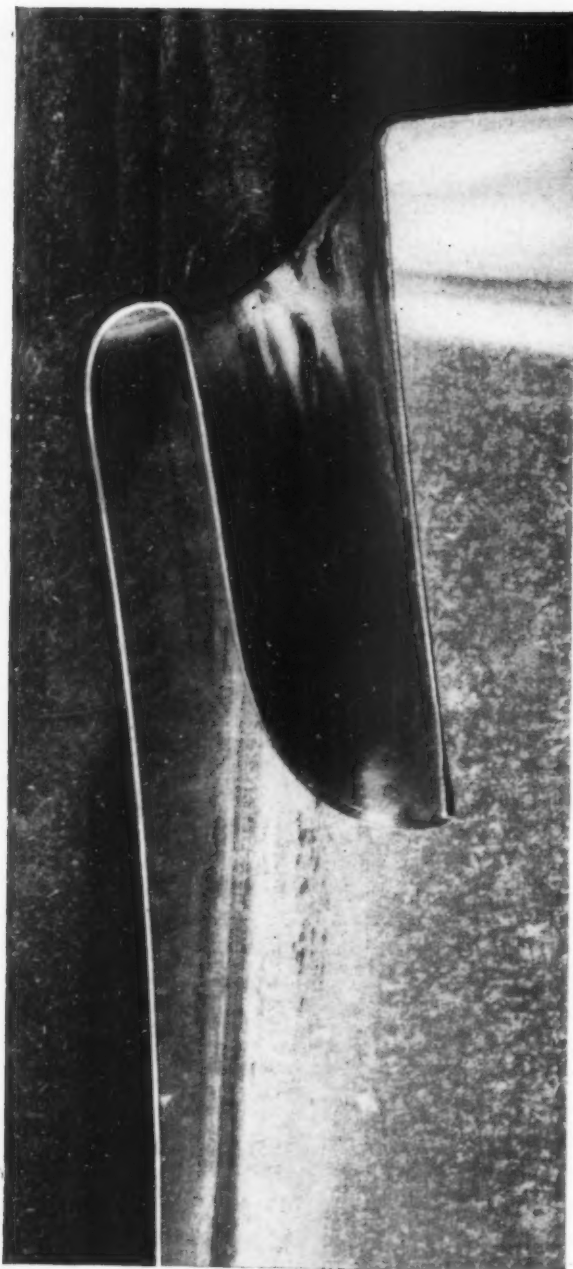
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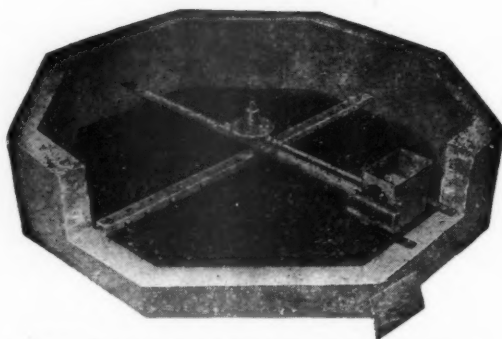
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Vacancies exist in the County Architect's Department for:—

(a) ARCHITECTS on A.P.T. Grade IV (£1,065—£1,220).

(b) ARCHITECTURAL ASSISTANTS on A.P.T. Grade II (£765—£880).

Applicants for (a) must be qualified architects with good general experience in design and construction, capable of taking charge of large projects with the minimum of supervision.

Applicants for (b) must be good draughtsmen of R.I.B.A. intermediate standard, who are capable of producing accurate working drawings and specifications, to work as assistants to senior architects.

The posts advertised offer interesting and responsible work in connection with the Council's extensive programme of school and other building.

The starting salary in each case will be fixed according to qualifications and experience—removal expenses will be paid in approved cases. The appointments are subject to the provisions of the Superannuation Acts and the selected candidates will be required to pass a medical examination.

Applications stating age, qualifications, experience and present employment, together with copies of two recent testimonials, must be delivered to the County Architect, Mr. E. J. Cundiffe, A.R.I.B.A., County Hall, Ipswich, by Tuesday the 15th September, 1959.

5326

CITY OF MANCHESTER HOUSING

DEPARTMENT

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5465

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Applications, giving full particulars and stating the names of two referees, should be made to the Hon. Secretary to the School Council, 23, Berkeley Square, Bristol, 8, by 21st September, 1959.

5484

COUNTY COUNCIL OF THE WEST RIDING

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OFFICE OF THE COUNTY ARCHITECT

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Applications to be submitted on forms to be obtained from and returned to the undersigned.

A. W. GLOVER, F.R.I.B.A.,

County Architect.

"Bishopgarth,"
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5205

LINDSEY COUNTY COUNCIL

PLANNING DEPARTMENT

Applications are invited for the appointment of SENIOR PLANNING ASSISTANT—Special Grade, £785—£1,070 per annum. Applicants must have passed Final examination of T.P.I. and have had in addition to training at least two years' experience in a county planning department. The appointment is in the Development Plan section. Car allowance. Commencing salary will have regard to qualifications and experience. Superannuation and N.J.C. conditions of service as approved by the County Council. Canvassing will disqualify. Relationship to any member or senior officer of the Council to be disclosed in writing by applicants.

Applications with particulars of training, experience and names of two referees to County Planning Officer, County Offices, Lincoln, not later than 24th September, 1959.

5417

LINDSEY (LINCOLNSHIRE) COUNTY

COUNCIL

ARCHITECT'S DEPARTMENT

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(a) ASSISTANTS with Final qualification Special Grade (£785—£1,070), or Intermediate R.I.B.A. Grade A.P.T. II (£765—£880).

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Applications, stating post applied for and salary required, giving age, qualifications, experience, present post and salary, and the names of at least two persons to whom reference can be made, to be sent not later than 17th September, 1959, to the County Architect, County Offices, Lincoln.

5471

METROPOLITAN BOROUGH OF BATTERSEA

BOROUGH ENGINEER AND SURVEYOR'S

DEPARTMENT

Applications are invited for the permanent appointment of SENIOR QUANTITY SURVEYOR, Grade A.P.T. IV (£1,065—£1,220), plus London weighting 21 and under 26, £20 p.a.; 26 and over, £30 p.a.

Applicants should have experience in taking off and preparing bills for new works and alterations and must be Corporate Members of the Royal Institute of Chartered Surveyors (Quantities sub-division).

Previous experience in local government will be an advantage but is not essential. The point of entry within the grade may be fixed above the minimum.

Application forms from the Borough Engineer and Surveyor, Town Hall, S.W.11. Closing date 21st September, 1959.

5472

COUNTY OF LINCOLN—PARTS OF

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COUNTY ARCHITECT'S DEPARTMENT

TWO ARCHITECTURAL ASSISTANTS

Special Grade (£765—£1,070).

Full particulars of the above appointments may be obtained from the County Architect, County Offices, Sleaford, Lincs.

Applications from suitably qualified persons, giving the names and addresses of two referees, should reach the undersigned not later than the 2nd October, 1959.

J. E. BLOW,

Clerk of the County Council.

County Offices,
Sleaford, Lincs.

5508

HEREFORDSHIRE COUNTY COUNCIL

SENIOR ASSISTANT ARCHITECT required on A.P.T. IV (£1,065 to £1,220 per annum). Must be A.R.I.B.A.

Superannuated post, subject to medical examination, and one month's notice either side. Travel and subsistence payable to married men in certain cases for limited period.

Application forms from County Architect, Bath Street, Hereford, to be submitted by 23rd September, 1959.

5460

ELSTREE RURAL DISTRICT COUNCIL

APPOINTMENT OF TEMPORARY

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Applications are invited for the above temporary appointment in the Department of an Engineer and Surveyor, for a period of not less than two years, on work in connection with the design and erection of a proposed Public Hall and Covered Swimming Pool.

Salary within Special Grade, £785 to £1,070 plus London weighting, the commencing salary to depend upon experience.

Candidates should have passed the Final Examination of the R.I.B.A. or equivalent.

The appointment will be subject to the National Scheme of Conditions of Service; the provisions of the Local Government Superannuation Acts, 1937-1953 and will be determinable by one month's notice, in writing, on either side. The successful candidate will be required to pass a medical examination.

Relationship to any Member or Officer of the Council must be disclosed and canvassing directly or indirectly will disqualify.

Applications stating age, qualifications and experience, together with the names and addresses of two referees, should be sent in an envelope endorsed "Architectural Assistant" so as to reach the Engineer & Surveyor at these Offices not later than Friday, 11th September, 1959.

A. LANCASHIRE,

Clerk of the Council.

Council Offices,
Shenley Road,
Boreham Wood, Herts.

27th August, 1959.

5415

LONDON COUNTY COUNCIL

ARCHITECT'S DEPARTMENT

QUANTITIES DIVISION

Applications are invited, particularly from newly qualified Surveyors, to fill vacancies affording an opportunity for interesting and rewarding careers in a variety of branches of quantity surveying. The positions include the following types of work:—

Junior taking-off/working-up,
Approximate estimating and assisting in cost planning.

Pricing bills of quantities for estimates comparable with tenders.

Preparation and settlement of final accounts for major building contracts including interim valuations.

Measurement of minor works, schedule accounts, etc.

General technical duties and working-up.

Salaries up to £1,135 p.a.

Application form and particulars from Hubert Bennett, F.R.I.B.A., Architect to the Council, County Hall, S.E.1. quoting ref. AR/EK/75/59.

(1745) 5401

LONDON COUNTY COUNCIL

ARCHITECTS (up to £1,135) required for

Housing, Schools and General Divisions of Architect's Department. Full and varied programme of new work including schools, multi-storey flats and town development. Starting salaries according to qualifications and experience.

Particulars and application form from Hubert Bennett, F.R.I.B.A., Architect to Council, EK/77/59, County Hall, S.E.1. (1879).

5551

LONDON COUNTY COUNCIL

ARCHITECTS (up to £1,135) required for

maintenance and restoration work on historic buildings owned by Council and also for making measured drawings for Survey of London. Candidates should have knowledge of historical architectural detail and special interest in the work. Experience in maintenance of buildings an advantage for the maintenance posts. Starting salaries according to qualifications and experience.

Particulars and application form from Hubert Bennett, F.R.I.B.A., Architect to Council, EK/79/59, County Hall, S.E.1. (1904).

5552

BUILDING SURVEYORS

Architect's Department, London County Council, requires Building Surveyors to deal with surveys of buildings in areas of high fire risk and applications from factories for certificates in respect of fire safety. Grade III (Qualified Surveyors) to lead small teams—up to £1,135.

SURVEYING ASSISTANTS up to £895.

Application forms, returnable by 23 September, and particulars from Hubert Bennett, F.R.I.B.A., Architect to Council, EK/78/59, County Hall, S.E.1. (1880).

5553

COUNTY BOROUGH OF ROTHERHAM

ARCHITECTURAL ASSISTANTS

Applications are invited for the following appointments:—

(a) ARCHITECTURAL ASSISTANT, A.P.T. I (£575—£725) to Special Grade (£750—£1,030).

(b) SENIOR ARCHITECTURAL ASSISTANT, A.P.T. IV (£1,065—£1,220).

Candidates for (a) are required to have passed Parts I and II of the R.I.B.A. Final Examination and (b) to be Associate Member of the R.I.B.A. with good general experience in design and construction. The commencing salary in the grades will be according to capabilities and experience. Housing accommodation will be available if necessary for the higher grade appointment.

Applications, to be endorsed "Architectural Assistants," stating age, qualifications and details of experience, together with names of two referees, should be received by me not later than Wednesday, 16th September, 1959.

Canvassing will disqualify.

JOHN S. WALL,

Town Clerk.

Municipal Offices,
Rotherham.

5574

BUILDING SURVEYORS

Architect's Department, London County Council, has vacancies in Building Regulation Division and District Surveyors' Service for work in connection with applications under the London Building Acts and Byelaws. District Surveyors' offices are in the Metropolitan Boroughs and work involves negotiations with developers and supervision of works in progress.

Up to £1,135 commencing according to qualifications and experience. Application form and particulars from Hubert Bennett, F.R.I.B.A., Architect to Council, EK 81 59, County Hall, S.E.1. (1906). 5554

GOVERNMENT OF THE FEDERATION OF MALAYA

Has vacancies for ARCHITECTS in the Public Works Department on contract for three years in the first instance.

Qualifications: Either (a) Associateship of the Royal Institute of British Architects; or (b) An Architectural qualification which is recognised by the Royal Institute of British Architects as an equivalent qualification to Associateship of the Royal Institute of British Architects, and at least five years' post qualifying experience.

Basic salary: £628 rising to £1,254 p.mersum (£879 to £1,755 p.a.). Commencing salary according to experience. In addition substantial gratuity and cost of living allowances varying with family circumstances, lump sum gratuity, full pay vacation leave, free passages, free medical attention (except for a small charge for maintenance if in hospital).

Further details and application forms can be obtained from the Recruitment & Personnel Division, Malaya House, 57, Trafalgar Square, London, W.C.2. 5559

GOVERNMENT OF MAURITIUS

CONTROLLER AND DEPUTY CONTROLLER, Central Housing Authority Ministry of Housing, Lands, Town and Country Planning

The Controller would be required to advise the Minister on housing policy, to control housing programmes, siting of housing schemes, the preparation of plans and supervision of constructions; and to train local staff. The Deputy Controller would deputise for the Controller and be responsible under his direction for a Central Housing Authority. Contract appointments. Salary £1,987 lds. and £1,725 a year respectively. Free passages. Preference will be given to candidates with professional qualifications in architecture, surveying or engineering.

Write Director of Recruitment, Colonial Office, London, S.W.1, giving full names, age, qualifications and experience, quoting L.C.D. 62/52/01 E2. 5565

PADDINGTON BOROUGH COUNCIL

Require QUANTITY SURVEYOR (A.P.T. IV: £1,095-£1,250 p.a.), A.R.I.C.S. essential with experience in all branches of building work particularly housing. Commencing salary will be according to qualifications and experience. Applications stating age, qualifications, experience, present and past appointments, names and addresses of two referees should be addressed to the undersigned by 25th September, 1959 (quoting A.425). W. H. BENTLEY, Town Clerk.

Town Hall,

Paddington Green, W.1. 5569

ESSEX COUNTY COUNCIL

ILFORD COMMITTEE FOR EDUCATION

Applications are invited for the appointment to the following posts in the Education Architect's Section of the Borough Engineer's Office:

- TWO SENIOR ASSISTANT ARCHITECTS, A.P.T. Grade III-IV (£880-£1,220 per annum).
- ASSISTANT ARCHITECT, A.P.T. Special Grade (£750-£1,050 per annum, subject to review).
- ASSISTANT ARCHITECT, A.P.T. Grade I (£610-£765 per annum).

Plus appropriate London weighting in each case. The posts are supernumerary and subject to medical examination.

Commencing salaries will be fixed within the grades according to experience.

Applicants for posts (a) and (b) must be Associates of the R.I.B.A. and have suitable experience in the design and development of school buildings.

Applicants for post (c) must have passed the Intermediate R.I.B.A. examination or its equivalent at a recognised School of Architecture.

Applications could be made on a form to be obtained from and returned to the Borough Engineer and Surveyor, Town Hall, Ilford, together with copies of not more than three recent testimonials, within 14 days of the appearance of this advertisement. 5529

BOROUGH OF DARTFORD

ARCHITECTURAL ASSISTANT

Applications are invited for the appointment of Architectural Assistant in the Borough Engineer and Surveyor's Department. Salary in accordance with the National Joint Council's Scheme of Conditions of Service. Grade A.P.T. II-III (payment to qualifications) with "plusage" of £20 or £30 per annum.

Housing accommodation available. Applications, stating age, qualifications and experience, and the names of three referees, should be forwarded to me by the 28th September, 1959.

THOMAS ARMSTRONG, Town Clerk.

Council Offices,
Dartford. 5575

LANCASHIRE COUNTY COUNCIL

Applications are invited for the post of Group Architect, Scale "C" (£1,385-£1,620 per annum). Applicants should be experienced designers and have a sound working knowledge of modern techniques in building construction, cost planning and cost control. The successful candidate will be responsible for the development, design and construction of a large office block in Preston.

Application forms, obtainable from the County Architect, P.O. Box 26, County Hall, Preston, should be returned by the 18th September, 1959, quoting reference A/AJ. 5510

BRITISH OVERSEAS AIRWAYS CORPORATION invite applications for the post of ASSISTANT STAFF ARCHITECT at LONDON AIRPORT. Preference given to candidates over 25 years of age with following qualifications and experience: Associate of the R.I.B.A.; experience in the design of industrial buildings, offices and shop fitting work; competence in rapid sketch planning and estimating, with experience of overseas work. Applicants should be prepared to go abroad for short periods with appropriate allowances. Commencing salary in the range £860 to £1,120 per annum in accordance with qualifications and experience. Attractive pension, staff insurance and leave facilities. Write, giving full particulars, to Mr. Leslie Pace, Recruitment Manager, B.O.A.C., London Airport, Hounslow, Middlesex. 5531

GOVERNMENT OF NORTHERN IRELAND

ASSISTANT QUANTITY SURVEYOR

Applications invited from Corporate Members of the Royal Institution of Chartered Surveyors (Quantities) for unestablished post in Chief Quantity Surveyor's Branch, Ministry of Finance. Experience in "taking off" for large building works essential. Salary scale £805-£1,260, entry point according to age and experience. Prospects of establishment. Preference for ex-Servicemen. Application forms, obtainable from Director of Establishments, Room 272, Stormont, Belfast, to be completed and returned by the 25th September, 1959. 5626

GHANA PUBLIC SERVICE COMMISSION

Applications are invited for the following vacancies in the PUBLIC WORKS DEPARTMENT:

ARCHITECTS: To design, prepare working drawings and supervise construction of new Government buildings such as quarters, offices, hospitals, schools, law courts, etc.; also at times to carry out duties as an Executive Architect responsible for the organisation of direct labour works, and perform administrative duties. Candidates, not over 50 years of age, (i) must have passed Parts I and II of the Final examination of the Royal Institute of British Architects; or (ii) be Licentiates of the R.I.B.A.; or (iii) be Associate members of the R.I.B.A. by the Institution's special examination; or (iv) have a qualification which is recognised as exempting from Parts I and II of the R.I.B.A. examination. Salary scale £1,080-£2,080 p.a.

Appointments are on contract/gratuity terms for 3 years each of 15 months. Gratuity at rate of £12 lds. for each completed month of service. Free passages for officer, wife and up to 3 children under 18 years and in addition an education allowance for children when not resident in Ghana of £100 a child for up to 3 children under 18 years of age. Accommodation at low rental. Interest-free advance for car and car maintenance allowance. Outfit allowance £60/£30 on first appointment. Generous home leave on full pay. Income tax at low local rates.

For further particulars and application forms write, stating age, qualifications and experience to The Director of Recruitment, Ghana High Commissioner's Office, 13, Belgrave Square, London, S.W.1. 5541

BOROUGH OF SOLIHULL

APPOINTMENT OF ASSISTANT ARCHITECT Applications are invited for the above post in the Architects' section of the Borough Surveyors' Department at a salary in accordance with the Special Grade (£785-£1,070 per annum) commencing according to experience and qualifications.

Applicants should have passed Parts I and II of the R.I.B.A. Final examination or the equivalent at one of the recognised schools of architecture and have had at least five years' experience including time spent in training.

The appointment will be subject to the provisions of the Local Government Superannuation Acts; to the National Scheme of Conditions of Service, and to one month's notice on either side.

In appropriate cases housing accommodation will be made available as soon as possible and half the costs of removal expenses paid.

Applications, giving the names of two referees, should be submitted to the Borough Surveyor, 90, Station Road, Solihull, by 19th September, 1959. W. MAURICE MELL, Town Clerk.

The Council House,

Solihull.

27th August, 1959. 5543

THE ROYAL INFIRMARY OF EDINBURGH AND ASSOCIATED HOSPITALS

Applications are invited from experienced candidates, preferably holding the Intermediate Certificate of the R.I.B.A. Starting salary £525-£605 per annum, according to age and experience. Apply to Personnel Officer, Royal Infirmary, Lauriston Place, Edinburgh, 3. 5596

COVENTRY

PLANNING OFFICERS. Special Grade £785-£1,070 p.a. Salary within grade if appropriate. There are three vacancies which give opportunities for positive creative planning.

AREA PLANNING OFFICER

Offers opportunities for experience in all branches of planning work. It is work in which results can be seen immediately, and there are opportunities for attending Committee meetings, etc.

CENTRAL AREA GROUP

Responsible for initiating certain comprehensive design projects within the inner areas of the City. This post offers opportunities for new thinking on redevelopment and the likelihood of implementing these new ideas in the near future.

DEVELOPMENT PLAN AND RESEARCH

The appointee will be senior assistant to the Group Planning Officer in charge of the group which is responsible for carrying out surveys and other research projects, the review of the Development Plan, and for formulating proposals affecting the general planning policy for the City.

Housing accommodation and car allowance in approved cases. Removal expenses loan available. Five-day working week. Application forms, etc., from City Architect and Planning Officer, Bull Yard, Coventry, returnable by 24th September, 1959. 5544

AIR MINISTRY WORKS DESIGNS BRANCH requires in London and Provinces ARCHITECTURAL ASSISTANTS experienced in planning/preparation of working drawings and details for permanent and semi-permanent buildings. Salaries in LONDON up to £900 for Grade III and £1,055 for Grade II p.a. for men and £868/£1,088 for women. Somewhat lower in PROVINCES. Starting pay dependent on age, qualifications and experience. Long term possibilities with promotion and pension prospects. Five-day week, three weeks three days leave a year initially. Overseas tours (for men) for which special allowances are payable. Normally natural born British subjects. Write stating age, qualifications, employment details including type of work done, to any Employment Exchange quoting Order No. Kings Cross 1769. 4873

BRITISH RAILWAYS

Applications are invited for the following positions in the office of the Architect, Eastern Region, King's Cross Station:

Post 1.-ASSISTANT ARCHITECT. Starting salary £943 p.a. Applicants should be qualified architects with some years practical experience.

Post 2.-ASSISTANT ARCHITECT. Starting salary £833 p.a. Applicants should be qualified or should have passed the Intermediate R.I.B.A. examination with some years practical experience.

Post 3.-ARCHITECTURAL ASSISTANT. Starting salary according to qualifications and experience.

The office is engaged on work of a varied and interesting character and a progressive approach to design and building techniques is essential.

The successful applicants will be given responsibility for design, administration and site supervision appropriate to their ability. Five-day week and concessionary rail travel. Apply in writing stating post applied for and giving particulars of age, experience and qualifications to the Chief Civil Engineer, Eastern Region, King's Cross Station, London, N.1. 5603

ZETLAND COUNTY COUNCIL

VACANCY for an ASSISTANT ARCHITECT. Interesting works, including new schools, new public buildings, housing. New 4-apartment traditional house available finely situated at Scalloway. Salary scale £795-£1,075 per annum, placing according to qualifications, etc. Applications, with full details and three recent testimonials to Subscriber by 30th September, 1959. JOHN N. SINCLAIR, County Clerk.

County Buildings,

LERWICK.

1st September, 1959. 5585

LONDON COUNTY COUNCIL

Vacancies exist in the HOUSING DIVISION of the ARCHITECT'S DEPARTMENT for ARCHITECTS, Grade III (up to £1,135) and ARCHITECTURAL ASSISTANTS (up to £895) with good design ability and an aptitude for research required for the Development Group.

Work of great interest including development of building techniques and their application in experimental building schemes of substantial size.

Starting salary according to experience and qualifications. Particulars and application form, returnable by 30th September, from Hubert Bennett, F.R.I.B.A., Architect to Council, EK 85/59, County Hall, S.E.1. (1903). 5589

COUNTY BOROUGH OF GREAT YARMOUTH SCHOOLS ARCHITECT'S DEPARTMENT

APPOINTMENT OF JUNIOR ASSISTANT Applications are invited to fill the vacancy for a Junior Assistant within A.P.T. Grade II (£765-£880).

Previous experience in Local Government not essential. Applications, stating age, qualifications, experience, details of past and present employment, together with the names of two referees, should reach the Schools Architect, 22, Euston Road, Great Yarmouth, by 24th September, 1959.

D. G. FARROW,

Chief Education Officer.

22, Euston Road.

Great Yarmouth. 5624

COUNTY BOROUGH OF DARLINGTON
BOROUGH SURVEYOR & TOWN PLANNING
OFFICE
APPOINTMENT OF TOWN PLANNING
ASSISTANT

Applications are invited for the appointment of a TOWN PLANNING ASSISTANT at a salary within the special scale for qualified assistants £785 per annum rising by increments of £40 per annum to £1,070 per annum.

Applicants must possess the appropriate qualifications and the commencing salary will be fixed having regard to the applicant's qualifications and experience.

The work to be undertaken include Development control and the preparation of schemes for areas of comprehensive development but it is not essential that candidates should have had previous municipal experience.

Housing accommodation can be made available for married men if required.

Applications endorsed "Town Planning Assistant" and giving the names and addresses of two referees should be delivered to me not later than Friday the 25th September, 1959.

C. N. S. NICHOLSON,
Town Clerk.

11 Houndgate,
Darlington. 5545

WORCESTERSHIRE COUNTY COUNCIL
Applications are invited for the post of ARCHITECTURAL ASSISTANT, Grade A.P.T. II (£765-£880).

Application forms and further particulars can be obtained from L. C. Lomas, F.R.I.B.A., County Architect, 14, Castle Street, Worcester, not later than 18th September, 1959. (Q269.) 5513

COUNTY BOROUGH OF SOUTHAMPTON
BOROUGH ARCHITECT'S DEPARTMENT
Applications are invited for the permanent post of:

(a) ARCHITECTURAL ASSISTANT, A.P.T. Grade I (£610-£765). Candidates should have passed the Intermediate Examination of the R.I.B.A.

(b) TECHNICAL ASSISTANT, Miscellaneous Grade V (£650-£715). Architectural draughtsman experienced in alterations and repairs.

Application forms from the Borough Architect, Civic Centre, Southampton.

Closing date 21st September, 1959. 5517

BERKSHIRE COUNTY COUNCIL
ASSISTANT ARCHITECT, Special Grade, £785-£1,070. Candidates should have had good architectural training and be experienced in planning, design and construction. Preference will be given to Associates of the R.I.B.A.

ASSISTANT QUANTITY SURVEYOR, Special Grade, £785-£1,070. Applicants should be capable of taking off for large projects. Preference will be given to Associates of the R.I.C.S.

QUANTITY SURVEYING ASSISTANT, A.P.T. Grade II, £765-£880. Applicants should have passed the Intermediate Examination of the R.I.C.S.

CLERK OF WORKS to supervise the erection of a new Secondary Modern School at Compton. Salary £14 14s. 0d. per week. Probable duration of work, one year. Applicants must have had practical experience on large building contracts. Preference will be given to those who have supervised the erection of new schools.

Application forms and further particulars can be obtained from J. T. Castle, A.R.I.B.A., A.M.T.P.I., County Architect, Wilton House, Parkside Road, Reading, to whom they should be returned not later than the 22nd September, 1959. 5404

FIFE COUNTY COUNCIL
ARCHITECTURAL DRAUGHTSMAN required for County Architect's Department, Cupar. Salary grade, Executive II & III (£675-£795 per annum). Superannuation Scheme. Applicants must be skilled and accurate draughtsmen with experience in architect's and drawing office routine. Housing accommodation may be available.

Applications, stating age, qualifications, post held and previous experience, with details of present salary and accompanied by copies of recent testimonials, should be lodged immediately with the County Clerk, County Buildings, Cupar. No canvassing. 5520

BOROUGH OF BILSTON
HOUSING DIRECTOR'S DEPARTMENT
Applications are invited for the following appointments:-

(a) ARCHITECTURAL ASSISTANT, A.P.T. Grade II, £765-£880.

(b) QUANTITY SURVEYING ASSISTANT, A.P.T. Grade III, £880-£1,065.

The appointments will be subject to the National Scheme of Conditions of Service, a medical examination and the Local Government Superannuation Acts, 1937 and 1959.

Housing accommodation will be made available if required.

Applications in writing, stating age, qualifications and previous experience, including any services with a Local Authority, together with the names and addresses of two referees to whom reference can be made, should be sent to the Housing Director, Municipal Buildings, Hall Street, Bilston, not later than Friday, 18th September, 1959.

A. M. WILLIAMS,
Town Clerk.

Town Hall,
Bilston.
3rd September, 1959. 5506

BIRMINGHAM REGIONAL HOSPITAL
BOARD

SURVEYING ASSISTANT (BUILDING): £545-£765. To assist in survey of existing hospital buildings and preparation of record plans. Intermediate R.I.C.S. (Buildings Division) essential. Must be neat draughtsman with experience in measurement and plotting of surveys to all scales. Superannuable. Five-day week. Written applications, naming two referees, to: Secretary, R.H.B., 10, Augustus Road, Birmingham, 15, by 28th September. 5573

COUNTY BOROUGH OF SOUTHAMPTON
requires under N.J.C. conditions of service: ASSISTANT ARCHITECT, Special Scale, £785-£1,070. Applicants must have passed Parts I and II of the R.I.B.A. Final Examination and have had experience in housing design and construction and estate layout, preferably with a municipal authority.

Apply on application forms obtainable from the Borough Engineer and Surveyor, Civic Centre, Southampton, by not later than Monday, 28th September, 1959. 5516

BOROUGH OF WATFORD
APPOINTMENT OF ASSISTANT ARCHITECT
Applications are invited for the above post at a salary in accordance with Grade A.P.T. I (£610-£765).

Commencing salary will be according to qualifications and experience.

Housing accommodation available.

Applications to the undersigned by 22nd September, 1959.

F. C. SAGE,
Borough Surveyor and Architect.

Town Hall,
Watford. 5580

NEWCASTLE REGIONAL HOSPITAL BOARD
REGIONAL ARCHITECT'S DEPARTMENT
During the next two years the Board plans to spend several millions on hospital developments and larger programmes are being planned to follow. The present building programme includes a wide variety of projects, ranging from houses to hospitals, and (since a large hospital comprises a small town) affords ample opportunity for gaining both general and hospital experience simultaneously.

The following posts in the Regional Architect's Department are open to applicants. The salary-scales are at present under review and it is expected that they will very shortly be improved.

1. ASSISTANT ARCHITECTS. Salary £730 x £25 (2) x £30 (2) x £35 (5) x £40 (1)-£1,055.

Applicants should be registered architects and have had experience of the planning and construction of public buildings. The commencing salary will be fixed within the Grade by reference to relevant experience and to age.

2. ARCHITECTURAL ASSISTANTS. Salary £545 at age 21 x £20 (3) x £25 (4) x £30 (2) x £765.

Applicants should have passed the Intermediate Examination of the R.I.B.A. or an examination recognised by the Institute as equivalent, and some practical experience is desirable.

The commencing salary within the grade will depend upon the applicant's age and practical experience, but will not exceed £605.

3. ARCHITECTURAL DRAUGHTSMAN. Salary £445 (at age 21: £20 shall be deducted for each year below that age) x £25 (5) x £30 (3) to £660.

Applicants should have had previous experience in an architect's drawing office and be neat and quick draughtsmen.

Evening study facilities are available at King's College of Durham University in Newcastle.

Applications, stating age, qualifications, past and present appointments, present salary and details of experience and training, together with the names of three referees of whom at least two should be architects, should be forwarded to the Secretary to the Board, Benfield Road, Newcastle upon Tyne, 6, not later than 24th September, 1959. 5515

LONDON COUNTY COUNCIL
ARCHITECTURAL ASSISTANTS required up to 2995. Full and interesting programme of houses, flats, schools and general buildings. Application form and particulars from Hubert Bennett, F.R.I.B.A., Architect to Council, A.R./EK/43/59, County Hall, S.E.1. (923.) 5052

SOUTH EASTERN ELECTRICITY BOARD
ARCHITECTURAL ASSISTANTS (two appointments)-Surveyor's Section at Hove.

Salary £795-£870 p.a. under N.J.C. grade 4. Superannuable. Experienced in the preparation of working and detail drawings for offices, stores, workshops, garages, showrooms and electricity substations. Intermediate examination of an appropriate professional body preferred.

Applications, quoting AJ and naming two referees, to Surveyor, Seaboard, 10, Queen's Gardens, Hove, 3, Sussex, by 23rd September, 1959.

GEORGE WRAY,
Secretary.

5534

GLENROTHES DEVELOPMENT CORPORATION
ARCHITECT (A.R.I.B.A.) required on Salary grades £880/£1,220 per annum. State experience in housing and public buildings. House to rent available if required. Medical examination under Superannuation Scheme. Application forms from Secretary and Legal Adviser, Glenrothes Development Corporation, Glenrothes, Fife, to be returned by 26th September, 1959. 5532

KENT COUNTY COUNCIL require:-
(a) ASSISTANT ARCHITECT capable of accepting responsibility and displaying initiative in the design and control of building projects and possessing experience and ability in current problems, design and control of costs. Candidates should be Associates of the Royal Institute of British Architects.

(b) ASSISTANT QUANTITY SURVEYOR with experience in the preparation of estimates, bills of quantities, final accounts for building projects and familiar with recent developments in cost analysis and cost planning. Candidates should have passed the Final Examination of the Royal Institution of Chartered Surveyors or hold a similar qualification.

Salaries within scale rising to £1,070. Commencing salary according to qualifications and experience. N.J.C. Conditions of Service. Further details and application forms from County Architect, Springfield, Maidstone. Closing date 30th September, 1959. 5531

Tenders Invited

6 lines or under, 15s.; each additional line, 2s. 6d.
Box Number, including forwarding replies, 2s. extra

METROPOLITAN BOROUGH OF STEPNEY
SMITHY STREET HOUSING SCHEME
Tenders are invited for the erection of fifteen blocks of flats and maisonettes (eleven of 4-storeys, two of 3-storeys, one of 2-storeys and one of 9-storeys) comprising 260 dwellings in all.

Forms of tender with conditions, etc., obtainable from the Architects (Messrs. Riches & Blythin, 16, Northumberland Avenue, W.C.2) upon payment of a deposit of ten guineas, cheques being made payable to Stepney Borough Council.

Closing date for tenders-6th October, 1959.

WILFRED REEVE,
Town Clerk.
5539

Architectural Appointments Vacant

4 lines or under, 9s. 6d.; each additional line, 2s. 6d.
Box Number, including forwarding replies, 2s. extra

HELLBERG AND HARRIS require Finals standard ASSISTANT for Coventry office, and Intermediate to Finals standard for Liverpool. Five-day week, pension scheme, salary according to experience. Interesting varied work with responsibility. Reply to 13, Queen Victoria Road, Coventry. 5564

ARCHITECTURAL STAFF urgently required in all Grades, salary range £500-£1,000. Write Morgan and Carn, A.A.R.I.B.A., 12, Grand Avenue, Hove 3, Sussex. 5566

BEXHILL-ON-SEA. Experienced ASSISTANT required immediately for varied work. Salary range £600-£750 according to ability. Roy Harrison, A.R.I.B.A., 1, Collington Avenue. 5567

FARMER AND DARK have vacancies in the Poole School for two ASSISTANTS, preferably school trained and with experience. Varied and interesting work, good salaries, five-day week. Please write to 14, High Street, Poole, Dorset. 5570

FUJI ISLANDS. British Company require a fully qualified STAFF ARCHITECT. Age under 35, married or single. Station permanent and pensionable, excellent conditions and climate. Write to Box No. 2735, c/o Charles Barker & Sons Ltd., Gateway House, London, E.C.4. 5571

ASSISTANTS, Intermediate standard, required for small London office; opportunity for site supervision. Salary range £600-£800. Write experience and salary required to Box 5572.

RONALD WARD & PARTNERS have immediate vacancies for ASSISTANT ARCHITECTS with initiative and some experience, for interesting, commercial, industrial and civic projects. Salaries commensurate with ability. Apply, 29, Chesham Place, S.W.1. BELGRAVIA 3561. 5538

COMPETENT and energetic qualified ARCHITECTURAL ASSISTANTS required, able to combine accuracy with commonsense. Contributory pension scheme in operation. Apply W. H. Watkins, Gray and Partners, Architects and Surveyors, 1, Clare Street, Bristol, 1. Tele.: Bristol 20491. 5525

INTERMEDIATE/FINAL ASSISTANT wanted at once. Good draughtsman and sound knowledge construction essential. Five-day week, salary according to experience. Ring AMB. 7271 for appointment or write brief details to Musman & Cousins, 12, Under Berkeley Street, W.1. 5527

H. A. HALPERN & ASSOCIATES require immediately ASSISTANT for their London Office. Intermediate standard and must have at least three years' office experience and a good knowledge of building construction. Apply, stating experience and salary required, to H. A. Halpern & Associates, Cumberland Chambers, 7, Edware Road, Marble Arch, London, W.2. Tel.: AMBassador 2471. 5536

A QUALIFIED SENIOR ASSISTANT required. Also vacancy for an INTERMEDIATE ASSISTANT. Established office with wide range of work in London and Home Counties, including Industrial, Medical, Domestic and Commercial. 5-day week, 3 weeks annual leave. Write giving full details of training, experience and salary required to E. William Palmer and Partners, Chartered Architects, 8, The Town, Enfield, Middlesex. 5537

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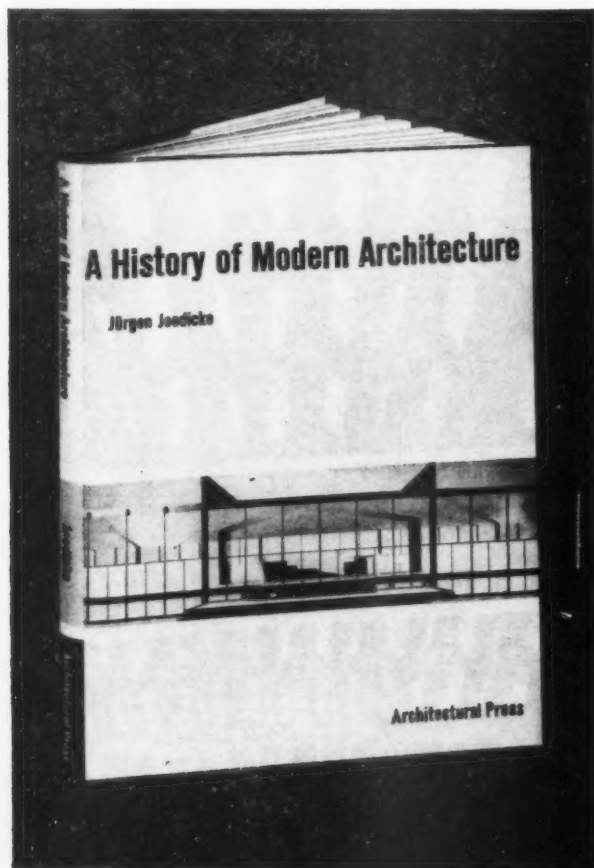
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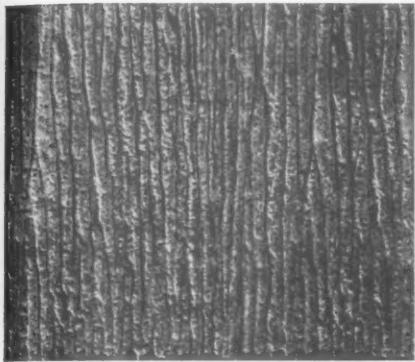
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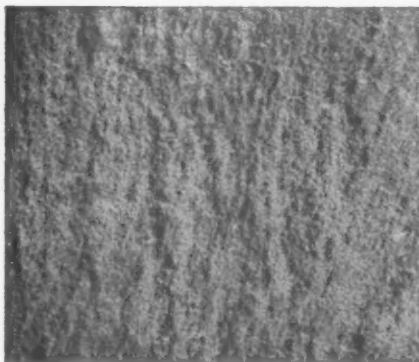
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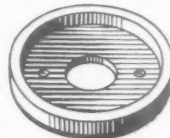
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'TECO' Heavy-Duty SHEAR PLATES

Inserted in pre-cut daps made by special dapping tools which are available for the purpose. 'TECO' 2½in. diam. SHEAR PLATES provide heavy shear load capacity for use in large structures for connections between timber and steel, timber and concrete, or used back to back in demountable structures.

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Manufactured to
B.S.S. 1579:
1953, Table 3.

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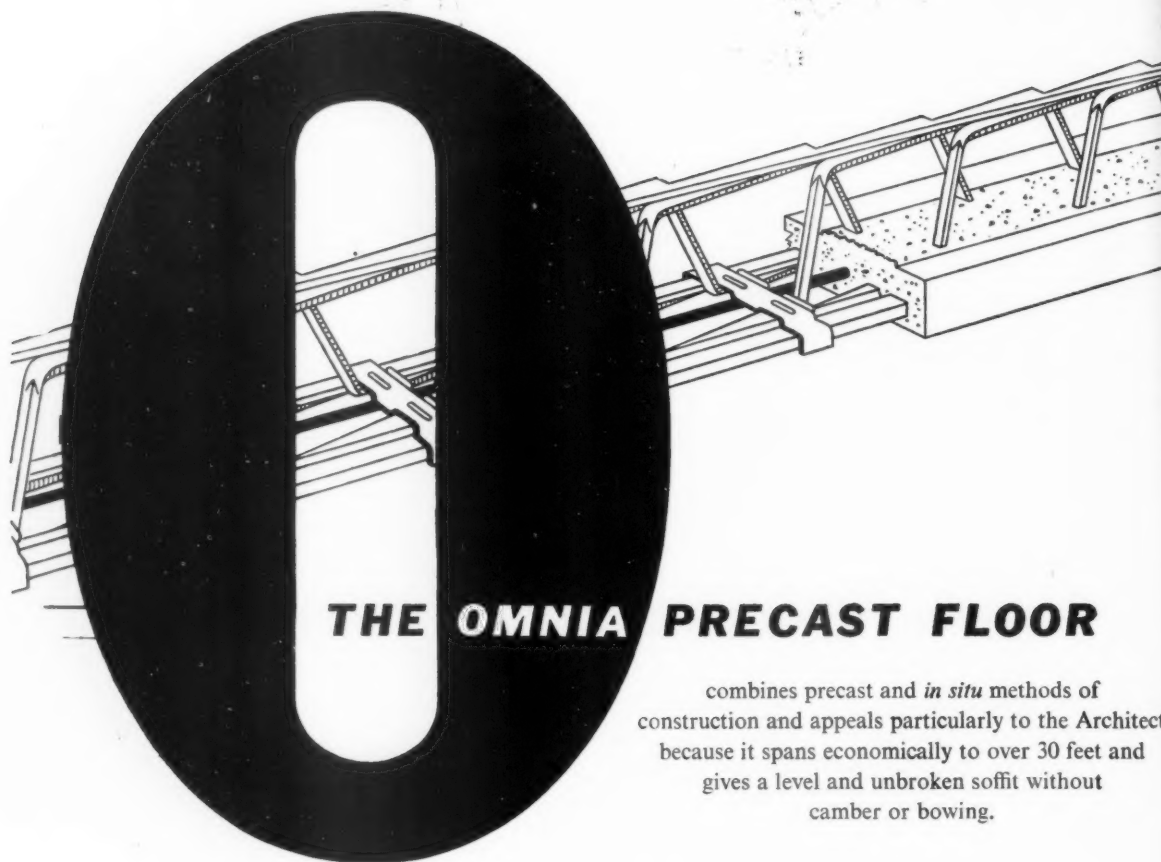


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