

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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CURRENT BUILDING

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Details of Planning, Construction,

Finishes and Costs

Buildings in the News

Building Costs Analysed

Architectural Appointments

Wanted and Vacant

No. 3411]

[Vol. 132

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 Ii one week, II 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.: J.H.Holden, College of Art, Cavendish Street, Manchester 15	
ABS	Architects' Benevolent Society. 66, Portland Place, W.1.	Langham 5533
ABT	Association of Building Technicians. 156, Waterloo Road, S.E.1.	Waterloo 5427
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, Portman Square, W.1.	Welbeck 4185
BCCF	British Cast Concrete Federation. 105, Uxbridge Road, Ealing, W.5.	Ealing 9621
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham	Redditch 716
BDA	British Door Association. 10, The Boltons, S.W.10.	Fremantle 8494
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. 13, Suffolk Street, Haymarket, S.W.1.	Reading 72255
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Whitehall 0540
EFMA	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.	Belgravia 4321
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.	Covent Garden 1871
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
IHVE	Institution of Heating and Ventilating Engineers. 49, Cadogan Square, S.W.1.	Sloane 1601/3158
IIBDID	Incorporated Institute of British Decorators and Interior Designers. 37, Soho Square, W.1.	Gerrard 5056

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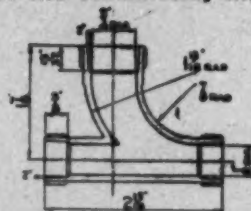
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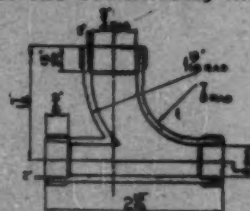
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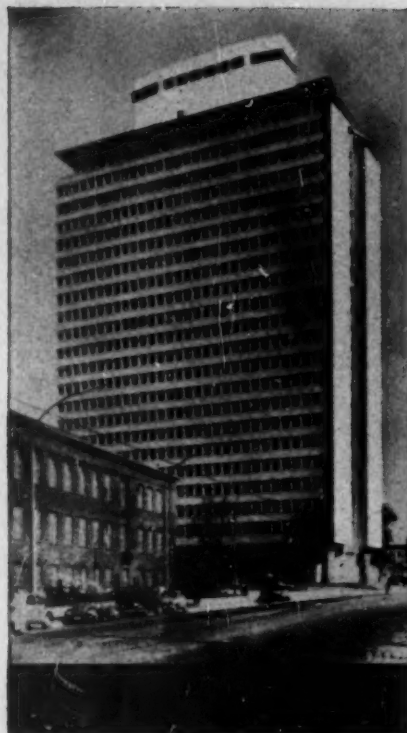


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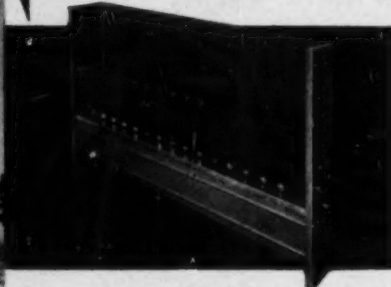
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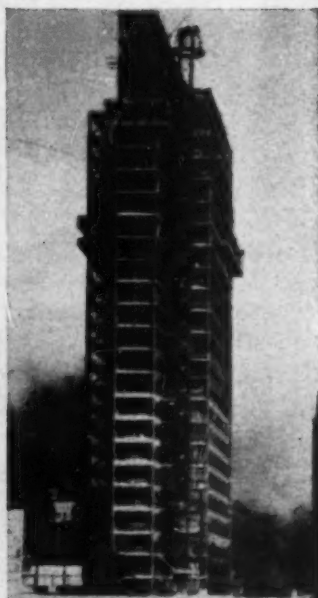
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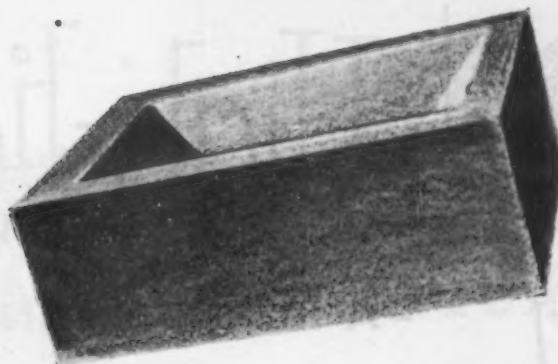
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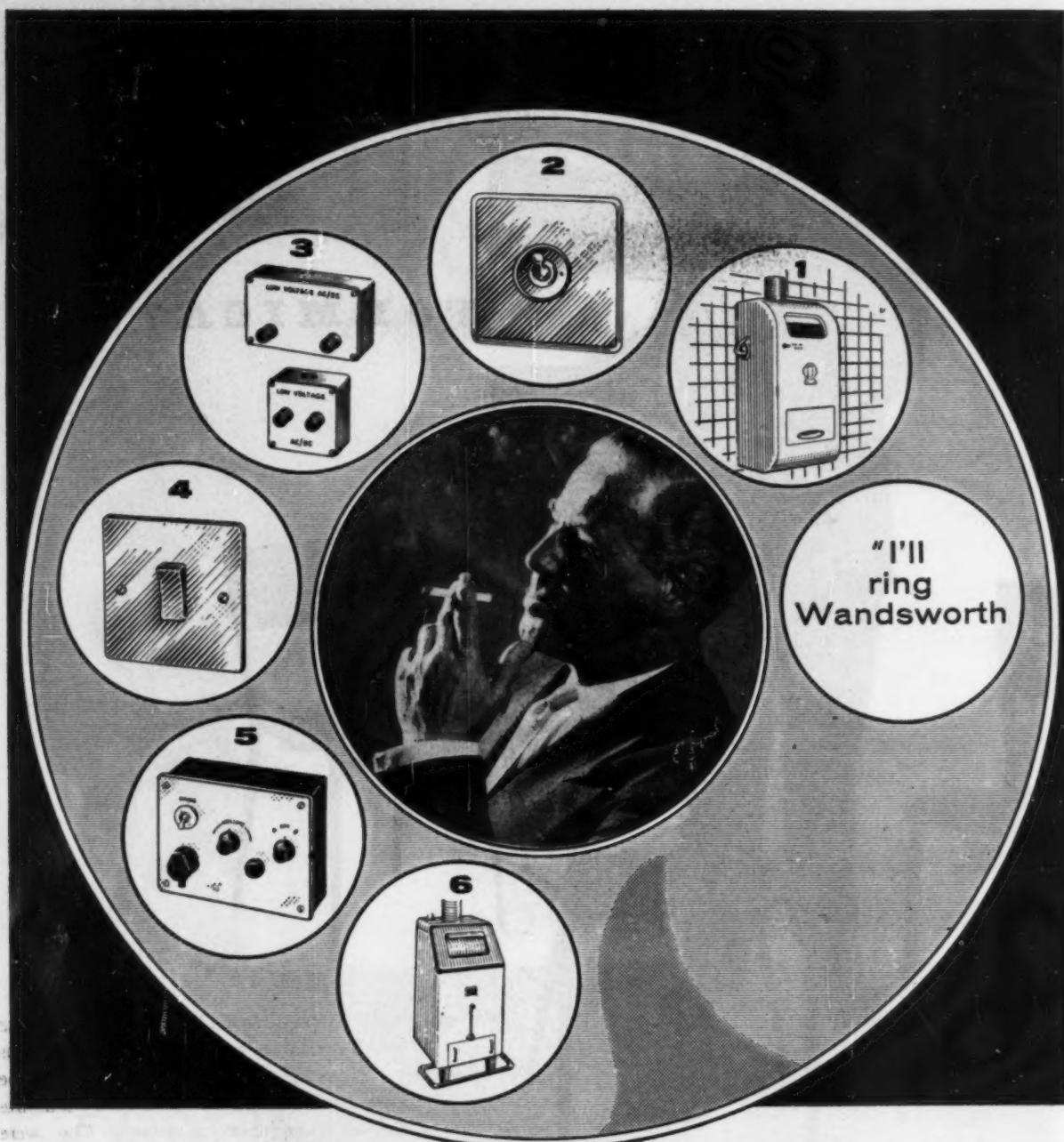
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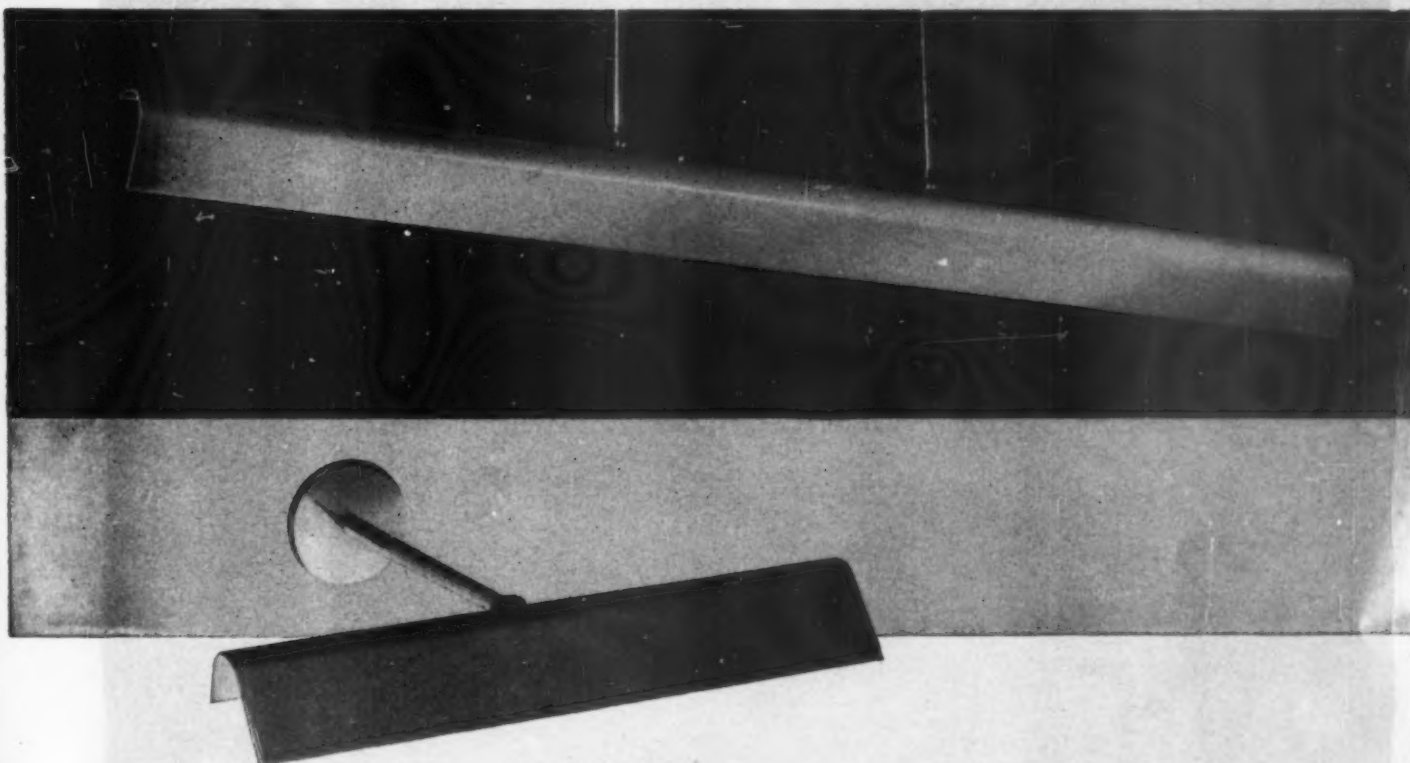
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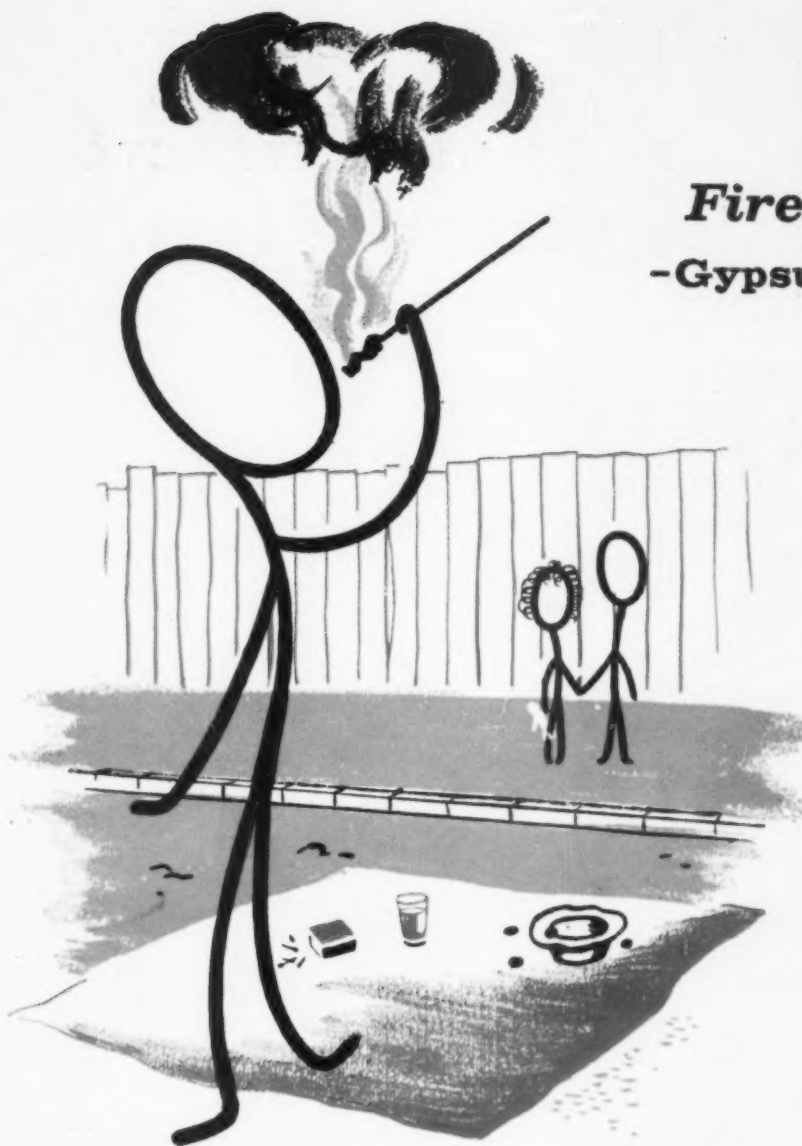
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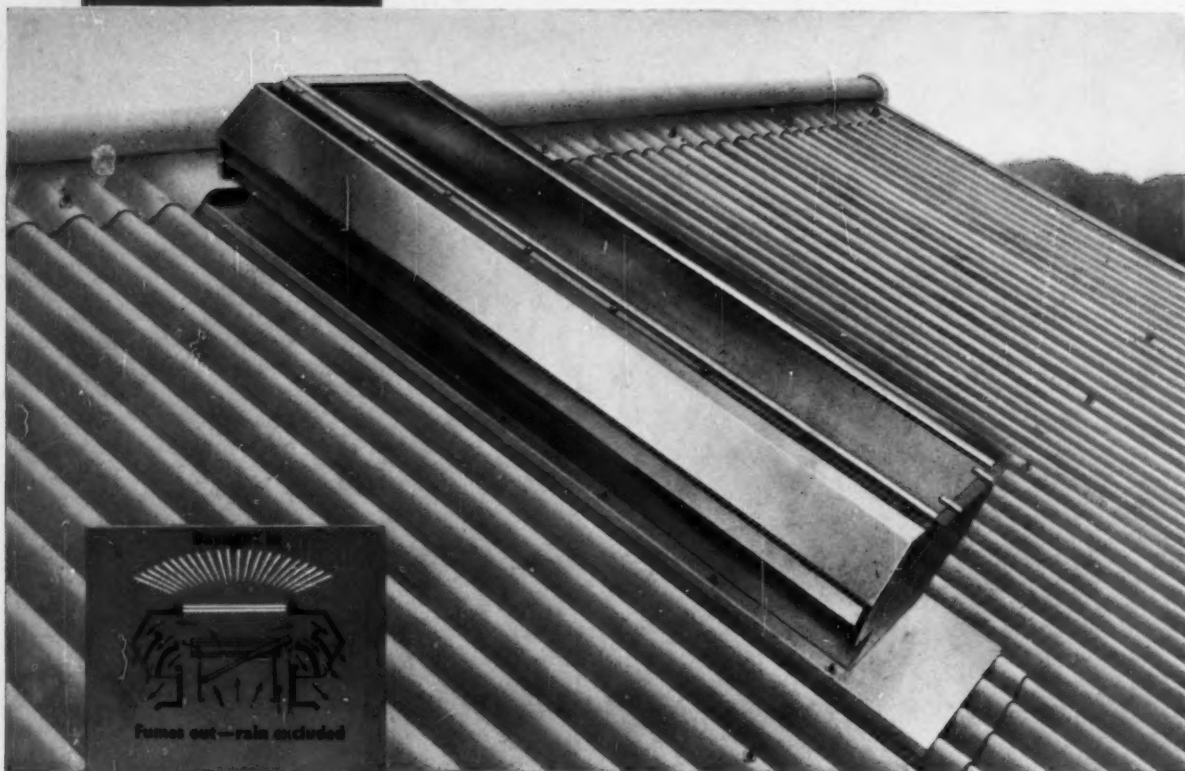
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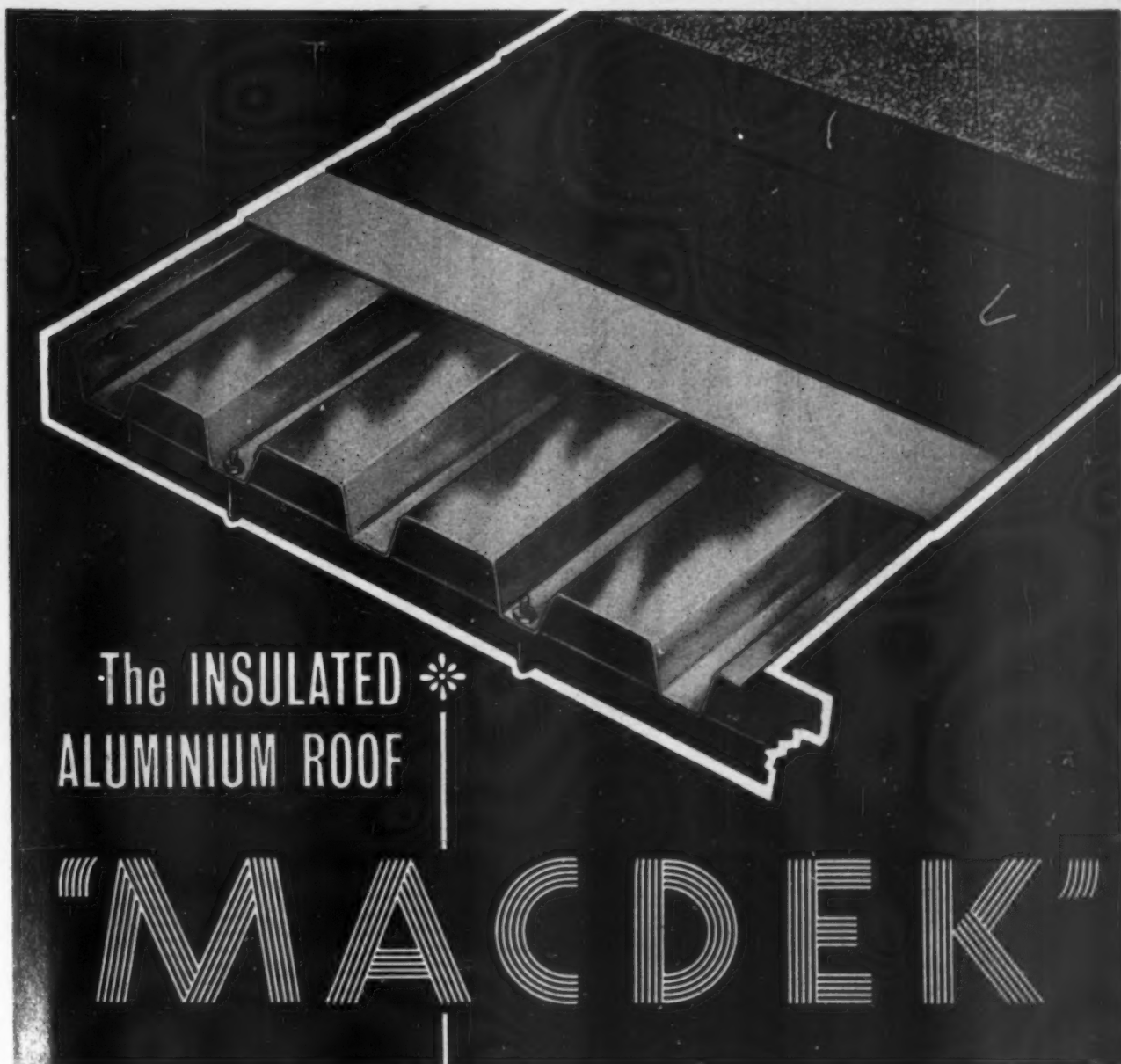
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at Southgate were specially made by Williams & Williams for Crawley Development Corporation.

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The final neighbourhood unit Gossops Green—where wide use has been made of Williams & Williams projected windows—is the 9th and last of the neighbourhood units. It is nearly finished and is already partly occupied.



Curtain Walling on the Post Office Williams & Williams curtain walling with yellow in-fill panels give a light, bright look to the new Post Office, situated just outside the Town Centre.



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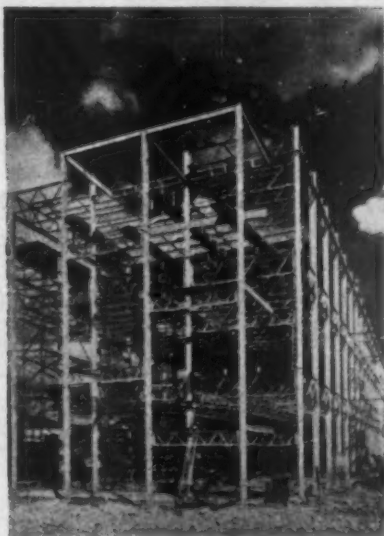
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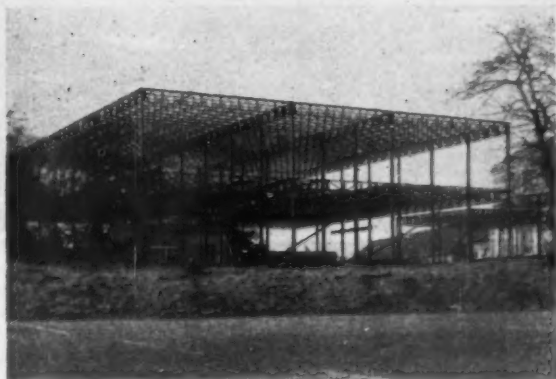
structural steelwork

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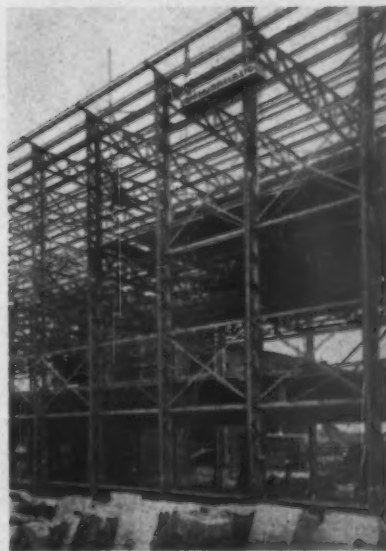
YORK. For the City of York a Grammar School. Sommerfelds designed the Steelwork on a 3 ft. 4 in. modular grid allowing complete freedom for the Architect to use curtain walling and internal arrangements.

Architect: E. Firth, F.R.I.B.A., A.M.T.P.I., City Architect.



B.E.A. For this B.E.A. Building, speed was the essence of the Contract. Sommerfelds designed the Steelwork and from unloading the first lorry on site to the completion of a 250 ton steelwork erection took three weeks.

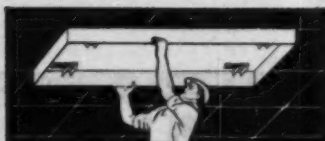
General Contractors: Messrs. Richard Costain Limited.



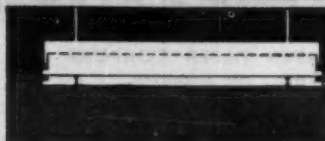
I.C.I. For I.C.I. a Laboratory Block. A multi-storey building with a height to eaves of 44 ft. and uninterrupted spans of 50 ft. on each floor. Deep Lattice Beams and light stanchions were used with considerable saving in steel requirements.

Architects: Messrs. J. Douglass Matthews & Partners.

Sommerfelds LTD. WELLINGTON · SHROPSHIRE
TEL 1000
London Office : 167 VICTORIA ST SW1 TEL VIC. 8843 AND 1000

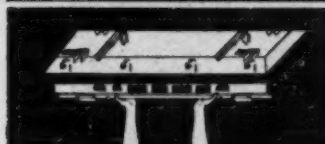


lateral adjustment using special slotted plates allows pre-wiring of ceiling



vertical adjustment of slim 1" trim ensures perfect joint with ceiling

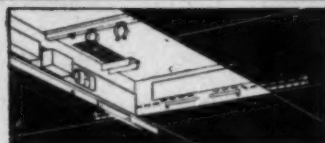
new modular troffers streamline false ceiling lighting installation



control gear trays attached after installation allowing single-handed fitting - hinged for easy maintenance



atlas modulite



fits all types of ceiling and suspends from either true or false ceiling

Ease of installation, complete flexibility and big savings in installation costs... these are the features which make the redesigned Atlas 'Modulite' recessed troffer fittings a *must* for modular ceilings today. Features of the redesigned modulite range include: hidden spring clips providing positive lock on diffusers and simplifying removal; 2, 4, 6 or 8 ft lengths on a 2 ft module; open-ended versions for continuous mounting; alternative suspension for true or false ceilings; choice of three diffusers - translucent 'Perspex', interlocking vinyl sections and shallow plastic louvre.

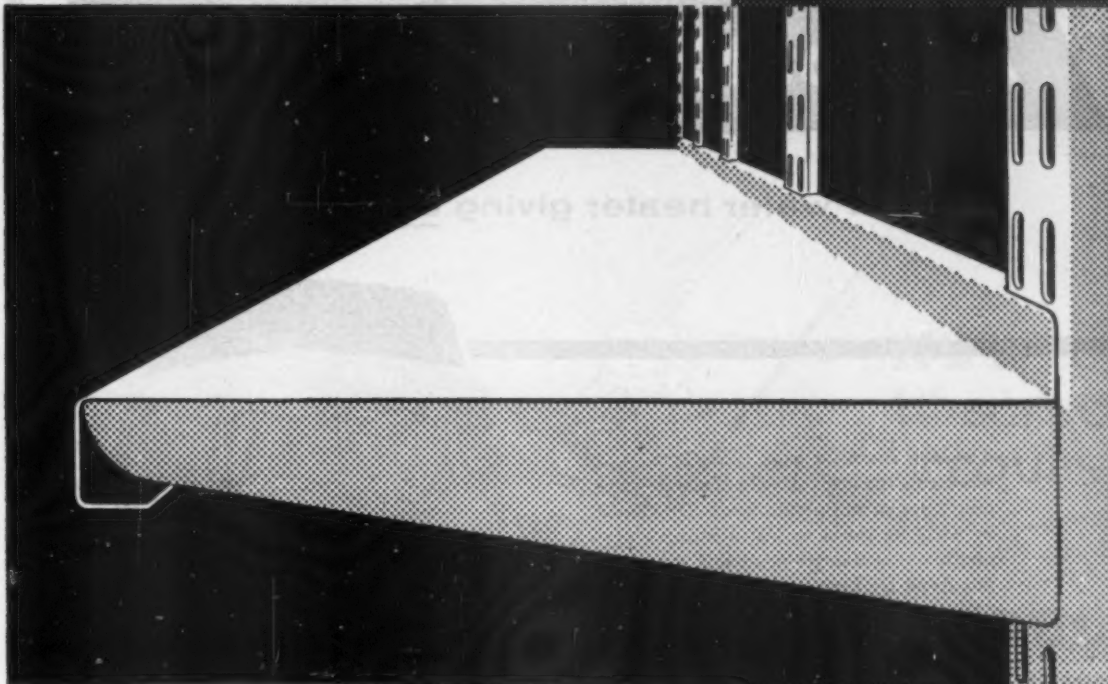
Atlas Lighting Limited, Thorn House, Upper St. Martin's Lane, London WC2

DTV

These New fittings mean

GREATER ADAPTABILITY...MORE APPLICATIONS FOR

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New **SPUR** metal shelves

Designed to clip in to standard SPUR brackets, these new shelves are excellent for display use. Neat, attractive with no projecting edges, they can be quickly mounted, without the use of tools, and easily removed for adjustment to new shelf heights. Available in durable Willow Grey colour finish. Sizes 24 in. x 7 in., 24 in. x 10½ in., 36 in. x 7 in., and 36 in. x 10½ in. For glass shelves a special adaptor clip can secure the glass shelf onto the standard SPUR bracket.

NEW SPUR ADJUSTABLE HOOKS

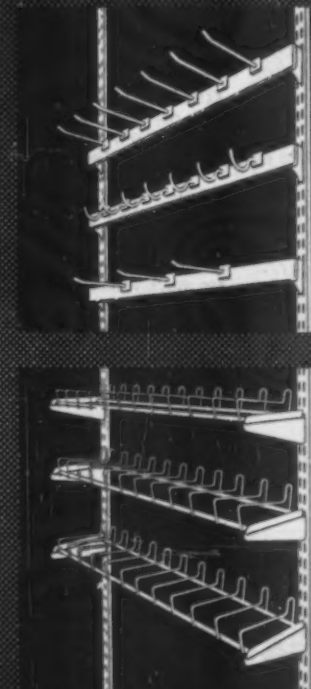
For shops, stores, cloakrooms, schools—wherever hanging accommodation must be provided simply and economically. Hooks clip on to special cross-bar units and can be quickly re-adjusted to meet changing needs. Two patterns available (as shown). Willow Grey colour finish. Cross bars in 2-ft and 3-ft lengths.

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Ascot De Luxe G512

the new water heater giving complete control

The New Ascot De Luxe type G512 represents the latest developments in water heater design and performance. Developed by Ascot for use as an instantaneous multipoint and single-point sink water heater, this Ascot De Luxe with its *complete* controls for gas and water is sure to be popular with the modern housewife. Here are some of its features:—

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A temperature selector controlling a temperature rise between 45°-100°F is incorporated, allowing the housewife to choose water at whatever heat she wants.

Gas and Water Controls

The Ascot De Luxe is fitted with a constant volume gas governor and a water governor. External controls include hot and cold taps and a rotary gas control. Gas and water cocks are an integral part of the heater linings.

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The De Luxe ensures easy fixing and maintenance. The outer case and top and bottom pans are quickly detachable, and all working parts are readily accessible. The stainless steel Ascot 'flat flame' burner needs little attention.

Versatility

The De Luxe is designed to operate as either a single point heater with a gin. spout, or as a small multipoint heater.

Performance

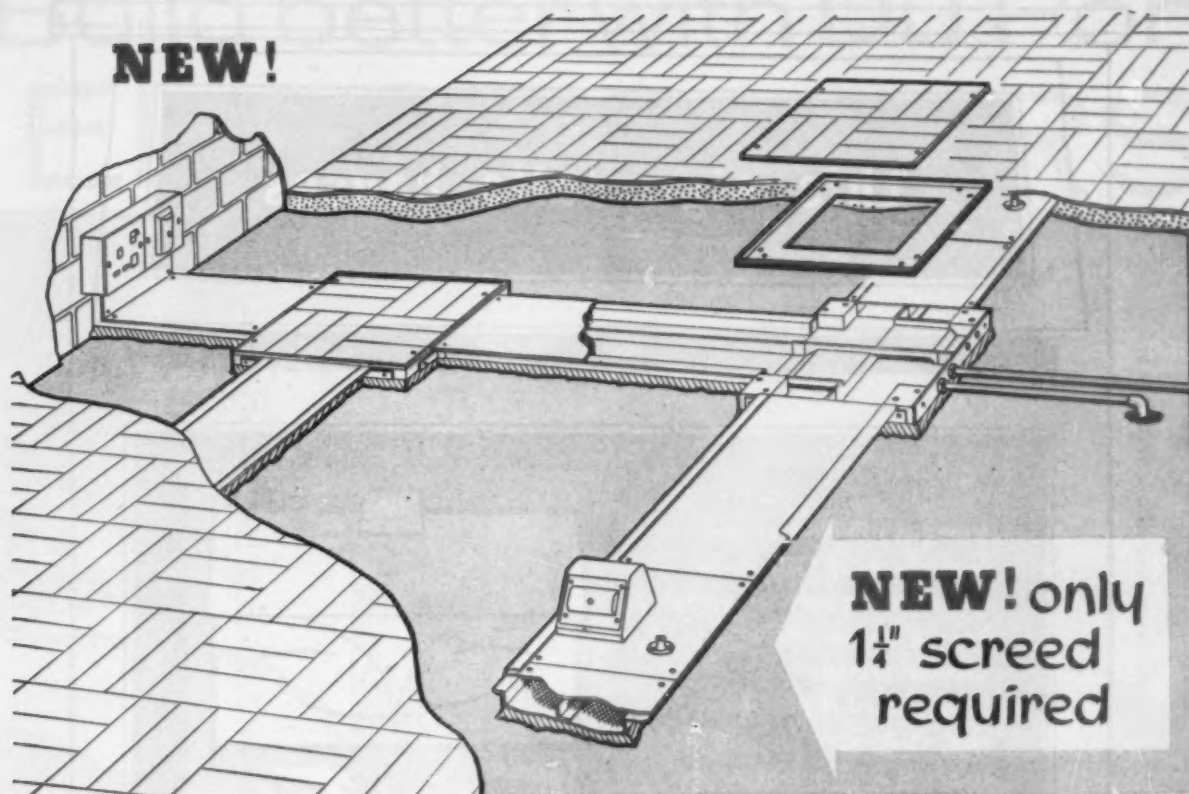
The De Luxe is 23½" high, 10½" wide and 8½" deep and gives 30,000 B.t.u./hr. thermal output from an input of 40,000 B.t.u./hr. producing 0.5 g.p.m. raised 100°F, and 0.625 g.p.m. raised 80°F, and pro rata. Pilot consumption is 250 B.t.u./hr.

For full details of the Ascot De Luxe type G512 write to

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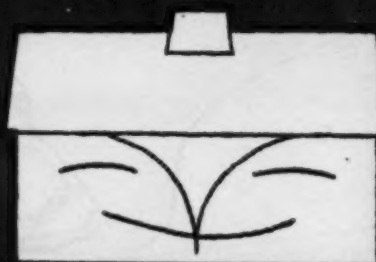
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GC 71

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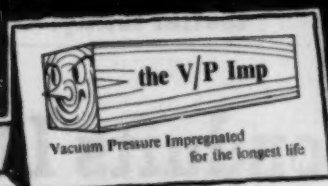
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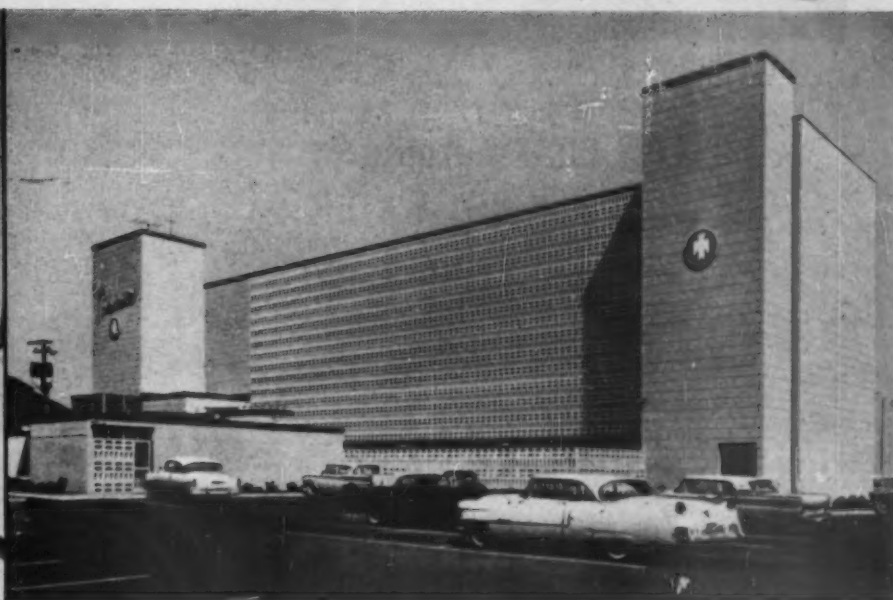
'Tanalised' is the registered trademark of HTI Co. (GB) Ltd.

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Performed neoprene gaskets for curtain wall construction are simply installed, seal effectively, outlast conventional glazing compounds. They cut costs and speed construction.

The Du Pont elastomers — neoprene, and Hypalon* synthetic rubber — make for better buildings by assuring utmost quality and longest life in a variety of building products. Du Pont neoprene and "Hypalon" have proved outstanding in resistance to sunlight, heat, extremes of climate and weather, oil and grease, stress and strain, and other deteriorating influences which

quickly destroy ordinary rubbers. "Hypalon" is unique in being completely immune to ozone attack — a chief cause of cracking in many other types of elastomers. In addition, "Hypalon" is available in an unlimited range of colours, including pastels, making this versatile elastomer highly decorative as well as functional.

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COATINGS—protective and decorative, for roofs, floors, exterior and interior walls; can be used over many types of substrates, including masonry. They can be combined with grit to form non-skid surfaces.

FLOORING—durable floor tile of "Hypalon" retains its colour, will not shrink, much more stable dimensionally, resists heat, flame, cigarette burns, permanent indentations, and strong oxidizing chemicals.

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ADHESIVES—based on Du Pont neoprene for bonding curtain-wall sandwich panels, applying plastic laminates, installing tile, wallboards, ceilings.

. . . and many other items, such as caulking compounds, structural bearing pads, roof-vent seals . . . belting, hose and other key parts on construction equipment.

See your local supplier or send coupon below for more information on these and other products made from Du Pont neoprene and "Hypalon"

*Hypalon is Du Pont's registered trade mark for one of its synthetic rubbers.



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Architects' Journal 9/60

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- ★ for **LOW COST** automatic **HEATING** and **HOT WATER**
- ★ **Convactor HEATING STOVES**
- ★ **Solid fuel COOKERS**

For **ROOM HEATING** Hard Coke is particularly suited for openable and closed stoves. Attractive in design, and highly efficient through the use of convection, these are amongst the most efficient appliances obtainable, when the correct fuel is used.

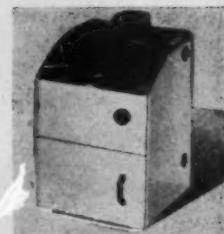
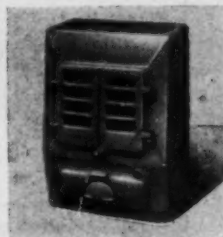
For **HOT WATER** the modern domestic boilers, with thermostatic control, operate with the highest degree of efficiency on Hard Coke.

For **COOKING** special Grades of Hard Coke are available for solid fuel cookers — clean, efficient and most economical for the modern housewife.

For **CENTRAL HEATING**, the new small bore system, operated on Hard Coke is economical to install and to run, at least as efficient as oil and much cheaper.

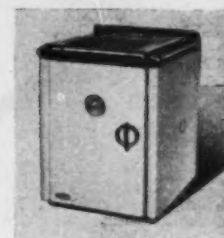
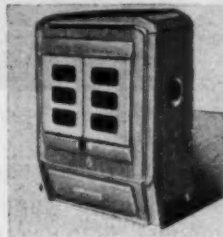
WHAT IS HARD COKE? It is the authorised smokeless fuel made by the British Coking Industry. It is particularly suitable for continuous-burning appliances because these can really be run *continuously*. (Hard Coke, made from *crushed* washed coals, contains no stone or 'bats' to clog the bars). Hard Coke is slow burning, giving great economy, and is consistent in size and quality.

COURTIER Type R Freestanding openable stove, in several sizes. Inset types also available.



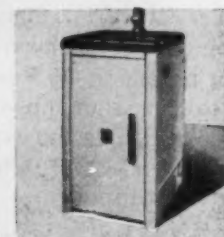
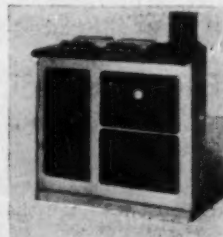
REDFYRE Magazine Boiler, 20,000 B.T.U. incorporating fuel hopper, saving frequent refuelling.

TORGLOW 1B. A freestanding openable stove with thermostat.



GLOW-WORM Aristocrat Mk. III, 12,000 B.T.U. output, and provided with thermostat control.

WELSTOOD HEATSTOR heat insulated cooker, freestanding, with boiler. In several colours.

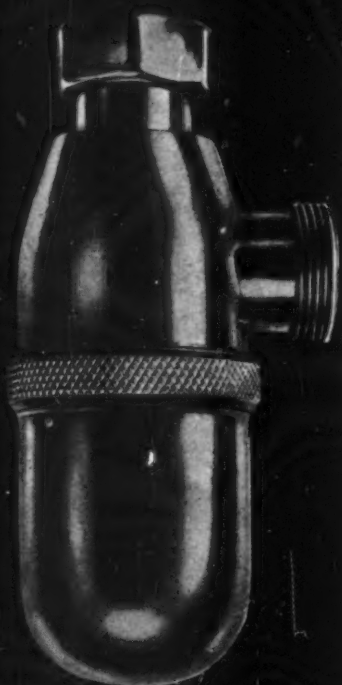


IDEAL Neo-classic Sectional Boiler. Serving small-bore piping system with electric pump and mixing valves, provides central heating with full hot water supply and automatic control, cheap to install and cheap to run.



SEND FOR THE BOOKLET
"Modernise with Hard Coke"

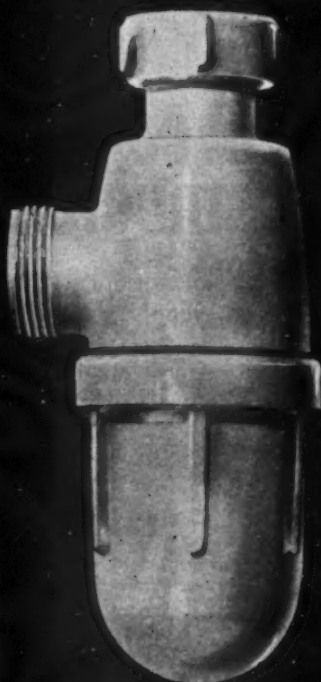
This new booklet illustrates and describes typical modern high-efficiency domestic appliances and gives full information on the use and advantages of Hard Coke. Free on application.



The GREVAK MONITOR in Cast Brass

- ★ Completely resistant to induced and self-siphonage.
- ★ No anti-siphon pipework required.
- ★ Maintains seal against flow of over 100 galls./min.
- ★ Removable base for easy cleaning.
- ★ Available in natural brass or chrome finish.
- ★ Size $1\frac{1}{4}$ " B.S.P. with 'P' or 'S' outlet.

GREVAK anti-siphon traps



The GREVAK MONITOR in Hostalen

- ★ Identical anti-siphon safeguard as Brass.
- ★ Hostalen is a high density polyethylene.
- ★ Resistant to acids and detergents.
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- ★ Size $1\frac{1}{4}$ " B.S.P. with 'P' or 'S' outlet.

"GREVAK" ANTI-SIPHON TRAPS are fully patented.



GREVAK SENIOR

Heavy duty pattern anti-siphon trap for commercial use with 'P' or 'S' outlet available in cast iron, brass and lead. Brass and Cast iron are bitumen coated internally.



GREVAK JUNIOR

Light duty pattern anti-siphon trap with 'P' or 'S' outlet available in cast iron, brass, copper and lead. Brass and Cast iron are bitumen coated internally.



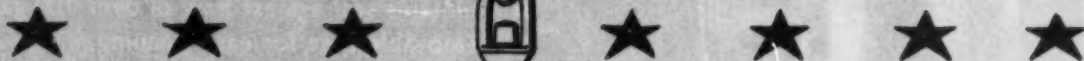
GREVAK BATH

This anti-siphon Bath trap with 'P' or 'S' outlet has no equal. The $1\frac{1}{4}$ " size being only $5\frac{1}{2}$ " deep, fits above the floor line with bath foot giving $6\frac{1}{2}$ " clearance. Available in cast iron, brass, copper and lead with or without overflows.

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Donnington Castle, Berkshire

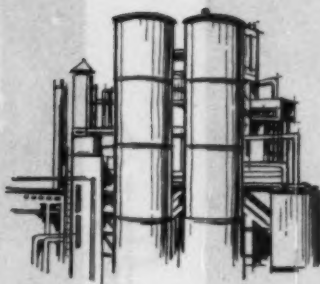
Situated near Newbury, this castle ruin was once a vital key position in the battles of the Civil War against that town. In 1643, General Middleton's attack with 4,000 men was repulsed by its gallant defender Sir John Boys who then withstood a sustained siege under fire for 12 days from other Parliamentary forces, which ruined most of this proud castle.



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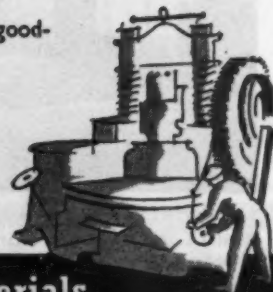


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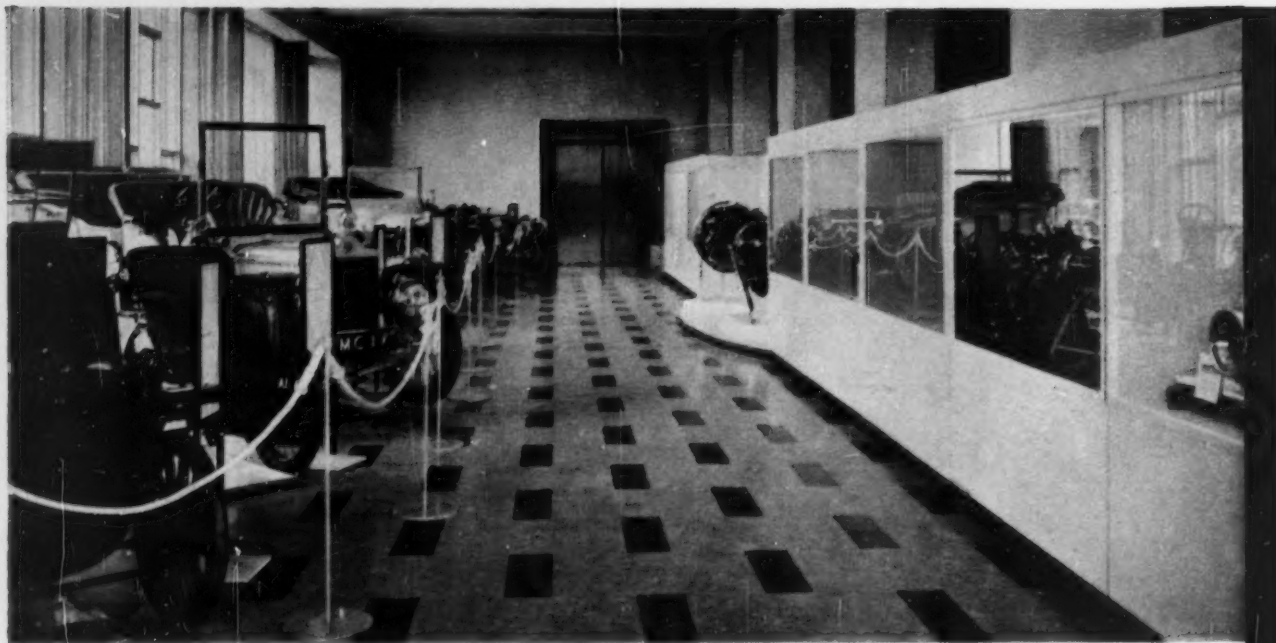
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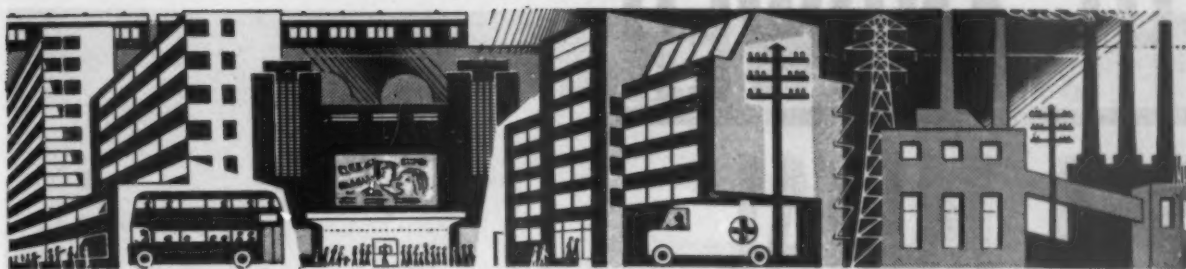
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Architect: Herbert, Son & Saundby, F.R.I.B.A. Contractor: Coventry Tile Co. Ltd.





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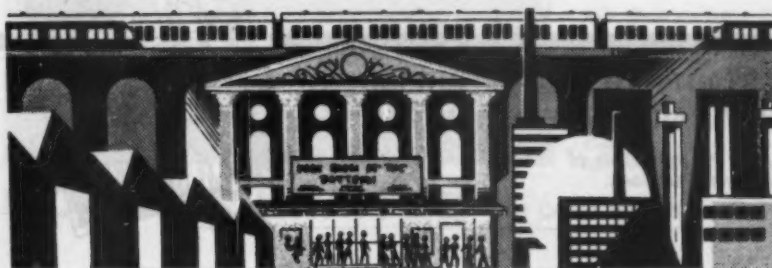
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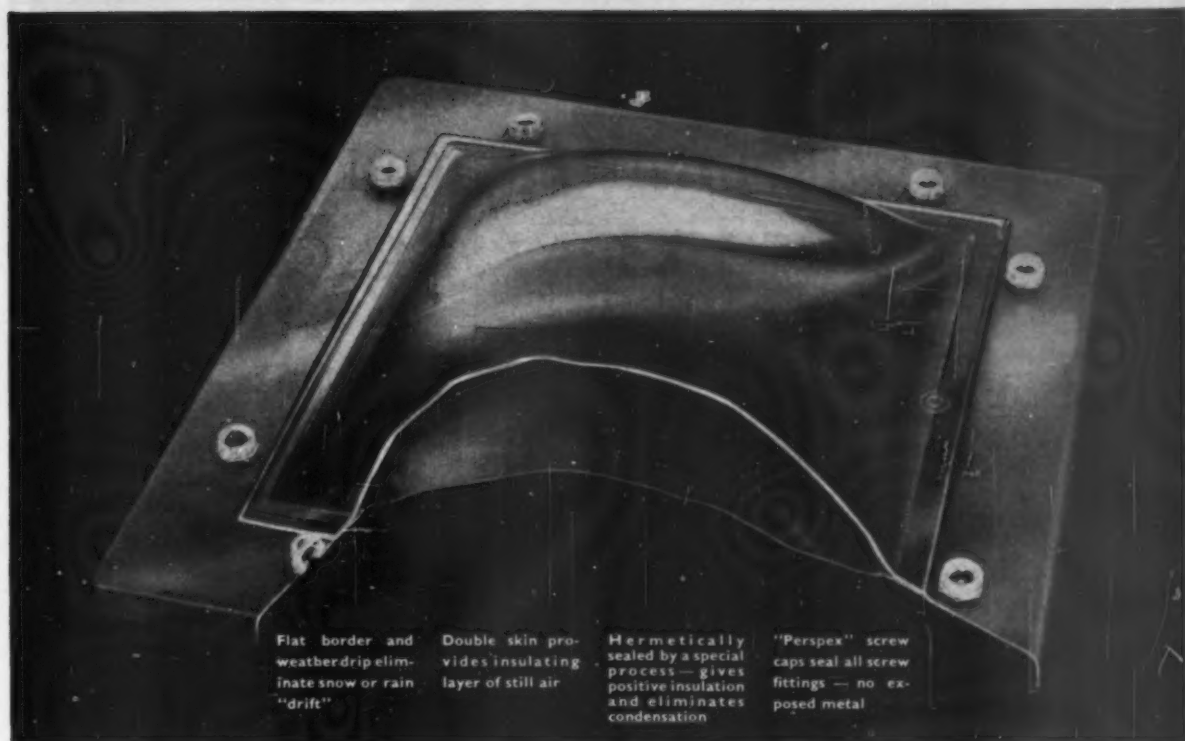
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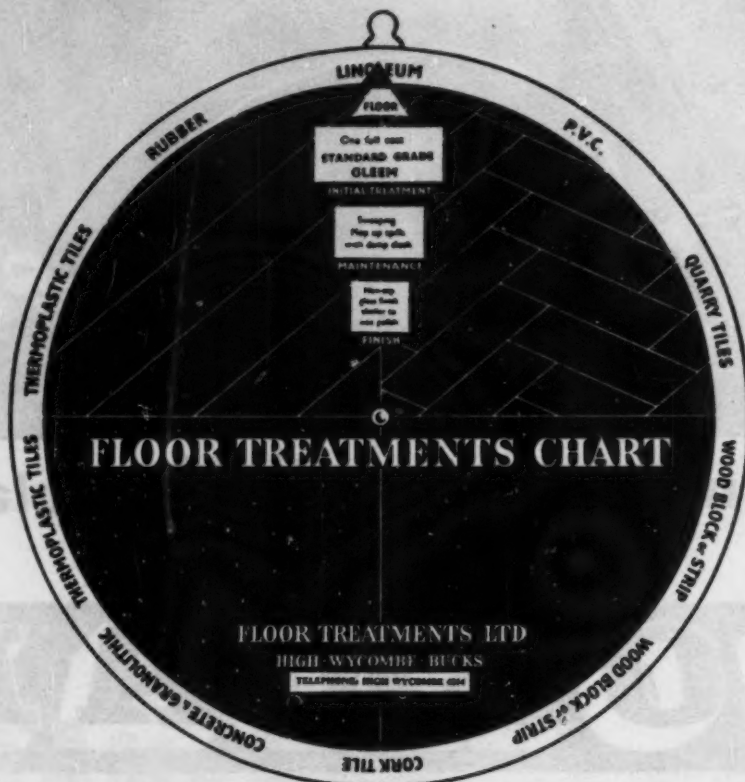
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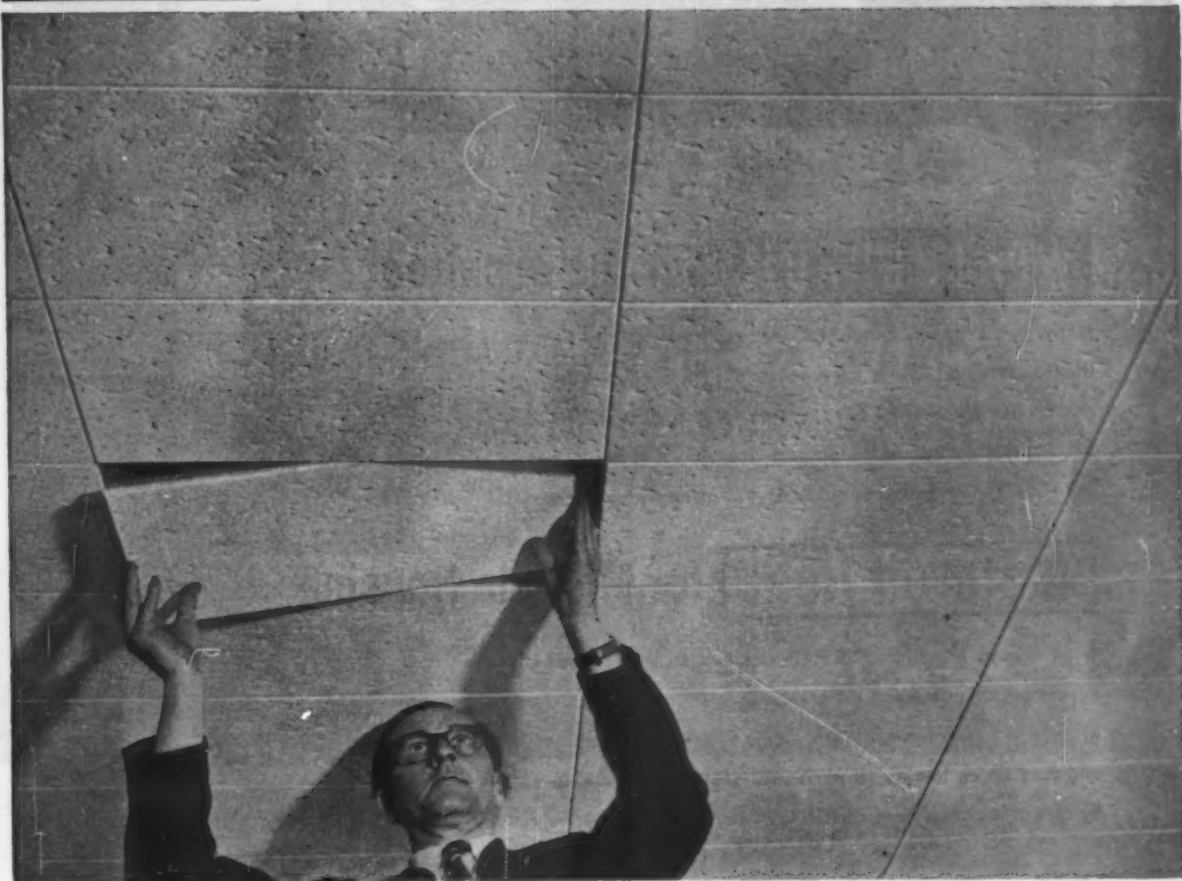
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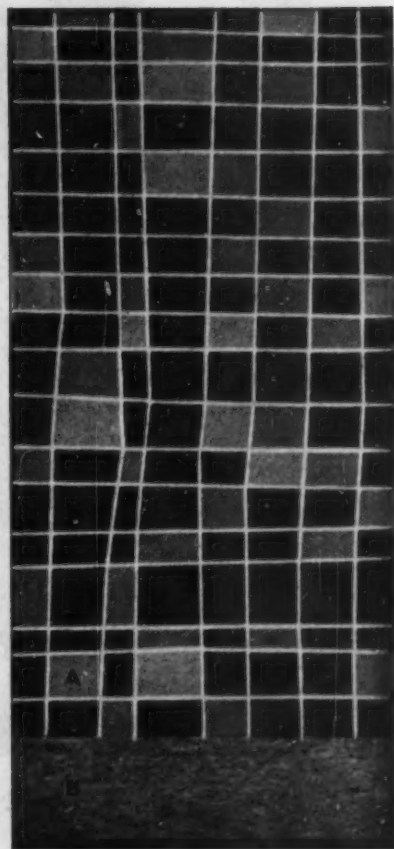
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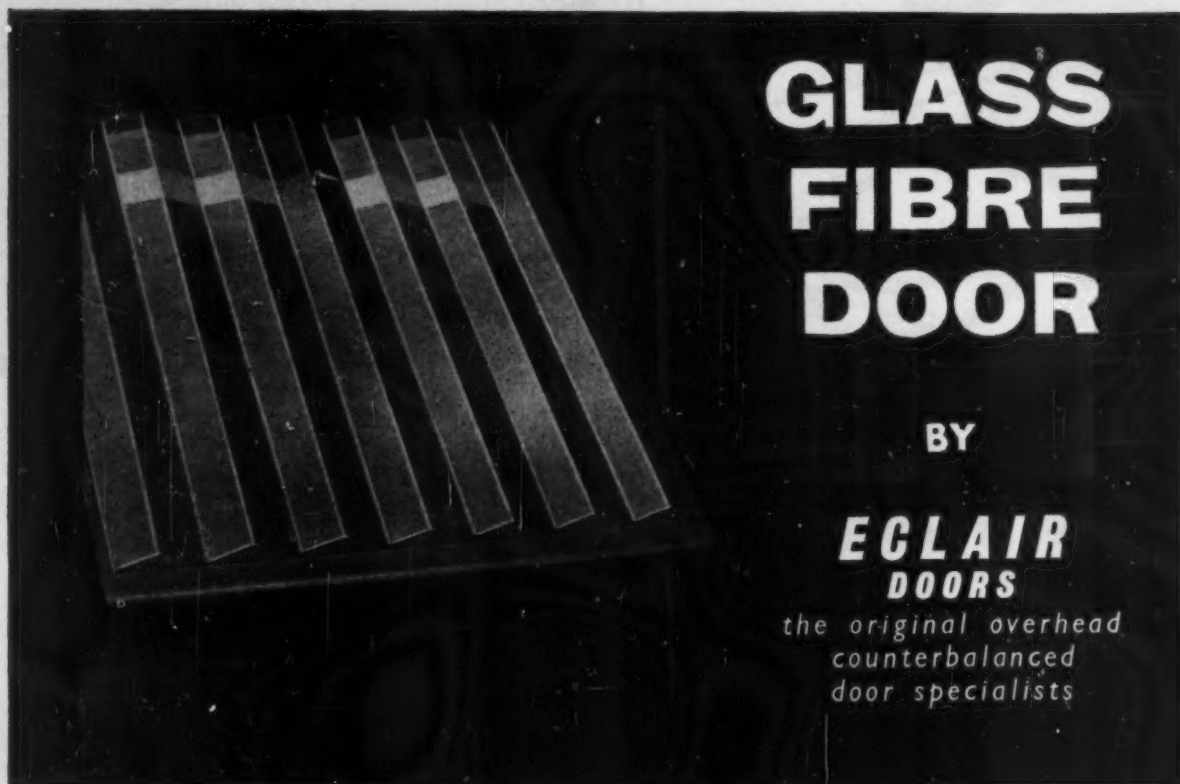
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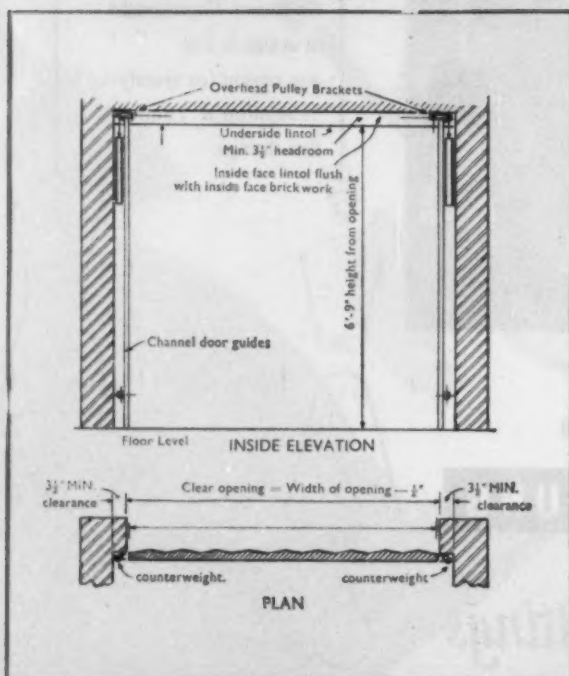


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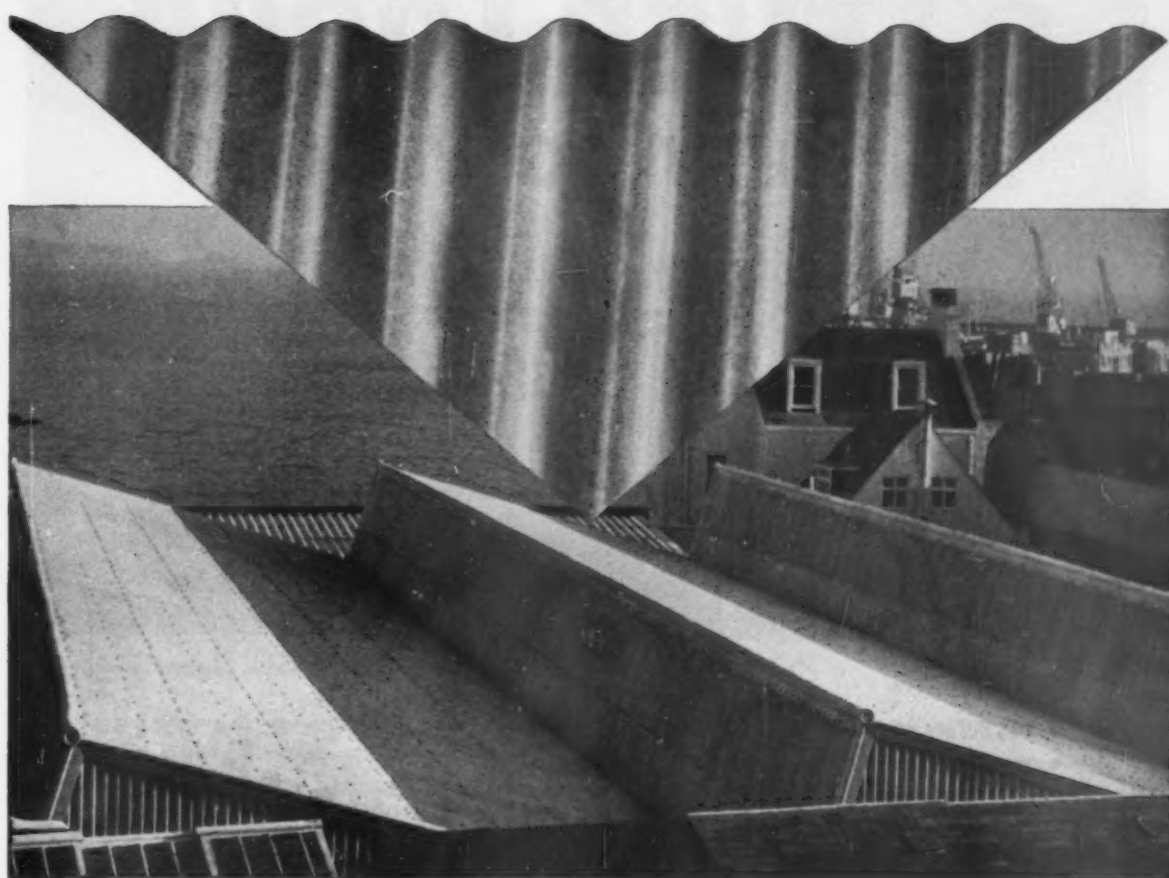
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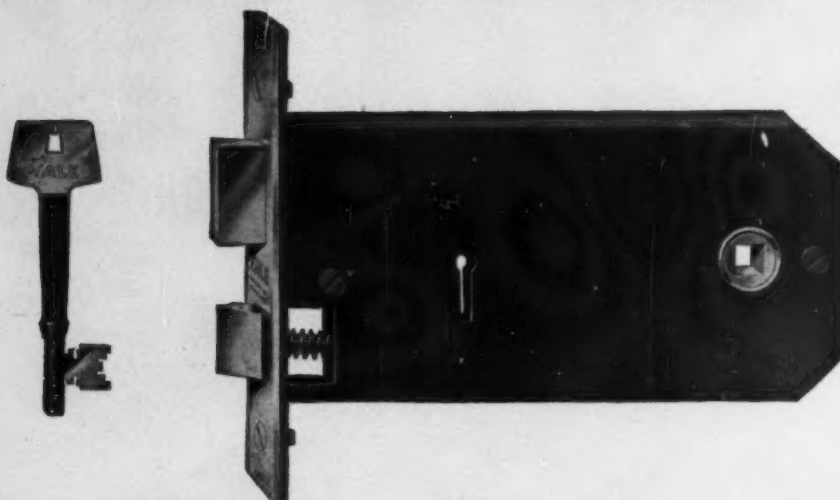
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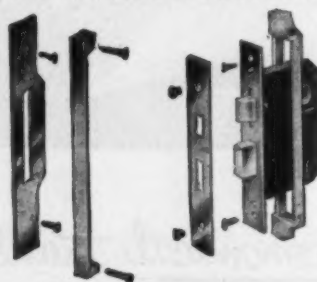


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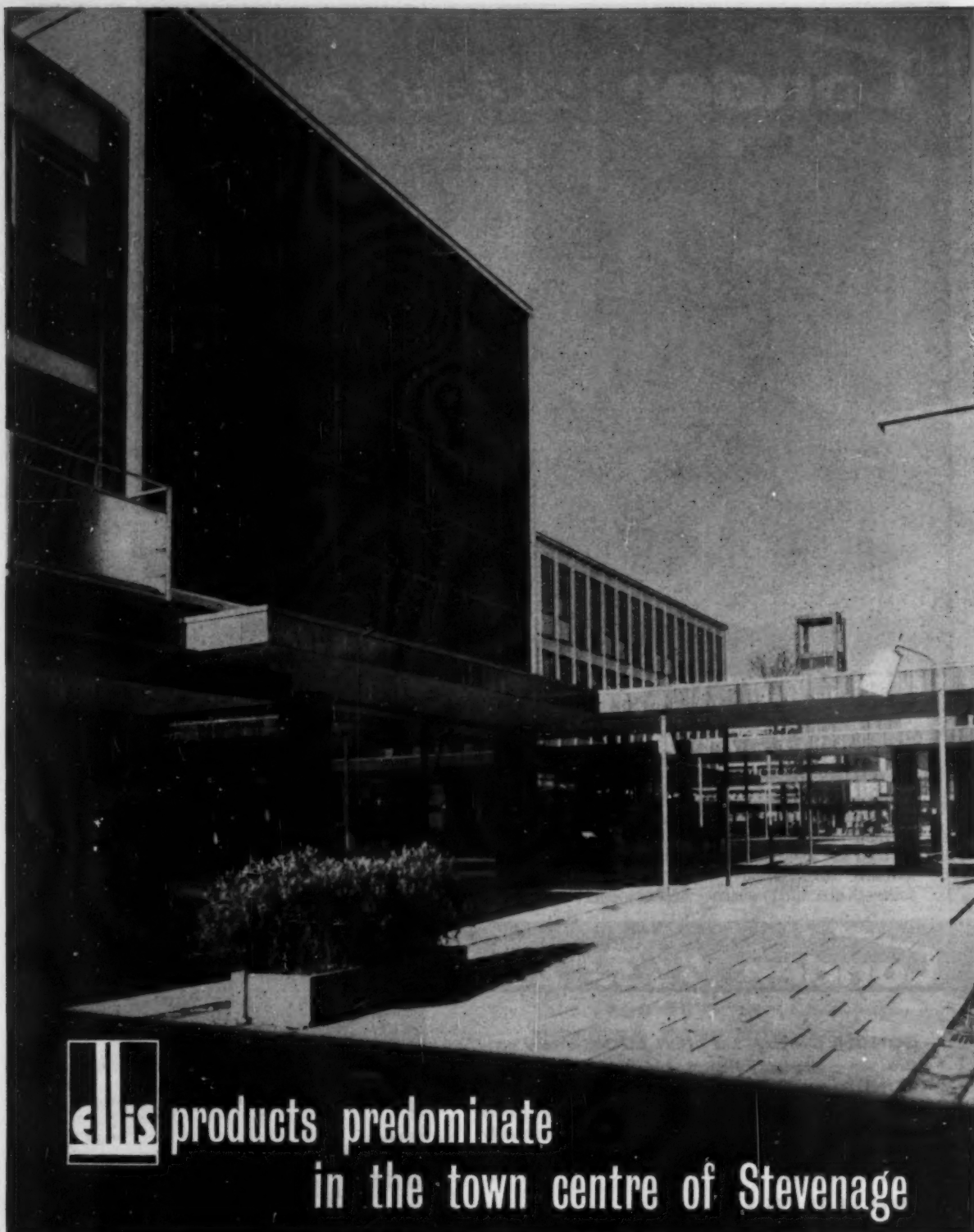
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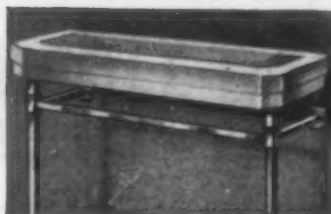
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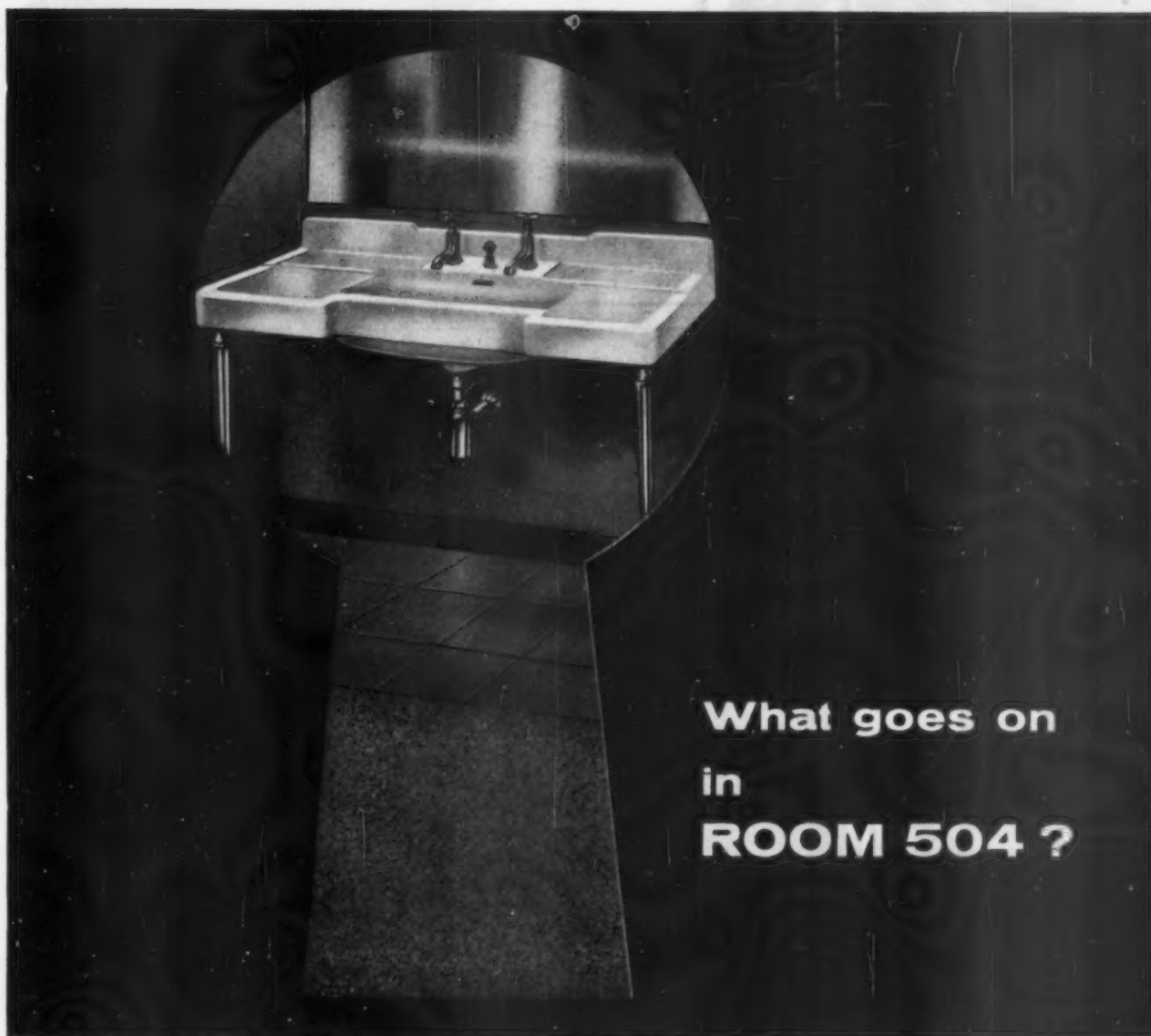
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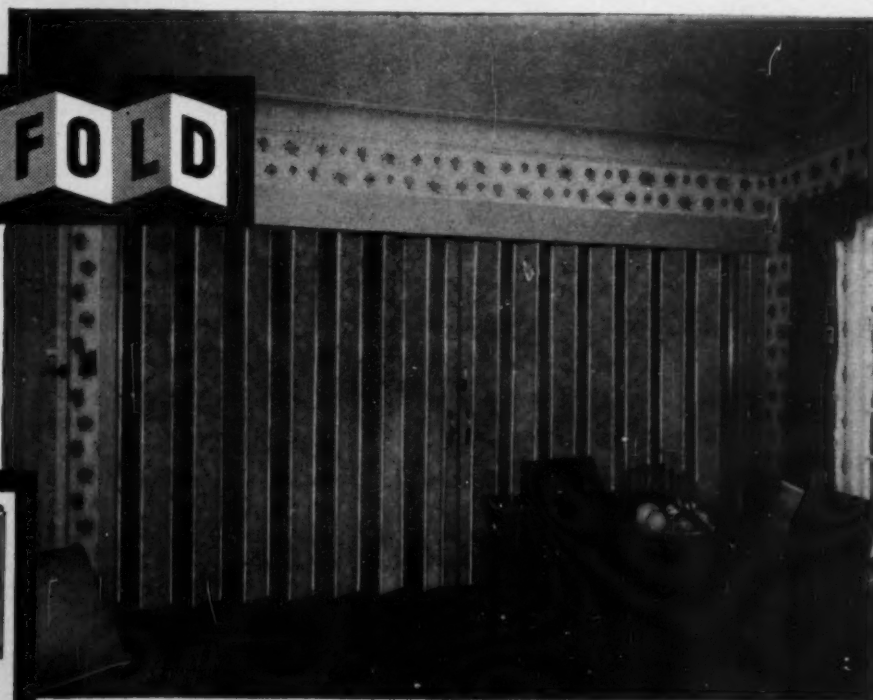
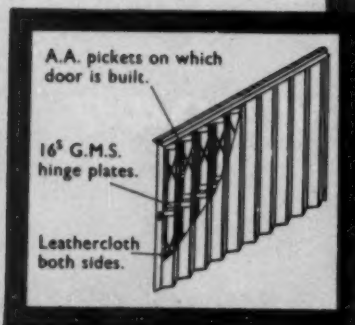


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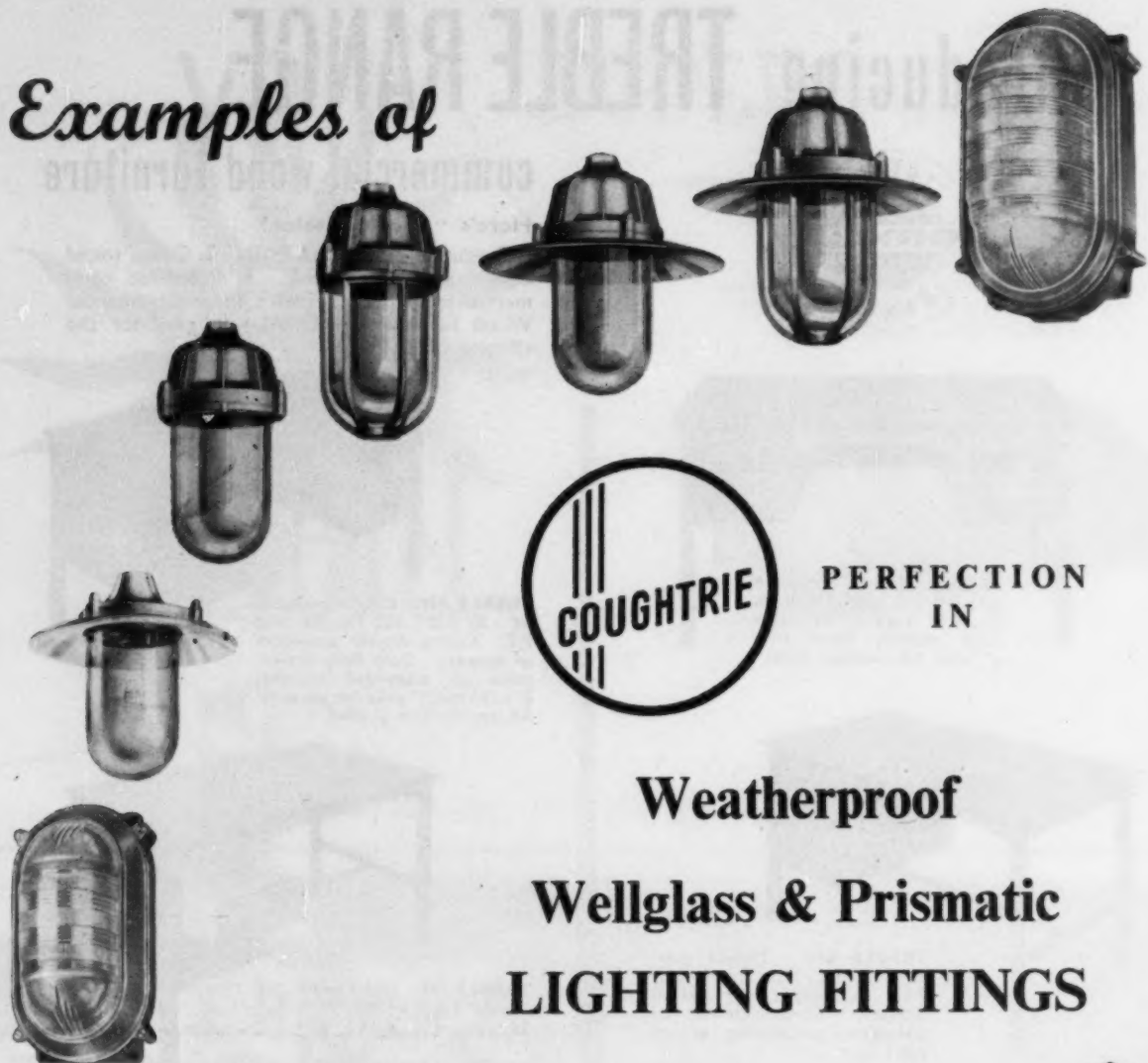
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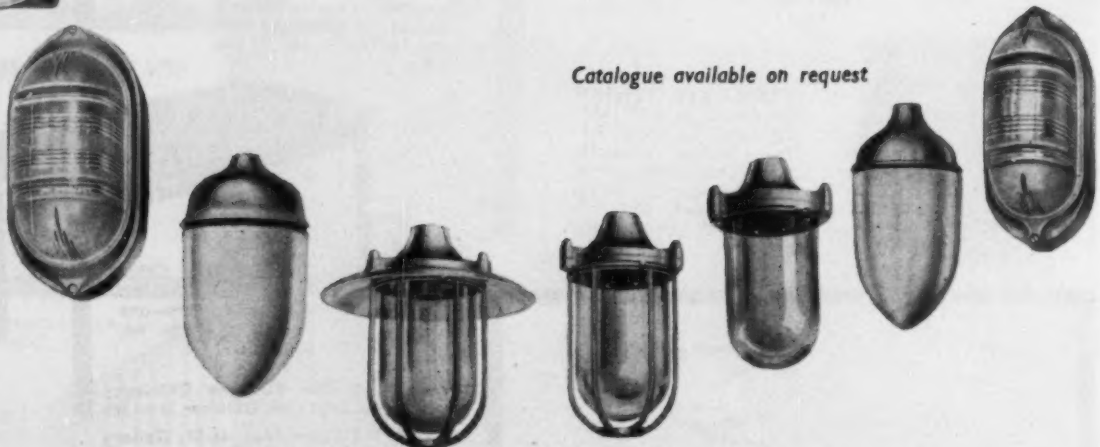
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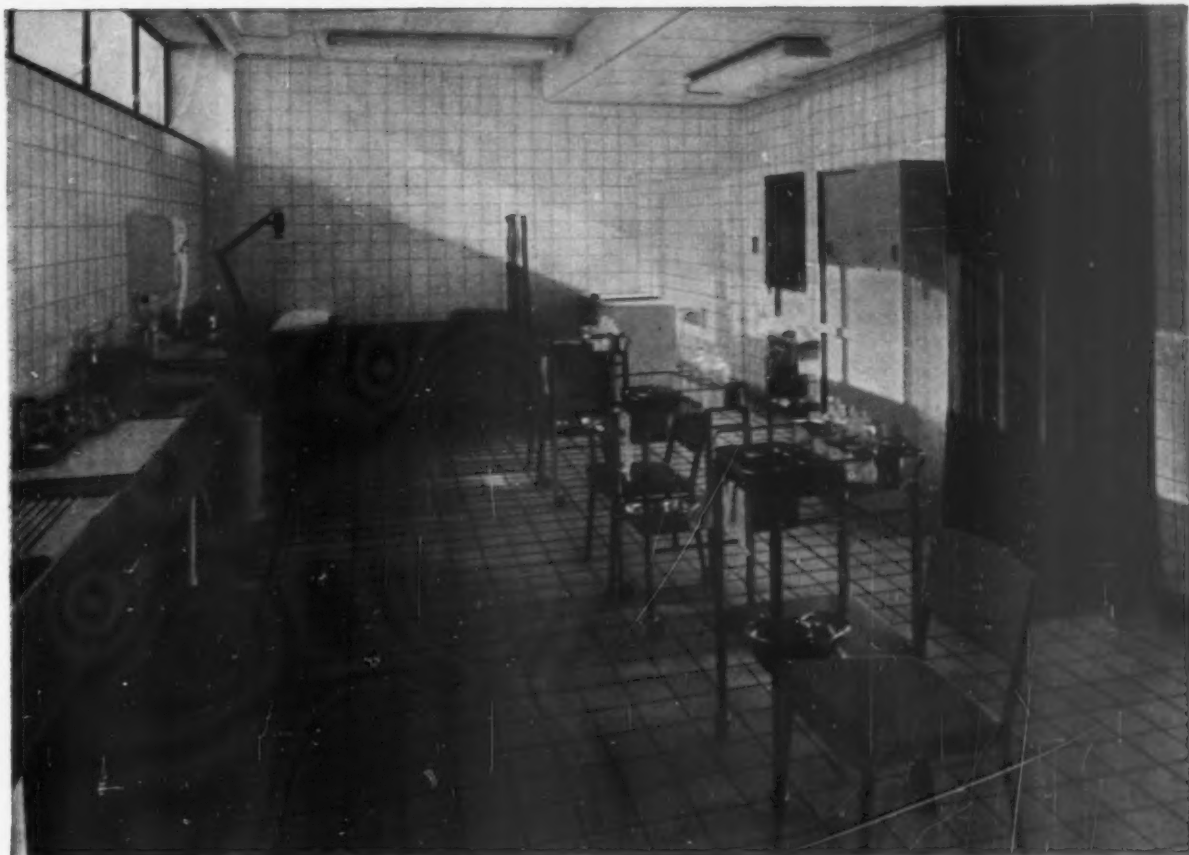


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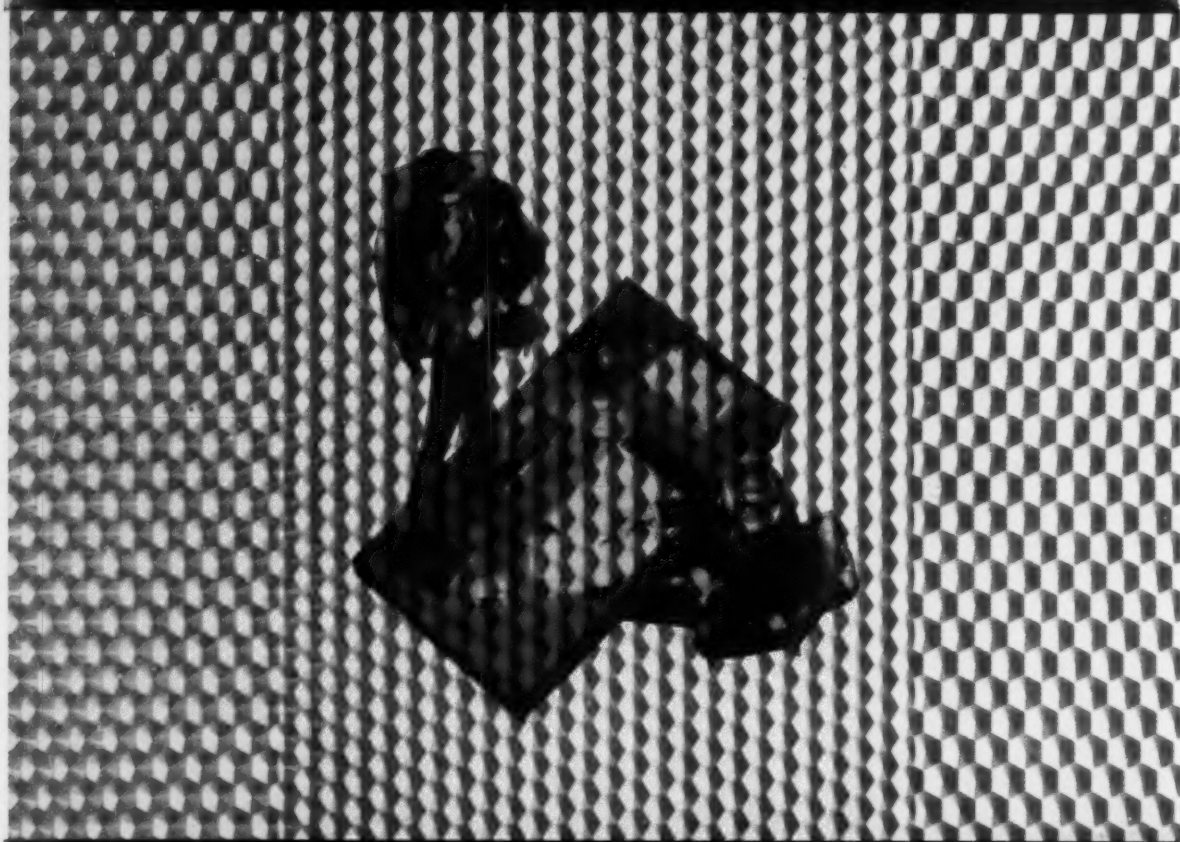
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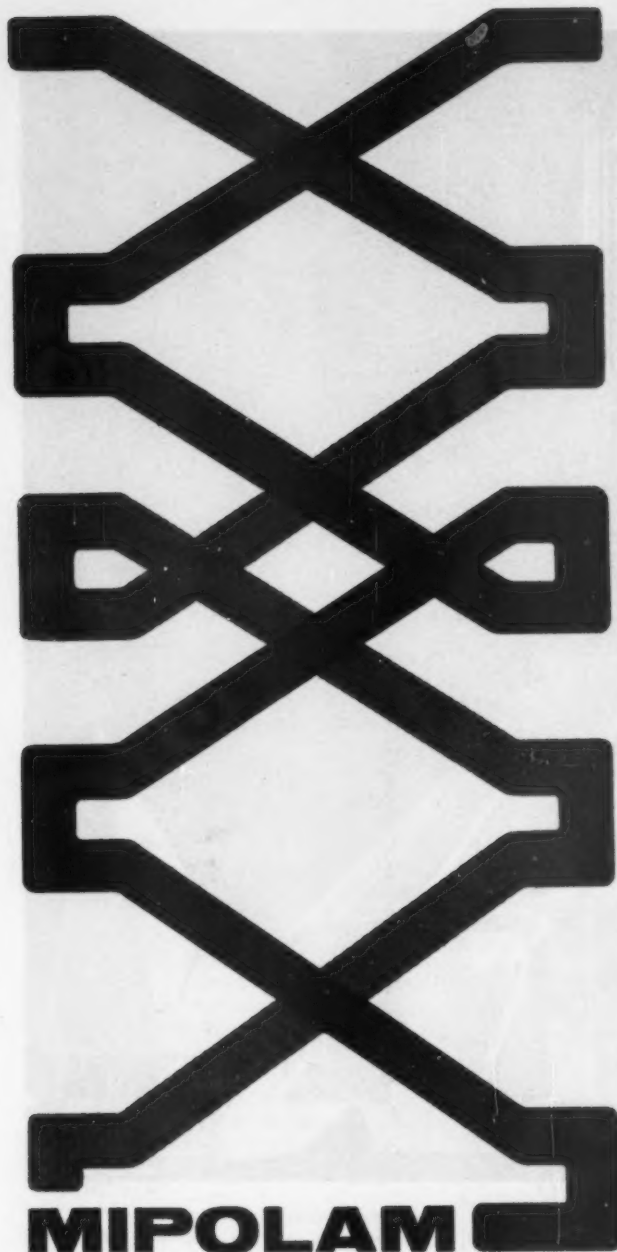
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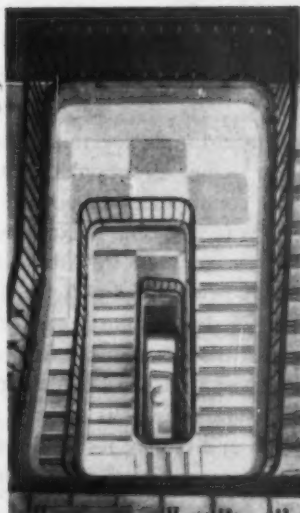
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The Architects' Journal

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NOT QUITE ARCHITECTURE

Meeta

Narchi

Tecta

Day

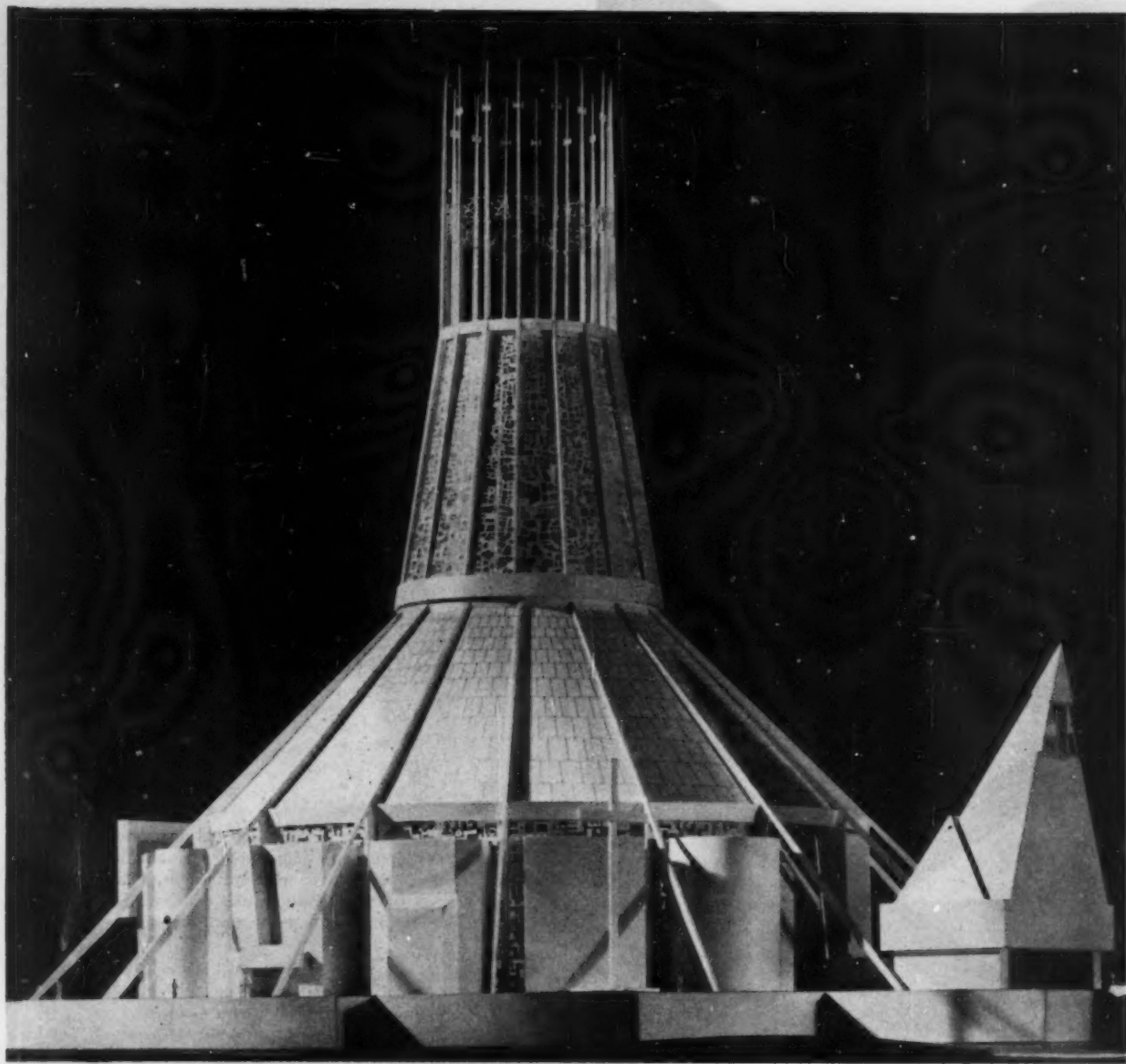
Ever since a friend told me that architects were going into public relations, into advertising, out to meet the people, I have been waiting. Waiting and watching . . . but no one has come to meet me:

I was looking forward to all sorts of dashing advertisements. Say, an ultra-natural colour photograph taking up a full page in my weekly magazine. It would show something symbolic, like a larger-than-life, ridged, yellow pencil, a scale on which the centimetres would look more like inches, a magnified, weed-green set square balanced carefully across the whole, with just the curled corner of a plan coming in the side of the picture. That would give a satisfying impression of reality. One direct slogan across the bottom:

Add an extra ARCHITECT for an extra-elegant house.

Or I would be courted with the human approach. A freckle-nosed engaging little boy with mischievous blue eyes would look out at me. "This is Archie," the writing would go:

When he grows up, he's going to be an ARCHITECT. He knows that, for the little bit more it costs, your house will be. . . It could be followed up with Archie outfits in all the shops. My Johnnie would look lovely in miniature corduroy trousers, a jersey worn at the elbows and a red beard to hook round his ears. Besides, he has always wanted one of those speckly, green portfolios. I know they don't hold much, but they do add class.



Liverpool Cathedral Competition



A model of Frederick Gibberd's prize-winning design for the Roman Catholic Cathedral of Christ the King, Liverpool. The result of the competition, open to architects in this country, throughout the Commonwealth and in Eire, marks the end of all efforts to build the Lutyens design of 1928 or any whittled down version of it, such as designed by Adrian Gilbert Scott in 1953, which Liverpool almost had as its new Cathedral (left). The Church authorities got as far as building the Crypt under the north end of Lutyens's enormous original scheme before realising that the astronomical rise in building costs (the estimated cost of his scheme had risen to £27m.) made further progress impossible. If Gibberd's design is built substantially as shown, Liverpool can expect a new Cathedral within five years at a cost of just under £1m. Details of the winning scheme, the second and third premiated designs and a selection of unsuccessful entries appear on pages 313-333.

I am positive the snob angle would have been effective. My neighbours always fall for that sort of thing. If they saw an advertisement like:

How could I ask Bob and Janie to our new house if I weren't sure that it was ARCHITECT-designed?

It would properly put the wind up them. Even better:

When the vicar dropped in unexpectedly, how glad I was our house is by an ARCHITECT.

They are always worried about the vicar coming.

The owl would go down well, too:

Wise couples know that sensible planning. . .

*

Of course, I realise you have to cater for the unmarried ones, as well. I wouldn't have objected to an occasional poster:

I dreamt I was walking down Fifth Avenue with an . . . ARCHITECT.

That catches the imagination. Or a man in the street at dusk with his hat-brim down:

Never be alone with an ARCHITECT. . .

For the jazz fan, there could be a frank, friendly head of Humphrey Lyttelton leaning out of the page, with the mouthpiece of his trumpet just showing—to identify him, so to speak—saying:

My house was designed by an ARCHITECT.

Then a cut-out at the bottom of the stables everyone made all that fuss in the papers about.

*

It is a disappointment. I was sure there would be TV jingles, short films on at the local in Architecturama and Designoscope, circulars with instructions on how to carry out the Window Test. We could have had a contest. They always whip up interest. For instance, two pictures side by side of two houses looking exactly the same, but one a bit smarter than the other. Then underneath, the caption, "Can you tell which house was designed by an ARCHITECT?"

Or, "Put in the order of importance, the following attributes of the ideal house: sliding plate-glass windows, an L-shaped living room, a middle-of-the-floor fireplace, a spiral staircase, an inlaid, mosaic mural."

After all, in this day and age advertising is almost as important as using the right detergent. I suppose architects are so busy being modern nowadays, they haven't got time to be contemporary. It's a pity, though— isn't it?

ANN BONE

NOT QUITE WHAT YOU THOUGHT

It is a great tribute to the accuracy of Alan Plater's satiric pen that many readers, including leaders of the profession, apparently believe that the magazine *Acropolis* (NQA, August 18) actually exists. In view of the widespread interest that has been expressed, there would appear to be an excellent opportunity for some enterprising provincial architecture school to start publishing this figment of Platerian imagination right away.

The Editors

SECOND BEST HOUSING

THE caravan is now officially recognised by the Government as a permanent home, and with the Caravan Sites and Control of Development Act the roaming, gipsy life has been neatly docketed for control by licence under the planning authorities. It is all to the good that sites are now to be selected with an eye to their own and the general local amenities, that decent standards and security of tenure will now be provided for caravaners, who have hitherto been a rather hunted minority. There are said to be some 60,000 families now living in this way and the number is increasing by at least 10,000 a year.

But while caravanning organisations regard this as a good thing, and the Act as a good thing because it will give a fillip to recruitment, is an increase of permanent caravan dwelling really a welcome development? It is claimed that caravans are getting more comfortable (also larger), with baths, central heating, flush lavatories—they are even beginning to call themselves "mobile homes"—and that many prefer them to immobile homes. But the majority of the swelling 60,000 surely live in caravans because of housing shortage and rising rents? The fact that so many find more privacy and comfort in a caravan than in whatever accommodation they had before, proves how bad much of our housing is, not that the caravan is really a desirable bijou residence.

Clearly the holiday caravan has come to stay, and one can only welcome the Minister's insistence that caravan parks shall not line our coast but be concentrated in selected places and encouraged to go a bit inland. But we would be much better pleased if he had made clear that the caravan is to be regarded as a second-best sort of house, and that it is the aim of the Government to put an end to the housing shortage within a foreseeable number of years, so that we could look forward to a shrinking caravan population. Not that such promises are always kept: remember the prefabs, supposed to be for ten years only (now they too are loved and clung to by many tenants, as giving more space and privacy than they ever had before their houses were bombed).

The housing shortage is clearly the most important social problem of the day, and the total failure of the Government to tackle it the cause of more dissatisfaction and sheer misery than anything else. The Green Belts crisis, the land values crisis, now the uproar over the effects of the Rent Act—culminating in Mr. Brooke's inept advice to local authorities to apply compulsory purchase (of all measures the most detested by all good Tories!) against extortionate landlords—all reflect an intolerable situation, which can only be solved by planning and spending on a far grander scale than hitherto.

Architects have a double interest in housing policy: like everyone else they need somewhere to live—preferably not a caravan; and they want greater scope to design and build housing schemes which will enhance our towns instead of

suburbifying them. Today, with the end of the general housing subsidy and the high price of money for local authority building (debt charges took 8 million out of the £134 million spent by the Metropolitan boroughs on housing in 1958-9), the screws are on architects to consider above everything, not value for money, but cheapness (with nastiness understood). Even the Edinburgh Corporation's proposed package deal, reported in this issue, has its defenders on the ground that it might save a million pounds to give competing contractors a free hand. A sound housing policy would aim at ending slums and near-slums within a planned period, and prevent the creation of new ones.



ENGLISH ELECTRIC SHOCK

You may have forgotten how angry you were when the English Electric Company disregarded the excellent results of their competition for a headquarters on the Gaiety site in the Strand and scraped up a revised Adams-Holden-Pearson design. If you have forgotten, then remind yourself by looking at the pictures opposite, because the recently completed building deserves to be greeted with anger. The bulk that now bungs up the east end of the Strand is one of the worst-looking buildings of all time; in appearance it is mediocre, characterless and without soul—a worthy rival to the remodelled Bank of England and Faraday House.

On the opening day I was fortified not only by the memory of the witty,

elegant building that once stood on the site of this savage, unuproarious farce (with its appropriate sculpture by Sir Charles Wheeler and its equally appropriate, mock-eighteenth-century board-rooms), but also by the discovery that the building had some perfectly splendid boilers, designed by the consulting engineers, Oscar Faber and Partners.

Isn't it odd that as you read this another branch of the organisation responsible for the muddled building is preparing the display of P1 fighters at Farnborough?

BEHIND THE RADIO TIMES

Did you expect to find even smaller radios at this year's Radio Show? The logical development of transistors and miniaturisation is surely the invisible set (except for the loudspeaker) buried in the surface of a piece of furniture. But in fact, transistor sets are getting bigger, and the portables with FM are now table machines—not vest-pocket affairs. "People expect a big set," I was told, "for twenty-eight guineas or so, which is the cheapest we can do such a circuit for; we couldn't sell a small portable for that kind of money."

Television sets, of course, continue to get more and more shallow—though not small enough to cause the same embarrassment as transistor radios; but it is clear from the exhibition that the Golders Green size is still in demand even for steam radio. In these days of high-fidelity reception your prestige symbols still have to be seen as well as heard.

SECOND THIRD DOUBLE-TALK

Reyner Banham certainly ought to have been seen as well as heard in his

second Third broadcast on Italy. He had a good television subject—what skyscrapers designed with different stylistic aims look like when seen as part of the town they stand in. I wouldn't have minded so much having to struggle with a visual subject, if Mr. Banham had given us less of his old buckminster. Admittedly he is terribly good at his one-upmanship stuff, but I was not amused by his reference to Milanese architects and streets as though they were household names. The sad thing is that he doesn't have to use this sort of ploy. He is quite capable of showing his admirers that good architecture is concerned not with stylistic theories, but with making ordinary life simpler in a too-complex age.

BRISTOL FASHION?

Imaginative schemes for youth clubs are frequently toned down for lack of money. I hope, therefore, that the Minister of Education's promise of £4 million for youth clubs in 1962-3 means we shall see some brighter building. They won't be lavish, of course; but maybe something could be done to encourage members to decorate and fit up rooms to a standard suggested in one or two that are fully finished. The MOE development architects are working on a scheme of this kind for Bristol. No one else could be relied on to give a more imaginative lead.

DEATH OF THE LOUNGE?

Big business still backs hotels, in spite of the financial risk and the small return on capital expended, and I was interested to see in the *Daily Telegraph* that some 2,300 rooms are under way in Britain and that another 3,980 are planned. If this last figure was realistic we should soon catch up on hotel building, but too many projects come to nothing. (For example, an excellent scheme for an East Anglian city hotel is being attacked by local residents who disapprove of the destruction of some undistinguished Victorian blocks to make way for it.)

The remainder of the *Telegraph* article stated no more than obvious—though I was surprised to read that the hard-headed and down-to-earth architect, Michael Rosenauer, "could not resist adding balconies to the Carlton Towers." Surely it is the

clients who demand things like balconies? One of the new developments the article didn't mention is the abandonment of public rooms by most guests, who prefer to use their rooms as bed-sitters, and therefore expect something more than a box for sleeping in. This is beginning to upset hotel-planning routines. No doubt we shall see more about it in the hotel issue of the *Architectural Review*, in October.

DROPPETH AS THE GENTLE, ETC.

Outdoor Shakespeare has been washed away from London's tourist season this year. Not surprising, perhaps. But what is surprising is the news that the Ministry of Works is trying to find out why by means of chemical analysis. They are trying to discover why the tent that producer-actor Robert Atkins uses in Regent's Park hasn't kept out the damp. Last year Mr. Atkins asked them to repair his thousand-strong, "if-wet" covering and agreed to their request for a higher rent. Although that tent turned up without any apparent sign of repair the Ministry made an extra £200 (total of £700) rent in what was fortunately a hot summer. This year promises were again made about tents with fewer and higher rents, but before long musicians complained of notes being washed off their music sheets and instruments going out of tune. At last a man turned up to do something. He put his foot through the roof, which tore like paper, and the tent was taken away. In its place came a substitute—one that could only hold 340 people. The company could no longer advertise "under cover if wet." It closed.

THIS WAY TO THE TOME

I hate to think young people are often put off architecture because their well-meaning elders try to introduce them to it via the piscinas, sedilias and all the other paraphernalia of the English parish church. Only the courageous will deny that the Eng. p. ch. is one of the glories of our heritage and so on. But it is seldom inspiring and needs the wit and charm of Mr. Betjeman—a fine hunter of 18th and 19th century accretions (as well as a lot of doubtful shaggy chapels) to attract our interest. Without such sophistication we are left with works like Eric R. Delderfield's new guide*—a dilution of all the

* *Ancient Churches for Beginners*. Raleigh Press, Exmouth, Devon. 1s. 6d.



English Electric—as it is



... as it was (the Holden competition design) with ...



... inglorious sculptures and ...



... splendid boilers

dreariest so-called facts about churches, interlarded with horror-comic drawings of buttresses.

SUMMING UP

As I have no head for maths, I sent *The New World of Mathematics** to Richard Llewelyn Davies, who writes: "This book is at once interesting, stimulating and annoying. It presents modern mathematics to the general reader and is successful in getting across to him some of the excitement of the subject, and also in showing how mathematics is used in the solution of many practical problems. But it is an irritating book because there is no consistency in the level of knowledge which is expected of the reader from chapter to chapter, and because many tantalising references are made to subjects which are only partially explained. For the general reader who wants to get to know something more of mathematics it is an appetiser rather than a meal."

HIGH LIFE FOR LOWLANDS

It seems that some people who go to Scotland complain that there is nothing to do in the evenings. So Hugh Fraser (who already owns half the Lowlands, recently bought Harrods, and is now a member of the Scottish Tourist Board) is making a bid for the Highlands. He wants to introduce what the fashion gossips call an "après-ski" type of place, with food, drink and dancing all the year round. And, if one is to judge by what Mr. Fraser has already managed, he will get his way, giving us a little Switzerland up north, miniature ski-runs, cocktails, fashionable entertainment and all.

I cannot comment better than by quoting what Ian Nairn wrote in *Outrage*, "The best use of the Highlands in an industrialised Britain is to provide a lung remote from industrial development and big enough to lose oneself in. A lung that is deliberately hard to get at and must be explored on foot, to provide a change of life and not merely a change of scene ... The Highlands are the only area left in Britain where one can return to wild nature without the Scylla and Charybdis of a municipal rubbish tip and a rustic sign saying 'Footpath to Heather Dingle.'"

ASTRAGAL

* *The New World of Mathematics*. George A. W. Boshm, Faber & Faber. 10s. 6d.



P. A. Denison Cape Building Products Ltd.

E. G. Lasseter, A.R.I.C.S

Eric Heaf, A.R.I.B.A.

Disgusted of Tunbridge Wells

Frank Senior, A.R.I.B.A.

Building Research

SIR: Whenever a criticism is made about the amount of money that this country spends each year on building research, it seems to me that the real root of the problem is overlooked. Whilst accepting, therefore, the individual points you make in your leader of August 18 on the BRS report, I take issue with you on what you fail to say.

Whether we perch on the commercial brink of architecture or are professionally immersed, none of us can be very satisfied with the rate of progress that occurs. The real trouble is the lack of recognised facilities for investment by industry in building research. The wish exists, but adequate and officially approved facilities do not. There is nothing like commercial necessity for stimulating research progress and there is nothing like the provision of efficient research and test facilities for stimulating the commercial necessity.

An enormous amount of valuable information and advice emerges from the BRS every year, but much of it does not come along anything like early enough. By the time a certain technique can be officially approved by the BRS, it may well have been an established practice for a number of years.

There is in this country, however, one shining exception to all this, within my sphere of experience, namely the work of the Joint Fire Research Organisation. Here, we have a Government (part) sponsored test station, with a status equal to that of the BRS, where industry can commission, on a fee basis, test and research programmes.

In parallel with the commercially commissioned work, the Station carries out a great deal of broader research. Anyone who has seen the Station grow, has had experience of the up-to-date advice and has used the very modern test facilities available there,

will know that given the right facilities, there is no lack of initiative and action in the field of building research. Sheer competition demands this approach by industry to research, and results in a snowball of discovery and advancement.

There is a wealth of difference in the way that the BRS and the JFRO operate. Within the limits of what I presume to be their terms of reference, or character, the BRS does as well as could conceivably be expected, and within the limited scope of its facilities, is ready and generous to give every possible help that its talented members are able to give one; but is there any driving compulsion that forces that research to progress at speed and in the direction most urgently required?

Naturally, the direction of commercially commissioned research should be related to building code requirements or associated standards or recommendations. The knowledge gained by commercially sponsored research would speed up the whole process of acquiring knowledge and making recommendations. Moreover, I am sure that the broader issue of research recommended in your editorial would be much nearer achievement, for there would be a source of income available. I contend, therefore, that if the BRS could gear its resources to the provision of test, proof and experience for those who are prepared to pay, then the broader requirements of building research would also benefit.

P. A. DENISON

Uxbridge

Many people feel, like Mr. Denison, that the useful information which emerges from BRS every year often takes too long in coming. There is some justification for this criticism. The suggestion, however, that the carrying out of research commissioned by commercial interests on a fee basis would, by providing a source of income, accelerate research on the broader issues and stimulate progress is open to question. There is a grave risk that such an arrangement would lead to a monopolising of the resources and time of the Station at the expense of other research more beneficial to the industry as a whole. The comparison between the JFRO, whose interests are relatively confined, and BRS is hardly valid. The Editors would be interested to have the views of other readers.—THE EDS.

Too Little . . . Too Late

SIR: Apart from the two misprints in my letter published in last week's issue of your JOURNAL (August 18) your inference as to my meaning was entirely wrong.

Technical civil servants have both technical and non-technical "masters." I must make it perfectly clear that I was in no way referring to the latter, for, as you so rightly suggest, these must rely upon the technical briefings given them; and—this is the point—the "underlings" act accordingly!

The purpose of my letter was not to attach but to "detach" the blame. To have done otherwise would have been invidious.

E. G. LASSETER

Guildford

Liverpool Cathedral Competition

SIR: All competitors for this competition will be interested in an analysis of the cost of the commended designs particularly as £1 million was such a limiting factor, and as there was no way of arriving at a cube rate from completed buildings.

It will also be interesting to know how much of the winning design was classified as stained glass and sculpture and therefore allowed as extra to the cost of the £1 million.

ERIC HEAF

Sheffield

SIR: The idea of the architectural competition is a beautiful but fragile thing—its basis, if it shall survive, must be full and complete confidence. Not only must Caesar's wife be above suspicion, everything, her dress, timing, appearance must be immaculate. And yet. . .

In the case of the competition for the new Roman Catholic Cathedral for Liverpool 300 designs were submitted, each probably on not less than six and not more than 12 double elephant sheets. Fourteen days, including the week-ends, were enough not only to judge them, but also give the winner enough time to produce an elaborate perspective. (Photographs of the model published in the press make it look like a working model.) Quick work?

And then everybody complains about architects being so slow. . .

DISGUSTED OF TUNBRIDGE WELLS

Tomorrow's Architect

SIR: I am wondering how ASTRAGAL's young career seeker (August 18) with the conscientious approach is likely to get busy in the face of an obsolete code which prohibits any offer of his services?

Isn't it time you devoted a little thought and space to this very problem? You are boring enough at times. The following is submitted with apology to ASTRAGAL:

Only last week I wrote of the young career seeker and his conscientious approach. Now I am wondering how, when the time comes to strike out on his own, he will surmount Clause 6 of the Code of Practice which prohibits any offer of his services to a person or corporate body? I cannot deny him a conscience nor would I wish to leave him permanently unemployed. I did hear recently of an associate maintaining a well-polished plate without being asked to design so much as a lean-to garage in two years.

The RIBA and ARCUK are doubtless giving "the greatest possible consideration" to these matters, but it does seem to me that some of you 30- or 35-year-olds, raring to go, might hasten the wind of change. A more liberal code is so long overdue.

What, for instance, would be unethical about a discreet advertisement, as defined by the Code of the Future, to announce that ASTRAGAL is available to accept commissions at the Wentworth?

FRANK SENIOR



EDINBURGH

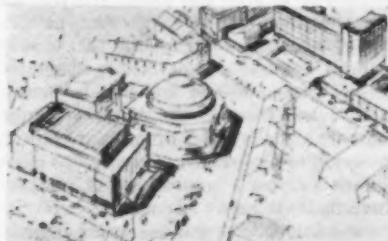
Package Deal Protest

Edinburgh Architectural Association has asked the Lord Provost to meet an informal delegation, to discuss the principles involved in the decision of the City's Housing Committee to hand over the prefab sites which are awaiting redevelopment to a selected list of contracting firms.

Edinburgh's 4,000 prefabs are to be replaced by 9,000 flats over the next ten years at a cost of around £18 million. But the revelation earlier this month that the Housing Construction Sub-Committee had invited a number of contracting firms, among them James Miller & Partners and George Wimpey, to take over the job has produced sharp reactions from architects and others, reflected in a series of indignant letters to the *Scotsman* and last week's emergency meeting of the Architectural Association.

Mr. Alan Reiach, who was present, said the meeting was well attended and feeling very strong. "We felt," he said, "that this is too big an issue for the Housing Committee; we decided to go for the Lord Provost himself to discuss the whole principle of the thing in a completely informal way."

The delegation has asked to be received "directly the Festival is over—nothing can be done till then, the City's mad at the moment—and before the meeting of the Housing Committee," in mid-September.



A new opera house for Edinburgh is again under discussion; the sketch above shows the design worked out four years ago by Alan Reiach and a group of Edinburgh architects, who proposed that the new building should be sited beside the Usher Hall. Such a scheme would cost about £1,250,000, could be combined in a block with shops and offices, and must be adaptable to round the year use.

The meeting elected their president, Mr. George Lawrence, Mr. Eric Hall, and Professor Percy Johnson-Marshall to represent them.

In defence of the proposal to hand over these housing sites to private firms instead of to the City's Architect's Department, Councillor Norman Smith, convener of the sub-committee concerned, claimed that "we felt that in these projects, which involve not only planning and building but demolition or removal of existing houses and alteration of site levels, a contractor would be better able to do the job," which has provoked the comment that evidently the city's architects haven't enough shovels.

The Assistant City Architect, Mr. T. H. Corner, refused to add anything to Councillor Smith's statement and tried to belittle the importance of the scheme. "At present this is simply a series of pilot schemes," he said. Four sites were involved, of roughly 30 acres. "And anyhow James Miller and George Wimpey have not even accepted the contracts yet." The matter would be discussed again at the Housing Committee in September.

He refused to express an opinion on the suggestion that pilot schemes in a ten-year redevelopment scheme should surely be the work of his own department.

Another Edinburgh architect, A. C. Miller Forward, expressed the feelings of the profession better when he wrote to the *Scotsman*: "This seems to me no less than the complete abdication of responsibility for the layout and design of 9,000 homes—evidently the Housing Committee regard the provision of these as a purely administrative matter, like so many towels and tablets of soap for users of slipper baths. . . . Does none of our elected representatives realise that a building programme of this magnitude is bound to have an enormous effect on the physical form of the city? . . . A step of this kind would be regrettable enough if made by the representative of Birmingham or Burslem; but for a city with the physical and cultural heritage of Edinburgh . . . it seems almost unbelievable."

MODULAR SOCIETY

No Retreat from the 4 in. Module

Progress in achieving modular co-ordination within the building industry is not helped by the fact that interested organisations tend to hold conflicting views on what is the desirable module. Two of the most important of these organisations—BRS and the Modular Society—appear to be travelling in diverging directions. That no compromise or reconciliation is likely in the near future may be assumed from the following statement recently issued by the Council of the Modular Society.

"In 1954 the Modular Society formally advocated the adoption of the 4-inch module for use in this country. Since then a considerable number of studies have been

undertaken by several organisations including the Society. The conclusions of these studies vary. But one factor remains constant: the urgent necessity to co-ordinate the dimensions of building products.

"Over the past several years, the Society has attempted to find a solution which would be readily acceptable to the various parts of the industry. They consider that the case for 4-inch modular co-ordination has been proved. But they have discussed various compromises with other organisations including the Building Research Station, the British Standards Institution and the Brick Development Association.

"The Society considers that the basic British Standard should be published without further delay and it would appear that there are, in principle, three ways in which this might be achieved: as a standard in which the alternative methods are fully described (and the choice left to the designer or manufacturer); as a standard in which the alternative methods are combined into one system; or as a standard in which one method is described for national adoption.

"The Council feels bound to reject the first since it would leave industry in doubt as to which method to adopt, and would, therefore, spread confusion. It also rejects the second, since many of the objectives of co-ordination would be lost in a combined system.

"The Council therefore continues to recommend the publication of a British Standard in which the adoption of 4-inch modular co-ordination for the British building industry is proposed. This is recognised as the long term objective. The Council emphasises that the existing sizes of components would remain in British Standards for so long as the Technical Committees of BSI consider that there is a demand for them. In the meantime modular sizes for components should be listed additionally to the existing sizes in all standards for building components. This work should be undertaken now.

"The Council recognises that a change of size is in many cases very costly; similarly that the absence of co-ordination is also very costly. Their proposal is intended to allow for the continued production of components to B.S. sizes, while setting an ultimate objective for new products and for changes of size as and when they are required."

CARAVAN SITES

For Ever?

The Caravan Sites and Control of Development Act, which came into operation yesterday, puts an end to the unregulated and scarcely recognised existence of growing numbers of permanent caravan sites in Britain, and in future all sites must be controlled by the local authorities. Those which have caravan sites in their areas have now to review them, and occupiers to apply for licences, which will be issued after consideration by the local planning authority.

Those areas where there are no sites at present must be prepared to make sites available "given the demand."

Hitherto many local authorities have refused to allow caravan sites because they could not control them, and the result was badly overcrowded and ill-provided unofficial sites, and often exploitation and insecurity for the caravan dwellers.

The Act distinguishes between existing sites, which have gradually to be brought up to standard, or replaced, and the number living on them reduced by "natural wastage"—so there are to be no evictions until better accommodation is available; and the selection of new sites. These are to be submitted first to the local planning authority, and when established will be regulated and equipped by the licensing authority, and the two are expected to agree between themselves on general policy.

Although no rules are laid down for the selection of sites, the MOHLG recommends that sites should be near a residential area, but not surrounded by houses, and must be out of danger from flooding and not near refuse tips. "Because of the adaptability of the caravan, irregular or uneven sites unsuitable for building . . . may sometimes be used with advantage."

Holiday sites are to be concentrated on established caravan localities, not widely scattered, and although not at beauty spots, can be unobtrusively near them. They should be well screened by trees or shrubs from public view, not on open moorland. But "woodlands where selective felling has taken place, scrubland and old orchards and . . . parklands attached to mansions no longer used as such have proved satisfactory, the houses being put to good use as restaurants or clubrooms."

On the size of sites, the Ministry suggests that less than 50 caravans is uneconomic if there is to be a high standard of equipment, and that "sites of over 200 should usually be viewed with caution."

There is one word of cheer for nature's hermits: "At the other end of the scale, the licensing and planning control of the very small site or single caravan should be as simple as possible."

BOOK REVIEWS

For Piazza Hunters

Town and Square. From the Agora to the Village Green; Paul Zucker; Columbia University Press (£6).

One of the joys of visiting Europe is exploring squares, plazas and piazzas; getting to know them as places in themselves and getting to know their relationship to the town. Dr. Paul Zucker has now written a book in American which can add greatly to our pleasure.

The book is a large one, about 300 pages; it is about the development of civic squares in the western world from ancient times until the nineteenth century: for good measure and, no doubt for the American

public, there is a chapter on early American public squares by Carl Feiss.

It is a history book and it stops short at the Baroque conception of space, neither attempting to examine contemporary space problems, nor the effect of modern conditions on existing centres—it is about a world without motor-cars.

Apart from an introductory chapter on the square in space and time and the final chapter on American spaces, the book is divided into four parts: Antiquity, Medieval, Renaissance and Seventeenth to Nineteenth Century. This is so vast a field, one might expect either a very superficial treatment or the omission of many important examples. Neither is the case; by concentrating on the space types rather than individual examples, a broad and comprehensive picture is drawn: and the classical examples are all there—Kahun, Miletus, Athens, Selinus, Rome, Pompeii, Timgad, Monpazier, Pisa, Siena, Mantua, Verona, San Gimignano and so on down to the French Place Royale, Karlsruhe, Bath and Edinburgh.

Dr. Zucker emigrated from Germany in 1937 and became a naturalised American citizen in 1944 and his book has a Germanic thoroughness. How successful it is as a social and historical analysis, the reviewer is not competent to judge but the manuscript of the book received the Brunner Scholarship Award of the American Institute of Architects.

The illustrations are copious—96 plates, mostly photographs; 55 plans and drawings in the text. All our old friends are there: Sitte's plan of Pompeii, Savonarola being burnt on the Piazza Della Signoria, the Renaissance ideal cities, Letrouilly and Piranesi's illustrations of the Campidoglio. Rome and the inevitable aerial views of Baroque axial planning; and some less familiar ones too, notably in Spain and East Prussia, which are worth hunting out. Regrettably there are many of those minute little plans, with illegible scales or no scale at all, which decorate every town-planning history book. If only someone could be commissioned to re-draw the more important examples to the same scale and the same technique, then some most interesting comparisons could be made between them. Dr. Zucker goes beyond the mere recording of facts into the aesthetics of various space types. He contends that certain basic types of square occur again and again and he defines five archetypes as follows: the CLOSED SQUARE, space self-contained; the DOMINATED SQUARE, space directed; the NUCLEAR SQUARE, space formed around a centre; GROUPED SQUARES, space units combined; and the AMORPHOUS SQUARE, space unlimited.

Only the simplest spaces fall automatically into place—the author does not imply that all squares are pure type: nevertheless, this is a very useful set of categories and a lot of fun can be had by fitting spaces into them, or even by inventing one's own categories.

It is puzzling that the most perfect closed squares, the mediaeval cloister and the English collegiate square, are excluded on

the grounds that they do not serve public life and the aesthetic one that they represent an element of a comprehensive architectural organisation. The implication is that there is some point in the design of towns where an architectural space changes to a town space. Twentieth century space has, of course, broken the barrier by the interpenetration of outside and inside spaces and with it will go, in time, the great schism between architecture and town planning which has made so much post-war town building commonplace. Fair play to Dr. Zucker, his book does not consider modern space types. Nevertheless, even in historic town types the division can only be between outside and inside the external walls of a building: spaces around a building are surely part of the town's space pattern.

The book is well printed, the layout is sensible, the index is efficient and there is a bibliography, adequate for all but the most pedantic scholar, and even he will find it adequate as a guide to further sources of material.

FREDERICK GIBBERD

Garaging

Garages and Service Stations; Rolf Vahlefeld and Friedrich Jacques (Leonard Hill (Books) Ltd., 63s.).

The publishers claim that this book will cause a revolution in the design of parking garages in this country. This seems most unlikely, since the book is for the most part a translation of one published in German as long ago as 1953.

The title page carries the legend "Adapted by J. Innes Elliott and C. R. Fowkes"; but the adaptation seems to have been confined to adding four pages on "English legislation," and a table giving the length, width, height, wheelbase and turning circle of many types of car of various nationalities, and of commercial vehicles manufactured in this country and in the U.S.A.

The book does not contain a single example of a garage or service station in this country: examples are drawn from Germany, Austria and Switzerland, with a few from the U.S.A., Italy and France, and even one from Roumania (dating from 1930).

In fact, it is a glorious pot-pourri of photographs and plans (mostly very small) of dozens of garages and service stations, fire stations, bus terminals, detached garages, attached garages and groups of lock-up garages. Space is even devoted to chauffeurs' living accommodation for private houses, and several pages to the design of garage doors, and to types of lifting gear. Motels, however, receive scant treatment—two pages tucked away in a section on "Garages for miscellaneous public service vehicles."

In the section on "Parking arrangements" (which is of fundamental importance), the dimensions are given in metres, and there is no equivalent of the magnificent "Parking Tables" to be found in the American book. *Parking*, by Baker and Funaro (reviewed, A.J. April 9, 1959), the best standard work on the subject.

N.S.

COMPETITION: METROPOLITAN CATHEDRAL OF CHRIST THE KING, LIVERPOOL

Results of the competition were announced in the A.J. last week. This week we publish details of the three prize-winning designs, together with some of the commended entries and a few unpremiated schemes which the Editors feel are of particular interest. First prize was awarded to Frederick Gibberd (London); second prize to C. H. R. Bailey (Kuala Lumpur); third prize to Arthur Bailey (London). The assessors were Dr. John Heenan, the Archbishop of Liverpool, Sir Basil Spence and David Stokes.

Many competitors apparently regarded the occasion as an opportunity to exploit modern techniques with the sole object of creating interesting structural shapes and forms. Undoubtedly the problem of providing an enclosed space for 3,000 people, so seated that all have an unobstructed view of the High Altar, was one calling for structural ingenuity. Viewed from this point the exhibition of some 2,500 drawings is exciting; but a closer inspection of the drawings suggests that in a large number of instances the point was laboured and it is obvious that many a Cathedral on view was a vehicle for a *tour de force* in structural techniques. If the viewpoint is to be taken seriously that a church or cathedral poses problems of functional design as exacting as those of almost any other building type, it is hard to believe that the work produced in this competition, which must have cost thousands both to promoters and competitors, contributes anything to our meagre knowledge on the subject. An exception may be made of the winning design. It has its faults, not the least of which is its unhappy scale. A "wigwam" shape of such enormous dimensions presents an extremely tricky problem and reference to the existing Crypt and the figures on the south elevation (see page 316) suggests that the designer has not satisfactorily resolved this. Of all the schemes which started with a circular seating arrangement, however, it undoubtedly arrives at the best answer. It is a sincere attempt to interpret the requirements of function within the simplest of shapes—a circle—and proceeds logically enough from there.

The scheme is estimated to cost £981,250, including £40,000 for a new Presbytery and Convent. The cubic content of almost 5 million cu. ft. suggests that this figure is optimistic, as are the estimates of several competitors. The architect hopes to start work on the ancillary buildings in the early

spring of 1961. Members of his staff who were involved in the preparation of the competition drawings are Felix Darnell, Stefan Kapos, Eduardo Orrego, Frank Heaver-sedge, Brian Bagot, William Ainsworth, Paul Wilson and Elizabeth Hogan.

Whilst many competitors apparently felt that the tight budget and the need for direct access between Cathedral and Crypt made it necessary to utilize the Lutyens Crypt as a podium on which to place the new building, it is significant that neither the first nor the second premiated designs attempted this. In both instances they have sited the Cathedral alongside the existing Crypt immediately to the south. In the case of C. H. R. Bailey's scheme, the Chapel of the Blessed Sacrament extends over the Crypt. In Gibberd's scheme the Presbytery is built over the west end of it. Otherwise both give over this space to a vast piazza. Bailey's conception of a series of parabolic shells owes something to Jorn Utzon's new Sydney Opera House. The layout of both Gibberd's and Bailey's schemes is evidence of the fact that the assessors were in no doubt that a circular or at least semi-circular seating arrangement was the answer. The estimate for the second prize winning design is £950,000, including new Presbytery and Convent.

The third prize winning design is one which places seating on either side of the Sanctuary in a rectangular plan form with roughly three-fifths on one side (south) and two-fifths on the other (north). Otherwise this scheme is the traditional cruciform plan with the Chapels of the Blessed Sacrament and Our Lady in the transepts, an arrangement which the assessors considered unfortunate as it made the former remote from the sacristies. Unlike the first and second schemes, it extends over most of the existing Crypt. Estimated cost, including new Presbytery and Convent, £999,449.

FIRST PREMIATED DESIGN BY FREDERICK GIBBERD

FROM THE ASSESSORS' REPORT

If the list of commendations seems unduly long, the gratifying reason is that no fewer than 298 designs were submitted. The Assessors have given special mention to so many designs because these were outstanding in an entry of exceptionally high standard.

The main challenge of this competition lay in the problem of marrying the existing Lutyens crypt to an entirely new building. The difficulty was increased by the comparatively low price limit of a million pounds. Competitors, for the most part, showed great ingenuity in their solutions.

The winning design was, in the view of the judges, clearly ahead of the field. The design is full of imagination and powerfully expresses the Kingship of Christ. The conception is itself a crown and the suggestion of the crowning glory of Christ is revealed in the details of the building with logic and restraint.

Each chapel has a distinctive design giving it character without detracting from the majesty of the main body of the building. The whole space is dominated by the High Altar set in a generous sanctuary lit by scintillating coloured light from the tower. The siting of the Blessed Sacrament Chapel is especially happy and the visitor will be left in no doubt that this is a temple built to the honour of Christ the King. The plan meets all requirements with deceptive ease. The extension of the piazza above the Crypt is a brilliant solution to the problem of establishing some sort of unity between the old and new buildings.

THE COMPETITOR'S REPORT

The building is designed as a place of corporate worship in which the congregation is at one with the clergy. It is a liturgical space. All is directed towards an intimate

association of the laity with the High Altar.

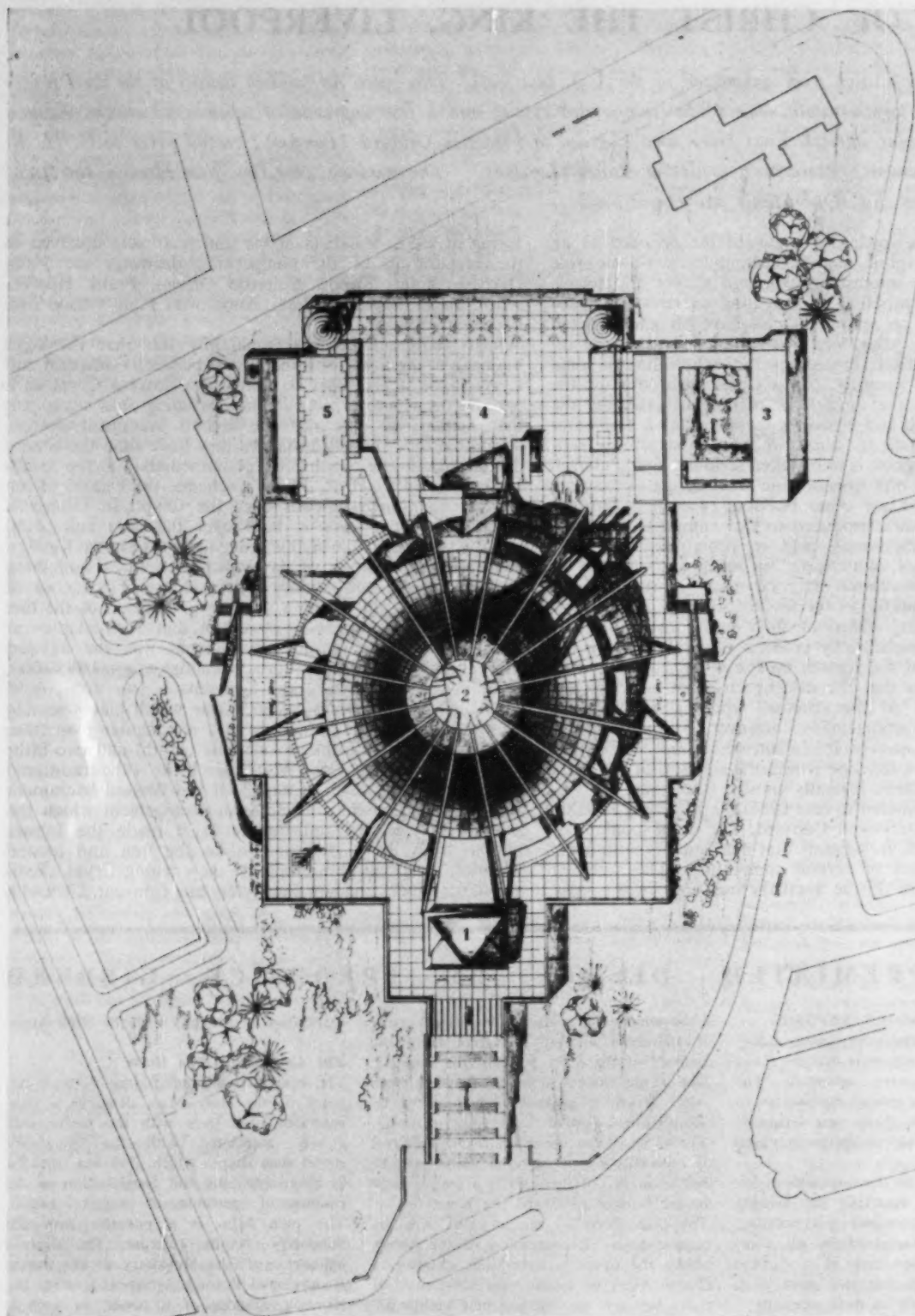
The Centralised Plan Form

The overwhelming significance of the celebrant of the Holy Mass demands a concentrated plan form with the participants closely associated with the Sanctuary rather than shapes which, however splendid in themselves, put the congregation in the position of spectators of liturgical action. The plan form is a polygon with the Sanctuary as its fulcrum. Spatially, a cylinder with the Sanctuary in the centre is developed through a conical roof to the tapering cylinder of a tower, in such a way that the most significant space and the most expressive construction occur over the most significant religious place. As a mass the building form makes a likewise external expression.

Grouping of the Congregation

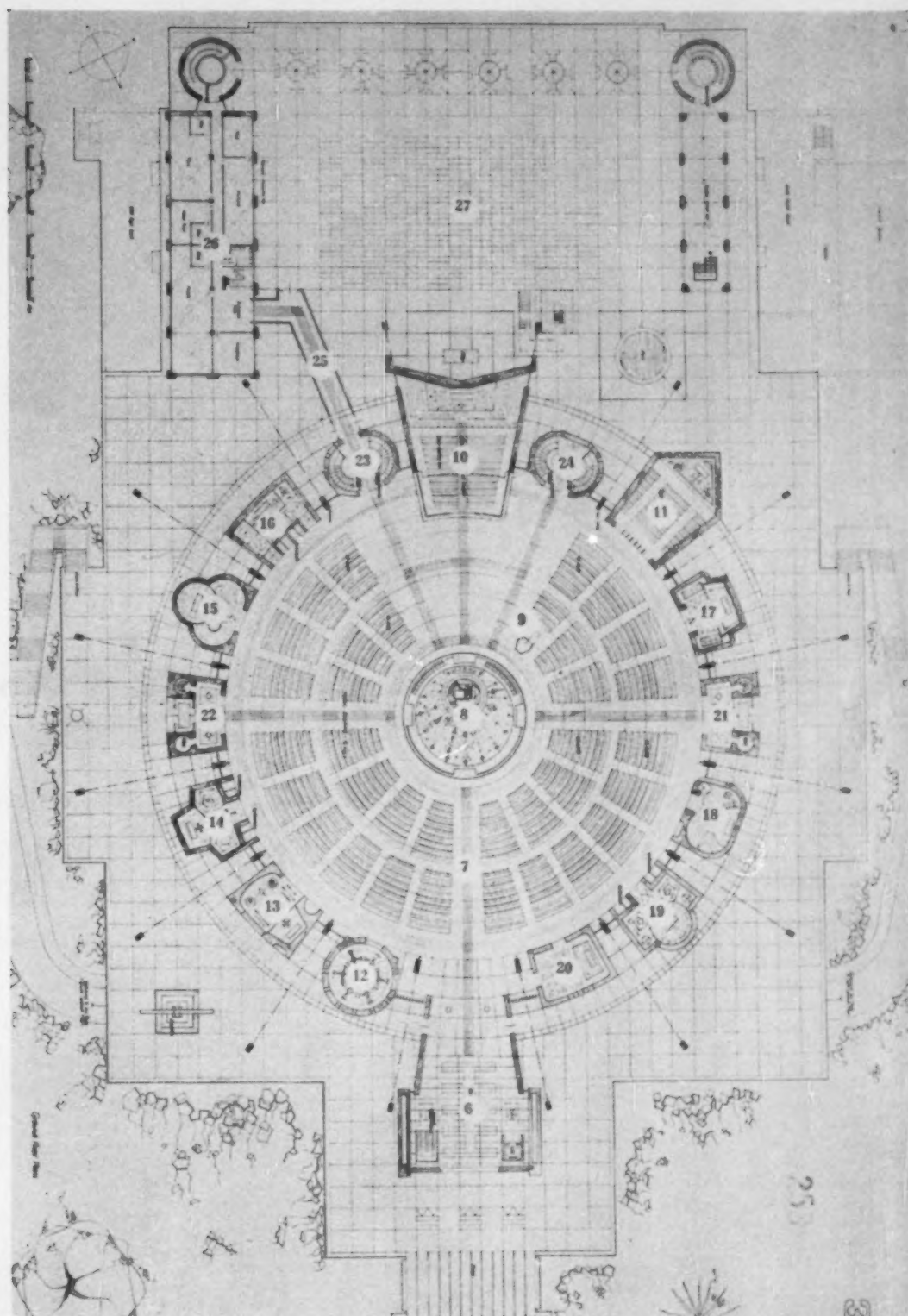
The liturgical difficulty of the circular plan

LIVERPOOL CATHEDRAL: FIRST PREMIATED DESIGN BY FREDERICK GIBBERD



Site plan. The new cathedral is placed immediately alongside the existing crypt on the south. The presbytery is built over the crypt at the west end and the remaining area of crypt roof serves as a piazza.

- 1 Entrance porch
- 2 Cathedral
- 3 Convent
- 4 Piazza
- 5 Presbytery



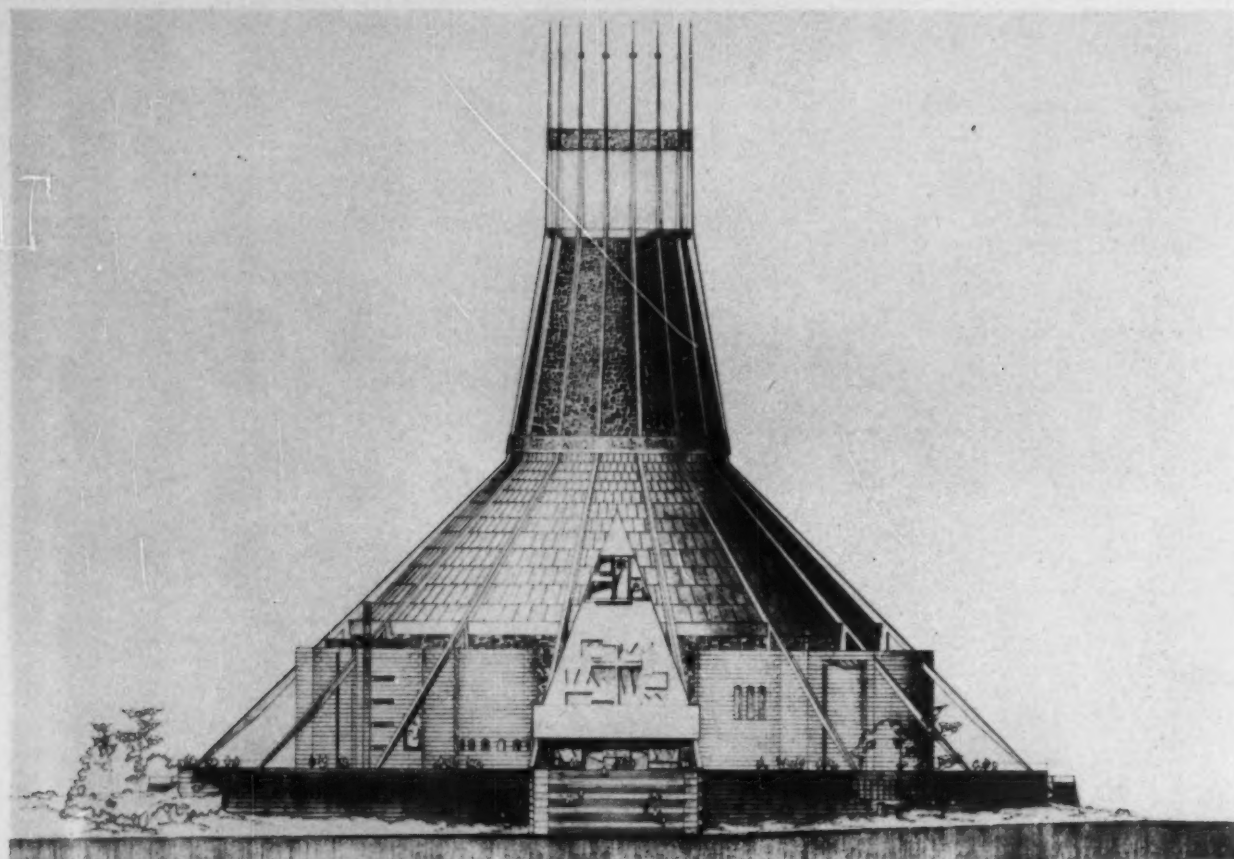
Main floor plan which is at crypt roof level.

- 6 Entrance porch
- 7 Seating for 3,000
- 8 Sanctuary
- 9 Pulpit
- 10 Blessed Sacrament Chapel

- 11 Chapel of Our Lady
12 Baptistry
13-20 Chapels
21 East porch
22 West porch

- 23-24 Staircase down to crypt and up to organ loft and choir
25 Covered access from Presbytery
26 Presbytery
27 Piazza.

LIVERPOOL CATHEDRAL: FIRST PREMIATED DESIGN BY FREDERICK GIBBERD

*South elevation main approach.*

form, in that it may lack direction, is overcome by grouping the congregation round three sides of the Sanctuary—in the manner of the Greek theatre—with the Chapel of the Holy Sacrament behind the High Altar on the North side of the building. The main Entrance Porch on the South gives further emphasis to the North to South axis, whilst East and West Porches form a secondary axis.

The Dished Floor

No member of the congregation is more than 70 feet from the steps to the Sanctuary. To increase the immediacy by giving a clear, uninterrupted view, the Derbyshire marble floor is dished down to the Sanctuary which is itself raised on steps.

The Processional Ways

The circular plan form, with its North to South major axis between the Entrance Porch, the Sanctuary and the Chapel of the Holy Sacrament, gives a clear and decisive significance to the Processional Ways.

The Podium and its Piazza

This precise, geometric structure is raised above the irregular and untidy environment by placing it on a large, rectangular podium formed by extending the Crypt roof to the South end of the site.

The building is placed clear of the Crypt, the roof of which is designed as a piazza

for open-air services and meetings.

The North side of the Cathedral is connected to the Crypt by two large staircases and the Sacristy, with the Priest's House over, is placed on the piazza in such a way that it connects to the Lutyens Crypt staircase, the body of the Cathedral—via an assembly corridor—and the new Crypt staircase.

Two-Level Circulation

The space under the South end of the podium is used for the vehicular approach. Ramps on both sides of the site lead to a large covered car park and a lower ground floor Entrance Porch immediately under the Main Porch and connected to it by lift and staircase.

This two-level planning enables the piazza and its processional approach to be exclusively pedestrian; it enables the motorist and the infirm to have direct access to the Cathedral under cover; and it clears the site of all unpleasant car parking areas.

The Structural Concept

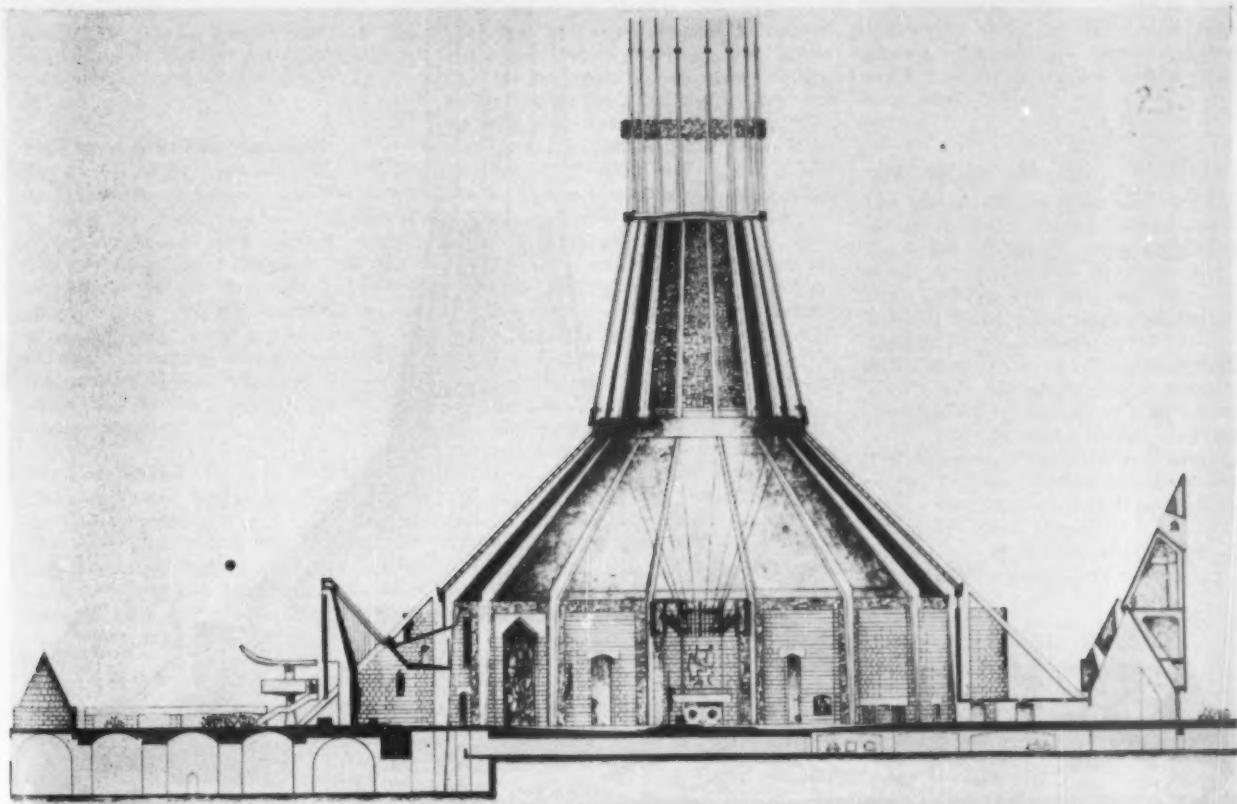
A purely intellectual exercise in structural mechanics could produce the most stimulating ways of sheltering three thousand people from the elements—the hyperbolic parabola, the space frame, the shell dome—but the object has been to give formal expression to a liturgical statement of belief in God rather than the ingenuity of man. The body of the Cathedral is formed by

sixteen reinforced concrete frames in the shape of a boomerang, forming the drum and the conical roof tied at the top by a ring beam and extending above in the shape of the tapering tower. As such a structure has considerable bending movements at its change of direction, the sloping cone members are carried down into the ground in the form of flying buttresses.

There is thus a structure primarily in pure compression, utilising the least possible amount of material and the least possible money. Some two hundred feet of tapering tower subject to high wind load is placed over the middle of a free and considerable volume of space by structural members which diminish to a few square feet when they enter the ground—a system not possible in any other stage in history, not even possible twenty years ago.

Articulation of Structures

The vertical members of the concrete frame are designed as free-standing elements round the Cathedral with the Porches, Chapels and Baptistry placed between them. These smaller structures are designed as load-bearing masses, only separated from the frame by coloured glass in thin concrete members. They nestle round the body of the Church and are contained by the frame and the flying buttresses. Coloured light filters into the Cathedral illuminating the structure which is thus clearly articulated.



Long section north/south showing the existing crypt on the left.

The Conical Roof

The conical roof structure is constructed from reinforced concrete cross members between the trusses supporting light metal decking which is covered externally with copper sheeting.

The ceiling is finished with a rough-textured plaster and large areas of acoustic plaster absorbent—a consultant on acoustics will be commissioned for the scheme.

Bronze Ring Beam

The ring beam is a most important structural and aesthetic element, as it marks the transition between the cone and the tower. It is therefore faced with cast bronze plates with a relief motif, for which an artist would be commissioned.

The Tower

The filling between the vertical members of the tower consists of a tracery of thin concrete members with one inch thick coloured glass infilling, cast with the concrete. Structurally this infilling acts as cross bracing to the vertical members: aesthetically it gives a broken textured pattern from the exterior of the building: from inside it is a tall shaft of scintillating coloured light over the High Altar.

The tower is roofed by a pattern of reinforced concrete members, again filled with coloured glass, the centre panel having the Cross motif.

The Pinnacles

The concrete members of the tower are carried up above the roof and are surmounted by light steel shafts to form lofty pinnacles. The pinnacle structure has been designed to give very great height at comparatively little expense. Bronze or cast iron shoes form the fixing or the visual transition from the concrete members to the steel shafts above. Cast aluminium crosses surmount the steel shafts, all of which are finished in dull black and above these are stainless steel spikes which glint in the sun or in floodlighting. The pinnacles are stiffened by cast iron panels of open "thorn" design, giving the effect of a crown of thorns. The pinnacles trace in space the cylindrical form of the tower, the crosses and crown having an elliptical form which varies according to the distance from which the building is seen.

The Sanctuary

The tower is inseparable in design from the Sanctuary, as it forms a vast canopy over it. The circular conical roof, the coloured tower, the cone and the ribs striving upwards to the pinnacles all form a visual extension of the Holy Place. The High Altar is on a circular marble platform towards the back of the Sanctuary to associate it with the Chapel of the Holy Sacrament beyond and to provide ample space in front for the celebrant. The Altar itself is a solid

block of white Carrara marble, cantilevered on all sides over a black granite base and behind is the Crucifix in metal—the types of metal will be left to the artist commissioned to design it.

The segmental Canons' stalls, symmetrically placed on either side of the High Altar, are constructed in reinforced concrete faced with thin marble slabs with detachable padded tapestry seats and back rests.

The Communion rail is again constructed of reinforced concrete faced with white Carrara marble and is supported on black steel shafts.

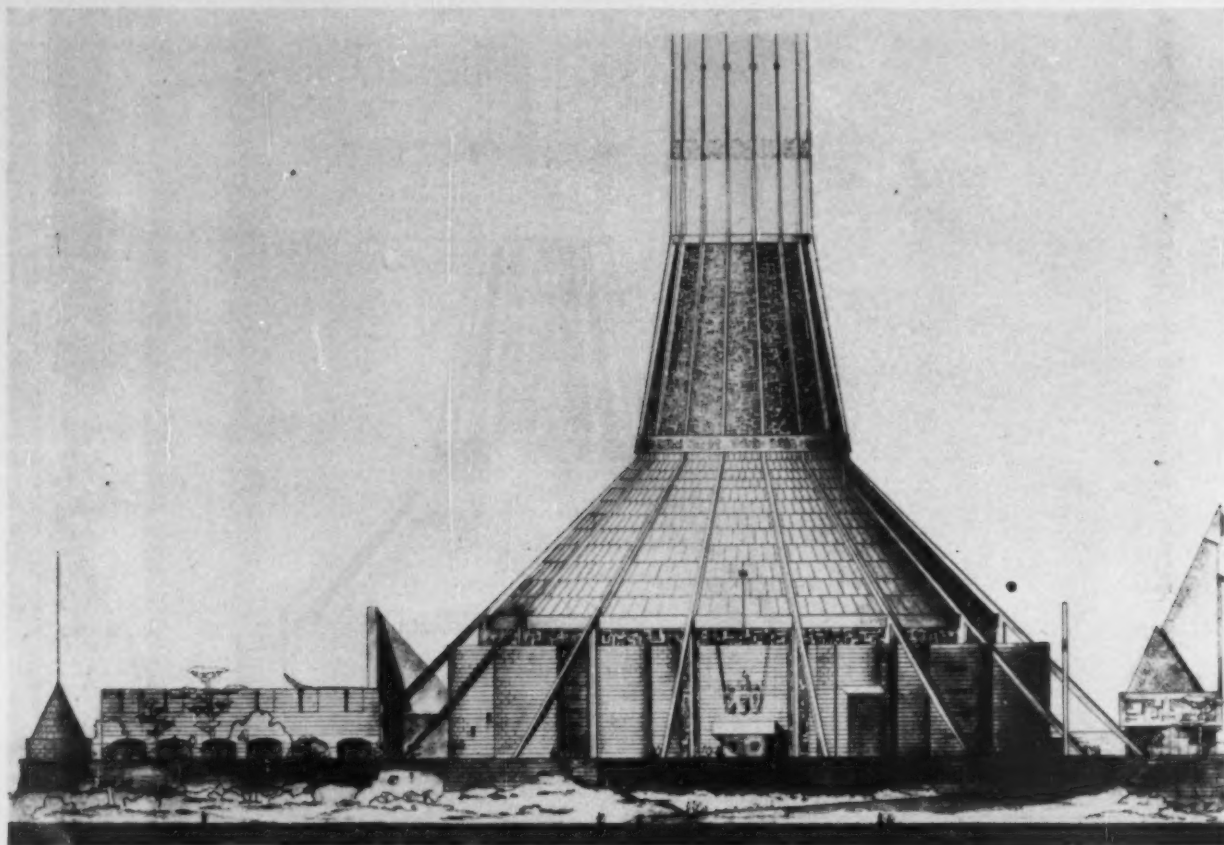
The floor and the steps of the Altar and Sanctuary are of marble with inlays of tile, ceramic and glass mosaic, coloured marble, brass and other materials, forming a rich and intricate design.

The Canopy

Suspended above the Sanctuary is a canopy designed to both define the Sanctuary itself and to link it with the tower superstructure. It was felt that any solid form of canopy would detract from the basic shapes of the Cathedral and in consequence its design is a light tracery of metal in the form of crowns.

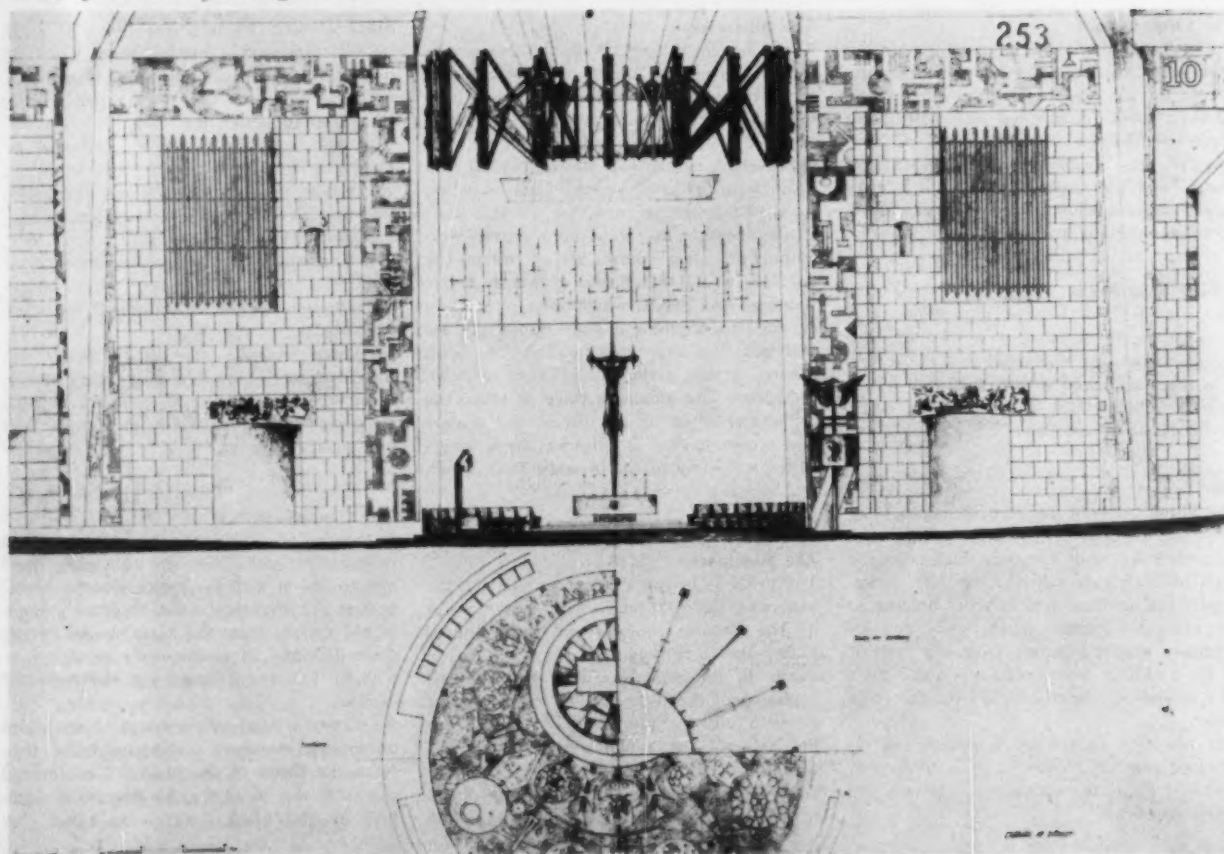
An inner ring of vertical brass and aluminium members is suspended by wire from the drum of the tower. Cantilevered out from this inner ring by flat metal members of dull black finish is an outer ring

LIVERPOOL CATHEDRAL: FIRST PREMIATED DESIGN BY FREDERICK GIBBERD



West elevation.

Detail of the sanctuary and high altar.



of strong vertical iron sections which are designed to contain bronze figures of the saints. Cross bracing in wire and thin steel rods add a gossamer-like quality to the design.

The Chapel of the Holy Sacrament

The Chapel of the Holy Sacrament behind the High Altar projects out into the piazza to mark its importance. The reinforced concrete walls and roof form a canopy over the Altar and a setting to the open air Altar with its suspended reinforced concrete Cross. Finishes generally would be simple, paint being applied directly to the concrete surface, all the interest being concentrated on the Altar and its setting which must be the subject of considerable further study.

The Lady Chapel

The Lady Chapel is again projected beyond the Cathedral walls to give it prominence. It is designed to give a rich but light environment, the interest of which would come from very rich furnishings. The stone walls are hung with tapestries and the floor is a simple surface of dark brown quarry tiles.

The Chapels

As the eight Chapels are separated from the main structure it was possible to design each one as an individual building, rather than a series of odd spaces utilised as Chapels. The limitations of a competition make it impossible to show the architectural character of each one but it is hoped that the drawings give sufficient indication that considerable variety is possible. Some of the Chapels are designed as visual extensions of the body of the Cathedral, others as enclosed, hollowed-out spaces in which to retire in seclusion; all have an intimacy and intricacy to contrast with the vast spaces of the Cathedral proper. The Chapels are constructed as load-bearing structures of brick with a Hollington stone facing both inside and out.

Hollowed out of the walls of the Chapels are the Confessionals (often ugly structures when free-standing) and recesses for sculpture.

Choir and Organ Gallery

The choir and organ console are placed in a gallery behind the High Altar, where they are connected to the main staircase leading to the body of the Church and the Presbytery and Sacristy building.

The organ pipes are contained by the staircase towers on either side of the gallery and are behind mahogany and metal grilles—the conventional false pipes were rejected as being too distracting.

An iron grille screens the choir from the celebrant, without obstructing the view and above is an acoustic reflector painted with a simple design to avoid conflict with the Sanctuary and its canopy.

The Baptistry

The circular Baptistry is placed between the body of the Cathedral itself and the Entrance Porch, with the Font, in Ancaster stone, in the centre. Visitors entering the Cathedral see the Font and are reminded of its symbolism of re-birth in Christ; but the font itself neither interrupts nor is interrupted by the main circulation.

The significance of the Font is expressed by the tall, cylindrical form of the building, lit from the roof. The interior is designed to give an atmosphere of joy and innocence. There are small windows at eye level for sunlight; the walls are plastered in white cement and silver sand, the ceiling is cerulean blue paint and the floor white marble with nickel silver and slate infilling.

Sculpturesque Porch and Bell Tower

The Porch is detached from the main Cathedral space to avoid disrupting its formal purity and to form an area of transition between the Cathedral and the outside world. Its design in reinforced concrete is a massive sculpturesque structure in contrast to the lightness of the Cathedral itself.

The bells are an integral part of the building and are contained within the triangular form of the apex.

The structure is left from the shuttering, excepting on the main approach face, where pre-cast slabs of concrete, faced with mosaic coloured glass, pebbles and

other materials, form a crown design. The sliding doors are faced with copper sheeting, decorated with a repoussé design and a heat curtain enables them to be left open when desired.

Light, Warmth and Air

The interior will be lit by concealed lighting, as it is felt hanging fittings and the like would confuse the forms. Light fittings would be concealed in the ring beam, to shine upwards into the tower. A second series of fittings are concealed in the upper portions of the Porches and Chapels, to shine upwards on to the conical ceiling which itself has small circular fittings recessed into it. Concealed light fittings with lenses light the metal canopy and other vital elements in the building. The lighting of the Porches, Chapels and other buildings would be an integral part of their subsequent detail design.

Heating will be by embedded copper pipes in the floor, backed by a warmed air system.

The funnel-like shape of the roof and tower structures ensure that there is a constant flow of air upwards and out of the building.

The Arts

It has been one of the intentions in the design to provide a broad architectural framework within which the other arts can obtain their most significant expression. It is hoped that sufficient indication has been given in the report that the building is dependent on the collaboration of painters, stone carvers, designers in wood, metal and other materials for its ultimate completion.

The Environment

Use is made of modern earth-moving techniques to reshape the ground around the Cathedral. Soil would be scraped away to expose rock forms, the surplus soil being used as filling to the podium. A bold and simple planting scheme, using mostly forest trees, completes the setting.

SECOND PREMIATED DESIGN BY C. H. R. BAILEY

FROM THE ASSESSORS' REPORT

The second premiated design (No. 85) is architecturally one of the simplest submitted. It is uncomplicated and direct. The enclosed space of the great papal crown is impressive. Undoubtedly this would make a beautiful cathedral. The author has obviously been influenced by the Sydney Opera House.

FROM THE COMPETITOR'S REPORT

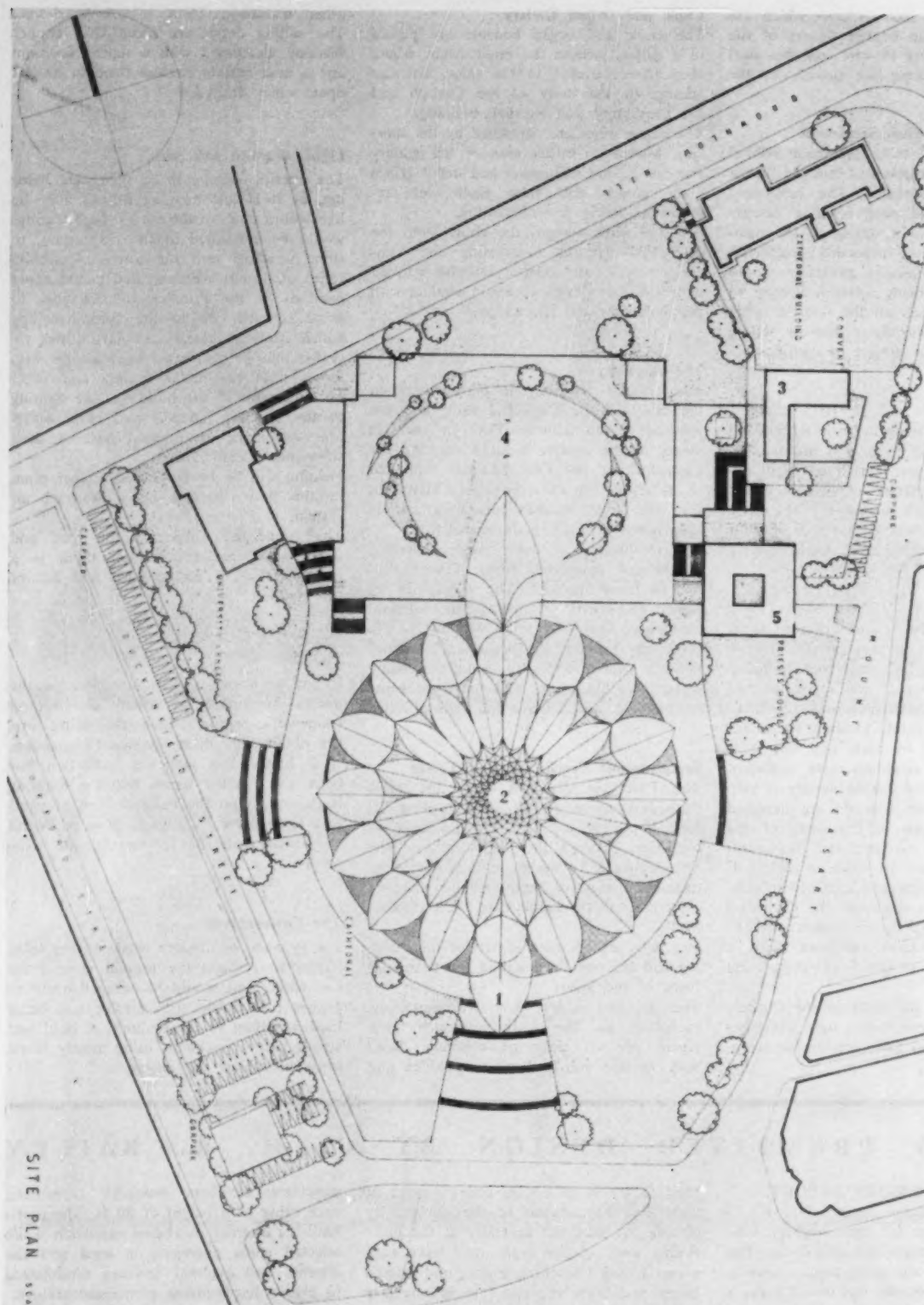
The buildings surrounding the site appear to contribute little towards the atmosphere associated with a cathedral close and as

their future is in doubt, little account of them has been taken in the design. By placing the sacristies centrally at the mezzanine level of the crypt they have easy access to the Cathedral, Piazza and priest's house and leave the site free of ancillary buildings. Placing the Blessed Sacrament Chapel at piazza level enables its altar to be used for liturgical functions held in the piazza.

The Cathedral is constructed entirely of reinforced shell concrete relying upon form for stability. The structure is gathered into 16 principal points of support, the main

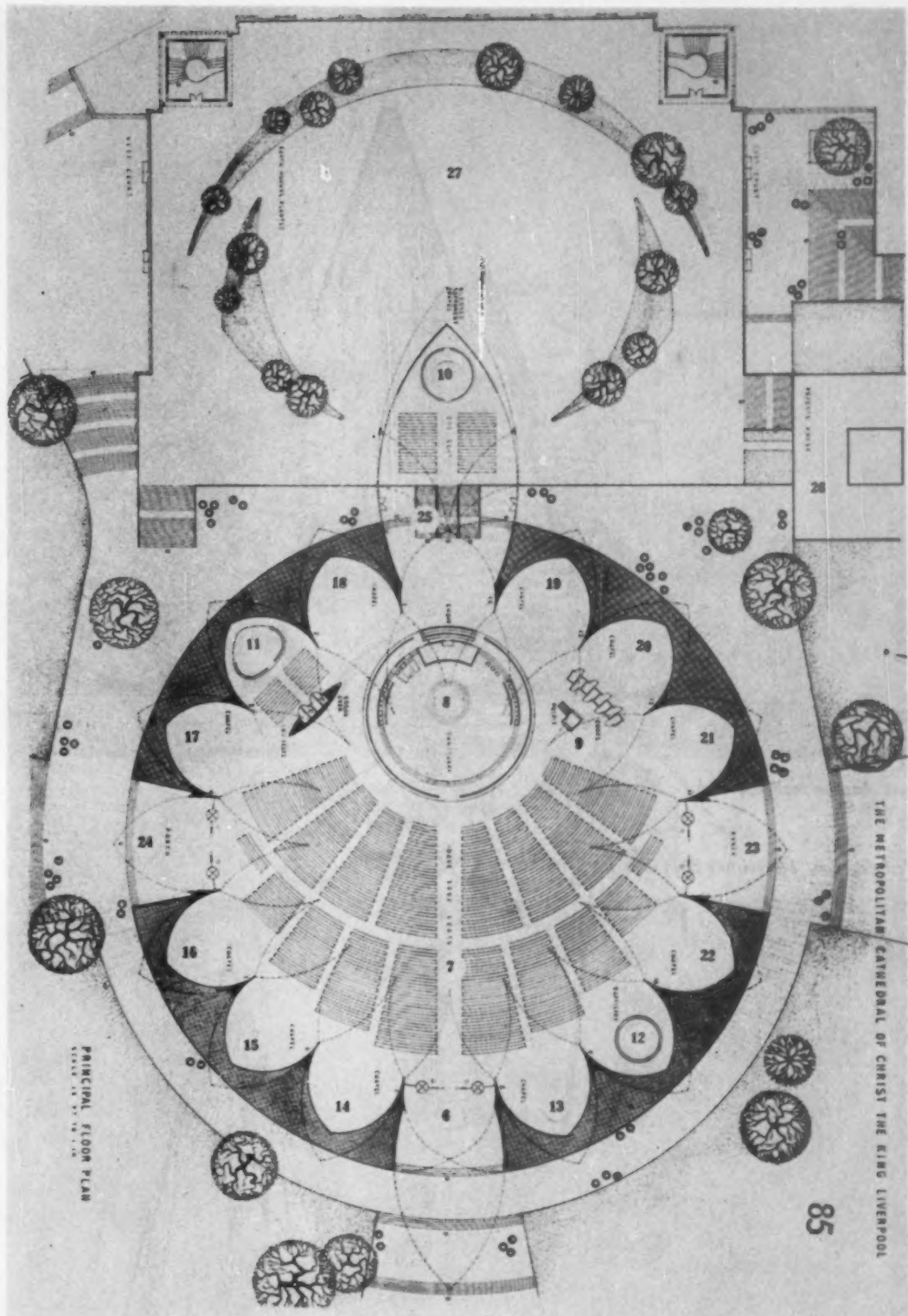
structural members mutually supporting each other to a height of 80 ft. The shells have an internal insulation sandwich while selected stone aggregate is used and the internal and external surfaces sandblasted to give a hardwearing permanent texture. Natural daylight and ventilation are provided by low windows around the periphery of the side chapels and between the main shells and the secondary shells of the chapels. The body of the Cathedral is lit by coloured glass set in concrete in abstract designs supported on a light concrete lattice springing from the main supports.

LIVERPOOL CATHEDRAL: SECOND PREMIATED DESIGN BY C. H. R. BAILEY



Site plan. As in the winner's design, this one sites the new cathedral immediately alongside the existing crypt on the south. The whole of the crypt roof is given over to a piazza.

- 1 Entrance porch
- 2 Cathedral
- 3 Convent
- 4 Piazza
- 5 Presbytery



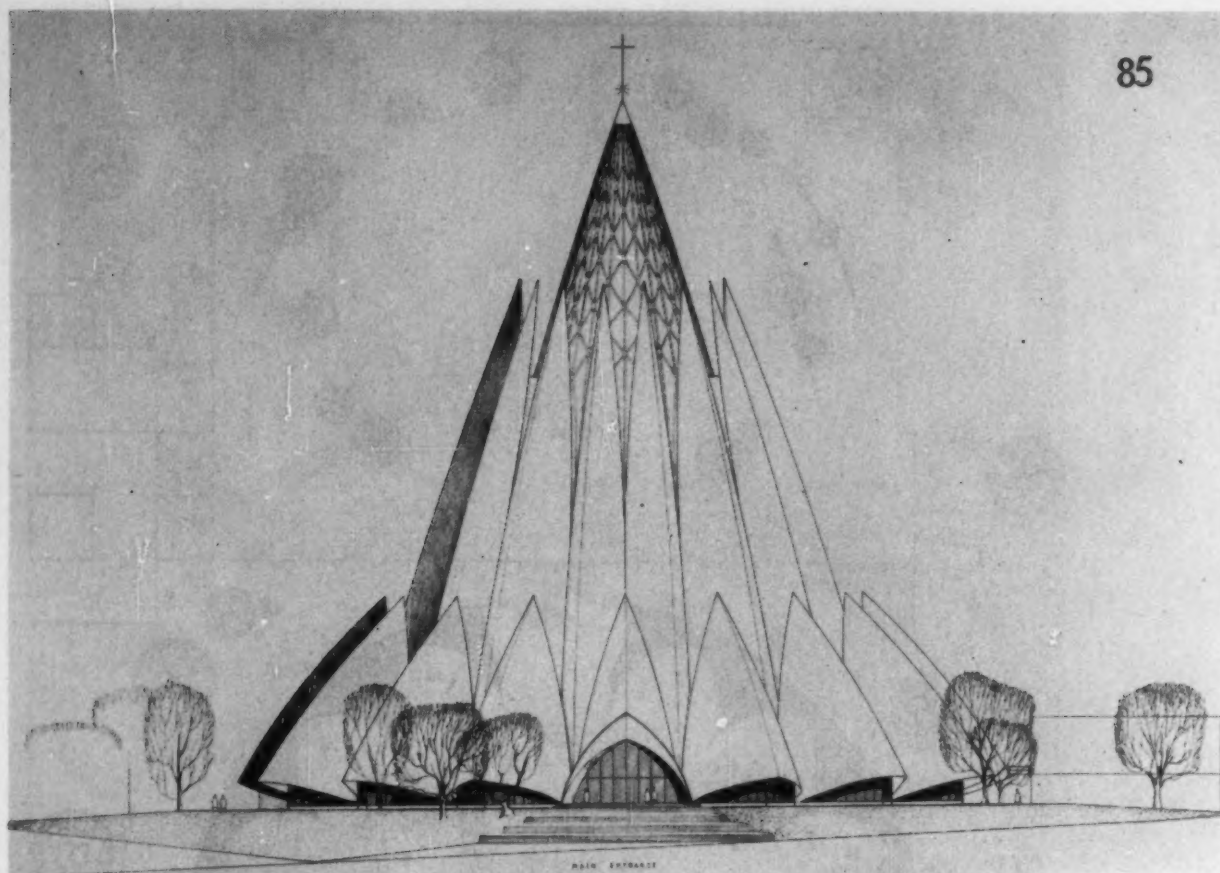
Main floor plan.

- 6 Entrance porch
- 7 Seating for 3,002
- 8 Sanctuary
- 9 Pulpit
- 10 Blessed Sacrament Chapel

- 11 Chapel of Our Lady
- 12 Baptistry
- 13-22 Chapels
- 23 East porch

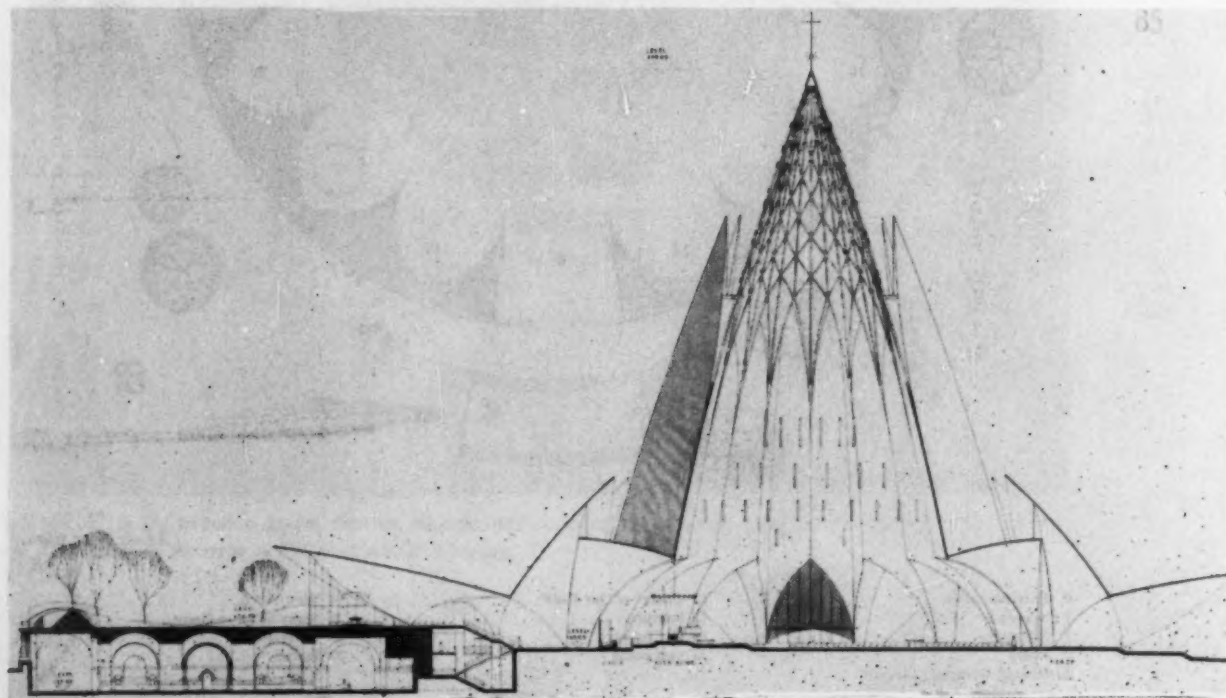
- 24 West porch
- 25 Stairs down to Crypt
- 26 Presbytery
- 27 Piazza

LIVERPOOL CATHEDRAL: SECOND PREMIATED DESIGN BY C. H. R. BAILEY

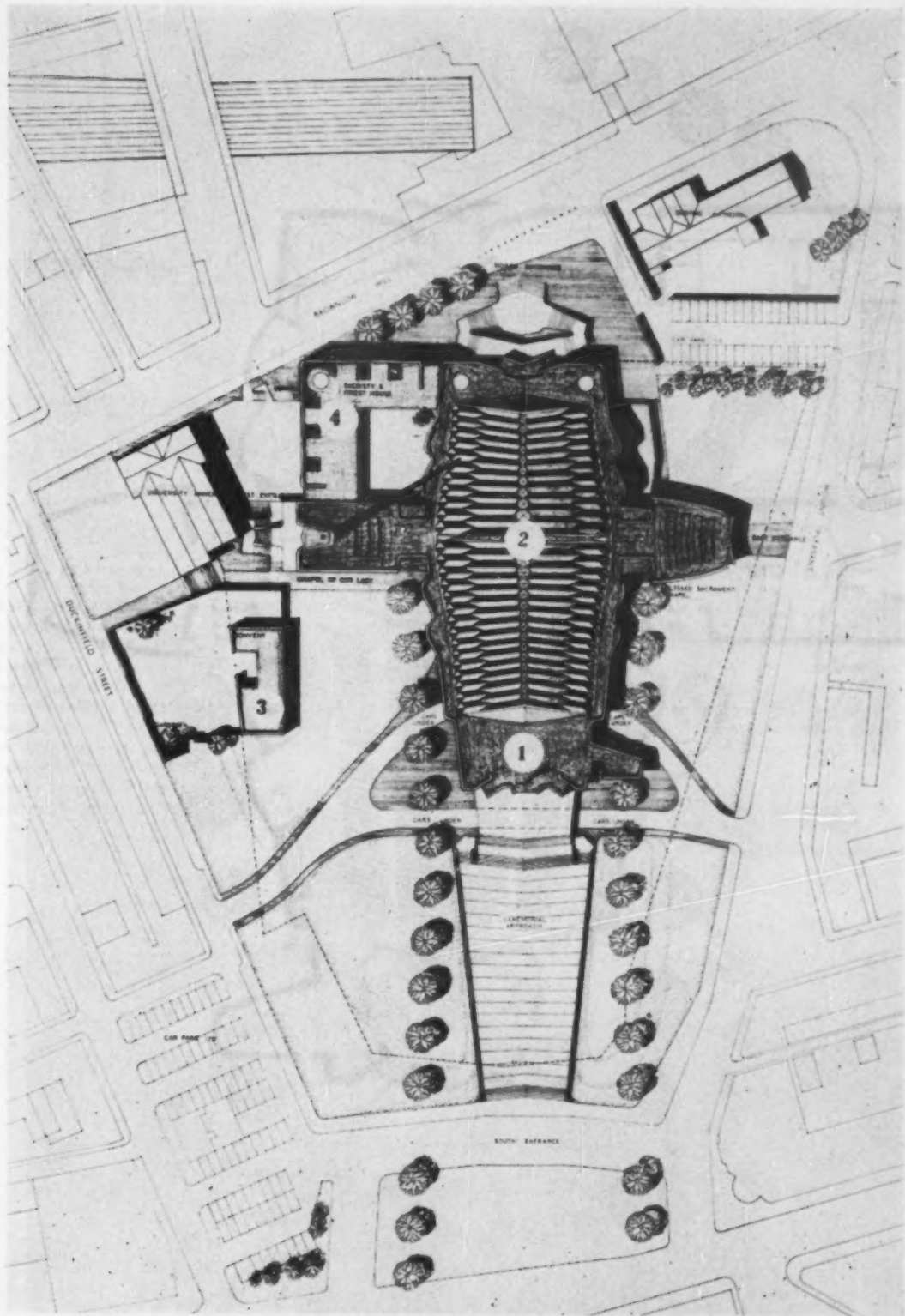


South elevation main approach.

West elevation. The existing crypt is on the left.



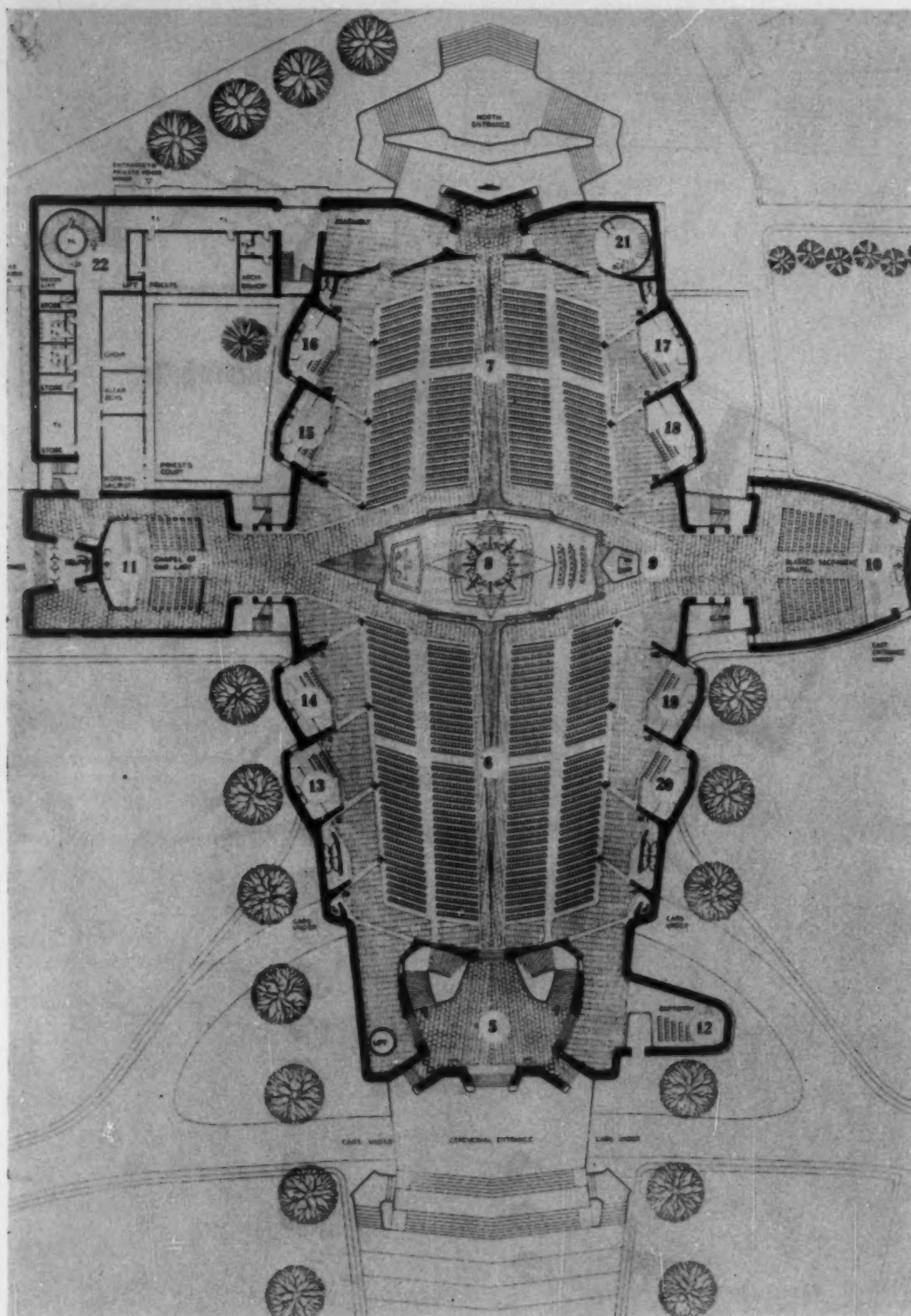
THIRD PREMIATED DESIGN BY ARTHUR BAILEY



Site plan.

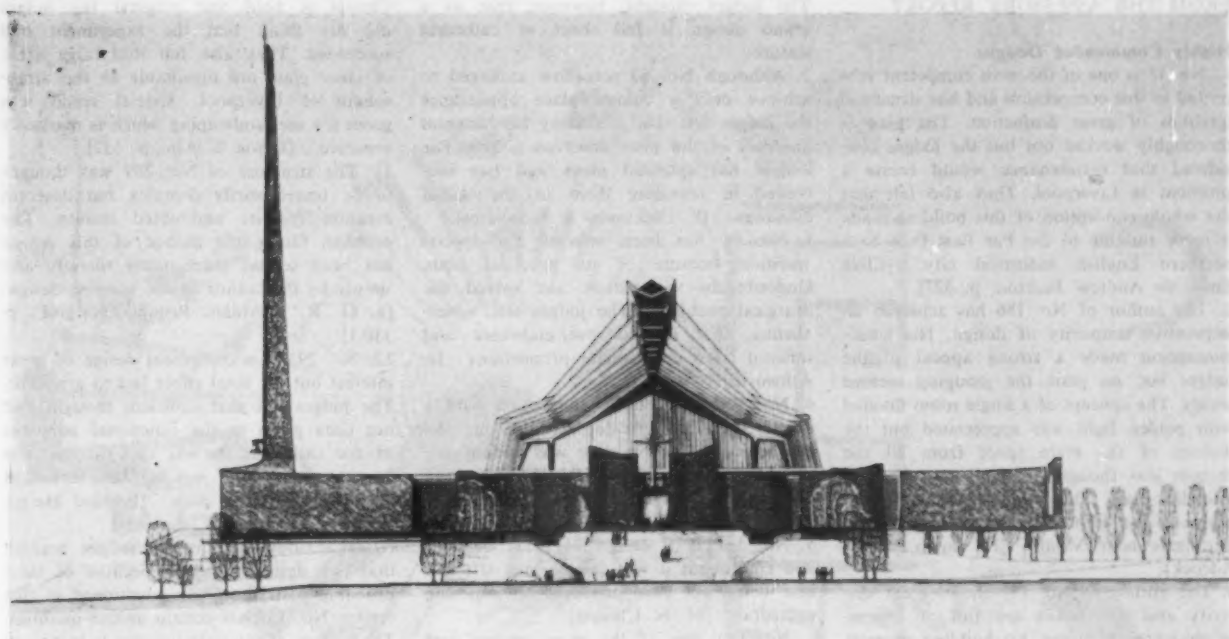
- 1 Entrance porch
- 2 Cathedral
- 3 Convent
- 4 Sacristy and Presbytery

LIVERPOOL CATHEDRAL: THIRD PREMIATED DESIGN BY ARTHUR BAILEY



Main floor plan which is at the roof level of the existing crypt.

- | | | |
|-----------------------|-----------------------------|----------------------------|
| 5 Entrance porch | 10 Blessed Sacrament Chapel | 13-20 Chapels |
| 6-7 Seating for 3,000 | 11 Chapel of Our Lady | 21 Staircase down to crypt |
| 8 Sanctuary | 12 Baptistry | 22 Sacristy and Presbytery |
| 9 Pulpit | | |



South elevation, main approach.

FROM THE ASSESSORS' REPORT

The third premiated design (No. 231) is imaginative and fresh. It contains many original features which deeply impressed the judges. But it was thought that the resultant building would not be sufficiently imposing for a metropolitan cathedral. The elements of the design are conceived with great skill to terminate in the High Altar. There is a stained glass cross above a folded roof. While the judges were convinced that a

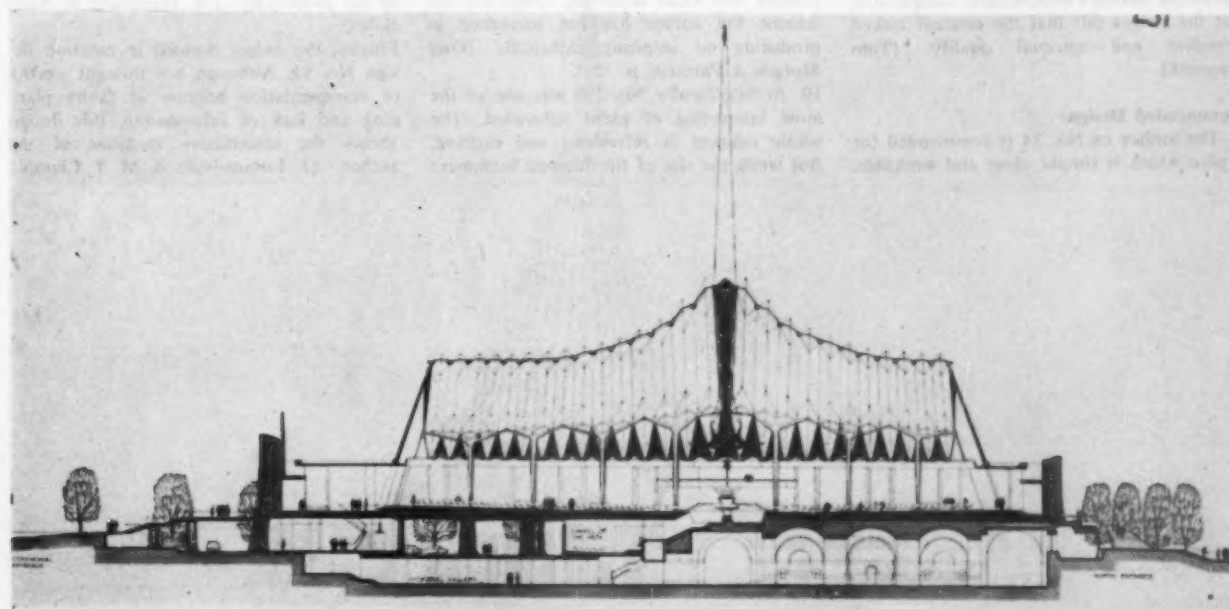
folded roof of concrete covered by copper could be designed on the general lines suggested by the author, it was felt that much more detailed study would be necessary before building. It was thought, however, that the position of the Blessed Sacrament Chapel was unfortunate. Not only is it very distant from the sacristies but architecturally its site is less significant than that of the Lady Chapel which is marked by the tower.

FROM THE COMPETITOR'S REPORT

If the design for the new cathedral is to be completely successful, it should totally embrace the existing crypt so that the one becomes an integral part of the other. Should the existing crypt look in any way detached there must be a grave danger that in future years it will remain as part of an abandoned scheme.

Emphasis is placed on the desire to bring the congregation into the closest communion with the Sanctuary and this has been achieved by placing the High Altar in a central position.

Long section, south/north.



LIVERPOOL CATHEDRAL: SOME COMMENDED AND UNSUCCESSFUL DESIGNS

FROM THE ASSESSORS' REPORT

Highly Commended Designs

1. No. 15 is one of the most competent submitted in this competition and has structural qualities of great distinction. The plan is thoroughly worked out but the judges considered that maintenance would create a problem in Liverpool. They also felt that the whole conception of this building made it more suitable to the Far East than to a northern English industrial city. [Clive Entwistle Andrew Jackson, p. 327].
2. The author of No. 186 has achieved an impressive simplicity of design. His whole conception made a strong appeal to the judges but, on plan, the grouping seemed untidy. The concept of a single room flooded with golden light was appreciated but the divorce of the main space from all the chapels was thought to spoil an otherwise splendid plan. The design is sincere and suggests the influence of the church at Baranzate near Milan. [H. Jacob, A. C. Adcock].
3. The author of No. 197 shows great sincerity and his details are full of charm. In character, however, his building suggests a parish church rather than a cathedral. The High Altar, moreover, is too remote from the congregation. The judges were impressed by the skilful detail and sensitive appreciation of scale and the use of materials. [Michael Jerome].
4. No. 254 is a compelling design of great strength. The judges found the plan deeply interesting but felt that the sweep of the roof destroyed the scale of the building. [Norah Glover in collaboration with Z. Borys, p. 328].
5. No. 285 bears some resemblance in plan to the winning design but, despite its many qualities, fails by comparison. The judges felt that the Blessed Sacrament Chapel was not given sufficient prominence. [Raglan Squire & Partners].
6. No. 291 is an interesting design and shows the author's architectural competence, but the judges felt that the concept lacked grandeur and spiritual quality. [Tom Hancock].

Commended Designs

1. The author of No. 34 is commended for a plan which is simple, clear and workable.

The judges thought, however, that as a grand design it fell short of cathedral stature.

2. Although No. 53 somehow managed to achieve only a commonplace appearance the judges felt that the many fundamental qualities of the plan deserved notice. The author has splendid ideas and has succeeded in revealing them in his skilful drawings. [P. Dickinson & Associates].
3. No. 96 has been selected for special mention because of its practical plan. Undoubtedly the author has solved the liturgical problems. The judges felt, nevertheless, that it was over-elaborate and suffered from unfortunate proportions. [J. Ashworth].
4. No. 100 is a plastic conception with a clever use of intricate lighting but the character of this building was judged unsuitable for Liverpool. It was also felt that the High Altar is too far removed from the people. [P. J. Quinn].
5. No. 131 is a design of great delicacy and charm but it was felt to lack strength and would not have produced an imposing cathedral. [M. N. Clinton].
6. No. 149, one of the many strung roof designs, was among the very best. The drawings were rather too sketchy and this may be one of the reasons why the judges found the scale unhappy. [G. P. Buzuk].
7. No. 188 on plan provided a unique solution to the problems set to competitors. While applauding much of the detail the judges nevertheless found many faults in the general conception. [J. R. Gradige, P. Jameson & Associates].
8. Although the judges were quite clear that No. 203 failed as a cathedral building they felt that the author should be commended for an impressive design. This design seemed to lack specifically religious quality but it would have succeeded as a structure for general cultural purposes. [G. Howes, P. Eisman].
9. No. 230 showed a plan of marked competence but while deserving credit for his scheme the author has not succeeded in producing an inspiring cathedral. [Guy Morgan & Partners, p. 329].
10. Architecturally No. 236 was one of the most interesting of plans submitted. The whole concept is refreshing and exciting. But while the site of the Blessed Sacrament

Chapel is bold and original the judges did not think that the experiment had succeeded. They also felt that large areas of clear glass are unsuitable to the atmosphere of Liverpool. Special credit was given for the landscaping which is markedly sensitive. [Lewis S. Ash, p. 332].

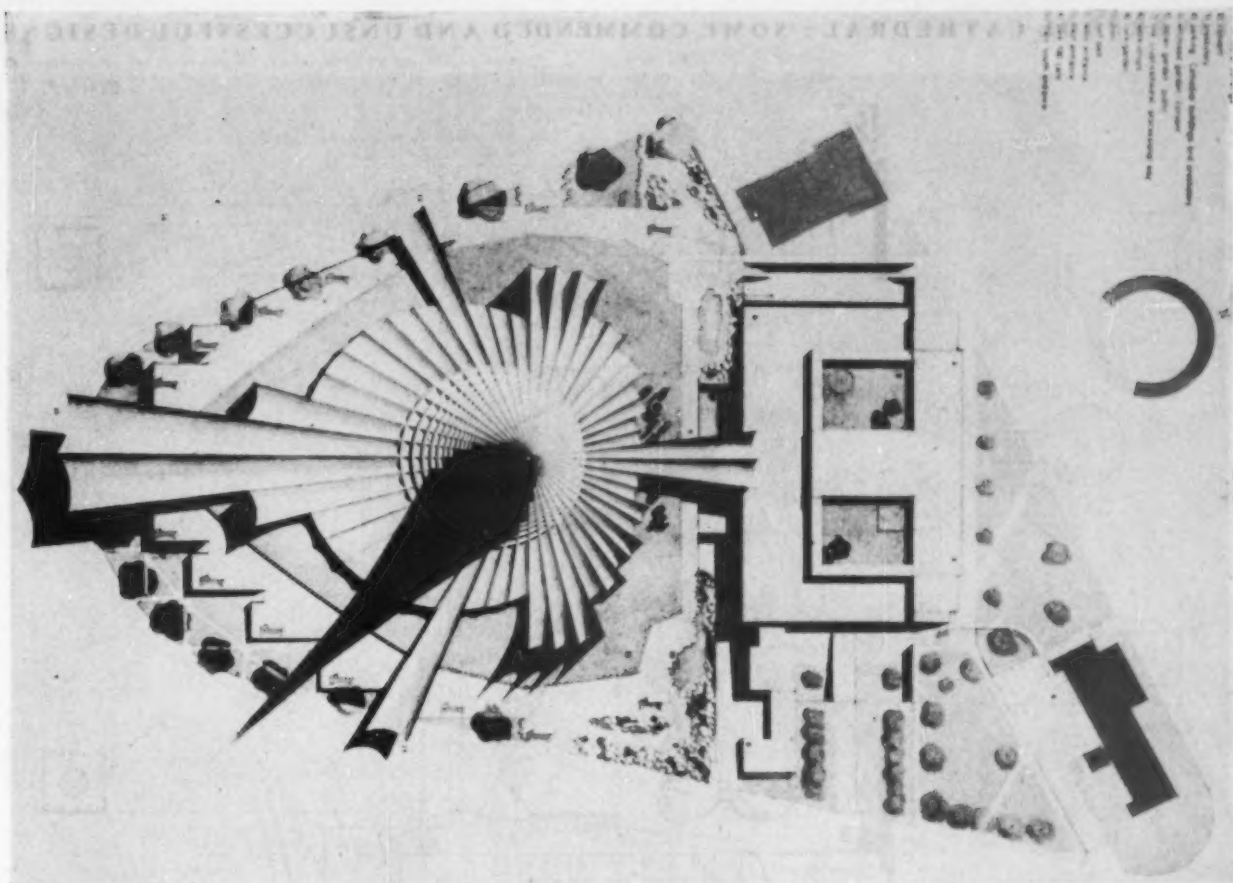
11. The structure of No. 259 was thought to be unnecessarily complex but deserves mention for its undoubted beauty. The problem facing the author of this design has been solved much more directly and simply by the author of the winning design. [J. G. R. Sheridan, Bruno Fedrigolli, p. 330-1].

12. No. 293 is a competent design of great interest but the total effect lacked grandeur. The judges felt that sufficient thought had not been given to the functional purposes of the cathedral. It was thought that the congregation would not be well served in a cathedral on this plan. [Edward Hartry of Wells Hickman & Partners].

After anxious thought the judges decided that two designs, rejected because of their probable cost, should be mentioned in this report. No. 157 has certain unique qualities. The system of intricate lighting is ingenious and original. It is quite certain that the effect would be conducive to worship. The siting of the Blessed Sacrament Chapel displays great imagination and the treatment of the undercroft has great possibilities. Apart, however, from the probable cost of erecting a building of these proportions, the plan would have failed because the High Altar is too remote from the congregation. [C. W. Noble].

The author of No. 175 has produced a plan of quite outstanding merit. The integration of the Cathedral with the existing Crypt is brilliant and the flow of space on split levels with bridges over the aisles is fascinating. Unfortunately, unlike the author of the winning design, he has not succeeded in producing a majestic building within the price limit laid down in the conditions. [N. Hutchison & Associates].

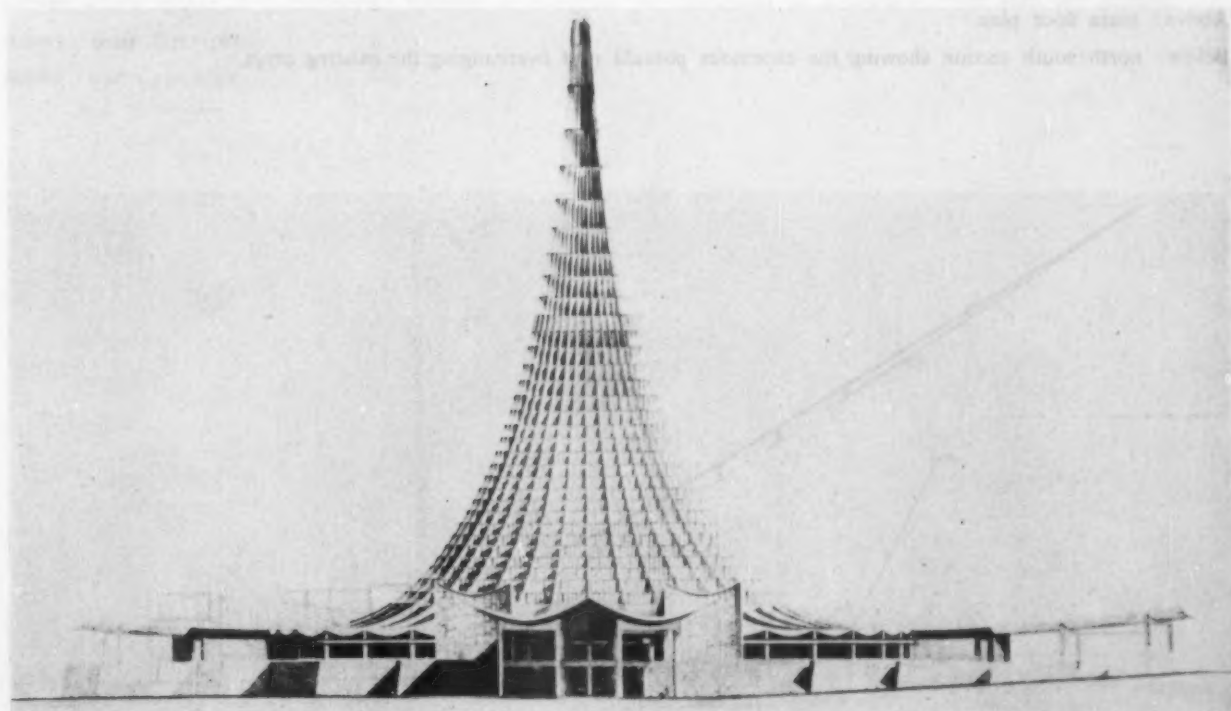
Finally, the judges decided to mention design No. 91. Although not thought worthy of commendation because of faulty planning and lack of information, this design shows the imaginative qualities of the author. [J. Lubicz-Nycz & M. J. Ciampi].



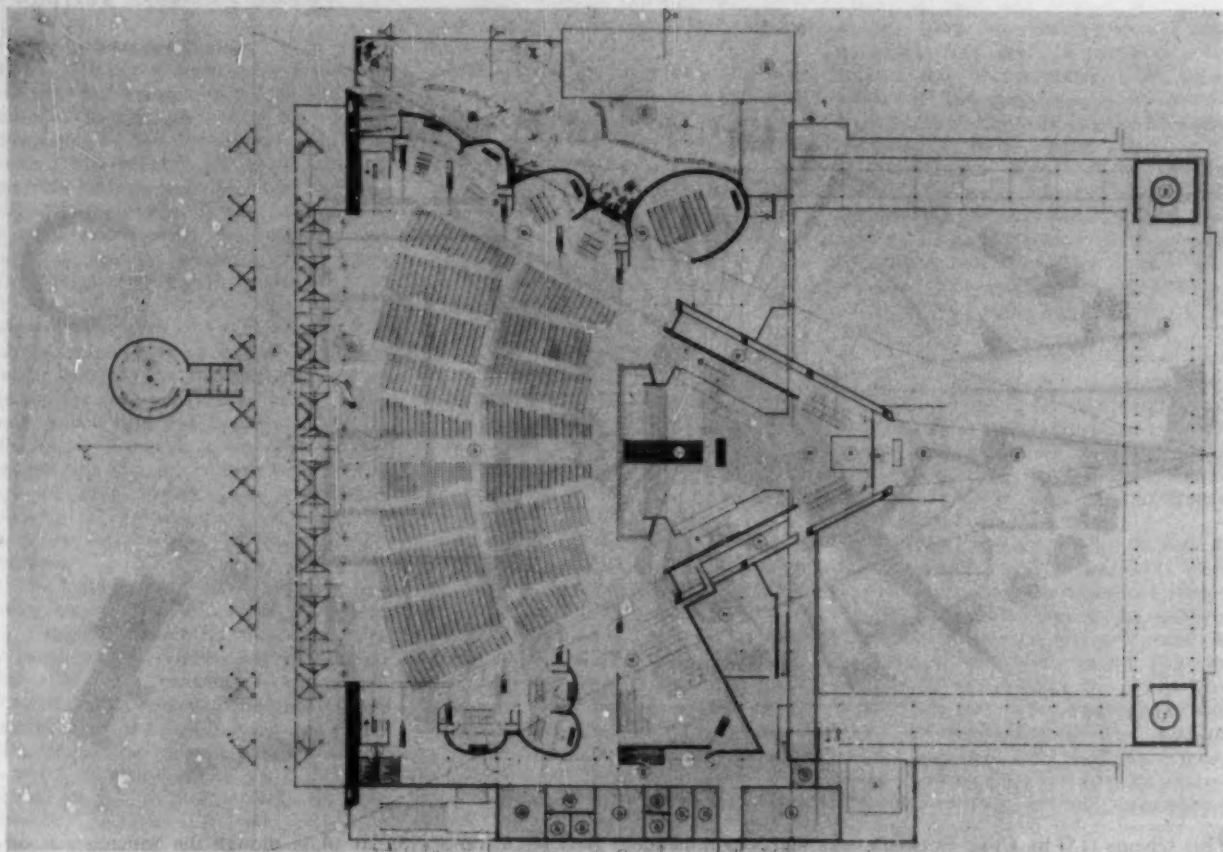
This scheme (15) by Clive Entwistle was highly commended. It is based on a circular plan, though the Sanctuary is off-centre and the seating arrangement semi-circular. Its structural form is one of the most flamboyant of those entries which worked from such a plan layout.

Above: site plan.

Below: south elevation, main approach.



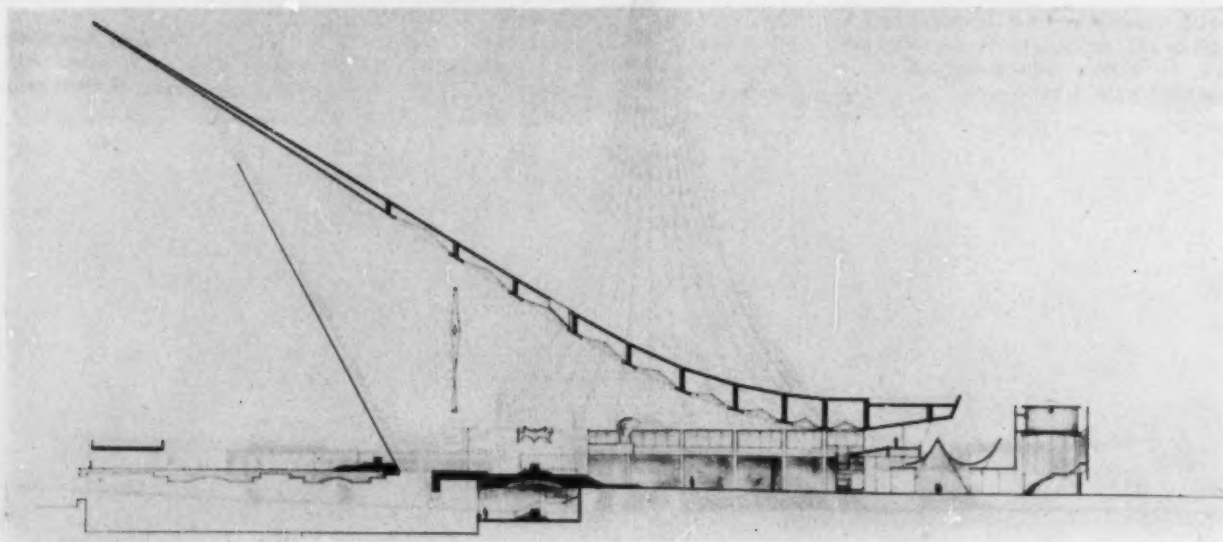
LIVERPOOL CATHEDRAL : SOME COMMENDED AND UNSUCCESSFUL DESIGNS

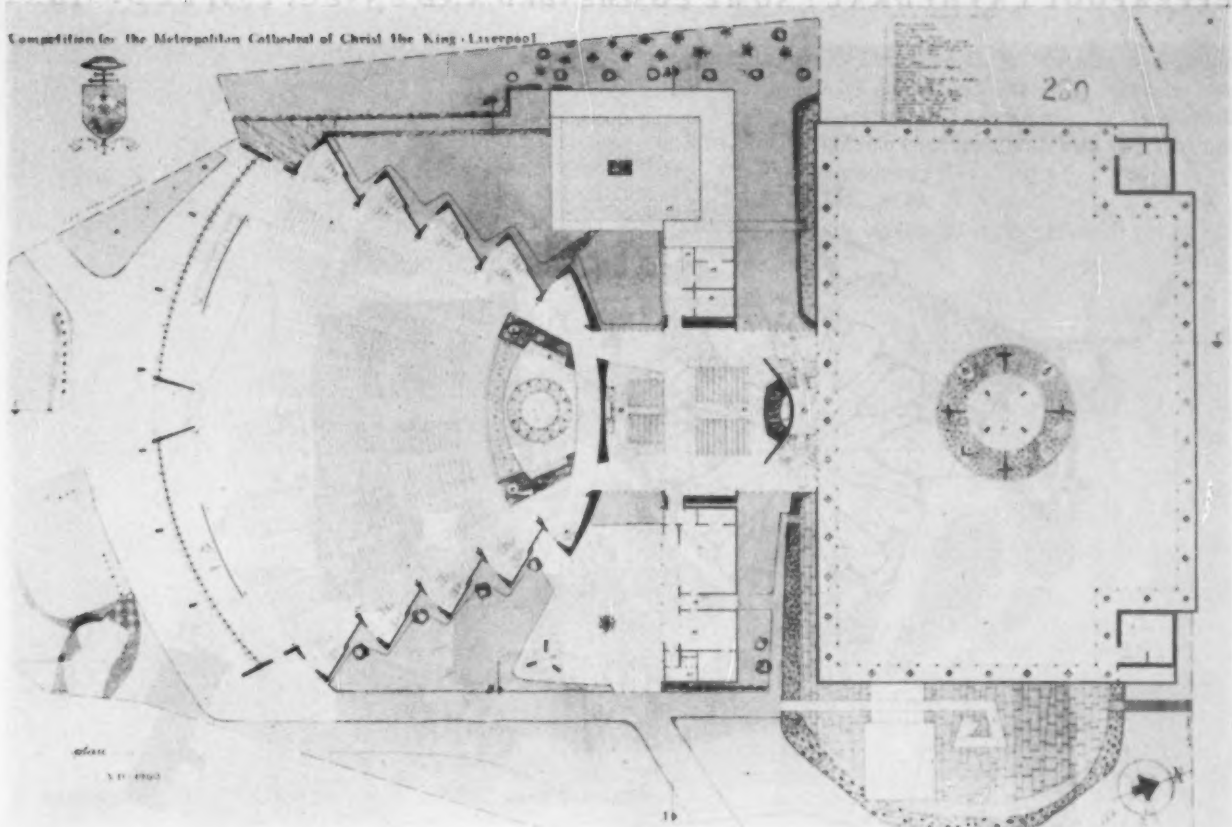


This scheme (254) by Norah Glover in collaboration with Z. Borys also was highly commended.

Above: main floor plan.

Below: north/south section showing the enormous pointed roof overhanging the existing crypt.

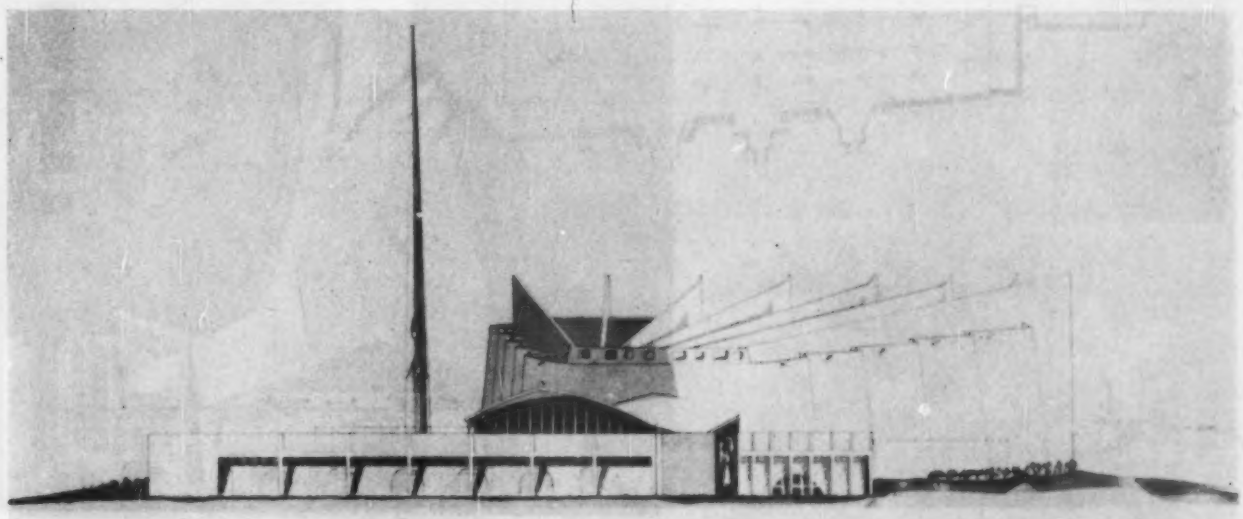




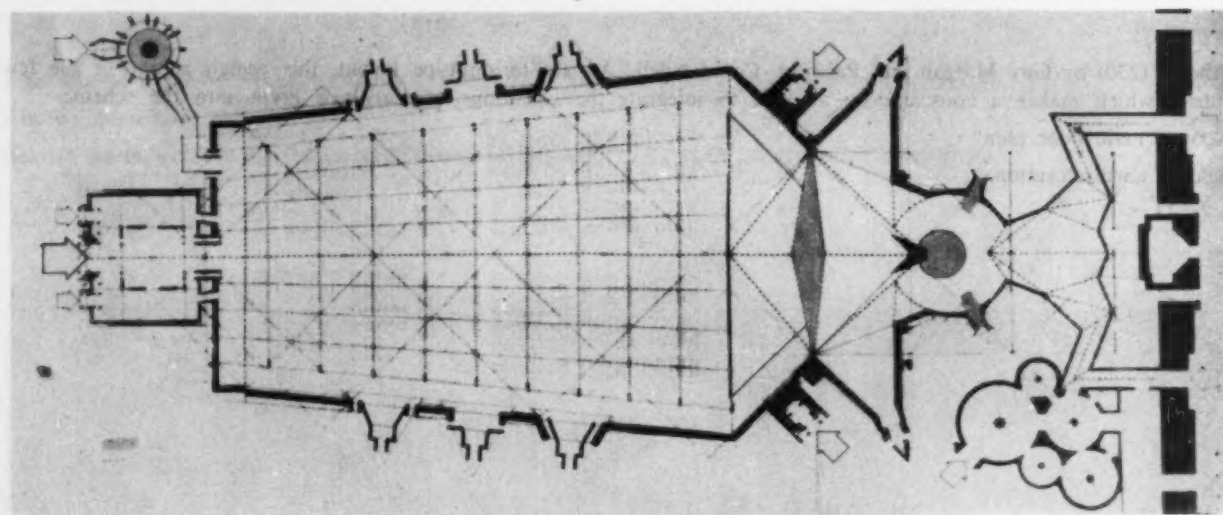
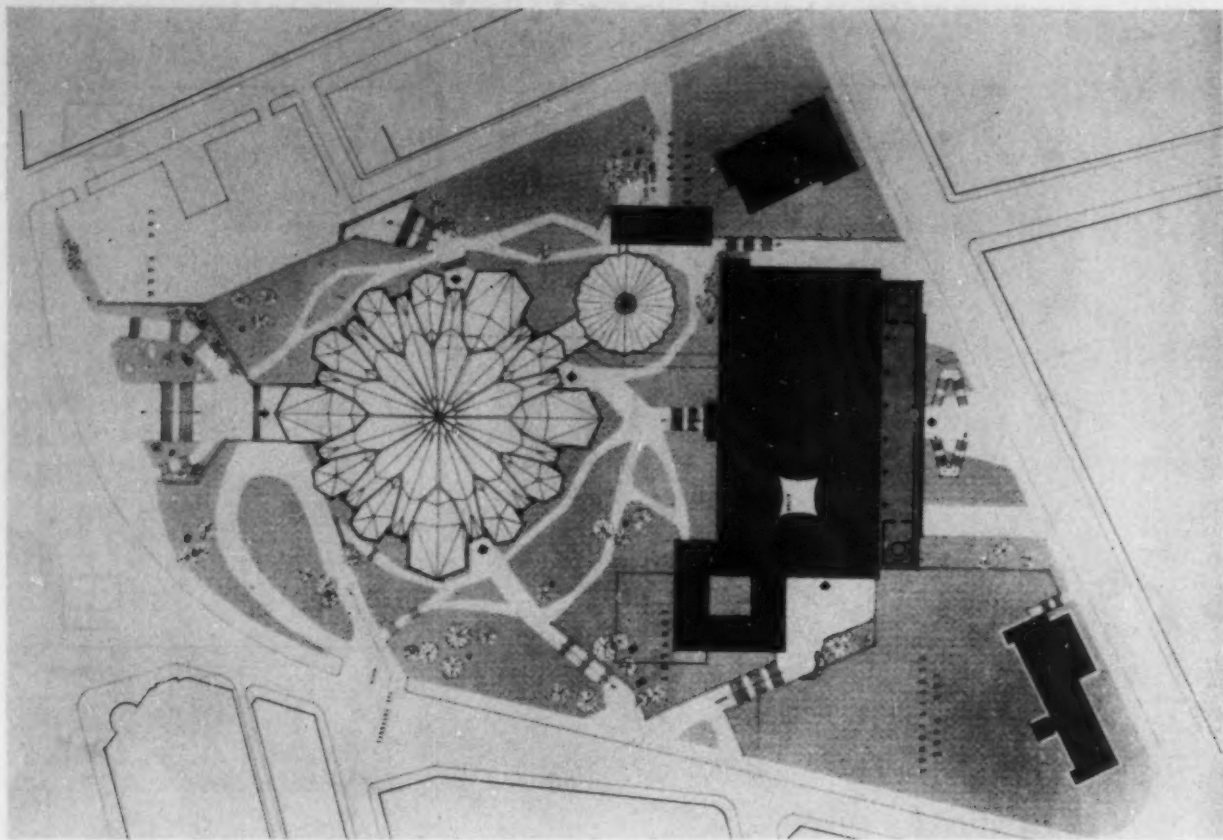
Scheme (230) by Guy Morgan and Partners. Commended. An auditorium-type layout, this design is one of the few entries which makes a conscientious attempt to integrate the elevations of Lutyens's crypt into the scheme.

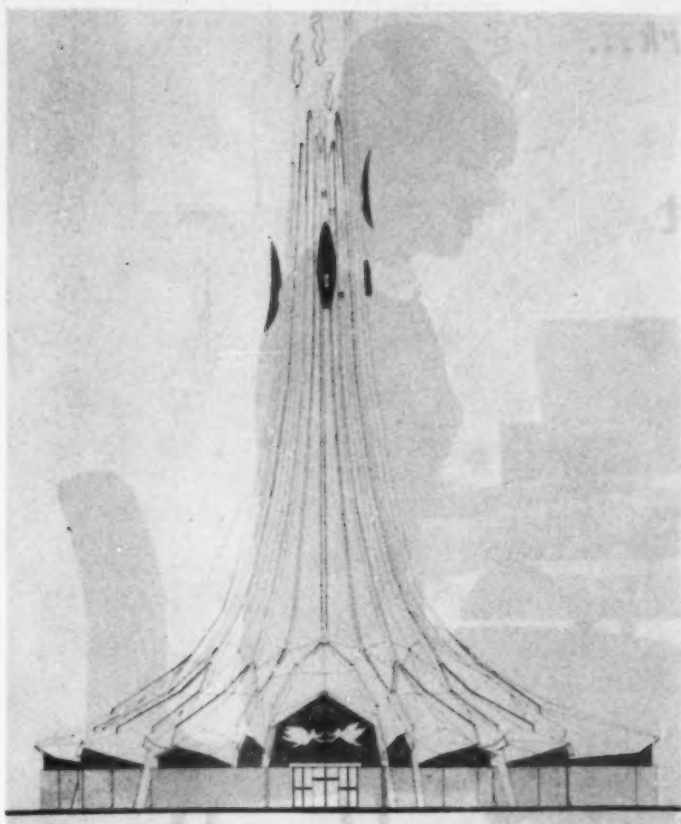
Above: main floor plan.

Below: north elevation.



LIVERPOOL CATHEDRAL : SOME COMMENDED AND UNSUCCESSFUL DESIGNS





Scheme (259) by John G. R. Sheridan and Bruno Fedrigolli. Commended. In this scheme the sacristies are housed separately in the small circular building connected both with the cathedral and the presbytery.

Far left: site plan.

Left: south elevation, main approach.



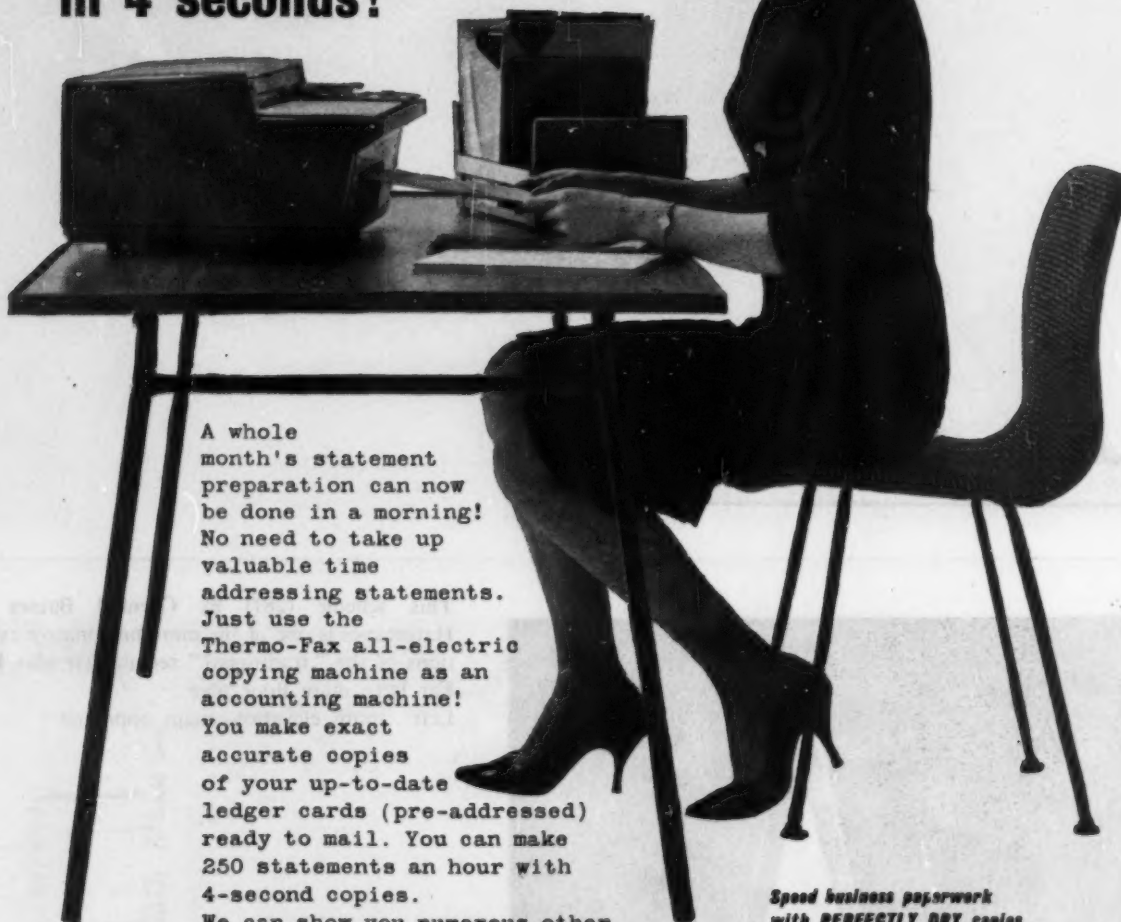
This scheme (281) by Grenfell Baines and Hargreaves is one of the more imaginative expositions of the "traditional" rectangular plan form.

Far left: main floor plan.

Left: south elevation, main approach.

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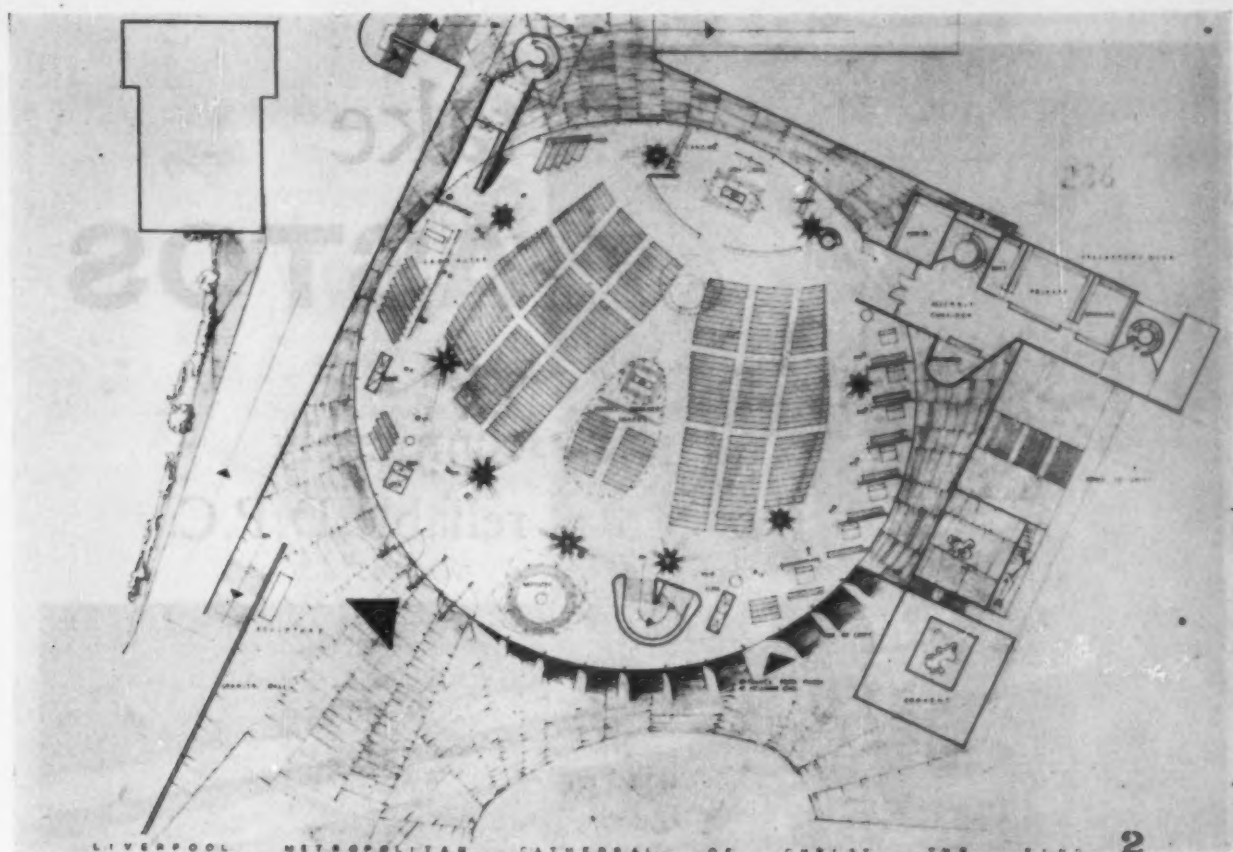
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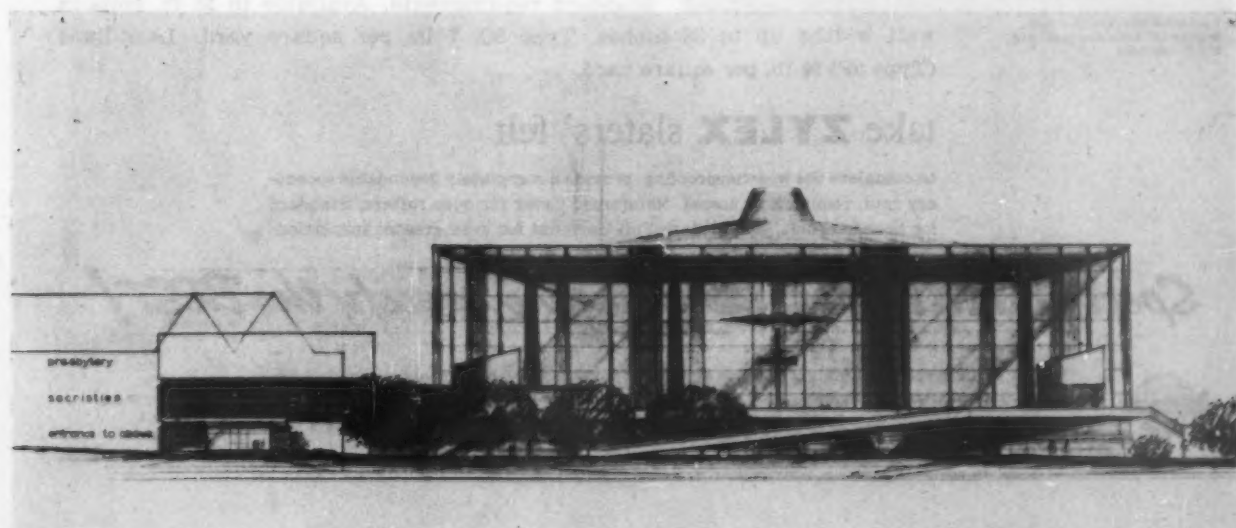
LIVERPOOL CATHEDRAL : SOME COMMENDED AND UNSUCCESSFUL DESIGNS



Scheme (236) by Lewis S. Ash. Commended. A circular plan which displays yet another seating arrangement. This scheme, unlike most others illustrated, is placed on top of the existing crypt.

Above: main floor plan.

Below: north elevation.





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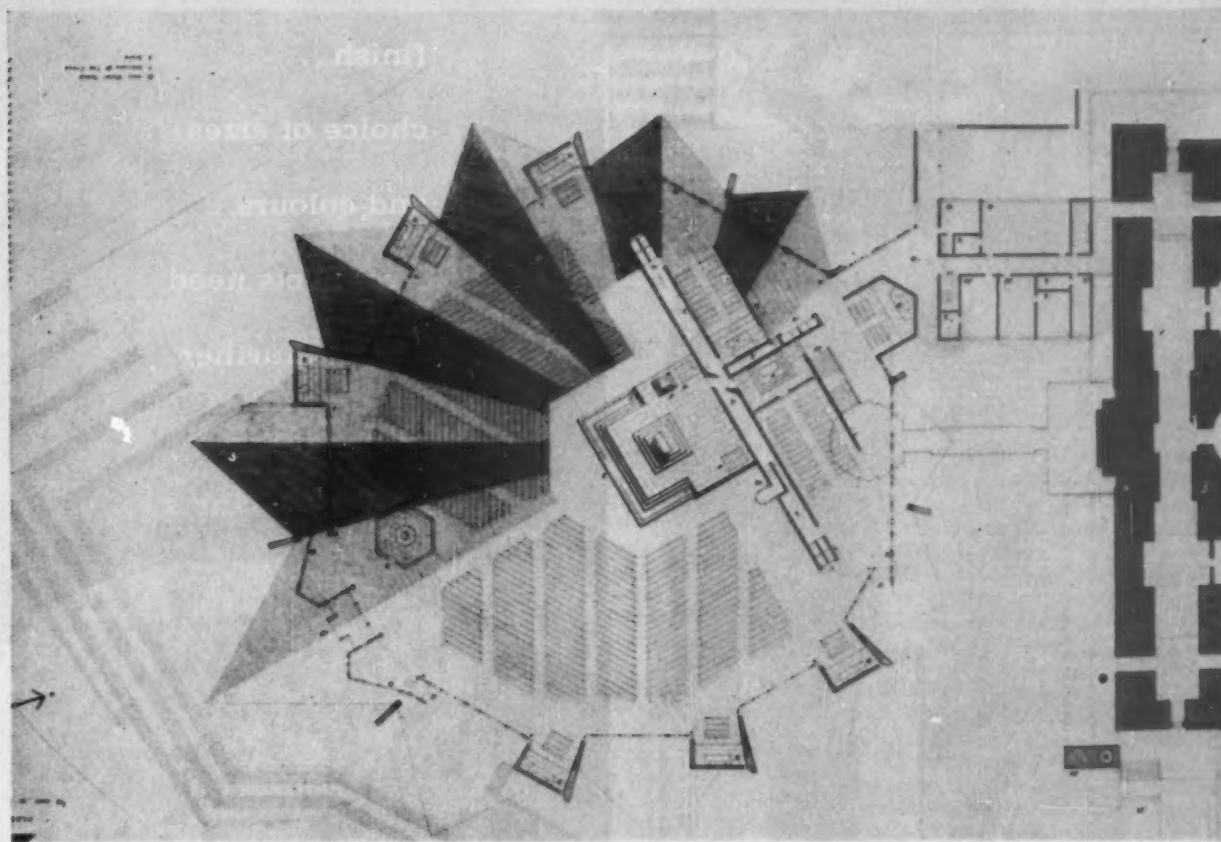
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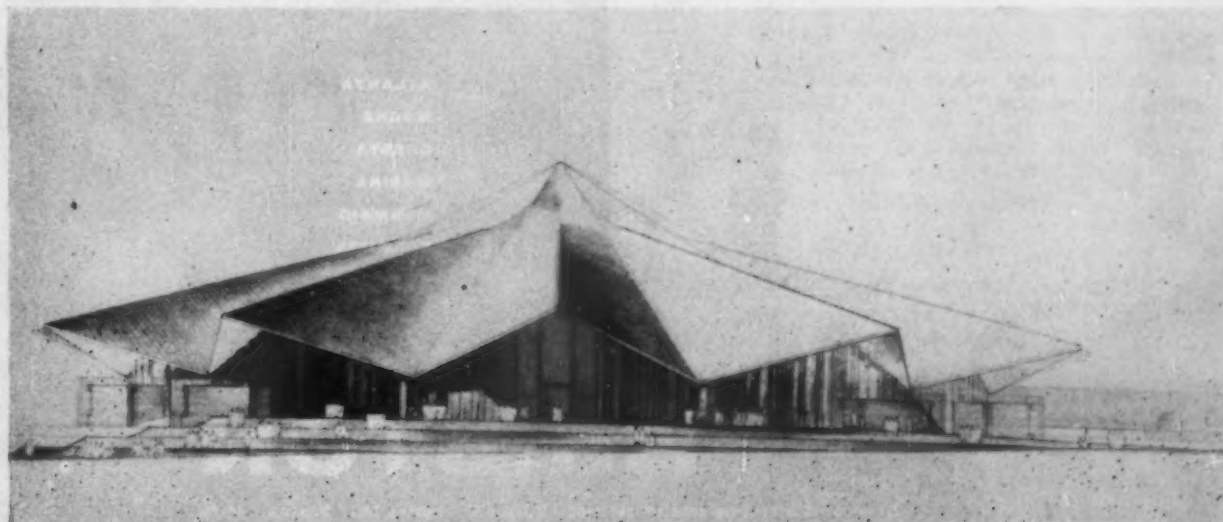
LIVERPOOL CATHEDRAL : SOME COMMENDED AND UNSUCCESSFUL DESIGNS



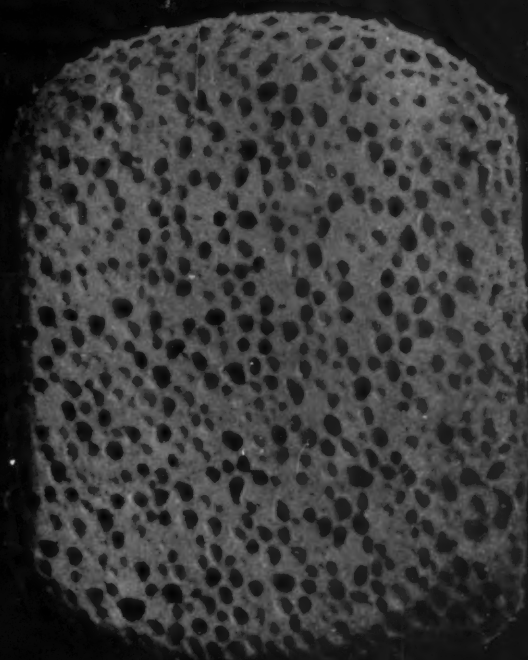
Scheme (178) by Denys Lasdun and Partners. The planning shows a more intelligent attempt to interpret functional requirements than many of the premiated designs. Unfortunately this refreshing approach stops short at the plan.

Above: main floor plan.

Below: south elevation, main approach.



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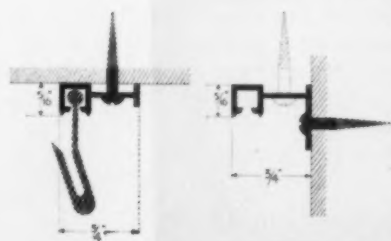
Illustrated literature sent on request. Bilston Foundries Ltd. Bilston. Staffs.

THE INDUSTRY

This week Brian Grant describes a curtain track, a hand washing and drying unit, high strength plastics made by a new process, and a new type of wallplug.

Curtain track

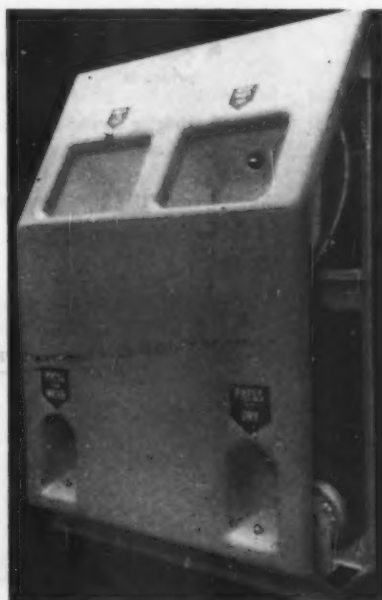
Ghost curtain track is made from aluminium alloy and has hooked plastic runners which can be used with any type of curtain tape. As can be seen from the section, the track is only $\frac{1}{8}$ in. deep, so that it is barely noticeable, and pelmets are unnecessary. Standard finish is natural aluminium, which can be gold anodised if required, but as the running surface is internal the track can be painted. The only limitations are that the track cannot be joined, but as it is produced in lengths up to 10 ft. this is presumably not a serious disadvantage: bending is difficult, so the track should be used for straight runs only. Fixing is by wood screws at 1-ft. centres, and the track will fit tight between window reveals as there is a special slot in each length for inserting the runners. Price is 1s. 8d. a foot complete with all fittings. (Haggard Robinson & Co. Ltd., 6, Stanley Park Road, Wallington, Surrey.)



Two patterns of Haggard Robinson ghost curtain track.

Hand Washing and Drying

The illustration below shows a hand washing and drying machine. The bowl on the left contains a soap dispenser and a water spray controlled by a foot valve, and in the bowl on the right is the hot air for hand drying, also controlled by foot pedal. The photograph is a little misleading, as it seems to have been taken from a height of about 2 ft.: the bowls are at about waist level and the whole cabinet is 4 ft. 6 in. high. The casing is of glass-fibre-reinforced plastic and contains a 2-gallon soap tank, enough for 3,000 washes, hot air is by blower with a 2.8 kW. electric heater and it takes about 25 seconds to dry the hands. Price of the complete unit is £89 12s. 6d. A further model in which the hand washing and drying is possible in each bowl is being developed. (The Bryn-Martyn Co., Ltd., 199 Runcorn Road, Barnton, Northwich, Cheshire.)



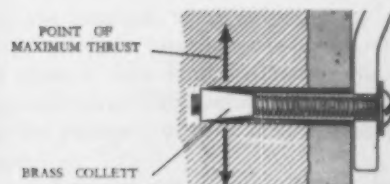
The Bryn-Martyn hand washing and drying unit.

High strength plastics

High strength glass reinforced polyester resin pipes and ductings are to be made in this country by a process which has already been working for some time in Sweden. Pipes with internal bores between 1½ and 20 in. can be made in lengths up to 40 ft. without joints and with wall thicknesses from ¼ to ½ in. By using different weaves in the layer of glass fibre it is possible to provide strength characteristics to suit particular applications, such as high bursting strength or resistance to bending. Synthetic fibres of the Terylene type can also be incorporated to give resistance to chemicals or abrasion. Flattened pipe and ducting with an oval cross section can be made for use where there is insufficient space for round ducting. Other uses suggested for the material are flagpoles and boat's masts and spars. (Flexo Plastic Industries Ltd., South Chingford, London, E4.)

New Type of Wallplug

A new type of wallplug makes use of a metal thread screw which engages with a tapered brass bush and thus expands the usual shell type plug. As can be seen from the diagram the area of maximum expansion of the plug is well within the wall and some distance away from the plaster, so that its holding power should be considerably improved. At the moment the plugs are made in a standard length of 2 inches and in 8, 10, 12 and 14 plug sizes at prices from 66s. to 72s. per 100 complete. (Grippoproductions Ltd., Henshaw Works, Oldham, Lancs.)

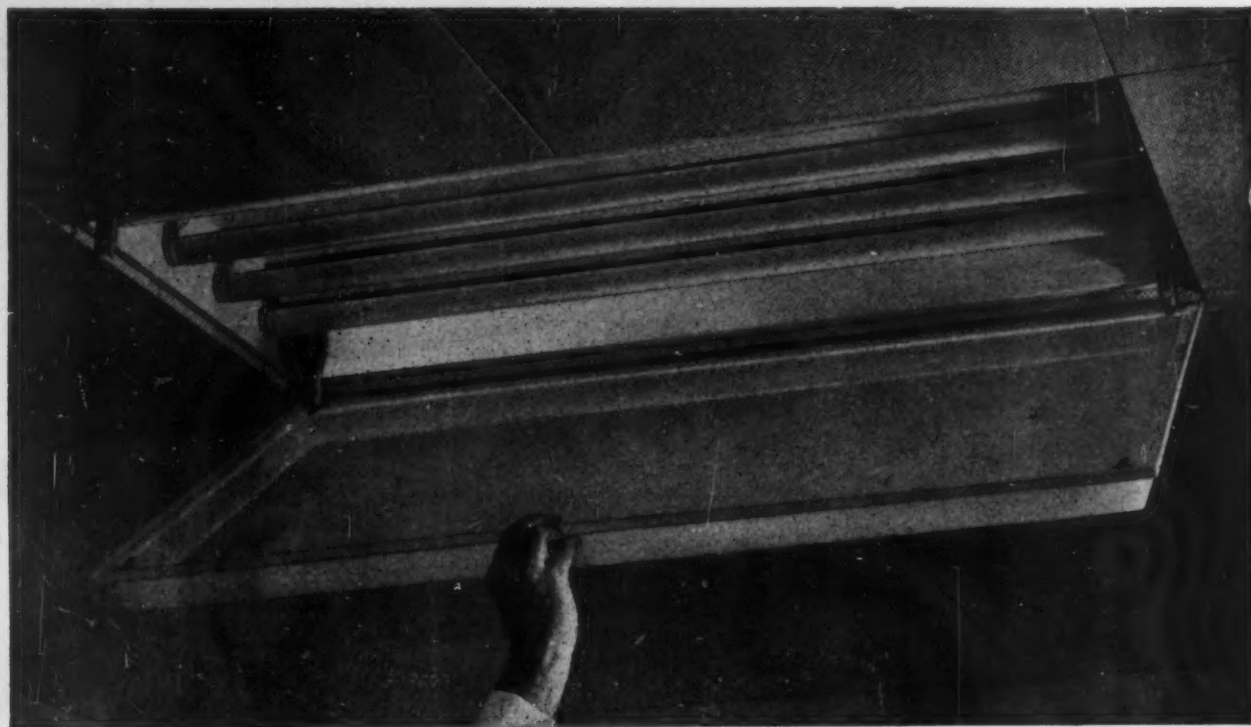


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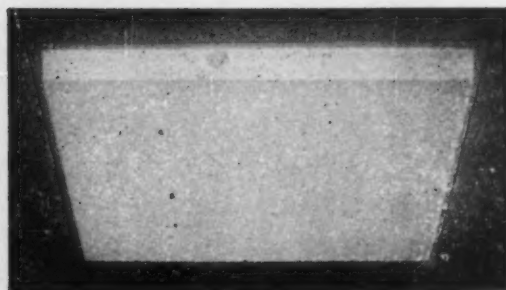
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technical section

19 CONSTRUCTION: DETAILS**common building failures, 2**

Different materials and, above all, a decisive reduction in the time available have made plastering, rendering and the laying of floor screeds very different from what they used to be. In his second article D. I. Watson of the materials-testing firm, R. H. Harry Stanger and Partners, discusses his firm's experience in respect of each. His comments should be read in conjunction with B.R.S. Digests 69 (Avoiding Defects in Internal Plastering, August 1954) and 131 (External Rendered Finishes, February 1960).

SIS No.

(42)P

UDC No.

Wall and Ceiling Plaster

The traditional mixes for lime plastering were 3 cubic ft. of coarse sand to 1 cu. ft. of lime putty for the backing and floating coats and 2 cu. ft. of fine sand to 1 cu. ft. of lime putty for the setting coat. Well beaten cow hair was incorporated in the backing and floating coats to give greater tensile strength and reduce shrinkage.

It was quite common to leave periods of several months between coats to ensure that shrinkage was complete. When the time came for the application of the floating to the backing coat of a lath and plaster ceiling, cracks would be visible between every lath, and backing coats on brickwork would be quite deeply crazed.

Finishing coats were heavily trowelled, and re-trowelled again, if necessary, on the next day or even several days after application.

Under modern conditions the use of these sand/lime mixes is quite impracticable unless Portland cement is added to the backing, and gypsum plaster to the finishing coat.

A 6:1:1 sand/lime/cement mix is now the usual recommendation for backings. Although the Codes of Practice permit the use of a neat gypsum plaster finish over this backing this seems unsafe. The hardest finish I would recommend is one consisting of equal parts of gypsum plaster and lime putty. The use of a 2 to 1 sand/lime putty mix gauged with gypsum plaster as a finishing coat has little to recommend it. It is too easily damaged.

Because of the speed with which building operations are now carried out, it is inevitable that the finished structure will contain a large quantity of absorbed

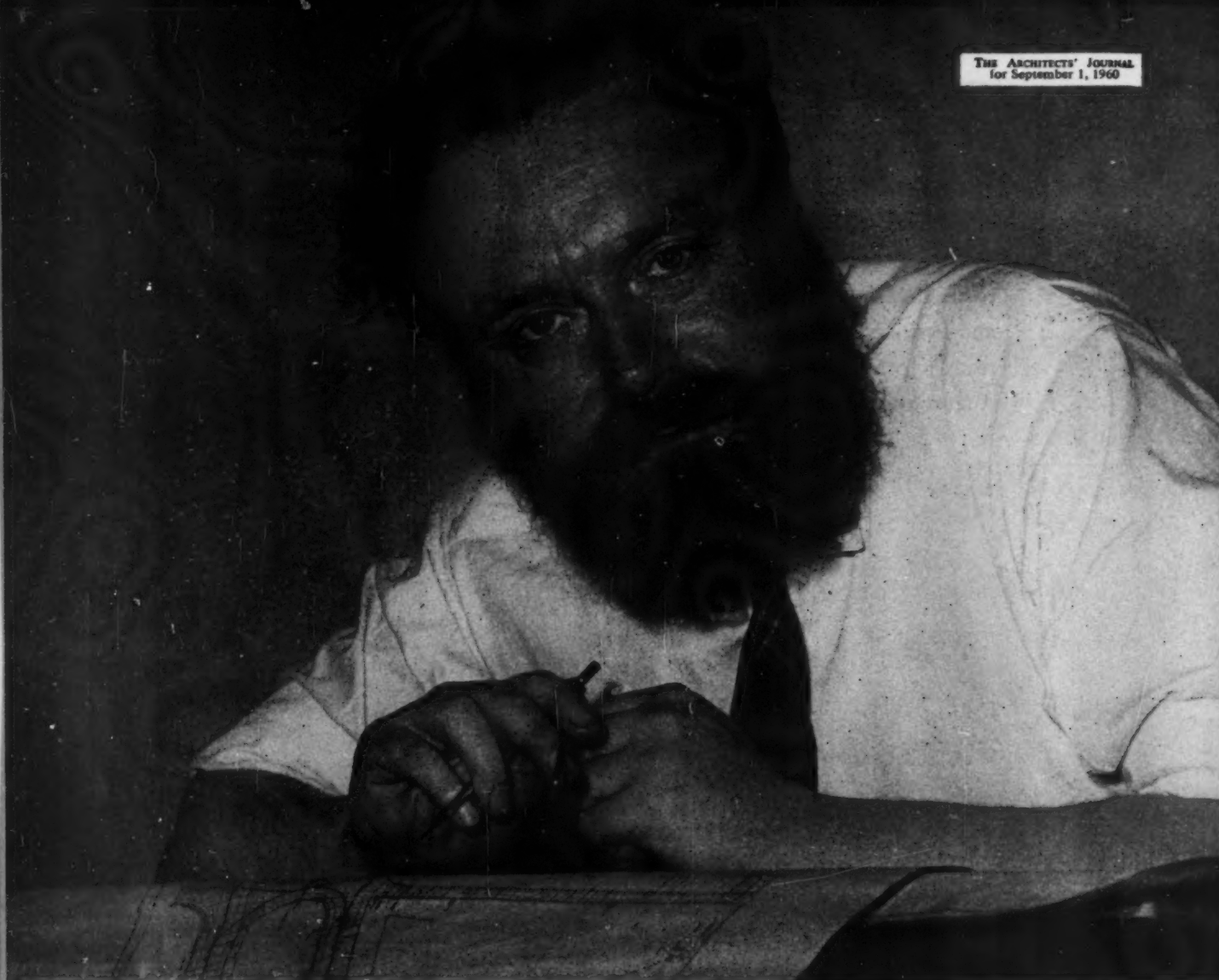
water. As this dries out, volume changes will take place and cracks will form in the structure itself and also in the plaster coats. The intensity of such cracking will often depend more on the history of the weather conditions during erection than on the workmanship or materials used.

As long as the cracks are not accompanied by loosening of the setting coat from the backing, or of the backing from the wall or ceiling, they can be filled and dealt with quite effectively at the first redecoration. Stripping or partial stripping of the setting coat from the backing is a common fault in new plastering. It can be caused in a number of ways. If the backing tends to be weak and friable, and the setting coat is hard, loosening of the setting coat is very liable to take place. If the backing is applied during very hot weather it may develop so much suction that, when the setting coat is applied, the interface bond will be weak because the water required for the hydration of the gypsum plaster has been sucked away before effective crystallisation has taken place.

Later on, atmospheric moisture will allow the setting action to proceed further and the resulting expansion will cause the setting coat to blister off. This type of failure is frequently seen on bathroom walls.

If a newly applied plaster finishing coat freezes, even superficially, there will be disruption of the bond to the backing and although, when the walls dry out after the thaw, the plaster may appear to harden off in the normal manner, there is a considerable risk of stripping at a later stage. This weakness may not show up until the first attempt is made to remove wallpaper from the wall.

In order to reduce the risk of early failure many



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technical section

plastering contractors still use a 3 to 1 sand/cement backing followed by a neat gypsum plaster finish. Such plastering will usually remain firmly in position, but has a marked tendency to develop slow crazing. Sounds are reflected from such relatively hard surfaces and such walls cause difficulty when plugging for fixings. They also tend to dry out very slowly. In recent years the use of gypsum plaster in the backing coat has become common, and most manufacturers of wall plaster supply a "browning" coat for use under their finish. When used in accordance with the makers' instructions, under normal circumstances, this method gives very good results. It should be recognised, however, that the backing coat must be relatively rich—2 cu. ft. or 1½ cu. ft. of sand to 1 cu. ft. of gypsum plaster. It has been my experience that such two coat plastering tends to give unsatisfactory results if the atmospheric conditions are unfavourable for drying out or if the walls are so damp that the plaster coats fail to dry off in a normal manner.

Surface defects in plaster, such as pitting and blowing, are very difficult to trace back to their source. They can be caused by the presence of expansive particles in any of the materials used. By the time the effects become apparent it is usually clear that the impurities were only present when a relatively small part of the plastering was carried out. It is then too late to obtain samples of the materials in use at the time. The trouble can be caused by a bad bag of lime, or gypsum plaster. Ashes thrown from a brazier on to the sand heap can be responsible, or nodules of a dried backing coat mix containing cement can become incorporated in the setting coat through the use of dirty mixing boards.

Many faults in workmanship, which have a marked effect on the results, are virtually impossible to establish. The use of a light spreading action in place of real pressure, and the use of a gypsum plaster mix which has already commenced to stiffen are examples of this. Unsatisfactory adhesion to the structural units may result from ineffective preparation and cleaning—all dust, loose material, efflorescence, oil, etc. must be eliminated. Unsatisfactory adhesion between coats may be due to ineffective keying—the scratching should be carried out carefully so that the grooves are uniform in coverage but not too deep.

Drying out should be assisted by means of controlled ventilation and every effort should be made to prevent heavy condensation at night, as the surface differences produced by such condensation are very liable to show up later as stains showing through the distemper or plastic emulsion used for decoration. Even the scratches produced by rubbing down with glass paper of coarse texture can behave in a similar manner.

Sands do not cause much trouble in plastering but care should be taken to avoid the use of sea sand containing chlorides because of their hygroscopic nature and of sands which are really the degradation products of granite, as these have inherently weak grains.

STN No. (41)P

UDC No.

Cement/Sand Renderings

In spite of all that has been written on the subject there is still a mistaken impression in many quarters that an external rendering needs to be waterproof. This is not the case; all the best facing bricks are porous in nature and at least one, which has an exceedingly good reputation, gives results on test of over 30 per cent by weight absorption in 24 hours.

The best external renderings are not only porous in character, but rather soft and weak mechanically. In very exposed situations, where continuous rain over long periods is encountered, it is undesirable to specify a higher cement content in the main rendering, but a layer of 1:1 sand/cement mixture about ½ in. thick should be applied first and the main rendering consisting of six parts of sand, one part of hydrated lime and one part of Portland cement should be applied over the rich layer at once before the latter has commenced to set.

The rich coat may be applied by mechanical means as a spatter-dash coat but it must form a continuous layer.

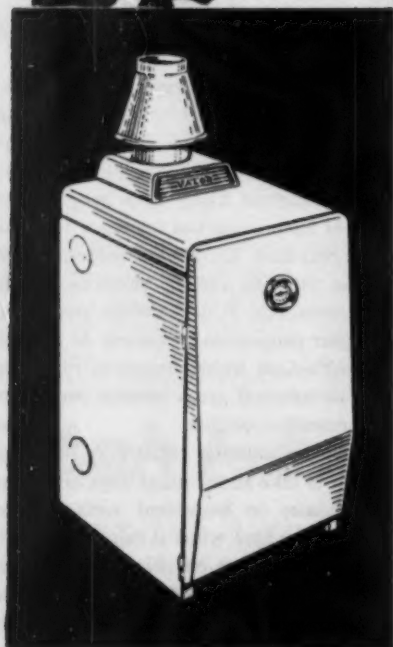
Relatively weak open-textured renderings do not suffer to any great extent from frost action after the rendering has hardened. It is the moderately porous and moderately strong mix which produces the type of rendering most susceptible to frost damage. Steps must always be taken to prevent freezing whilst building is in progress.

As effective adhesion to the background is very important, great care should be taken to clean the surface free from dust, efflorescence, etc. A moderate degree of "suction" is also an absolute necessity. A relatively rough surface finish is to be preferred, as smooth surfaces have a marked tendency to crack. The common pebble-dash finish very seldom cracks or crazes because the fine surface shrinkage cracks tend not to be continuous. It is therefore possible to incorporate a higher proportion of cement in the mix when using a pebble-dash finish. Excessive roughness is to be avoided in industrial areas because rough surfaces are more retentive of dirt.

When using decorative external renderings it is particularly important to take all the usual steps to prevent dirt which accumulates on horizontal surfaces from being washed down the face when it rains.

The use of external renderings on chimney stacks and parapets walls should be avoided altogether as the risk of failure is too high. The application of a cement rendering to dense, smooth concrete is also hazardous, and the difficulties are only partly overcome by the use of special bonding coats.

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For further details please contact:

The Valor Company Ltd., Bromford, Erdington 24, Birmingham 24. Erdington 6151

technical section

SIS No.

(43)

UDC No.

Cement/Sand Floor Screeds

These are used to some extent as floor finishes over concrete, but are in much wider use to form the base on which wood blocks, tiles, rubber flooring, linoleum, etc. are laid. The mix is usually specified to consist of three parts by measure of clean sand to one part of Portland cement. This form of wording is unsatisfactory because it is liable to be interpreted as meaning three shovelfuls of sand to one shovel of cement, and a much greater volume of damp sand is likely to stay on the shovel than in the case of the cement. A better wording would be 3 cubic feet of dry sand to 90 lb. of Portland cement.

Although, in practice, the sand would be measured in a damp condition the above wording would allow the contractor to make suitable adjustment for the "bulking" of the sand.

When laying floor screeds, proper attention must be paid to the preparation and cleaning of the base concrete, and the cleaned surface should be treated with a neat cement grout. The recommendations for surface treatment contained in the first article of this series, *Granolithic Paving*, apply to floor screed also.

It is sometimes suggested that floor screeds should not be attached to the base concrete, but isolated from it by some kind of membrane. The theoretical argument is that this enables the screed to shrink as a whole, and therefore eliminates the risk of cracking. In practice this does not take place because there are many reasons for local restraint. Even if the surface of the base concrete is quite smooth and regular, uneven lateral shrinkage will be caused by the presence of openings for doors, column bases, etc., and cracks will result.

Cracking will also result from curling due to temperature differences, and brittle floor finishes may crack because of deformation caused by uneven loading. Such cracking probably can only be prevented by securing a really firm bond to the base concrete so that lateral movement cannot take place.

In order to minimise shrinkage stresses it is usual to recommend the use of a semi-dry mix. This is quite

satisfactory as long as mixing is thorough and the method of consolidation employed is effective, but it is all too common to find a mix resembling brown sugar in consistency being spread with wooden floats in such a manner that it is only the top $\frac{1}{4}$ in. or so which has been compacted. Below the surface the sand grains are not even coated with cement. Under such conditions the screed remains weak and friable below the top skin.

It should always be recognised that the drier the mix the greater the effort which must go into consolidation. If the screed is merely to be floated into position sufficient water must be added to produce a fully plastic mix.

Under normal circumstances floor screeds are laid to a thickness of $\frac{1}{4}$ in., but in some instances it may be necessary to lay to a thickness of as much as 2 in. If this is the case a 3 to 1 sand/cement mix must never be employed, because at such a thickness the shrinkage stresses will be too high. Instead, a fine concrete consisting of 3 cu. ft. of pea shingle 2 cu. ft. of sand and 90 lb. of cement should be specified.

In the case of floor screeds it is particularly important to arrange for good curing conditions or the surface will be dusty and friable. It will then prove too weak to carry the adhesive used for fixing the finish. When thin rubber flooring is to be laid it is especially important that the surface of the screed is strong and hard, because the elastic nature of the rubber causes heavy shear stresses at the bond, when moving point surface loads are applied, as in walking.

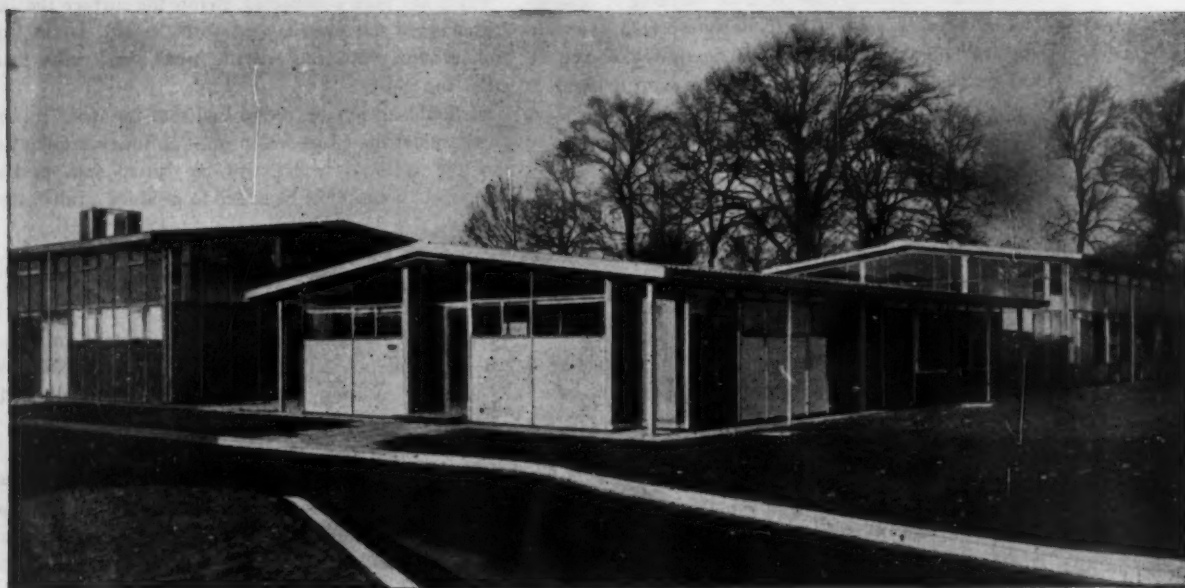
In the case of solid floors at ground level, where no actual damp proof membrane has been used, it is necessary to prevent rising dampness wherever an adhesive is to be employed. Waterproofers based on stearates and the like, if added to the screed, will tend to make it water-repellant. This is an advantage if rubber, plastic, cork or linoleum tiles are to be laid because it will, in most instances, reduce the rate of moisture rise to a figure which is below that of the normal evaporation at the joints.

ELECTRIC FLOOR WARMING

INFORMATION SHEET

3

A high tribute to Electric Floor warming



British Standards Institution choose it for their new offices and testing centre at Hemel Hempstead

Easier planning. This new centre for the British Standards Institution is built on the modular principle. It comprises a series of three inter-connected buildings: an administration block, a general office and a test shop. The buildings are 13 ft. apart and are connected by linkways. Total floor area is 6,366 sq. ft.

The electric floor warming system consists of cable embedded in the floor screed. The total loading is 85 kW, to give a temperature of 65° F.

Lower installation costs. Electric floor warming is one of the easiest systems to install in new buildings — and certainly the cheapest. There are no fireplaces, flues, chimney breasts, pipes and radiators to plan for. Outside boilerhouses, chimneys, fuel stores and pipe trenches are no longer necessary.

Trouble-free luxury heating. Electric floor warming never needs attention, and obviates the need for boiler-room staff. It eliminates all chores associated with solid fuels; goes on giving constant, even warmth year after year.

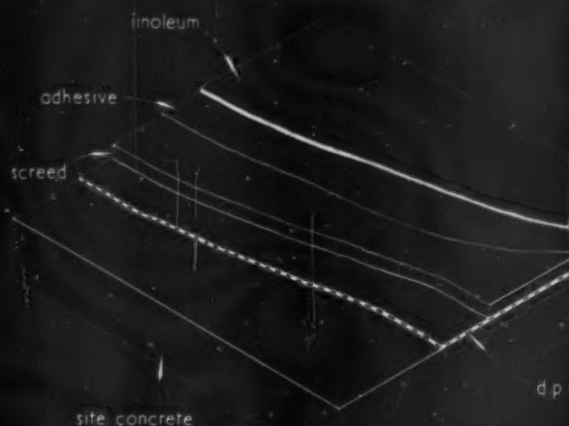
Low running costs . . . cleanliness. Electric floor warming is particularly economical to run, because it stores up heat for the day by using cheap off-peak electricity at night. Another great advantage is its cleanliness. It does not cause dust and dirt and there are no pipes or radiators to stain walls or ceilings.

If you are thinking of installing electric floor warming, ask your Electricity Board for details.

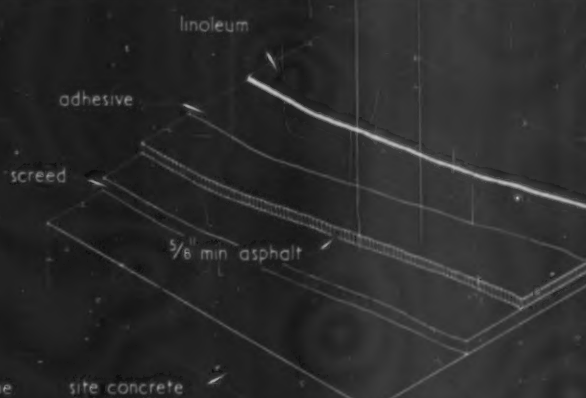
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FLOOR FINISHES | LINOLEUM AND CORK CARPET

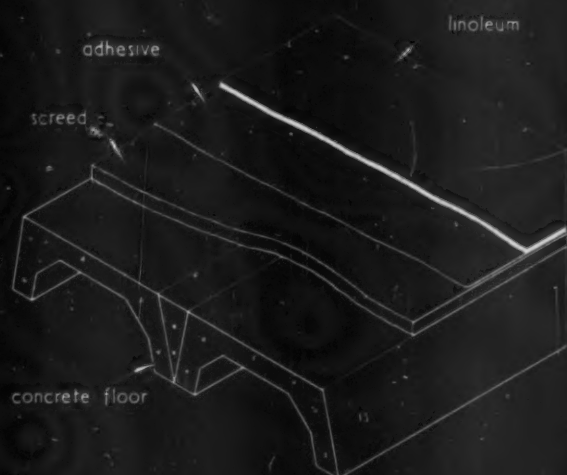
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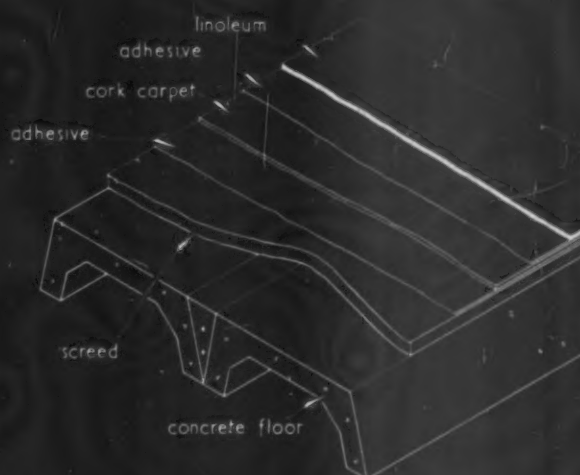
NEW SOLID CONCRETE



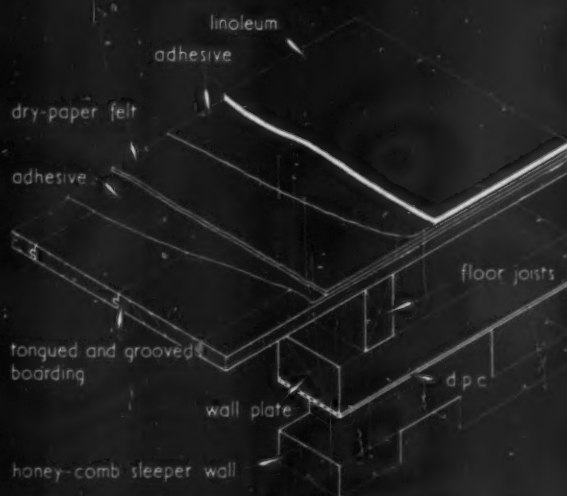
EXISTING SOLID CONCRETE



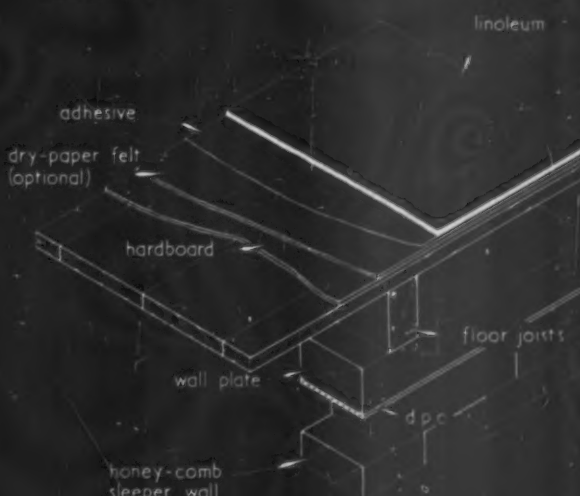
SUSPENDED CONCRETE FLOOR



SUSPENDED CONCRETE FLOOR WITH ADDITIONAL INSULATION



NEW OR OLD WOOD FLOOR (tongued and grooved)



NEW OR OLD WOOD FLOOR (rough boarded)

LINOLEUM AND CORK CARPET : LAYING AND FIXING TO FLOORS.

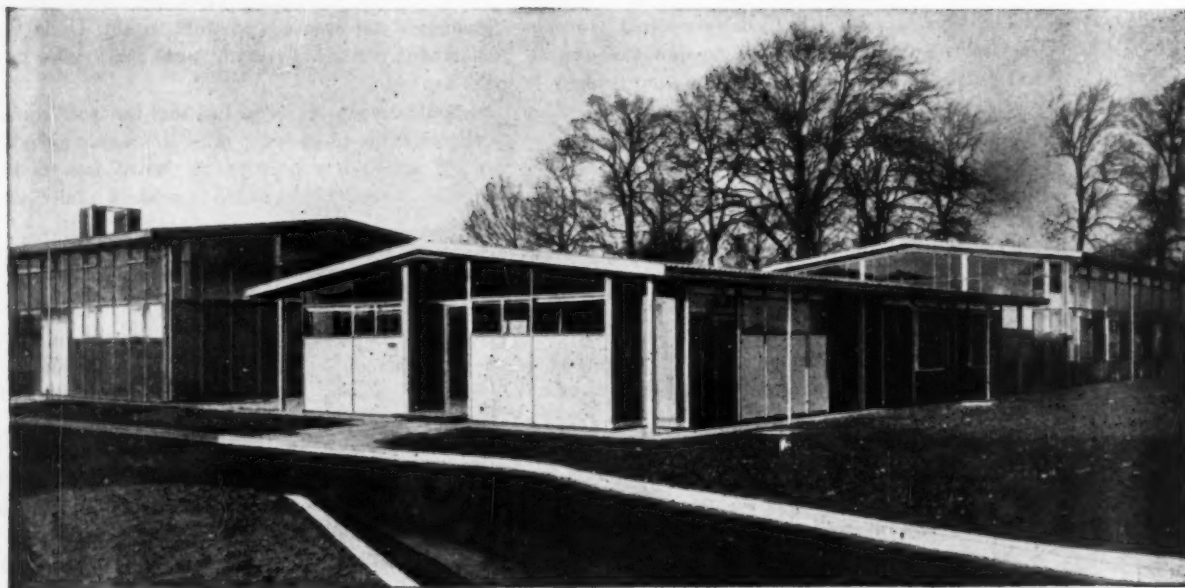
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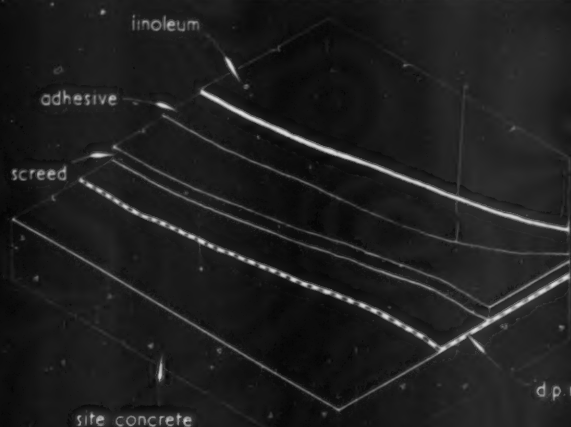
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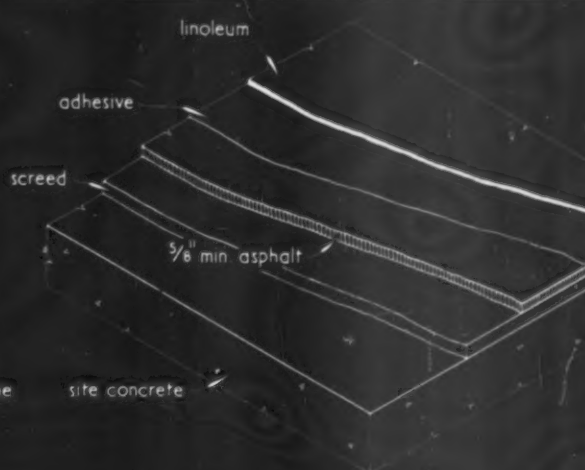
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FLOOR FINISHES | LINOLEUM AND CORK CARPET

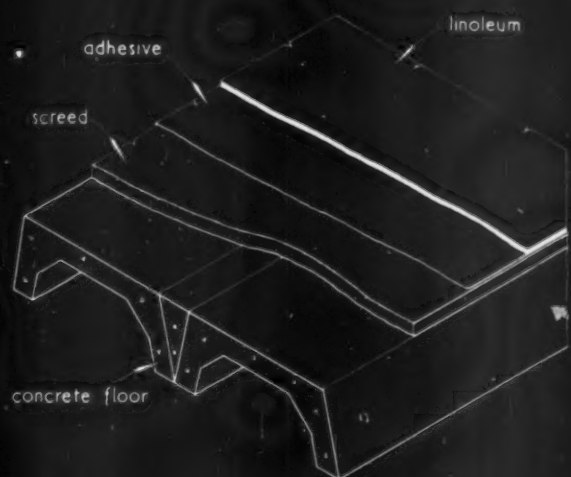
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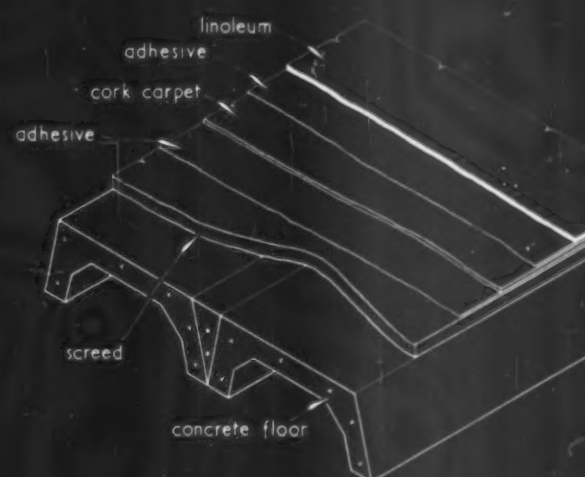
NEW SOLID CONCRETE



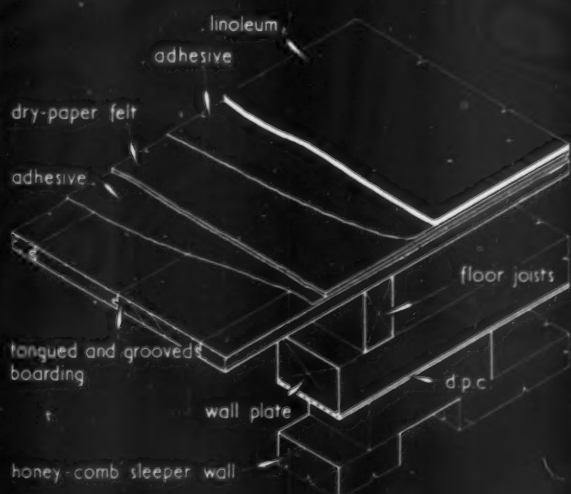
EXISTING SOLID CONCRETE



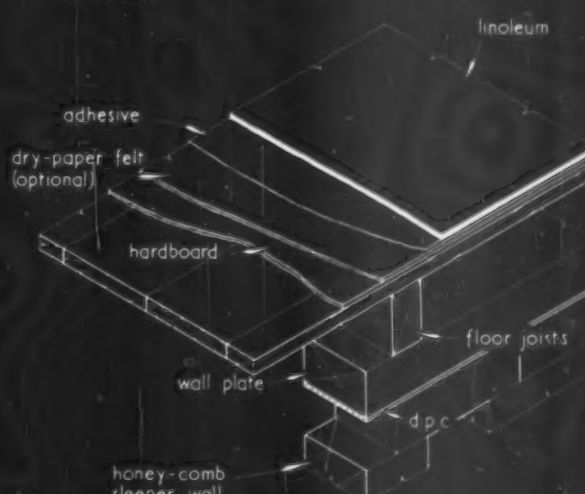
SUSPENDED CONCRETE FLOOR



SUSPENDED CONCRETE FLOOR WITH ADDITIONAL INSULATION



NEW OR OLD WOOD FLOOR (tongued and grooved)



NEW OR OLD WOOD FLOOR (rough boarded)

LINOLEUM AND CORK CARPET : LAYING AND FIXING TO FLOORS

Compiled from information supplied by : The Linoleum Manufacturers' Association

19.G3 LINOLEUM AND CORK CARPET: SPECIFICATION NOTES FOR LAYING AND FIXING TO FLOORS

This Sheet, the third of a group on linoleum and cork carpet, supersedes Sheet 19.G3 published 15.4.54. It gives typical specification notes for preparing the sub-floor and fixing linoleum to old and new floors; the drawings on the face show typical details.

Sheet 19.G1 covers general data, types and uses; 19.G2 deals with laying including typical designs, and 19.G4 with specialised uses, e.g., to stairs, furniture, doors and walls.

Preparation of Surfaces

New solid concrete floors: All surfaces to be covered with a 1 to 1½ in. screed (2 in. minimum should be specified where direct-to-earth floors have a damp-proof membrane incorporated during construction) of 3 : 1 washed building sand and Portland cement well trowelled to a smooth level finish. Expansion joints in the screed to be filled with a non-shrinking filler. Surfaces to be clean and free from dust: where "dusting" occurs surface to be primed with bituminous or other approved primer free from alkaline content. Moisture content to be tested with an approved type of moisture meter and the readings correctly interpreted to ensure that the floor is dry enough before laying begins.

Existing solid concrete floors, quarry tiles or similar: Direct-to-earth floors not containing a d.p.c. to be surfaced with mastic asphalt not less than ½ in. thickness.

Existing suspended concrete floors: Worn or uneven areas to be levelled with an approved levelling compound. Surfaces which are "dusting" to be primed with a bituminous or other approved primer free from alkaline content.

Integrally-heated concrete floors*: Floors to be dry before linoleum is laid: moisture content to be tested with an approved type of moisture meter. The heating system to be turned off and the floor allowed to become cold before laying begins. After linoleum (linoleum tiles) has been laid the surface temperature of the floor is not to exceed 80° F.

New wood floors: The surface to be smooth, dry and clean. Dry (bitumen-saturated) felt paper to be laid across the run of the boards, with seams closely-butted, and cut to fit vertical surfaces. Felt paper to be bonded to the floorboards with an approved adhesive and well rolled with a linoleum roller.†

Existing wood floors: All loose boards to be securely fixed, all exposed nail heads punched in and all surface irregularities removed, if necessary with a sanding machine. All boards which have been sanded should be correctly primed before felt paper is bonded to the floor.‡

* Direct-to-earth floors should have a damp-proof membrane below the heating element embodied in the floor during construction.

† Boarded floors invariably show on the surface of the linoleum even if sanded. For exemplary results plywood or hardboard treatment is recommended.

‡ The most satisfactory method of preparing a boarded floor is to surface it with hardboard or plywood. The sheets of hardboard or plywood should be laid with staggered joints and be securely nailed down with flat-headed screw type nails at 6-in. centres (4-in. centres along the edges); ½-in. hardboard or 4mm plywood is the thickness usually employed but in very badly worn floors ¾-in. thickness is recommended.

Additional Sound-Insulating Underlay

Concrete sub-floors: Cork carpet (cork carpet underlay) of . . mm gauge to be bonded direct to the concrete.

Wood sub-floors: Cork carpet (cork carpet underlay) of . . mm gauge to be bonded to a felt paper underlay.

(see note under *Materials*)

Floor Finish

The whole of the floor surfaces is to be covered with linoleum (linoleum tiles) bonded with the adhesive specified. All cutting-in, seams and joints to be close-fitted to the architect's approval.

Skirtings

Provide and fix the linoleum (p.v.c.) skirting specified with the least possible number of joints. All joints and mitres to be close-fitted and the skirting securely bonded.

Materials

Linoleum, linoleum tiles, or cork carpet: Linoleum (linoleum tiles) (cork carpet) to be . . mm gauge of . . type, . . colour (pattern number), and . . in size. The floor finishing material to be similar in all respects to the sample deposited with the architect.

Felt paper: The felt paper to be not less than 0.90 mm in thickness.

Cork carpet (for sound insulation if required): The underlay to be . . mm cork carpet.

Note: Underlays can aggravate indentation where high point loadings are prevalent. Correct dispersal of point loads should receive attention at the design stage.

The following combinations have been found generally satisfactory in normal circumstances:—

3.20mm linoleum; 2.50mm cork carpet underlay or 3.20mm cork carpet.

4.50mm linoleum or thicker gauges; 2.50mm cork carpet underlay, 3.20mm cork carpet or 4.50mm cork carpet.

Adhesives

The approved adhesive to be used as recommended by the manufacturer.

Relevant Publications

B.S. Code of Practice C.P.203 (1951) *Sheet and similar floorings*.

B.S.810:1957 *Sheet linoleum (calendered types) and cork carpet*.

B.S.1863: 1952 *Felt backed linoleum*.

Building Research Station Digest No. 1, *The design of timber floors to prevent dry-rot*.

Building Research Station Digest No. 77, *Linoleum*.

Building Research Station Digest No. 86, *Damp-proof treatments for solid floors*.

Compiled from information supplied by:

The Linoleum Manufacturers' Association

Address: 127, Victoria Street, London, S.W.1

Telephone: Tate Gallery 4218/9

CEMENT KEY FOR PLASTERING

The Architects' Journal Library of Information Sheets 782. Editor: Cotterell Butler, A.R.E.B.A.

CEMENT · PLASKEY · AND HYDRALIME · PLASKEY · KEY FOR PLASTERING

This Sheet describes the use of Cement Plaskey to provide a key for external rendering or internal plastering and Hydralime Plaskey for internal use only. Both are prepared on the site with Cemprover, a liquid product which gives the mixture its adhesion.

GENERAL

Present-day shuttering techniques produce so smooth a finish on untreated concrete that subsequently providing a key by hacking can be laborious and often reduces or disturbs the cover to the reinforcement. The application of Plaskey obviates all these disadvantages and provides an excellent key for plastering or rendering. Cement Plaskey is suitable for external and internal applications: it is not suitable on bricks containing sulphates except in the case of dry, internal walls. Hydralime Plaskey is for internal work only, including surfaces covered with oil-bound paint; it should not be used on brickwork or paintwork subject to sulphate action or in damp conditions and it should not be used on water-bound distemper or similar.

CEMENT PLASKEY

Mix

The mix consists of 2 parts by volume of Portland cement and 3 parts by volume of fine, clean, sharp sand gauged with sufficient Cemprover, diluted with an equal quantity of water, to give a thick slurry; this should be stirred frequently and used within one hour of mixing. The sand used should be as dry as possible, but, if dry sand is not available, the Cemprover should be used undiluted. Cemprover is supplied in 1 and 5 gallon containers.

Preparation of Surface

Untreated concrete or smooth-faced brickwork should be cleaned of all traces of mould oil, efflorescence, dirt and grease, if necessary by washing with a detergent. Where difficulty in applying the Plaskey is encountered or it dries out too rapidly, the suction should be controlled by damping the surface with clean water. Where suction is excessive (e.g. on limestone concrete), a priming coat of Cemprover should be applied diluted, if necessary with not more than an equal volume of clean water. This should be allowed to dry before the Cement Plaskey is applied (3 to 24 hours).

Application

When the surface is free from moisture, the Plaskey should be applied by brushing vigorously and stippling immediately with a banister brush (or similar) to form a close-textured key. The Plaskey should be lightly sprayed with water when conditions are such that it is liable to dry out rather than set, e.g., in hot sun, high winds. In very exposed positions it should be protected with hessian in addition to the damping. Plaskey should not be applied when the temperature is likely to fall below 40° F. The

Plaskey must be rock hard before any undercoat for plaster or rendering is applied: this may take 3 to 7 days depending on weather and site conditions.

Note: Mixes containing Cemprover must not be emptied into drains owing to its adhesive property. For the same reason any splashes must be wiped immediately from any surface with which it may accidentally come in contact. Brushes should be cleaned at frequent intervals.

Covering Capacity

One gallon of Cemprover diluted with one gallon of water will cover 18 to 25 sq. yd., depending on the grading of the sand used, and the type and condition of the surface to be keyed.

Plastering and Rendering

The following recommendations are made by the manufacturer for plastering and rendering surfaces keyed with Cement Plaskey.

Internal walls: Two-coat work is recommended wherever practicable. The total thickness of the two coats should not exceed $\frac{3}{4}$ in. and adequate time should be allowed between their application in accordance with B.S. Code of Practice 211:1949 *Internal Plastering*.

Internal ceilings and soffits: Where Portland cement, Hydralime and sand mixes or Walcrete Masonry Cement and sand mixes are to be used, single-coat work is recommended with a maximum thickness of $\frac{3}{4}$ in. For gypsum plaster finishes, retarded hemihydrate or anhydrous gypsum plaster should be mixed with Hydralime in accordance with the manufacturer's recommendations and applied in not more than two coats to a total thickness of $\frac{3}{4}$ in. maximum.*

External walls: Although the mix will vary with every type of job, low-density mixes should be used if possible and the first coat of rendering should not exceed $\frac{3}{4}$ in. in thickness to ensure good adhesion to the Plaskey. Adequate time should be allowed between the application of successive coats.

External soffits: Where Portland cement, Hydralime and sand mixes or Walcrete Masonry Cement and sand mixes are specified, single-coat work is recommended with a maximum thickness of $\frac{1}{4}$ in.*

* Where thicker plaster or different materials from the above are specified, the manufacturer's technical advice should be sought.

HYDRALIME PLASKEY

Mix

The mix consists of 1 part by volume of Hydralime and 2 parts by volume of fine, clean, dry sand, sieved to ensure thorough mixing and gauged with undiluted Cemprover to produce a thick slurry. It is essential that the sand used be dry.

7.Z1 CEMENT ·PLASKEY· AND HYDRALIME ·PLASKEY· KEY FOR PLASTERING

Preparation of Surface

The surface should be thoroughly cleaned of oil, grease, water-bound distemper or limewash; it should be washed with a detergent and rinsed with clean water. Where difficulty in applying the Plaskey is encountered or it dries out too rapidly, the suction should be controlled by damping the surface with clean water. Where the suction is excessive (e.g. on limestone concrete), a priming coat of Cemprover, should be applied diluted, if necessary, with not more than an equal volume of clean water. This should be allowed to dry before the Hydralime Plaskey is applied (3 to 24 hours).

Application

The Plaskey should be applied by brushing vigorously into the surface and stippling with a banister brush (or similar) to give a fine, close-textured key. Where a floating coat is to be applied, a slightly heavier-textured stipple is required. The Plaskey should be allowed to harden thoroughly for a period of 24 to 72 hours, depending on conditions, before the application of any plaster coat. (See note under *Cement Plaskey, Application* for precautions regarding disposal of unused mixes.)

Covering Capacity

For walls: One gallon of Cemprover will cover 15 to 20 sq. yd., depending on the surface and the texture of the stipple.

For ceilings: One gallon of Cemprover will cover 10 to 12 sq. yd.

Plastering

On fair-faced painted surfaces, the plaster should be limited to a thin finishing coat ($\frac{1}{4}$ in. maximum).

On surfaces where an undercoat is required it should not exceed $\frac{1}{2}$ in.

Undercoat: The mix should consist of 1 part of Hydralime, soaked to putty, mixed with 2 parts of sand and gauged with a suitable plaster immediately before use. The floating coat should be well keyed with a devil float and left to set hard before the finishing coat is applied.

Finishing coat: The following mixes are recommended for the finishing coat (all parts by volume):

1 : $\frac{1}{2}$ to $\frac{1}{4}$ lime putty/gypsum plaster

1 : $\frac{1}{2}$ to $\frac{1}{4}$: 1 (maximum) lime putty/gypsum plaster/sand

Class B or C plasters gauged with lime (e.g. 3 : 1 Paristone/lime).

The plaster should be applied by trowel, float and trowel and, to avoid stress on the key, a minimum amount of water should be used with the final trowelling which should be as light as possible. During the application of the first trowel coat, the Hydralime Plaskey may soften slightly, but this is a temporary condition.

FURTHER INFORMATION

The manufacturer maintains a technical advisory department available to answer questions dealing with all aspects of the application of Cement Plaskey and Hydralime Plaskey. Modified specifications for special conditions can be supplied in all cases.

Compiled from information supplied by:

The Cement Marketing Company Limited.

Address: Portland House, Tothill Street, London, S.W.1.
Telephone: Abbey 3456.

working detail

(8)

WINDOWS: 80

SHOP FRONT: SHOP IN CARDIFF

T. Alwyn Lloyd and Gordon, architects; Leonard Beavan, architect-in-charge



This window is shown as an example of the use of standard shopfitters' materials and methods to produce a coherent design.

7.21 CEMENT · PLASKEY · AND HYDRALIME · PLASKEY · KEY FOR PLASTERING

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1 : $\frac{1}{2}$ to $\frac{1}{4}$: 1 (maximum) lime putty/gypsum plaster/sand

Class B or C plasters gauged with lime (e.g. 3 : 1 Paristone/lime).

The plaster should be applied by trowel, float and trowel and, to avoid stress on the key, a minimum amount of water should be used with the final trowelling which should be as light as possible. During the application of the first trowel coat, the Hydralime Plaskey may soften slightly, but this is a temporary condition.

FURTHER INFORMATION

The manufacturer maintains a technical advisory department available to answer questions dealing with all aspects of the application of Cement Plaskey and Hydralime Plaskey. Modified specifications for special conditions can be supplied in all cases.

Compiled from information supplied by:

The Cement Marketing Company Limited.

Address: Portland House, Tothill Street, London, S.W.1.
Telephone: Abbey 3456.

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The Architects' Journal Library of Information Sheets.
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SHOP FRONT: SHOP IN CARDIFF

T. Alwyn Lloyd and Gordon, architects; Leonard Beavan, architect-in-charge



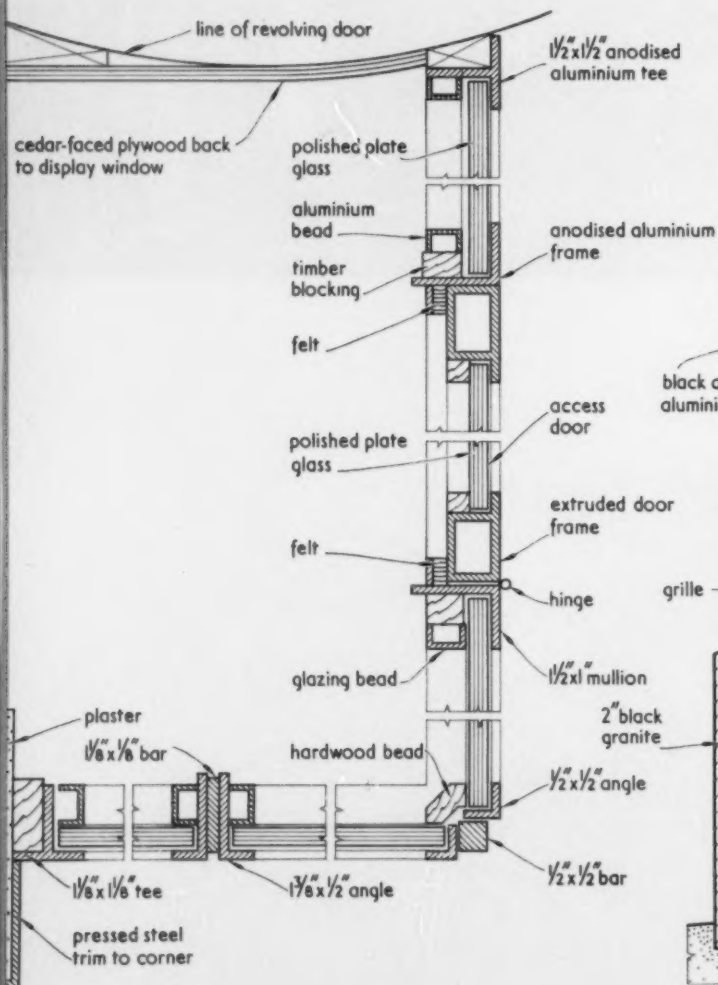
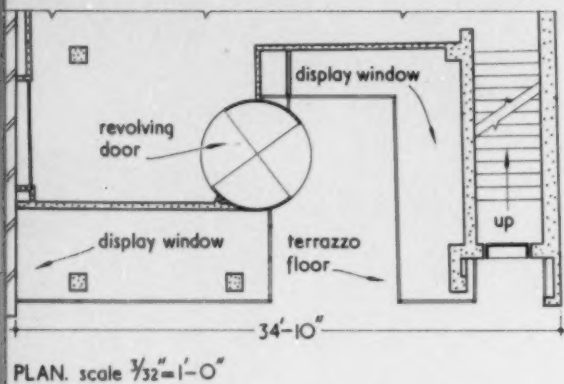
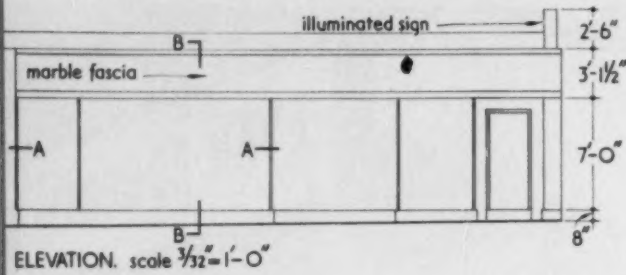
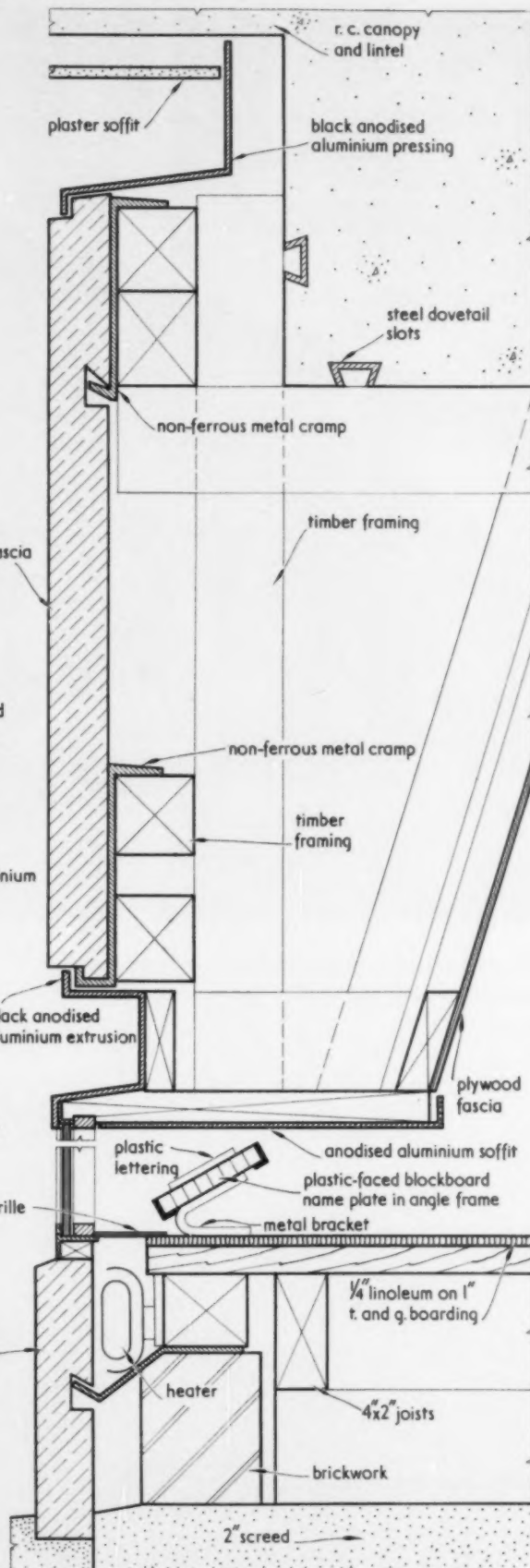
This window is shown as an example of the use of standard shopfitters' materials and methods to produce a coherent design.

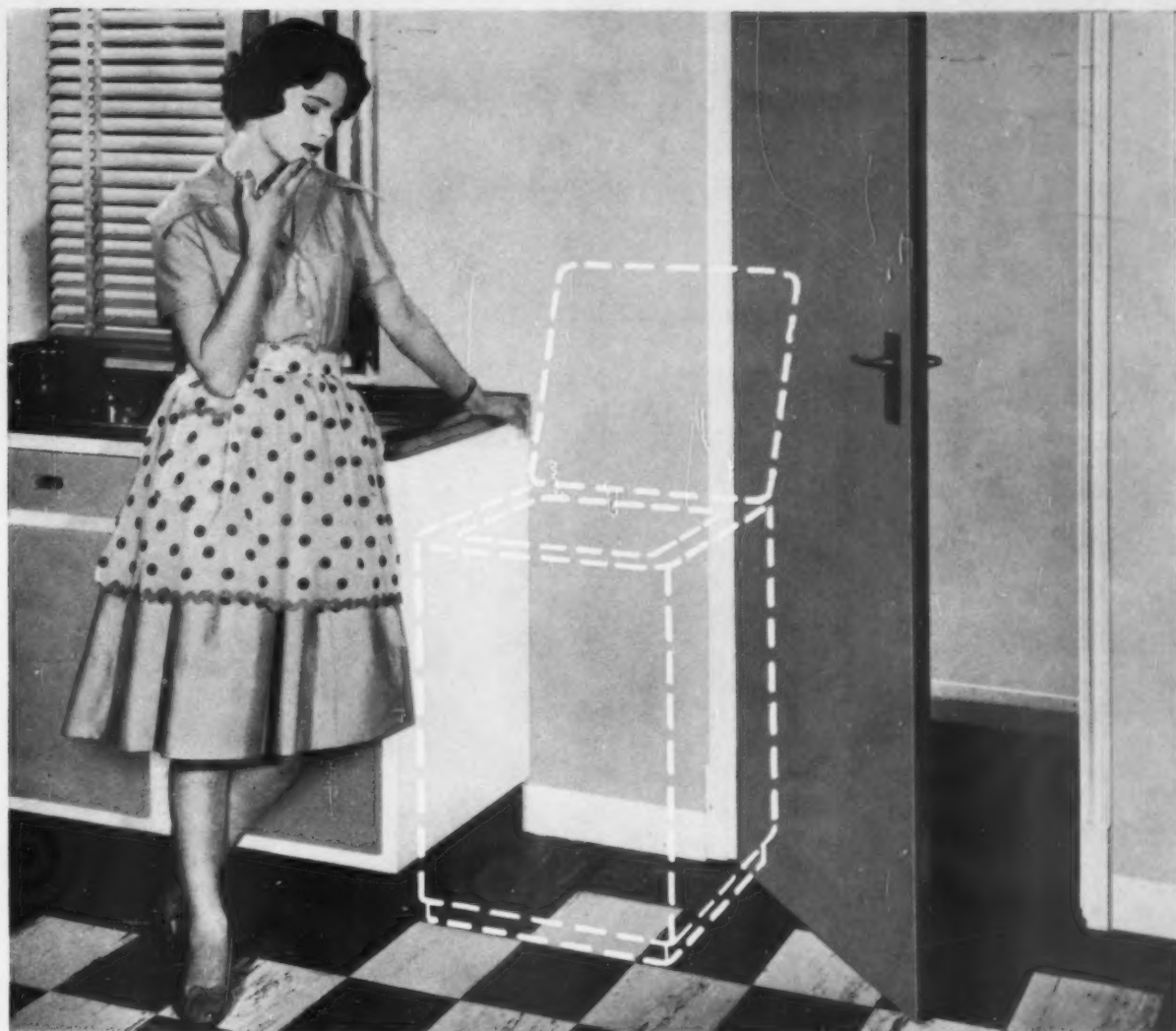
working detail

(8)
WINDOWS: 80

SHOP FRONT: SHOP IN CARDIFF

T. Alwyn Lloyd and Gordon, architects; Leonard Beavan, architect-in-charge

PLAN AT A-A. scale $\frac{3}{8}$ full sizeSECTION B-B. scale $\frac{3}{16}$ full size



In restricted floor and wall areas . . .

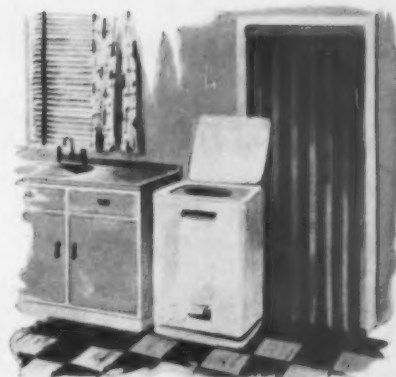
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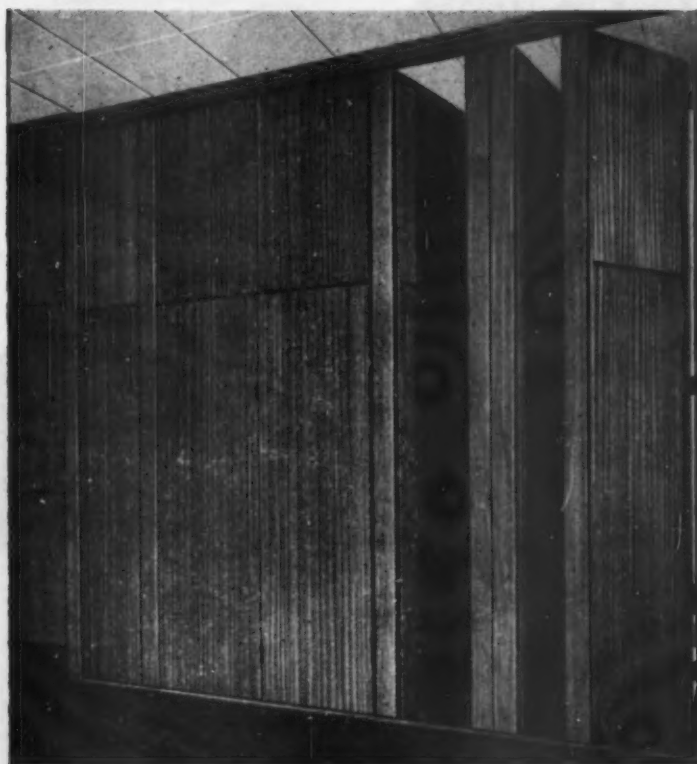
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40/5

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The G.P.O. has launched a scheme for "Brighter Post Offices" and this is the South Molton Street office, before and after modernisation by Sir Hugh Casson and Professor Misha Black—whose talents hardly get full exercise. Since all must use post offices the point of modernisation is easier recognition from outside and better service within. The first is provided by more standardisation, the latter by better lighting, clearer signs, and more slot machines. "Before" on left.



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Announcements

PROFESSIONAL

John Newlove, A.R.I.B.A., of 4, Saunderson Road, Penistone, Yorkshire, is about to take up an appointment as Lecturer in Building at Barnsley College of Technology and would like to receive trade literature and samples.

Alister MacDonald & Partners have appointed F. David Craddock, A.R.I.B.A., as one of the Associated Members of the firm.

C. B. Martindale, F.R.I.B.A., moved his Beaconsfield office to 23, Wilton Road, Beaconsfield, Bucks. (telephone Beaconsfield 103), in January 1960, but trade catalogues are still being sent to his former address at 2, Assheton Road.

John Bickerdike, A.R.I.B.A., has taken in as an associate partner, P. J. A. Gower, A.R.I.B.A. The style of the firm is now changed to John Bickerdike Partnership, and the address is now 37, Gloucester Place, W.1 (telephone Hunter 0775).

N. M. Phillips, A.R.I.B.A., has moved to 23, Portland Square, Workington, Cumberland (telephone Carlisle 24501).

Leslie J. Newton, F.R.I.C.S. has taken into partnership A. Birch, A.R.I.C.S. The firm will now be known as Leslie J. Newton & Partners, and will continue to practise from 9-10 Staple Inn, W.C.1 (Holborn 0372).

TRADE

High Duty Alloys Ltd. have transferred their Birmingham Sales Office from Queen's College Chambers, Paradise Street, to 369, City Road, Edgbaston, Birmingham, 16 (telephone Bearwood 2344/5).

The Reed Paper Group Press and Public Relations Office has moved to Blackfriars House, New Bridge Street, London, E.C.4 (telephone Fleet Street 7701).

Howard Farrow Ltd. have moved their Head Office to Highfield Road, Golders Green Road, N.W.11. The telephone number MEAdway 3232 remains the same and will be common to both the head office and the plant depot.

John B. Henderson has joined Fablon Ltd. of 49, Park Lane, W.1, as Product Manager of the Building Division.

Elephant Oil Mill (Private) Ltd. has changed its name to Blundell Eomite Paints Private Ltd. It is a subsidiary company of Blundell, Spence & Co. Ltd.

Causeway Reinforcement Ltd. have formed a new Installation Division. Mr. J. D. Abernethy has been appointed Manager and the address is Five Ash Works, Dover Road East, Northfleet, Kent.

The Brightside Foundry and Engineering Co. Ltd. have appointed G. E. Robinson as General Sales Manager, G. H. Lewis as Sales Manager, Foundry Division, and T. Hessey as Technical Sales Manager.

Gerflex colour flooring distributed by Gerlands Ltd. have now moved to new offices at 90 Crawford Street, London, W.1—telephone AMBassador 2016 (3 lines), where all information is now obtainable.

Correction

In the "Building Illustrated" feature on Basildon housing, AJ, August 11, 1960, the roof tile suppliers' name was omitted from the contractors' list: it is Redland Tiles Limited.

Salford Royal Technical College another Stott installation

Salford Royal Technical College, a fine example of modern architecture, will eventually accommodate 2,500 students. The catering equipment used throughout is by Stotts of Oldham.

The architect was C. H. Simmons, Esq., A.R.I.B.A., architect to Lancashire County Council, and we are indebted to Sherratt & Smith Ltd., constructional engineers, for this photograph.



Other recent orders for complete schemes include:

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St. Paul's College, Cheltenham.	St. John Vianney School, Blackpool.
Cheshire Training College, Crewe.	Cranville College of Further Education, Sheffield.
Loughborough College, Loughborough, Leics.	City Training College, Sheffield.
	Doncaster Technical College.

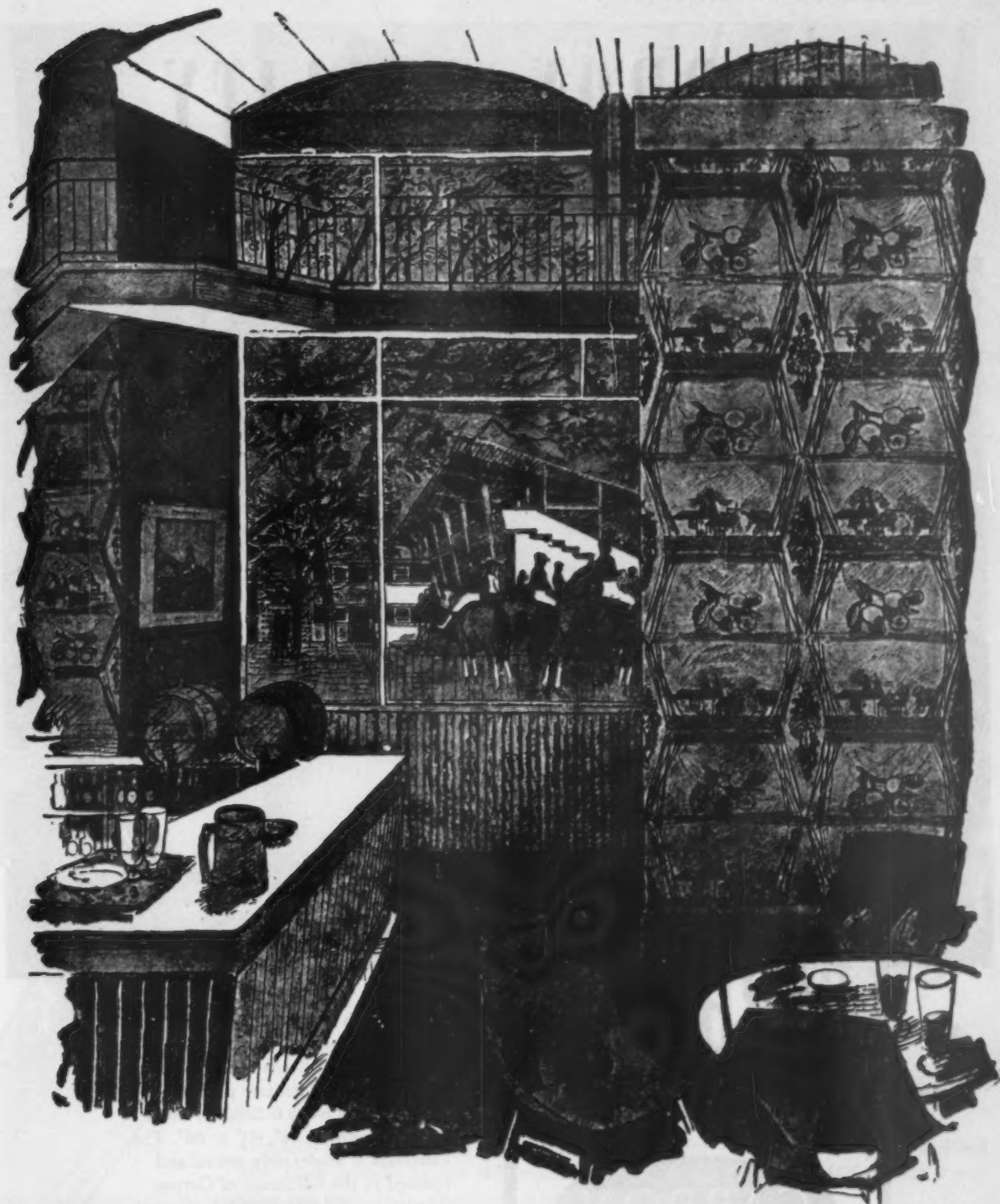
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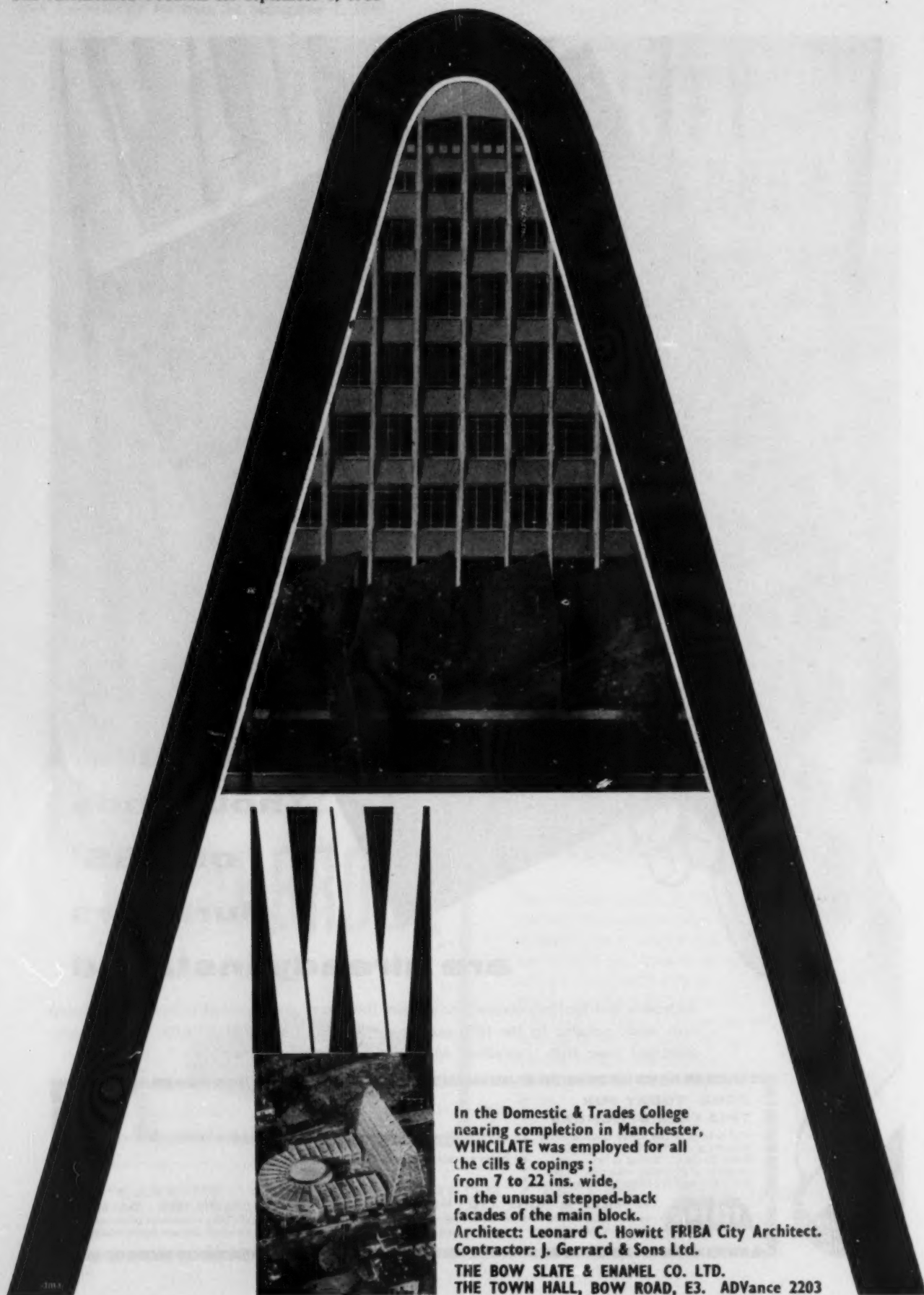
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P.5204



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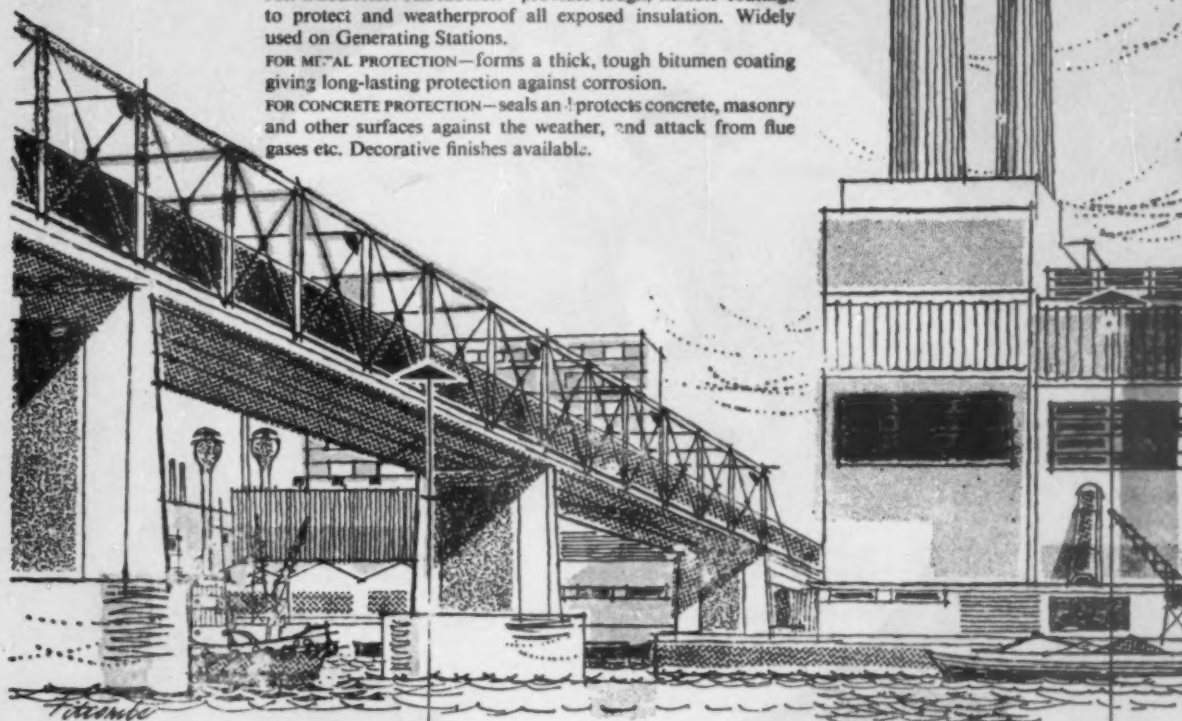
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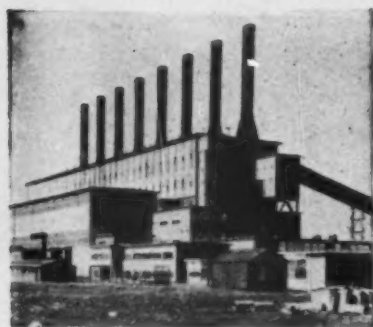
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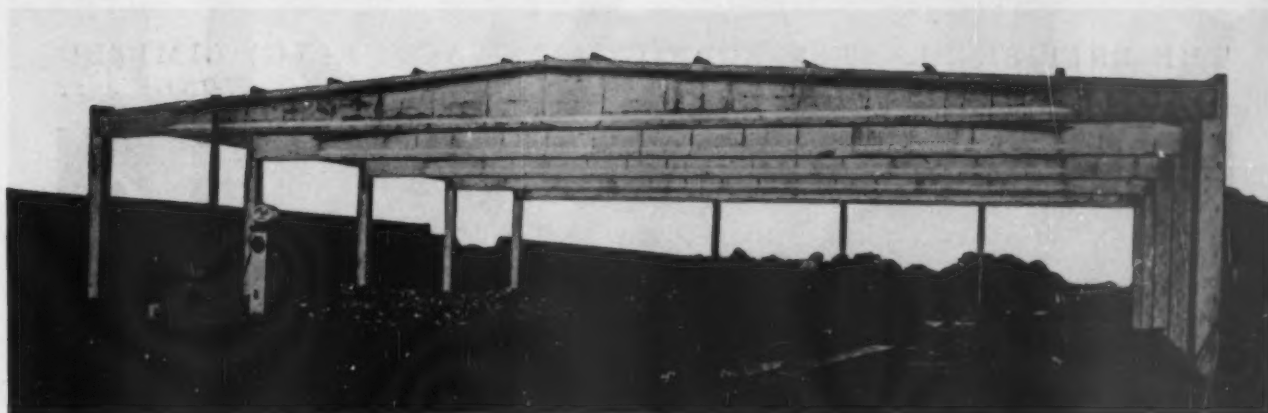
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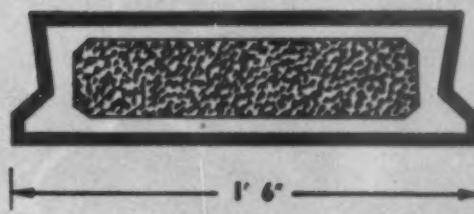
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THE ARCHITECTS' JOURNAL for September 1, 1960

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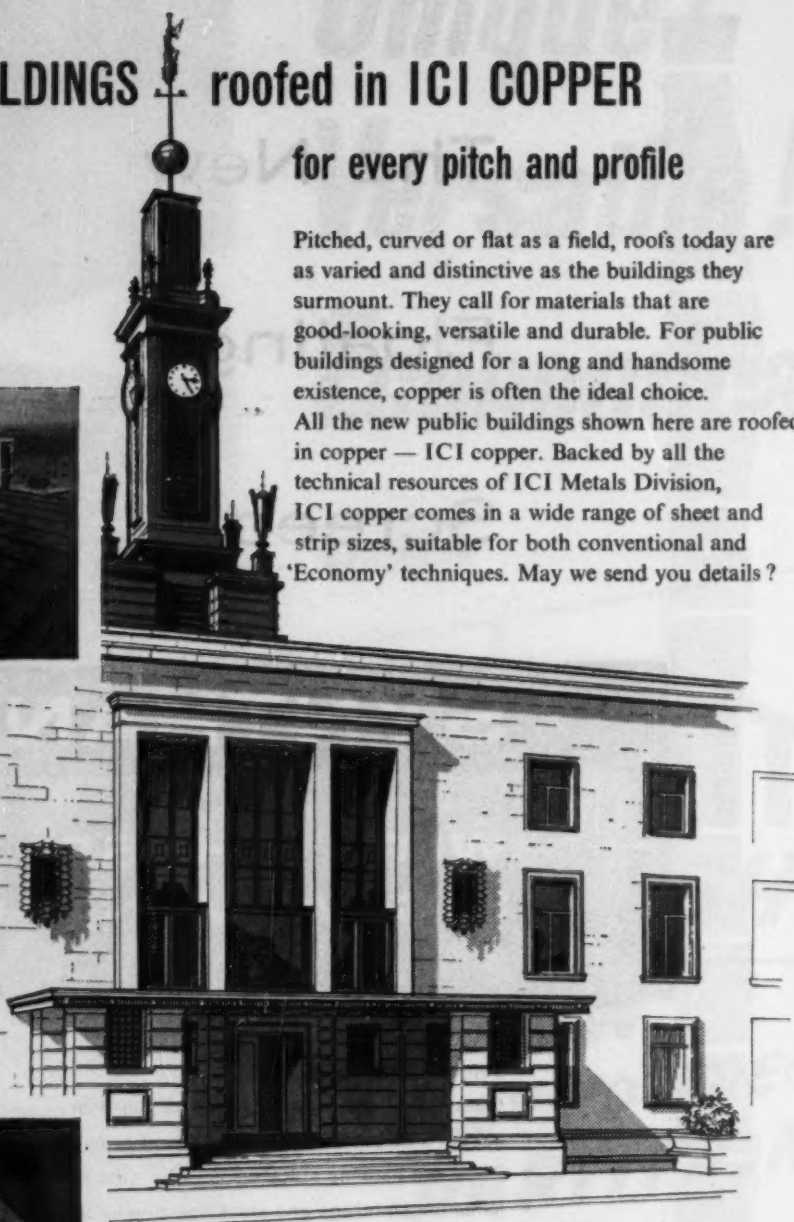
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Architects: Messrs Carr and Howard
F.F.R.I.B.A., F.F.R.I.A.S.
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Top left:
Manor Guild House, Coventry
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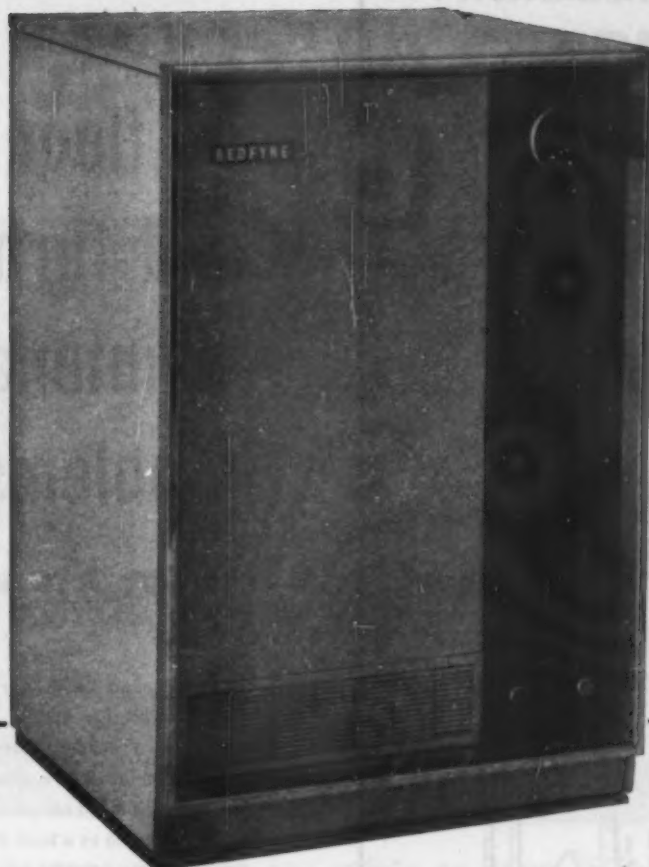
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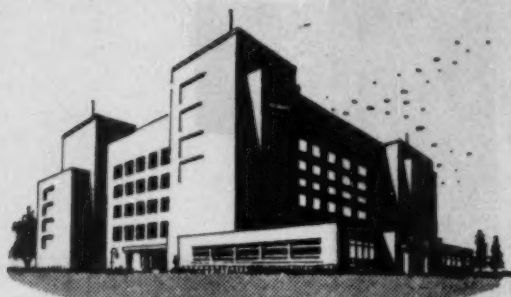
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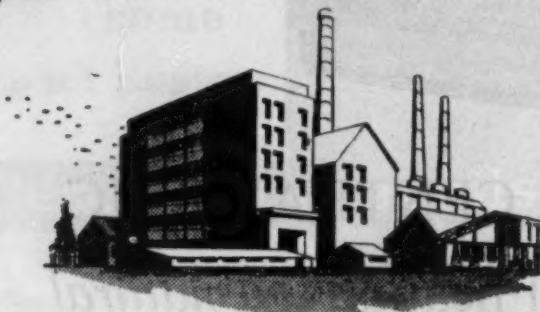
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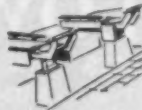
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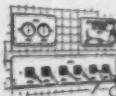
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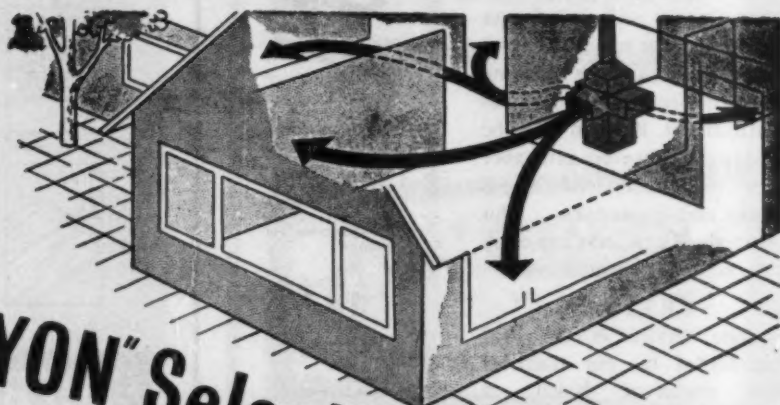
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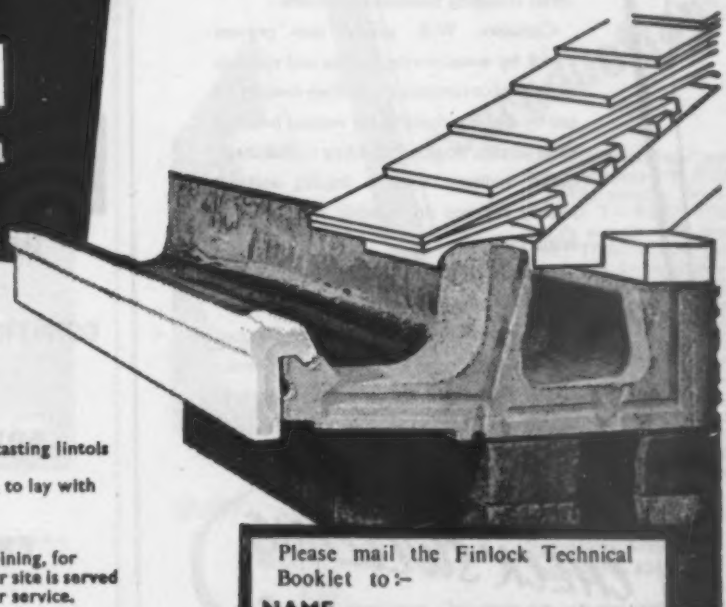
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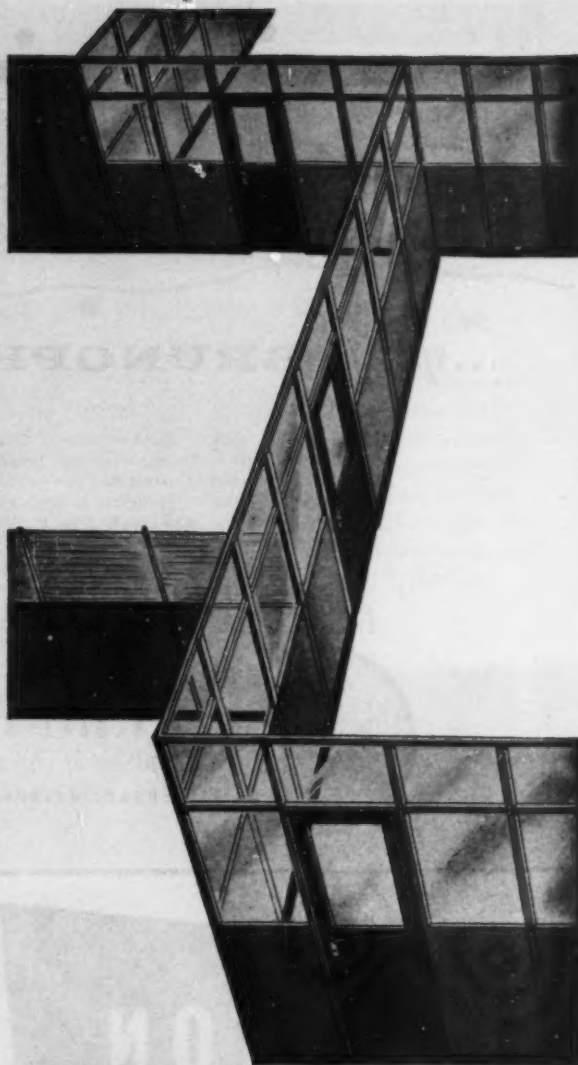
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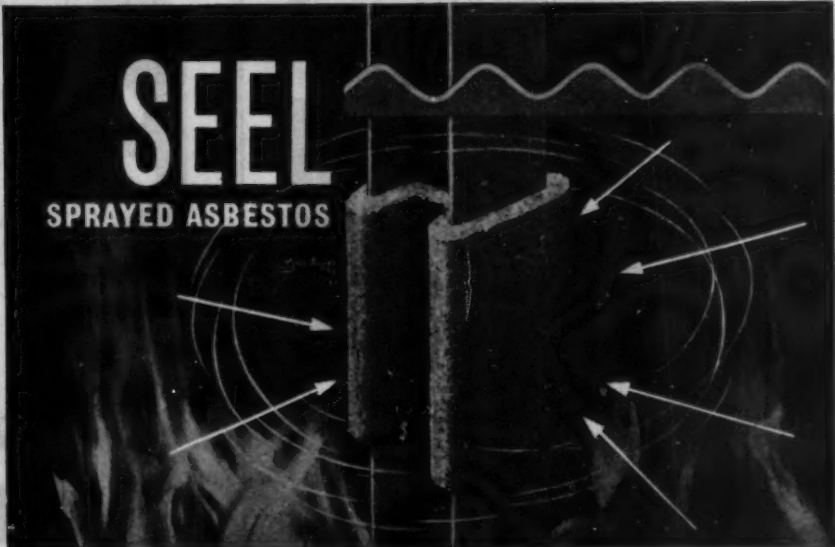
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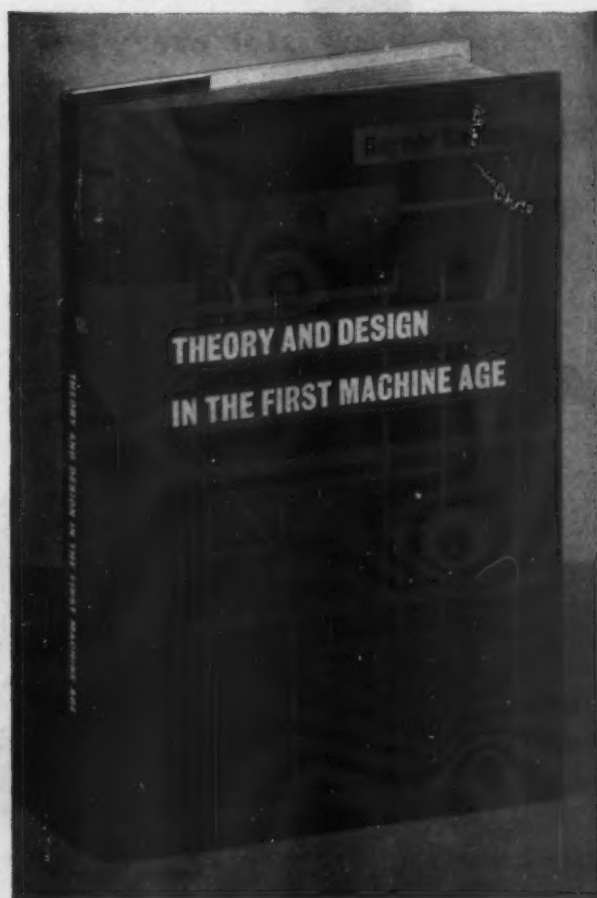
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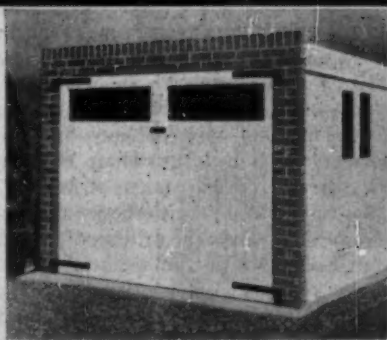
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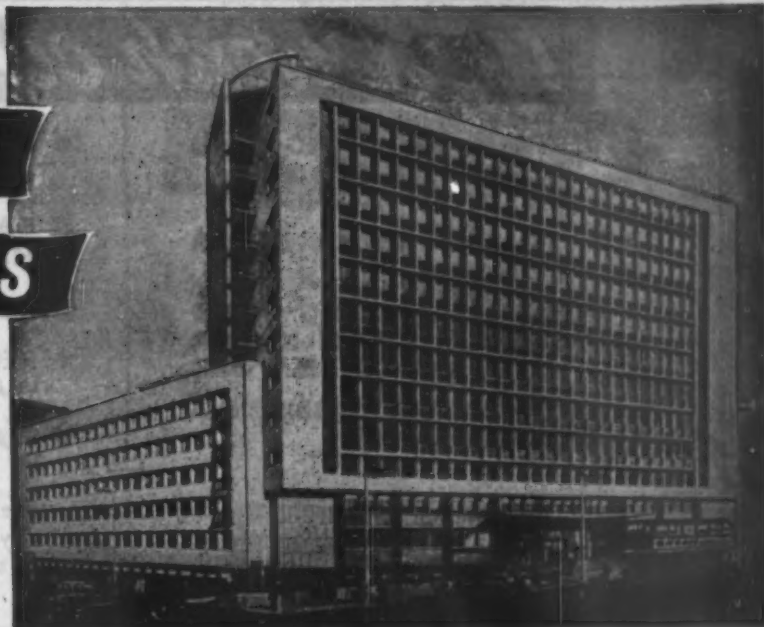
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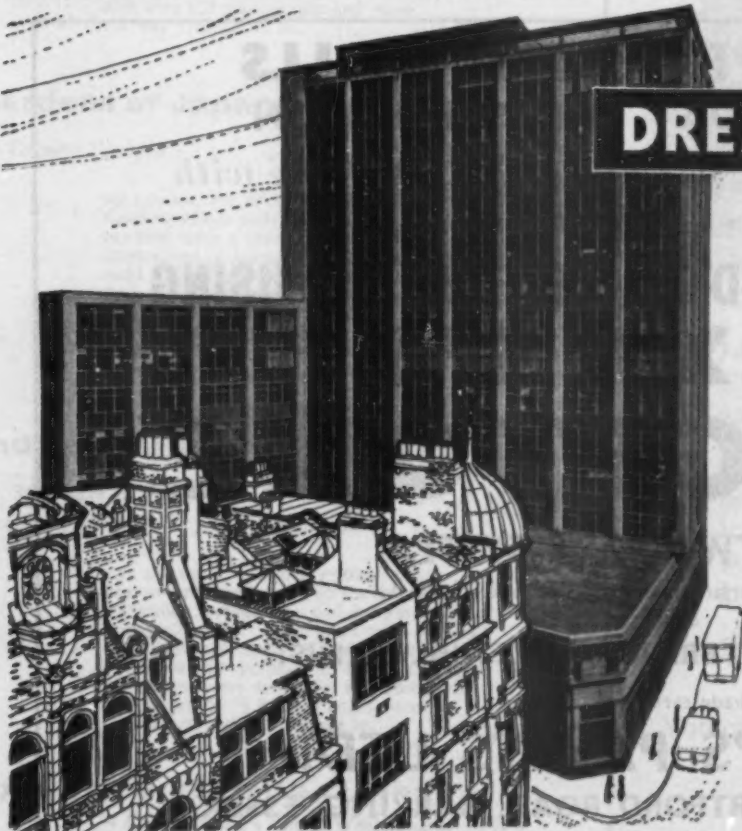
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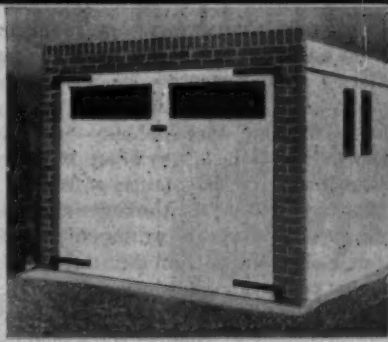
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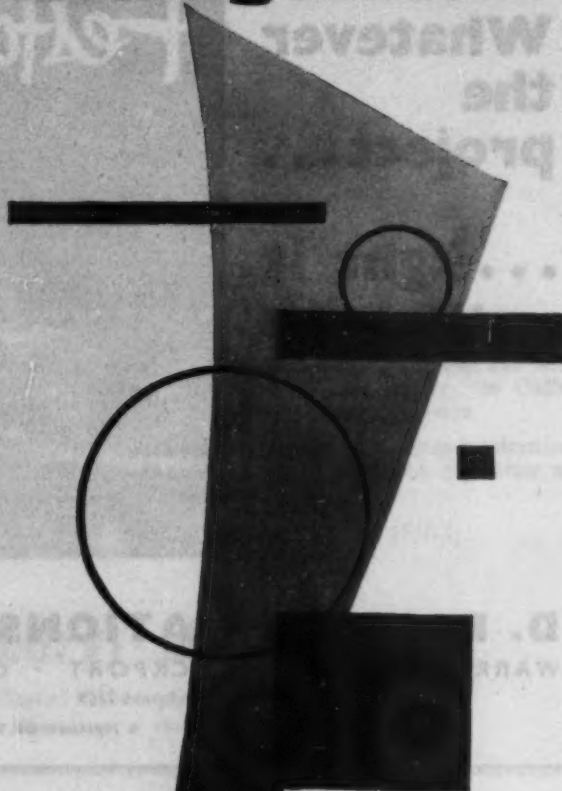


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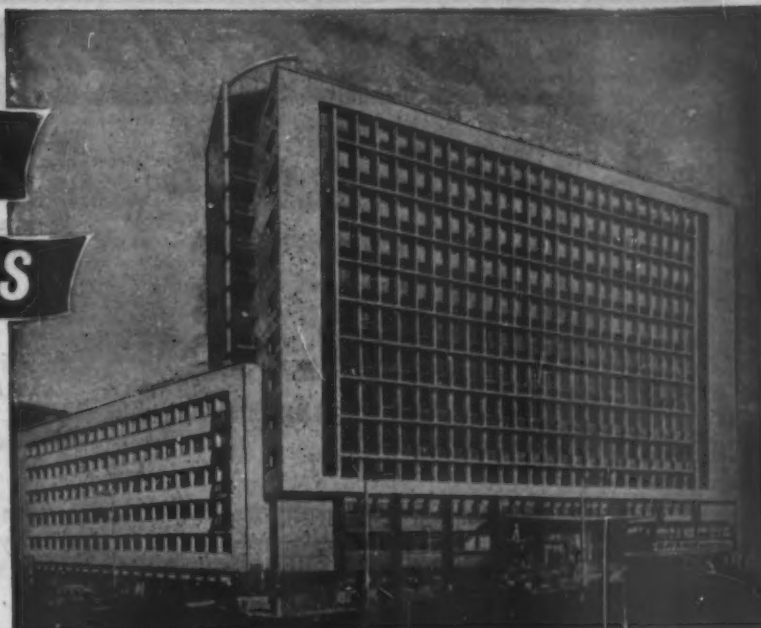
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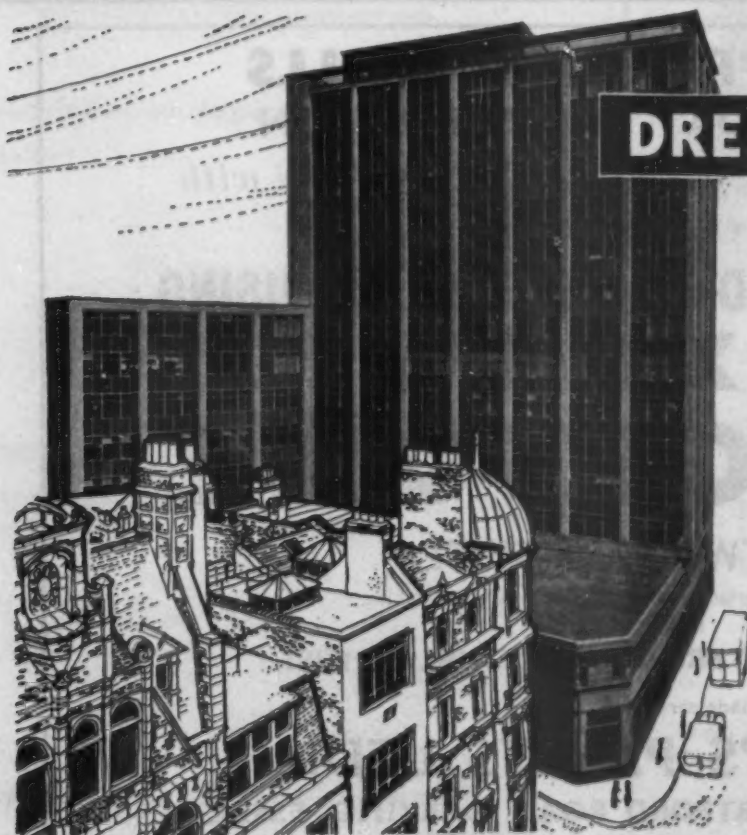
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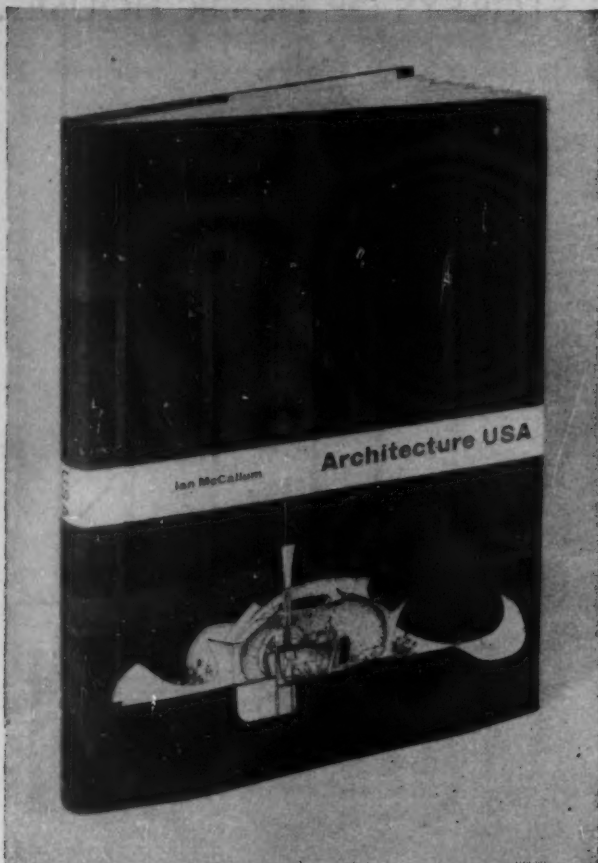
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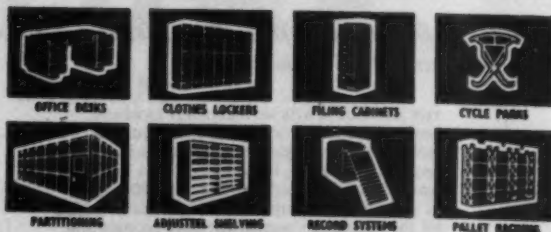


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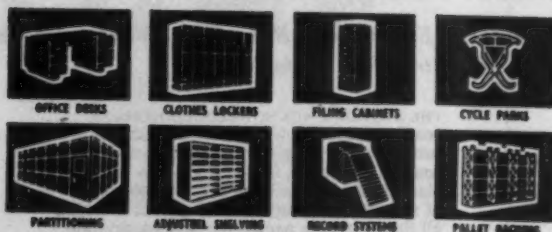


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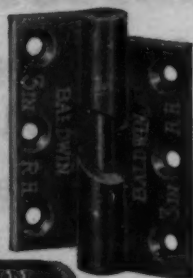
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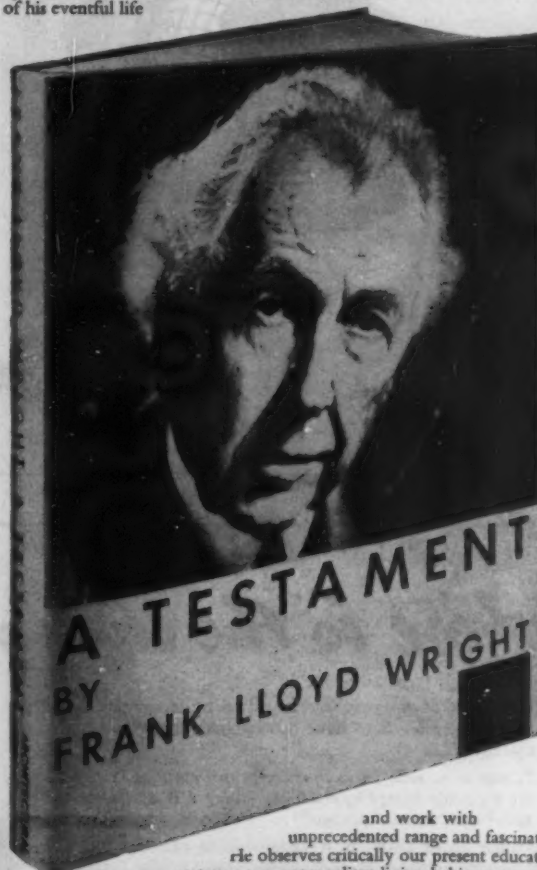
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COMMITTEE FOR EDUCATION
APPOINTMENT OF ARCHITECTURAL ASSISTANT

Applications are invited for the permanent appointment of Architectural Assistant, Grade A.P.T. II £765-£980 per annum plus London Weighting. The successful applicant will be employed by the Essex County Council and will work in the School Architect's Section of the Borough Engineer & Surveyor's Department, Town Hall, Leyton, five-day week is operative.

Details and forms of application from the Borough Education Officer, Education Office, Kirkdale Road, Leytonstone, E.11, to whom they should be returned not later than Friday, the 9th September, 1960.

2886

LANCASHIRE COUNTY COUNCIL
COUNTY ARCHITECTS' DEPARTMENT
TO ALL BUILDING CONTRACTORS
APPROVED LIST OF BUILDING CONTRACTORS

Firms desirous of having their names included in an approved list of contractors from whom the Lancashire County Council will invite tenders for new building and other works should make application to the County Architect, P.O. Box 26, County Hall, Preston, Lancashire.

The lists are as follows:—

1. Contracts estimated to cost over £15,000 and up to £50,000.
2. Contracts estimated to cost over £50,000 and up to £100,000.
3. Contracts estimated to cost over £100,000.

Contractors may apply for their name to be included in any one or more of the lists.

Applications must be made on forms obtainable from the County Architect at the address given above and returned on or before 12th September, 1960.

Tenders will be considered only from contractors included in the official lists which will be published from time to time by the County Council after the consideration of applications.

2831

BOROUGH OF BEXLEY
ARCHITECTURAL DRAUGHTSMAN

Applications are invited for this appointment at a salary within Grade A.P.T. 1 (£610-£765 per annum) plus London Weighting.

Applicants should be good draughtsmen and have a general knowledge of building construction and specification work.

Form of application and conditions of appointment are obtainable from Borough Engineer, West Lodge, Broadway, Bexleyheath, to whom completed applications must be returned by MONDAY, 12th September, 1960. Canvassing will disqualify.

ARTHUR GOLDFINCH,
Town Clerk.
2860

BOROUGH OF HARROW

Requires the following staff for employment on work of a varied nature in the Borough Engineer and Surveyor's Department:—

- (a) SENIOR ARCHITECTURAL ASSISTANT, Special Grade (£830 to £1,315 per annum).
- (b) ARCHITECTURAL ASSISTANT, A.P.T. Grade I (£625 to £985 per annum).

Commencing salaries in accordance with qualifications, age and experience.

The Council is unable to provide housing accommodation but a contribution towards removal expenses will be considered.

The appointments will be subject to the Local Government Superannuation Act and the National Joint Council's Scheme of Conditions of Service.

Application forms obtainable from me, to whom they should be returned by 10th September, 1960.

D. H. PRITCHARD,
Town Clerk.

Town Clerk's Office,
Harrow Weald Lodge,
Harrow, Middlesex.

2837

COUNCIL OF THE COUNTY OF ABERDEEN
COUNTY ARCHITECTS' DEPARTMENT

Applications are invited for an appointment as ASSISTANT ARCHITECT in the above Department.

Salary £805 x £35-£1,185 per annum. Placing on the scale may be given according to experience. Applicants must be Associates of the Royal Institute of British Architects.

The appointment is superannuable. Application forms and conditions of appointment may be obtained from the undersigned. Closing date for applications, 14th September, 1960.

JAMES L. CRAIG,
County Clerk.

County Buildings,
22, Union Terrace,
Aberdeen.
19th August, 1960.

8935

**WEST SUSSEX COUNTY COUNCIL
PLANNING DEPARTMENT**

Applications are invited for the under-mentioned appointments:—
SENIOR PLANNING ASSISTANT (Development Plan) (Revised advertisement).
Salary: Grade A.P.T. V, £1,220 + £55 (1) × £55 (3) = £1,375.

Applicants should have had experience gained preferably in a County Planning Department of the preparation of County, Town, C.D.A. and Village Maps and associated Reports and be capable of supervising staff engaged upon this work.

The post is equal in grading and responsibility with two other Senior Assistants, and is a new appointment.

Candidates should be Associate Members of the Town Planning Institute or hold other appropriate qualifications.

Fuller details of the duties of this post can be obtained on request.

PLANNING ASSISTANTS

In the Headquarters Drawing Office of the Department at County Hall, Chichester.
Salary in accordance with A.P.T. I (£610—£765 p.a.).

Applicants should be experienced draughtsmen and should be capable of making surveys.

Application forms obtainable from the County Planning Officer, County Hall, Chichester, to be returned by the 10th September, 1960.

T. C. HAYWARD,
Clerk of the County Council.

CITY OF CARLISLE

Applications are invited from Qualified ARCHITECTS to work on an interesting building programme. There are three posts which offer scope for initiative and imagination and an opportunity to carry a project through from sketch design to completion. Salary range A.P.T. IV, £1,065—£1,220 per annum. Housing accommodation considered. Application forms together with further particulars can be obtained from the City Engineer, 13, Fisher Street, Carlisle, to whom applications should be sent by 5th September, 1960.

H. D. A. ROBERTSON,
Town Clerk.

CITY OF MANCHESTER

CHIEF ASSISTANT AND SENIOR ASSISTANT PLANNING OFFICERS required in the City Surveyor and Engineer's Department. Salaries:—
Chief Assistant Planning Officer, J.N.C. Scale "D" (£1,520—£1,755).
Senior Assistant Planning Officers, J.N.C. Scale "B" (£1,260—£1,485).

Candidates must be appropriately qualified by examination and must have had considerable experience in the Planning and Development work of a local authority.

These appointments offer practical experience on large scale projects. Housing accommodation and removal expenses.

Applications stating age, education, qualifications and experience, together with the names of three referees, to the Town Clerk, Town Hall, Manchester, 2, not later than 23rd September, 1960.

CORPORATION OF LONDON

PERMANENT STAFF

Applications are invited for appointment of a **SENIOR ASSISTANT ARCHITECT** in Building and Architectural Division—City Surveyor's Office. Candidates must have passed Final R.I.B.A. Salary up to £1,375, point of entry dependent upon age and experience.

Applications with relevant particulars, including names and addresses of two referees to the City Surveyor, Guildhall, London, E.C.2, within 14 days.

**BOROUGH OF SHREWSBURY
ARCHITECTURAL ASSISTANT**

Applications are invited for the post of Architectural Assistant on the permanent staff of the Borough Surveyor at a salary in accordance with the Special Grade, £765—£1,070 per annum, commencing according to qualifications and experience. Five-day week.

Housing accommodation will be provided and approved removal expenses paid.

The programme of major works planned includes new sewage disposal works, abattoir, houses and bungalows, shops, public lavatories, and redevelopment in areas of special architectural interest.

Applications stating age, qualifications, experience, and names of two referees to be sent to the Borough Surveyor, Guildhall, Shrewsbury, by Monday, 12th September, 1960.

S. R. H. LOXTON, Town Clerk.

BRACKNELL DEVELOPMENT CORPORATION

Applications are invited for the post of **CLERK OF WORKS** in the Chief Architect's Department. Salary range £280—£1,065. Superannuation schemes, medical examination. Housing available. Apply by 6th September, 1960, stating age, when available to commence duties, experience and appointments held (with dates and salaries) and names of two referees, to General Manager (C.W.A.), Bracknell Development Corporation, Farley Hall, Bracknell, Berks.

PETROLEUM OFFICER, A.P.T. I (£650—£905 inc.) for inspection and testing of petroleum installations, etc. Car allowance.

DEAUGHTSMAN. Salary up to £695 inclusive, according to age and qualifications.

Application forms from Borough Surveyor, Town Hall, Ealing, W.5. Closing date 9th September, 1960.

E. J. COPE-BROWN,
Town Clerk.

CT2563

BRACKNELL DEVELOPMENT CORPORATION

Applications are invited for the post of **ARCHITECT**, salary range £1,163—£1,390. Applicants must be Corporate Members of the R.I.B.A. Superannuation schemes, medical examination. Housing available. Apply by 6th September, 1960, giving age, education and qualifications, experience and appointments held (with dates and salaries), and names of two referees, to General Manager (A), Bracknell Development Corporation, Farley Hall, Bracknell, Berks.

THE DEPARTMENT OF HEALTH FOR SCOTLAND

CHIEF ARCHITECT'S OFFICE

Applications are invited from ARCHITECTURAL DEUGHTSMEN with considerable office experience for a non-pensionable post. Duties include assisting architects on building projects in prisons, borstals, etc.

Salary range £550—£975 (which is under review) with placing according to age and experience. Form of application obtainable from Chief Architect, T. A. Jeffries, Esq., A.R.I.B.A., A.M.T.P.I., Department of Health for Scotland (Room 30), St. Andrew's House, Edinburgh, 1.

WARWICKSHIRE COUNTY COUNCIL

ARCHITECT'S DEPARTMENT

(a) **DEPUTY GROUP ARCHITECTS (Two)** Grade A.P.T. IV-V (£1,065—£1,375).

Applications are invited from qualified and experienced architects for these posts, which are for the groups handling projects for the Council's education building programme.

In each case the post is one of responsibility requiring a high degree of initiative and design ability in up-to-date forms of construction, use of materials, control of costs, job planning and organisation.

The successful applicant will also be expected to deputise generally for the group architect.

(b) **ARCHITECTS SPECIAL GRADE (£785—£1,070)**

Applications are invited from architects who have passed Parts I and II of the R.I.B.A. final or special examination or their equivalent at one of the recognised schools of architecture. The successful applicants will work in groups on large projects, and an opportunity will be given to men with enthusiasm and ability to design and carry out projects under a group architect.

(c) **ARCHITECTURAL ASSISTANTS (Grade A.P.T. II (£765—£980)).**

Vacancies exist for assistants who are up to Intermediate R.I.B.A. standard and who require experience in a variety of interesting projects.

The commencing salary can be within the grade according to ability and experience. Five-day week worked. The Council have schemes for the payment of removal expenses and a lodging allowance to married officers.

Application forms and full conditions applicable to the appointments can be obtained from Eric Davies, F.R.I.B.A., A.M.T.P.I., County Architect, Shire Hall, Warwick.

L. EDGAR STEPHENS,
Clerk of the Council.

Shire Hall,
Warwick.
July, 1960.

ADMINISTRATIVE COUNTY OF LEICESTER

ARCHITECTURAL ASSISTANT £765—£980 according to experience.

Candidates must have passed Part I of the R.I.B.A. examination, have had office experience and be capable of executing working drawings. Lodging allowance and removal expenses may be paid to a married man. Apply by 16th September, 1960, to County Architect, 123, London Road, Leicester.

URBAN DISTRICT COUNCIL OF BASILDON

(Population 21,000—27,000 acres—rapidly developing district)

Established Posts.

(a) **SENIOR ASSISTANT ARCHITECT**—within A.P.T. IV (£1,065—£1,220 p.a.).

(b) **ARCHITECTURAL ASSISTANT**—within A.P.T. II (£765—£1,000 p.a.).

(c) **JUNIOR ASSISTANT**—within Miscellaneous IV (£390—£550 p.a.).

Applicants for (a) must be qualified and experienced Architects, those for (b) should have intermediate R.I.B.A. or equivalent and practical experience and those for (c) should be competent draughtsmen, preferably with a knowledge of building construction.

Housing accommodation considered. Five-day week.

Full particulars and application form from and the latter returnable to Mr. S. A. Wadsworth, A.M.I.C.E., A.M.I.Mun.E., 88, Town Sq., Basildon, Closing 15th September.

CITY ARCHITECT'S OFFICE, MANCHESTER

Applications invited for the appointment on the permanent staff of a **SENIOR ASSISTANT ARCHITECT/GROUP LEADER**. Salary JNC "B" £1,260—£1,485 per annum. Candidates must be architects of some experience, have high ability in design, be capable of taking charge of large contracts and of controlling a group of assistant architects.

Housing accommodation for a limited period may be provided. Removal expenses allowed. Five-day week.

Forms of application from the City Architect, Town Hall, Completed forms to be returned to the Town Clerk, Town Hall, by 10th September, 1960.

COUNTY BOROUGH OF WALSALL

PUBLIC WORKS DEPARTMENT

Applications are invited from suitably qualified persons for appointments as **ASSISTANT ARCHITECTS** in the Architects Section of the Public Works Department, at commencing salaries, according to experience and capabilities, within the following grades:—

(a) A.P.T. Grade IV, £1,065—£1,220 per annum.

(b) Special Grade, £785—£1,070 per annum.

The Department is engaged on an extensive programme of architectural work which includes schemes of Comprehensive Housing Development incorporating multi-storey flats; a school programme including a Comprehensive School, College of Art and a Youth Centre; redevelopment projects within the Central Area embracing a new Police Headquarters, Law Courts, Shops, Offices and other buildings associated with a proposed twin-river road.

Applicants should disclose if they are related to a member or officer of the Council. All posts are superannuated and subject to medical examination. Housing accommodation will be made available if required.

Applications, indicating the appointment applied for together with details of present position, salary, qualifications, details of experience and the names of two referees should be submitted to reach the undersigned by Monday, 12th September, 1960.

M. E. HABERSHON,

Borough Engineer & Surveyor.

Council House,
Walsall, Staffs.
19th August, 1960.

CONTEMPORARY HOSPITAL DESIGN

ARCHITECTS of progressive outlook, interested in a new approach to hospital planning, are invited to apply for the following post in the Architect's Department of the Oxford Regional Hospital Board (Regional Architect, W. J. Johnson, from whom further particulars may be obtained).

ASSISTANT ARCHITECT—£905 to £1,310 per annum.

Applications, with the names of two referees, should be received by the Secretary, Oxford Regional Hospital Board, 41 Banbury Road, Oxford, not later than 12th September, 1960.

COVENTRY

Enthusiastic, imaginative ARCHITECT required in Central Area Division. Programme includes Multi-storey commercial and residential development and swimming baths. Salary within A.P.T. V, £1,220—£1,375.

Housing accommodation in approved cases. Removal expenses loan available. Five-day working week. Canteen facilities. Application forms from Department of Architecture and Planning, Council House, Earl Street, returnable 14 days after publication.

The new aids to
Roof Construction

FULLY GUARANTEED

Patent No. 744973



ARCHITECTS' JOURNAL
INFORMATION SHEET AND
FULLY ILLUSTRATED
BROCHURE AND PRICE LIST
FROM

**PARAMOUNT ASPHALTE
LIMITED**

149 KENNINGTON PARK ROAD
LONDON, S.E.11

Tel.: RELiance 2373-2191

GOVERNMENT OF NORTHERN IRELAND ASSISTANT PLANNING OFFICER

Applications invited for pensionable post in Ministry of Health and Local Government. Qualifications: Membership of Associate Membership of the Town Planning Institute and preferably an Architectural training. Good experience in Town and Country Planning work essential. Salary scale: £1,210-£1,550; exceptionally a candidate may be given an entry point above the minimum of the scale. Existing pension rights transferable in certain circumstances. Preference for ex-Servicemen. Application forms obtainable from Secretary, Civil Service Commission, Stormont, Belfast, 4, must be returned by 8th September, 1960.

2939

MACCLESFIELD RURAL DISTRICT COUNCIL ARCHITECTURAL ASSISTANT

Applications are invited for the appointment of Architectural Assistant in the Engineer and Surveyor's Department, at a salary in accordance with Grade A.P.T. II (£765-£880). Car allowance will be paid in accordance with the Casual User scale. Applications, stating age, qualifications, present salary, appointments held, and experience, together with the names of two persons to whom reference may be made, must reach the Engineer and Surveyor at Council Offices, King Edward Street, Macclesfield, not later than the 19th September, 1960.

H. W. ABBOTT,
Clerk of the Council.

2938

CITY OF BIRMINGHAM PUBLIC WORKS DEPARTMENT

Applications are invited for the post of CHIEF ASSISTANT TOWN PLANNING AND REDEVELOPMENT SECTION. Candidates must be Corporate Members of the Town Planning Institute or hold equivalent qualifications. They should preferably have experience in comprehensive development and landscape design.

Salary Grade: A.P.T. V (£1,220-£1,375 per annum). The post is permanent, superannuable and subject to a medical examination.

Applications stating qualifications, age and experience, and naming two referees, should reach the undersigned by the 17th September, 1960. Canvassing disqualified.

HERBERT J. MANZONI,
City Engineer and Surveyor.

Civic Centre,
Birmingham, 1.

2937

LONDON COUNTY COUNCIL ASSISTANT SENIOR ARCHITECT-HOUSING

Applications invited for a position of Assistant Senior Architect (£1,750-£2,050) in the Housing Division of the Architect's Department, with divisional responsibilities. The main work of the Division is now concentrated on the redevelopment of the outwards areas of London. Close collaboration with the Town Planning Division is involved, and a qualification in Planning or Civic Design would therefore be an advantage.

Application form and particulars from Hubert Bennett, F.R.I.B.A., Architect to the Council, the County Hall, S.E.1, quoting ref. (EK/AJ/2189/8). Form returnable by 14th September, 1960.

2949

BOROUGH OF ACTON BOROUGH ENGINEER'S DEPARTMENT

Applications are invited for the following appointments:-

SENIOR ENGINEERING ASSISTANT, A.P.T. Grade IV.

ENGINEERING ASSISTANTS (2), A.P.T. Grades II/III/IV.

CIVIL ENGINEERING TRAINEE. Commencing £335-£400 per annum.

TECHNICAL ASSISTANT-Street Lighting, A.P.T. Grade II/III.

SENIOR ARCHITECTURAL ASSISTANT, A.P.T. Grade V.

ARCHITECTURAL ASSISTANT, A.P.T. Grade IV.

ARCHITECTURAL ASSISTANT, A.P.T. Grades II/III/IV.

ARCHITECTURAL TRAINEE. Commencing £335-£400 per annum.

TOWN PLANNING ASSISTANT & BUILDING INSPECTOR, A.P.T. Grade IV.

ASSISTANT BUILDING SUPERINTENDENT, Miscellaneous Grade VI.

Successful candidates will be engaged on general municipal works and on multi-storey development.

Applicants for appointments on A.P.T. Grades IV and V should have passed appropriate qualifying examinations.

Starting salaries will be according to age, qualifications and experience, plus appropriate London allowance (max. 245 p.s.). The Council operates a five-day week.

Conditions of appointment and forms of application may be obtained from and should be returned to the Borough Engineer, Town Hall, Acton, W.3, by September 14th, 1960.

2953

COUNTY BOROUGH OF BLACKPOOL APPLICATIONS are invited for the following appointments in the BOROUGH SURVEYOR'S DEPT.

ARCHITECTURAL ASSISTANT, A.P.T. I, £610/£765.

ASSISTANT ARCHITECTS, SPECIAL GRADE, £785/£1,070.

ASSISTANT QUANTITY SURVEYORS, SPECIAL GRADE, £785/£1,070.

Particulars and Forms of Application from Borough Surveyor (Arthur Hamilton, R.Sc., A.R.I.B.A.), P.O. Box 17, Municipal Offices, Blackpool.

2996

HUNTINGDONSHIRE COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments:-

(a) ARCHITECTURAL ASSISTANTS, Special Grade (£785-£1,070).

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

The persons appointed will become Members of small architectural teams engaged in projects of varying size. It is desired that the persons appointed shall be keenly interested in architecture with an up-to-date approach to both planning and design.

Application forms and further particulars may be obtained from S. M. Holloway, A.R.I.B.A., County Architect, County Buildings, Huntingdon, and completed forms should be returned to the undersigned by Friday, 9th September.

A. C. KYLWARD,
Clerk of the County Council.

County Buildings,
Huntingdon.

2974

HOLLAND COUNTY COUNCIL- LINCOLNSHIRE

Applications are invited for the following appointments:-

(a) Senior Assistant Architect.

(b) Quantity Surveying Assistant.

The salary for post (a) will be up to a maximum of £1,220 per annum and (b) to £880 per annum subject to qualifications and experience.

The provisions of the Local Government Superannuation Acts, the N.J.C. Scheme of Conditions of Service and a medical examination will apply.

The County Council would be prepared to make a contribution towards the cost of removals.

Forms obtainable from the County Architect should be returned to the undersigned by September 12.

H. A. H. WALTER,
Clerk of the County Council.

County Hall,
Boston, Lincs.

2948

BOROUGH OF STOCKTON-ON-TEES BOROUGH ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments:-

SENIOR ASSISTANT ARCHITECT-Salary A.P.T. IV (£1,065-£1,220).

TWO ASSISTANT ARCHITECTS-Salary Special Grade (£785-£1,070).

ASSISTANT QUANTITY SURVEYOR-Salary A.P.T. I (£610-£765).

Forms of application from the Borough Architect, 25, The Square, Stockton-on-Tees, to be returned not later than September 12, 1960.

Any person applying at present employed in Local Government Service with less than two years' service with his existing employer will not be considered.

Housing accommodation will be available for married applicants for the architectural posts.

JOHN R. HAWORTH,
Town Clerk.

Barclays Bank Chambers,
49, High Street,
Stockton-on-Tees.

2944

BOROUGH OF STRATFORD-UPON-AVON ARCHITECTURAL ASSISTANT, A.P.T. II/III

Applications are invited for the above appointment on the staff of the Borough Engineer & Surveyor at a salary in accordance with Grade A.P.T. II/III, £765-£1,065, commencing at a point to be determined according to qualifications and experience.

Preference will be given to candidates with previous local government experience who have passed the Intermediate examination of the R.I.B.A. and previous Planning experience would be an advantage.

The Council will, if necessary, be prepared to consider the provision of housing accommodation.

Conditions of appointment and forms of application may be obtained from the undersigned to whom completed forms should be returned by not later than September 19, 1960.

P. C. SMART, M.I.C.E., M.I.Mun.E.,
Borough Engineer and Surveyor.

Borough Engineer's Department,
Municipal Offices,
Stratford-upon-Avon.

2943

PUBLIC SERVICE OF TASMANIA

Applications are invited for the undermentioned superannuable positions in the Department of Public Works in which appointments will be made in accordance with the provisions of the Public Service Act, 1923:-

FOUR VACANCIES FOR ARCHITECTS

Appointees will be stationed in the office of a District Architect and will receive commencing salary at the rate of £41.96 rising by automatic annual increments of £46 to a maximum of £42.144 per annum. Subsequent advancement will depend on satisfactory service and the occurrence of opportunities for promotion.

Duties:-To be responsible to the District Architect for preparation of working drawings, details and specifications of public buildings, and other structures and supervision of work of the Drawing Office; to assume responsibility for the District Office in the absence of the District Architect.

Applicants to be associates of R.A.I.A. or hold equivalent qualifications.

Applications, in duplicate, giving full personal particulars and details of qualifications and experience should be addressed to the Agent General for Tasmania, 457 Strand, London, W.C.2.

3001

GLOUCESTERSHIRE COUNTY COUNCIL APPOINTMENT OF ASSISTANT ARCHITECTS

Applications are invited for the following appointments:-

(a) "CAREER CLASS" commencing in A.P.T. IV (£1,065-£1,220) progressing to A.P.T. V (£1,220-£1,375) subject to satisfactory report on reaching appropriate incremental point in Grade.

(b) "QUALIFYING CLASS," Special Grade (£785-£1,070). Applicants must have passed the Final Examination R.I.B.A.

N.J.C. Service Conditions, Superannuation, Medical Examination.

Applications stating age, present position, salary and date of appointment, details of previous appointments, together with the names and addresses of two persons for reference, to be submitted to the COUNTY ARCHITECT, SHIRE HALL, GLOUCESTER, by SEPTEMBER 10.

GUY H. DAVIS,
Clerk of the County Council.

2973

COUNTY BOROUGH OF OLDHAM BOROUGH ENGINEER & SURVEYOR'S DEPARTMENT

APPOINTMENT OF ARCHITECTURAL DRAUGHTSMAN

Applications are invited for the appointment of Architectural Draughtsman at a salary within Grade Miscellaneous V (£650-£715), commencing salary according to experience.

The successful applicant will be engaged in the Architectural Section of my Department and should be a competent draughtsman, capable of working up detail drawings and carrying out the measurement of land and buildings.

The National Conditions of Service and the Local Government Superannuation Acts will apply, and the successful candidate will be expected to pass a medical examination.

Applications endorsed "Architectural Draughtsman," together with the names of two referees, should reach me not later than Friday, the 16th September, 1960.

A. L. HOBSON,
Borough Engineer & Surveyor.

3002

COUNTY BOROUGH OF PRESTON APPOINTMENT OF

(a) SENIOR ARCHITECT (Salary A.P.T.V. £1,220-£1,375).

(b) ASSISTANT ARCHITECT (Salary Special Grade £785-£1,070).

(c) ASSISTANT ARCHITECT (Salary A.P.T.II. £765-£880).

Applications are invited for the above-mentioned appointments in the Borough Surveyor's Department. Candidates for (a) and (b) must be Registered Architects and Corporate members of the R.I.B.A., and for appointment (c) preferably should have passed the Intermediate Examination R.I.B.A.

The programme of works is large and varied and the appointments afford opportunities for good experience, particularly in educational buildings.

The National Scheme of Conditions of Service and Local Superannuation Acts apply, and the successful applicants will be required to pass a medical examination.

Forms of Application can be obtained from the undersigned, to whom they must be returned, completed, not later than Tuesday, 27th September.

W. E. E. LOCKLEY,
Town Clerk.

3034

SOMERSET COUNTY COUNCIL ARCHITECTS DEPARTMENT

Applications are invited for the appointment of an Area Building Surveyor-A.P.T. II (£765-£880).

A good practical knowledge of all aspects of the building trade is essential, particularly the maintenance of public buildings, schools and houses. Duties include preparation of estimates, specifications, the supervision and inspection of works in progress and the subsequent certification of accounts.

The successful applicant will be required to reside in or near Yeovil. An essential user car allowance will be paid. N.J.C. conditions of service. Medical examination.

Applications, giving age, previous and present appointments, qualifications and the names and addresses of two technical referees, must be submitted on or before Friday, the 9th September, 1960.

BERNARD C. ADAMS, A.R.I.B.A.,
County Architect.

The Crescent,
Taunton.

3037

LANARK COUNTY COUNCIL ARCHITECTURAL ASSISTANTS (Qualified A.R.I.B.A.)

required for County Architect's Department with headquarters at Motherwell, on the following J.I.C. Salary Scales-Admin. "D" £1,040/£1,120; Professional Assistants-£796/£1,075.

Placing on scales may be given according to qualifications and experience. Employment offers wide scope in development of modern building programme.

Medical examination. Superannuation. No canvassing.

Applications, stating age, qualifications and experience, together with names and addresses of three referees, should be lodged with County Clerk, P.O. Box No. 1, Glasgow, within 14 days of advertisement.

3023

PORTSMOUTH COLLEGE OF ART

Principal: W. J. L. GAYDON, A.R.C.A.

Applications are invited for the post of **STUDIO MASTER AND LECTURER** in the School of Architecture. Preference will be given to applicants who have been trained in a Recognised School of Architecture, are Associates of the Royal Institute of British Architects, and have at least three years' post-academic practical experience.

The salary will be in accordance with the Burnham Technical Scale for Lecturers, viz., £1,370-£3,560.

Further particulars and forms of applications, which should be returned as soon as possible, may be obtained from the Registrar, College of Art, Hyde Park Road, Portsmouth.

NATIONAL COAL BOARD

The Division's Architect's Branch, Northern (N & C) Division, has vacancies for qualified architects and unqualified assistants to work on a variety of interesting schemes including medical centres, laboratories, offices, pithead baths and colliery surface buildings.

ARCHITECTS are required to work as second members of teams and must have had experience in working drawings for good class work. Applicants must be Associates R.I.B.A. Salary scale £315 x £30-£1,125.

ARCHITECTURAL ASSISTANTS should have had some experience in preparing working drawings. Salary scale £715 x £25-£250.

Applications, giving date of birth and full details of education, qualifications and experience to Staff Department, National Coal Board, Northern (N & C) Division, Whitley Road, Longbenton, Newcastle upon Tyne, 12, by 12th September, 1960. Please quote: A/3.

ALDRIDGE URBAN DISTRICT COUNCIL ASSISTANT ARCHITECT

Applications are invited for this appointment on Grade A.P.T. II, III, or Special; starting point dependent on qualifications and experience; Special Grade for Final R.I.B.A. only; A.P.T. III for part Final qualifications. Applicants must be capable of preparing and supervising schemes in the Council's Housing Programme.

Housing accommodation will be provided and the candidate's removal expenses paid.

The Urban District has a current annual capital works programme of approximately £1,000,000. Housing programme 400 houses annually.

Aldridge is expanding by approximately 3,000 persons per annum; estimated present population 48,000. School facilities are excellent. Applications to be received not later than 12th September, 1960.

H. G. G. NICHOLS, Clerk of the Council.

Council House, Aldridge, Staffs. 3036

COUNTY BOROUGH OF SOUTHPORT

Applications are invited for the undermentioned appointments in the Borough Architect and Town Planning Officer's Department:—

(a) **CHIEF ASSISTANT ARCHITECT**—Grade A.P.T. IV—Salary £1,065-£1,220. Applicants should be Registered Architects and/or Associates R.I.B.A.

(b) **ASSISTANT ARCHITECT**—Special Grade—Salary £785-£1,070. Applicants should be Registered Architects and/or Associates R.I.B.A.

(c) **ARCHITECTURAL ASSISTANT**—Grade A.P.T. I—Salary £610-£765. Applicants should have passed the Intermediate R.I.B.A. examination.

(d) **TEMPORARY TOWN PLANNING ASSISTANT**—Grade A.P.T. I—Salary £610-£765. The successful applicant will be required to assist on the work of the Town Development Plan review, and should have a reasonable standard of draughtsmanship.

Notes:—Successful applicant for Temporary Post (d) will be required for at least two years.

Application forms may be obtained from the Borough Architect and Town Planning Officer, 99/105 Lord Street. Closing date for the receipt of applications is 17th September.

BRITISH RAILWAYS—EASTERN REGION

Applications are invited for the following posts in the office of the Architect, Eastern Region, British Railways, at King's Cross Station:—

Leading ASSISTANT ARCHITECTS: Starting salary £1,150-£1,360. Applicants should be qualified architects with some years' practical experience.

ASSISTANT ARCHITECTS: in the salary range £875-£1,034. Starting salary will be determined in accordance with qualifications and experience.

The office is engaged on a wide range of interesting buildings and gives responsibility for design, administration and site supervision to those with ability. Modern working conditions, five-day week, rail travel concessions. Apply in writing to the Architect, Chief Civil Engineer's Office, British Railways, Eastern Region, King's Cross Station, London, N.1 giving particulars of age, experience and qualifications.

BOROUGH OF EALING

DRAUGHTSMAN for Civil Engineering work. Miscellaneous Grade IV, £630-£699 inclusive of London weighting.

Full particulars and application forms obtainable from the Borough Surveyor, Town Hall, Ealing, W.5.

Closing date 19th September, 1960.

E. J. COPE-BROWN, Town Clerk.

3048

MIDDLESEX COUNTY COUNCIL

ASSISTANT ARCHITECTS—Salary range £330-£1,365. Commencing salaries will be assessed according to ability and experience.

The department has in hand an interesting programme of works which will be designed under the direction of Mr. Whitfield Lewis, F.R.I.B.A., County Architect. Organisation is on a group basis and full scope will be given to Architects who show marked design ability.

Good career prospects can be expected. Prescribed conditions.

Application forms from the County Architect, 1, Queen Anne's Gate Buildings, Dartmouth Street, S.W.1, returnable by 3rd October. (Quote M.365 A.J.)

3050

LANCASHIRE COUNTY COUNCIL

PLANNING ASSISTANTS required at ST. ANNES, LIVERPOOL and MANCHESTER, salary within range £510-£1,570 per annum.

Applicants should be studying for or possess a recognised qualification in architecture, surveying, engineering and/or town planning. The commencing and maximum salary will be according to qualifications and experience.

Applications, stating appointment applied for, giving age, qualifications, present appointment, experience, etc., and two referees, to the County Planning Officer, East Chiff County Offices, Preston, by the 19th September, 1960.

3044

NEWCASTLE REGIONAL HOSPITAL BOARD EXPANSION OF ARCHITECTURAL DEPARTMENT

P. H. KNIGHTON, M.B.E., A.R.I.B.A., REGIONAL ARCHITECT

Arising from the number of major projects (totaling about £14m.) to be carried out in the Newcastle Region as part of the Hospital Expansion Programme, the Board intends to add considerably to its Architectural Department in Newcastle.

The work is of a high-class and varied nature and offers ample opportunity for gaining experience in both highly specialised hospital structures and many types of ancillary general and domestic buildings. Possession of hospital experience is not essential. The work will involve all stages from sketch plans to supervision of construction and a car mileage allowance will be paid.

Applications are invited for the following (superannuable) posts:—

SENIOR ASSISTANT ARCHITECTS (£1,300 x £60 (5)-£1,600).

Applicants should be registered architects and have had experience of the design and construction of major public buildings. Experience of hospital work is desirable but not essential.

ASSISTANT ARCHITECTS (£905 x £36 (1) x £45 (6) x £50 (2)-£1,310).

Applicants should have passed the R.I.B.A. Final Examination. For registered architects increments can be given above the bottom of the grade in accordance with relevant practical experience since qualifying.

ARCHITECTURAL ASSISTANTS (£625 x £30 (8) x £35 (1)-£900).

Intermediate R.I.B.A. and preferably some practical experience.

ARCHITECTURAL DRAUGHTSMEN (£475 x £25 (6) x £34 (2)-£685).

Applicants should have had three years' 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 should give details of professional training, qualifications, experience and posts held, present salary and any other relevant information, should be accompanied by the names of three architectural referees and should reach the Secretary to the Board, Benfield Road, Newcastle upon Tyne, 6, not later than the 14th September, 1960. Canvassing will disqualify.

3012

BOROUGH OF LUTON

Applications are invited for the following appointments:—

(a) **SENIOR ASSISTANT ARCHITECTS** A.P.T.IV/V (£1,065-£1,375).

(b) **SENIOR ASSISTANT ARCHITECTS** A.P.T.IV (£1,065-£1,220).

(c) **ARCHITECTURAL ASSISTANTS** A.P.T.I/Special (£610-£1,070).

(d) **BUILDING MAINTENANCE SURVEYOR** A.P.T.II (£765-£880).

Applicants for (a) and (b) must be Chartered Architects and the commencing salaries will be dependent on qualifications and experience.

Under (c) the Council will consider applications from candidates who have completed professional training but have not passed their final examinations. The grades within the range at which appointments will be made will depend on qualifications and experience.

For post (d) good practical knowledge essential of all aspects of the building trade, particularly maintenance of public buildings, schools and housing. Duties include preparation of estimates, specifications and the supervision and inspection of works in progress. An essential user car allowance will be paid.

Consideration will be given to the provision of housing accommodation and payment of reasonable removal expenses for all appointments.

Luton is a rapidly developing borough with a large and varied programme of capital works in hand or projected which offers exceptional opportunities of gaining experience.

Further particulars and forms of application may be obtained from The Borough Architect, Town Hall, Luton, by whom applications should be received not later than 17th September, 1960.

2994

ARCHITECTS: MINISTRY OF HOUSING AND LOCAL GOVERNMENT

Pensionable posts (2 Senior, 3 Main Grade) in a newly-created development group in London for registered Architects (men and women). For the Senior posts candidates should normally be at least 40 on 1.9.60 and experience of research and/or development, and in the running of building contracts is essential. For the main grade posts candidates should normally be at least 35 on 1.9.60, preference will be given to applicants who have some experience of development work, a keen interest in research, strong design capacity, and practical building experience. Duties include research into design, construction, and costs of housing and other types of local government buildings, preparation of advisory bulletins and studies, and carrying out selected development projects in the housing field. Salaries (men, London): £1,840-£2,120 (Senior Grade), £1,325-£1,780 (Main Grade). Starting pay may be above minimum in each case. Write Civil Service Commission, 17 North Audley Street, London, W.1, for application form, quoting S/5185/60. Closing date 27th September, 1960.

302

NORTHUMBERLAND COUNTY COUNCIL

COUNTY PLANNING DEPARTMENT Applications are invited for the following posts in the County Planning Department:

(a) **PLANNING ASSISTANT (SPECIAL SCALE)** £735-£1,070.

This post is in the Development Plan section and the successful applicant will be engaged on the review of the County Development Plan and on research into specific problems. Applicants should have an analytical approach to planning problems, a good knowledge of statutory planning and experience of work on research and development plan matters, and be capable of writing clear and concise reports. Applicants should be Corporate Members of the Town Planning Institute or hold a suitable alternative qualification.

(b) **PLANNING ASSISTANT (TEMPORARY (SPECIAL SCALE £785-£1,070))**

This appointment is in the Development Plan section and initially will be for a period of approximately two years. The successful applicant will be engaged on the preparation of Town Maps including schemes for the comprehensive redevelopment of central area. Applicants should have experience of Town Map work, an ability to put forward constructive suggestions for future planning policies, and be capable of viewing problems objectively and producing clear, concise reports. Applicants should be Corporate Members of the Town Planning Institute or hold a suitable alternative qualification.

(c) **LANDSCAPE ASSISTANT (SPECIAL SCALE £785-£1,070)**

The post is in the Design Section and the successful applicant will be a member of a small landscape team. Applicants should have a good knowledge of all aspects of landscape work in connection with the preparation of schemes for various types of development in urban and rural areas, and in addition be capable of reporting on the problems of afforestation, etc., which will arise mainly in the Northumberland National Park area. Applicants should be Associate Members of the Institute of Landscape Architects or hold a suitable alternative qualification, with experience in the wider aspects of landscape planning.

The salary for each post will be fixed according to previous experience and ability.

Application forms are obtainable from the County Planning Officer, County Hall, Newcastle upon Tyne 1, and must be returned not later than 15th September, 1960.

2993

COUNTY BOROUGH OF WALSALL

PUBLIC WORKS DEPT. APPOINTMENT OF SENIOR PLANNING ASSISTANT

SPECIAL GRADE (£785-£1,070) (Commencing salary to be fixed according to qualifications and experience).

Applications are invited for the above appointment in the Planning Division of the Borough Engineer and Surveyor's Department.

Applicants should be members of an appropriate professional institution or hold a degree in Geography or Economics and should have experience of Development Plan and Development Control work.

The person appointed will be required to assist in the preparation of redevelopment proposals, to undertake technical studies in connection with the implementation of the approved Development Plan and to assist in Development Control.

HOUSING ACCOMMODATION WILL BE AVAILABLE IF REQUIRED.

Applications stating age, details of training, qualifications, present and previous appointments and experience together with the names and addresses of two referees, should be sent to the undersigned not later than Monday, 19th September, 1960.

M. E. HABERSHON,

Borough Engineer & Surveyor.

Council House, Walsall, August 25th, 1960.

2998

ADMINISTRATIVE COUNTY OF LEICESTER GROUP LEADER ARCHITECT

£1,385-£1,620. Candidates must be corporate members of the R.I.B.A., have a flair for design and have had sound experience. Apply in writing to County Architect, 123, London Road, Leicester, by 16th September, 1960.

3011

HERTFORDSHIRE COUNTY PLANNING DEPARTMENT

Applications are invited for the following appointments the gradings of which are now under review. In each case the commencing salary will be according to qualification and experience.

1. ASSISTANT DIVISIONAL PLANNING OFFICERS in

(a) East Herts. Division, Hertford.
(b) Central Herts. Division, St. Albans.
Must have considerable experience in dealing with Development Applications and in drafting planning proposals. Must be Chartered Member of Town Planning Institute or hold other professional qualifications.

Salary: Within range Special Grade linked A.P.T. IV (£785 rising to £1,220).

2. SENIOR PLANNING ASSISTANT.
Required as Group Leader of the Central Areas Group of the Development Plan Section. To be responsible for all town-centre plans and urban renewal schemes. Must be A.M.T.P.I. preferably with considerable experience.

Salary: Within range Special Grade linked A.P.T. IV (£785 rising to £1,220).

3. MINERALS OFFICER.
To be responsible for the planning and control of mineral workings (mainly sand, gravel and chalk) and their subsequent restoration. Should be either A.M.T.P.I. or hold qualifications in Geology or have considerable experience in dealing with planning aspects of mineral workings.

Salary: Special Grade—£785 rising to £1,070.

4. PLANNING ASSISTANT.
In Development Plan Section—applicants should hold Intermediate examination of Town Planning Institute or equivalent. Suitable post for newly qualified university graduates.

Salary: A.P.T. I/II—£610 rising to £380.

An 'Essential' car allowance will be paid for Posts—1, 2 and 3. Five-day working week. Forms of application, stating post for which applying, from the County Planning Officer, County Hall, Hertford, returnable by 14th September, 1960. 2936

BOROUGH OF EDMONTON CHIEF TOWN PLANNING ASSISTANT

BOROUGH ARCHITECT'S DEPARTMENT
Applications are invited for the appointment of Chief Town Planning Assistant on Grade A.P.T. IV—£1,065 to £1,320 plus London weighting.

Applicants should have passed the Final Examination of the Town Planning Institute and Joint Examination Board or equivalent. Applications on forms obtainable from the Town Clerk, Town Hall, Edmonton, N.9, must be delivered by the 16th September, 1960. 3047

CITY OF CHESTER

DEPARTMENT OF CITY ENGINEER
Applications are invited for the post of SENIOR ARCHITECTURAL ASSISTANT, salary within the A.P.T. Special Grade scale. Candidates should have passed the R.I.B.A. final examination and should have had good training and practical experience of a general nature. Housing accommodation will be available to the successful applicant if required. Applications giving the names of two persons to whom reference can be made should reach the City Engineer, 49, Northgate Street, Chester, by 19th September, 1960. 3025

COUNTY COUNCIL OF ESSEX

SECTIONAL ASSISTANT ARCHITECT J.N.C.
Scale "B," salary according to qualifications and experience but not exceeding £1,485.

Candidates should be members of the R.I.B.A. and interested in taking charge of the section dealing with work for the Welfare Committee including attending committee meetings.

Application form from H. Conolly, C.B.E., F.R.I.B.A., County Architect, County Hall, Chelmsford, to be returned by 16th September, 1960. 3013

STEPNEY M.B.C.

Require ARCHITECTURAL LEARNER: £320 per annum at 16 years proceeding to £770; G.C.E. in English, Maths and three other subjects required; opportunity to become Qualified Architect (£1,265 per annum); application form and other particulars from Town Clerk, 227, Commercial Road, E.1. Closing date 8th September, 1960. 2966

Architectural Appointments Vacant

3s. per line; minimum 12s. Box Number, including forwarding replies, 2s. extra.

SENIOR ASSISTANTS required immediately. Salary by arrangement. Theo. H. Birks, 35, Portland Place, London, W.1. LAN 7236. 1000

ARCHITECTURAL ASSISTANTS required in busy Bloomsbury office with varied practice. Good salary and prospects for suitable applicants. Five-day week. Write giving particulars of age, qualifications, experience, etc., to Box 918, c/o V. Ooptic Street, W.C.1. 8016

LEWIS SOLOMON, KAYE & PARTNERS.
L rapidly expanding practice require ARCHITECTS and ASSISTANTS with initiative and competence to work on major design projects in the London area. These projects include Comprehensive Development Schemes, Hotels, Schools, Offices, and Luxury Flats. Good salaries according to ability and experience, luncheon vouchers, five-day week, and excellent working conditions. Write to Holborn Circus Thavies Inn House, S.C.1. or telephone CITY 8811, quoting S.L.B. in both instances. 7700

ARCHITECTURAL ASSISTANT required, with at least two years' office experience. Apply in writing to Thomas Mitchell & Partners, 20, Bedford Square, London, W.C.1. 7282

MONROE AND PARTNERS require ARCHITECTURAL ASSISTANTS of Intermediate/Final R.I.B.A. standard in their London, Watford, and Glasgow Offices for work on interesting industrial and commercial projects. Salary range £800—£1,000 p.a. Non-contributory Pension Scheme. Five-day week. Apply in writing to 32, Clarendon Road, Watford. 8699

ARCHITECTURAL ASSISTANT, about Intermediate standard, required for general practice in North Devon Office. Pension scheme. Box 9744. 7700

£1,000 (£2,000 p.a. will be paid to experienced competent ARCHITECTS by a private practice in the City of London. The work will be primarily on the drawing board on new and interesting projects of magnitude. A high standard of design and detailing ability is required. Please apply in writing to Box 9360. 9844

ARCHITECTS and ASSISTANT ARCHITECTS required for interesting commercial, industrial and civic projects. Responsibility and initiative encouraged. Five-day week, good salary commensurate with ability and experience. Ronald Ward & Partners, 29, Chesham Place, S.W.1. BELgravia 3361. 9844

BASIL SPENCE & PARTNERS require qualified and experienced ARCHITECTS to fill positions of responsibility on a major building programme. Write to 48, Queen Anne Street, W.1. stating experience and salary required. 9824

LEICESTER—SENIOR ARCHITECTS and ASSISTANTS required for general practice. Appropriate salary paid. Five-day week. Apply by telephone or in writing for an interview to Herbert, Son & Sawday, 18, Friar Lane, Leicester. Tel. 56476. 2413

WEST END OFFICE requires ASSISTANT ARCHITECTS of Final and Intermediate standards for interesting industrial projects in Home Counties. Good salaries offered to men with initiative and ability. Bonus Scheme, five-day week, holiday arrangements honoured. Box 2639. 9824

ARCHITECTURAL ASSISTANT required, able to work on own initiative, varied practice, small office, opportunity for advancement. Write or phone: Nicholson & Euston, 2, New Square, Lincoln's Inn, W.C.2. Holborn 2096. 2946

INTERMEDIATE to Final standard. Design-conscious expanding practice engaged large scale commercial projects requires ARCHITECTURAL ASSISTANTS with initiative and perspective ability. Good salaries according capabilities. Five-day week. L.V.s. Raymond Spratley & Partners, 9, Hertford Street, Park Lane, W.1. GRO 1532. 8334

ARCHITECTURAL ASSISTANT, qualified or unqualified, with practical experience, required for busy, interesting and varied practice. Salary up to £1,000. Box 2347. 8334

ELIE MAYORCAS requires ARCHITECTURAL ASSISTANTS, preferably with some office experience, for interesting work. Write, giving particulars of architectural education and experience, and salary required to: 13, David Mews, Baker Street, W.1. 2214

CROYDON. Varied and interesting experience offered in progressive and growing practice to SENIOR and JUNIOR ASSISTANTS. Holiday arrangements respected. Five-day week. Please write or telephone: J. A. Macintosh & Haines, A./A.R.I.B.A., 33/35, High Street, Croydon, CRO 5780/9992. 2362

OSCAR GARRY and PARTNERS have immediate vacancies for Senior and Junior ASSISTANTS for work on major design projects. Good salary, luncheon vouchers, travelling expenses. Apply: 66 Gloucester Place, W.1. WELbeck 2597. 8131

£850—£1,400. ARCHITECTURAL ASSISTANTS with imagination and designing ability required to assist with large and important new developments in the central London Area. Telephone or write—Trehearn & Norman, Froese & Partners, 33 Kingsway, W.C.2. HOLborn 4071. 2195

DONALD ROWSWELL urgently requires capable ASSISTANTS of various grades for Croydon office. Salary by agreement. Holiday arrangements honoured. Apply with full details to 54, Friends Road, Croydon, or telephone CROYdon 4089. 1946

ARCHITECTS and ASSISTANTS REQUIRED for work on interesting industrial Project affording first class design and technical experience.

Apply in writing to:
Sir William Halcrow & Partners,
(B.A. Architects' Section),
47, Park Lane, London, W.1. 1700

WATKINS, GRAY & PARTNERS, 57, Catherine Place, S.W.1. require SENIOR and JUNIOR ASSISTANTS for work on large hospital projects. Excellent opportunities for those seeking first hand experience in this most interesting and rapidly developing field. Luncheon Vouchers and pension scheme in operation. Write giving full particulars. 1594

RONALD WARD AND PARTNERS invite applications from ARCHITECTS, Senior and Junior. Long-term prospects. Scope for initiative and responsibility in interesting commercial, industrial and civic projects in British Isles, West Africa and Australia. Salaries commensurate with ability. Non-contributory Pension and Life Insurance schemes. Five-day week. Pleasant offices. Apply 29, Chesham Place, Belgrave Square, London, S.W.1. Tel.: BELgravia 3361. 2960

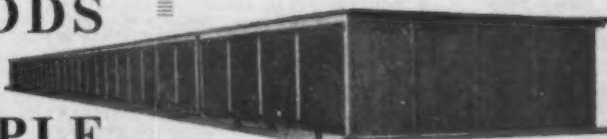
SENIOR ASSISTANT required by Harker & Hall, L./F.R.I.B.A., in their office in Warwickshire. Good salary with scope for initiative and responsibility. Write London House, High Street, Knowle, or telephone Knowle (Birmingham) 3502. 3143

CAWOODS

QUALITY CONCRETE

MULTIPLE GARAGES

A GOOD INVESTMENT



Full details
and prices
on application
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West Drayton 3691

Cawoods batteries of garages are available with either horizontal or vertical panels and in buff or normal concrete finish.

Any size
of battery.

Simple
and economical
to erect.

Easily adaptable
to make a store
or a
small building.

Well designed
and made from
first class
concrete.

INTERMEDIATE to Final ASSISTANTS required immediately. Salary according to ability and experience. Theo. H. Birks, 39, Portland Place, London, W.1. L.A.N. 72K. 9739

SIR GILES SCOTT, SON & PARTNERS require ARCHITECTURAL ASSISTANT, qualified or unqualified, with practical experience. Interesting and varied practice. Salary up to £1,000 plus luncheon vouchers. Write S. Gray's Inn Square, W.C.1, or telephone CHANCERY 8367/8. 2649

VACANCIES in leading Bristol Office for all grades of qualified ARCHITECTS and ARCHITECTURAL ASSISTANTS. Modern approach to design essential and considerable freedom of expression allowed. Salaries from £500 to £1,500 according to ability and experience. Outstandingly good working conditions; five-day week. Annual bonus; contributory pension scheme. Existing holiday commitments honoured. Apply giving particulars of age and experience to W. H. Watkins, Gray and Partners, 2, Colston Avenue, Bristol 1. 2659

SIR JOHN BURNET, TAIT & PARTNERS have vacancies for ARCHITECTURAL ASSISTANTS of all grades. Salaries ranging from £1,000 to £1,500 per annum. Luncheon vouchers. Pension and Medical schemes (non-contributory). Telephone LANGHAM 3625 for appointment. 2113

A PROGRESSIVE and expanding building and civil engineering organisation requires the services of an ARCHITECTURAL ASSISTANT in their Housing Division. Applicants should be experienced in the design and execution of working drawings in connection with Housing and Flat Development Schemes. Permanent and progressive position. Pension and Luncheon Voucher Schemes. Salary according to ability and experience. Write or phone Percy Hilton Ltd., Hilton House, 54-58 Uxbridge Road, Ealing, W.5. Tel. EALING 7777. 2664

SEELY AND PAGET, 41, Cloth Fair, E.C.1. Experienced ASSISTANT (3 or more years) needed. Education at least to Intermediate R.I.B.A. standard. Luncheon voucher scheme in operation. Your holiday arrangements respected. Pay according to qualifications. Annual salary review. General varied practice. Easily accessible office in quiet part of City. Telephone MET 8511 or write to above address. 2676

FARMER AND DARK have vacancies for:—
ASST. ARCHITECTS
JUNIOR ASSISTANTS

Wide variety of interesting projects both here and abroad; including Schools, Offices, Laboratories, Factories, Power Stations and Military Establishments.

Please write or telephone:—
Romney House, Tufston Street, S.W.1. ABBEY 6311. 2678

ARCHITECTURAL ASSISTANTS of all categories required for busy City office engaged in industrial and commercial work. Good working conditions, 5-day week, luncheon vouchers. Salary by arrangement. Please contact Eric Firmin & Partners, Thavies Inn House, Holborn Circus, E.C.1. Tel. City 5811. 2694

BRYAN & NORMAN WESTWOOD & PARTNERS require ASSISTANT ARCHITECTS. Please apply to 21, Suffolk Street, S.W.1. TRAFALGAR 4411. 9914

CITY OFFICE requires ASSISTANTS for industrial and commercial work. 5-day week, luncheon vouchers. Salary £1,200 p.a. 2691

ARCHITECTS are invited to apply to George, Trew and Dunn, 50, Eastbourne Terrace, W.3. Various projects in hand include hospital and office development, university library, ship interiors, schools and housing. Please write stating qualifications and salary required. 2669

SENIOR ASSISTANT aged 27/34 required in Architects' Dept. of large Building & Civil Engineering organisation (West End Office). Work at home and abroad. Please write giving full details to Chief Architect, Box 2670.

ARCHITECT'S DEPT. of Building and Civil Engineering organisation requires newly qualified or qualified ASSISTANT with some experience. London Office, 5-day week and luncheon vouchers. Write stating age, experience and salary required to Box 2671. 2670

C. H. ELSOM & PARTNERS require Senior and Junior staff. The posts offer long term prospects and the opportunity of experience in all facets of Architectural work in a large office. 10 Lower Grosvenor Place, London, S.W.1. Tel. VIC 4364. 2686

ASSISTANT, qualified or nearly, with experience, required for ARCHITECTS' CO-PARTNERSHIP. Varied interesting work. Write 44, Charlotte Street, W.1, or phone LANGHAM 5791. 2660

ASSISTANTS required urgently in busy West End practice, offering excellent opportunities for gaining all-round experience. Write, stating experience, to Box 2657, or telephone MAYfair 3112. 2657

SMALL progressive and contemporary London office with staff of four requires SENIOR ASSISTANT. Good opportunity for person who wishes to gain experience in all aspects of a varied practice. Also very interested in Intermediate to Final Assistant with experience. Good salary to right people. Box 2768. 2768

SIR GILES SCOTT, SON & PARTNERS require a SENIOR ASSISTANT with good general experience in practical supervision of work and also in administration. Varied work including schools, hostels, churches, office buildings, municipal buildings, etc. Five-day week, luncheon vouchers, and salary in accordance with experience. Please apply in writing to 9, Gray's Inn Square, London, W.C.1. 2710

WEST COUNTRY general practice, within easy reach of London and the coast, wishes to increase their staff as follows: (a) ASSISTANT ARCHITECT, preferably qualified, for work on all stages of new medium sized contracts under direct supervision of partner. (b) ARCHITECTURAL ASSISTANT with particular interest in the conservation of churches and other historic buildings. (c) EXPERIENCED TRACER. (d) YOUNG MAN wishing to gain practical experience, with a view to preparation of R.I.B.A. examinations. G.C.E. with two "A" levels essential. Day release granted to attend classes. Apply to Robert Potter & Richard Hare, F.A.R.I.B.A., De Vaux House, Salisbury, Wiltshire. 2706

SEVERAL experienced SENIOR ASSISTANTS required at top salaries by Beard, Bennett, Wilkins and Partners. We are busy on offices, factories, hospitals and nursing homes, flats, shops and banks besides exciting future projects. Our staff share in profits, a pension scheme and other benefits. For an appointment to see our office and to discuss joining us phone HUNTER 171 ref. RAM or write to 101, Baker Street, London, W.1. 2776

A FIRM of Industrial Consultants have a vacancy for a SENIOR ASSISTANT ARCHITECT in their Architectural Department in the Reading area. Applicants must be qualified and capable of acting as deputy to the Senior Architect. The post offers an opportunity to work on an expanding programme of industrial work in co-operation with the Civil, Structural and Services Engineering Sections of the Company. Salary will be within the range £1,100—£1,300 and in addition the Company offer pension scheme, five-day week, payment for overtime and annual salary review. Detailed applications should be sent to the Senior Architect, Box 2748. 2748

KINGSTON - UPON - THAMES - MALE or **FEMALE ASSISTANT** in Architect's office. Interesting and varied work; five-day week. Apply in writing to Donaldson & Co., Architects, 75, London Road, Kingston-upon-Thames. 2864

ASSISTANT ARCHITECTS required to join an imaginative and busy Staff Architect's Department of a large Multiple Organisation with Head Office in Leeds. Numerous interesting projects throughout the country. Field for design and detailing an advantage. Fully qualified or experienced Intermediate R.I.B.A. standard. Salary by arrangement. Apply Box 2753. 2753

CO-OPERATIVE WHOLESALE SOCIETY LTD., Architect's Department, Manchester, have vacancies for SENIOR AND JUNIOR ARCHITECT'S ASSISTANTS to work on a variety of interesting commercial and industrial projects. Five-day week. Three weeks' holiday. (Existing holiday arrangements honoured). Pension scheme. Commencing salary up to £1,300 according to experience and qualifications. Apply in writing with details of age, qualifications and experience to: G. S. Hay, F.R.I.B.A., Chief Architect, Co-operative Wholesale Society Ltd., 1, Balloon Street, Manchester, 4. 2733

CO-OPERATIVE WHOLESALE SOCIETY LTD., Branch Architect's Department, Nottingham, have vacancies for SENIOR AND JUNIOR ARCHITECT'S ASSISTANTS to work on a variety of interesting commercial and industrial projects. Five-day week. Three weeks' holiday. (Existing holiday arrangements honoured). Pension scheme. Commencing salary up to £1,300 according to experience and qualifications. Apply in writing with details of age, qualifications and experience to: G. S. Hay, F.R.I.B.A., Chief Architect, Co-operative Wholesale Society Ltd., 1, Balloon Street, Manchester, 4. 2726

NEWCASTLE-ON-TYNE Architects require SENIOR ASSISTANT, capable of controlling contracts from sketch plan to final accounts, commencing salary £1,000 plus. Also INTERMEDIATE ASSISTANT, commencing salary £750 plus. Both are permanent positions with regular annual increments. Stephenson, Gillis and Partners, 2, Saville Chambers, North Street, Newcastle-on-Tyne. 2719

ARCHITECTURAL ASSISTANT required, with experience and good knowledge of construction. Salary by arrangement. Write or telephone: William & Segar Owen, Chartered Architects, 4, Museum Street, Warrington. Telephone: 33137/8. 2740

AN ARCHITECTURAL ASSISTANT (A.R.I.B.A.) is required for the Architect's Staff of a large and well-established industrial Group near Birmingham. There are good prospects of long-term employment for an experienced and capable man. Please send details of experience, qualifications, age and approximate salary required to Box 2756. 2756

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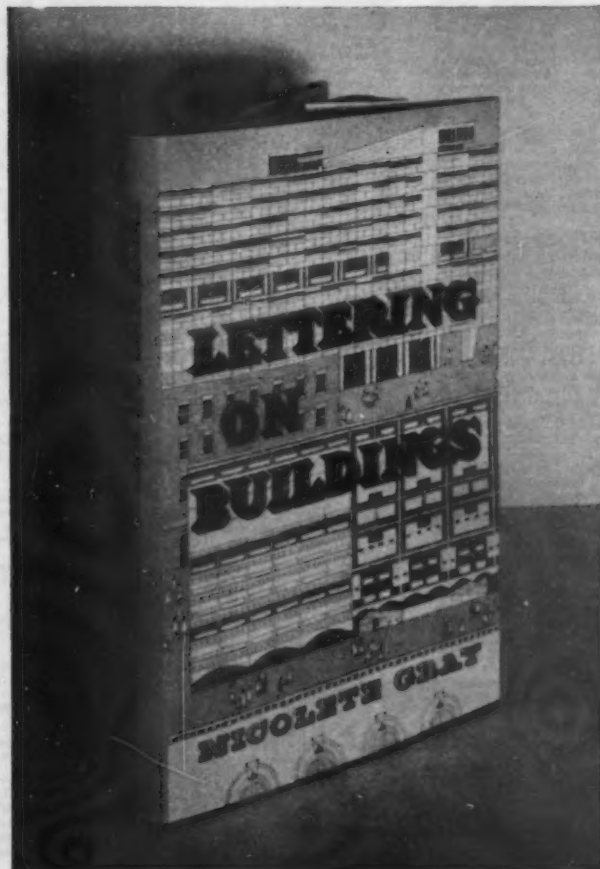
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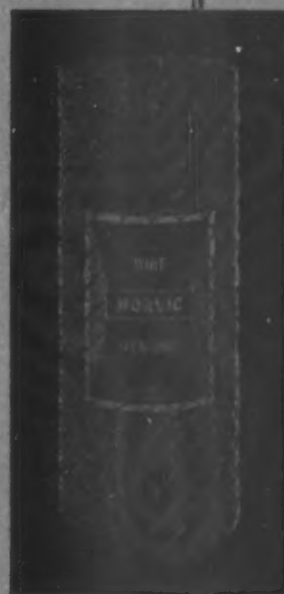
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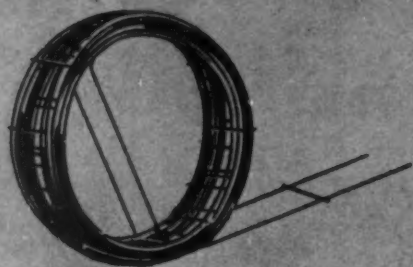
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