

# THE ARCHITECTS' JOURNAL

FINE ARTS



## standard contents

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

## NEWS and COMMENT

Astragal's Notes and Topics

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## CURRENT BUILDING

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Finishes and Costs

Buildings in the News

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Wanted and Vacant

No. 3399] [Vol. 131

THE ARCHITECTURAL PRESS

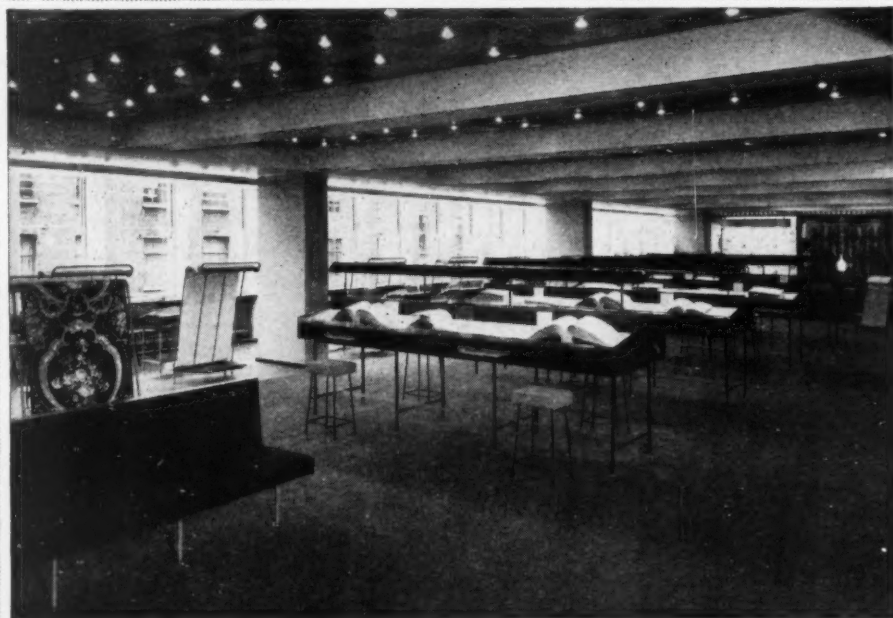
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S.W.1. 'Phone: Whitehall 0611

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Registered as a Newspaper.

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

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy.: 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, Portland Square, W.1.	Welbeck 4185
BCCF	British Cast Concrete Federation. 105, Uxbridge Road, Ealing, W.5.	Ealing 9621
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham	Redditch 716
BDA	British Door Association. 10, The Boltons, S.W.10.	Fremantle 8494
BE	Building Exhibition. 11, Manchester Square, W.1.	Hunter 1951
BEDA	British Electrical Development Association, 2 Savoy Hill, W.C.2.	Temple Bar 9434
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Glasgow Central 2891
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Chancery 7772
BOT	Board of Trade. Whitehall Gardens, Horseguards Avenue, Whitehall, S.W.1.	Langham 2785
BRS	Building Research Station. Bucknalls Lane, Watford.	Trafalgar 8855
BSA	Building Societies Association. 14, Park Street, W.1.	Garston 4040
BSI	British Standards Institution. British Standards House, 2 Park St., W.1.	Mayfair 0515
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.	Mayfair 9000
CAS	County Architects' Society. C/o S. Vincent Goodman, F.R.I.B.A., Shire Hall, Bedford.	Holborn 3411
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Bedford 67444
CDA	Copper Development Association. 55, South Audley Street, W.1.	Belgravia 6661
COID	Council of Industrial Design. 28, Haymarket, S.W.1.	Grosvenor 8811
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.1.	Trafalgar 8000
CUC	Coal Utilization Council. 3, Upper Belgrave Street, S.W.1.	Sloane 4280
CVE	Council for Visual Education. 13, Suffolk Street, Haymarket, S.W.1.	Sloane 9116
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Reading 72255
EJMA	English Joinery Manufacturers' Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Whitehall 0540
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	Regent 4448
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
FBBD	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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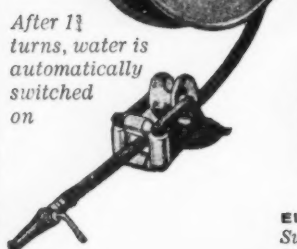
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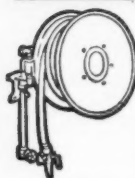
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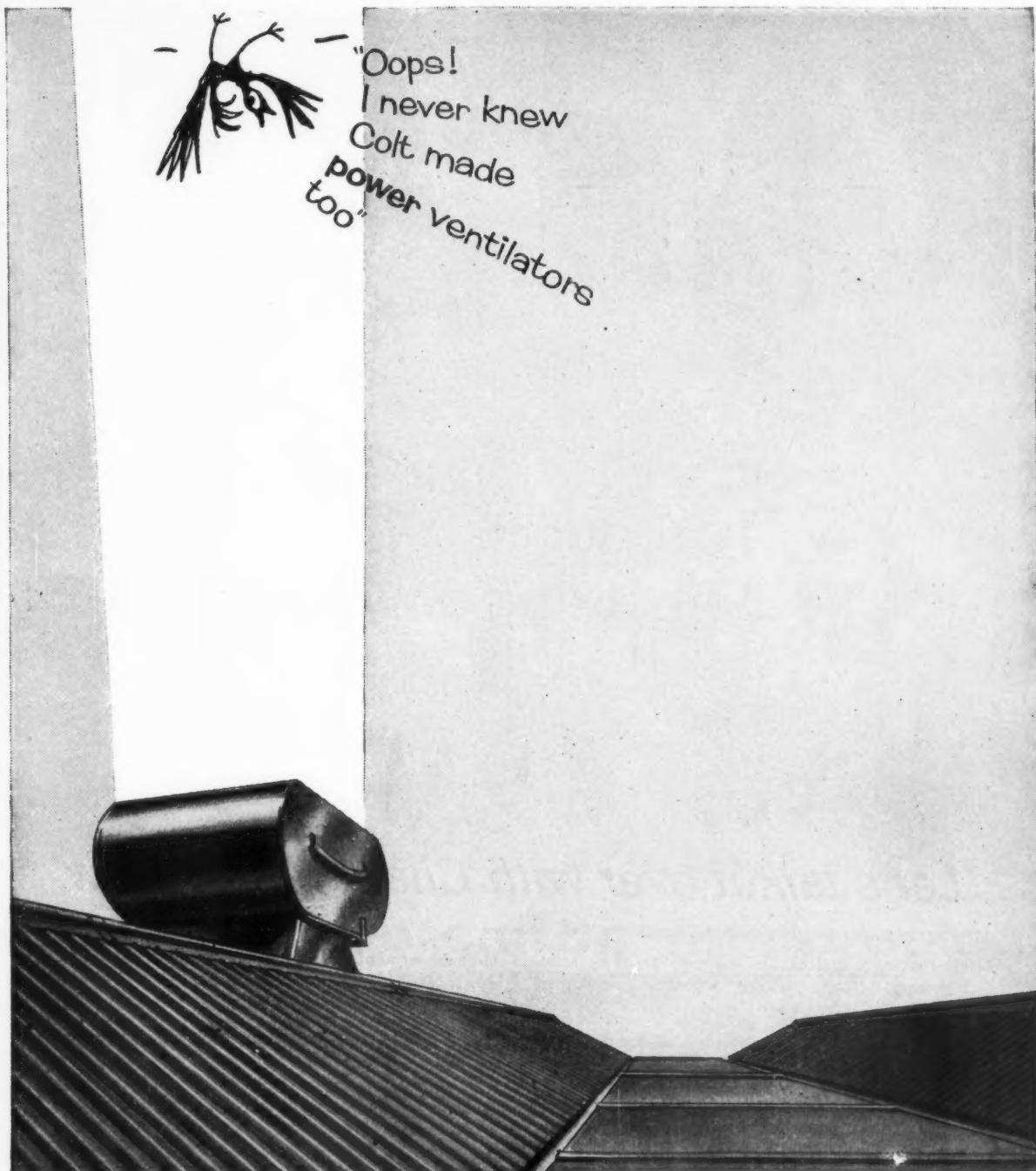
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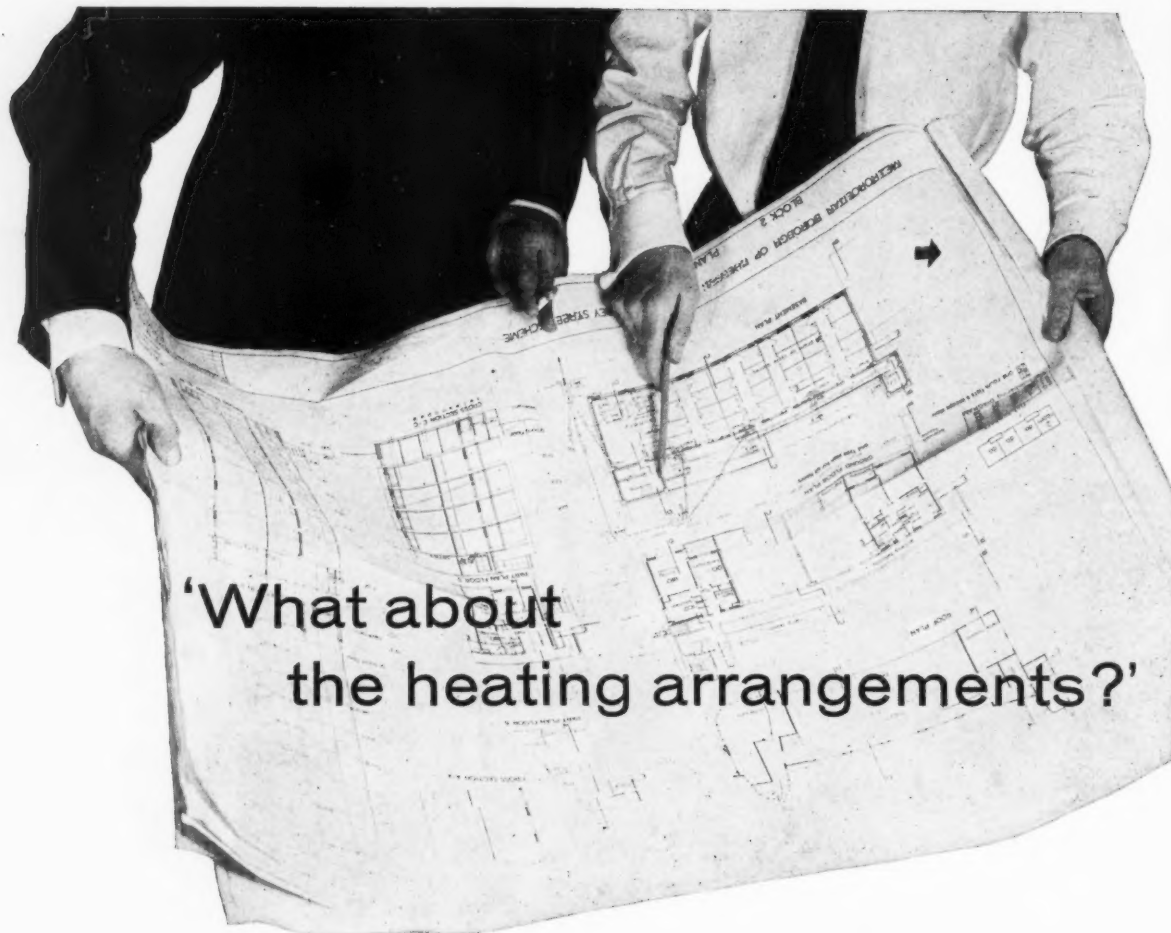


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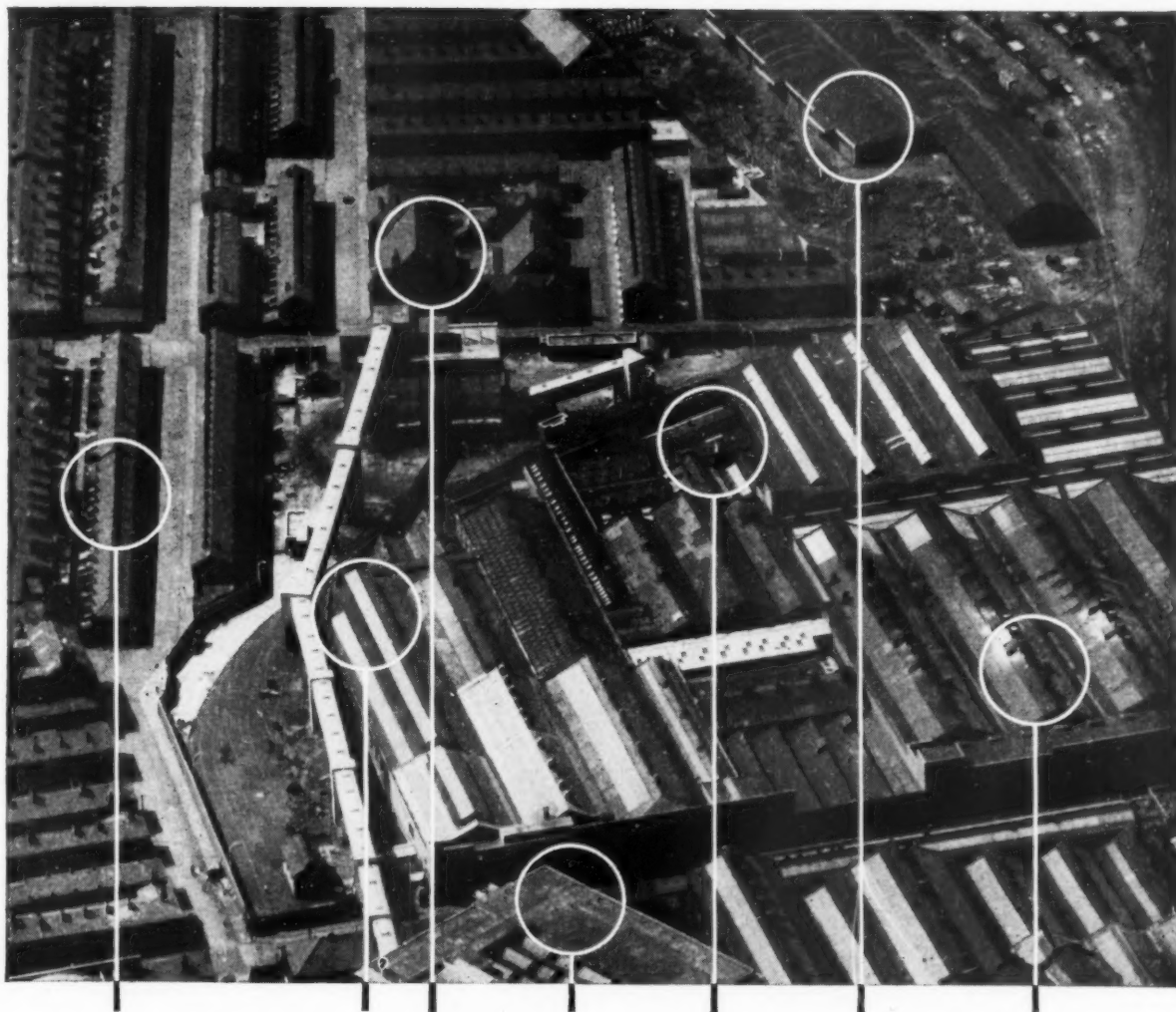
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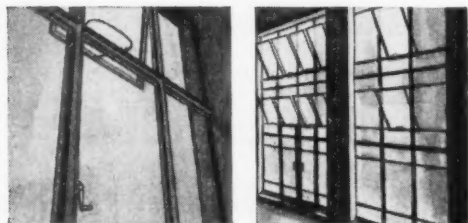
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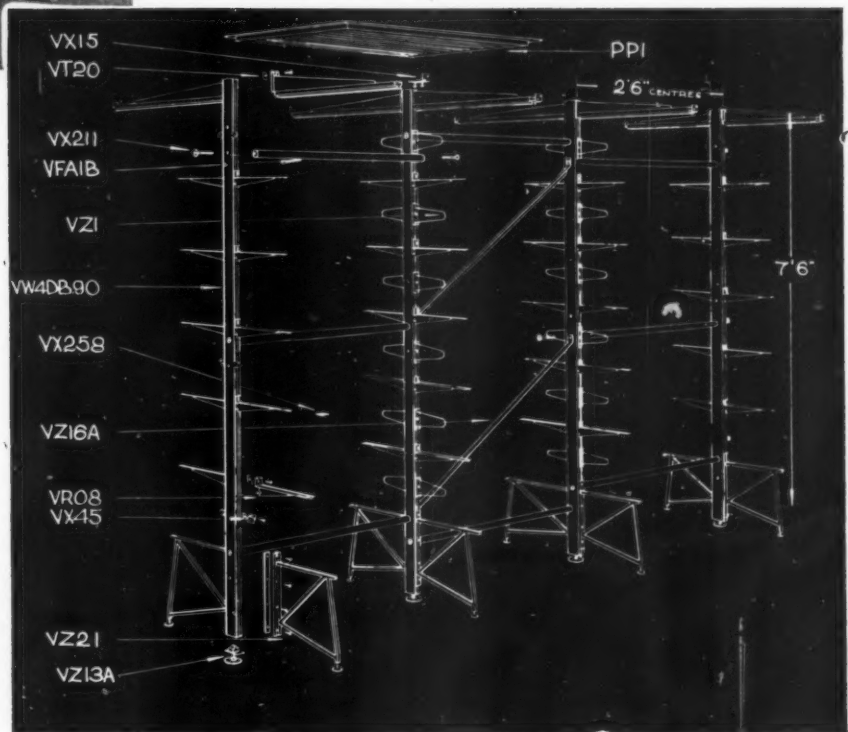
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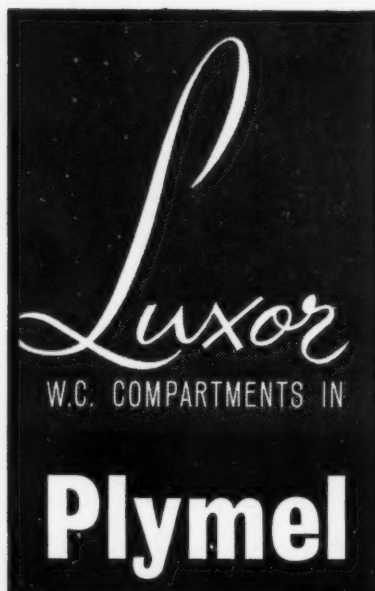
Telegrams: Rhodspaca, Norphone, London

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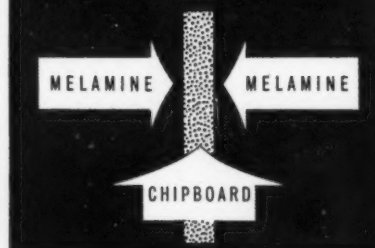
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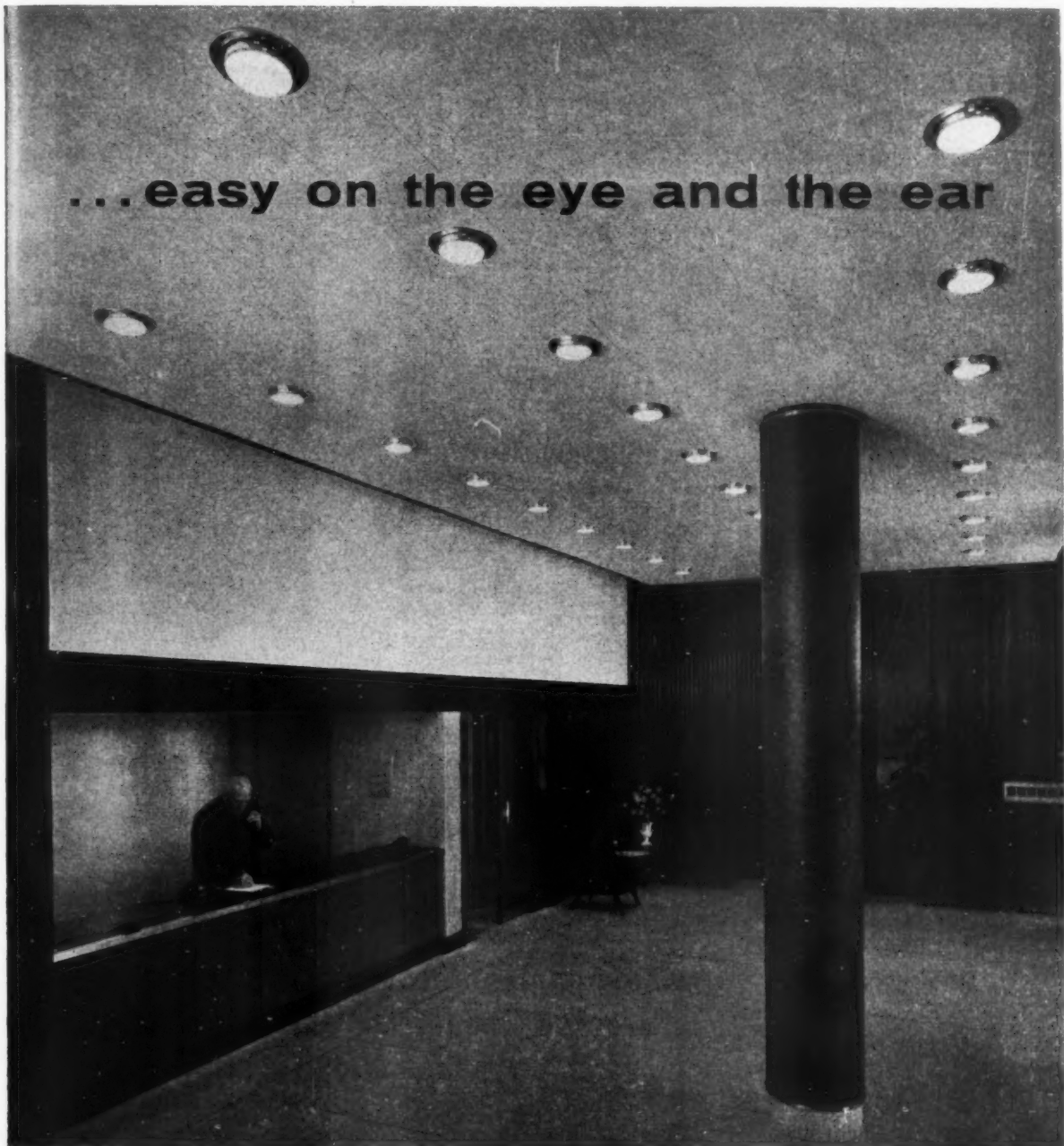
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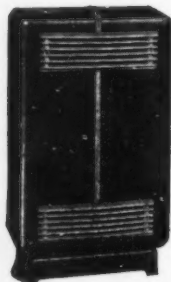
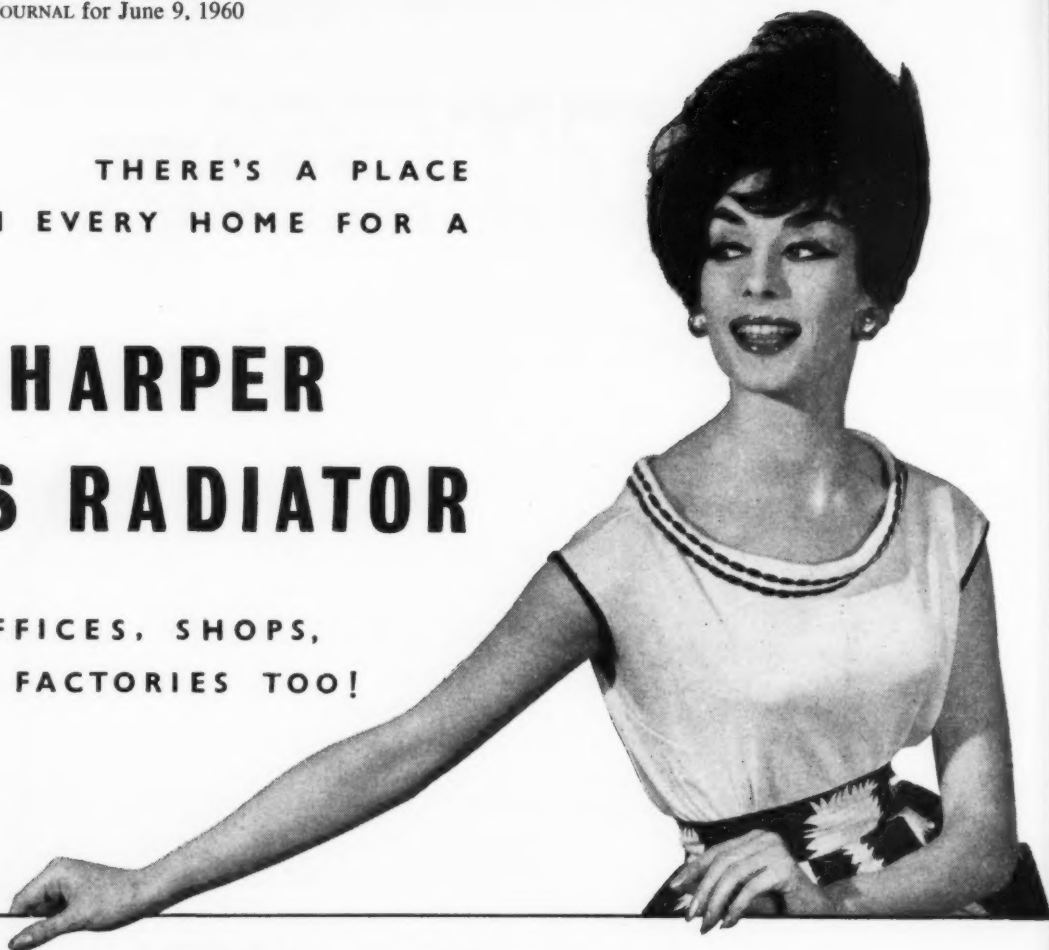
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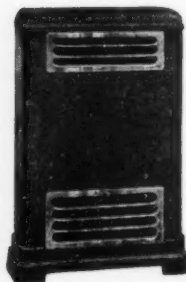
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IN EVERY HOME FOR A

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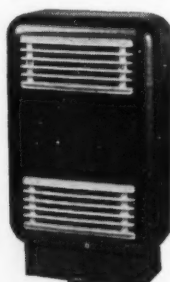
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enamelled. Louvers cream  
vitreous enamelled.  
Burner—cast iron with  
luminous gray jets. 1 in.  
gas inlet, can be fitted  
for R.H. or L.H. feed.  
Governor—constant  
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c.v. Dimensions—Height  
29½ in. Width 17½ in.  
Depth 7 in. Weight 42 lb.



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—Heat resisting coinage  
bronze. The top louver  
and the door (which has  
concealed hinges) are  
cream vitreous enamelled.  
Burner—cast iron with  
luminous gray jets. 1 in.  
B.S.P. inlet for R.H. or  
L.H. feed. Governor—  
Constant pressure. Gas  
Consumption 12 cu. ft.  
per hour at 2½ in. W.G.  
Maximum Output per  
hour—5,400 B.Th.U. at  
500 c.v. Dimensions—  
Height 25 in. Width  
17 in. Depth 6½ in.  
Weight 31½ lb.

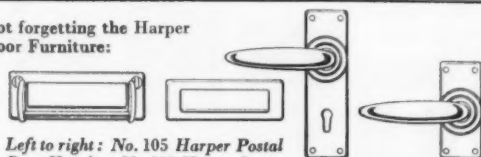


**Model No. 4008. Finish**  
—Base and body heat  
resisting coinage bronze  
or pearl blue. Baffle  
vitreous enamelled.  
Louvers cream vitreous  
enamelled. Burner—Cast  
iron with luminous gray  
jets. 1 in. gas inlet can  
be fitted for R.H. or  
L.H. feed. Governor—  
Constant Pressure. Gas  
Consumption—8 cu. ft.  
per hour at 2½ in.  
W.G. Maximum Output  
per hour—3,600 B.Th.U.  
at 500 c.v. Dimensions—  
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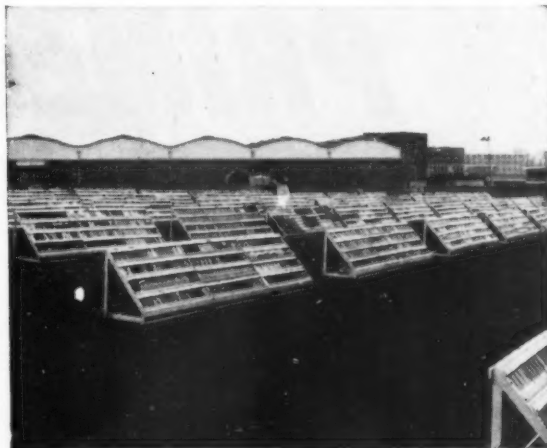
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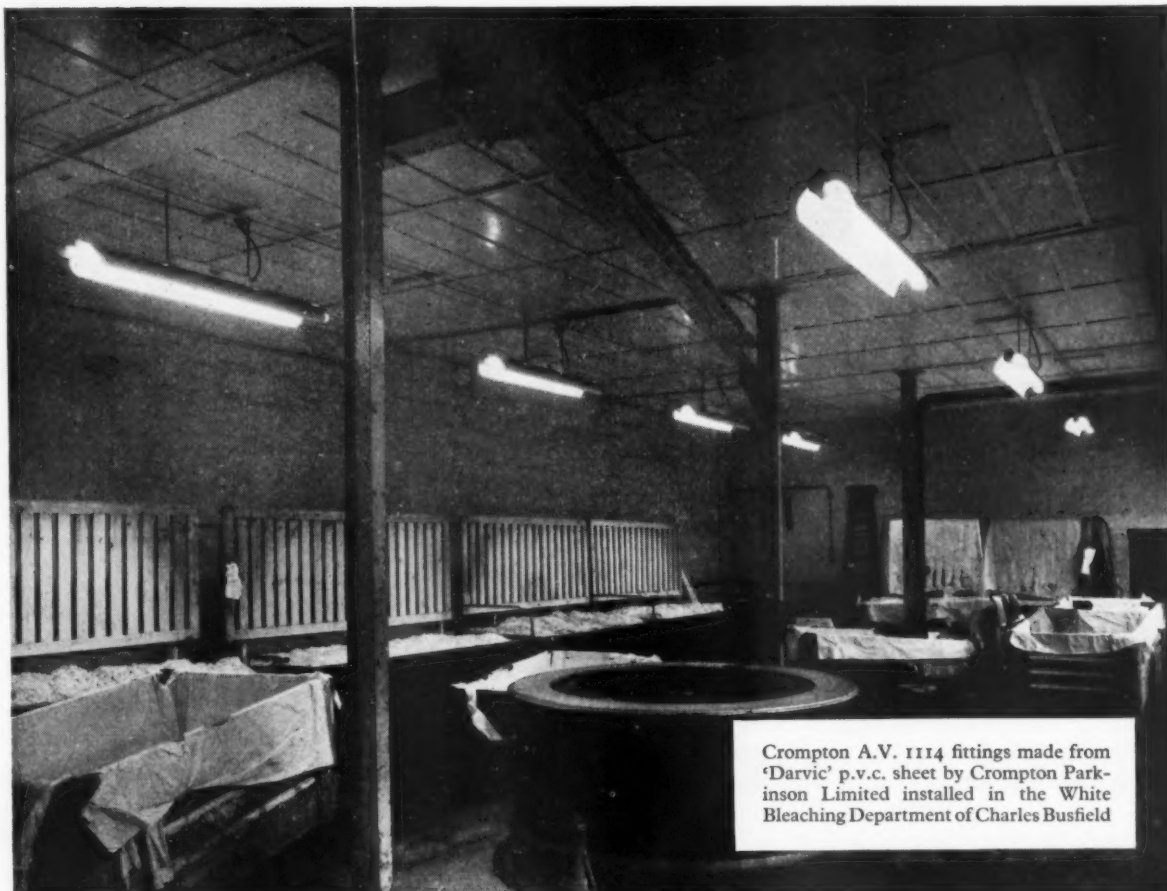
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*'Darvic' is the registered trade mark for the rigid p.v.c. sheet manufactured by I.C.I.*



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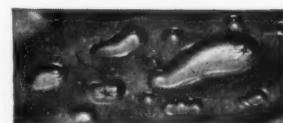


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**STOPS flaking and peeling**



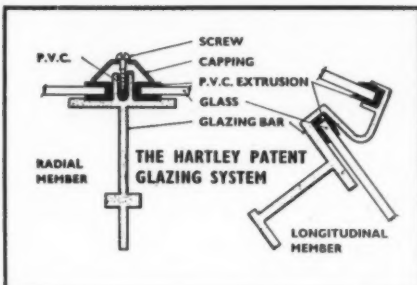
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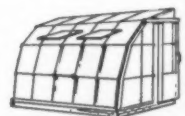


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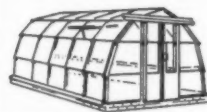
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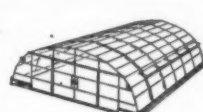
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Hartley "21" 21' 2 1/2" Wide  
10' 0" High



Hartley "27" 28'1" Wide, 11'9" High

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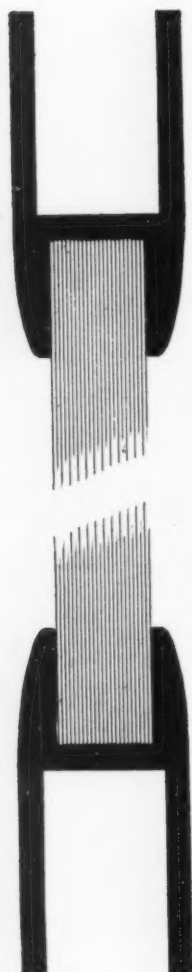
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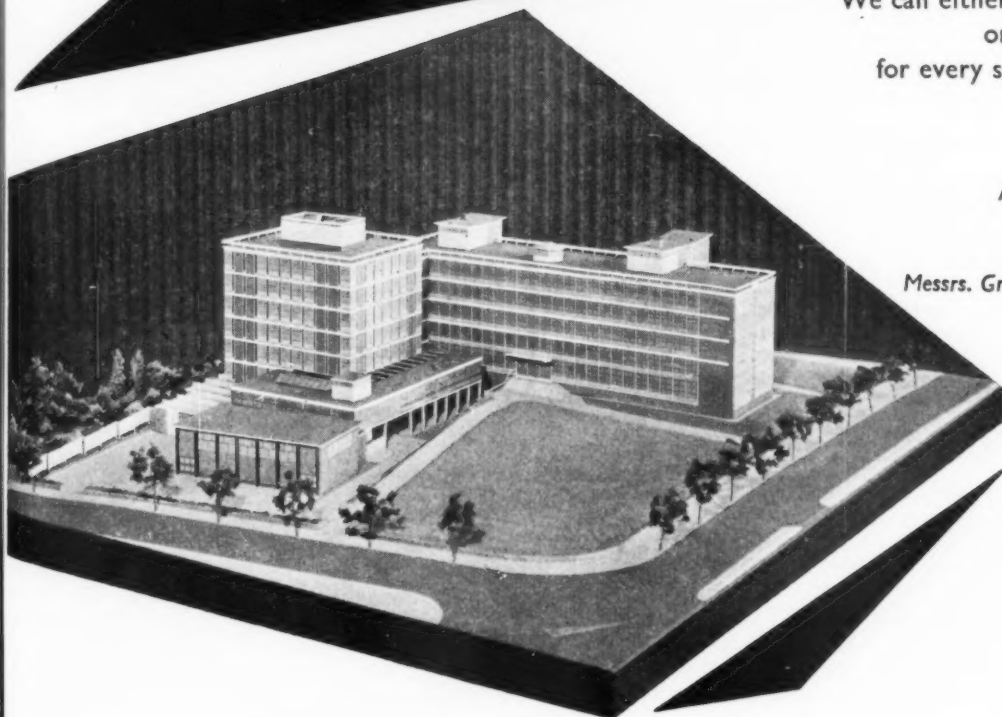
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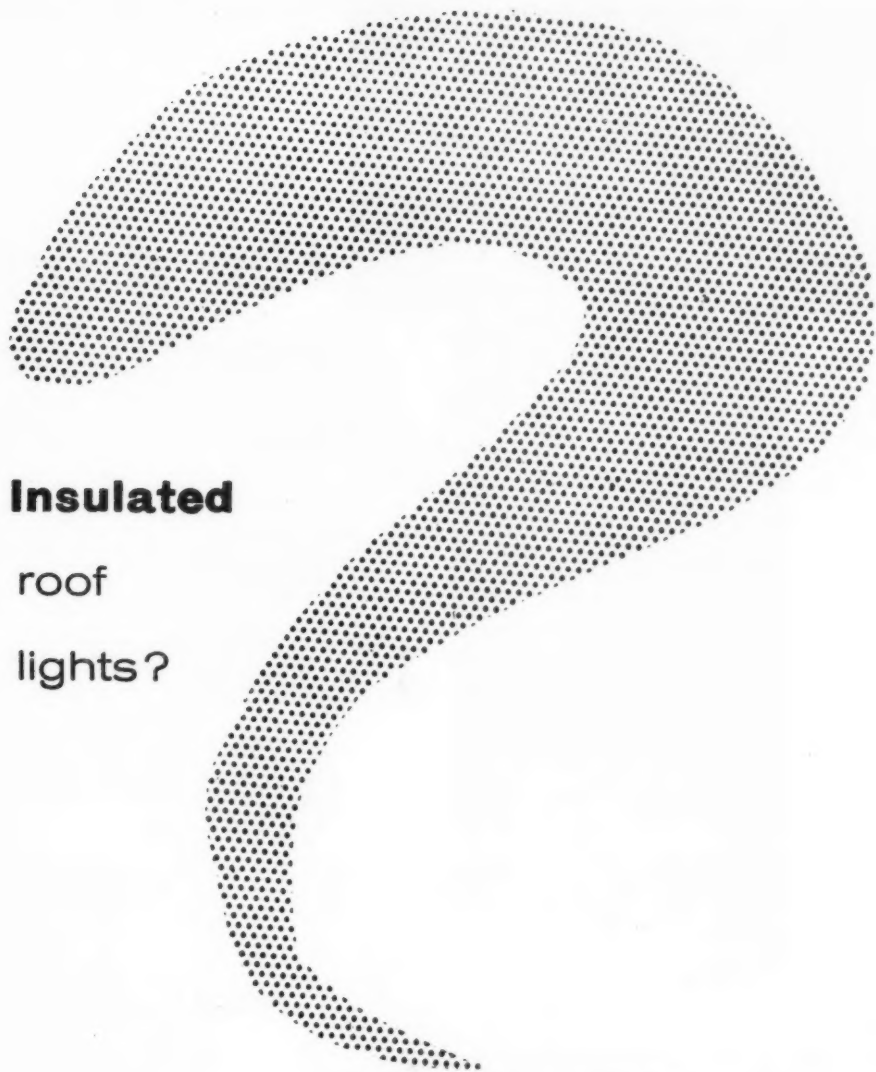
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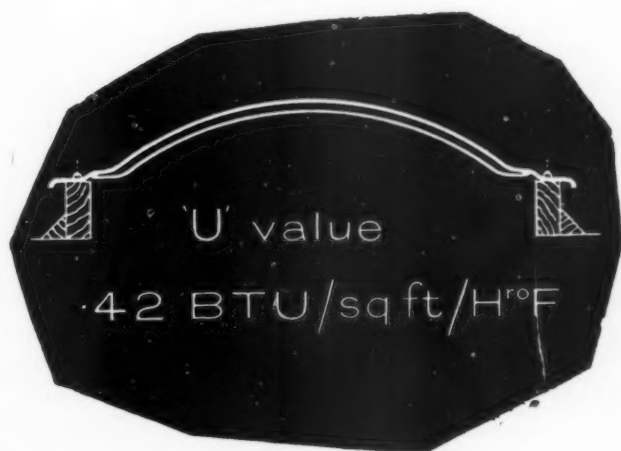


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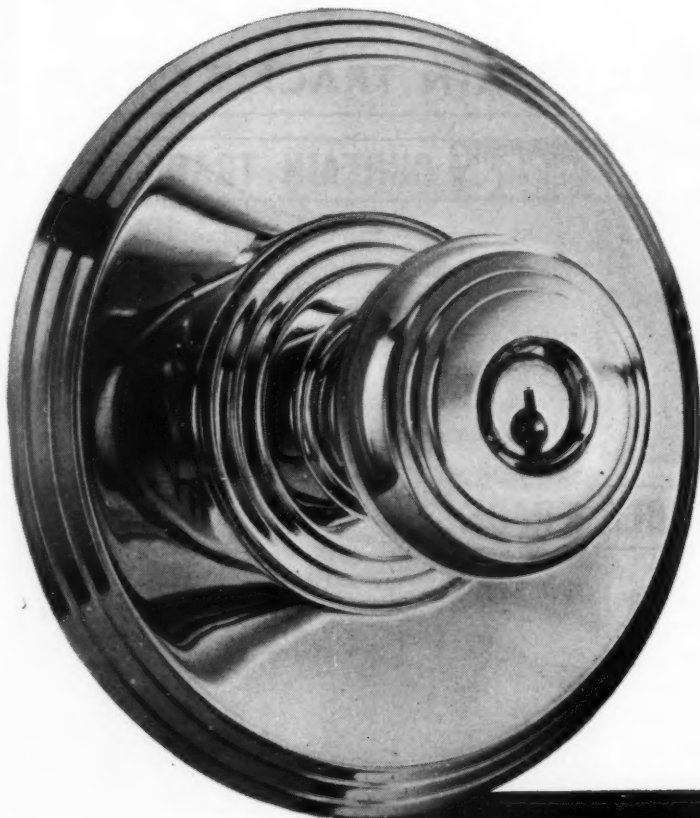
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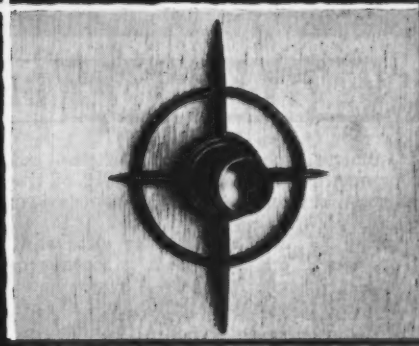
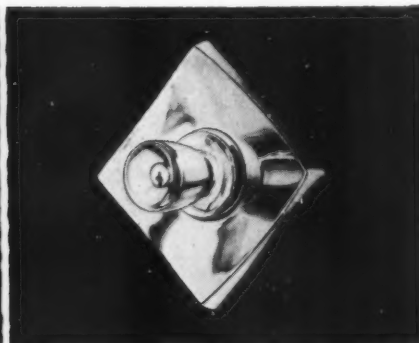
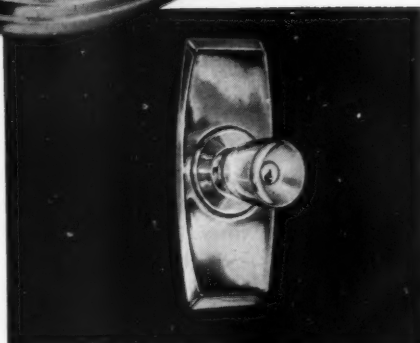
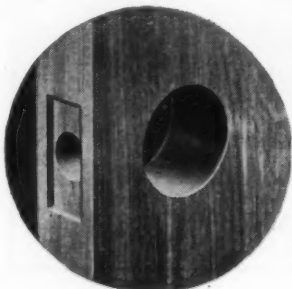
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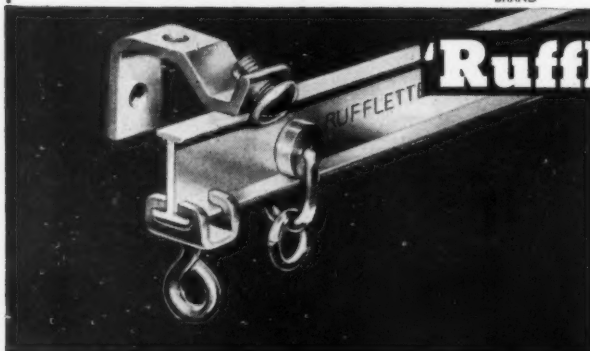
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**'Rufflette'** CURTAIN TRACK SYSTEMS



**'Rufflette' CURTAIN TRACK**

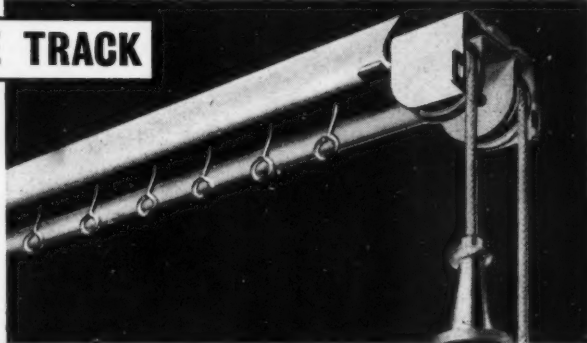
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A strong, reliable curtain track made in brass or aluminium complete with all the necessary fittings. Specially designed fixing brackets enable the track to be locked rigidly in position by just a turn of a single front facing screw. Add to the track 'Rufflette' Brand Cord Control for straight or bay windows for the smoothest method of opening and closing curtains.

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**'Rufflette' CUBICLE TRACK**

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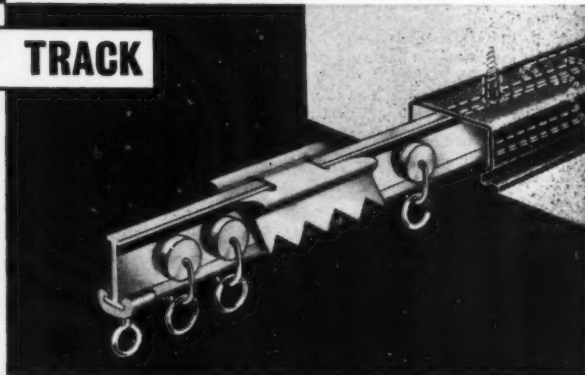
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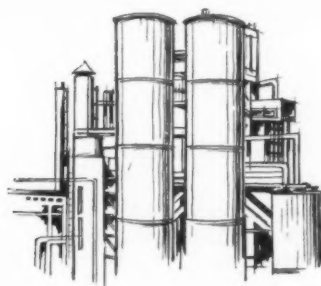
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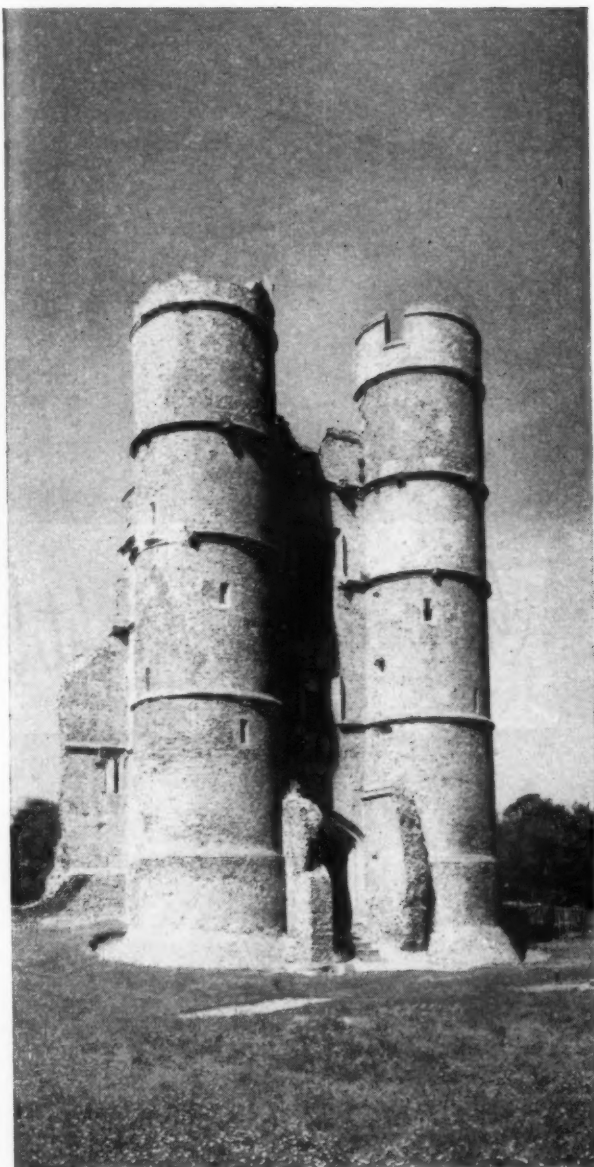
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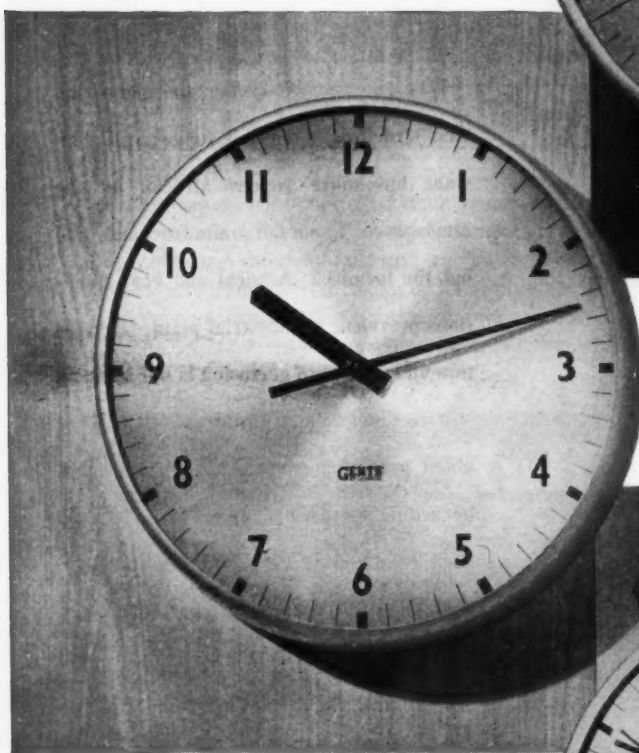
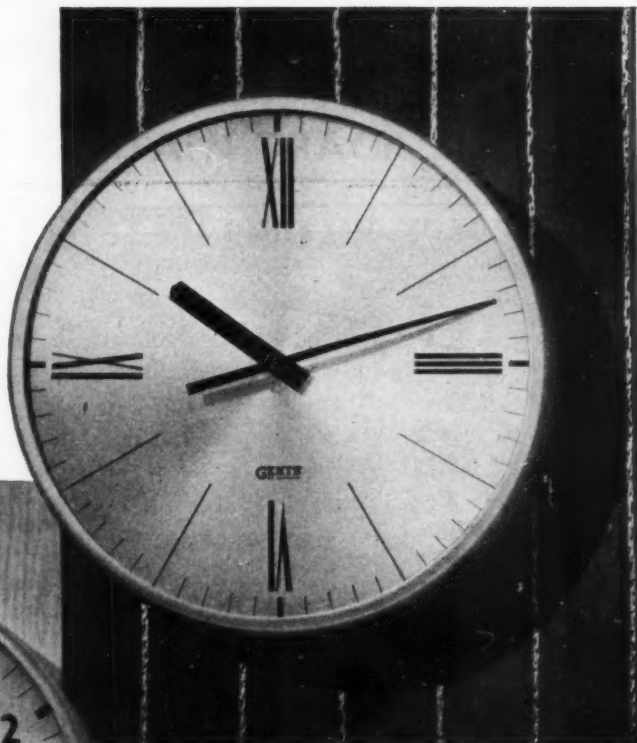


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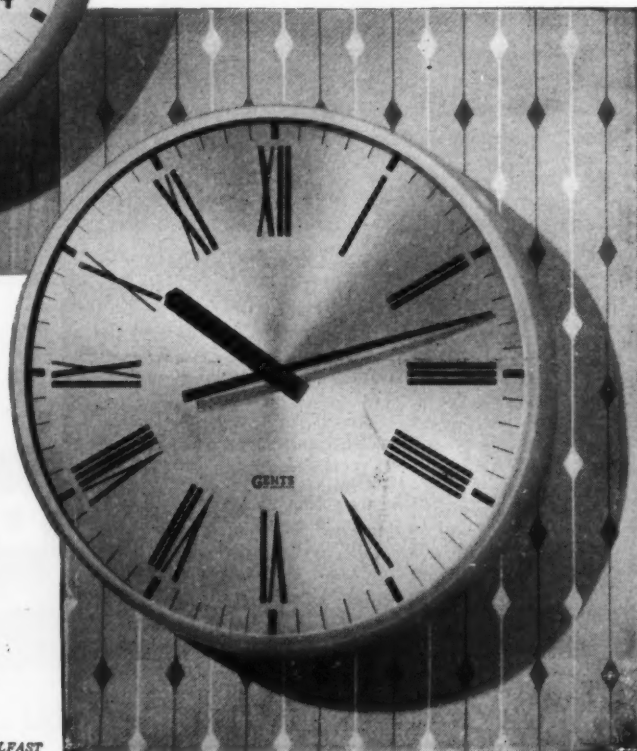
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*May we send you literature?*

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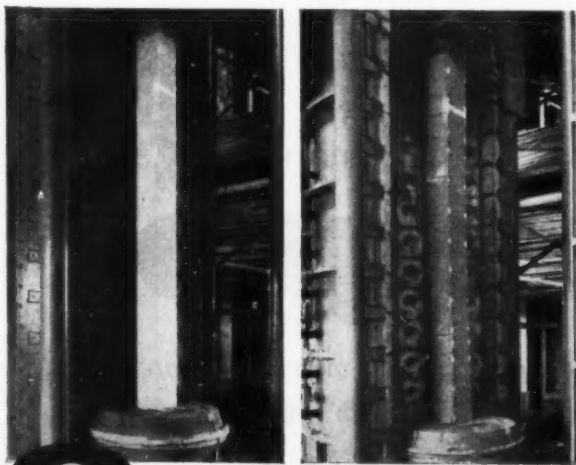
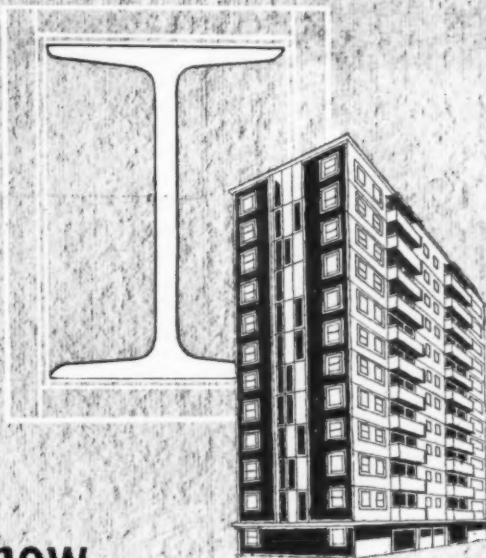
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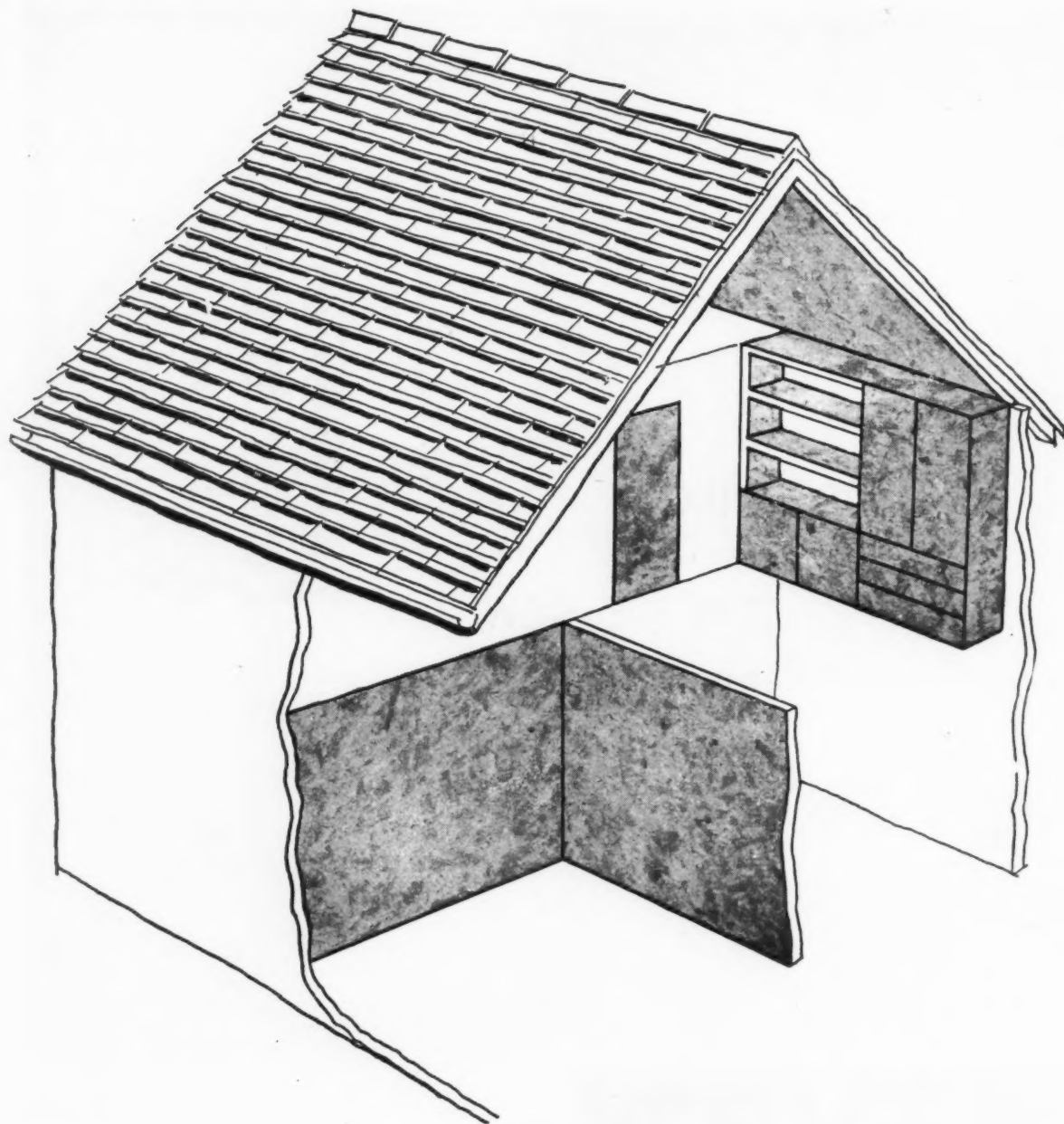


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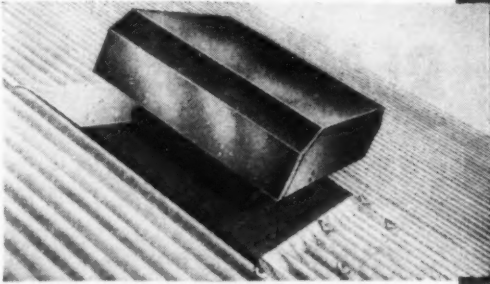
VPS 66

# Powered & Natural

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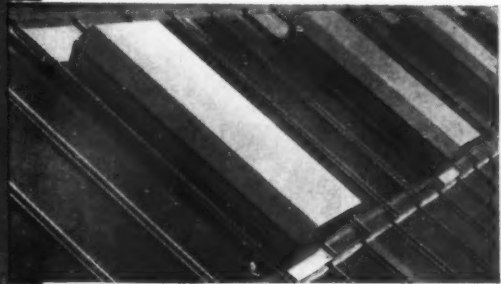
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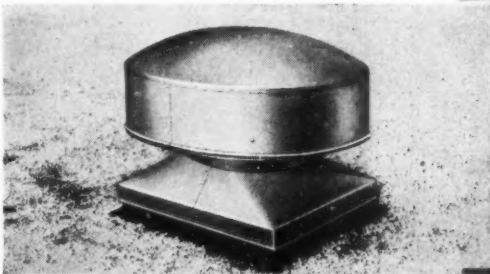
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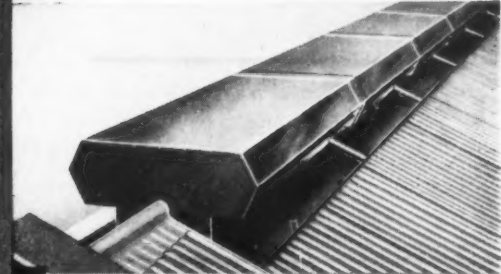
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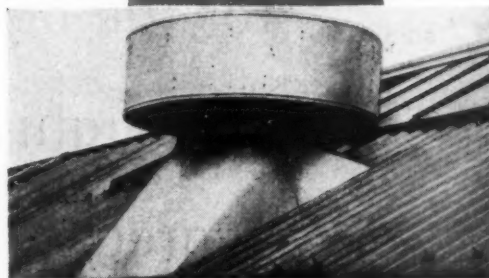


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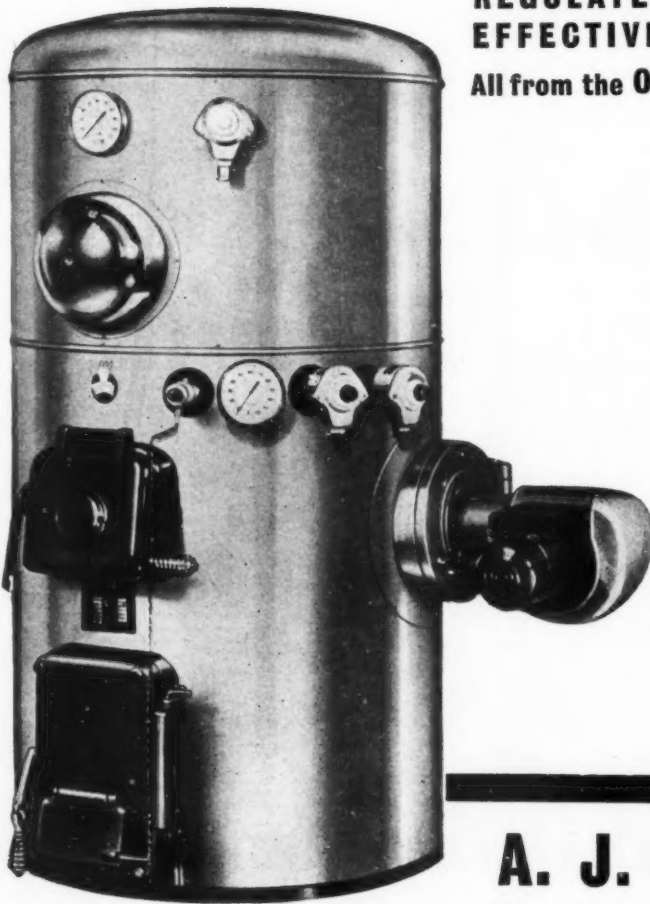


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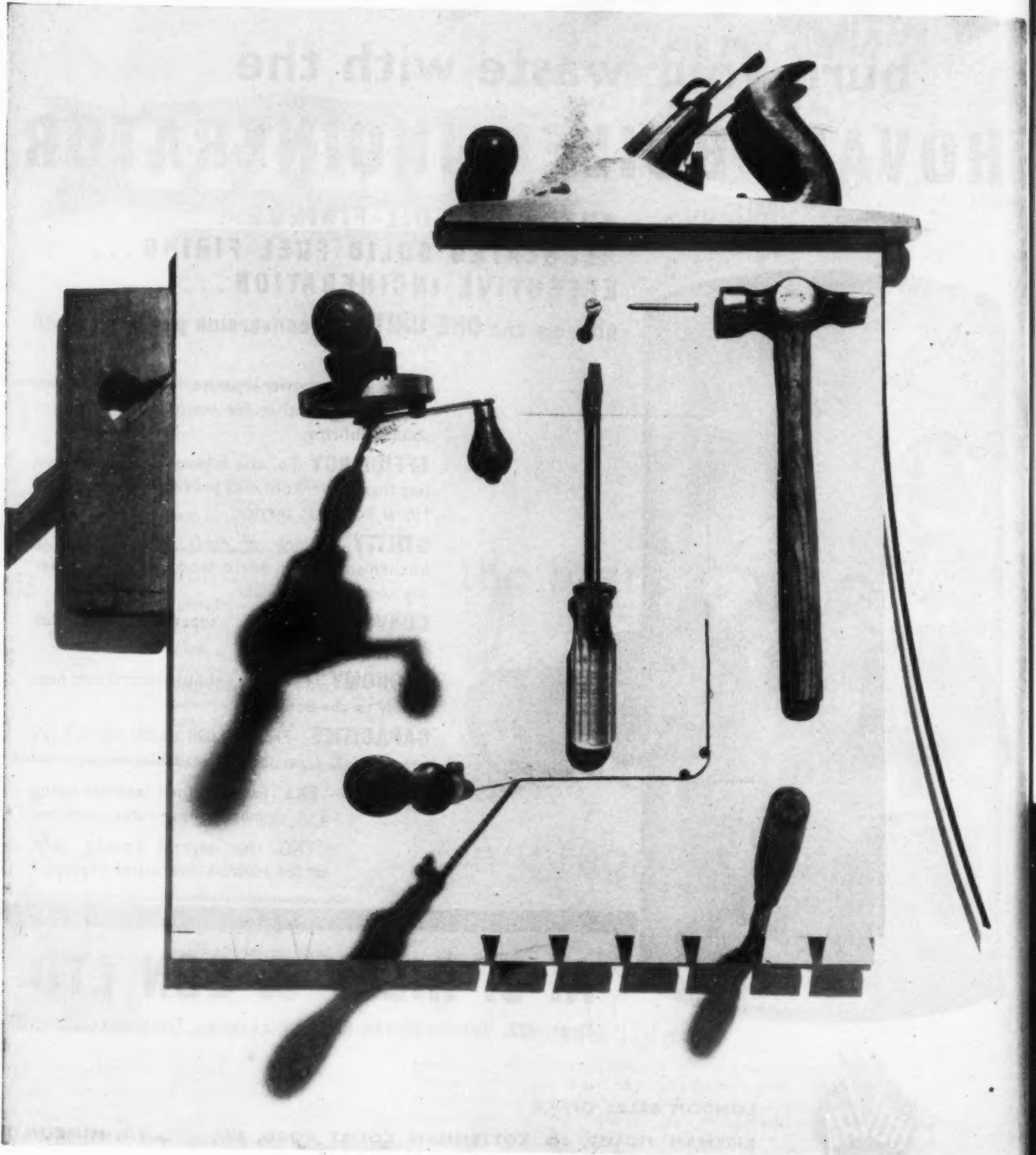


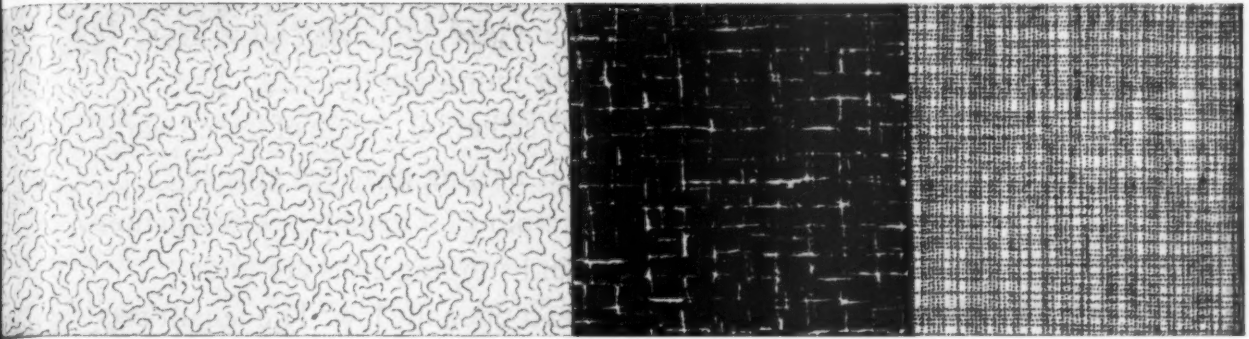
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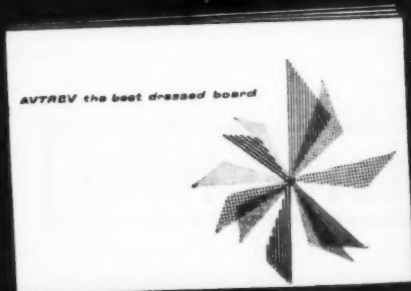
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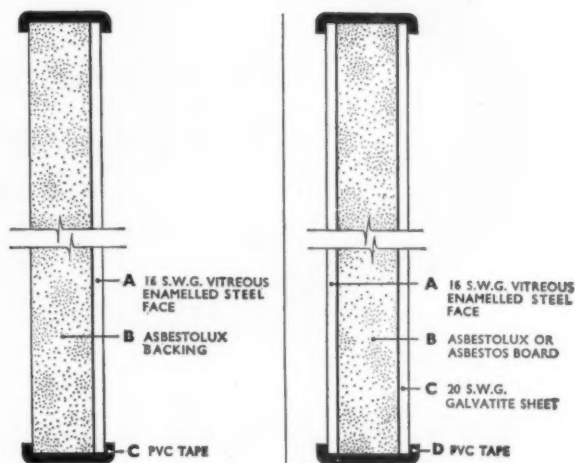


# CURRAN SEAPORCLAD INFILL PANEL TYPE 7 AND 5

Seaporclad vitreous enamelled steel\* Infill Panel Type No 7 which has been used to clad the new Cyntwell School, Cardiff is one of a wide range of infill and facing panels manufactured by Edward Curran Engineering Ltd. These panels provide permanent colour and excellent insulation. They are light and versatile in use and quickly assembled. The smooth vitreous enamelled surfaces are washed by every rainfall and require the minimum maintenance. Panels are available up to 8' 0" x 4' 0". Recommended maximum size is 6' 0" x 4' 0". Seaporclad panels comply with the standards and specifications laid down by the Vitreous Enamel Development Council. Full technical information is available from the sole manufacturers in the British Isles: Edward Curran Engineering Ltd., Architectural Division, Cardiff. Telephone: Cardiff 33644.

\* Curran vitreous enamel is a true glass surface fired at 860°C on steel; it is permanent, will not fade and is highly resistant to chemical attack.

Seaporclad Infill Panels are also being manufactured and used in Australia, Austria, Belgium, Brazil, Canada, Chile, Denmark, France, Germany, Holland, Italy, Japan, Luxembourg, New Zealand, Norway, South Africa, Spain, Sweden, Switzerland, Turkey, United States of America.

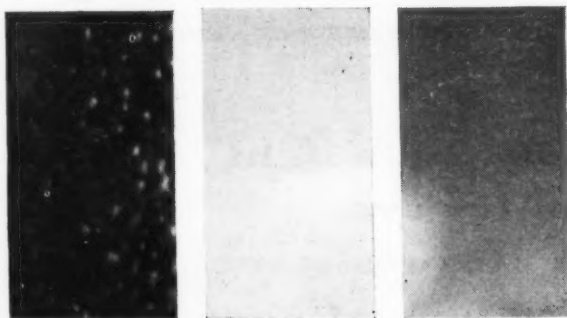


## TYPE 7

The face is a flat vitreous enamelled 16-gauge steel sheet, bonded with neoprene adhesive to an Asbestolux or asbestos board,  $\frac{1}{2}$ ",  $\frac{1}{4}$ " or  $\frac{3}{8}$ " thick. Panel edges are sealed all round with PVC tape.

## TYPE 5

is exactly the same as Type 7, except that the Asbestolux is backed up with a 20-gauge electro-galvanized steel sheet.



**Colour:** almost all colours of the British Standard 101 Range.

**Finish:** available in full gloss, matt and semi-matt.

**Texture:** supplied stippled, marbled, etc.

U <sub>v</sub> Value	Weight per sq. ft.	Panel Thickness	Core Thickness	U <sub>v</sub> value	Weight per sq. ft.	Panel Thickness	Core Thickness
.619	3 lb. 11½ oz.	$\frac{1}{8}$ "	$\frac{1}{2}$ "	.550	5 lb. 9 oz.	$\frac{1}{4}$ "	$\frac{1}{2}$ "
.503	4 lb. 1 oz.	$\frac{1}{8}$ "	$\frac{1}{2}$ "	.500	6 lb. 0 oz.	$\frac{1}{4}$ "	$\frac{1}{2}$ "
.422	4 lb. 11½ oz.	$\frac{1}{8}$ "	$\frac{3}{4}$ "	.422	6 lb. 14 oz.	$\frac{1}{4}$ "	$\frac{3}{4}$ "



## THE NEW CYNTWELL SCHOOL, CARDIFF

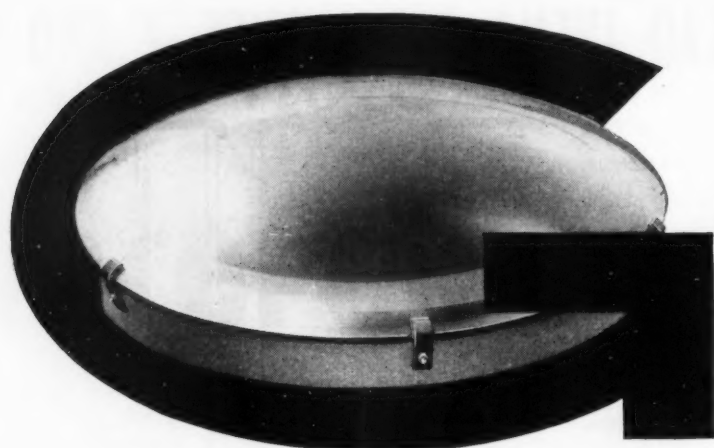
All panels used are Curran Seaporclad Type 7, finished in full gloss. Total surface area: 1228.43 sq. ft.

**Architects:** City Architects Department, Cardiff

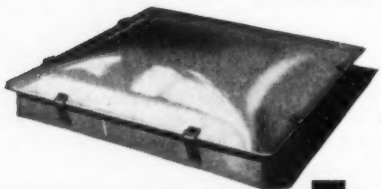

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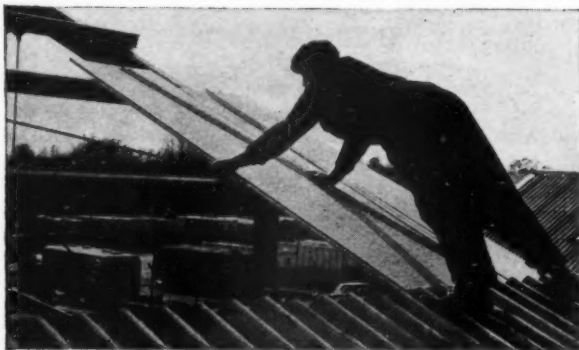
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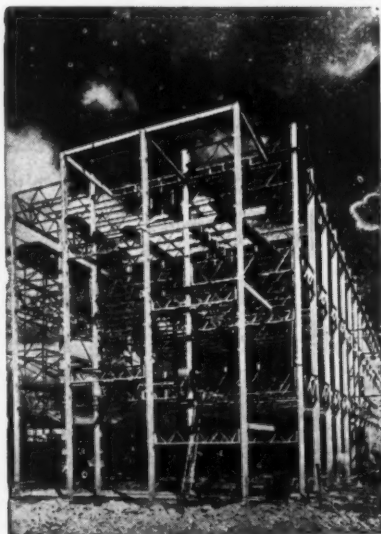
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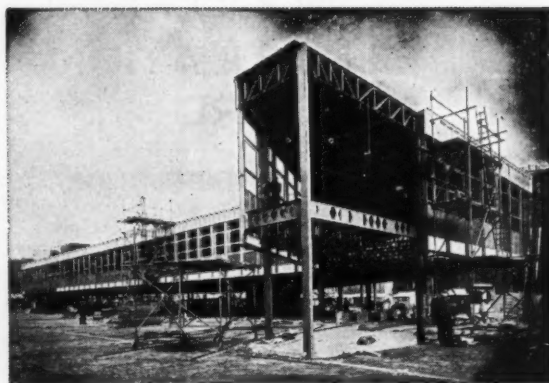
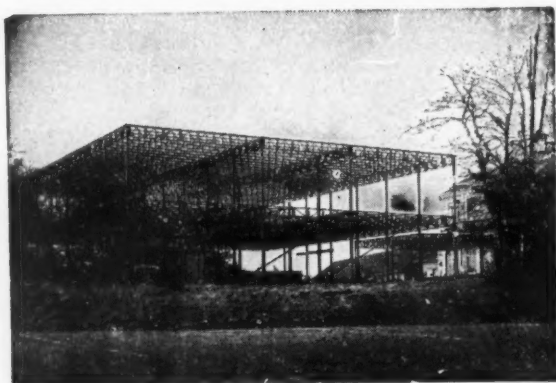
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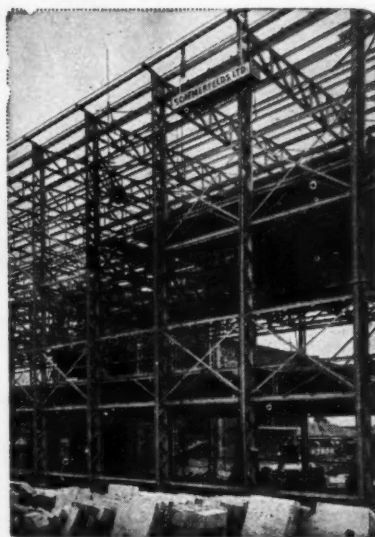
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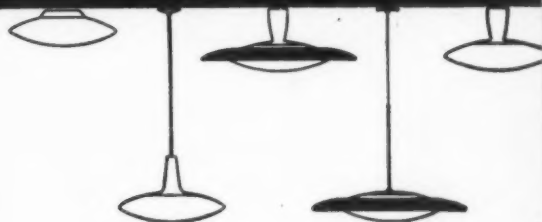


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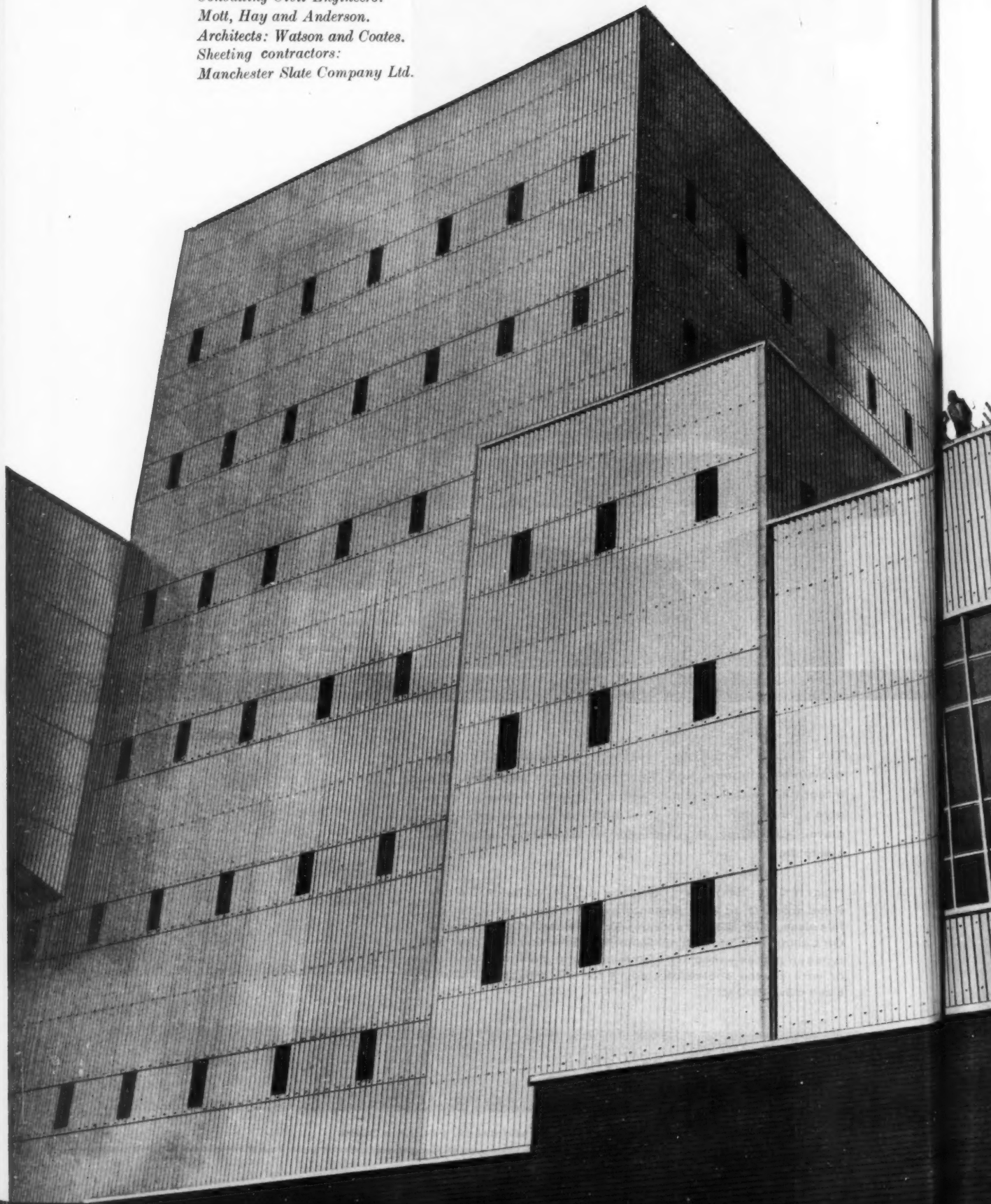
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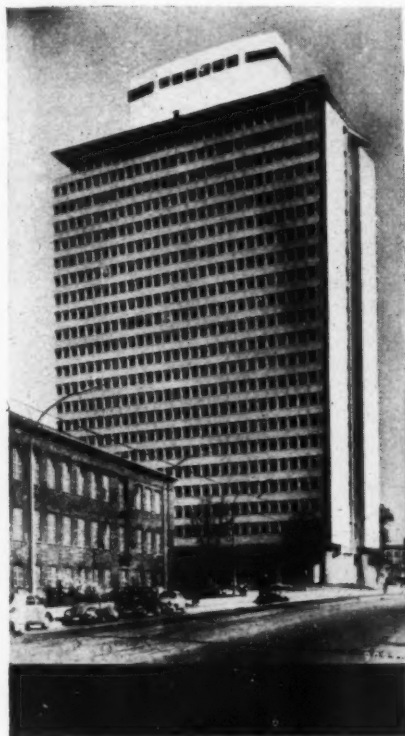
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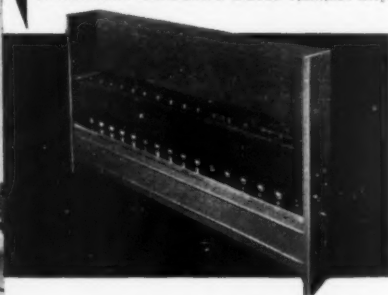
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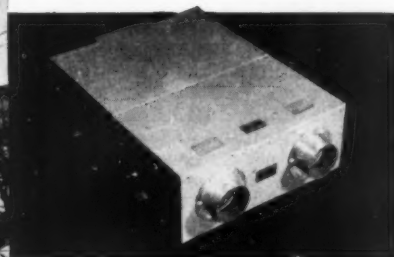
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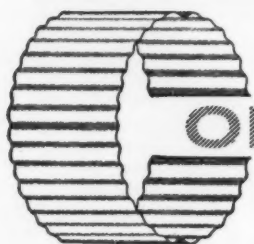
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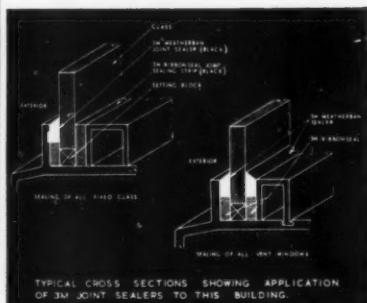
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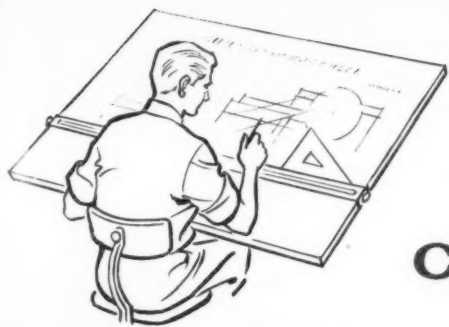
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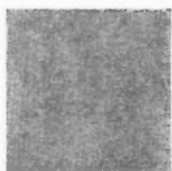




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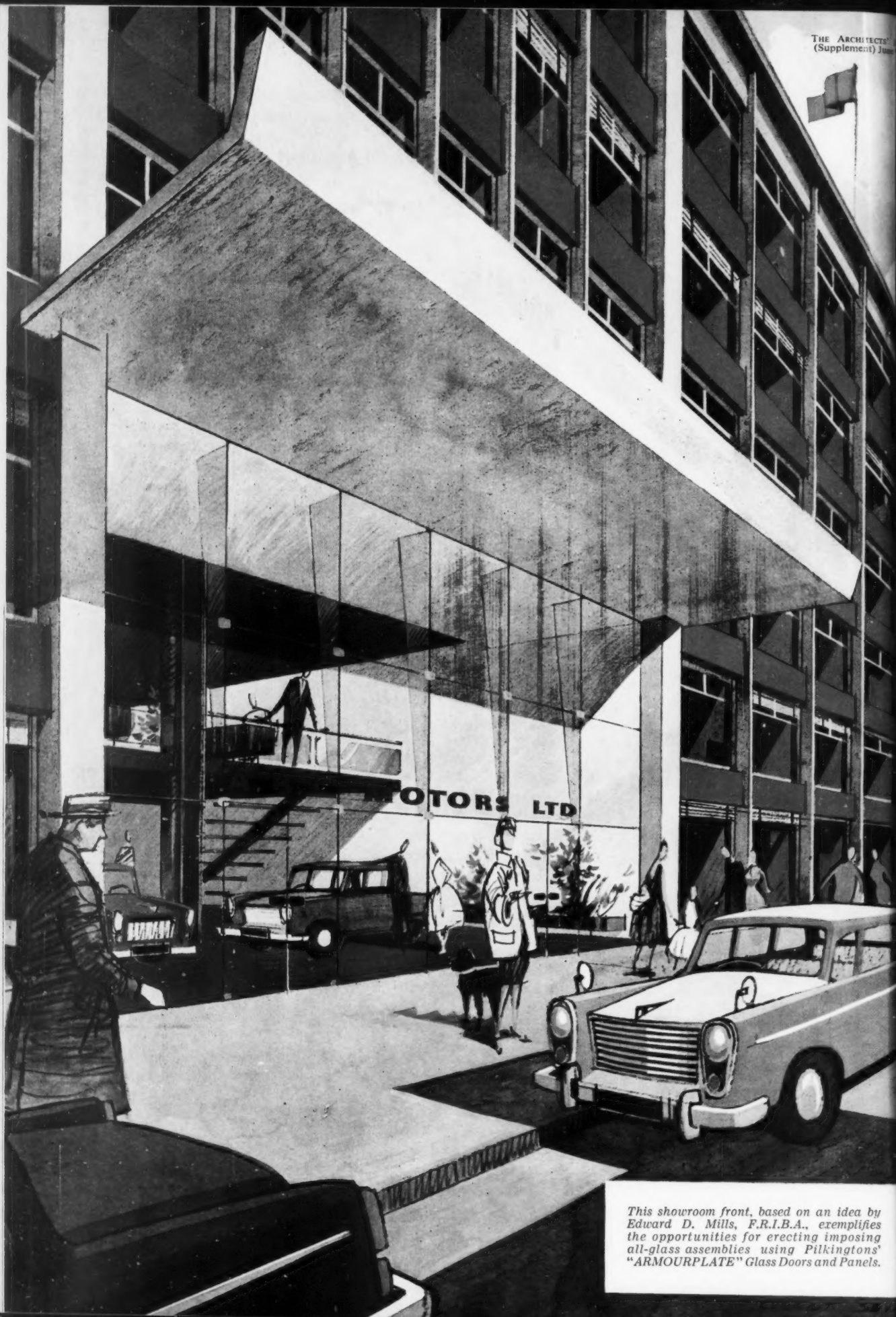
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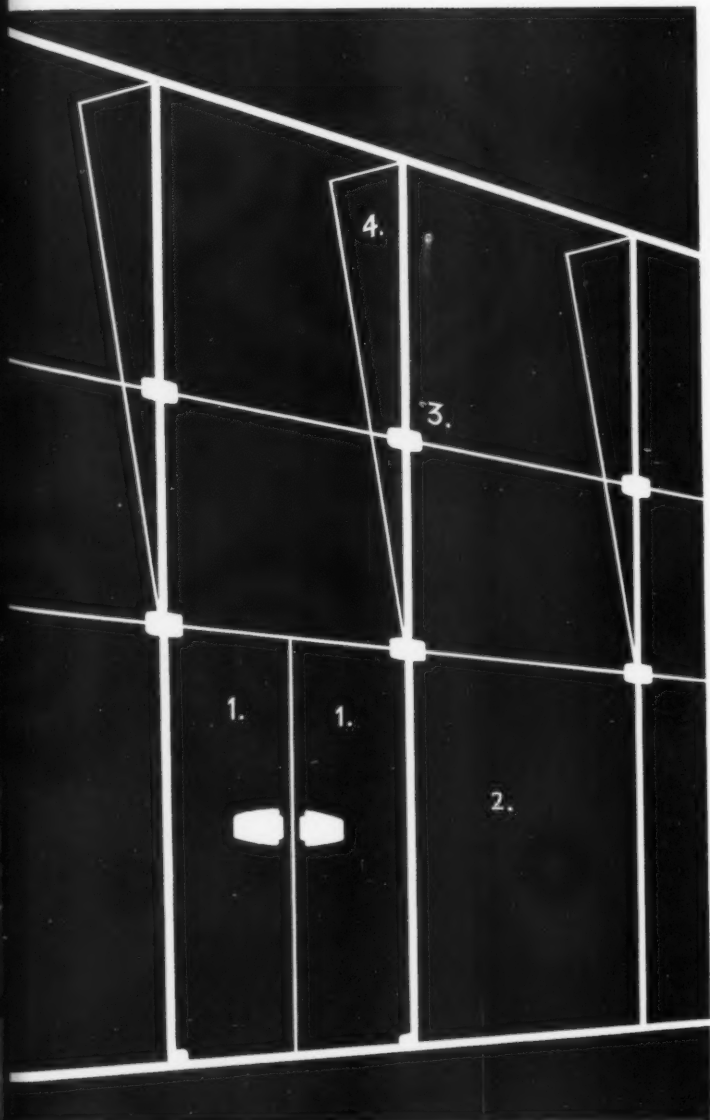






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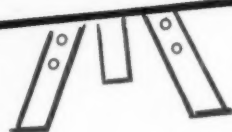
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*the heavy duty flooring for all occasions*

Caludon Castle School, Coventry.  
City Architect: A. G. Ling, Esq., F.R.I.B.A., A.M.T.P.I.  
Specialist Contractor: Premier Tiles (Coventry) Ltd.

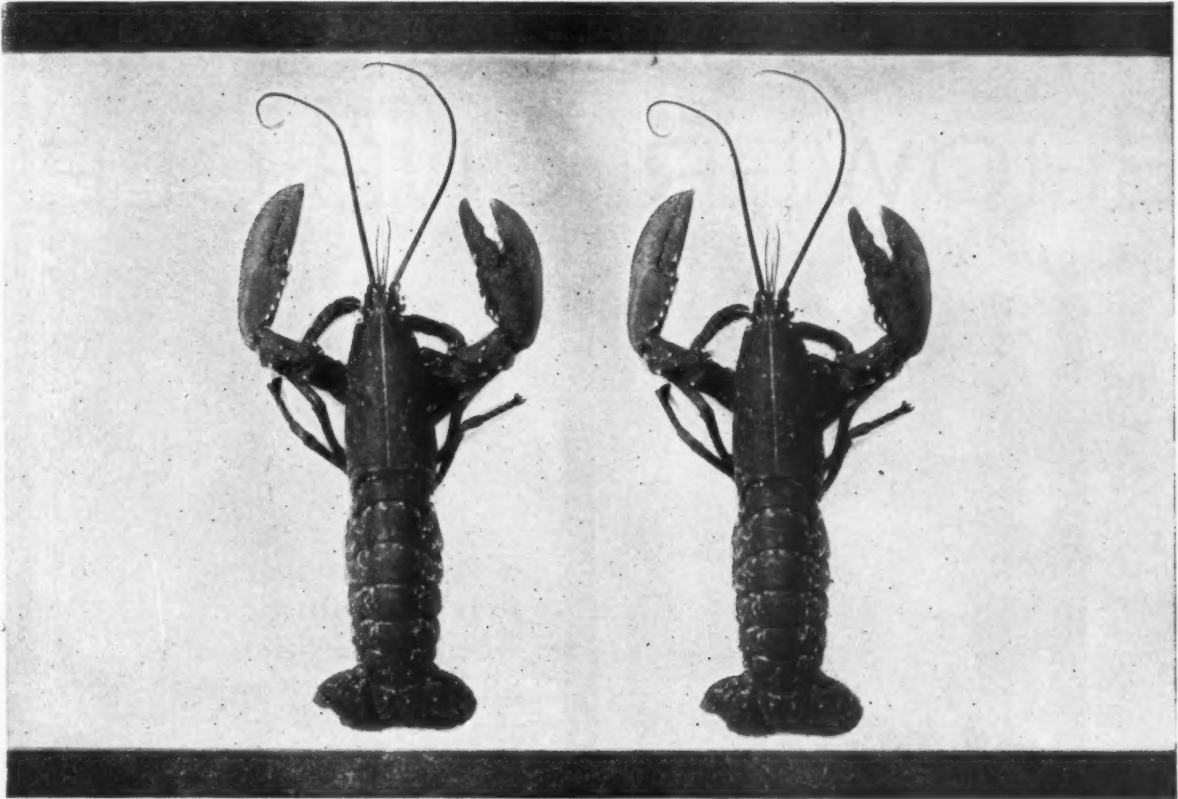
Accotile Flooring is especially recommended for the busier walks of life such as schools, hospitals, libraries, shops and commercial buildings. Accotile Floors are extremely hard wearing and retain their original lustre in spite of the heaviest traffic. From the wide range of colours, countless designs can be

evolved. In addition to its outstanding durability, Accotile provides a hygienic floor which is draught proof and requires the minimum of care to maintain its well groomed appearance. For heavy duty specify Accotile the modern thermo-plastic flooring. Samples and full details will be sent at your request.

**Armstrong flooring**  
**ACCOFLEX • ACCOTILE • CORK TILE • LINOLEUM**

ARMSTRONG CORK COMPANY LTD., BUSH HOUSE, ALDWYCH, LONDON, W.C.2. COVent Garden 1101

can **you** see the difference?



On the surface they look the same. Hardboards are like that. Tests conclusively prove that Swedish Masonite Presdwood has Less Moisture Absorption Than Any Other Swedish Hardboard. This is the reason why Masonite Presdwood does not laminate, buckle or warp. Look for the famous Masonite mark Stamped on the

reverse side of every board.



Swedish Hardboards are best. Masonite Presdwood is the best of Swedish Hardboards

**MASONITE LIMITED, BEVIS MARKS HOUSE,  
BEVIS MARKS, LONDON E.C.3**

Tel: AVEnue 2846

Grams: Etinosam, Fen, London

Research tests from the Swedish Testing Institute show the following —



**STATENS  
PROVNINGSANSTALT  
STOCKHOLM**

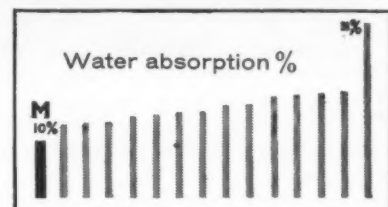
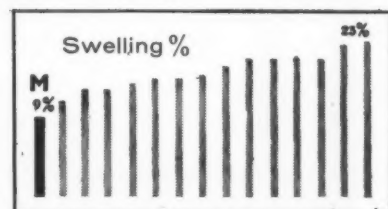
Idag nr 44-207

Uppdragsgivare: P. Wikström Jor., Stockholm

Föremål: 36 st träfiberark

Undersökning: Svällning och vattenabsorption

	Water absorption	Swelling
MASONITE	9.6	8.9
Mean value for 14 other makes	22.3	17.7
Maximum among these	50.7	23.3
Minimum " "	15.8	12.2



from **LEISURE** a self-contained  
**SHOWER CUBICLE**



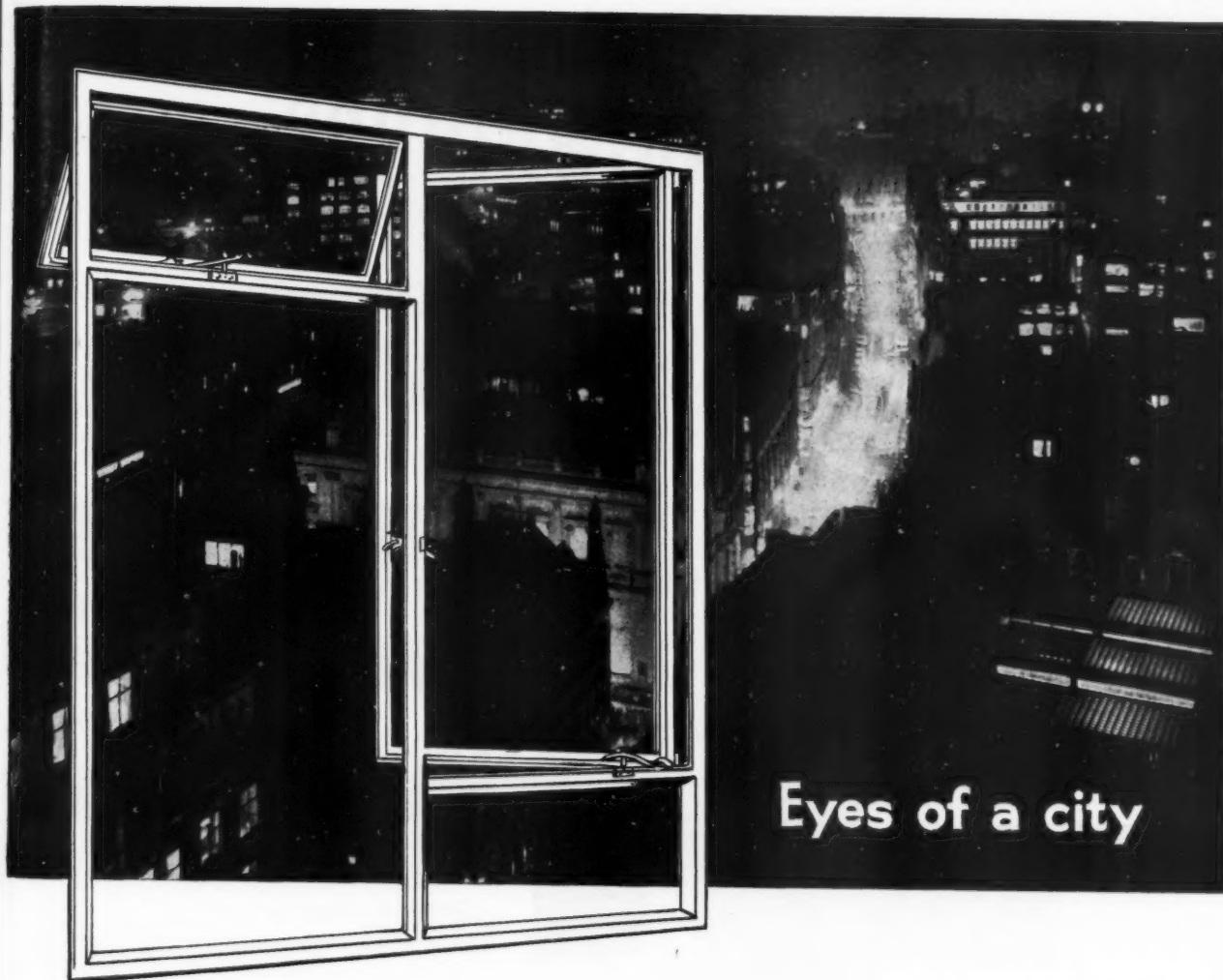
**a space-saving  
private bathroom  
within the reach of  
all your customers!**

The Leisure Shower Cubicle has been designed to stand anywhere without structural alterations of any kind. It is particularly useful in flatlets, where space is so precious. What does the Leisure Shower Cubicle offer? An attractive shower curtain seals off the gleaming white and black enamel interior from the outside room. The spotlight glass panel, set into the roof, provides plenty of light. A twist of the anti-scald mixer tap gives instant hot or cold showers. The chrome flexible pipe can be transferred to the washbasin, which together with the mirror and glass holder is an optional accessory. The Leisure Shower Cubicle is soundly constructed in pressed steel, and is easy to install. Prices have been kept to a minimum so that all can benefit from this unique piece of home equipment. Display the Shower Cubicle prominently in your showroom—and get set for brisk sales this summer!

PRICES FROM £43.4.6 (undrilled)  
TO £58.3.3 (complete with all accessories)

THE LEISURE SHOWER CUBICLE IS MADE BY LEISURE KITCHEN EQUIPMENT LTD  
NOTTINGHAM ROAD · LONG EATON · N<sup>r</sup> NOTTINGHAM · A DIVISION OF  **ALLIED IRONFOUNDERS**





Eyes of a city

**A**NTICIPATING the practical needs of extensive multi-storey building developments in our Cities, the Beacon Inside-Glaze Window is a low-cost solution to the glazing problems of high buildings. All Beacon windows in the B.S.S. 990 range can be specified with inside glazing and yet maintain one-piece construction and identical overall sizes: coupling is not required.



FOR **INSIDE GLAZING**

MEMBER OF THE  METAL WINDOW ASSOCIATION

**JOHN THOMPSON BEACON WINDOWS LTD • WOLVERHAMPTON**

# plastics downpipes

**NO PAINTING**

**EASY FIXING**

**NO CORROSION**

**LIGHT WEIGHT**

**LESS FOULING**

**DURABLE**

made with

## High Impact GEON PVC

Geon PVC cannot corrode:  
pipes can be self coloured  
and do not need painting.

It is light in weight and tough:  
pipes are easy to install and  
are not easily damaged.

Geon PVC is completely impervious:  
pipes will not form moss or  
collect leaves and dirt.

It is easily and economically worked:  
pipes can be quickly sawn to length  
with a hacksaw and the offcuts used.

*For full information about*

*High Impact Geon PVC*

*please write for booklet No. 128*

'Osma' pipes made by G. H. Osborn Building Products Ltd.  
using high impact Geon PVC cost no more than painted cast iron.  
For further information please write to:  
G. H. Osborn Building Products Ltd.  
4 Dollis Park, Finchley, London N3

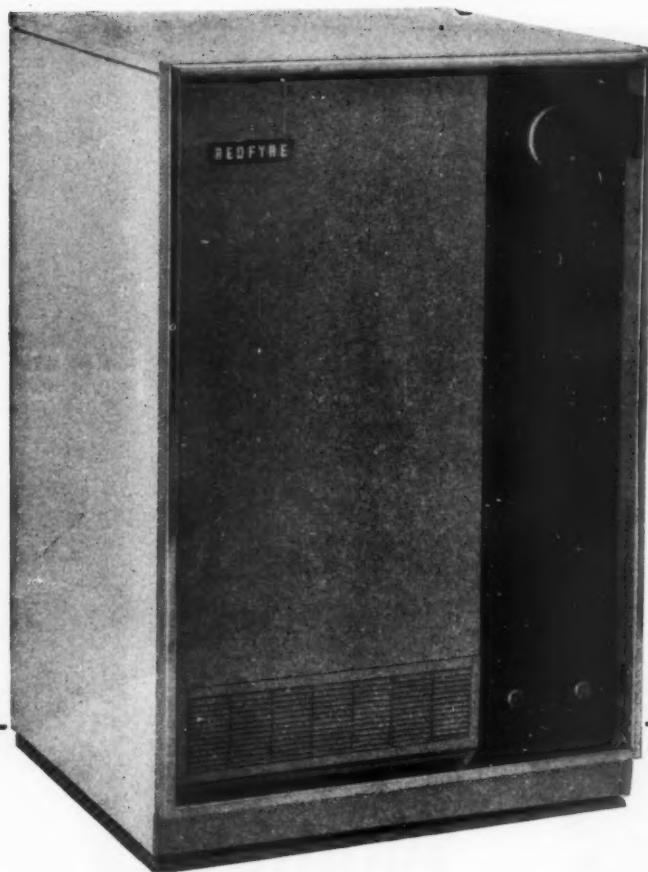
**British Geon Ltd**

A COMPANY IN THE DISTILLERS PLASTICS GROUP



SALES AND TECHNICAL SERVICE DEVONSHIRE HOUSE PICCADILLY LONDON W1 HYDE PARK 7321

*Distillers Plastics Serve Everyman*



## The new REDFYRE CENTRAMATIC<sup>REGD.</sup> makes oil-fired central heating the *natural* choice for three or four bedroomed houses

The new Redfyre Centramatic 50 can provide full central heating and ample domestic hot water for a three or four bedroom house on as little as 25/6 worth of fuel a week averaged over the year. It can do this partly because it is thermostatically controlled, and partly because of its unique electric ignition system which completely cuts out wasteful idling.

The Centramatic 50 is designed to fit perfectly into a modern kitchen. It has the right dimensions (36" high x 21" deep) and an attractive variety of 3-tone colour schemes. It is fully insulated, and does not rely on

chimney draught for efficient combustion (although it needs a chimney flue in which to exhaust).

The Centramatic 50 comes as a packaged unit. It requires no specialised installation techniques. And, of course, being totally enclosed, permanently installed and fed with oil from outside the house, it is always perfectly safe.

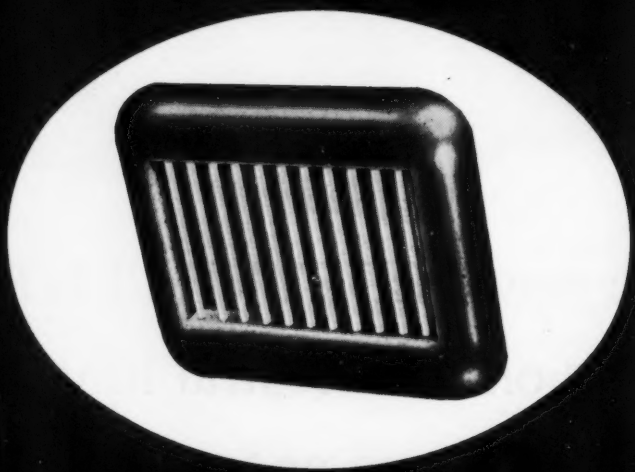
The Redfyre Centramatic 50 is suitable for heating systems requiring up to 50,000 B.T.U.'s per hour and costs £128 retail. There is also a larger version, the Redfyre Centramatic 80, which has an hourly output of 80,000 B.T.U.'s and costs £149 retail.

*Full technical specifications of the  
Redfyre Centramatic oil-fired boilers are available. Please write to*

**NEWTON CHAMBERS & CO. LTD., REDFYRE PRODUCTS, THORNCLIFFE, SHEFFIELD**



# MASTERTHERM



Radiant Heating Patent Nos. 741660 and 744980  
Schwank Patent No. 700539



All models  
available  
for automatic  
ignition.

#### FOR 'SPOT' OR 'FULL' HEATING

Fitted with high efficiency radiant gas burners they can be tilted to any angle from 30°-70°. For lasting wear the streamlined casing is made in cast iron with a vitreous enamel finish. Models available for wall or suspension fitting.

MASTERTHERM No. 1 approx. coverage 200 sq. ft.  
MASTERTHERM No. 2 approx. coverage 325 sq. ft.  
MASTERTHERM No. 3 approx. coverage 450 sq. ft.

Send for details of the Mastertherm and the full Radiant Heating range to Radiant Heating Limited, Radiant Works, 9 Barnsbury Park, London, N.1. NORTH 1677



## RADIANT- HEATING LIMITED



A large, stylized graphic for an Escaboard advertisement. At the top center is a circular logo with a crown and the letters 'SCA'. Below this, the word 'ESCABOARD' is written in large, bold, italicized capital letters, set against a dark, angular background that resembles a large 'X' or a stylized building. Below the text, a group of nine people in mid-20th-century attire are shown in silhouette, walking and pointing upwards towards the 'ESCABOARD' text. The entire scene is set within a dark, trapezoidal frame that suggests a stage or a spotlight effect.

***NO FILLING! NO SEALING! NO PRIMING!***

Escaboard has taken a big step forward . . . out of the range of ordinary hardboards and into a class by itself. Recently introduced from Sweden, its revolutionary new features have won for Escaboard immediate and widespread favour.

**SAVES TIME...SAVES PAINT**

Specially made with an unusually smooth, hard surface, Escaboard needs far less paint and gives better coverage. Cuts painting, varnishing and wax polishing time in half.

**CAN BE USED FOR FLOORING**

The very hard and durable surface of Escaboard makes it ideal for floor tiles or panels, as carpet surrounds, etc. Clear varnish or wax polish brings out its full, natural colour and preserves its beauty.

**ESCABOARD OFFERS NEW SCOPE**

Escaboard has been found ideal for silk-screen printing and a host of other applications normally considered to be well outside the scope of ordinary hardboard.



Manufactured by:  
**SVENSKA CELLULOSA AB**  
**FIBREBOARDS DIVISION**  
SUNDSVALL • SWEDEN



Sole selling agents for U.K. and Eire: **MARTIN OLSSON (FIBREBOARDS) LTD • MELBOURNE HOUSE • ALDWYCH • LONDON W.C.2**

## In your **STORAGE** or **DISPLAY** plan for

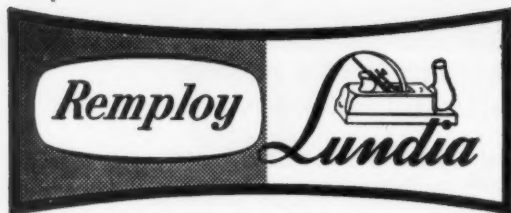
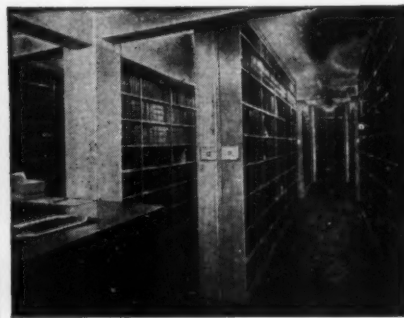
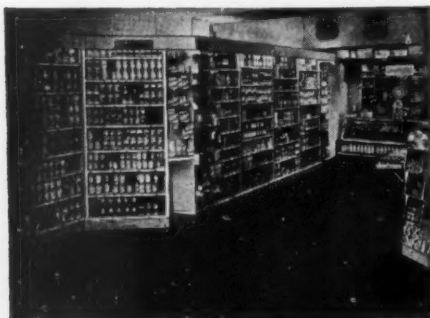


**Boardrooms**  
**Warehouses**  
**General Storage**  
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**Schools . . .**



in fact wherever a shelving plan is required

**..it is to your client's benefit to specify this..**



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The only system of its kind in the country  
obtainable **IN WOOD OR STEEL**

Easy to assemble and dismantle.  
Shelves secured without  
nuts and bolts.  
Fits any wall space to  
within six inches.  
Easily adapted to other positions  
and shelf spaces.  
No protrusions to damage goods.  
Firm and rigid, and  
capable of carrying heavy loads.

#### **TECHNICAL DATA**

Write for Library Information Sheets  
Nos. 596 and 597 and for full sales  
information on this unique system.

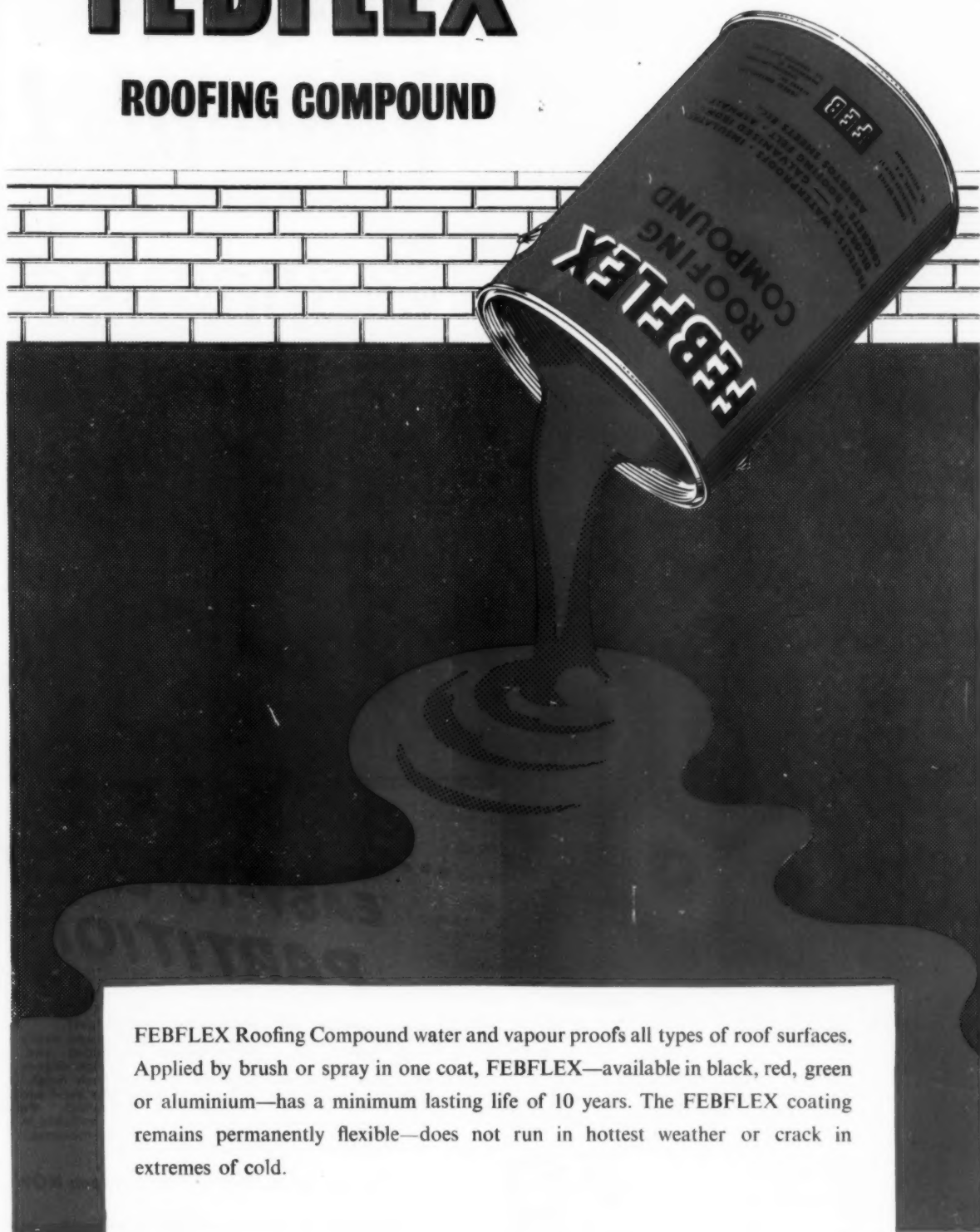


**REMPLOY LTD., OXGATE LANE, CRICKLEWOOD, LONDON, N.W.2. Telephone: GLAdstone 8020.**

Branches at Cardiff, Bristol, Birmingham, Oldham, Newcastle-on-Tyne, Glasgow.

# FEBFLEX

## ROOFING COMPOUND



FEBFLEX Roofing Compound water and vapour proofs all types of roof surfaces. Applied by brush or spray in one coat, FEBFLEX—available in black, red, green or aluminium—has a minimum lasting life of 10 years. The FEBFLEX coating remains permanently flexible—does not run in hottest weather or crack in extremes of cold.



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**Unique!**  
**Versatile!**  
**Economical!**

**that's**

**STRAMIT**  
**'MOVAFLUSH'**

**...THE NEW**  
**EASY-TO-ERECT**  
**PARTITION**

Just consider the outstanding advantages! Stramit 'Movaflush' Partitions are erected speedily and easily. They have remarkable sound-deadening properties and afford excellent thermal insulation, as well as a high degree of fire resistance. They also have an attractive flush finish (no unsightly cover-fillets) and offer an exceptionally good surface for decoration. What's more, Stramit 'Movaflush' Partitions are of completely dry construction and are available in a wide range of sizes. They're rigid, durable and de-mountable. And for all this, they're surprisingly low in price.

**For full details fill-in and post coupon NOW**

Please send, without obligation, full details of the new Stramit 'Movaflush' partition. A.J. 6

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ADDRESS .....

For the attention of .....

**STRAMIT BOARDS LTD., COWLEY PEACHEY,**  
**UXBRIDGE, MIDDLESEX : West Drayton 3751 (10 lines)**





!



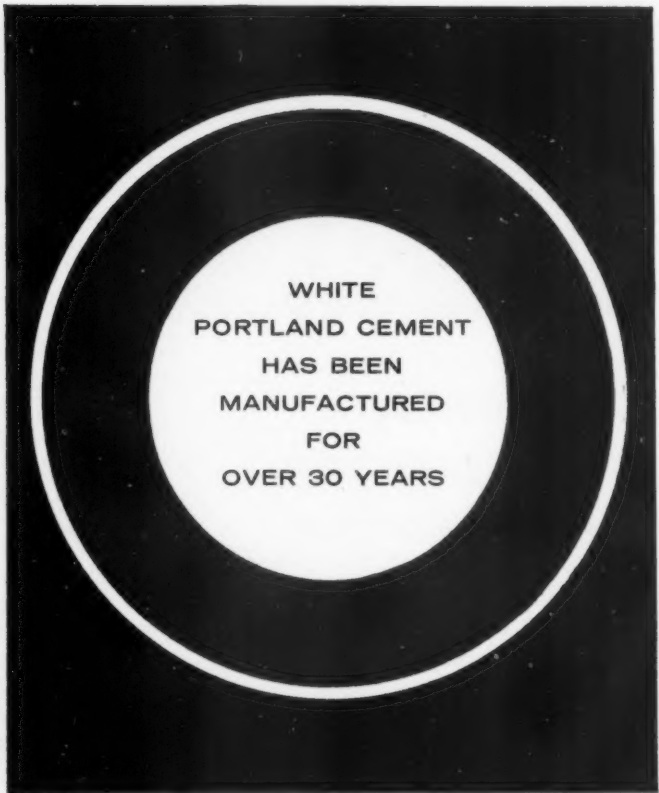
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# SNOWCRETE



Its strength—equal to that of the finest grey cement ;  
its durability—proved in every climate and latitude—and  
its reasonable cost, provide three of the reasons why  
it has achieved such an overwhelming success throughout  
the world. Structural concrete, cast-stone, terrazzo and  
renderings show how architects, engineers and  
contractors have exploited to the full the many effective  
possibilities of form and style, and interesting finishes based  
on this long established British White Portland Cement.  
Snowcrete complies with all the requirements of B.S.12, 1958.  
Available in 112 lb. and 56 lb. bags.



Supplied by

THE CEMENT MARKETING COMPANY LTD · PORTLAND HOUSE, TOTHILL STREET, LONDON, S.W.1.  
G. & T. EARLE LTD., HULL · THE SOUTH WALES PORTLAND CEMENT & LIME CO. LTD., PENARTH, GLAM.

Modernise with

# HARD COKE

**for LOW COST  
heating—automatic  
and trouble-free**

THERE are available automatic coke boilers outstanding for their efficiency and economy and which operate unattended for long periods. Also chain-grate stokers, underfeed stokers and preburner units for converting boilers to automatic firing and higher efficiencies.

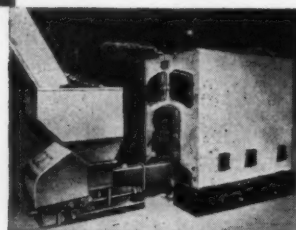
For the larger sectional boilers there are inexpensive, easily-applied conversion units which will raise the efficiency of the boiler, reduce the fuel consumption and provide accurate thermostatic control with time switches. The cost of the conversion has been saved in little more than a year from fuel savings, burning Hard Coke.

Further information will be supplied by the British Coking Industry Association representing the producers of Hard Coke, whose members include the leading Steel Companies, the National Coal Board and independent producers.

**To conform with the  
CLEAN AIR ACT:**

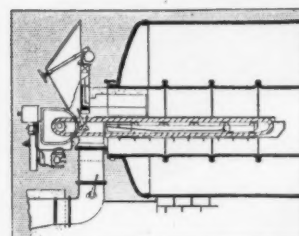
On the 1st June, 1958, the general industrial provisions of the Clean Air Act came into force. Have you a furnace or boiler which is difficult to operate smokelessly? A change to hard coke may very well be a simple solution to your problem. With attention to firing details such a change will give you added economy.

HARD COKE is widely used to heat flats, offices, hotels, schools etc. Coke-burning equipment can be as highly efficient, automatic and trouble-free as any other fuel system which probably costs FAR more to install and to run. Users prefer Hard Coke because it is made in plants designed essentially for producing cokes and these are technically suited and carefully graded for their specific purposes. Specially selected coals are used which are washed and crushed before carbonisation.

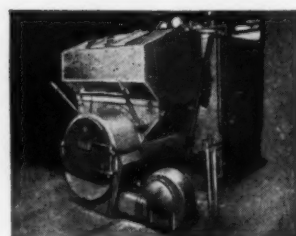


"BIGWOOD" Underfeed Stoker fitted to a sectional boiler.

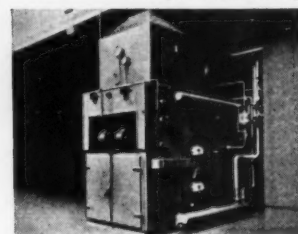
Cross-section of the "OLDBURY" Chain Grate Stoker fitted to a Lancashire boiler.



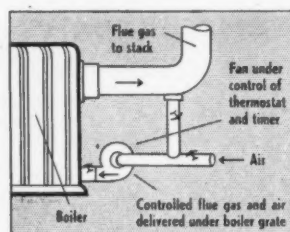
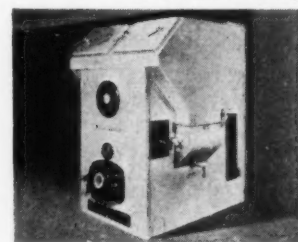
Redfyrre "EMMA" coke-fired Boiler for Central Heating.



A "SUKE" pre-burner fitted to a sectional boiler for Central Heating.



"WATTS" coke-fired magazine boiler for Central Heating.



G.A.P. conversion unit fitted to sectional boiler for Central Heating.



*for want of 10 minutes....*



*....a factory was lost!*

**FIRE!**... the critical few minutes between the alarm and the arrival of the Brigade make all the difference.

**TREROCK!**... if only the roof lining had been coated with Trerock the flames would not have spread and another building would have been saved.

*put time on your side by using* **TREROCK**

Trerock raises insulation board to a Class 1 surface when tested for surface spread of flame in accordance with BS.476, Part 1, 1953. Official Test Report No. 1560 shows **NO SPREAD OF FLAME AT ALL** on Trerock coated boards.



**20**  
**ATTRACTIVE**  
**SHADES**

TREROCK is the only  
Flame Retardant Paint  
which also gives a full  
decorative effect.

**TREROCK**

**FLAME RETARDANT PAINT**

*limits the Fire Hazard*

**PEARL VARNISH CO. LTD. TREFOREST INDUSTRIAL ESTATE · SOUTH WALES**

*think* **Steelwork**

*think* **Boulton and Paul**



A team of specialists at your service . . . A wealth of skill and experience . . .  
Effective co-operation to speed your plans . . . Assured quality of material and  
workmanship from the originators of STEELWORK BY AUTOMATION—  
mechanised fabrication giving improved deliveries and lower costs. Write for details.

**Boulton and Paul Limited · NORWICH · LONDON · BIRMINGHAM**

APICE41

installations of

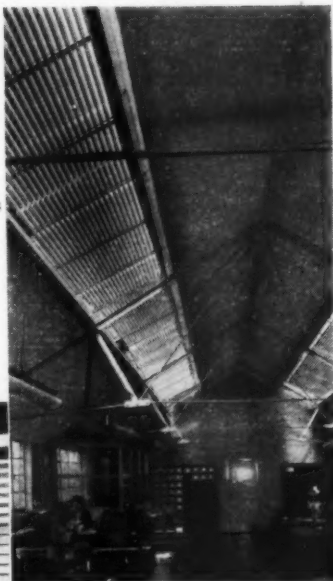
# SUNWAY

REGD.

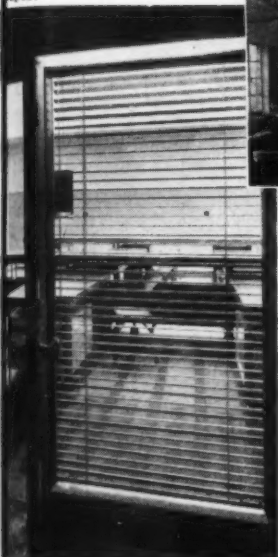
VENETIAN BLINDS

- Give full control of sunlight and eliminate glare
- Reflect artificial light, increasing volume by up to 25%
- Adjustable aluminium alloy slats give perfect ventilation and insulation
- Scientifically curved slats are flexible, unbreakable and easy to clean
- Stove enamelled finish in wide choice of attractive colours—will not chip or fade
- Negligible maintenance cost and long life

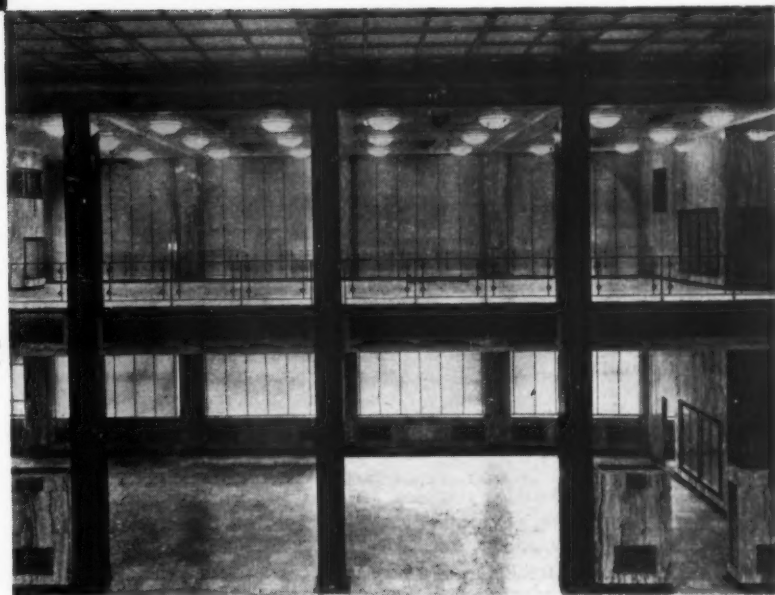
Sunway Skylight Blinds fitted to glass roof of office.



Sunway Standard Blind fitted with Invisible Terylene tapes.



Sunway Blinds with electrical control are at Lloyds.



## SKYLIGHT BLINDS

Specially designed for horizontal and sloping roof lights and floating ceilings. They are a fixed, non-retractable installation with a variable slat adjustment and fitted with a versatile electrical hydraulic or mechanical remote control. (Runs up to 100 feet can be controlled from a single point). They can be instantly adjusted to changing light and heat conditions and eliminate cost of seasonal treating of roof lights.

## STANDARD BLINDS

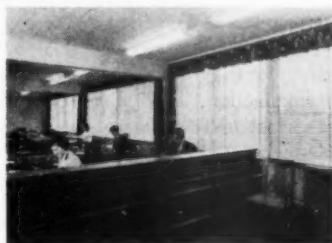
All blinds made to measure to fit any window from 18 inches to 12 feet wide and 2 to 15 feet in drop, with automatic cord lock for raising and lowering. Also available with two-tone slats and tapes, giving colour continuity to outside and choice of colour to individual rooms inside.

## TWO-WAY BLINDS

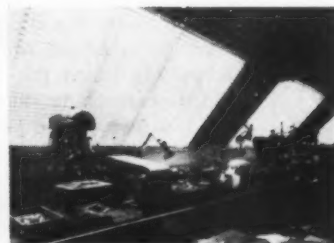
Can be raised from the sill or lowered from the top. Especially useful for drawing offices, schools and hospitals and municipal buildings.

## DIM-OUT BLINDS

Suitable for Cine or Slide showing.



Sunway Standard Blind fitted with cotton canvas tapes.



Sunway Skylight Blinds fitted to factory inclined roof light.

Full details and colour charts contained in descriptive folder. Specimen slats and tapes (Invisible Terylene, cotton canvas or plasticised) gladly sent on request.

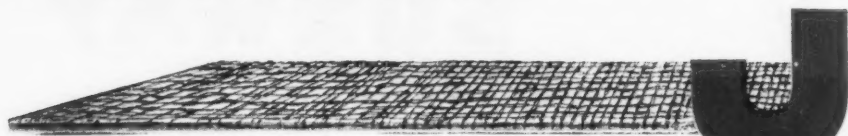
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# HORSLEY, SMITH & HEWETSONS

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Fishnet designed by Ronald Grierson F.S.I.A.

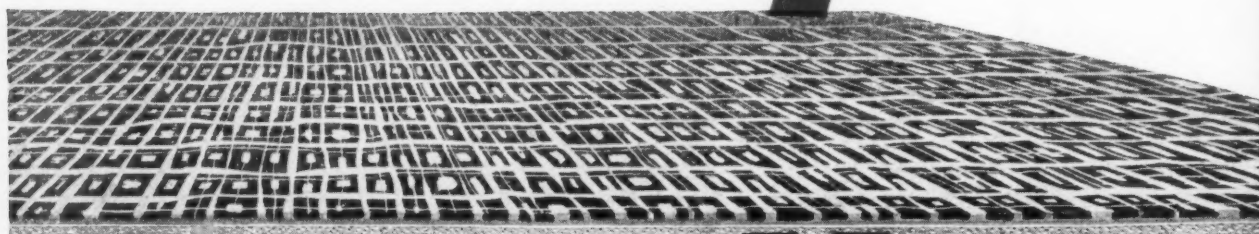
BRI-NYLON

**Shildon**

— the carpet of the future

**TODAY!**

1960



Townscape designed by Ronald Grierson F.S.I.A.



Architects, Designers and Furnishing Contractors who keep abreast of the times specify Shildon—the world's most advanced carpet.

Intensive research and development have resulted in the perfect Nylon carpet. Almost every leading store in this country has tested the wearing and other qualities of Shildon carpets to their satisfaction. For instance, more than two million pairs of feet failed to wear out a Shildon carpet in a leading Manchester store. Quality plus the best design features and the most modern production methods have gained recognition for Shildon carpet as a

product in keeping with the finest traditions of the British carpet industry.

Shildon carpet comes in exciting new designs, rich colours, and with its own foam rubber underlay. And Shildon is washable and stain resistant too, which means that the carpeting will always retain its beautiful look and luxurious feel. Yet all this luxury costs (including underlay) no more than ordinary carpet. This is why more and more Architects, Designers and Contractors include BRI-NYLON Shildon carpets when planning floor coverings.

# BRI-NYLON **Shildon** CARPETS

Expert advice on any carpet problem is always available. Designs can be planned to your specification. You are also invited to visit the BRI-NYLON Shildon Carpet Centre at 60 Berners Street, London, W.1.  
Tel: LANgham 0471

**BRI-NYLON** is the Registered Trade Mark of British Nylon Spinners Limited

THE ALFRED MORRIS GROUP OF COMPANIES 





**How much  
water —  
hot water —  
can you  
afford  
to waste?**

**We waste too much water, and mainly hot water. We fiddle with the taps until the basin is a hot reservoir.**

Contrast this with two recent cases. In the first, a branch of an institution was using in an ordinary week five hundred gallons hot and cold. This is now fifty-four gallons a week! The second is a London office block which for years used in a month six thousand gallons of hot and one thousand, six hundred and fifteen of cold. They have reduced this to one thousand, four hundred and fifty hot and eight hundred and fifty cold—a sixty-nine per cent total saving of water, seventy-five per cent of which (repeat: seventy-five per cent) was hot!

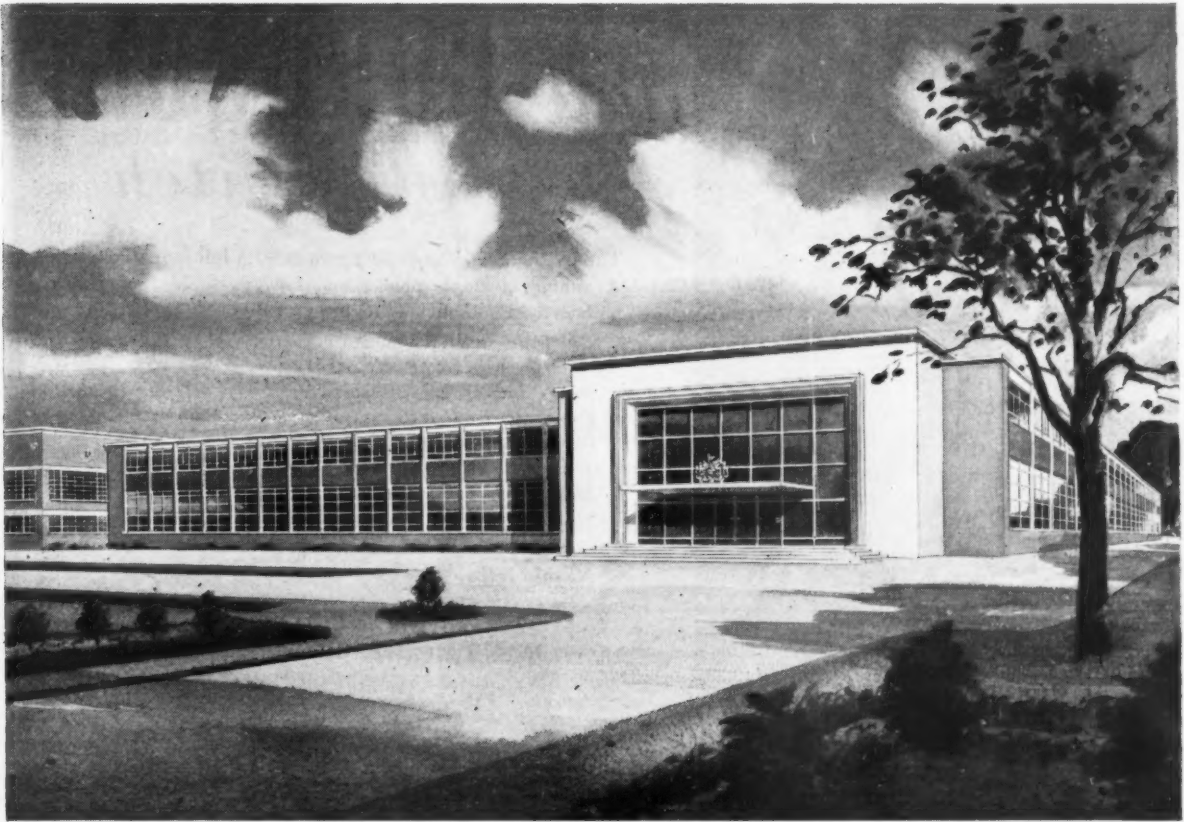
Unataps do this. A single mixing-tap, an exhilarating, fine spray, a more hygienic wash—and a saving. You really cannot afford to be without Unataps.

*Write for Leaflet No. UJ/2.*

**WALKER CROSWELLER & Co. Ltd., Cheltenham. Phone: Cheltenham 56317 or HOLborn 2986 (London)**



**THE ENGRAVERS GUILD LTD**  
MAKERS OF PRINTING BLOCKS  
WINDSOR HOUSE · CURSITOR STREET · LONDON · E.C.4



## The day we uncrossed our fingers

A NEW EXTENSION covering some 150,000 sq. ft. was needed for Sanderson's fabric factory at Uxbridge. And needed quickly. "Can you," they asked us, "guarantee completion within twelve months?"

We thought of the soil—mostly clay. We thought of the thousand or more 25-foot piles that would have to be sunk into it. We thought of the millions of gallons of water that would need pumping out. We thought of 1,000 tons of structural steel and 10,000 cubic yards of concrete. We thought of the worst that the weather might do.

Then we thought of our reputation. "Yes," we said, "we can guarantee it."

We did it—with a month to spare. Everyone was pleased, including the most important people of all—Sanderson.

### Architects :

Messrs. Ley Colbeck & Partners, F./F.R.I.B.A., R. F. Galbriath, Esq., B.Sc., M.I.Struct.E., A.M.I.C.E.,  
Palmerston House, 51 Bishopsgate, E.C.3.

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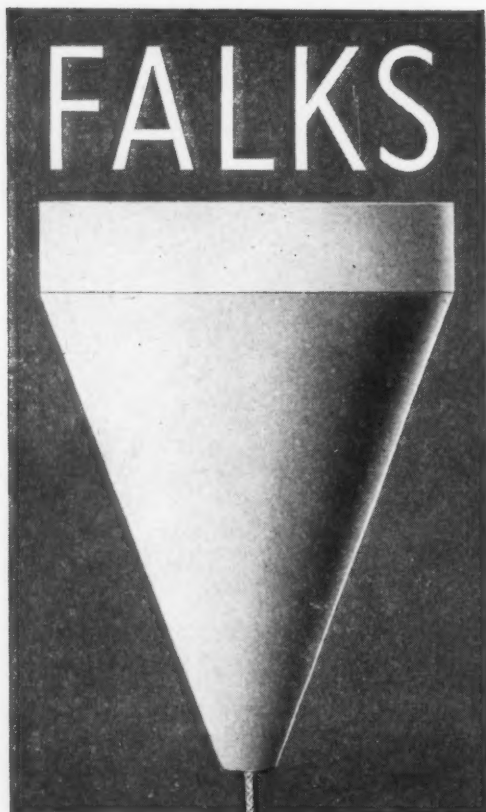
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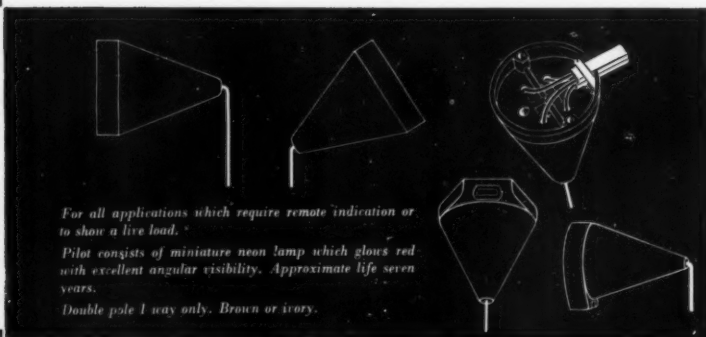
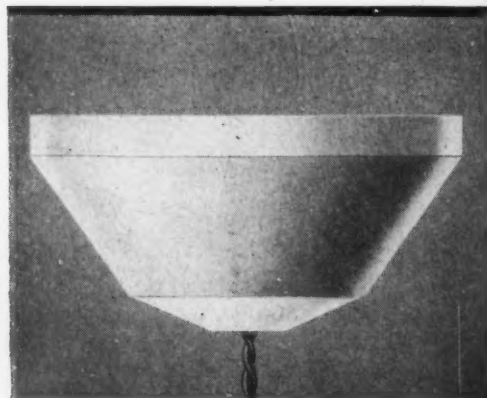
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- \* Conforms to B.S.2652 : 1955 for cord operated switches.

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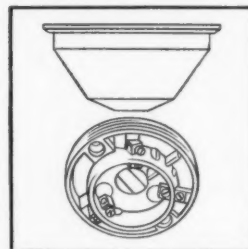
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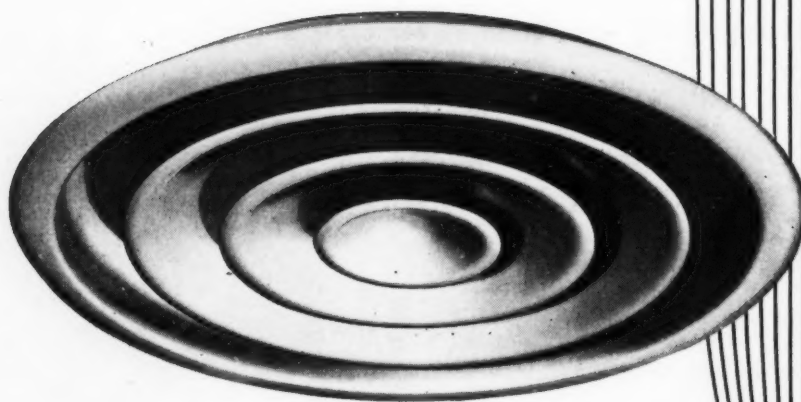
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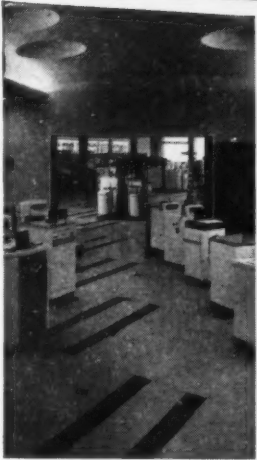

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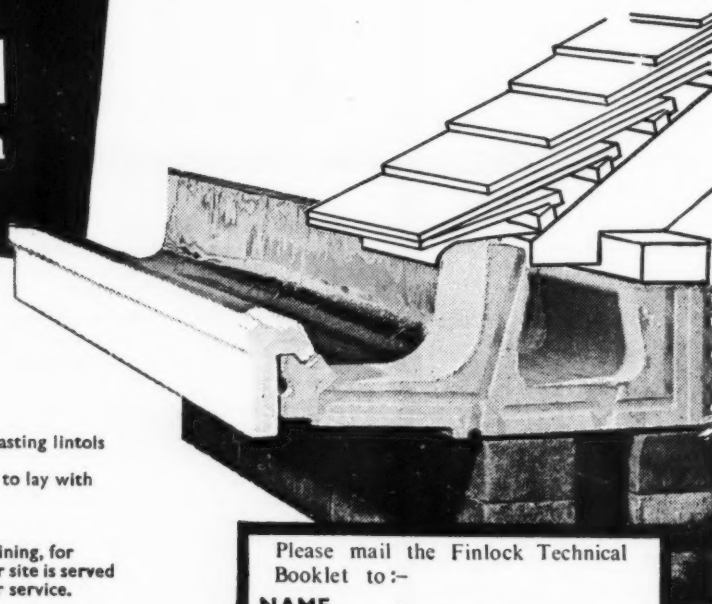
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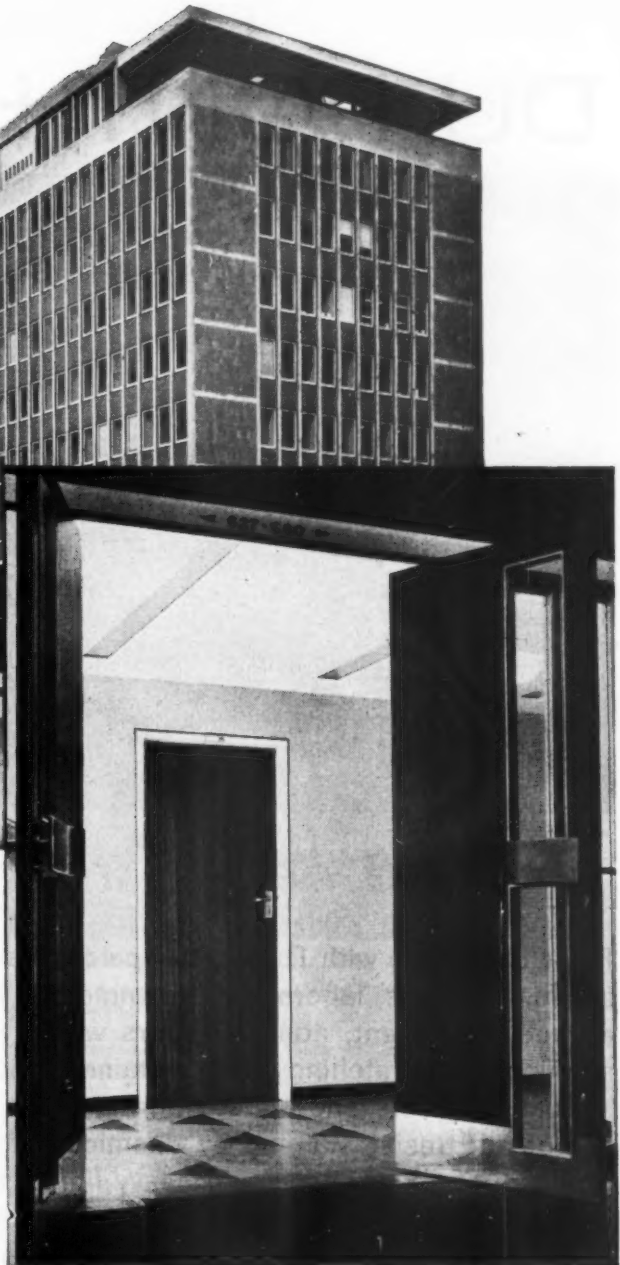
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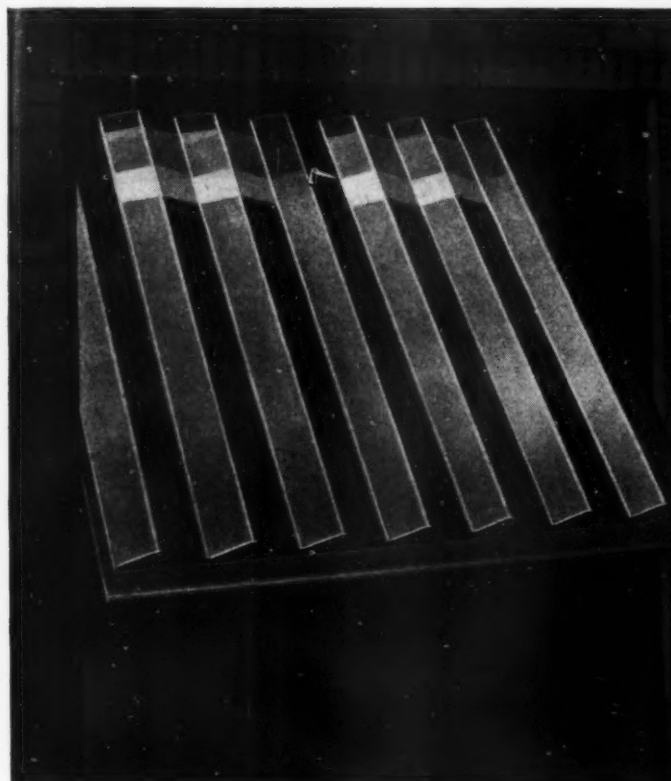
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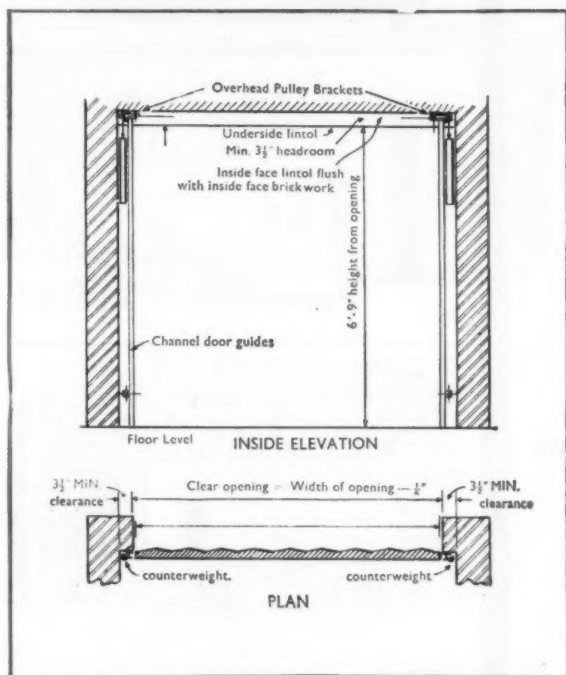
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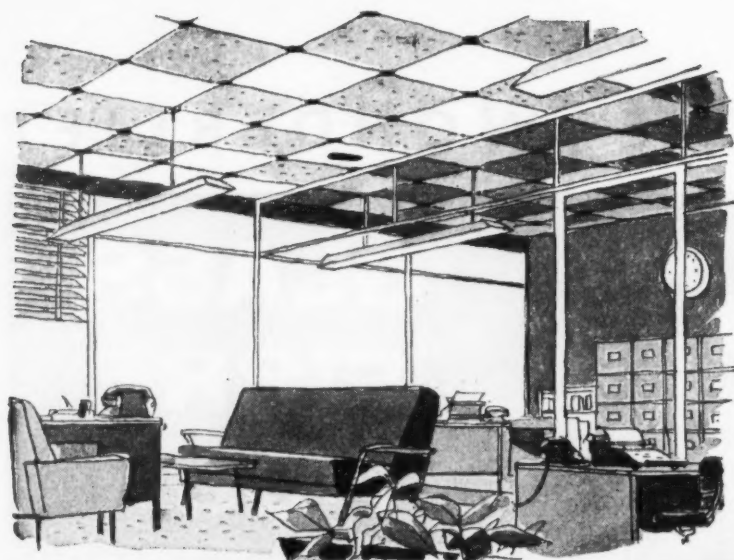
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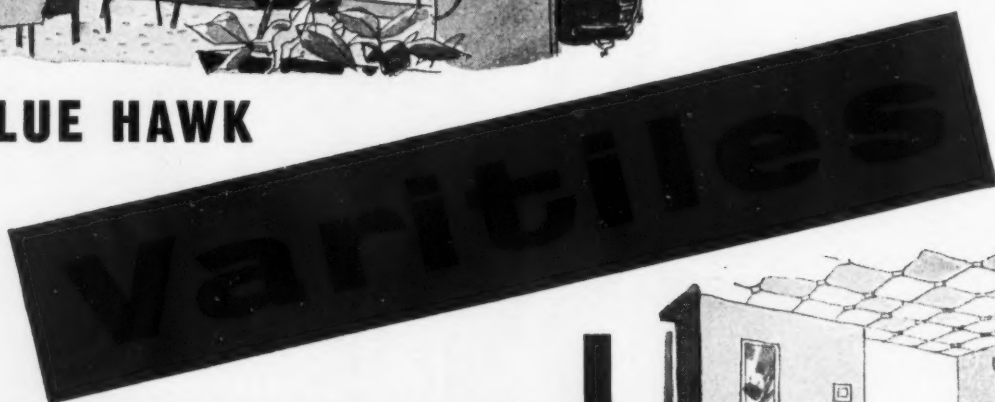
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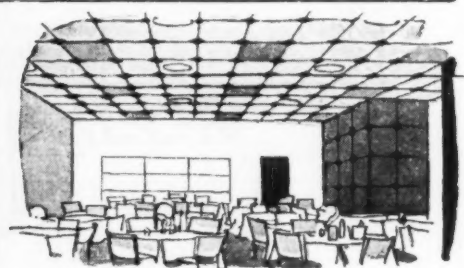
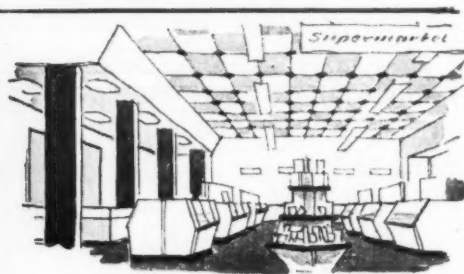
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The Architects' Journal

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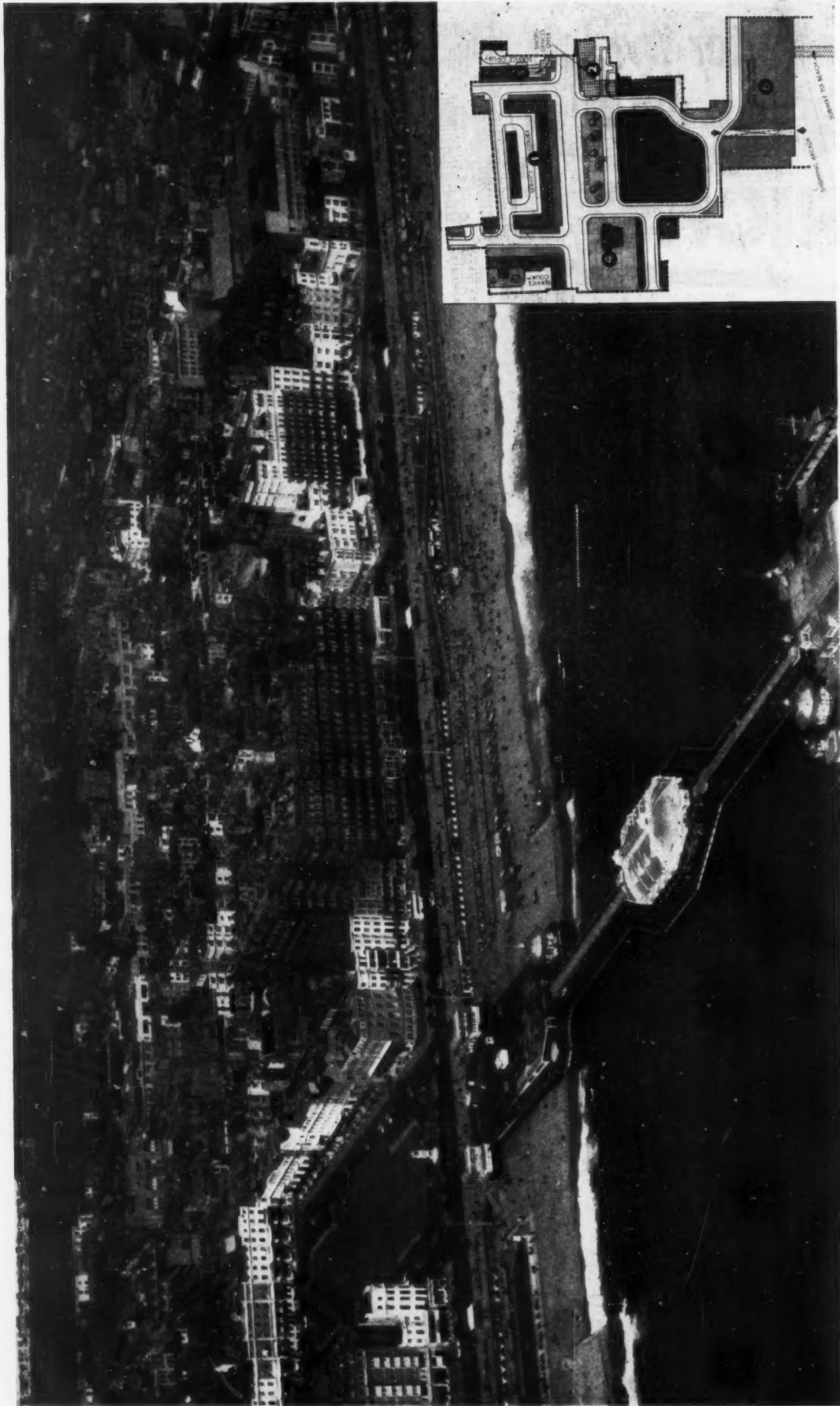
#### NOT QUITE ARCHITECTURE

### Conference INS and OUTS

Let us remind you; a thing will be IN if it  
is unquestionably great, a classic—Jodrell  
Bank Radio Telescope is IN—or because it  
is so rare and obscure that even IN people  
hardly know about it—the interior of the  
Rylands Library is IN—or because it is so  
far OUT that even OUT people won't be  
seen dead with it—the exterior of the  
Rylands Library will soon be IN again.  
Right? Then here is all you need to know  
to keep your end up in Manchester in Con-  
ference week.

Better to travel hopefully dept.: really IN  
people will arrive by Sabena, but British  
airlines will get by, and in any case the BEA  
bar is IN; arriving at London Road by BR  
diesel is IN, but any mention of Piccadilly  
Station is OUT; small cars with front drive  
or rear engines are IN, but Volkswagens  
and old Citroen Light Fifteens are OUT;  
driving your own Rolls is IN; cycle clips are  
IN. . . .

Exploding metropolis and such: King  
Cotton is OUT, and Central Manchester  
went with him; Suburbia is IN, but some  
suburbs are more IN than others—Sir  
Hubert Worthington is right OUT at Alder-  
ley Edge, but the Wittington Worthingtons  
are IN; Chester is OUT; the Wirral is so  
far OUT it will soon be IN; light industry  
is OUT at Sharston; Reet-niks are IN at



Brighton from the Front, especially as seen here from the air, still presents fair stretches of its white, terraced, Regency face to the sea, undemolished though not unscarred and meet for preservation and perhaps a face-lift as the ravaged remains of what was our most elegant as well as most popular watering place. But the white-fronted area to the right of the West Pier (shown above and in plan) has been listed by the Town Council for redevelopment, and three schemes short-listed for consideration have been submitted to the Royal Fine Art Commission for their comments (see p. 857). Brighton is a boom town, a seaside annexe of London, and it cannot be expected to stand still. The question is, what sort of development should take place?

KEY:—1, Flats over shops with garages behind 2 and 3, Offices over shops 4, Flats with public gardens 5, Flats over shops 6, Conference hall with car park below 7, Car park

## Brighton Refronted?

Didsbury  
Prestbury  
boost a

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Buchan  
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Music  
strippi  
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*Didsbury, so is Wham!; the Bridge at Prestbury is so IN that even IN people boast about what it cost them to eat there*

Court and personal: *Basil Spence is OUT, of course, now that Sir Bill is IN; Malcolm MacEwen is IN, but if you try to ring him at Portland Place he is sure to be OUT; architects are IN people's lives, but all-IN services are still OUT; John Page is IN, and Llewelyn Davies just got back IN again; Urban Renewal is so far IN it will soon be OUT of the question; SPUR is OUT; Colin Buchanan is IN; finding a good word for Jack Cotton is IN; Linear cities are IN, but quoting Doxiadis is OUT unless you can manage the accent; practically anyone called Mellor is IN. . . .*

Cultural Capital of some-where or other: *earplugs should be kept IN at Liston's Music Hall; wrestling, juggling, singing and stripping at Bill Benny clubs is IN; Sinclair's Oyster Bar is IN; drinking with the TV crush in the New Theatre Hotel is IN because Telly is IN, but anti-snob ploys are OUT (so are jokes about Wigan and the weather); the Fifty-One Society went OUT while no-one was paying attention; Lord James is OUT, but proposals to turn his Grammar School into a co-ed comprehensive are IN; the Bombay Restaurant is IN; breakfast at the Midland is IN; the College Arms is IN; cruck-houses, vernacular architecture before 1933 and Phone-Book Ph.D.'s are OUT, but Frank Jenkins is IN; the Hallé looks like being flat OUT before long if things go on as at present; the Zenith Six at the Clarendon is IN; knowing where to find Engels's tomb is IN; the most IN place in Manchester is the private room on the right in the Left Wing Coffee Bar; the most OUT is Beaumont's Gaumont.*

Sport and general: *Sammy Davis Jr. is IN; golden memories of love, death and architecture during the Italian campaign are right OUT; cigars are IN, but thin, dark panatellas are the most IN; protest marches are IN, popular support notwithstanding; small, portable children with names like Sean, Timothy or Fiona are IN; the Smithsons are BACK, but everything Japanese is still IN, pending detailed reports; Jill Lavender ties are IN; a smattering of German is IN, but la belle France is definitely DEHORS; Elizabeth Beasley's carve-up of the Manchester scene will be IN next week's AJ, OUT on Thursday.*

BILL PEIRSON AND PETER PRYS  
(IN men who got OUT of  
Manchester unscathed.)

## The Editors

### FIRST STEPS TO BIGGER CONURBATIONS

**B**UILDERS and land speculators have been putting pressure on the Ministry of Local Government to allow more building in green belts and the open countryside. As might be expected from a Government which is constantly tempted to put private profit before public good, the builder's pressure is gaining effect. Last week the Ministry's deputy chief technical planner, J. R. James, was encouraging local authorities to relax their green belt policy. This week the Ministry publishes a booklet specifically for the general public titled: "New Houses in the Country." Concerned with single houses, or very small groups of houses, the book sets out three main principles:

- In a village permission for a well-sited, and well-designed house will *normally* be granted unless the local authority have a definite reason to the contrary.
- In the open country, new houses will not *normally* be permitted *unless* the development plan provides accordingly or *unless* on the merits of the particular case there is a special need.
- Additions to existing ribbon development or to scattered building will not *usually* be allowed, *apart from limited infilling*. We have italicised the words and phrases with which the Ministry are prepared to water down their policy of preserving the countryside. The booklet differs considerably from the one it supersedes ("Notes on the siting of houses in country districts." HMSO, 1950, price 3d.) which adopted a much more cautious tone generally and was more concerned with specific issues, such as whether farm workers should live on farms or in villages, and whether villages should be allowed to die.

Armed with this new booklet an army of small-time builders, speculators, retired people and commuters can start browbeating local authorities to accelerate the sprawl which post-war planning legislation has only slowed down, and not stopped.

Of course, towns with overspill problems must be given space to expand. But this should be in the form of new towns, or expanded towns, on sites well beyond genuine green belts. But if *all* villages are "normally" allowed to expand in the form of single and small groups of houses, the growth of conurbations will be accelerated.

The Ministry has taken a cowardly step. Lacking a policy for population movement, it throws responsibility for preserving the countryside on to local authorities. All praise then to Surrey which is trying to turn the greater part of its open land into a green belt area and thus limit London's sprawl. It will be interesting to see whether the "planning" Ministry appreciates such action. The result of the Ministerial enquiry into Surrey's proposal, now being held, may provide the answer.





## ARCHITECTS IN JAIL

We're all looking forward to some useful results from the RIBA's increased interest in the Commonwealth (there's a special conference on the way); but let's hope it leads to something more than high-placed handshakes and quinquennial banquets. There's one job that needs doing immediately. A fuss and a fund should be started for architects Jack Barnett and Gerald Goldman and their wives and children in Cape Town. These men have been in jail, without charge or trial, under the emergency regulations, for more than two months—and no one knows how long the Government of South Africa will choose to keep them there.

## PETTY POLITICS

Whatever good work is done it seems to be done under appalling difficulties. You'd think—wouldn't you?—that Coventry would be grateful to its Architects' Department for the imaginative foresight that is shaping the city so well. But now the Tories say that if they gain control they will cut the size of the department and alter the redevelopment plans. This sort of thing makes long-term planning impossible. We need a reform of local government to protect citizens from the petty-mindedness of capricious party politics. Fortunately, as a result of recent elec-



*The Balfour Group are proud of the fact that they designed their research centre at Leven without architects. In ASTRAGAL's opinion at least a dozen architects would have designed a better looking and more efficient building; two dozen would have produced a better looking, less efficient building and unfortunately, hundreds would have produced one just like this.*

tions, this threat cannot materialize for some years.

## CHEMICAL REACTIONARIES

A chemical engineering group has just put up a Scottish research centre, for a quarter of a million pounds, without using an architect or an engineer. How? Simply by relying on the scientific and technical know-how available within the company. At least, that's how the operation was described in the *Scotsman*. But the writer of the report went on to say that the "design team" formed under one of the directors visited similar establishments and combed British and foreign technical journals for "the latest ideas." In other words, they *did* use architects in a second-hand way. You can see the result in the picture above. It is clear that however much the company (the Balfour Group) knows about sludges, slurries and kinetic high frequencies, it thinks architecture is just a matter of trimmings. The sad thing is that the company seems madly pleased with itself.

## YOU TOO CAN BE TOP

This sort of client behaviour is enough to frighten small boys away from architectural careers. It even made me look rather wistfully at the *Sheffield Telegraph's* career supplement—four pages of golden opportunities in steel, gas, coal, commerce or nursing. But I was cheered by the absurdity of the last heading on the last column on the last page. "Room at the Top," it said, "for Architects." The author was Basil Spence, second man from the top, and he wasn't quite fair. Young boys who want to know should be told to brush

up their Pilkington and see how little room at the top there really is.

## NAVAL CONTEMPLATION

Journalists who went to a recent exhibition of the proposed furniture and furnishings for the new P & O liner, *Oriana*, were given a good lunch and a bad exhibition. The contents of the display—cutlery, tableware, fabrics and chairs—were good, but too many were crammed together on the exhibition screens. It was impossible to visualize the appearance of a two-berth cabin or a public room simply by looking at one tile, a six-inch square of carpet and half a yard of curtain, especially as each group of products was labelled in appalling lettering. We could have done with some mock-ups, or at least perspectives, to see what cabins would look like, or how the nautical paraphernalia, such as trunking outlets, would be married to the contemporary good taste of the soft furnishings.

\*

The impression given—possibly a wrong one—was that Misha Black and his associated designers were called in to fit furnishings into the spaces left over after the naval architect had done his routine work. I got the impression that the Orient Line (in spite of the enlightened members of the Anderson clan) know and care very little about good design. No company with a design policy would have allowed this exhibition to be presented.

## HOMO ADDS BRIGHTNESS

If you can find the LCC's sculpture exhibition—back in its old home at

Battersse  
(try the  
may ag  
lose the  
Hollan  
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and a  
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Violle  
7 gns.



Battersea Park, but badly signposted (try the Albert Bridge approach) you may agree with me that it's a pity to lose the architectural backgrounds of Holland Park. As a foil to sculpture one shrub is very much like another, and anyway you really need a building to shout down the Epstein *Ecce Homo*, which itself shouts down a good Paolozzi (*Mekanik Sero*) at something like a hundred yards. Not much can live in the company of this tribal god in a sacred grove. The more-or-less naturalistic works, which have been praised for their *humanism* (whatever that is) look sentimental in comparison, and the abstracts have to work very hard: Henry Moore's *Glenkiln Cross* succeeds by force of altitude and Robert Adams's space-frame *Thing* by being almost invisible. For me the most successful works were those that needed investigation, even if they didn't reveal much—works like Hubert Dalwood's dumbly lunatic *Large Object* and Jean Ipousteguy's monument without a cause. And Picasso came over as a bit of a lark.

#### WHITE PAPER ELEPHANT

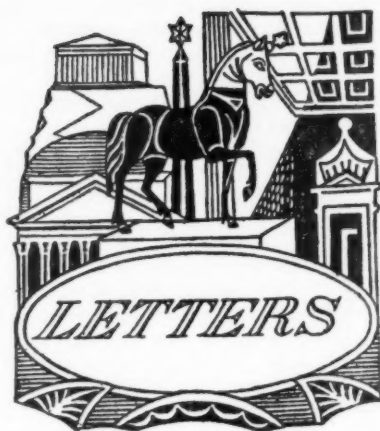
Published today, simultaneously in Britain and America, is a new and impressive-looking English-language edition of the *Discourses* of Viollet-le-Duc\*. It has been timed to appear a hundred years after the original and could have been a most valuable publication, because Viollet-le-Duc has lately been coming into his again as an architectural philosopher and a lot of interesting things could be said about his relevance today.

\*

But no attempt has been made to say them. Quite astonishingly, the book is a straight reprint, without any comment, of Benjamin Bucknall's translation of 1889. Bucknall's own preface is reprinted; so is Viollet-le-Duc's preface written in 1860, but nothing more. The result seems to ASTRAGAL a complete white elephant. The book that is wanted is one that places Viollet-le-Duc in his contemporary context. The only people likely to want just the original are students, who can't afford 7 guineas. For them the cheapest possible format was required. This is a sadly wasted publishing effort.

ASTRAGAL.

\* *Discourses on Architecture*. By Eugène Emmanuel Viollet-le-Duc. London: Allen & Unwin (2 Vols) Price 7 gns.



John Basing

James Collier, Christopher Rainford

Ian Nairn

David N. Sutcliffe, A.R.I.B.A.

#### Ability or A.R.I.B.A?

SIR: After a president with such a capacity for self deception it is a pleasure to have a new one that faces facts.

Towards the back of the AJ, for May 26, is an advertisement: "William Holford & Partners. Wanted, go-ahead assistant to work on contemporary University projects. Ability more important than qualifications. . . ." So there you have it from the horses mouth; those hard earned ARIBA's for which you pay 7½ guineas a year are not worth a light.

There are three rational answers to this:

1. Refuse to support an organization that is directly opposed to the interests of good architecture and the majority of architects.
2. Join the RIBA and raise merry hell, or,
3. Join the RIBA and get into the "jobs for the boys" racket.

I prefer the first course, very few adopt the second, many aspire (unsuccessfully) to the third, but the vast majority pay their black-mail and elect candidates who are pledged to do precisely nothing.

JOHN BASING

London

#### Eccentrics

SIR: May we say how discouraging it is for younger architects to find nominees for the RIBA Council declaring that Le Corbusier is an eccentric engineer who has done much harm to the cause of good architecture in the last 30 years.

If Mr. Redfern can seriously dismiss Le Corbusier's town planning principles and artistic and technical achievements as eccentric may we humbly suggest that Mr. Redfern is one of those eccentric reactionaries who have done much harm to the cause of good architecture in the last 30 years.

JAMES COLLIER,  
CHRISTOPHER RAINFORD

Newcastle

SIR: Mr. Redfern in your May 26 issue has unwittingly hit on one of the real reasons why the average architect-designed building is not better than it is. The Anti-Uglies only "lower the status of the profession" if the word status is understood in the sense of false dignity, self-importance, intellectual and aesthetic arrogance. The real status, proceeding from inner integrity and the pride which comes from having done each job appropriately and as well as one could, would not only be unaffected by Anti-Ugly demonstrations: there would probably be no reason to have the Anti-Uglies anyway.

IAN NAIRN

London

#### Water Supply and Sanitation

SIR: The above article which draws attention to some of the restrictive rules of the British Water Regulations is very timely, since only too often rules can become an end in themselves, losing sight of their origin and preventing reasonable modernization of design and practice.

We have found that the Water Inspectors have, over the past few years, been insisting on an ever higher standard of plumbing installation—with consequent increase in cost. Many of the requirements are based on sound logic and should have been accepted practice for years past—e.g. Rising Mains to be at least 2 ft. inside the building, all pipes in lofts and behind bath panels, etc., to be lagged. However, some of the practices insisted upon are of very doubtful use—especially the provision of draw-off cocks at every loop to a tap or fitting. We recently had a case where 15 draw-off cocks had to be fixed on a skirting heating job on a bungalow, these draw-offs being taken through the external walls and protected with small wood boxes at ground level. These draw-offs are very vulnerable to freezing and unlikely to be ever used for draining down the system. Regarding your Fig. 1 in the article, neither system shows a hot water storage cylinder and it is not clear how the continental system allows for expansion of the hot water—does this blow back through the pressure relief valve and if so, what happens if the main stopcock is turned off?

DAVID N. SUTCLIFFE

London

The Author replies: The means of hot water storage, together with all other items not relevant to the case, was omitted from both sketches, but would of course be present in practice.

Expansion is treated in a number of recognized ways, e.g. run to waste (the quantity is small) via a pressure relief valve: returned behind the main stopcock, using a non-return valve: led to a pneumatic expansion chamber fitted with relief valve. The answer varies from country to country, and within countries. Most important, though, the answers are there, not the problems. These have already been faced by others. So there is no excuse in this country for regarding the general use of direct mains supply as a dangerous excursion into the unknown.



## NEW TOWNS

### *Northumberland Proposes Town-building*

Ten thousand people a year leave the north-east of England for the Midlands and the congested south. To try and prevent this Northumberland has started a campaign to attract industry into the area and are launching two new town projects at North Killingworth and Cramlington which are approximately five and eight miles from the centre of Newcastle. The County will control the development, leasing or selling land to builders. The eventual population of North Killingworth will be only 17,000, but Cramlington is planned for 40,000.

One-third of all insured workers in the area are now engaged in heavy industry, mainly ship building and coal mining. A reduction in the latter is inevitable and could produce unemployment after 1970 because reserves are being worked out. There is also uncertainty about the future of ship building and repairing. In order to provide alternative employment in light industry the County plan to create 200 square miles in the south-east "in which any industry can set up and in which almost any development is possible," to quote the Duke of Northumberland, the Lord Lieutenant of the County. He claimed to be able to offer sites, from four to 500 acres, either inland or on the coast, "in green belt conditions—without ruining our countryside. . . . We are going to out-Coventry Coventry." A by-pass of Newcastle, costing £13m., is scheduled to start this year and will allow A1 traffic to avoid the congestion of the built-up Tyne valley.

The JOURNAL hopes to publish a further report on this County's, and the Duke's, interesting and provocatively worded proposals.

## SURREY

### *Preserving Countryside*

In an attempt to prevent the great octopus of London eating up the open land of

Surrey, the county is proposing to so amend its development plan that most of the county would become a green belt area. There are 80 objectors to such a proposal attending a Ministerial inquiry being held at County Hall, Kingston.

Nigel Bridge, on behalf of the county, showed the extent of London's pressure on the county by quoting the increase in season ticket holders on the Surrey-London railways: from 56,000 to 87,000 in 10 years. The proposal is being opposed by objectors from the neighbouring counties of Hampshire, Sussex and Berkshire, who no doubt would like Surrey to sink with the rest of them. Certainly if Surrey became a green belt the pressure on the neighbouring counties would increase.

Needless to say the builders object to the proposal. E. A. Vaughan Neil, on behalf of the Southern Counties Federation of Building Trades Employees said that the Surrey proposal "thinks more of pylons than people." He was not thinking of builders, apparently, or of his employees, but of the population at large, the national population trend, the growth of employment in London and the home counties by 8 per cent. against only 4½ per cent. for the whole country.

Another builder representative, Douglas Thomson, area secretary of the Federation, quoted examples of increases in the cost of building land. One instance was a 64 acre site in Camberley which was sold for £25,000 in March, 1958, was sold for £210,000 in 1960. This of course demonstrates the effectiveness of the green belt policy in limiting expansion, except at a price, in the south east of England. Such high prices will soon make the redevelopment of low density built-up areas economic.

## LIVERPOOL

### *Course in Building Science*

A post graduate course of one year, leading to a Diploma of Building Science is being introduced in the Department of Building Science, Liverpool University, next October. Prospective students must be of graduate status in civil engineering, architecture or building. Each application for admission will be considered on its merits and students may be interviewed. The tuition fees are £40, and the principal lecture courses are on materials, structures, physics of environment, principles of building and building operations. In addition students will take two of the following three subsidiary courses: principles of architectural design; analysis of function; elements of statistics.

## YERBURY FOUNDATION

### *Kahn Not Deep Enough*

Last week's Yerbury Foundation Lecture, delivered at the RIBA by an eminent New York architect, Ely Khan, was the

most disappointing to date of a disappointing series, a correspondent writes. Mr. Kahn's subject was "Tall Buildings in New York" and the impressive list of tall buildings with which he has been associated (it includes collaboration with Mies on the Seagram Building) led me to believe that we were in for a really weighty lecture on the technical and practical problems of this subject—the fruits of Mr. Kahn's experience. Stimulated no doubt by the title, a tolerably large audience (by RIBA standards) rolled up. But just what did we learn from Mr. Kahn? My list includes (1) more large buildings are going up in New York because they recognize that a large building, by grouping services is much more economical and efficient than a lot of small ones (2) full air conditioning is universally accepted (3) there are a lot of problems in detailing curtain walls (4) contemporary building today is devoid of the applied ornament of the Woolworth-Empire State era. I could go on but what would be the point?

There was so much ground the lecturer could have covered. What, for example, are the common methods of cleaning façades, how often does this have to be done and what are the problems? What proportion of the total floor area is taken up with the services, such as the air conditioning plant? What methods of fire warning or fire fighting are most commonly used? It is true that Mr. Kahn touched on some specific points. He mentioned a system of underfloor ducting which permitted complete freedom in wiring and services runs. But where were the details? It is also true that the audience had the opportunity of questioning the speaker afterwards, but this is the time to clarify points of detail, not to prise out of the lecturer information which should have been part of the lecture itself. Some of the audience, including Sir William Holford, did persist. Sir William wanted to know what maximum plot ratio was used. Mr. Kahn said it varied (planning legislation in New York does not concern itself with this) and that a scheme on which he was currently engaged worked out at around 13:1! Even Sir Howard Robertson, in his capacity as chairman, was moved to the unusual procedure of taking the speaker to task after the vote of thanks had been moved and seconded, for failing to take a responsible line on the subject of plot ratio.

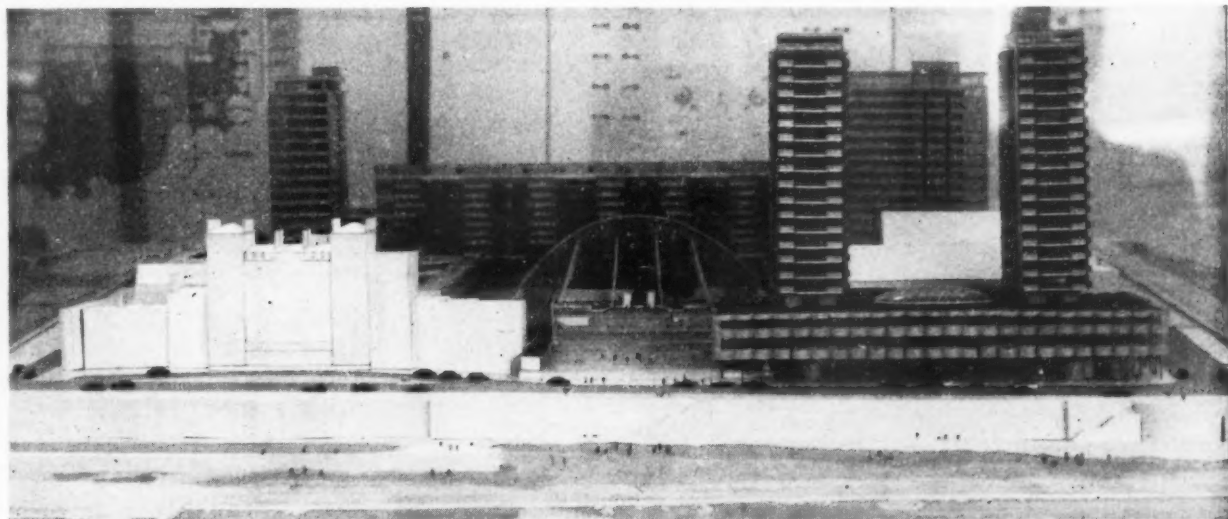
Mr. Kahn is not a good lecturer. He read his paper at machine-gun rate and at times it was impossible to clearly grasp what he had said. But it was possible to grasp that, technically, he said nothing of any moment at all. Learning from this experience the Yerbury Foundation will no doubt take greater precautions to ensure that the next speaker from across the Atlantic is worth the expense of bringing over here. I understand that Yamasaki has been booked for the Autumn lecture and that, to try to avoid a repetition of last week's catastrophe he will be expected to answer specific questions from a panel of eminent architects.

G.T.

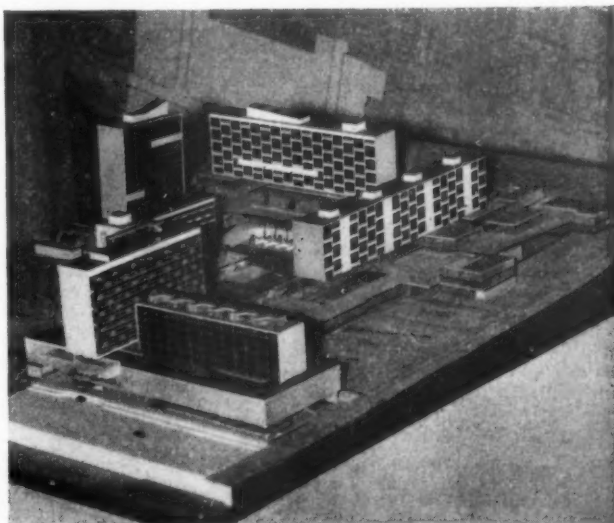
T H R

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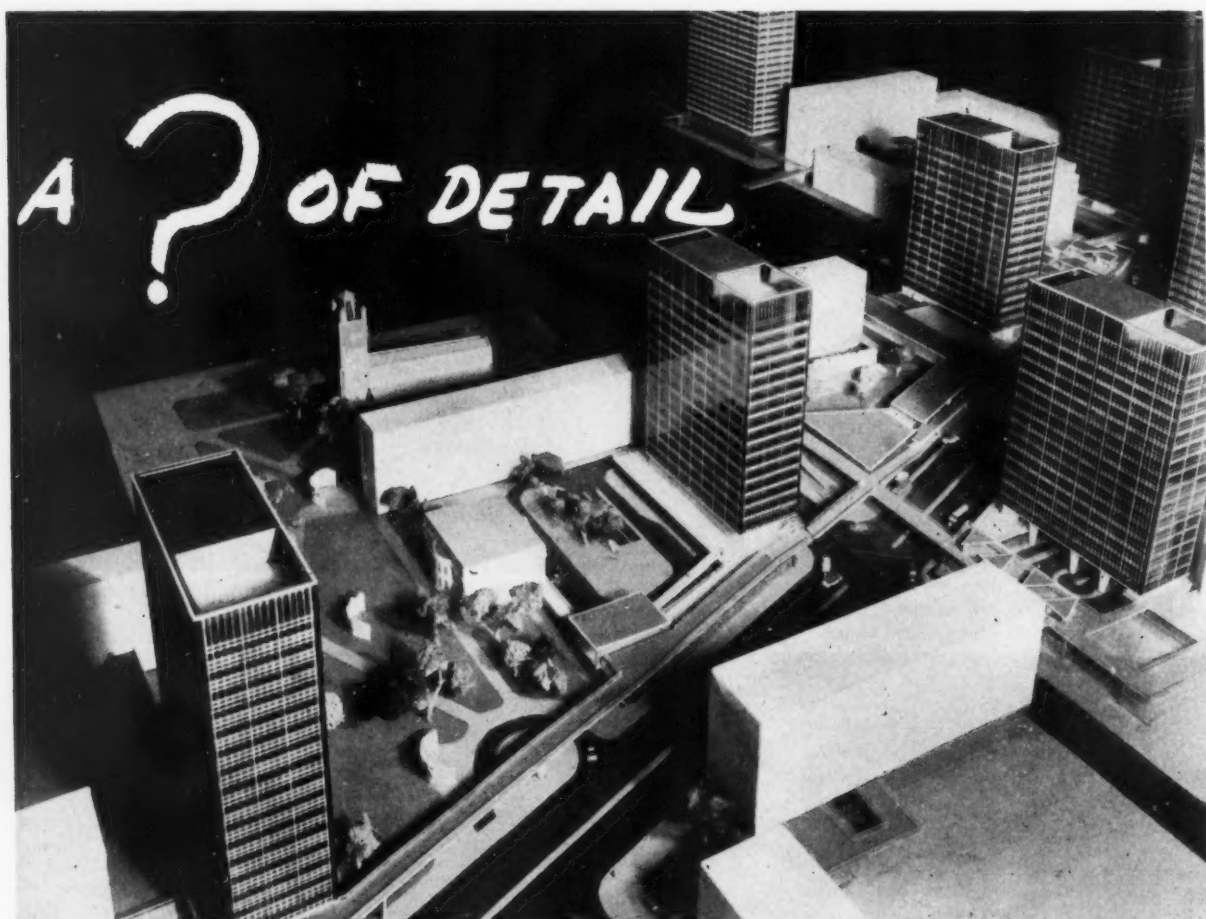
## THREE SCHEMES FOR BRIGHTON FRONT

*Designed by Russell Diplock Associates.**Designed by Guy Morgan and Raglan Squire.*

These three development schemes have been short-listed by Brighton Town Council for the rebuilding of the important 11-acre site on the Front, and the R.F.A.C. has been asked to comment. "But of course we do not have to accept their recommendations," said the Borough Surveyor who has charge of Brighton's architecture and town planning department. It is hard to tell from a model how far any of these schemes is planned as a coherent development, and how far as a piecemeal effort to build high and increase valuable lettable areas without any real integrated plan. Clearly the Grand Hotel on the front is to be surrounded but not demolished; clearly the Regency houses on the front are to go: is the criterion to be that what's small and cheaply acquired is to go while what's expensive remains? It would increase both our confidence and Brighton's own if the Town Council started such work with the appointment of an Architect and Town Planner, and a comprehensive plan. See also page 852.

*Designed by Alister MacDonald.*





# *SOME THOUGHTS ON SOUTH BARBICAN* by KENNETH BROWNE

So long as unrestricted traffic is allowed to penetrate a city there is only one way to prevent pedestrian casualties and free the citizen to enjoy his surroundings. That is, to arrange that people and traffic never move on the same level.

This need for vertical segregation has world wide recognition, in theory, yet in practice it is still impossible to point to a single instance where it has been carried out; that is on a scale sufficiently large to make it work. Nearly all the larger schemes have been shelved on account of expense and on a small scale the system just doesn't get a fair trial; inevitably people take the shortest route from A to B preferring to risk the traffic rather than climb steps.

It is good news therefore that London is to be the first city to carry out a large scheme of this kind.

The Court of Common Council has at last given final approval to the large scale pedestrian segregation system proposed for the Barbican. Its commercial area, known as **South Barbican** (see model 1), will be built first and will be traversed by a system of pedestrian walkways raised 18 ft. above road level. Lying on either side of Route 11, which will be crossed by four pedestrian bridges, it will eventually link up with the residential area to the north designed by Chamberlin, Powell and Bon. The individual buildings and their immediate surroundings will be designed by private architects to a very tight pattern enforced by the City's planning department, who in conjunction with the LCC have designed the over-all scheme. Already one of the six almost identical 220-ft. office blocks is up and looking very much as shown on the block model above.

When the scheme is completed, workers in the Barbican will be lifted by escalator to walkway level direct from Moorgate underground station and will be

able by means of the bridges to reach their offices on either side of Route 11, without the danger of zebra crossings or the depression of subways. They will be able to shop, eat, relax without worrying about the traffic—a step up literally and metaphorically.

However, though this looks like an exciting scheme must remember that we are only looking at a model.

This can give no real idea of the close-up appearance of the raised walkways, which are, after all, a new design problem; or the bridges, railings, parapets, steps, ramps, lightfittings, and so on. You may say, "But does it really matter, surely that's just a question of detail?" Exactly, but detail repeated hundreds of times. For instance along Route 11 alone there will be 550 yds. of railings and miles of it in the whole scheme. There will be hundreds of lamp standards and difficult junctions of steps and ramps not to mention the detail of bridges and walkways.

themselves

The tro  
just the  
TOGET  
we do s

It is a jo  
best desig  
decisions  
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details, s  
or ramp  
sculpture  
junior as  
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The skill  
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Castle (2





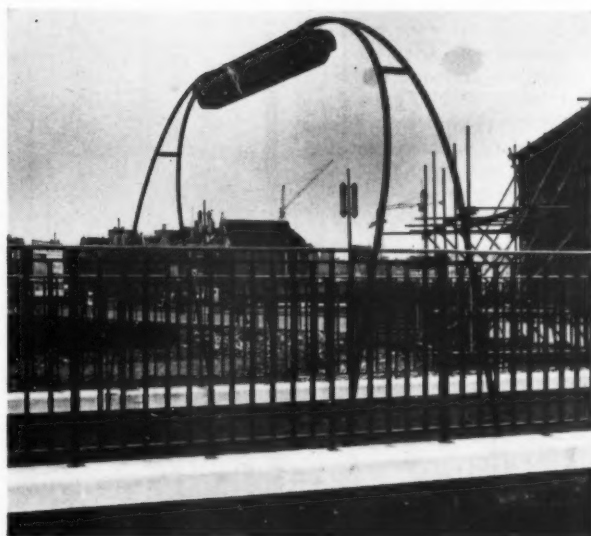
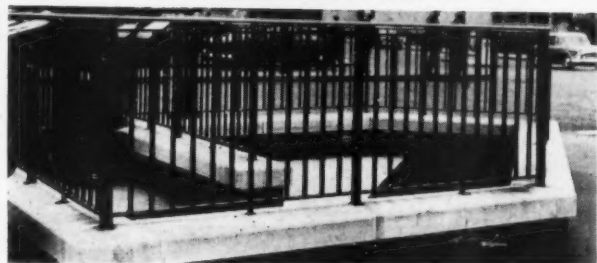
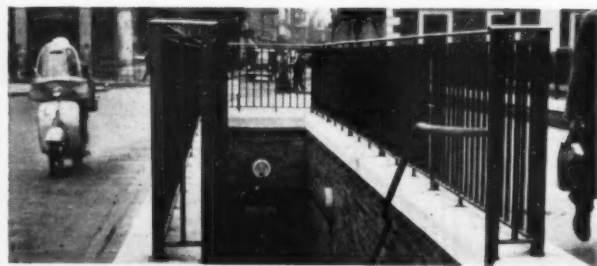
themselves.

The trouble is that this is just the sort of **PUTTING TOGETHER** operation we do so badly.

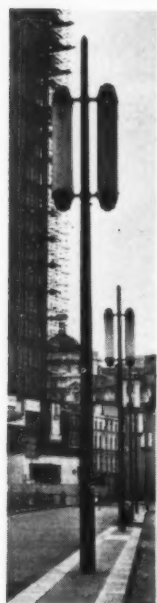
It is a job to tax the skill of the best designers, yet the crucial decisions are often made by committees and the critical details, such as the form a stair or ramp shall take, real street sculpture, are just left to a junior as being of little importance.

The skill that is required can be gauged by a glance at the new subway ramps at Elephant and Castle (2). Despite the trouble

2



3



which the LCC architects take over this sort of thing, the final effect is hardly a contribution to the environment. It doesn't really work as townscape. How much worse then is it likely to be at Barbican where there is far more of this kind of thing to be designed and where there will be four interested bodies stirring the soup: the city engineer's office, the city planning department, the LCC, and the private architects.

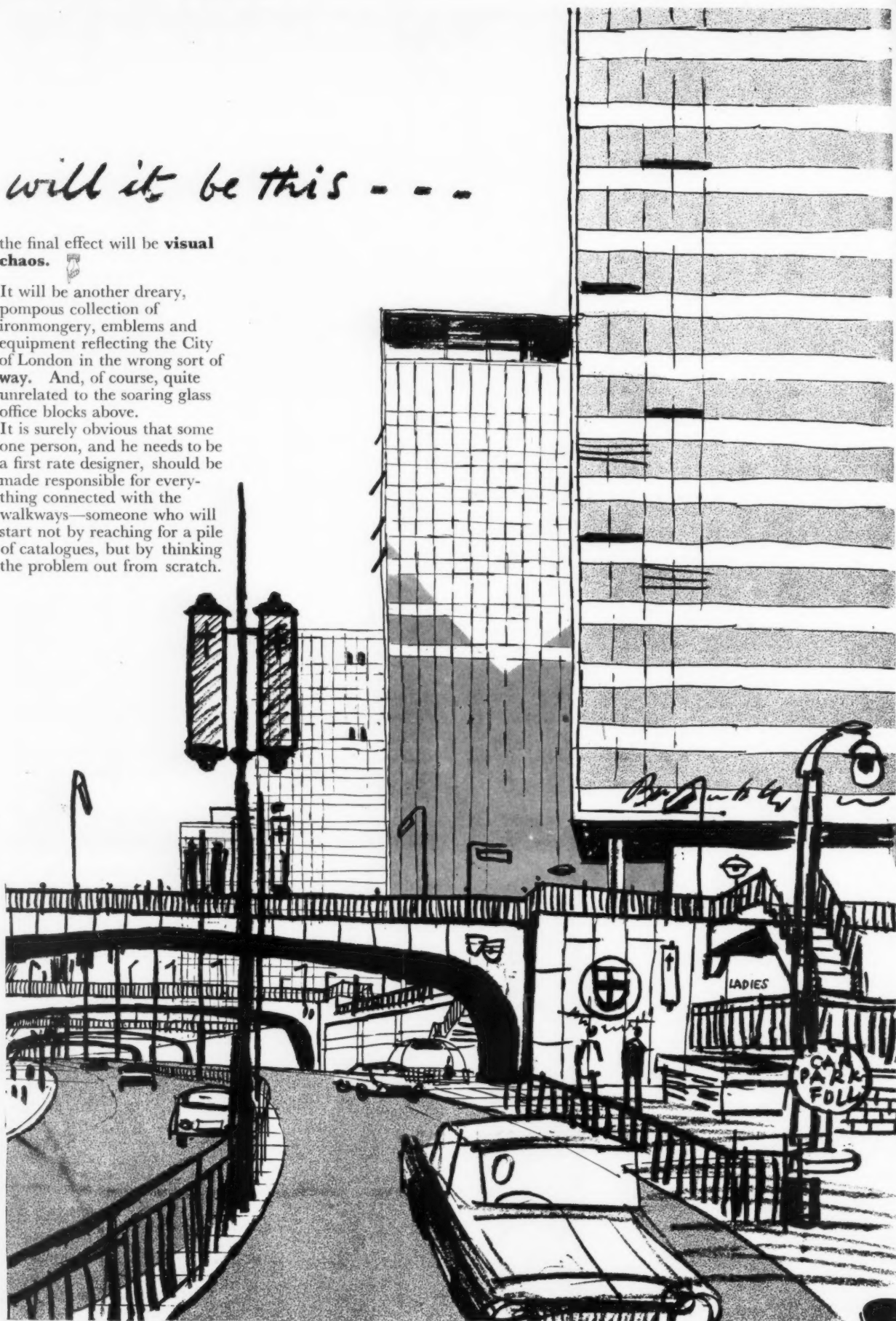
The **existing evidence along Route 11 (3)** arouses the worst apprehensions. If these are typical details, heaven help us;

*will it be this - - -*

the final effect will be **visual chaos.**

It will be another dreary, pompous collection of ironmongery, emblems and equipment reflecting the City of London in the wrong sort of way. And, of course, quite unrelated to the soaring glass office blocks above.

It is surely obvious that some one person, and he needs to be a first rate designer, should be made responsible for everything connected with the walkways—someone who will start not by reaching for a pile of catalogues, but by thinking the problem out from scratch.



He should  
DETAIL  
as much  
To do this  
restate the  
object of  
To construct  
walkways  
the railings  
etc., to  
most similar  
The next  
sort of

--- or this?

He should then aim to  
DETAIL OUT, get rid of  
as much detail as possible.


To do that he will need to  
restate the purpose of each  
object or detail concerned.

To consider the bridges, the  
walkways, the lamp standards,  
the railings, the stairways, etc.,  
etc., to see how they can be  
most simply stated and related.

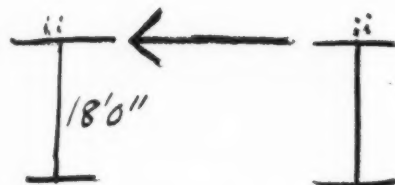
The next few pages show the  
sort of thing I mean:



# Bridges

*we are not doing this* 

PURPOSE: to cross Route 11 at walkway level, 18 ft. up. Therefore, merely a continuation of the high level pavement and should look like it.

*... but this* 

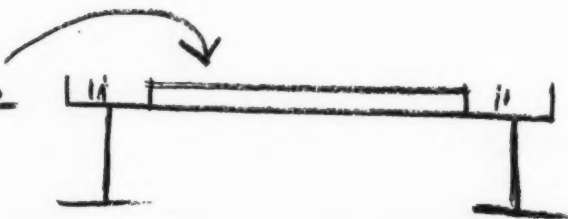
*X*  
*so we don't need this sort of thing*



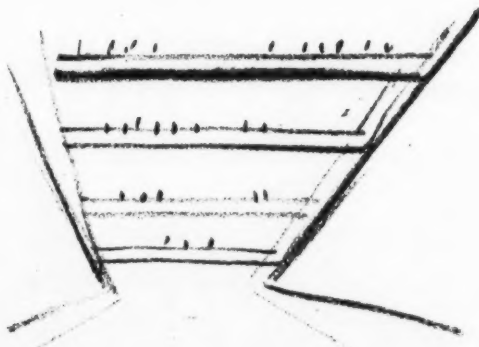
*resulting in this*



*this is all we want-*



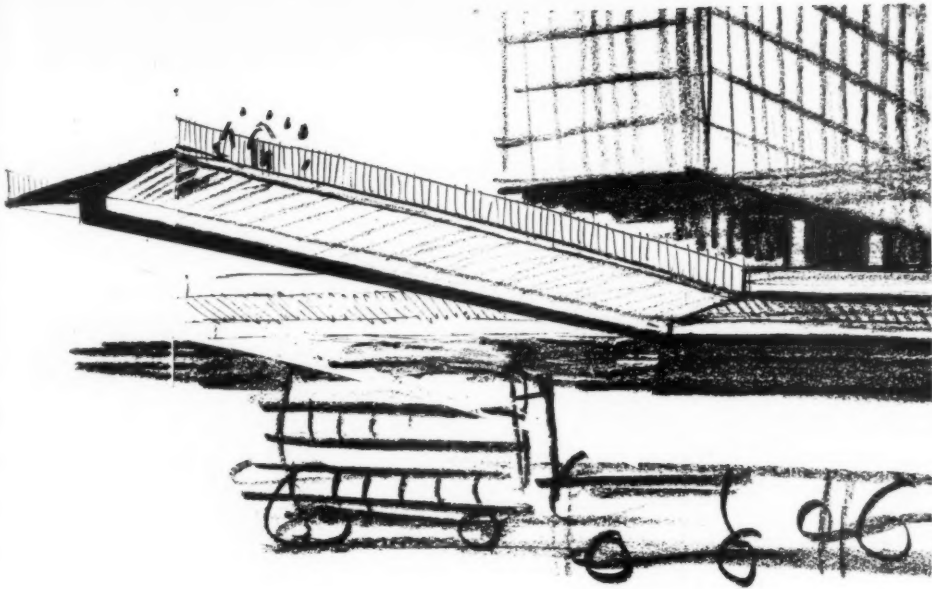
*of the lighter the better*



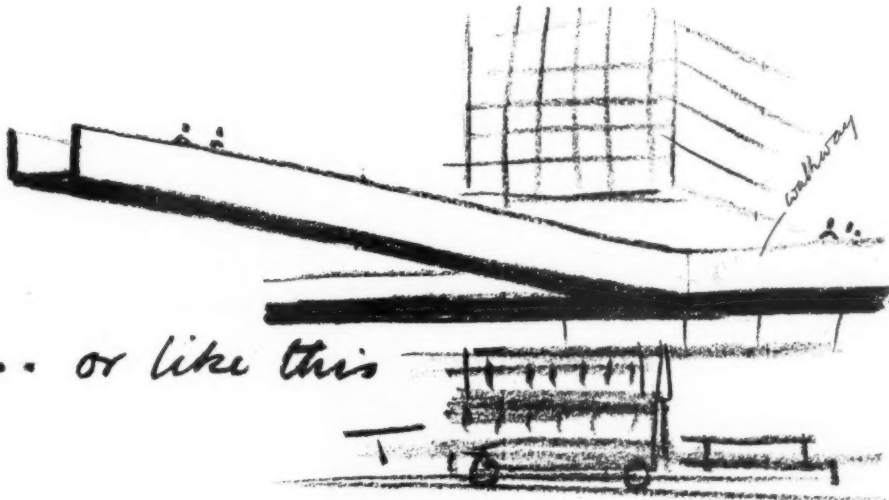
This is a good EXAMPLE from the Festival of Britain back in 1951 (4). Rails and tapered legs look a bit dated but this is the kind of thing, in concrete.



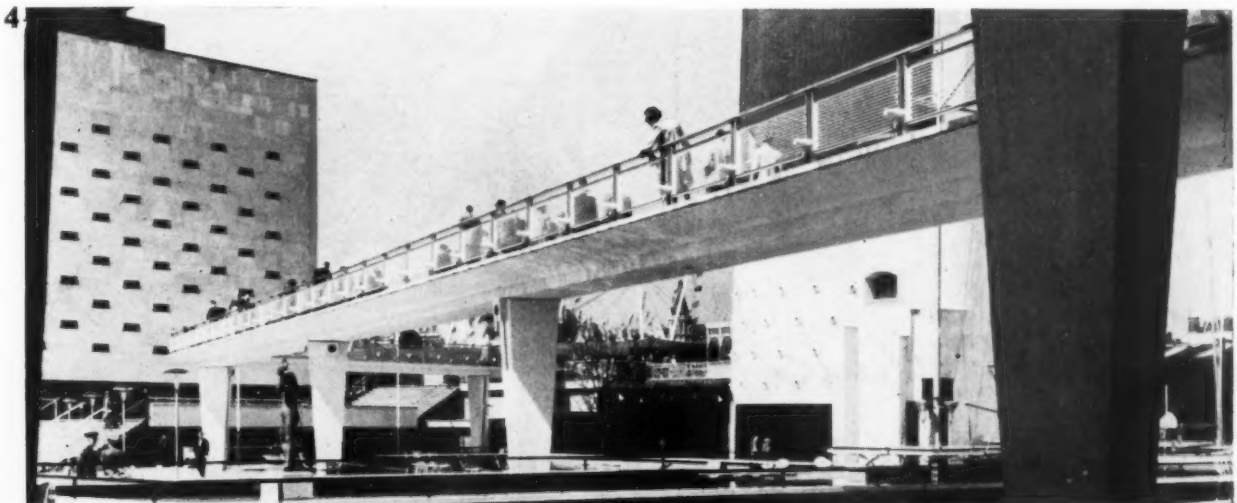




*it could be like this - - -*



*- - - or like this*



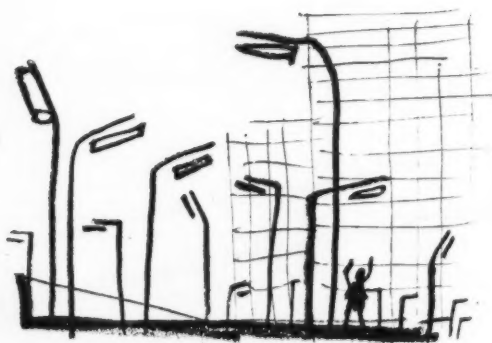
# Lamps

## What to avoid

X  
avoid cranked  
posts



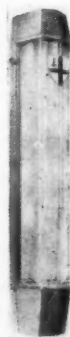
they result  
in this →



X avoid the  
whimsy  
(this isn't an  
exhibition)



X & the archaic

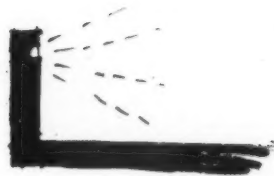


PURPOSE: to light  
walkways: for pedestrians  
not traffic therefore  
brilliant illumination not  
necessary.

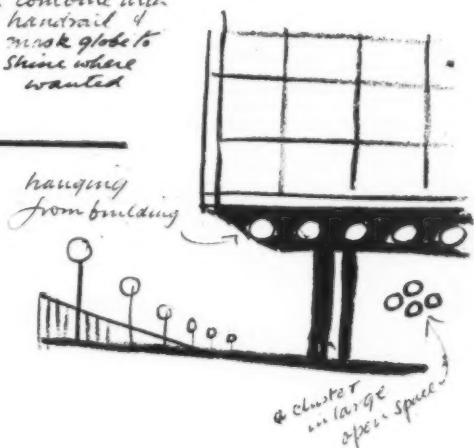
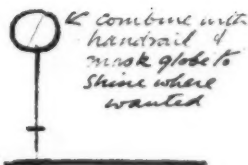
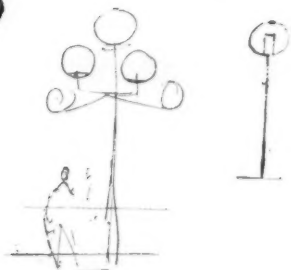
REMEMBER will be seen  
at all sorts of different  
angles, so avoid all cranked  
posts. Hide as many fittings  
as possible.

# suggest

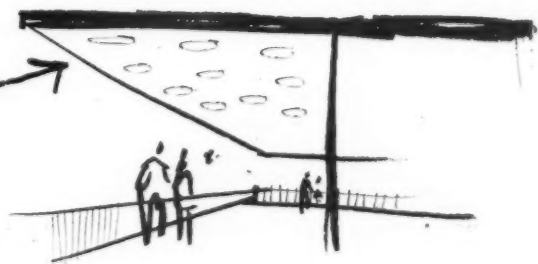
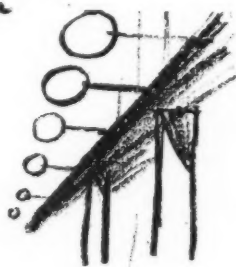
1. no lamppost - just strip light housed in parapet or under rail (just right for bridges anyway)



2. all freestanding lamps must have shape which looks the same no matter where placed.  
eg. a globe ○



3. flush with canopy or bracketed from building

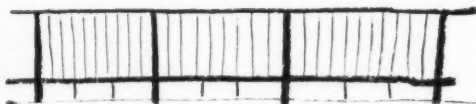


# Rails and Parapets

X not this sort of thing



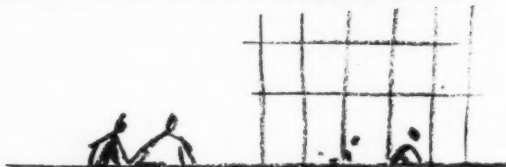
X or even this



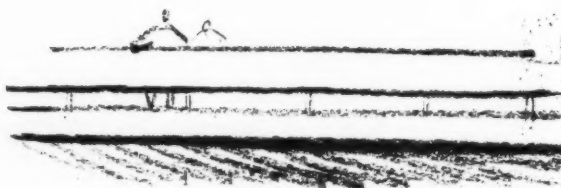
✓ but this



✓ or this



✓ or this

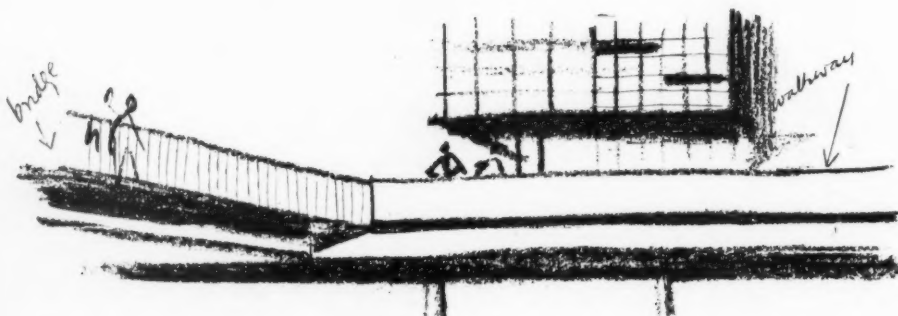


PURPOSE: to stop people from falling off walkways, bridges, etc.

REMEMBER Utmost simplicity essential. Regular rhythm of uprights must be maintained, for hundreds of yards of it will be seen at a time. No syncopation. Avoid clumsy brackets (7) and heavy members breaking rhythm (6). Contrast with German example (8). They don't need clumsy brackets so why do we? Note how regular spacing makes an entity of the whole length of rail.

P.S. Don't paint railings white, as the L.C.C. have done at Elephant & Castle. They look awful now they're dirty (2).

A THOUGHT: unrelated lengths of railing at all angles can be very worrying to the eye (5). Suggest considerable use of solid, or pierced parapets which will help to give scale and suggest strength to support the tall buildings above.



Why not rail and parapet?





6

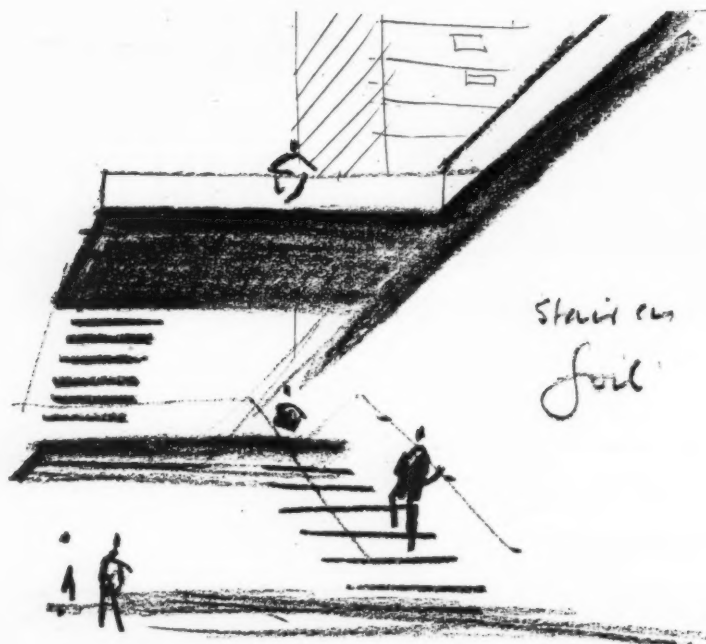
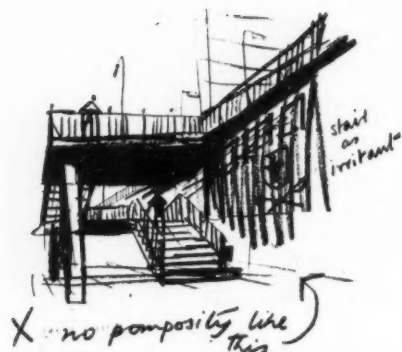


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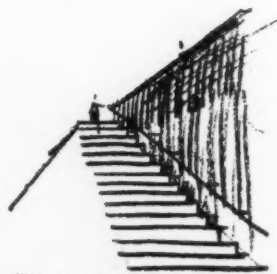
8



# Steps and Ramps



express the purpose as simply as possible



remember: a stair always reads best against a plain wall

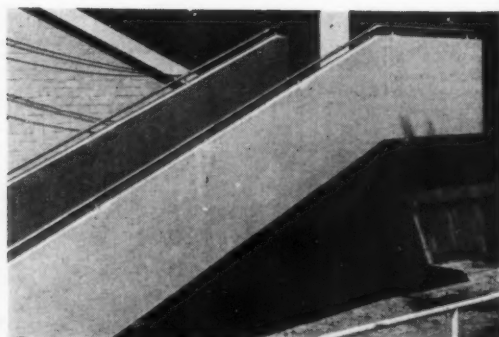
**PURPOSE:** to get up and down from the 18-ft. level.

**WHAT TO AVOID:** confusion of forms and fussy detail. There is a case for some stairs with solid sides (9) to help this.

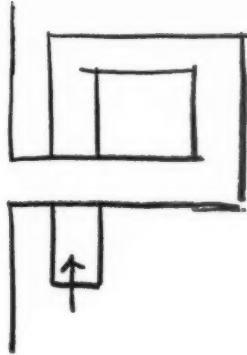
This is a job for a sculptor/architect/engineer. Ramps are pure sculpture, or should be, and the shapes which look O.K. on the Barbican plans could be terrible in fact.

They must be thought out in 3D.

For instance, a ramp shown on the plans like **A** (opposite) could be carried out cleanly like **B**, or all fingers and thumbs like **C**.

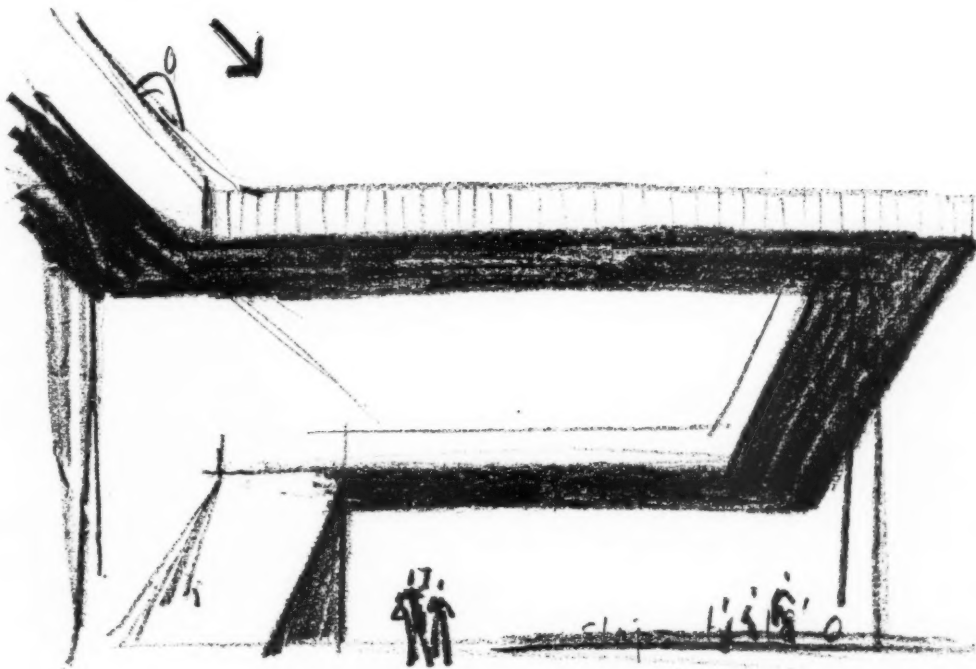


will this →



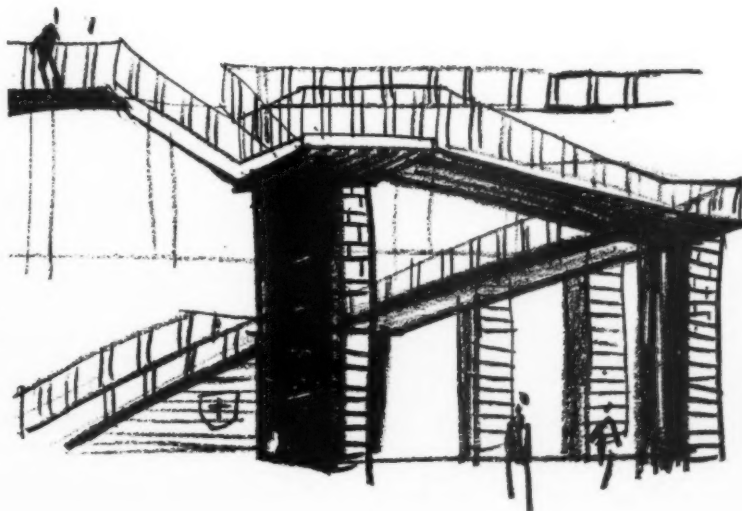
A

be like  
this

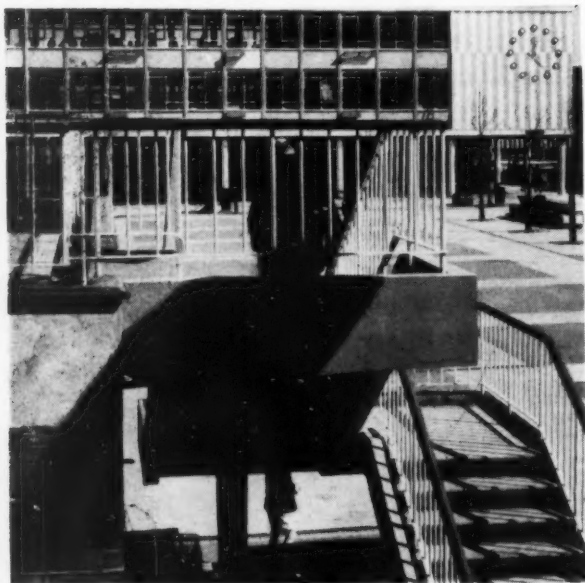


B

or like  
this? →

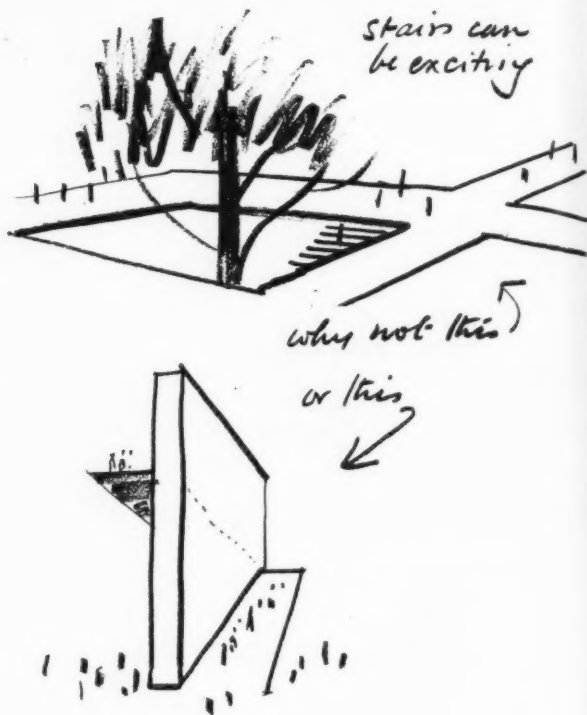


C



10

Unless the visual effect of the plan is foreseen you get results like **10**, at best. Compare its



fussiness with the **German example (11)**, which adds a splendid form to the scene. It is a

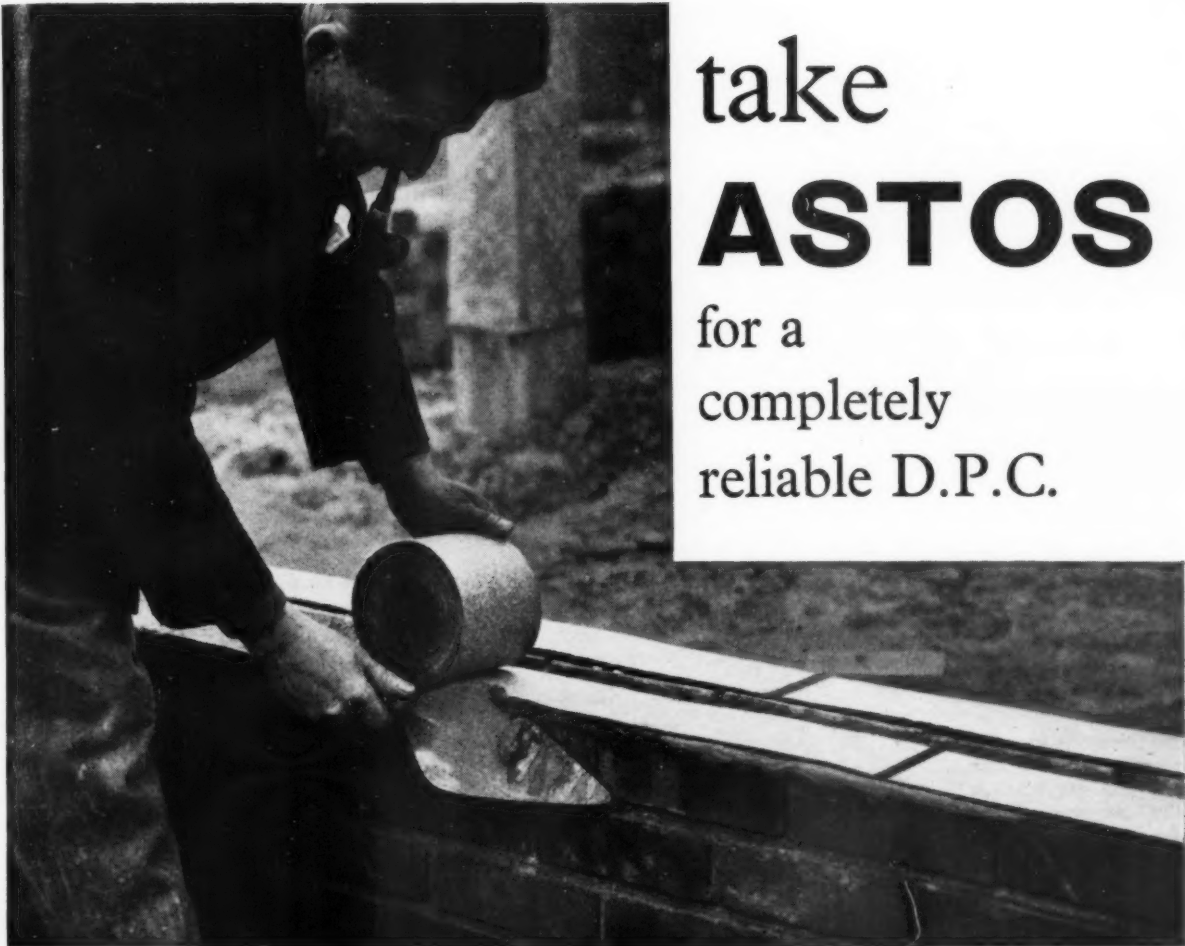
good example of basic simplicity carried right through to the finished job.

11



This may  
band on  
at 8 ft. in





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Holborn 9501 (5 lines)

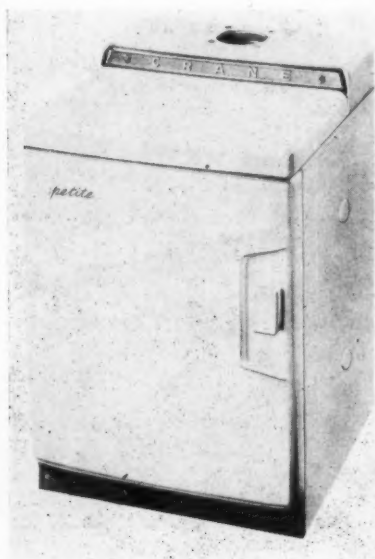
**ZAG11**

## THE INDUSTRY

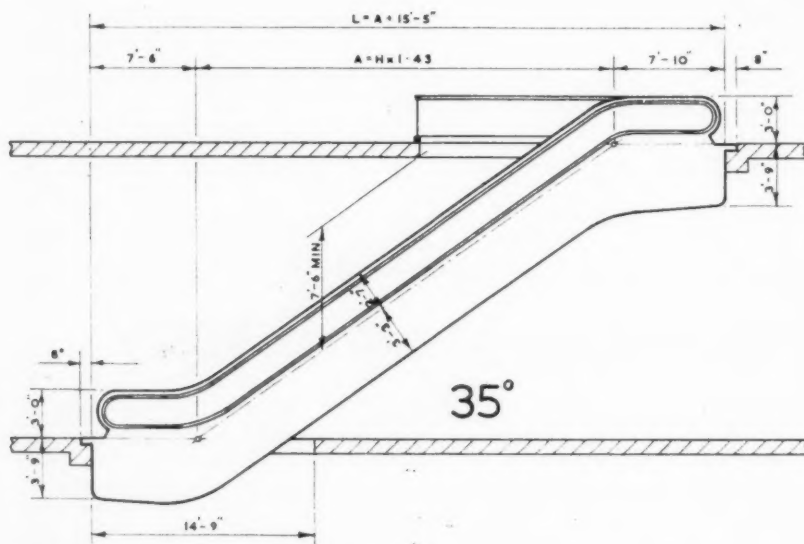
*This week Brian Grant describes a small kerosene boiler, a prefabricated escalator unit, and a recessed lighting panel.*

**New small boiler**

Crane have recently announced a new small kerosene-burning boiler with an output of 12,000 B.Th.U. per hour. It is known as the Petite, and measures only 15½ by 18 in. on plan, with a height of 23½ in. Price is £45, plus about £5 for a storage tank of 50 to 60 gallons, but it would be worth providing a larger tank than this to take fuel at a cheaper rate for larger quantities. Control is by thermostat and the makers recommend that a fire valve should be fitted in all installations to cut off the fuel if the flame should be extinguished. (Crane Ltd., 15-16, Red Lion Court, Fleet Street, London, E.C.4.)

*The Crane Petite boiler.***Packaged escalators**

At the new C & A shop recently opened in Ilford Marryat & Scott installed a new type

*The 35° version of the Eggers-Kehrhahn escalator.*

of packaged escalator which is produced as a complete unit. With this type, imported from Western Germany, the site labour is reduced to a minimum, and all the builder has to do is to form the necessary holes in the floor slabs before the machine is delivered. The escalator frame is made of high tensile steel tube, and this supports the entire machine, so that a motor room is not needed. Delivery is by rail to the nearest goods yard, where the escalator is mounted on rubber tyred wheels and then towed to the site and straight into the building as a complete prefabricated unit which can be put into use as soon as an electricity supply is available. Each unit is made to suit the floor height required and the standard models are available with an angle of inclination of 30 or 35 deg. and in step widths of 24, 32 and 40 in., giving passenger capacities of 4,500, 5,000 and 7,000 an hour: individual machines can also be made for special purposes. Standard models have two level moving steps at top and bottom landings, and handrails are synchronized with the step movement. Standard panelling finish is anodized aluminium, with the sides and under surface in painted asbestos cement.

In the conversion or alteration of existing buildings the savings can be quite considerable, as once the openings in the floor slabs have been made the complete installation can be carried out over the week-end provided that there is a 10 ft. square opening into the building for the necessary access. The makers of the escalators are Eggers-Kehrhahn, one of the Rheinstahl steel group of Hamburg, and Marryats are erecting and servicing them in the UK and also East Africa.

A similar arrangement has been made to cover the Paternoster lifts made by the same firm. Paternosters are continuous lifts which have not been used much in this country, though they are quite widely used on the Continent, particularly in buildings where there is heavy traffic between floors. The lift cars have no doors, and remain vertical on an endless chain, providing a continuous service with cars moving upwards past one opening and down in the other. A two-person car system needs a well only 8 ft. 8 in. by 5 ft. 3 in., plus a 17 ft. pit at the bottom and 23 ft. headroom. (Marryat & Scott Ltd., Wellington Works, Hounslow, Middlesex.)

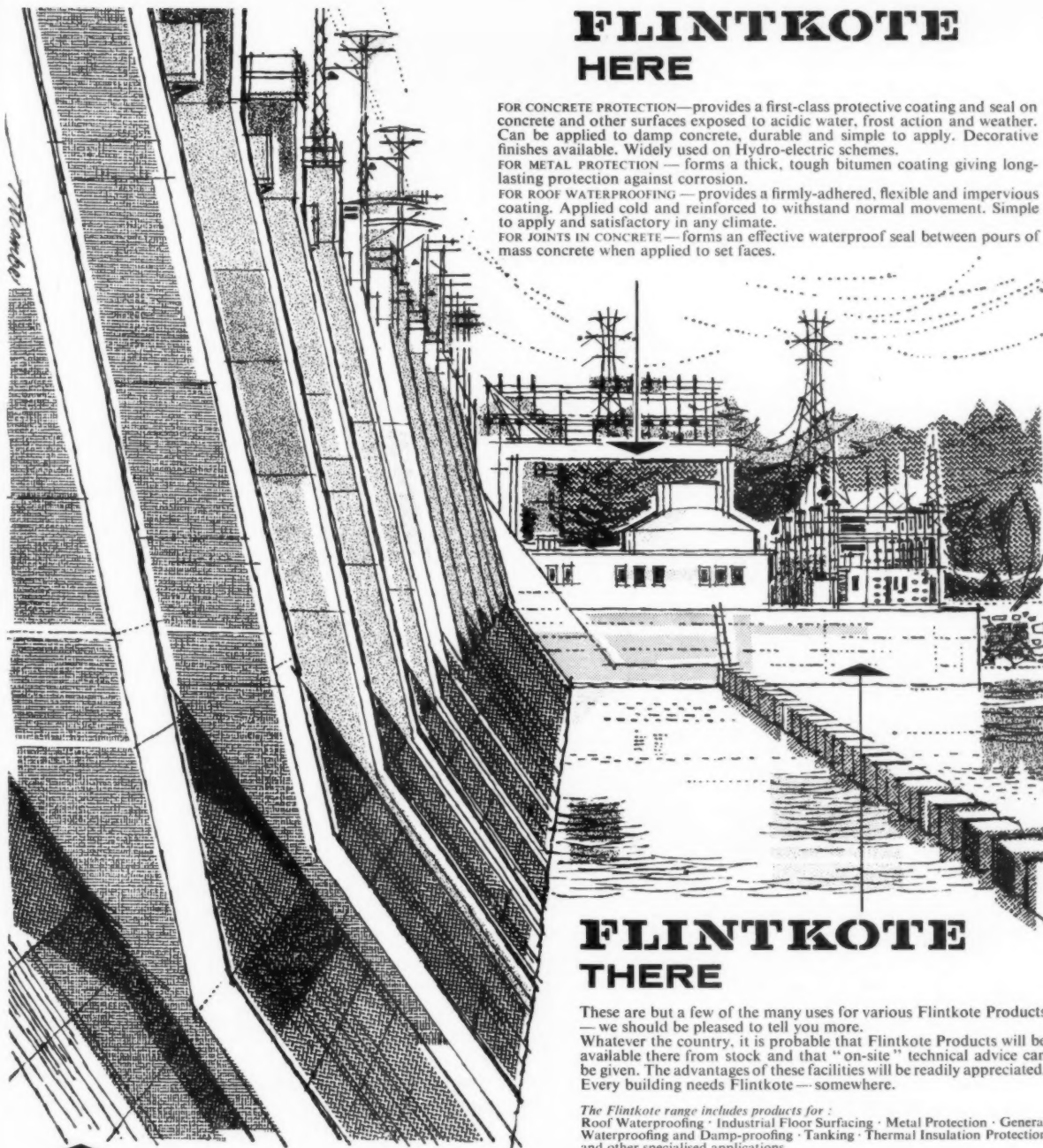
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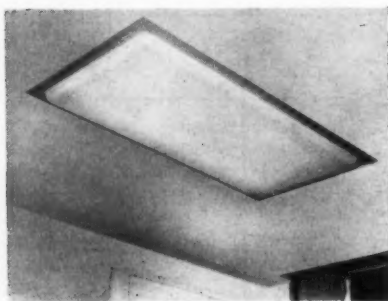


Scotland. THE GLEN SHIRA HYDRO-ELECTRIC SCHEME. Concrete surfaces of the main dam, lower dams, and main tunnel are all FLINTKOTE — protected from attack by acids in the peaty water.



**Access to ceiling voids**

The simplest and most economical form of suspended ceiling is probably the expanded metal and plaster type, and Campbell Denis, in conjunction with the Utility Lamp and Fittings Co., have recently introduced a recessed lamp fitting (see below) which is quickly and easily removable to give access to services within the void. The removal of two surface screws frees the diffuser and at the same time unclamps the fitting, which can then be removed from its bearers with a simple lift and tilt movement, and the whole unit can then be lowered as soon as the flex is disconnected. The whole process should not take more than three or four minutes. The fittings, which may be modular or not, are made to take 2, 3 and 5 ft. fluorescent lamps, with one, two or three lamps in each fitting, so that any degree of illumination can be provided. With this system, access can be gained to 85 per cent. of the ceiling void with one fitting to every 80 sq. ft. of ceiling. (Campbell Denis Ltd., Campden House, 48a, Elizabeth Street, London, S.W.1.)



*The Campbell-Denis lighting panel.*

## INFORMATION CENTRE

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

A

624-074

### 18.212 construction: theory

#### **TIMBER SHELL DESIGN**

*The Analysis of Hyperbolic Paraboloid Shells.* T.D.A. 1960. 3s. 6d.

Research Report E/RR/5 of the T.D.A. written by H. Tottenham who was responsible for the Association's early work in the field of timber shell structures deals with hyperbolic parabolic shells.

The author states that a shallow right hyperbolic paraboloid shell may be considered as a membrane undergoing finite deflection. The displacements and forces are found to be related to two simultaneous non-linear differential equations. Two methods of solving the equations are suggested. There are about fifteen pages of higher mathematics and we can recommend it only to the more mathematically minded Architect and Engineer.

Bi

658-562

### 18.213 construction: theory

#### **TIMBER DESIGN**

*Production Standards for Structural Glued Laminated Timber.* T.D.A. 1960. 3s. 6d.

T.D.A. manual based on available scientific information and practical experience gained by manufacturers in production of structural glued laminated timbers both in this country and North America.

The manual defines the manufacturers' obligations in regard to factory equipment and environment, control and measuring instruments and workers' welfare and hygiene. The next two sections deal in turn with timber specification and adhesives. In the latter section attention is given to the choice of suitable glues for different service conditions. Manufacturing requirements are examined under a number of headings in the next and longest section; the subjects considered include provision of test specimens, preparation and condition of laminations, removal and patching of defects, cupping, end jointing methods, mixing and spreading of adhesives, assembly periods and cramping, pressures, curing periods and protection of finished members. Other sections of the publication are devoted to site gluing, preservative and fire retardant treatment and appearance grades in glued laminated members. Appendices to the standards provide information about the choice of species for laminations and spacing of cramps, together with extracts from comparable Canadian standards. This subject receives scanty treatment in design code C.P. 112 and the manual will therefore help to fill the gap.

## The Gas Council on gas installation

*On the following pages is a supplement on communal laundries which is sponsored by the Gas Council. This is the tenth of a series of supplements which have as their object to give a full technical description for architects of the different uses to which gas and coke can be put. Like Information Sheets, these supplements are a journalistic hybrid: they are "advertisements" in the sense that the space they occupy is paid for by the sponsors and that their ultimate object is to foster the greater use of gas; but they are "editorial" to the extent that the means chosen is to provide as much reliable information as possible and that this information has in fact been "approved" by the JOURNAL's Technical Editor. We hope that readers will extract and keep these supplements for future reference. For this purpose a special binder can be obtained, free of charge, on application to the Publicity Manager, Gas Council, 1 Grosvenor Place, S.W.1. Alternatively, readers may apply through the business reply folder at the back of this issue. The first nine supplements "Domestic Space Heating 1. Fires and unit heaters," "Domestic Space Heating 2. Central heating by gas and coke," "Domestic Water Heating," "Gas Flues," "Coke," "Flues in Tall Buildings," "The Domestic Kitchen," "Catering," and "Gas Installation," appeared in the JOURNAL for November 29, 1956, April 25, 1957, September 26, 1957, April 24, 1958, January 22, 1959, October 8, 1959, November 26, 1959, January 14, 1960, and February 11, 1960, respectively.*



gas supplement

SIB File No. (54)

UDC No. 696.2

## COMMUNAL LAUNDRIES

This supplement begins by considering the four different types: the central estate laundry giving all services, the small communal laundry for washing and drying only, the utility room for handwashing and drying, and the communal drying room. An account is next given of the equipment which will be needed for each of these four provisions, taking in turn that needed for washing, for the supply of hot water and for drying. A table gives the number of pieces of equipment to serve different numbers of families, and layout plans are given for three laundries of the central estate type.

### Communal laundries

With the post-war building programme, opportunity was taken by some local authorities to site communal laundries within the curtilage of new housing schemes or to go further still and provide facilities within the individual blocks of flats themselves. These communal laundries are the modern equivalent of the old type wash houses which were built to provide laundry facilities in congested areas: as towns have spread and standards of living have risen, people have become unwilling to travel long distances with bundles of washing.

For several years after the war, reasonably priced home laundry equipment was not generally available and communal laundries fulfilled a definite need and achieved some popularity. The facilities provided are sometimes included in the tenants' rent and in other cases the tenant has to pay the additional cost directly, the pieces of equipment in the communal laundry being supplied with gas through prepayment meters.

Laundries where the facilities are included in the rent have proved the most popular but there has nevertheless been a general falling off in the use of the laundry facilities by the tenants in recent years; where payment meters are provided this is very much more marked. Many of the communal laundries provided are now becoming uneconomic.

The general trend is towards all washing and drying being carried out in the flat: factors contributing to this trend are the availability of home laundry equipment, developments in detergents and the easier washing of artificial materials (e.g., drip-dry shirts).

This Supplement, in the space available, cannot do more than discuss the principles of providing communal laundry facilities. The planning in detail of no two laundries is alike and it is recommended very strongly that the Gas Board should be consulted at a very early stage for specialist advice.

### Types of laundries

In considering laundry problems, the first consideration is the number of families to be accommodated, and the type of laundry facility to be provided. Reference should be made to the National Building Studies Special Report No. 9 entitled "An Enquiry into Communal Laundry Facilities," published by HM Stationery Office. This booklet, although primarily concerned with public communal laundries, contains essential information on good natural lighting, layout and sequence of operations, size of cubicles, water softening, ventilation, safety measures, temperature, and the many other considerations which are involved in a project of this kind.

Generally speaking, there are four types of laundry facility provided on housing estates.

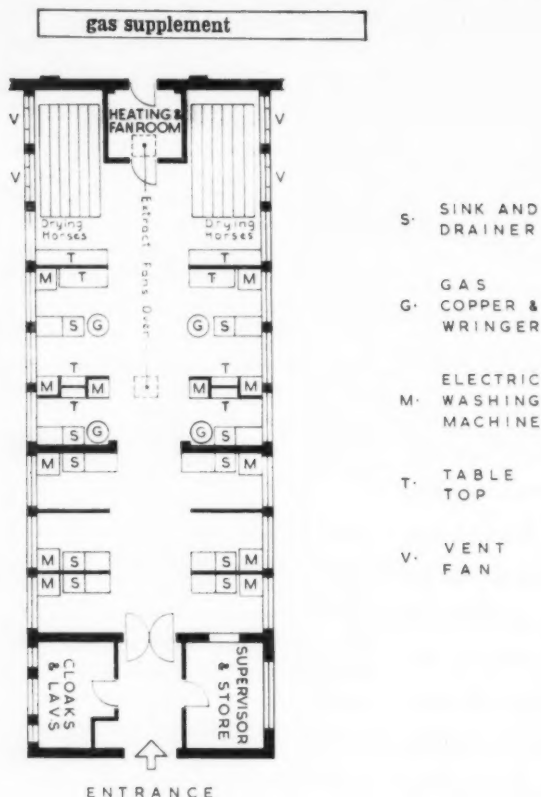
1. On a large estate of, say, 1,000 flats, the tenants are often catered for by the provision of one, or perhaps two, laundries with complete equipment for washing, sterilizing, drying, and occasionally ironing. These laundries are usually separately housed and sited centrally on the estate.

Briefly, the advantage of a laundry of this type is that the authorities can provide full facilities for a large number of dwellings at the lowest capital cost. The disadvantages are that the tenants have to carry their washing to and from the laundry possibly in wet weather, there is a lack of privacy, a rota is necessary and the problem arises of looking after small children during the tenant's absence from the flat.

2. Small communal laundries for washing and drying only, generally housed in the basement of one of the blocks of flats, or in each block. Ironing is carried out in the tenant's flat.

In the case of a communal laundry within each block of flats, the capital cost to the authorities is higher than for a single laundry for several blocks but the tenants have the advantage that they do not have to carry their washing so far or out of doors.

3. Utility rooms for washing by hand and drying often situated in the basement or on the ground floor. The arrangement is reasonably convenient for the tenant and does not involve the authority in great capital expenditure but does take up space that could be occupied more profitably by a flat.



*Heathpark Estate, Dagenham; Architects Norman and Dawbarn.*

4. Communal drying rooms only, usually situated on half-landings on each floor of the main staircase. Washing and ironing facilities are carried out in the flat.

This arrangement may well represent the most satisfactory compromise taking into consideration the convenience of the tenant. The cost of providing all the facilities within the individual flats may be prohibitive but if the respective points are provided and space is allocated, the tenants can themselves provide the equipment if they desire.

In the London area the maintenance required on the more complex pieces of laundry equipment has in many cases proved to be excessive and one Council has decided that the provision of communal drying rooms with up to three drying cupboards and the washing and ironing carried out in the flats represents the most satisfactory and economic solution and this will represent their general practice in future housing schemes.

For the various types of laundry the following equipment is generally installed:—

*Type (1)* is usually of fairly large scale and most of the equipment is mechanical, but of such a type and design as to enable the tenant to handle it individually with complete safety after suitable tuition, with perhaps occasional supervision by the caretaker.

Washing equipment includes semi-commercial washing machines, domestic type washing machines with or without spin driers, or automatic sequence washing machines: domestic type washing machines have been

installed in communal laundries but require frequent maintenance to keep them in order in view of the rough handling they inevitably receive, and the fact that they were not designed for continuous use. Sterilizing equipment will consist of wash boilers.

Drying appliances may include hydro-extractors, gas or steam heated withdrawable hoppers, gas or steam heated tumbler driers or large gas heated drying cabinets either as single or multiple units.

*Type (2)* has similar equipment except that steam is not usually available and the drying appliances generally are confined to the individual cupboard units. A lighter type of hydro-extractor is used. Ironing is carried out in the tenants' flats.

*Type (3)* has deep sinks with draining boards and wringers, gas wash boilers, individual drying cupboard units, ironing being carried out in the tenants' flats.

*Type (4)* consists of drying cupboard units only, washing, wringing and ironing being carried out in the tenants' flats.

#### Supply of hot water

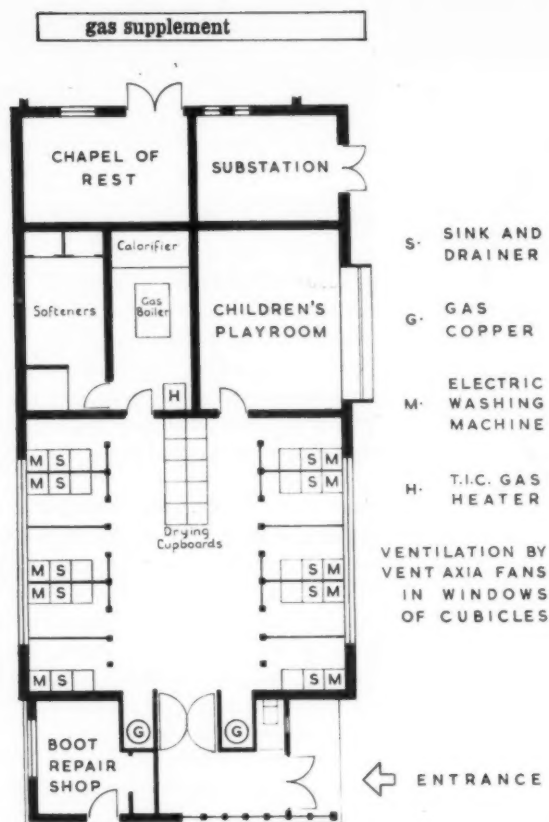
For *Type (1)* laundry hot water can be drawn from the central plant if it exists, which provides heating and hot water to the flats. Alternatively, the laundry may have its own steam raising plant or bulk storage water heater. For *Type (2)* laundry the same conditions apply with the exception of the steam raising plant. For *Type (3)* individual water heaters, mostly of the gas instantaneous type, are used.

Hot water is required for filling washing machines and at the deep sinks to enable the tenants to deal with the woollen and fine articles that do not go into the machine, or to carry out washing by hand where no machines are provided. Warm and cold water is also required in quantity for rinsing.

The exact amount of hot water required per weekly wash for each type of laundry is difficult to assess as the quantities used vary to a great extent according to the washing habits of the users, the extent to which the clothes are soiled, the amount of soda and detergents provided, and the size and type of equipment available. The amounts vary from 30 to 70 gal. at 140 deg. F. for washing without a machine, up to 95 gal. at 140 deg. F. with a machine, in a public wash-house.

#### Equipment for drying

*Hydro-extractors* consist of circular metal drums or basket-shaped containers which revolve at high speed on a central axis. The speed with which the container revolves, forces the clothes against the perforated sides and presses the water out through these holes and via a pipe to the drain or gully provided in the laundry floor. The quantity of water removed is of some importance as it has a direct bearing on the overall drying time of a load of clothes, especially if it is desired to maintain a rota system of usage for the tenants for a complete washing and drying cycle. Some of the lighter articles of clothing or household linen can, if the speed



Pembroke Street, Islington; Architect E. C. P. Monson.

of the appliance is sufficiently high, be removed at ironing dampness. The time taken is usually about three to five minutes for this operation. The remaining articles will need further drying and the operation can be completed in a number of ways:—

*Withdrawable drying horses* consist of racks which can be drawn out from the framework of the dryer, loaded with the clothes, and pushed back again. The heat can be provided from the steam plant, if available, or by gas heated warm air assisted by a blower. The time taken is usually about 20 to 30 minutes according to the weight of the water in the clothes to be dried.

Withdrawable drying horses are provided usually on a basis of one per washing machine: they are available in both shallow and deep versions and are built up as a multiple unit to suit the demand and the space available.

*Large drying cabinets* of much lighter construction than the withdrawable horse methods are also used with considerable success. These consist of sheet steel cabinets of 2 ft. or 4 ft. width and 2 ft. deep in batches of six or twelve joined together. At one end a gas burner and blower is fitted with automatic controls. The heated air is forced through the cabinets in an upward direction and returns to be re-heated. A percentage of the air, however, passes out via the flue with a percentage of the products of combustion. When any one cabinet is used the operation of opening the door seals off that compartment. The action of

the heated air blowing upwards bellows out the clothes, ensuring that the heated air passes over both sides of the article, and also agitates them lightly. This helps to keep the clothes soft and supple and avoids that hardness of surface and stiffness that sometimes occurs with artificial drying. The time taken is about 20 minutes per load.

As the equipment is fully automatic, gas is used only in proportion to the work to be done, i.e., if the portion of heated air which is partially re-circulated, returns to the burner chamber without loss or with little loss of temperature, the thermostatic control reduces the gas rate accordingly. A humidity control would be a better method of control, but the cost is high.

*Tumbler dryers* are sometimes used and consist of a revolving drum not unlike those used for dry cleaning. The heat is provided from either available steam plant, or by gas, the heater in that case being an integral part of the appliance. The articles to be dried are placed in the drum from the front. The drum revolves slowly and the clothes are tumbled about whilst hot air is forced through the chambers. The drying again takes about 20-30 minutes according to weight of water to be removed.

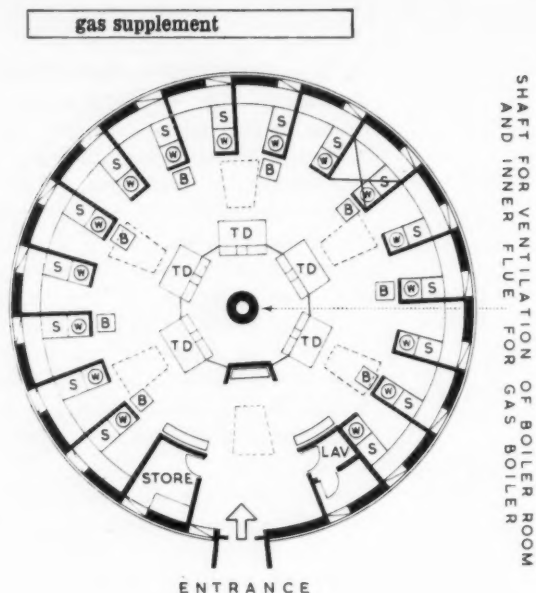
*The drying cabinet and the drying cupboard unit* are other types of drier. The first is a self-contained steel cabinet complete with heater; the other is a heater only with protective grid and louvres that can be supplied for fitting into a site-constructed cupboard. A steel door with air louvres built in and a Yale lock incorporated is supplied by some makers, and is particularly useful when required for communal use. Sectionalized steel cabinets for site erection are now available.

It might be mentioned that both types are being increasingly used, particularly in small laundries and drying rooms, although originally designed for individual flats. They can deal adequately with about 9 lb. dry weight of clothes and remove about 5 lb. of water per hour. Light articles can be dried in about 45 minutes while heavier articles holding a greater quantity of water take up to 1½ to 2 hours. Wringing of the clothes is, however, essential. The provision of mechanical means of removing excess water to a fairly low percentage will reduce the time factor considerably. This provision will also reduce the need for larger drying units and cupboards being required. A large load of washing can be spread over two or more cupboards if desired.

In the type of laundries under review, it has been found that most tenants like to complete the operation of washing and drying and return to their flats as soon as possible, in order to iron the articles and attend to other domestic duties. This avoids the need to provide ironing tables which require considerable space in the laundry.

If it is a fairly large estate, it may be appropriate to install a Type (1) or Type (2) laundry. In either case the following table applies, giving the number of different articles of Electrolux laundry equipment





T.D. TUMBLER DRYER      B. GAS WASH BOILER  
W. ELEC. WASHING MACHINE      S. SINK & DRAINER

Ventilation of laundry by induction through draught hoods on tumbler dryers which are under compression by fans. Hydro extractor installed where cubicle is marked with a cross.

*Busaco Street, Finsbury; Architects Skinner and Bailey*

recommended as necessary to provide adequate laundering facilities in relation to the number of families to be served.

No. of families	No. of Electrolux washing machines	No. of hydro-extractors	No. of trucks	No. of sinks	No. of drying cabinets
30	1	1	1 (1)	1	2
60	2	1	2 (1)	2	4
90	3	2	3 (2)	3	6
120	4	2	4 (2)	4	8
150	5	3	5 (3)	5	10
180	6	3	6 (3)	6	12
210	7	4	7 (4)	7	14
240	8	4	8 (4)	8	16
270	9	5	9 (5)	9	18

Figures in brackets represent the minimum requirements.

The average wash for a family of four brought into the laundry comprises 18 to 20 lb. dry weight of clothes. Each machine can deal with 22 lb. of dry weight of clothes, and on a rota system, 1,200 lb. per week over a 40 hour week.

One sink per washing machine is essential to deal with the knitted woollen and fine articles which should not be put into the washing machine. The recommendation of two drying cabinets per washing machine is based on results of extensive tests which show that each cabinet can handle satisfactorily in about half an hour of drying 9 lb. dry weight of clothing after use of the hydro-extractor. The hydro-extractor is designed to take 14 lb. dry weight of clothes in one operation. As an approximate guide to the floor area required, one laundry set, consisting of a washing machine, hydro-extractor, and two drying cabinets, requires 150 sq. ft. of floor area.

#### Ventilation of laundries and drying rooms

The primary need for ventilation is to disperse the water vapours given off during the process of washing and drying, and for Type (1) and (2) laundries an air change of the order of 20 per hour is necessary for

comfortable conditions. The ventilation system, however, can be designed to include the removal of the products of combustion from the gas appliances without the necessity of providing unsightly flues. Adequate air inlets must be provided.

The use of mechanical extraction enables the laundry or drying room to be ventilated and at the same time evacuate any products of combustion, without marring the face of the building. A louvered grating on the external face of the wall is all that is required, as the stream of moist air is projected clear of the face of the wall before it is dispersed into the atmosphere. Appliances which emit quantities of steam when boiling, often need special attention (e.g., a hood over the appliance).

*Methods of flueing:* One method is to arrange all the gas appliances in such a manner that the flues can be taken into a duct with an extractor fan incorporated at one end. Calibrated grilles can be inserted in the duct to ventilate the laundry itself at the same time. Small drying cupboards in the laundry can be ventilated by being discharged into the laundry itself for subsequent clearance via the general ducting system. Care must be taken when combining mechanical ventilation of the laundry as a whole with independent natural draught flues to appliances such as instantaneous water heaters. The extract fan can adversely affect the function of the independently flued appliances by reversing the action of the flues. To overcome this difficulty, the fan can be used to draw air into the laundry, the moist air being expelled into the atmosphere through outlet louvres; this arrangement will tend to assist the independent flues. Alternatively, two properly balanced fans can be used, one supplying air and the other extracting.

It must also be remembered that if an extractor fan is used as the sole means of ventilating both the laundry and the gas appliance, a fan failure device actuated by a cessation of the electricity supply or mechanical failure of the fan should be employed to control the gas supply. This will only be necessary where the total gas rating of the appliances is in excess of 8 cu. ft./hr. per 1,000 cu. ft. of room space. In small laundry rooms or drying rooms on half-landings, it is sometimes not considered economic to fit an extractor fan. In these cases it is recommended most strongly to flue them direct to atmosphere. An 8-in. duct with efficient terminal will give complete clearance of moisture and products of combustion. If they are not ventilated direct to atmosphere, it is almost certain that condensation will occur on the walls: an air inlet to the drying room of equivalent size is necessary.

It is important to note that in an unheated room on a cold day most of the water evaporated from the clothes in unflued drying cabinets will undoubtedly condense out on the walls and ceiling, although natural ventilation has been provided for the room itself. Assuming that 50 per cent. of the moisture-laden air escapes satisfactorily, with four cabinets in use there could be a gallon of water deposited on the walls and ceiling per hour.



## technical section

SIS File No.

B

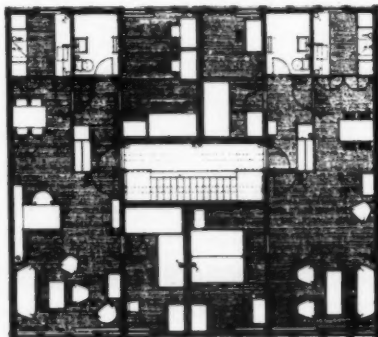
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## 17 CONSTRUCTION: GENERAL

### prefabrication in northern europe

In this country the process of transferring building work from site to factory has been arrested because it has been found uneconomic. In this matter the experience of the building industry has been contrary to that of other industries and it is at least possible that our experiences have been determined by accidental circumstances (e.g. the present training and composition of the building industry) and not by the inherent nature of the case. For this reason it is worth our while to keep an eye on those countries of northern Europe who have persevered with large-scale prefabrication, even though their doing so is fully accountable to their bad winter site conditions. This week, therefore, Rolf Rosner reports on the prefabrication of storey-height units in Denmark, Norway and the two Germanies.



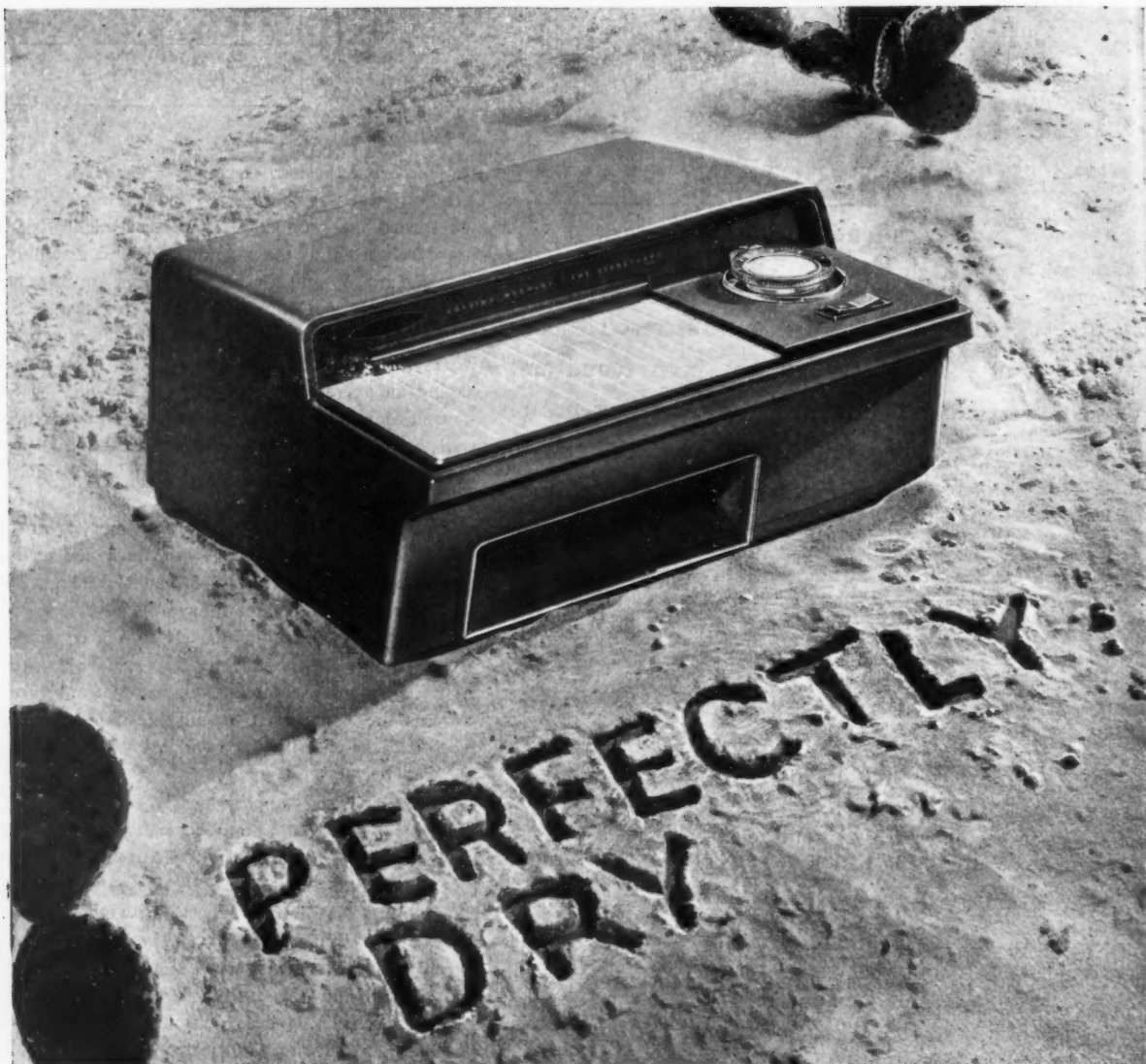
### Denmark and Western Germany

After the last war the Danish firm of Larsen & Nielsen started the production of pre-cast elements. This has developed into the manufacture and assembly of flats and houses and the firm's licences are now being used not only in Denmark but also in Norway, Switzerland and Western Germany. In 1958 the Danish works turned out four dwellings daily, each dwelling having an average area of 870 sq. ft. (Fig. 1). Such a dwelling requires 30 m<sup>3</sup> of pre-cast units for floors, walls and staircases. On the basis of 250 annual working days 30,000 m<sup>3</sup> of pre-cast units are being produced each year. The wall units consist of an outer skin of reinforced concrete, 3.5 cm. thick, an insulating core of Leca concrete, 11 cm. thick and an inner skin of reinforced concrete, 4.5 cm. thick (Figs. 2 and 5). Generally, two to three floor units cover one room, the surface of the ceiling is left fair-faced with the grooved joints clearly showing. The surface finishes of all units are of exceptional quality. Various profiled patterns are being used to enliven the external surfaces and the insertion at regular intervals of glazed tiles can be most interesting.

Larsen & Nielsen employ nearly 40 highly skilled carpenters, joiners and concretors and in addition 120 semi-skilled operatives. The Copenhagen works have four production lines, each equipped with a travelling gantry. The first line produces small units such as fencing posts and glazing bars for roof lights; the second and third lines, columns, lintels and wall and floor units; and the fourth line prestressed units. There are tensioning beds of up to 380 ft. in length. The firm produces prefabricated one-family houses with an area of nearly 1,000 sq. ft. equipped with built-in cupboards and warm-air heating. The heated air circulates within the floors and enters the rooms through grilles at skirting level. Most of the grilles are placed under the windows.

The recent entry of the firm into the West German market is of some interest. For many years now the West Germans have shown little interest in prefabrication. This is partly due to the statutory adoption of an octometric system of modular co-ordination which favours the efficient use of traditional materials such as bricks and blocks and partly due to an aversion on the part of many architects and ignorance and indifference on the part of most contractors. The architects' aversion is based on a fear of regimentation and eventual unemployment and the contractors are indifferent because a hectic and profitable building boom discourages a change in methods. The small

Fig. 1. Above: plan (scale  $\frac{1}{16}$  in.) of a typical pair of the triangle flats at Copenhagen built by Larsen & Nielsen using storey-height units. Below: elevation (scale  $\frac{1}{32}$  in.) of part of the façade.



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share of the total building output carried out directly by public authorities is another negative factor. Recently one of Western Germany's leading contractors expressed the view that the risk involved in experiments with new structural methods can best be faced by a public authority.

In Hamburg, at least, interest in new methods has been sufficiently aroused to make a spectacular start in the field of housing. This is caused through a continuous scarcity of labour and exceptionally high wages within the city boundaries. The city authorities have also developed a system of prefabricated school construction which has been very successful. At the beginning of this year they commissioned the firm of Larsen & Nielsen to erect four experimental four-storey blocks of flats (Fig. 4) and licences have now been given to several German firms to develop the use of the Danish system. The eventual aim is to turn out annually 2,000 dwellings for the City of Hamburg. The pilot project was completed in four and a half months and its quality is quite impressive. There are some crude details internally but overall the appearance of the blocks of flats lacks the coarseness so often associated with large concrete units. The blocks are centrally heated and supplied with hot water. The kitchen is generously equipped with built-in cupboards and there are connections for gas, electricity, telephone and television. Each flat has a 220 sq. ft. storage closet and there are additional stores and communal laundry in the basement. To ensure a reduction in noise the public staircases have been placed on rubber pads.

The manufacturers are reluctant to give the costs of the pilot scheme (all units were imported from Denmark) but they claim that, once mass-production is fully under way, the cost of each dwelling should be 20 per cent. below that of an equivalent unit built with traditional methods. The city authorities, more cautiously, expect no decrease or increase in costs but a considerable speed-up in completions.

The favourable impression created by this pilot project has induced a large Hamburg housing trust to build an experimental estate, using the French "Camus" system which is also based on storey wall units. A German architect has adapted the system for use in Hamburg and judging from latest reports its appearance is likely to be quite exciting.

It seems regrettable that no comparative developments of systems with large r.c. wall and floor units have taken place to an appreciable extent in Britain. The prospects of such systems in the field of housing are considerable.

#### Norway

One of the most interesting Norwegian schemes using storey units has just been completed in Bergen. This is a housing estate with altogether 588 flats grouped in 10 four-storey blocks of flats and one slab block, 10 storeys high. The architects are Aal and Løkeland. The buildings were planned on a 60 cm. module and the load-bearing cross walls are spaced at either 3.00 m. (10 ft.) or 4.20 m. (14 ft.) centres. The depth of the four-storey staircase access blocks is 11.40 m.



Fig. 2. External wall unit for a Larsen & Nielsen project. The surface finishes are of high quality.

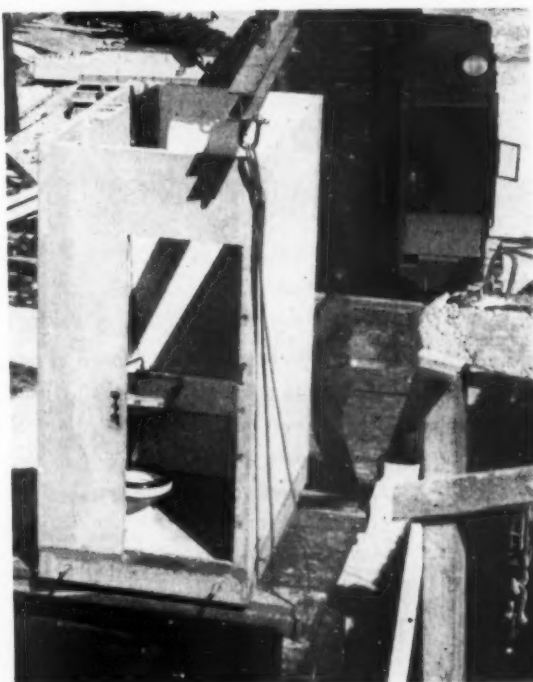
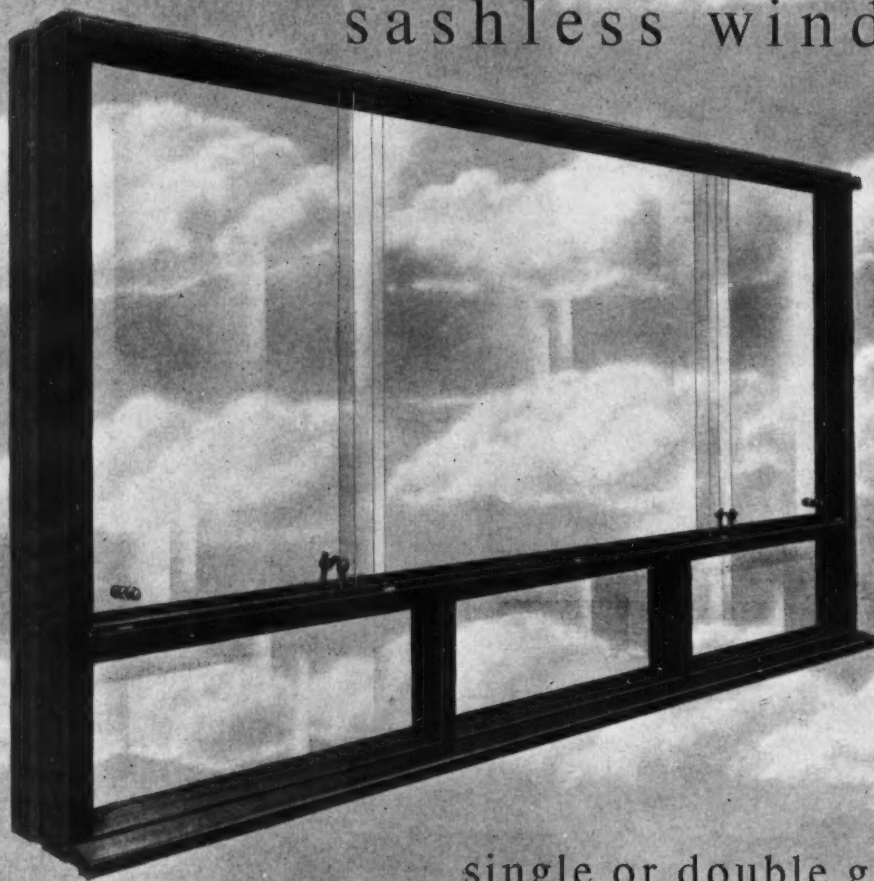


Fig. 3. Transporting a Larsen & Nielsen prefabricated bathroom unit with fittings installed.



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Fig.  
block



(37 ft. 10 in.). The cross walls consist of storey-height reinforced concrete units which are manufactured on site (Fig. 6). Steel shuttering is used and the surfaces of the units are smooth enough to make plastering unnecessary. Floors, balconies (Fig. 7) and staircases are also prefabricated. External walls consist of storey timber frames (Fig. 8) covered externally with Eternit-tiles and internally with plaster board, the thermal insulation being placed in between. The end walls are covered with profiled storey-height concrete panels. Throughout, a tolerance of 5 mm. has been kept to. A full-size mock-up of a kitchen-bathroom unit was put up on the site as a guide for the installation of ducts and service pipes.

### Eastern Germany

Eastern Germany, in conformity with all countries linked politically and economically with the Soviet Union, is turning towards large-scale prefabrication in the building industry. The extensive and well-organized building centre in East Berlin enables the western visitor to get a good idea about current developments.

There are three structural systems in use, one with large load-bearing wall panels of one-half and one-third of storey height, another one with storey-high wall elements and a third, based on pre-stressed frame construction. The various techniques are used as follows:

Technique	Max. weight of elements	Annual economic output of one production plant	Production unit	Used for
Wall panels one-third and one-half of storey height	650-880 lb.	40-250 dwellings More than 250 dwellings	Traditional site organisation Weigh-batching plant	Housing, Agricultural buildings, Infilling panels for frame construction
Large floor units and storey wall elements	6,600-8,800 lb.	700 dwellings and more	Large weigh-batching plant	Housing, Infilling panels for industrial buildings
Pre-stressed frame	6,600-8,800 lb.	Up to 250 dwellings More than 250 dwellings	Traditional site organisation Weigh-batching plant	Multi-storey housing Industrial buildings

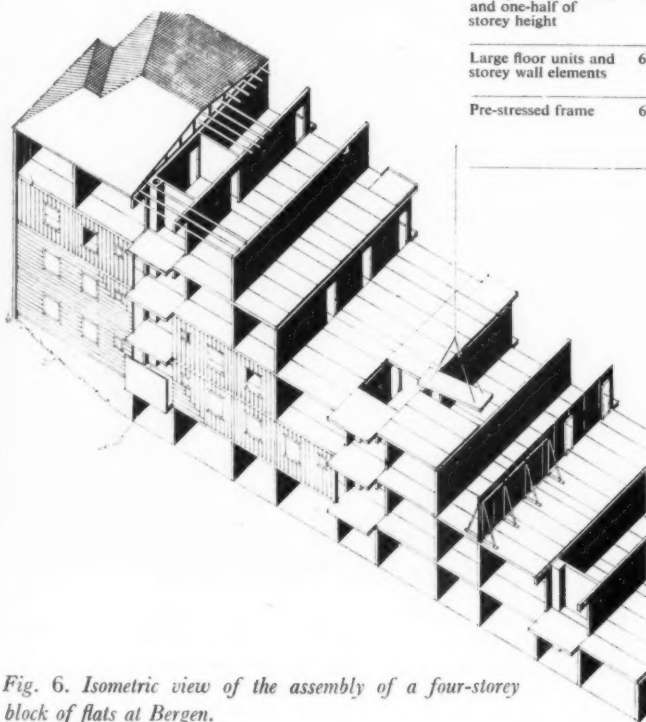


Fig. 6. Isometric view of the assembly of a four-storey block of flats at Bergen.

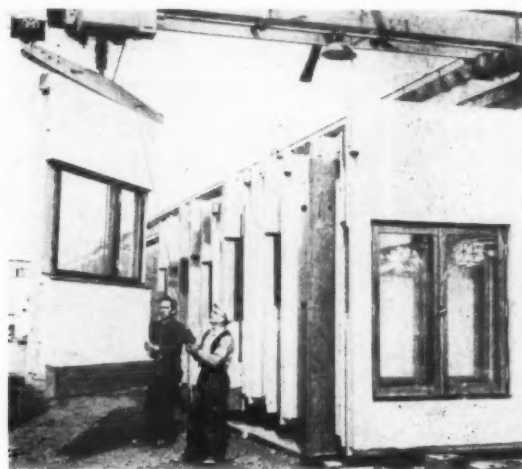


Fig. 5. Storey wall units for the experimental housing estate in Hamburg. Note that the windows are inserted before transport.



Fig. 4. Constructing a housing terrace at Vestorbro, Denmark. This is similar in design to those in Hamburg.



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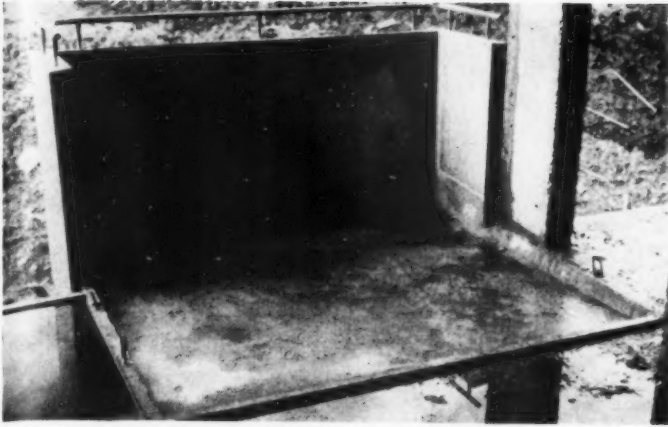


Fig. 7. Flats at Bergen. Prefabricated balcony unit in position.

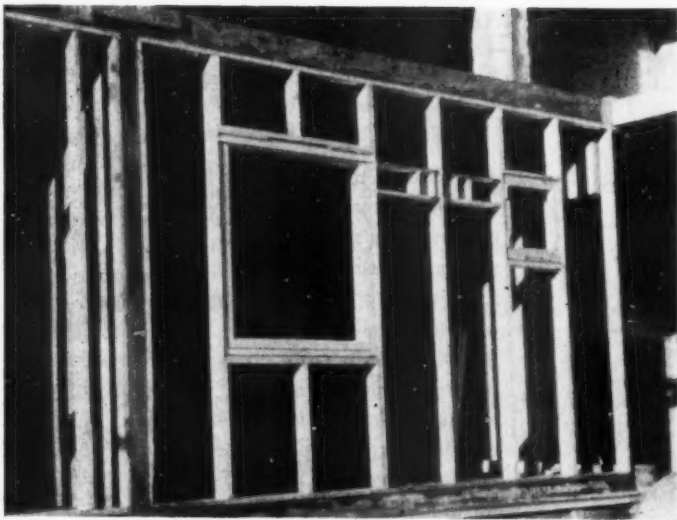


Fig. 8. Flats at Bergen. Storey height timber frames before cladding with asbestos cement tiles.

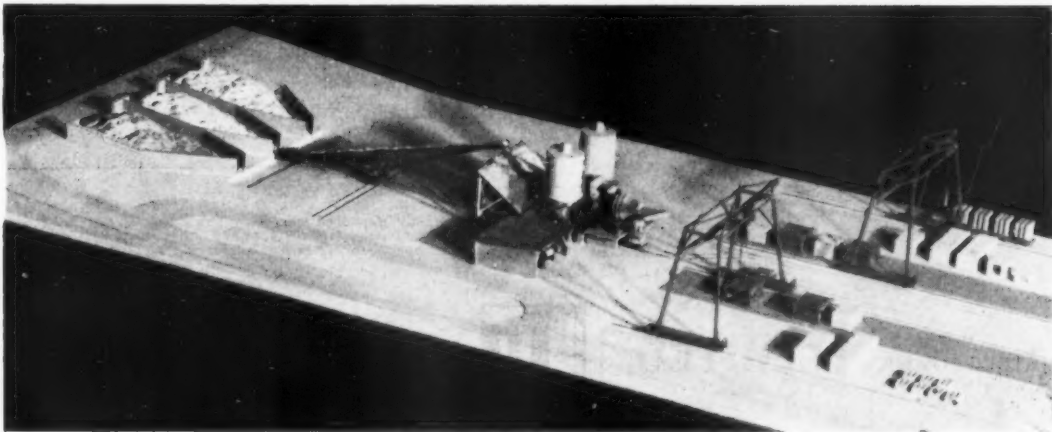


Fig. 9. Photograph of model of plant for manufacturing large concrete units in Eastern Germany, using the stationary method.

During the early stages of the switch-over to prefabrication the East German Government built a large factory for the production of elemental units; it was a financial failure; built at a cost of 14,000,000 East Marks the plant was capable of producing 1,000 dwellings per year, whilst a weigh-batching unit costing 250,000 East Marks was capable of producing 350 dwellings. The manufacture of large elements is either based on stationary methods or on the principle of flow along a production line. Fig. 9 shows the layout of a plant using stationary methods.

The aggregates are stored separately (extreme left) and are transferred to a belt conveyor (the see-saw-like object on a transverse rail) by means of a hand-operated scraper. They are then fed into containers next to the cement silos (centre). After passing a weigh batching plant (between the silos and hardly visible), aggregates and cement pass the concrete mixer (to right of silos). A mobile container then carries them by rail to the casting tables (the two long grey streaks, right). The container is positioned by a travelling gantry which empties the concrete into forms. These are opened after eight hours when the cast units are stacked for 30 days. They are then despatched to the site from loading bays.

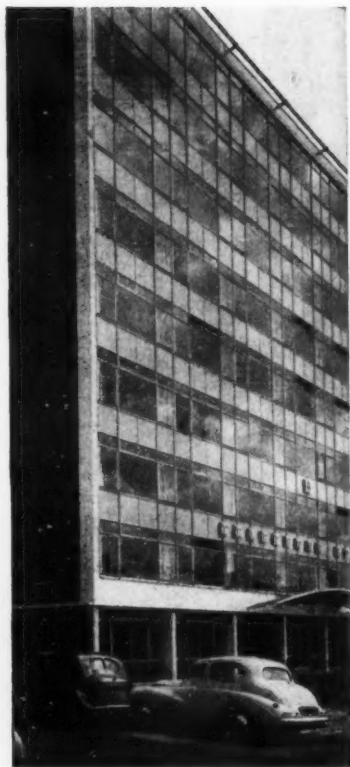
This type of plant has a capacity of turning out 350 dwellings a year; it employs 21 operatives.

When a production line is used, the forms are mounted on trolleys and move every 15 to 20 minutes from one stage of production to the next.

The various systems of prefabrication use a preferred series of dimensions based on 3 mm. Tolerances of  $\pm 3$  mm. are allowed for the thickness of units and tolerances of +5mm -10 mm. for the length and



## surface patterning



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height of units. Joints between units are 10 mm. thick. A component with a nominal length of 1,190 mm. may have a lower limit measurement of 1,180 mm. and an upper limit measurement of 1,195 mm.

The structural system for storey wall units is similar to that used in the Soviet Union. Each room is enclosed by four vertical and two horizontal units. It is therefore impossible to interchange units; the layout of dwellings is bound to be inflexible and unimaginative; also, the area of living rooms is hardly larger than that of the other rooms (Fig. 10). The weight of the units, from 3 to 5 tons, causes considerable transport problems (Fig. 11). The wall units are plastered inside and rendered outside during their manufacture and the use of fair-faced concrete does not seem to be favoured.

The interesting Scandinavian developments in the field of prefabrication seem to leave no mark on developments in Eastern Germany although they are known there. Two years ago Prof. Levitski a leading East German expert, studied the methods of Larsen & Nielsen in Copenhagen and, judging from an article he subsequently published, he was very impressed by their methods. But in practice his investigations seem to have little if any effect.

This appears to be the general tendency in all European countries developing prefabricated systems of one sort or another. Each firm or team of technicians seems to be fully preoccupied with its own developments without attempting to seek out the achievements and shortcomings of others. In spite of OEEC and many other agencies, international interchange of ideas is very limited.

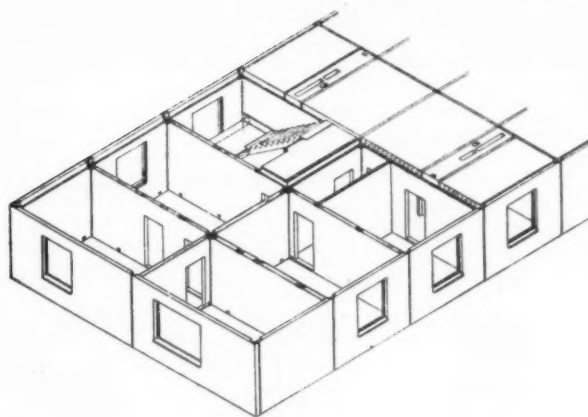


Fig. 10. Isometric view of flat constructed of storey-height units (Eastern Germany).

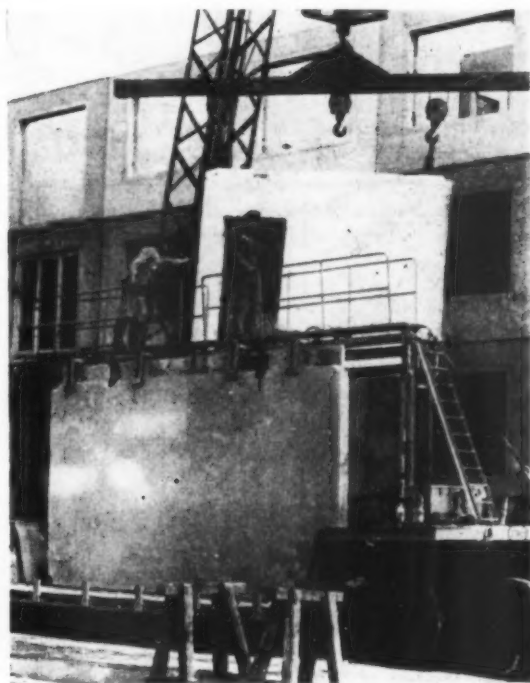
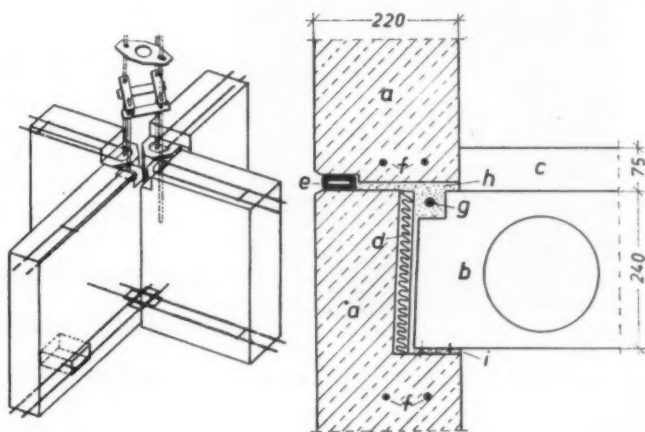
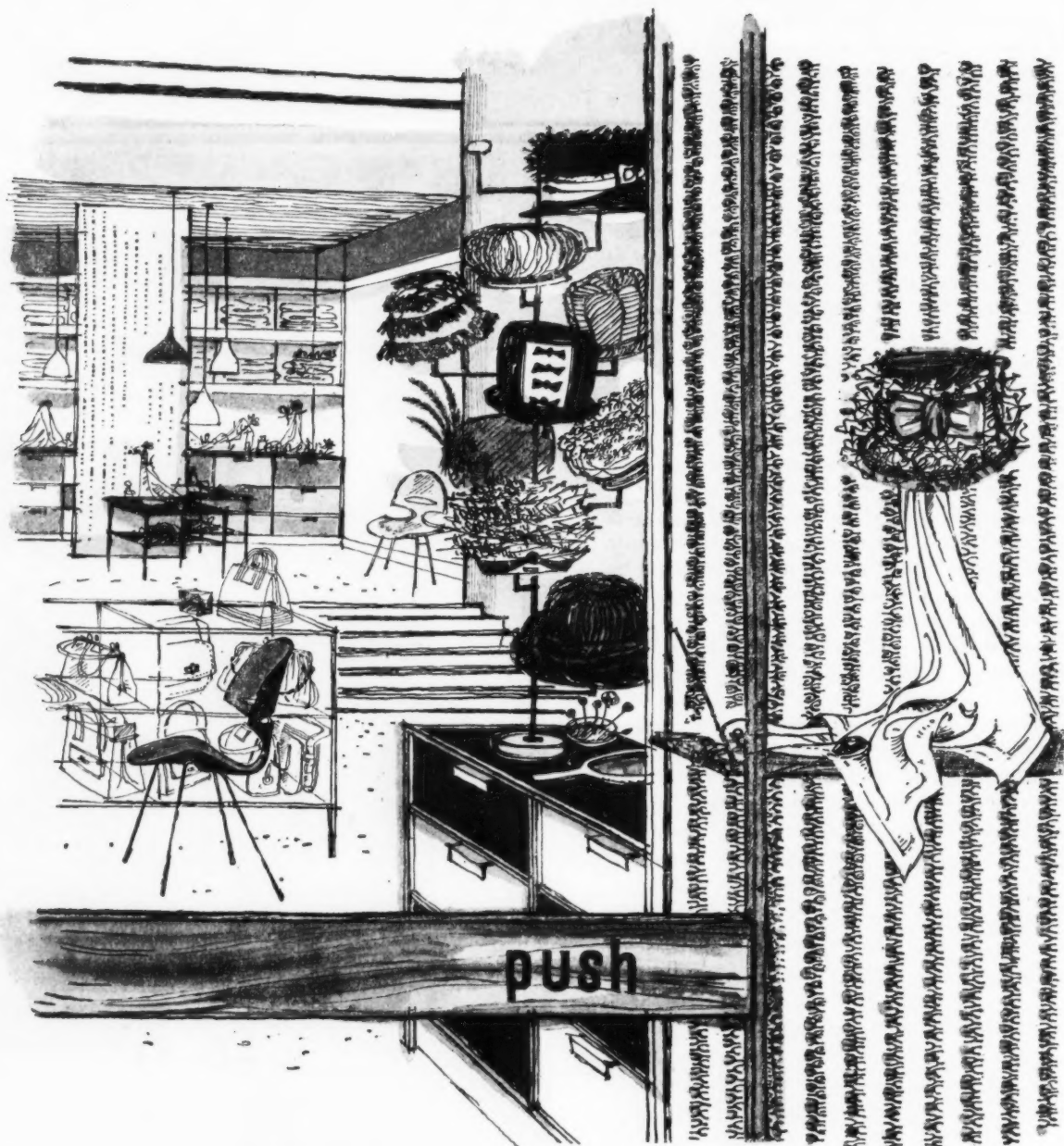


Fig. 11. Transporting storey-height units in Eastern Germany.

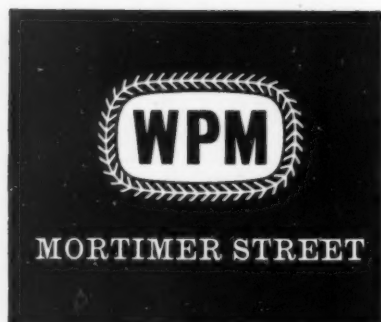
Fig. 12. Detailing in Eastern Germany. Left: diagram of typical four-way junction. Right: section through external walls at floor level.

- Key: a external wall elements  
 b floor units  
 c screed and floor finish  
 d thermal insulation  
 e rubber bead  
 f reinforcement of wall units  
 g and h reinforced in situ concrete  
 i pointing





Drawing by Pamela Guiet



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## THE TWO TIER PROFESSION

It is estimated that 10,000 unqualified architectural assistants are employed in the United Kingdom. The Oxford Conference recommended that this situation should be recognised by providing a course of training, and a subsequent qualification for assistants. It did not wish, as has been suggested, that a lower order of architects should be created, but that as it already existed it should be recognised.

At the Bristol Conference BASA rejected the Oxford Conference proposal, because it only recognised the existing situation, without examining either the likelihood or the desirability of its continuing. Presumably the feeling of the students there was that an unadmitted evil didn't really count. Thus it was proposed that heads should be buried in the sand and blind eyes turned. Hear no evil, see no evil, speak no evil, etc. . . .

Oh, no! Please don't let's kid ourselves. Whether we like it or not (and we like it) the architectural assistant exists. That he exists, and that he has existed for some time, indicates that there is a need for him, and that he has come to stay, at least for some time to come. Surely then we should accept the Oxford Conference proposal—as far as it goes.

Having legitimised the position of the assistant in the lower tier shouldn't we then consider the position of the man in the upper tier—the architect himself? What is most needed in the profession at this time is neither the creation nor the recognition of assistants. What is needed is a reappraisal of the architect. Is the architect of today so well educated that he can even adequately serve the complex needs of the society of which he is a part and to which he has a grave responsibility? Is the architect so well trained that he can set himself up as leader, co-ordinator and organiser of the necessary production process? Has he even the ability to make use of the fund of specialist knowledge that is available to him? It is one thing to have a fund of skill and know-how available, it is another to be able to make use of it.

This is an age of technology, science, industry and economy. The architect can no longer afford to stumble along in an absent-minded confusion of bow ties and neo-Gothic public conveniences. The building trade is fast becoming an industry. If the architect wishes to maintain himself as the designer for this industry he must equip himself suitably, so as to be able to deal with matters financial, functional, and sociological as well as those poetic, aesthetic, and stylistic. The architect today all too rarely commands respect from his client, from those who work with him or from society generally.

Ironically, perhaps, it is the architect who ought now to set his own house in order.

## STUDENT'S VIEW

Recent meetings of the BASA Executive have been concerned with arranging the **Oxford Conference** scheduled for September 19-21 at Balliol College, Oxford. This is the second BASA conference specifically on Education. At the conference the historical background of architectural education and present school facilities will be reviewed together with an analysis of the Bristol Conference.

The Executive has decided to invite speakers on education in its widest sense, on education as applied to architecture and finally on architectural education as it is required in this country. Time has been allowed for discussion.

The Executive extends a cordial invitation to those interested in attending. This could be your last fling before the new academic year starts. A party is to be arranged for the first evening. We hope that the conference is well attended as we feel that it is a worthwhile medium for the exchange of student views as well as an opportunity to hear some interesting papers.

**Hammersmith School Architecture Students' Association** is a new Association, formed this February, following the granting of departmental status to the Department of Architecture this year. We offer our congratulations. It is reported by Tim Murgatroyd, Hammersmith's BASA Rep., that at the end of the Spring Term (April 8, 1960) the newly formed Department held the first "architects only" prizegiving and exhibition in adjoining premises, formerly occupied by the Mary Boone Girls' School, into which the College will now expand. Already second, third, fourth and finals year full-time students are comfortably accommodated in converted adjoining terrace houses. Proceeds from the sale of studio coffee and teas paid for the first reception in the new premises. This was a farewell party for Mr. Peter Whiteley, Third Year Studio Master.

Many distinguished architects attended the exhibition. The address and presentation of prizes was by Mr. J. Brandon-Jones, A.R.I.B.A., A.A.Dip., and Mr. H. G. Dowling, F.R.S.A., P.P.I.B.D., Hon. A.I.D., Chairman of the Gover-

Would those interested complete the reverse side of this slip and send it to the Permanent Secretary, The Building Centre, Store Street, London, W.C.1.

For further details, see *STUDENT'S VIEW* above.

**SECOND BASA CONFERENCE ON ARCHITECTURAL EDUCATION** to be held at **BALLIOL COLLEGE, OXFORD**  
**5 p.m. September 19 – 5 p.m. September 21, 1960**

nors, was in the chair. Reports were given by Mr. E. M. Rice, F.R.I.B.A., Dip.Arch.(Leeds), Hon. F.I.B.D., principal of the College, and Mr. Paul Nightingale, Dip.Arch.(London), F.R.I.B.A., A.I.Struct.E., Head of Department of Architecture. Votes of thanks were proposed by Mr. Wesolowski, Ing. Arch. Dip.C.D., A.R.I.B.A., Senior Lecturer and seconded by R. T. Murgatroyd on behalf of the students.

We hear from **Nottingham** that students there went on a day trip to Rotterdam—cost approximately £7 per head. They were guided by Paul Ritter who also gave a comprehensive commentary. Artist McHale gave a talk to the Society on Buckminster Fuller's Geodetic Domes supplemented by films and slides. Nottingham are sorry to lose Senior Lecturer Gordon Graham leaving at the end of the year to devote his time to his practice, and wish him every success.

The **Poly.** held its first staff-student committee meeting recently. The Poly. is to move into a new building which will have facilities for testing the strength of full size structures.

The **Portsmouth** School is to visit London and will be entertained by one of the LCC departments. They say also that they have had lectures in "The Work of the Landscape Architect" and "Modular Design."

We congratulate the students of the **Plymouth** School of Architecture on the founding of their Student Society.

We had not realized before visiting this year's Architecture Room in the Royal Academy that Sir Hugh Casson and Neville Conder are God's Gift to British Architecture. Sir Hugh's perspective of his proposed Lecture Hall, Sidgwick Avenue, in Cambridge, was the bright spot amongst the turgid washes of the commercial moderns.

STUDENT.

## VAC WORK ABROAD

To satisfy popular demand BASA has developed a scheme to help students find work abroad. The scheme works like this. While a student over here finds a job for a foreign student the foreign student arranges work in his own country for the British student. Arrangements will be facilitated by the Permanent Secretary from whom further information can be obtained.

We hope that this scheme will eliminate difficulties over obtaining visas and work permits. We shall have to confine the scheme initially to students of third years and beyond. This is a modest beginning but will become more ambitious as we gain contacts abroad.

## LETTERS TO THE BASA EDITORS

### LEEDS ACCENT

SIR: *Accent*, a non-profit-making magazine published in April and October of each year by students of Art and Architecture at the Leeds Combined Colleges, concerns itself with important issues in all fields of design, sociology, politics, planning and industry. Our next issue will be devoted to a series of articles relating to new ideas of civilization, the artist's role in this, the moral responsibility of the individual, and emerging patterns of mass leisure time.

We believe that these are the problems to which the architect must commit himself: if we are concerned with society, and with being a useful participant in it, then we must as individuals find our own place in it. And we are not going to do this by becoming professional designers or somesuch; our responsibility must be derived from contact with all the problems that shape civilization, with their causes and with their effects.

There must be many among the BASA body that regard these as prerequisites to any new architectural thought today, and we welcome all correspondence and ideas.

MICHAEL MITCHELL  
JOHN TEMPEST  
*Editors, Accent*

### KARACHI CALLING

SIR: On reading your excellent articles published in the *ARCHITECTS' JOURNAL* of April 23, 1959, it occurred to me to write to you.

I, too, was or rather am (you can never cease to be a student of architecture) a student of architecture, having obtained

my Diploma in Architecture from the Government School of Architecture, Karachi, earlier this year. It is my one ambition to pursue further studies in England and be ultimately associated with the RIBA.

Being an architectural student, it interests me greatly to know more about what fellow architectural students are doing abroad. It is to pursue this policy that I am a very keen reader of the BASA supplements (though I must confess that the first articles which appeared left me stumped, probably because of the number of words which even Chambers's 20th Century Dictionary failed to explain).

I wonder whether it would be possible for you to introduce me to architectural students in Britain, so that we could correspond freely about each other's social customs, purposes and aspirations in design and a host of other subjects, which I am sure would be equally interesting to both of us. It is needless to assure you that I would reply with great enthusiasm to any such person. I believe that a free exchange of such ideas would greatly facilitate in understanding each other's designs. There are many factors in British planning which I just cannot understand: I believe it is only through the method mentioned above that I may become aware of them.

AZAD HASAN THARIANI.  
68, Lakshmi Building,  
Bunder Road,  
Karachi 2 (Pakistan).

*Editor's Note:* We were delighted to receive Mr. Thariani's letter and hope that someone will take advantage of this opportunity and write to him.

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School .....

Address .....

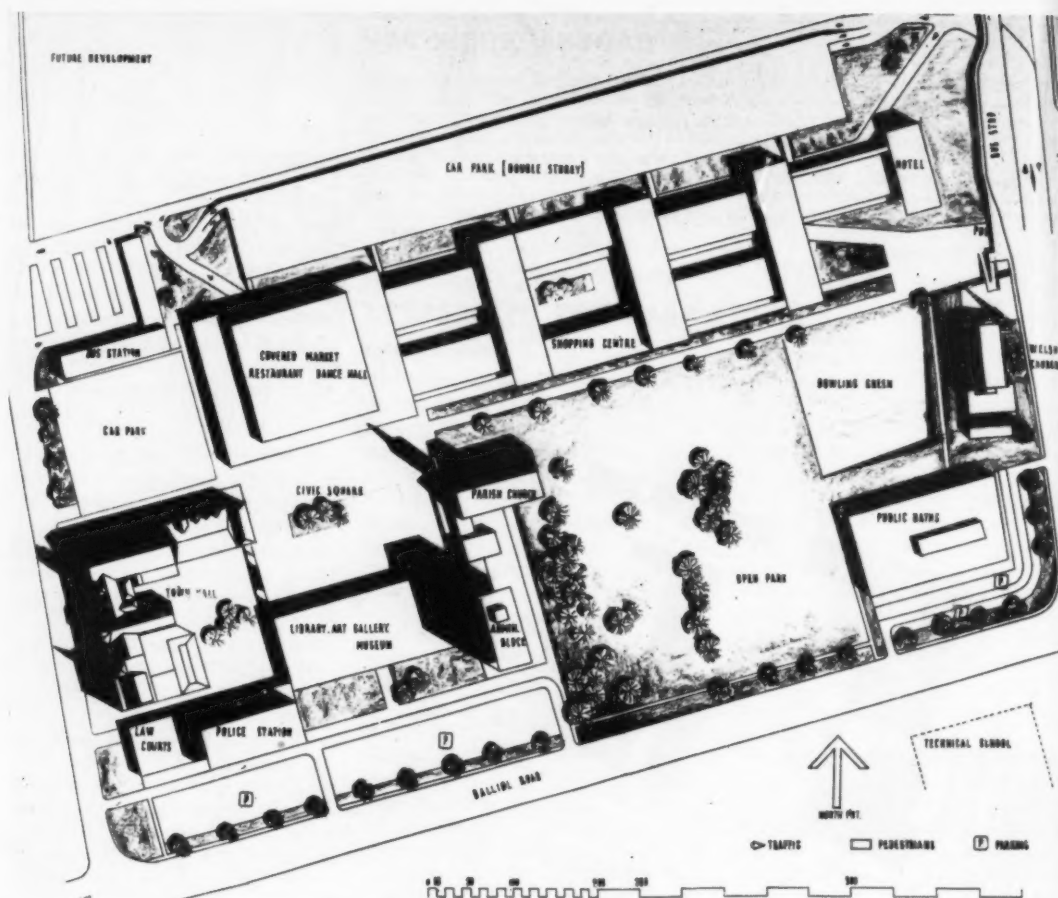




council recently due to the acute shortage of office space. At present the civic centre is out of sight to most visitors to Bootle.

The replanning of central areas and the reshaping of community life of old towns and cities are both necessary and timely. Public authorities are apt to be shortsighted and are often in possession of a false idea of real economy. Liverpool School of Architecture undertook to

1. A survey.
2. An architectural solution to the planning programme.
3. The design of individual buildings within the framework of the general plan.



This is the layout of the selected planning proposal and the second part of the year's programme. Although the photograph

opposite is of the model made after the individual buildings had been developed in detail, and differs in some

ways to the above plan, the general position of the buildings has remained unaltered.

#### Factors affecting choice of site.

From the information gathered from the survey of the existing conditions in the area and of the present centre, several alternative solutions were proposed on the siting of the centre, the general layout of the buildings and the main pattern of communication. After discussion, one solution was accepted, on which buildings were developed into complete architectural designs and working drawings prepared, sufficient to enable them to be built.

The photograph shown is of the master model and executed after the completion of part three of the year's work. Although the eventual outcome differs in some ways to the initial solution it afforded no difference in principles. As I was involved in the making of the original scheme, perhaps it might be of interest to the readers if I attempted to reveal some of the thoughts that went into the scheme, aimed at the reinvigoration of Bootle City Centre.

Bootle, though technically a County Borough with a history longer than that of Liverpool, appears to the unknowing beholder to be part of Liverpool. Apart from the fact that

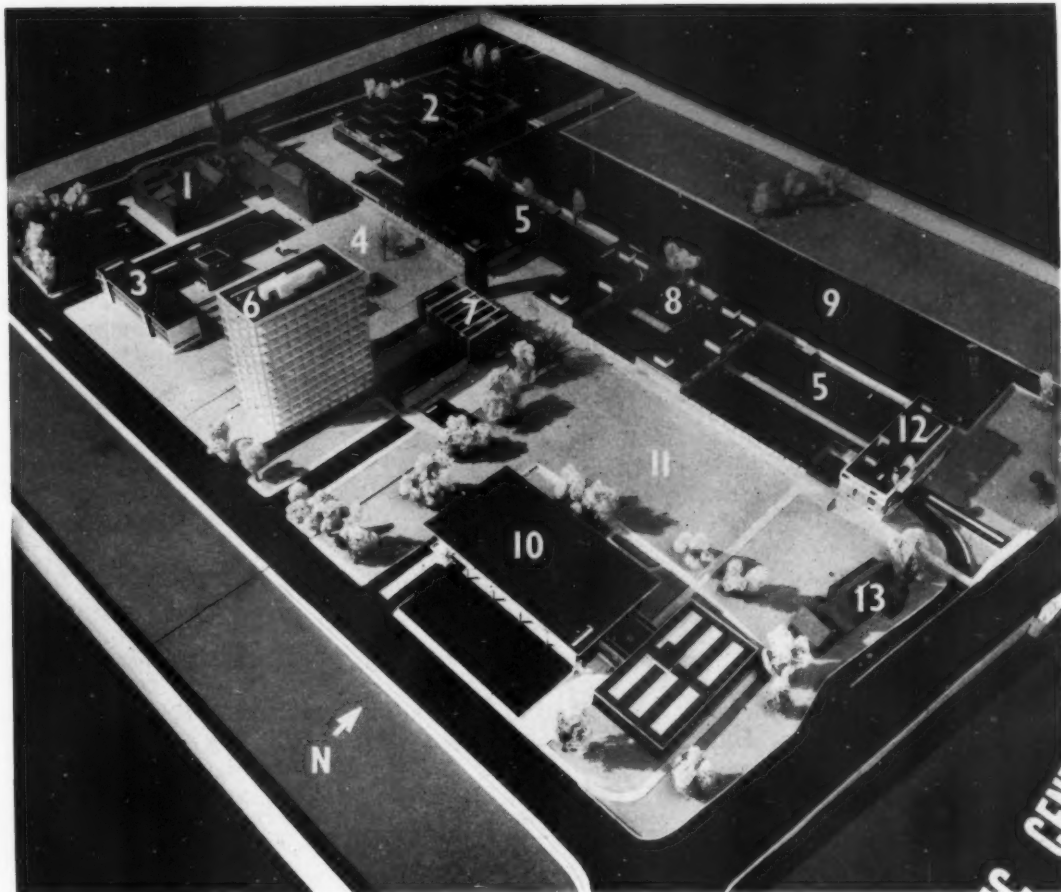
there is no visible boundary the primary reason is that there is no centre as such where people of diverse interests (civic, cultural and commercial) may congregate. The creation of a centre to serve the above mentioned would undoubtedly lend significant prestige to the at present neglected and anonymous town. It must also be remembered that the population of Bootle is not lacking in civic pride, a quality that should not go unsupported. This influenced the choice of a site on Stanley Road, the main route connecting Liverpool and Southport, from which people travelling through gain their impressions of the borough. Also the site is directly related to the ring road about Liverpool. The choice of its actual position along Stanley Road is due to the attraction of—

1. existing bus and rail communication.
2. low net density (30 habitable rooms per acre) as compared to the Corporation and byelaw housing of the area. Even less people actually use the habitable rooms as the late Victorian and Edwardian villas and terraces are in a sad state of repair.
3. Adequate existing water, gas, electricity and sewerage services.

4. The presence of the Town Hall, built in 1853 in French renaissance style. Symbolic of the history of Bootle's civic life.

#### The Underlying Principles

The scheme aimed at the evolving of a civic and shopping centre that is free from the invasion of motor vehicles, yet not unsympathetic to its users. (Peripheral parking for 1,500 cars of the fast rising cars to persons ratio of Bootolians were catered for.) Further to this segregation, the pedestrians cross the main highway via an underpass. (See plan.) Public places where people can gather spontaneously to exchange opinions were introduced in the form of a large civic square and a paved and partly covered area along the shopping mall. Their importance and their assured usage are only too obvious from the examples one observes in larger cities (London—Hyde Park, Birmingham—Bull Ring, Liverpool—Pier head.) To ensure that the centre remains alive during the evenings after the library and museum cease to draw people, a



This is a photograph of the final redevelopment scheme when the individual buildings have been developed in detail. The buildings are labelled and show the contents of the civic and shopping centre.

An imaginary line running east-west of the site may be drawn dividing the shopping group and the civic buildings. This contributes to the ease in phasing the building programme.

1. Town Hall; 2. Covered Market; 3. Police Station; 4. Civil Square; 5. Shops; 6. Administration Block; 7. Parish Church; 8. Department Store; 9. Car Park; 10. Swimming Baths; 11. Park; 12. Hotel; 13. Welsh Church.

public house, a restaurant, and a dance hall are included in the redevelopment plan. Also there is a covered market which operates initially for two days a week, and may be used at other times for political, cultural and charitable purposes. Included is a vast open space in the form of a park where residents from the site and from nearby Corporation housing estates may relax themselves. All elements friendly to man—trees, grass, water, light, shade and shelter—have been carefully considered in the landscaping.

#### Detailed analysis of Shopping Centre

At an early stage it was realized that the building of a Civic Centre of the size that would adequately serve the Bootle population (approximately 80,000) would present difficulty in financing. Therefore it was upon the success of the shopping centre as a commercial enterprise that the financing of the former would depend. To support a shopping centre of the envisaged size—covered market, supermarket, three departmental stores and 100 shop units of 750 sq. ft.—it was felt necessary not only to cater for the local residents of

Bootle but also customers from further afield. The tendency is for shoppers to go to Liverpool to secure bargains and to Southport for class shopping. Bootle shopping centre has to provide new incentive. The population of Merseyside is rising, and particularly so in view of the introduction of the motor vehicle industry. The number of car owners is also expected to rise. The plan of Liverpool city is not one that can easily adapt itself to the change of circumstances. It was upon this weakness that we hoped to draw support for a Bootle shopping centre.

The relevant considerations in designs for a shopping centre aimed at the motorist are: easy accessibility, departure and parking. Motorist shoppers prefer kerb parking when all is said and done. As a progression to this, a double storey car park capable of accommodating 700 cars was planned along the whole length of one side of the shopping lanes via ramp bridges (see plan). A special junction was designed to take from, and release traffic on to, Stanley Road without interruption. The positioning of the shopping group at right angles to

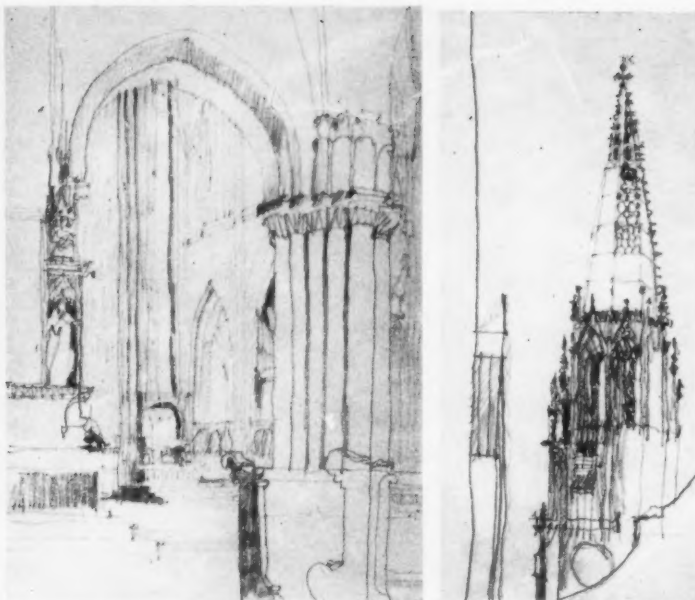
Stanley Road and in the middle portion of an unobstructed site affords time for the motorist to apprehend and direct himself into the appropriate traffic lane. Service vehicles utilize a sunken one-way road between the shopping group and the car park serving directly into the basements of the stores.

#### Conclusion

Within the short space of this report I have tried to demonstrate a few of the ideas and ideals devoted to the planning of this scheme. This report will, I hope, eliminate some of the misconceptions of the Liverpool School. Certain criticisms have been levelled at the School for its *beaux-arts* mentality. The detailed enlargements on the design to the planning scheme is directed to show that the highest degree of realism was aimed at.

A humanitarian solution dominated by the conscious realization of the architect's obligation to society yet not unconscious of the economic factors in such projects is the impression I have hoped to present.

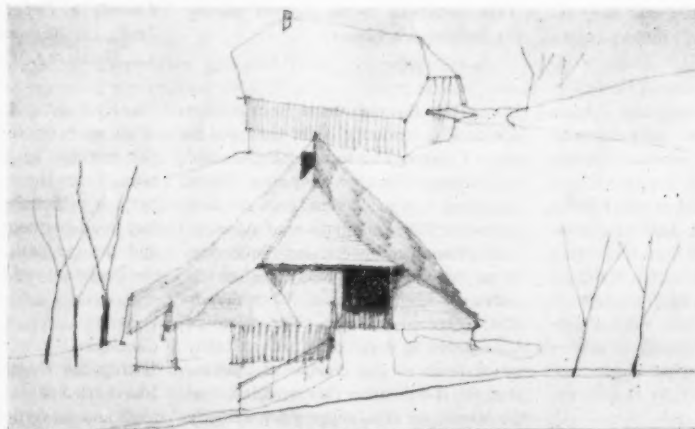
YAN WONG



*Interior and spire of the Minster, Freiburg.*

## FREIBURG IM BREISGAU, GERMANY: Roger Clarke

*Two farmhouses in the Black Forest.*



The city is situated at the feet of the hills which rise up from the flat plain of the Rhine valley into the heights of the Black Forest. Founded in 1120 at the crossing of two trade routes, the tightly walled form of the town was retained even until the late eighteenth century; as the focal point of the town the minster building was commenced early in the twelfth century, but was not completed until the close of the fifteenth.

The surrounding countryside, in the valley and higher in the hills, has a strong character. The farmhouses, built in the valleys round a courtyard, in the hills under one great roof, are constructed on the system of placing animals, workers and stores in the same huge building. The very large roofs resulting from this form of plan seem like tents spread out on the slopes of the pastures. The resulting form of sweeping shingled roof, bridge access to the store, and doll's house-scale dwelling nestling under the eaves of this all embracing canopy; combined with instinctive use of materials and overall use of timber in its many different types, is strong and impressive.

The town is dominated by the Minster. The trellis work of the spire rises over the steeply raked roof of the choir from the narrow street network of the gothic settlement—against a richly textured backcloth of the fir clad hills directly above the walls of the town. The structure of the spire is remarkable, the upper octagon and its conical peak is entirely hollow, there being no lateral ties whatsoever to restrain the forces contained within the stonework. It was complete by 1301. The building stands freely in the market place, the lower walls plain, massive flat areas of buttresses supporting the delicate tracery of the spire.

The only relief to the weight of these heavy walls is given by the graceful flying buttresses over the aisles and clustered around the apse, by the sculptured figures—adding scale—perched on the string courses of the piers; and the vividly coloured stained glass windows which date mostly from the thirteenth century. The apse of the church is Norman and breaks the continuity of the early Gothic nave and tater light net valut of the choir.



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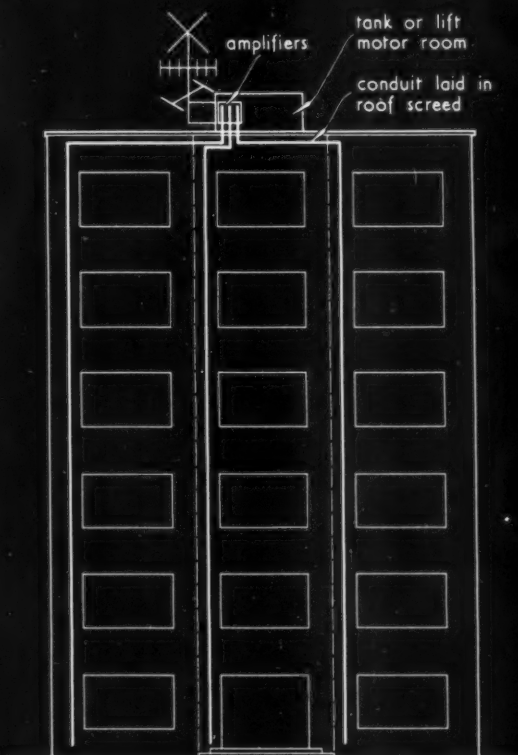
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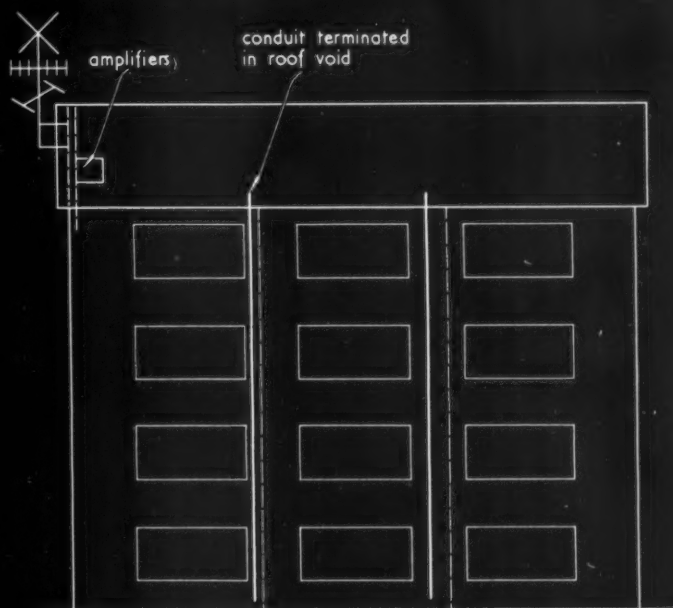
# SERVICES AND EQUIPMENT | TELEVISION

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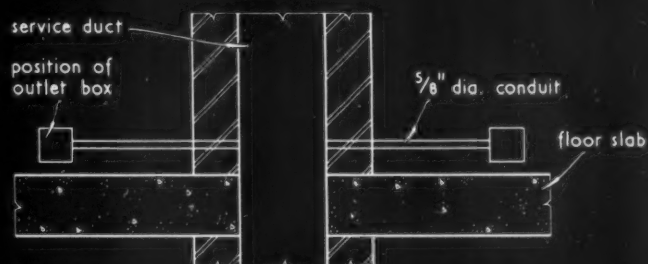
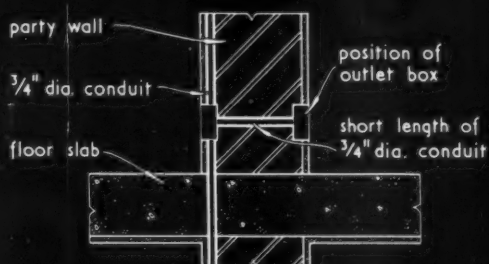
37.K1



FLATS OR MAISONETTES WITH FLAT ROOF.

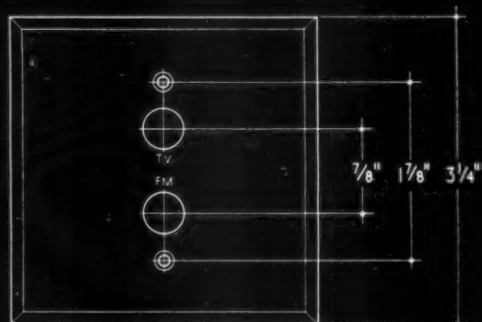


FLATS OR MAISONETTES WITH ROOF VOID.



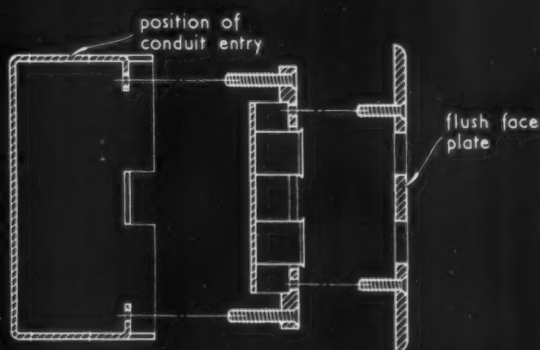
ALTERNATIVE INSTALLATIONS FOR ADJACENT LIVING ROOMS.

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socket outlet  
(TV/FM  
combined)



elevation of flush face plate

DETAILS OF OUTLET BOX.



section through outlet box

## THE INSTALLATION OF COMMUNAL TELEVISION AERIAL SYSTEMS.

Compiled from information supplied by Wolsey Electronics Limited

### 37.K1 THE INSTALLATION OF COMMUNAL TELEVISION AERIAL SYSTEMS

This Sheet describes the installation of communal television aerial systems in multi-storey blocks.

#### Aerials

The aerials should be fitted:

- (a) On the external wall of the tank or lift motor room.
  - (b) On a gable end wall where a roof void is available.
  - (c) On a suitable mast, not attached to the building (suitable for housing estates).
  - (d) In the roof void, but only where the signal strength in the area is strong enough to make it feasible.
- From the selected aerial position, the signals are fed through low-loss coaxial television feeder cables to the amplifier equipment.

#### Amplifier Equipment

This should be sited:

- (a) On the inside wall of the tank or lift motor room.
- (b) In the roof void above a communal staircase.
- (c) In a suitable cupboard mounted on the top landing of a communal staircase.
- (d) On the internal wall of the electrical supply intake room.
- (e) In an external waterproof cupboard adjacent to the aerial mast.

The space required to house the amplifiers for a block of 100 flats would be approximately 2 ft. 0 in. by 2 ft. 0 in. by 1 ft. 0 in. and the consumption approximately 120 watts.

#### Distribution

From the amplifiers, the television signals are distributed, through low-loss coaxial television feeder cable, by one of three methods.

*Flats or maisonettes with flat roof:* The cables are carried in  $\frac{1}{2}$ -in. outside diameter conduit from the amplifiers in the tank or lift motor room laterally through the roof screed and then vertically through conduit risers to each tier of living rooms. An outlet is provided in each living room. The drawings on the lower face of the Sheet give details of an outlet box to B.S. 1299 or B.S. 1363, and an ivory finish flush face plate. The conduit risers should be bonded to a common earth in the tank or lift motor room.

*Flats or maisonettes with roof void:* The conduit riser through each tier of living rooms terminates just above roof joist level with a brass bush. The low-loss coaxial cable from the amplifiers is cleated to the roof joists and fed down the conduit risers to an outlet box in each living room as previously described.

*Housing estates:* It is sometimes desirable on housing estates to provide a communal aerial to a group of houses or blocks of flats. In this case the feeder cable may be carried between the buildings by underground ducting or, where this is impracticable, by overhead suspensions. Ducting may be  $\frac{1}{2}$ -in. galvanised conduit or pliable black polythene tubing. The latter, being a pure polymer, contains no plasticisers or volatile constituents and will, therefore, not deteriorate through hardening: it is not attacked by soil chemicals. For overhead suspension, special feeder cable is available with a built-in catenary.

#### Installation of Conduit

In cases where living rooms adjoin, adjacent outlet positions may be connected by means of a short length of  $\frac{1}{2}$ -in. conduit through the party wall, thus dispensing with one vertical conduit riser. Use may

also be made of service ducts for running cables to each floor level and distributing them by lateral runs of conduit from the duct to the outlet positions.

#### Maintenance

Maintenance on equipment of this type is virtually negligible. The products of all reputable equipment manufacturers are covered by a twelve months' guarantee, with the exception of valves which are covered by the valve manufacturers' normal warranty of ninety days. It is strongly recommended that no time-switching be employed for the following reasons. Valve failure usually occurs during switching on or off. Most vision network systems now include the provision of FM/VHF radio with programmes from 6.00 a.m. to 12 midnight. As this means the amplifiers are switched on for eighteen hours of the day, the saving of current is negligible.

#### Instructions to Electrical Contractors

Electrical contractors should be instructed that all conduit bends are to be machine bends and that the ends of all conduits should be provided with brass bushes. All outlet positions are to be supplied with square conduit outlet boxes to B.S. 1299 or B.S. 1363. All conduit runs of over 20 ft. should have draw wires left in situ. A fused mains outlet socket must be provided at each amplifier position.

#### G.P.O. Standards

The Post Office Engineering Department lays down technical conditions and standards of performance covering the installation and operation of any vision network system. Full details of this information may be obtained from the Post Office Engineering Department, LLB Branch, Post Office Laboratories, Palace of Engineering, Wembley, Middlesex, entitled *Broadcast Relay Services, Technical Conditions and Performance Standards* (sheet number SO6382).

#### Licence

All communal aerial systems strictly need to be covered by a broadcast relay station licence, but the Post Office does not insist on it for communal aerial systems installed in single blocks of flats. The use of a receiver connected to any type of aerial system, whether or not the system is separately licensed, needs, of course, to be covered by a broadcast receiving licence.

#### Further Information

In view of the technical nature of these installations, reputable equipment manufacturers, whose products have been approved by the G.P.O., should be approached to undertake the planning. Certain of these manufacturers offer a free planning service which covers all requirements, including conduit planning. Plans and elevations of the property in which it is intended to install a vision network system must be supplied and a detailed specification of requirements and wiring diagram will then be prepared so that the proposed installation can be sent out to tender.

Wolsey Electronics Limited can supply a full range of equipment and advise on all aspects of installation.

Compiled from information supplied by:

#### Wolsey Electronics Limited

(Electronics Division, Gas Purification and Chemical Company Limited)

Address: Cray Avenue, St. Mary Cray, Orpington, Kent.  
Telephone: Orpington 26661.







**FLOOR FINISHES | LINOLEUM AND CORK CARPET****19.G2**

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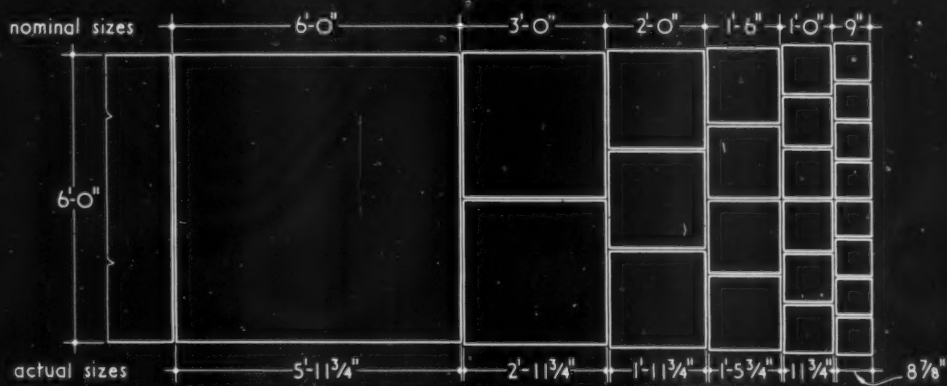
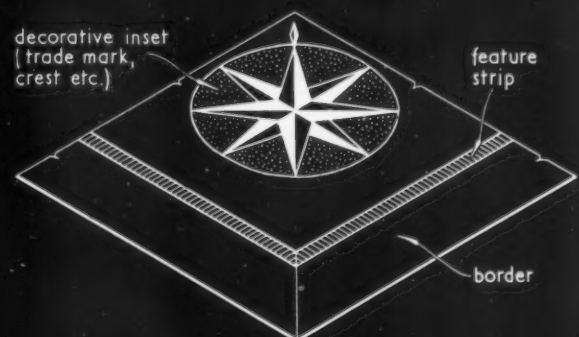
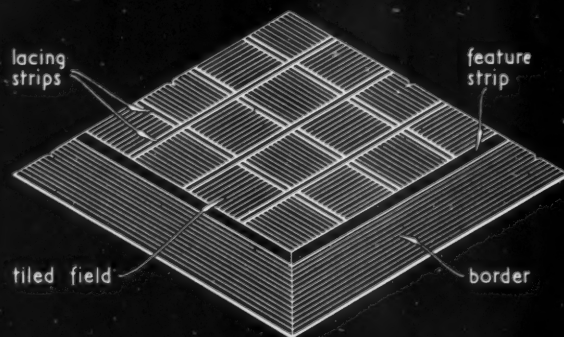
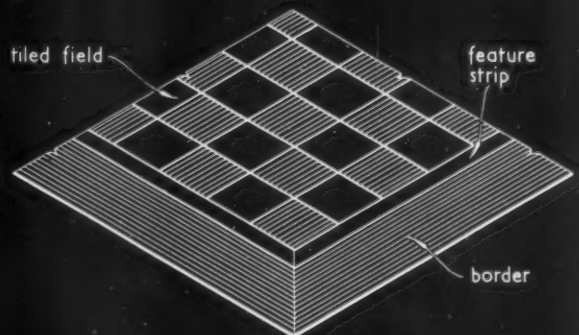
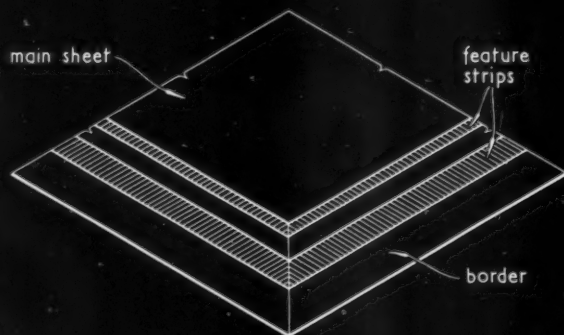
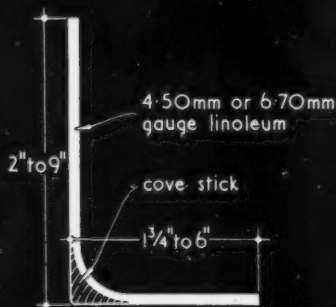
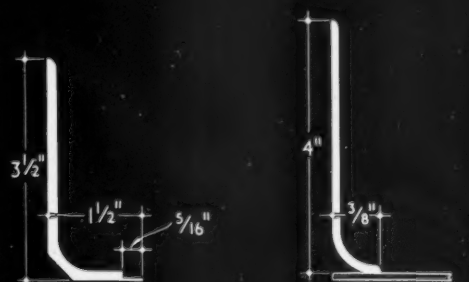


DIAGRAM SHOWING SIZES OF TILES CUT FROM STANDARD ROLL.



TYPICAL PATTERNS.

prefabricated linoleum  
SKIRTINGS.

alternative typical extruded p.v.c. skirtings

**LINOLEUM AND CORK CARPET : DESIGN, LAYING AND FIXING.**

Compiled from information supplied by The Linoleum Manufacturers' Association.

## 19.G2 LINOLEUM AND CORK CARPET: DESIGN, LAYING AND FIXING

**This Sheet**, the second of a series on linoleum and cork carpet supersedes Sheet 19.G2 published 1.4.54. It describes the decorative effects that can be obtained with linoleum and gives general notes on laying. Sheet 19.G1 covers general data, types and uses, 19.G3 gives specifications for various applications and 19.G4 deals with specialised uses, e.g. to stairs, furniture, doors and walls.

### Designs

The variety of colours and patterns in which linoleum is produced gives an almost unlimited choice of decorative effects. Trade marks, crests, lettering, etc., can be embodied in floor designs for shops, hotels and restaurants, schools, ships and industrial buildings.

**Sheet linoleum:** Sheet linoleum provides an economical flooring with a minimum of joints. In addition to the effects obtained by using any of the patterned types of linoleum listed on the face of Sheet 19.G1, borders and insets, as shown on the face of this Sheet, can be cut to the architect's design. Prefabricated designs in sheet linoleum are obtainable if required.

**Linoleum tiles:** Tile sizes are governed by the number which can be cut from 6-ft.-wide sheet (as shown in the diagram on the face of the Sheet) and the nominal sizes are usually given. Tiles with a bitumen-impregnated felt backing (F.B. tiles) are available 9 in. by 9 in. and 12 in. by 12 in. in 3·20 mm thickness and 9 in. by 9 in. in 2·50 mm thickness, cut to exact size in all cases.

Linoleum tiles can be laid square or diagonally and the grain of adjacent tiles can be reversed. Tiles of several colours can be used together and borders, strips and decorative insets can be included.

### General Laying Notes

To facilitate cutting and fitting, sheet linoleum and cork carpet should be kept in a temperature of 65° F for at least 24 hours before laying. On timber sub-floors, dry or bitumen-saturated felt paper should first be bonded to the surface across the run of the boards. It is recommended that sheet linoleum be bonded to the sub-floor in preference to laying loose: tiles are, of course, always bonded. Bonding increases the resistance to wear and improves the appearance of the finished surface.

### Preparation of Sub-Floors

All types of sub-floor should be thoroughly and permanently dry before linoleum sheet or tiles, or cork carpet, are laid. The surface of any sub-floor must be smooth, even and clean.

**Concrete sub-floors:** New concrete floors direct to earth should have a damp-proof membrane embodied in the floor during construction. Existing concrete floors having no damp course should be surfaced with mastic asphalt to a minimum thickness of  $\frac{1}{2}$  in. All holes, cracks and uneven areas in concrete surfaces should be filled with a latex-cement filler or an underlay of this material be given overall. Dusting worn concrete should be primed to bind the surface.

**Timber sub-floors:** At ground level these must be provided with adequate cross-ventilation as a precaution against dry rot. Loose boards should be nailed down, protruding nail heads flattened or extracted, and any uneven spots levelled by sanding. Felt paper should be bonded across the run of the boards before the linoleum is laid. Very worn, uneven floors should be faced with plywood or hard-board.

### Adhesives

It is important that the correct adhesive and the right method of use be specified for the type of surface to which the flooring is to be bonded. Felt paper, linoleum sheet and tiles and cork carpet should be rolled with a 150 lb. roller in two directions to ensure maximum adhesion when bonding. Member companies of the Linoleum Manufacturers' Association will supply on request a booklet which gives detailed instructions on laying, the use of adhesives and maintenance.

### Skirtings

Three types of skirting are illustrated on the lower face of this Sheet. The first drawing shows a skirting prefabricated from linoleum of 4·50 mm or 6·70 mm thickness for use with linoleum of the appropriate thickness. It is available in lengths up to 6 ft. 0 in. The second and third drawings show alternative extruded p.v.c. skirtings. Alternatively, skirting can be formed in situ from sheet linoleum up to 3·20 mm thickness: the linoleum is fixed over a preformed cove.

Compiled from information supplied by:

The Linoleum Manufacturers' Association

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

Telephone : Tate Gallery 4218/9.

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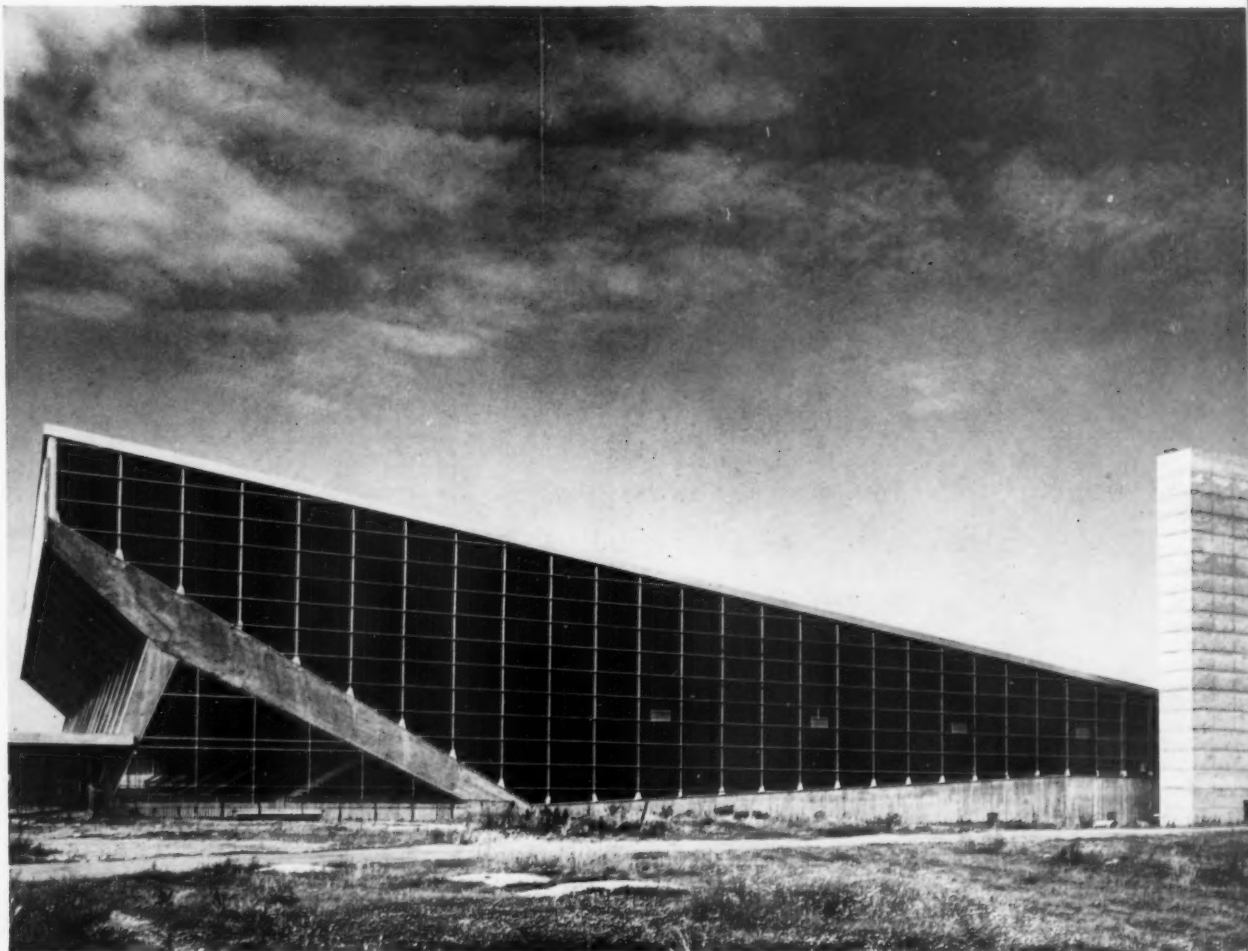


working detail

WALLS AND PARTITIONS: 97

GLAZED WALL: SKATING RINK IN GENEVA

*A. Cingria, F. Maurice and J. Duret, architects (material supplied by Dariush Borbor)*



*The aluminium detailing of this building is very different from that usual in this country. Note the channels used for both mullions and transoms and the use of synthetic rubber to close the joint at the head and sides of the glazed wall.*





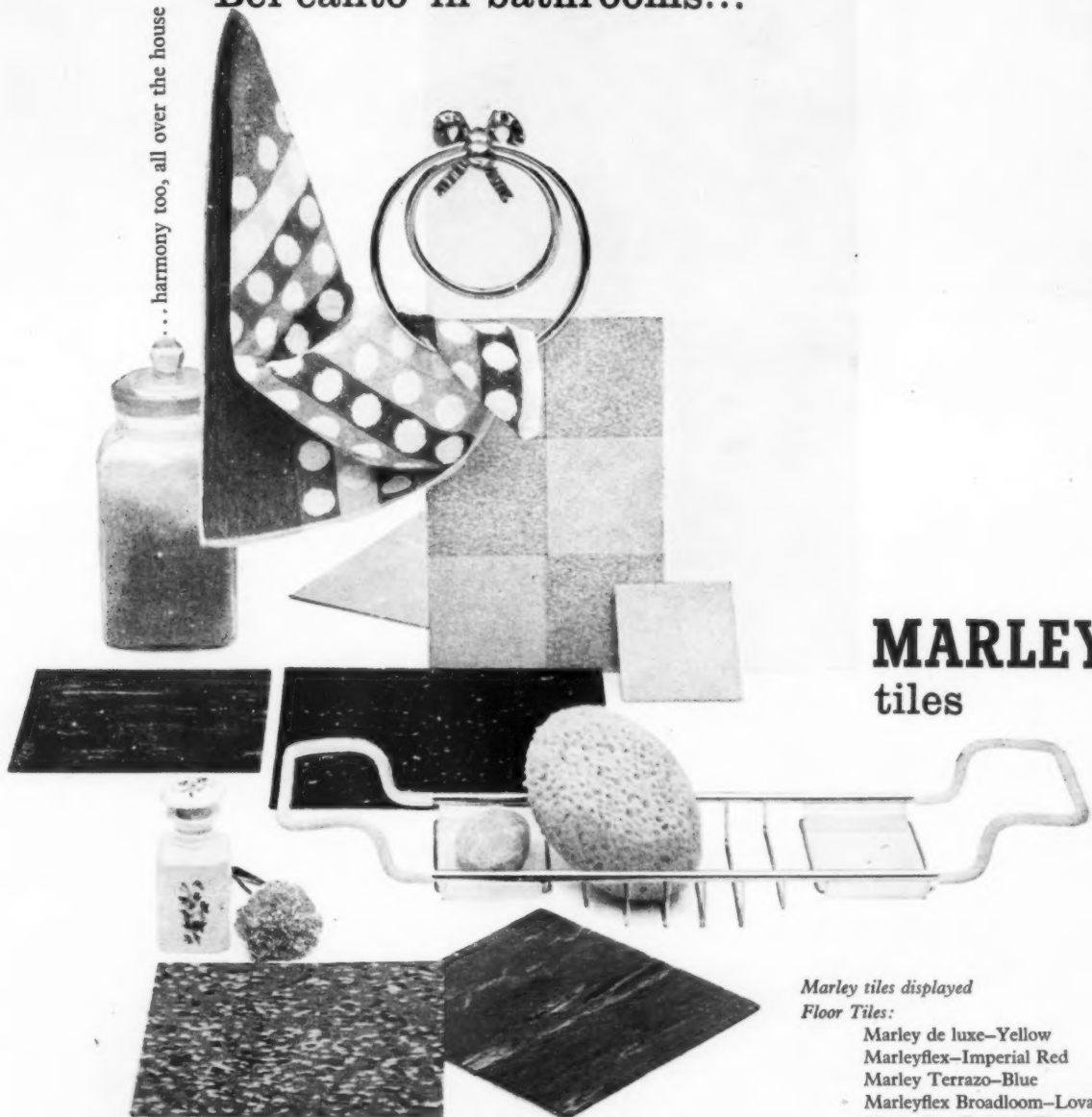
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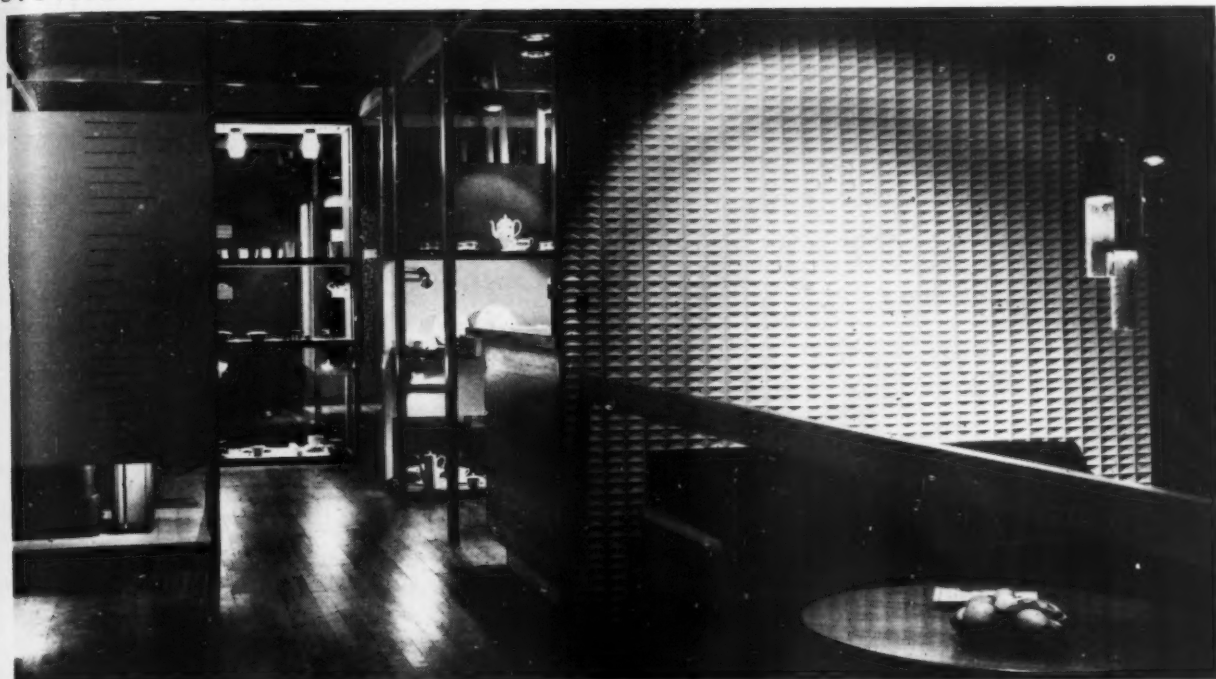
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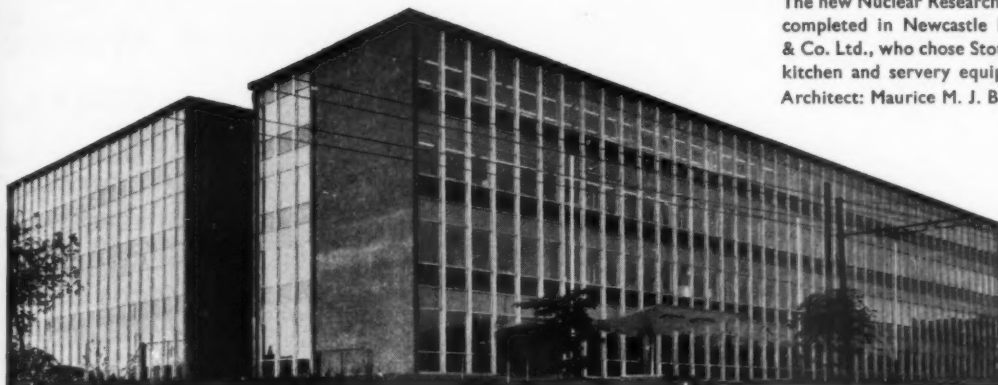


## C.O.I.D. EXHIBITION IN LIVERPOOL



*A successful exhibition by the Council of Industrial Design has just finished at Liverpool—the first independent exhibition mounted by the C.O.I.D., designed by Ian Bradbury, who used a system of display units on a grid similar to the Design Centre in London. The alcove shown here displays a studio couch, low table and prize-winning lamp shades against a wall of relief tiles. Other sections of the exhibition showed many kinds of household furnishing, equipment and tools, and a number of Liverpool shops held supporting exhibitions.*

## C. A. Parsons & Co. Ltd. — another Stott installation



The new Nuclear Research Building recently completed in Newcastle by C. A. Parsons & Co. Ltd., who chose Stotts to supply their kitchen and servery equipment.  
Architect: Maurice M. J. Bebb, L.R.I.B.A.

Other recent orders for complete schemes by Stotts include

City Training College, Sheffield.  
Dr. Barnado's Home, London.  
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Leeds College of Technology.  
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## Announcements

### PROFESSIONAL

Oswald E. Parratt, Chartered Quantity Surveyors, of Adelaide House, London Bridge, E.C.4, have taken into partnership J. S. Clarke, A.R.I.C.S. and E. J. A. Colley, F.R.I.C.S. The style of the firm will be Oswald E. Parratt and Partners.

Harold Richard Morris, A.R.I.B.A., A.A.Dipl., has now moved to White Bays, Bushfield Road, Bovington, Herts. (telephone Bovington 2330).

K. W. Berry, Esq., A.R.I.C.S., has now moved to 63, Great George Street, Leeds 1.

L. G. D. & E. G. Thompson, A/R.I.B.A., have changed their address to 55, Main Street, Larne, Co. Antrim, and wish to continue in practice under the style of Laurance and Eleanor Thompson.

### TRADE

Frederick J. Rolt, A.M.I.H.V.E., has joined the staff of United Air Coil Ltd., as Senior Engineer in charge of Research and Development work on heat transfer equipment.

The Press and Public Relations Department of Prestcold Refrigeration is now at Swansea, Glamorgan (telephone Swansea 51561).

The Fibre Building Board Development Organisation Ltd. has appointed E. P. Lawrence as President.

Richard Costain Ltd. have bought a controlling interest in the Australian contracting firm of Hansen and Yuncen Pty. Ltd., Melbourne, Victoria.

The Cambridge Instrument Co. Ltd. has moved its Nottingham office to Century Insurance Buildings, Milton Street, Nottingham (telephone 42612).

V. C. Matthews has resigned his directorships with the Clarke & Fenn Group of Companies to take up the appointment of Managing Director of Bridge Walker Ltd.

A. T. Daniel, F.I.B.D., F.R.S.A., has joined Sherwoods Paints Ltd. to inaugurate their Colour Advisory and Technical Department in the Midland Area

Grundy Arnatt Ltd. have moved to Vicarage Road, Hampton Wick, Kingston-upon-Thames, Surrey (telephone Teddington Lock 2215).

Richard Costain Ltd. and William Press & Son Ltd. have formed two companies, Costain & Press (Overseas Services) Ltd., and Costain & Press (Overseas) Ltd., with registered offices at 111, Westminster Bridge Road, London, S.E.1.

E. K. Cole Ltd., 5, Vigo Street, London, W.1, have appointed G. South as general sales representative for Yorkshire and the North-East Coast area.

Ford & Walton Ltd. announce that Colonel P. A. Adams, B.A., has joined the staff as chief engineer.

A. H. Freeman, A.M.I.MECH.E., A.M.I.C.E., has been elected Chairman and Managing Director of Heatrae Ltd.

Notice is hereby given that Clopay Corporation seeks leave to amend the Complete Specification of Letters Patent No. 725,677 for an invention entitled "Improvements in or relating to flexible closures for openings such as doorways."

Particulars of the proposed amendments were set forth in the Official Journal (Patents), No. 3,719 dated May 25, 1960. Any person may give Notice of Opposition to the amendment by leaving Patents Form No. 36 at the Patents Office, 25, Southampton Buildings, London, W.C.2, on or before June 25, 1960.

GORDON GRANT,  
Controller General.

### Correction

In the ARCHITECTS' JOURNAL for May 19, under Design Centre Awards 1960, the wallpaper illustrated in photograph No. 12, made by the Wall Paper Manufacturers Ltd., costs £4 10s. 4d. a 12 yard roll and not £9 10s. 4d. as stated.



for further information, samples and prices

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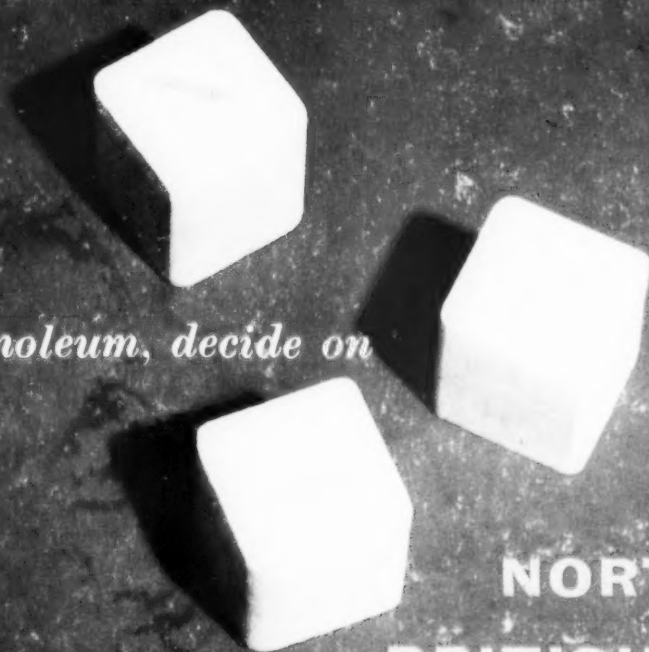
Illustrated literature sent on request · Bilston Foundries Ltd, Bilston, Staffs





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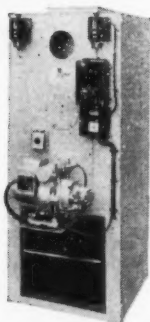


**AIR**  
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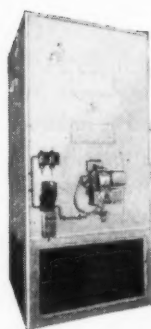
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## OIL-BURNING EQUIPMENT FOR ECONOMICAL CLEAN SPACE HEATING

### Air Heat



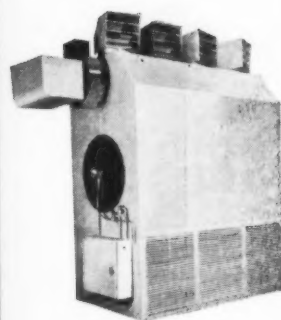
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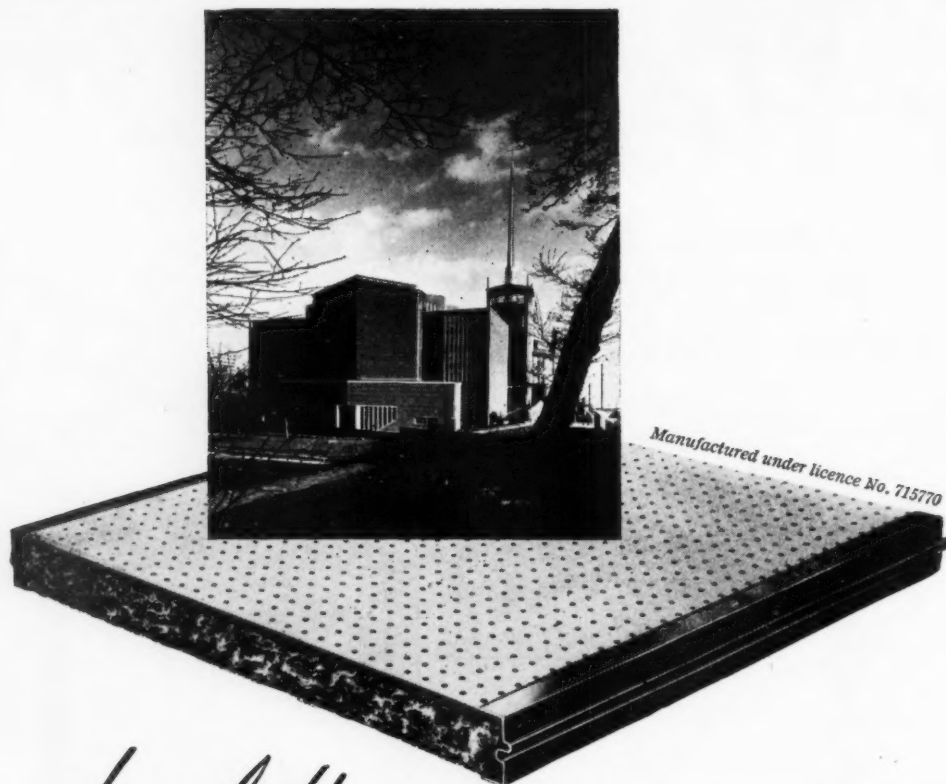
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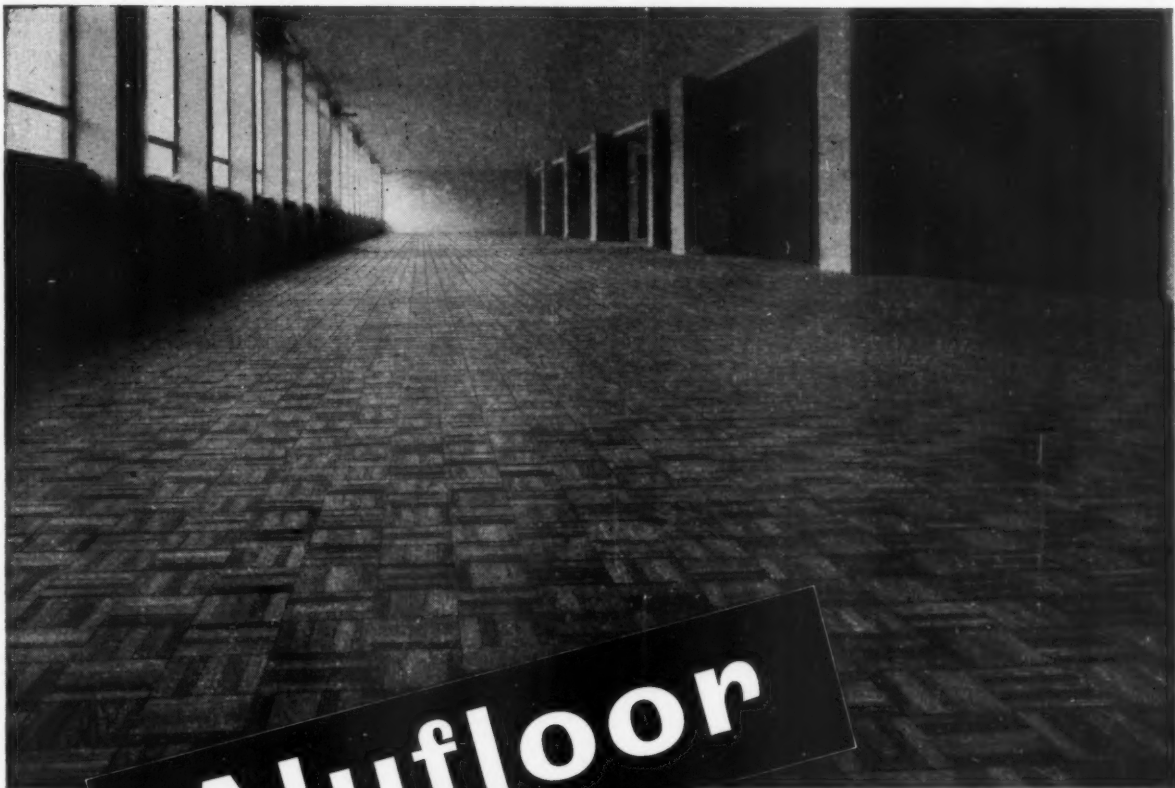
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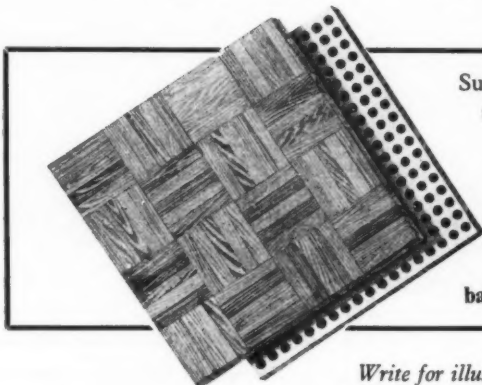
# Alufloor

British Patent No. 746791

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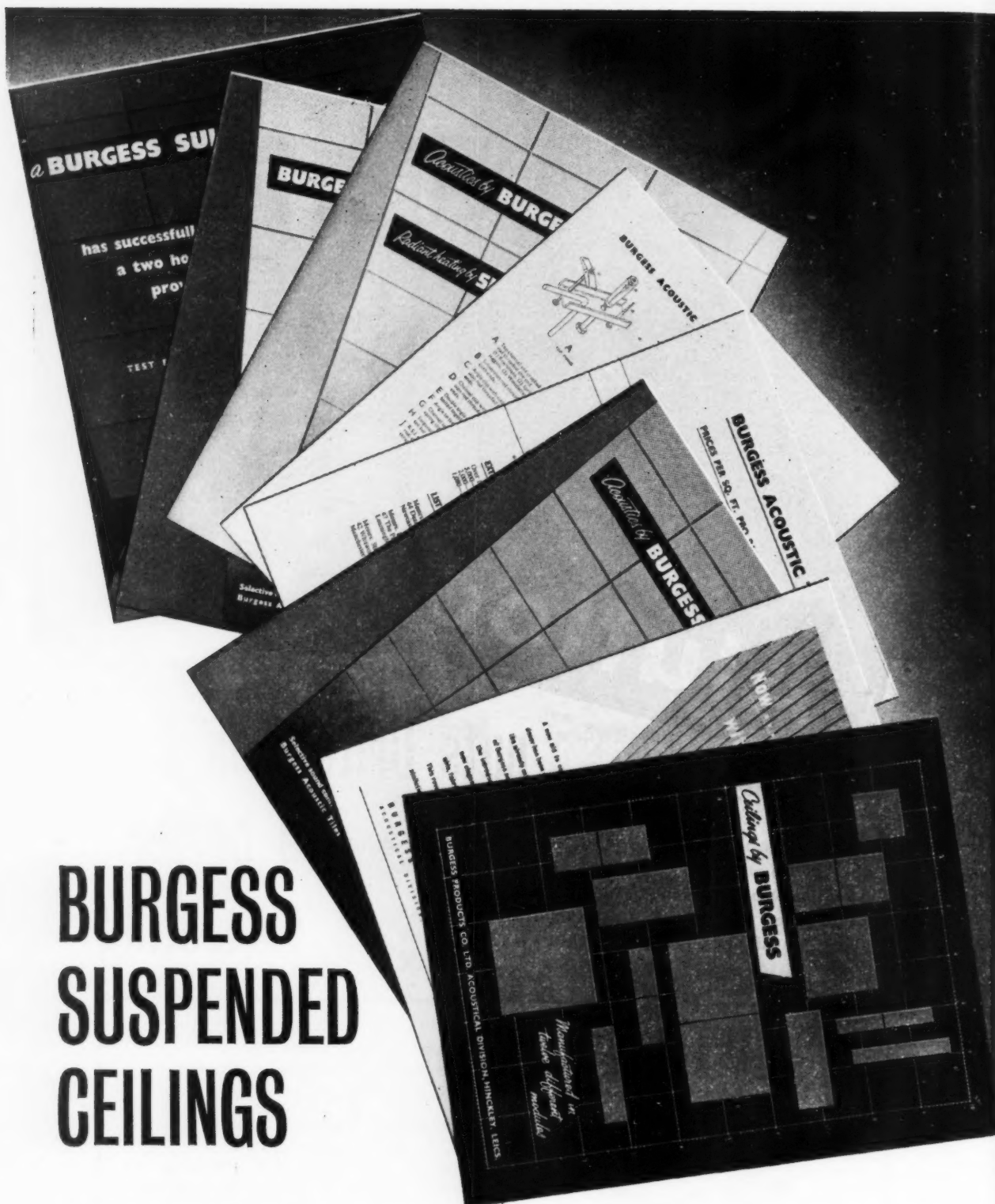
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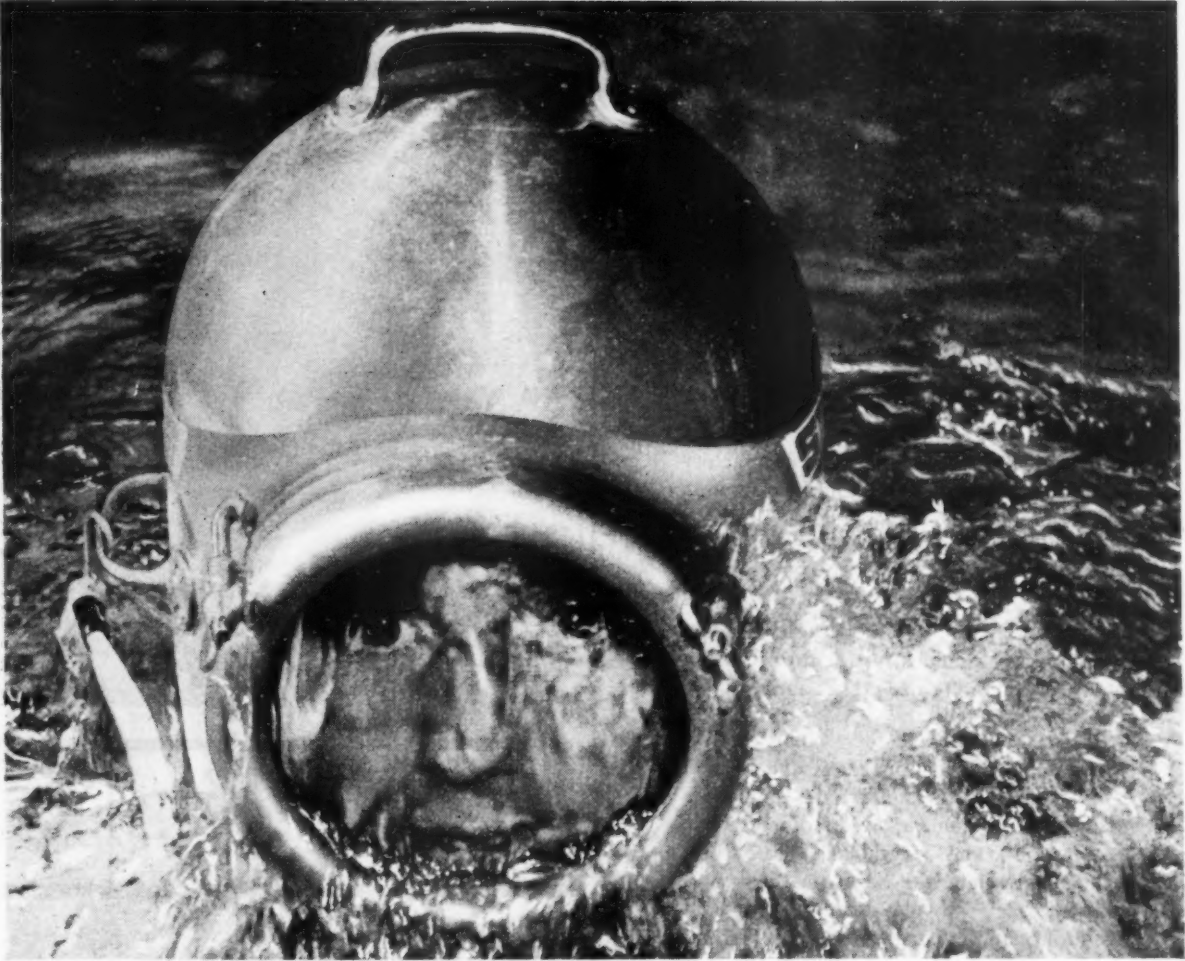
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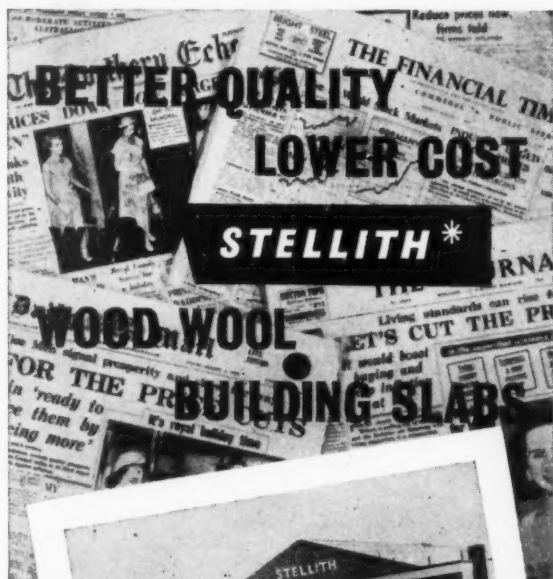


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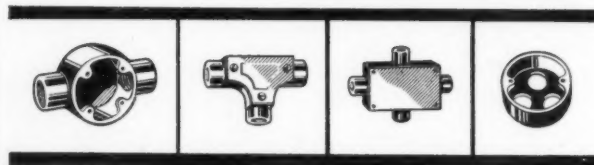
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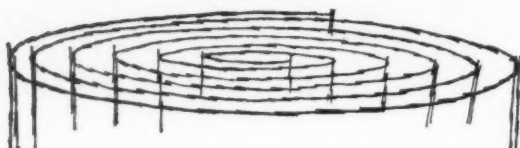
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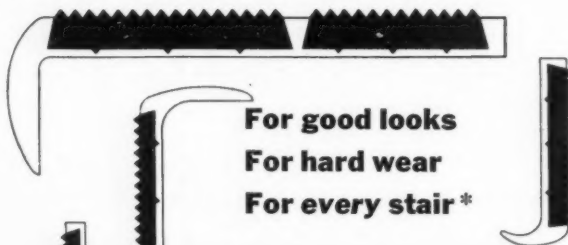
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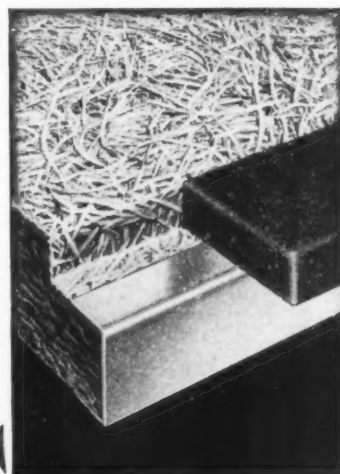
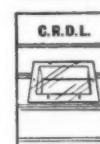
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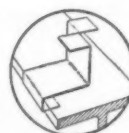
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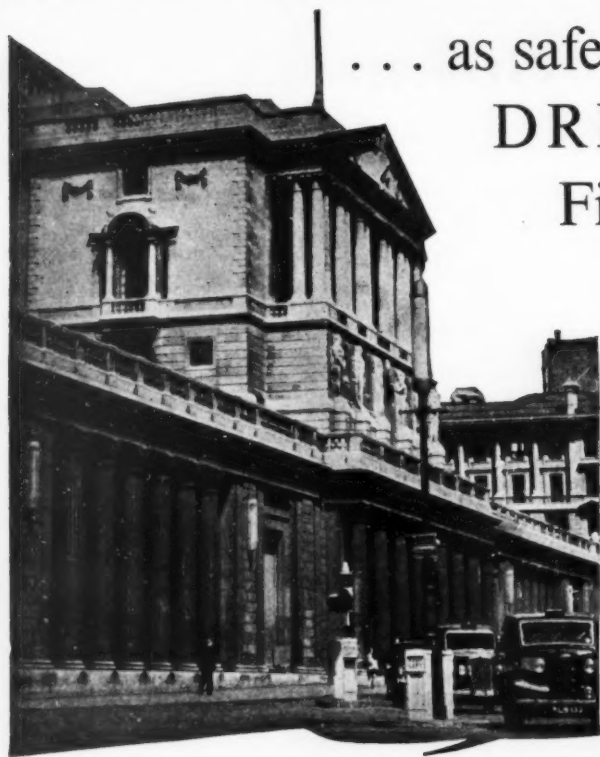
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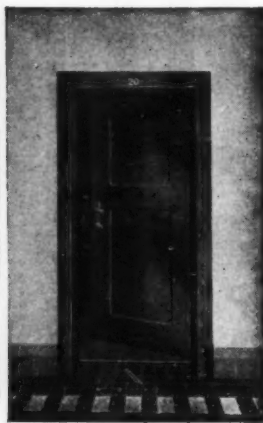


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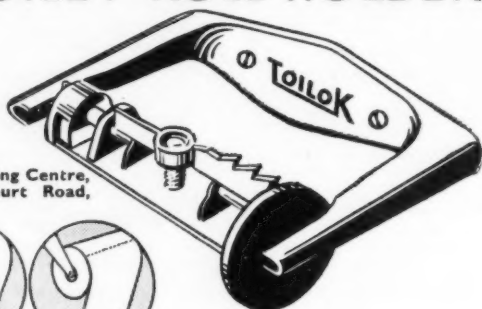
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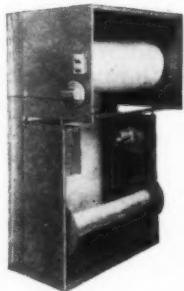
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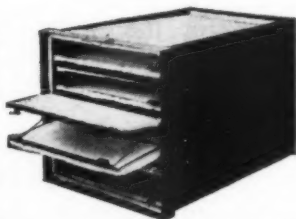
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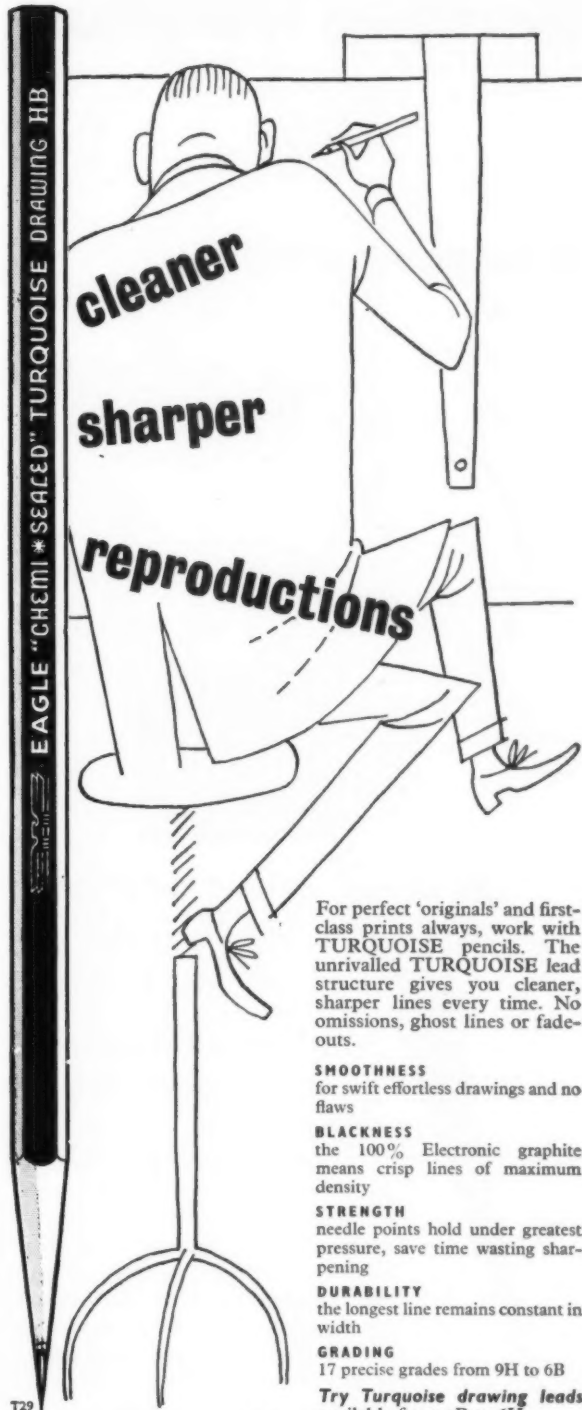
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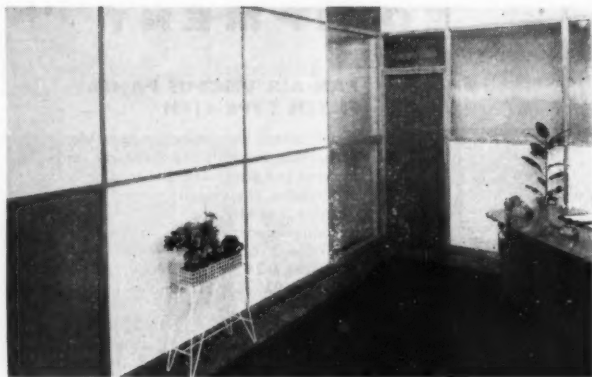
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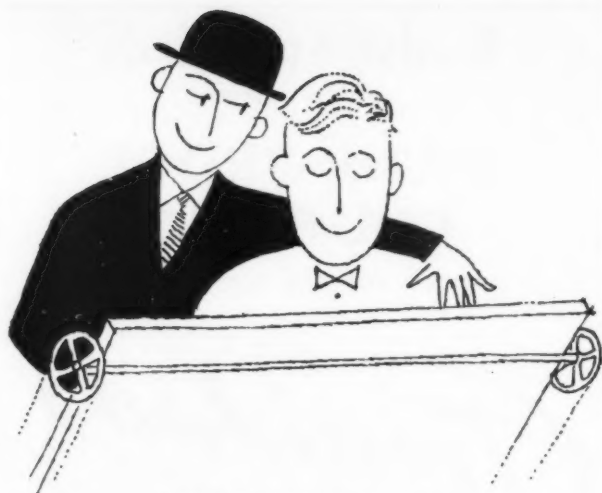
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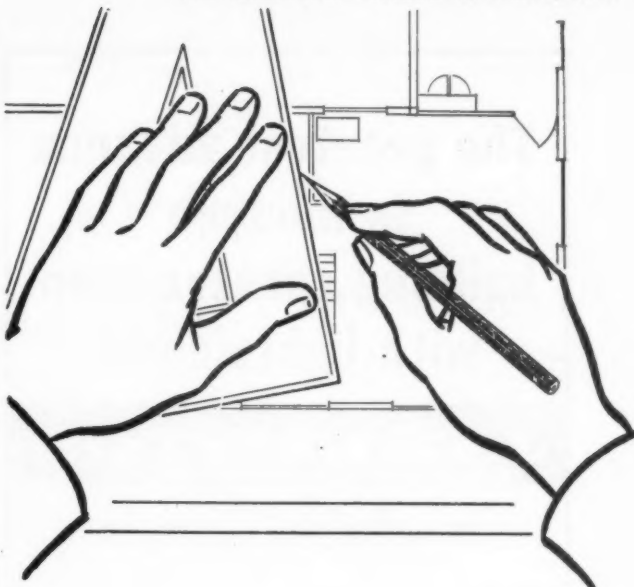
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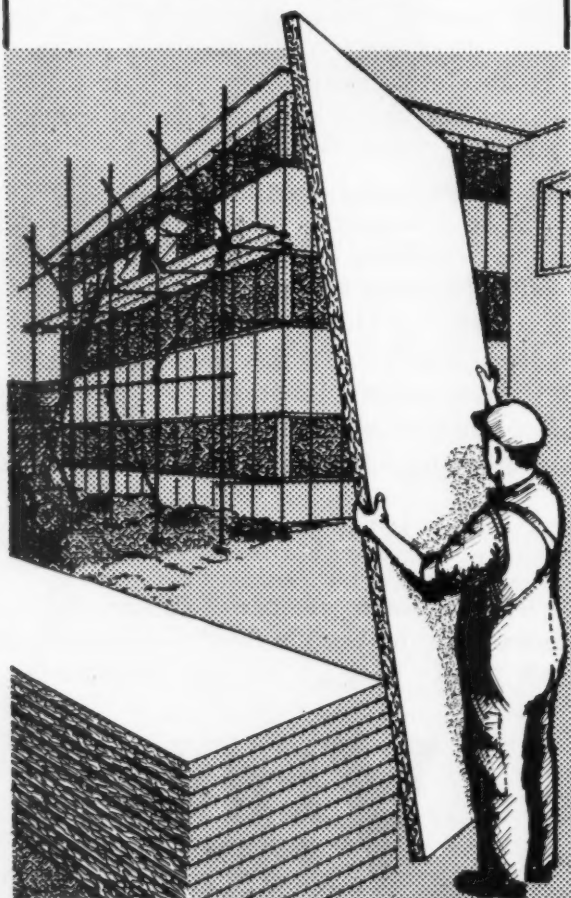
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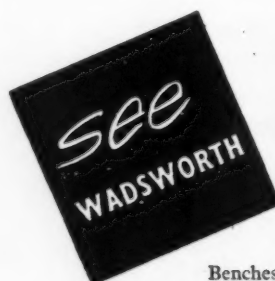
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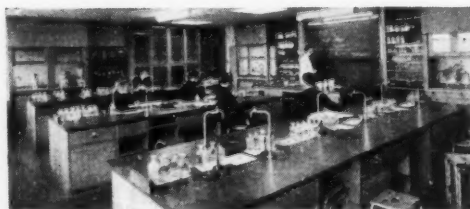
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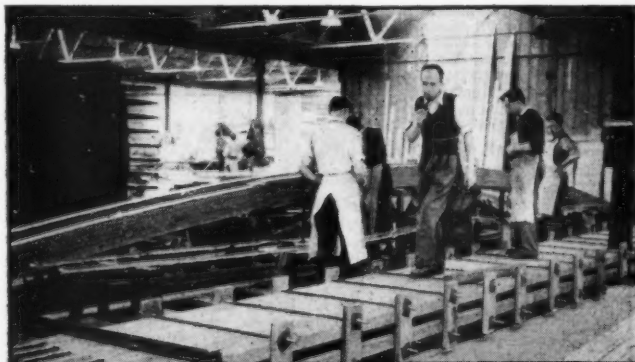
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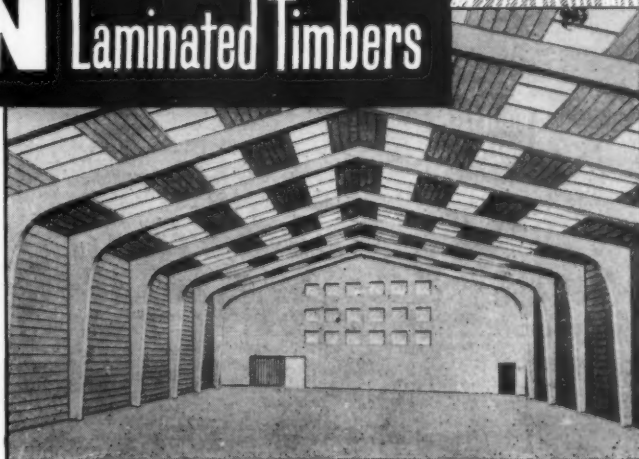


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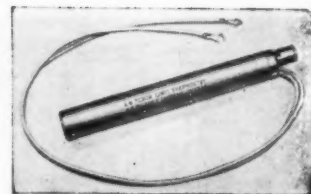
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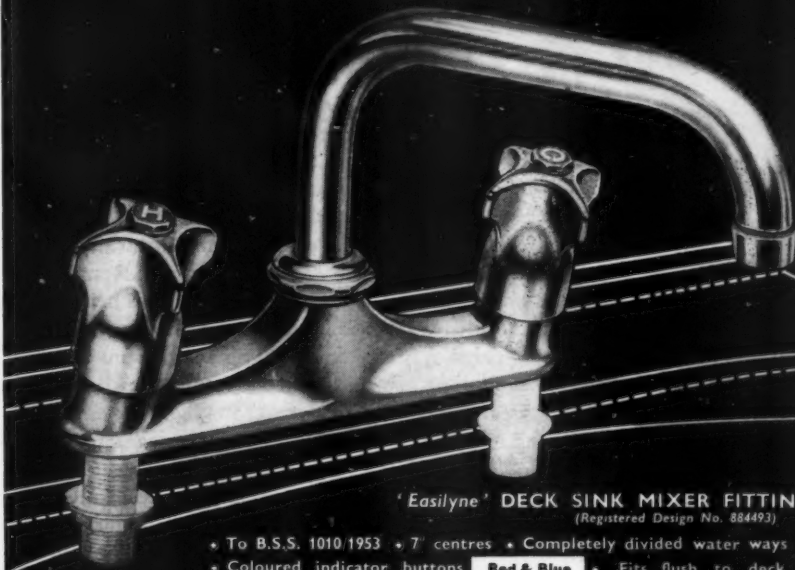


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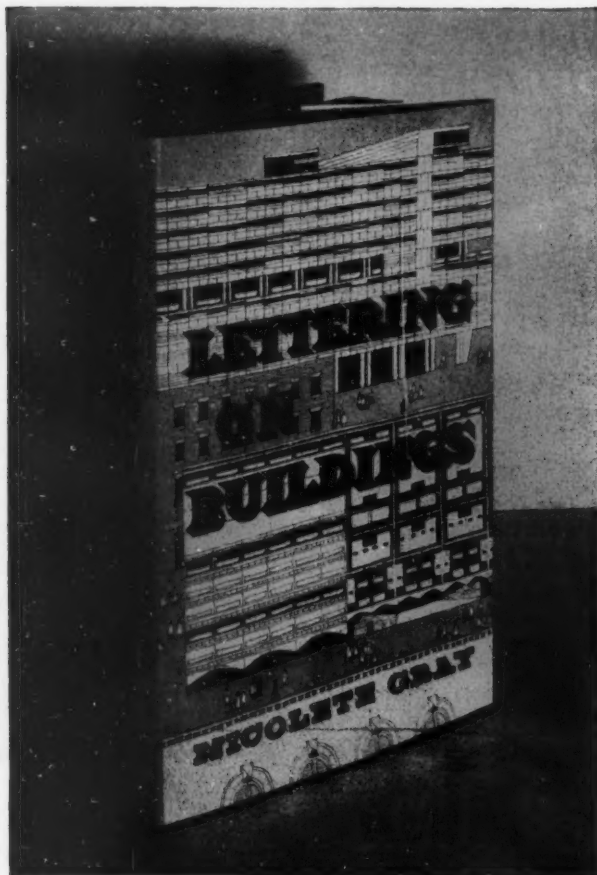
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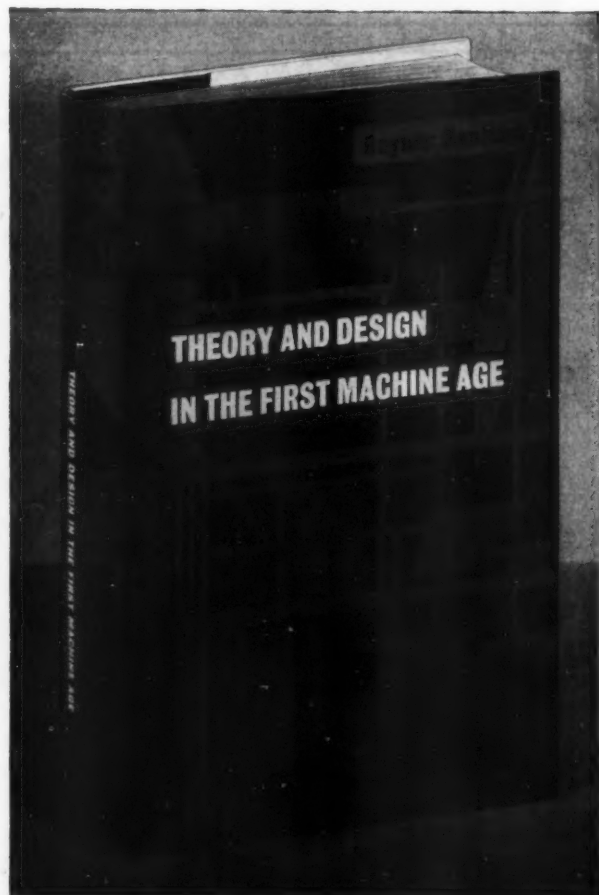
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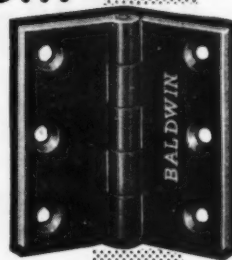
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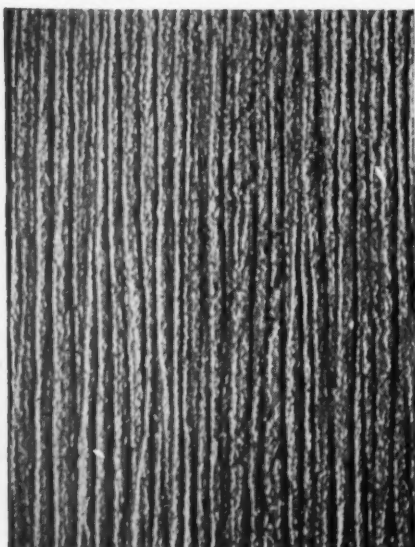
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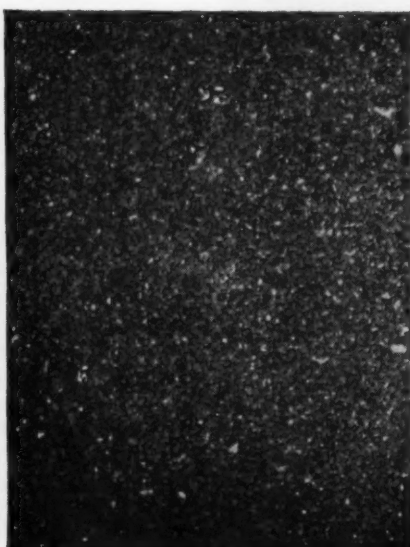
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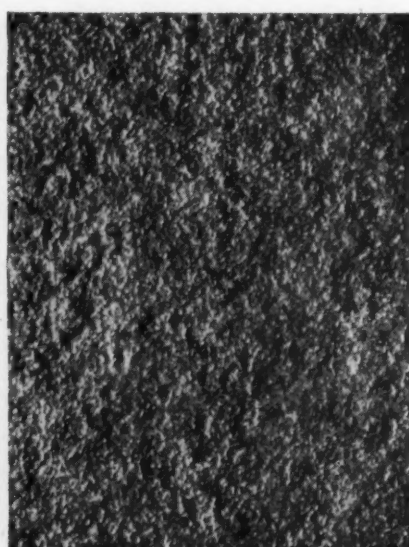
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## CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advertisement Manager, "The Architects' Journal," 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, and should reach there by first post Friday morning for inclusion in the following Thursday's paper.

Replies to Box Numbers should be addressed to "The Architects' Journal," at the address given above.

AIR-MAIL SERVICE available on request. In response to requests from a number of Overseas subscribers for air-mail delivery of Public and Official Appointment details and Other Appointments Vacant, we have been pleased to arrange that cuttings of all such classified advertisements appearing in the A.J., shall be despatched by air-mail on Wednesday of each week (one day prior to A.J. publication date). The cost of this special service to Overseas subscribers will be 5s. for four weeks (i.e. 3d. for each additional week) and prepayment should be sent by subscribers wishing to take advantage of this service. The charge we are making represents only the actual cost of the postage involved.

## Public and Official Announcements

36s. per inch; each additional line, 3s.

**LONDON COUNTY COUNCIL ARCHITECTS' DEPARTMENT**  
ARCHITECT/PLANNERS required. Tasks include three-dimensional planning in Comprehensive Development Areas and all other important areas of new development throughout London, including those associated with road improvements. Up to £1,135 (under review) according to experience and qualifications. Application form and particulars from Hubert Bennett, F.R.I.B.A., Architect, to the Council (EK/AS/527/6), County Hall, S.E.1. 9077

**THE UNIVERSITY OF MANCHESTER**  
Applications are invited for the post of LECTURER IN ARCHITECTURE from candidates with professional membership of the Royal Institute of British Architects and not less than three years' of practical experience. Salary on a scale (at present under review) £900 to £1,650 per annum: initial salary according to qualifications and experience. Membership of the F.S.A.U. and Children's Allowance Scheme. Applications should be sent not later than June 25th, 1960, to the Registrar, the University, Manchester, 13, from whom further particulars and forms of application may be obtained. 1470

**ARCHITECTURAL ASSISTANT**  
Applications are invited from suitably qualified persons for the above post which is on the staff of the Board's Architect. The Department is engaged on an extensive programme of new industrial and commercial building, interior design, showroom and exhibition work, and offers the opportunity of working on unique projects in commercial and industrial design. The salary for the appointment, which is pensionable and subject to medical examination, will be within the range of £946-£1,071 per annum.

Applications, stating age, qualifications and experience, together with the names of two referees, should be addressed to the Industrial Relations Officer, West Midlands Gas Board, 6, Augustus Road, Edgbaston, Birmingham, 15. 1383

## CITY AND COUNTY OF THE CITY OF EXETER

Applications are invited for the appointment of PRINCIPAL ASSISTANT ARCHITECT to take immediate responsibility for the Housing Section of the Department. Salary within A.P.T. Grade IV, i.e. £1,065 to £1,220 per annum. Applicants must be Associate Members of The Royal Institute of British Architects and must be thoroughly experienced in the design of housing layouts, houses and flats, etc., and fully competent to administer Contracts from inception to completion.

The appointment will be subject to one month's notice on either side and to the provisions of the Local Government Superannuation Acts. The successful candidate will be required to pass a medical examination.

Applications, stating age, qualifications, previous and present appointments and salaries, and the earliest possible date when available, should be sent to J. R. Rowe, F.R.I.B.A., A.M.I.Struct.E., City Architect, Municipal Offices, Exeter, not later than the 16th June, 1960. 1552

## WANSTEAD AND WOODFORD CORPORATION

**SENIOR PLANNING ASSISTANT, A.P.T. IV** (£1,065-£1,220 plus London weighting)  
Applicants must hold the Final Examination of the Town Planning Institute and additional architectural or engineering qualifications would be advantageous. Applicants will be preferred who have experience in urban redevelopment with a local authority in addition to routine development control. Starting salary will be fixed in accordance with the experience of the successful applicant. A casual user car allowance is payable. Housing accommodation will be made available but a subsistence allowance will be paid for a limited period pending the availability of accommodation.

Forms are obtainable from and are to be returned to L. S. Jeffery, Borough Engineer, Surveyor and Planning Officer, Municipal Offices, High Road, London, E.13, by the 15th June, 1960. 1516

## UNIVERSITY OF EDINBURGH

**DEPARTMENT OF ARCHITECTURE**  
Applications are invited for two posts of RESEARCH ARCHITECT to work under Professor Robert Matthew on a 30-acre housing scheme for Cumbernauld New Town. A keen enquiring mind and good design ability are more important than experience, although some work done on housing would be an advantage. Salary £950 per annum. The successful candidates will require to take up duty on 1st September, 1960. They may be given the opportunity of undertaking study for the degree of Master of Architecture. Architects who have already shown an interest in this project may again apply if they wish to be considered for the posts.

Further particulars may be obtained from the undersigned, with whom applications, giving the names of two referees, should be lodged not later than 15th June, 1960.

CHARLES H. STEWART,  
Secretary to the University. 1564

## METROPOLITAN BOROUGH OF ISLINGTON BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT

Applications are invited from persons not more than 50 years of age for the following appointments on the permanent staff:—

- TWO SENIOR ARCHITECTURAL ASSISTANTS—Grade A.P.T. V (£1,220-£1,375 p.a.).
- TWO ARCHITECTURAL ASSISTANTS—Grade A.P.T. III (£880-£1,065 p.a.). All plus appropriate London weighting.

Applicants for:—  
(a) Should be Associate Members of the R.I.B.A. with considerable experience including the design and construction of multi-storey housing.

(b) Should have passed the Intermediate Examination of the R.I.B.A. and be suitably experienced.

Application forms, returnable by first post on Wednesday, the 15th June, 1960, obtainable from Mr. C. N. Cowney, Borough Engineer and Surveyor, Town Hall, Upper Street, N.1.

H. DIXON CLARK,  
Town Clerk. 1528

## WORCESTERSHIRE COUNTY COUNCIL COUNTY ARCHITECTS' DEPARTMENT

RE-ADVERTISEMENT

Applications are invited for:—  
(1) SENIOR ARCHITECT, Grade A.P.T. IV (£1,065-£1,220 per annum)

(2) ARCHITECTURAL ASSISTANT, Grade A.P.T. III (£880-£1,065) or Special Grade (£785-£1,070) according to qualifications and experience.

(3) TEMPORARY CLERK OF WORKS, salary at the rate of £16 10s. per week, for Halesowen area.

Application forms and further particulars should be obtained from L. C. Lomas, F.R.I.B.A., County Architect, 14, Castle Street, Worcester, not later than 16th June, 1960. (Z.280.) 1546

## BOROUGH OF RASINGSTOKE

A SENIOR ASSISTANT is required in the Architect's Department for housing and general work in this rapidly expanding town.

Applications are invited from Associates, R.I.B.A. who have had considerable housing experience; salary range £785-£1,070 according to experience. House or flat available. N.J.C. conditions. Post pensionable. Medical examination.

Details giving age, training, experience, etc., and names and addresses of three referees to be sent to the Borough Architect, Eric Almond, Dist. Arch., A.R.I.B.A., Municipal Buildings, Rasingstoke, Hants., by the 16th June, 1960.

L. WOMERSLEY,  
Town Clerk. 1566

## COUNTY BOROUGH OF WOLVERHAMPTON BOROUGH ENGINEER'S DEPARTMENT

Applications are invited for the following appointments:—

(a) PRINCIPAL ASSISTANT ARCHITECT. Salary within Grades A.P.T. IV to V (£1,065-£1,375).

(b) ASSISTANT ARCHITECTS. Salary in accordance with the Special Scale (£785-£1,070).

(c) ARCHITECTURAL ASSISTANTS. Salary within Grades A.P.T. I to II (£610-£880). Commencing salaries according to qualifications and experience.

Housing accommodation may be made available in respect of post (a).

Applications, stating age, qualifications, training and experience, and naming two referees, to the Borough Engineer, Town Hall, Wolverhampton, by Monday, 20th June, 1960. 1651

## BRACKNELL DEVELOPMENT CORPORATION

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

(1) ARCHITECT, salary range £1,065-£1,220.

(2) ARCHITECTURAL ASSISTANT, salary range £610-£785.

(3) JUNIOR ARCHITECTURAL ASSISTANT, salary up to £595 (commencing salary according to qualifications and experience).

Superannuation schemes, medical examination, Housing available. Apply by 22nd June, 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., stating clearly which post is applied for. 1600

## BOROUGH OF MACCLESFIELD APPOINTMENT OF DEPUTY BOROUGH ARCHITECT

Applications are invited for the appointment of DEPUTY BOROUGH ARCHITECT on Grade A.P.T. IV-£1,065 to £1,220 (under review).

Applicants must be members of the R.I.B.A. and should have had experience of the architectural work of a Local Authority.

Application forms and particulars may be obtained from the Borough Architect, 3, Jordan-gate, Macclesfield, to whom they must be returned not later than 16th June, 1960.

WALTER ISAAC,  
Town Clerk. 1457

## BOROUGH OF REDCAR

APPOINTMENT OF CLERK OF WORKS

Miscellaneous Grade IV, £590 x £20-£650. Applications are invited for the above appointment to supervise all types of building and engineering works.

Applicants must have worked in a supervisory capacity.

Housing accommodation will be provided and the Council will consider contributing towards removal expenses.

Applications on the forms obtainable from the undersigned must be returned before noon on Monday, 13th June, 1960.

HUGH CALDWELL,  
Town Clerk. 1506

## Municipal Buildings, Redcar.

**BUCKINGHAMSHIRE COUNTY COUNCIL**  
Applications are invited for the following appointments in the South-East and North Bucks Area Offices of the County Planning Department:—

(a) ONE SENIOR PLANNING ASSISTANT, Grade A.P.T. IV (£1,065-£1,220), to work at Slough.

(b) ONE PLANNING ASSISTANT, Special Scale (£785-£1,070), to work at Amersham.

(c) TWO DRAUGHTSMAN / PLANNING ASSISTANTS, Grade A.P.T. I (£610-£765), one to work at Slough, one to work at Bletchley.

Candidates for post (a) must be Corporate Members of the Town Planning Institute and preference will be given to those holding an additional recognised qualification. They must have had considerable experience covering both county problems and urban development.

Candidates for post (b) must be Corporate Members of the Town Planning Institute with considerable experience in all aspects of statutory planning, development control and planning procedure.

Candidates for posts (c) should have had training in a Planning, Architectural, Surveying or Engineering Office.

The commencing salary for each appointment will be according to qualifications and experience.

The appointments are superannuable and subject to medical examinations.

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

Forms of application may be obtained from the County Planning Officer, County Offices, Aylesbury, to whom completed applications must be returned by Friday, 24th June, 1960.

R. E. MILLARD,  
Clerk of the County Council.

County Hall, Aylesbury. 1456

## MAY, 1960.

## SURREY COUNTY COUNCIL

Applications invited for following appointments:—

ASSISTANT ARCHITECTS in the salary range of £785-£1,220 p.a. plus £45 n.a. London Allowance. Commencing salary will be in accordance with qualifications and experience.

ARCHITECTURAL ASSISTANTS, GRADE II (£765-£880 p.a. plus up to £40 p.a. London Allowance, according to age). Must be of good general training, preference given those who have passed Intermediate R.I.B.A. Candidates will be appointed at the appropriate point within the scale according to age and ability.

Full details, present salary and three conv testimonials to County Architect, County Hall, Kingston, as soon as possible. 1449

## THE NORTH OF SCOTLAND COLLEGE OF AGRICULTURE AND P.D.A.

AWARD OF SCHOLARSHIP

A scholarship is offered for the critical investigation and study of commercial housing for pigs. The scholarship amounts to £750 per annum (together with the payment of approved expenses) and is available in the first instance for one year.

Renewal for a further year may be considered. The successful candidate will work under the direction of the College Farm Buildings Adviser and will co-operate with other College specialists as may be required. He may also be asked to spend portions of the available time at other centres in Britain. It is hoped that the experience gained may assist the scholar to embark on a career of research work in this field.

Applications are invited from suitably qualified graduates in Architecture, Animal Husbandry or Science and should be made in writing (giving full particulars of qualifications, experience and special interests) to the Secretary of the College at 415, Union Street, Aberdeen, not later than 30th June, 1960. 1665



**CITY AND COUNTY OF NEWCASTLE UPON TYNE**

**CITY ARCHITECTS' DEPARTMENT**  
The City Architect will be pleased to receive applications for the following appointments in the Department in connection with the New Town Hall project:—

**SENIOR ASSISTANT ARCHITECTS** in the A.P.T. Division Grade V (£1,220—£1,375 per annum), and A.P.T. Division Grade IV (£1,065—£1,220 per annum).

These posts will offer ideal opportunity for Architects wishing to work on an important building involving finishes of high quality. Work has just commenced on the first three blocks of the New Town Hall, and the whole project is estimated to cost in the region of £3,500,000. A high standard of design ability and an appreciation of and experience in good quality building work is essential.

Application forms and full particulars may be obtained from George Kenyon, A.R.I.B.A., A.M.T.P.I., City Architect, 18, Cloth Market, Newcastle upon Tyne, 1. Applicants should state the Grade applied for when requesting particulars.

Closing date for receipt of completed applications: Monday, 27th June, 1960.

JOHN ATKINSON,  
Town Clerk.

Town Hall,  
Newcastle upon Tyne, 1.  
25th May, 1960. 1501

**WORTLEY RURAL DISTRICT COUNCIL**  
(Population approaching 50,000)  
**APPOINTMENT OF SENIOR ASSISTANT ARCHITECT**

Applications are invited from persons of suitable experience and qualification for the above appointment at a salary in the range A.P.T. Special, £785 to £1,070 per annum. Housing accommodation is available if required.

There is a considerable amount of varied and interesting work to be done and the successful applicant will be given many opportunities. Applicants should submit their application in writing to the undersigned with the names of two persons to whom reference may be made, not later than noon on Friday, 17th June, 1960.

ADRIAN M. KELLY,  
Clerk.

Council Offices,  
Grenoside,  
Sheffield. 1473

**NOTTINGHAMSHIRE COUNTY COUNCIL**  
**COUNTY ARCHITECTS' DEPARTMENT**  
**Appointment of ASSISTANT ARCHITECTS**

Applications are invited from students who have passed the Final Examination of the R.I.B.A. or the Diploma Examination of a recognised School or from qualified Architects to work on the County Council's Major Building Programmes. Architects in the respective groups carry out in turn the design, organisation and supervision of projects as Job Architects through all stages of the job. The salary range is £785—£1,070, commencing salary to be offered will be in accordance with ability and experience. Starting date by agreement. Forms of application may be obtained from the County Architect, County Hall, West Bridgford, Nottingham, to whom they should be returned as soon as possible.

A. R. DAVIS,  
Clerk of the County Council.  
1556

**LONDON COUNTY COUNCIL**  
**ARCHITECTS' DEPARTMENT**  
**ARCHITECTURAL DRAFTSMEN**

Unqualified ARCHITECTURAL ASSISTANTS required in Housing Division. Candidates must have drawing board experience in an architect's office. Preference to those proposing to qualify by evening study though others considered. Full programme of new work and opportunities for promotion. Starting salaries according to age and experience. Form and particulars from Hubert Bennett, F.R.I.B.A., Architect to the Council (EK/AJ/1359/6a), County Hall, S.E.1. 1498

**CITY AND COUNTY OF NEWCASTLE UPON TYNE**  
**CITY ARCHITECTS' DEPARTMENT**

Consequent upon revisions to the Establishment of his Department, the City Architect is now able to offer vacancies in a number of additional senior posts in the Department, and will be pleased to hear from Architects who are keen to take part in an exciting and extensive programme of high quality architectural work.

Three PRINCIPAL ASSISTANT ARCHITECTS, J.N.C. "C" (General Education & Re-housing Sections), £1,385—£1,620 per annum.

One PRINCIPAL ASSISTANT ARCHITECT, J.N.C. "B" (Housing Section), £1,255—£1,485 per annum.

SENIOR ASSISTANT ARCHITECTS, A.P.T. V (All Sections), £1,220—£1,375 per annum.

SENIOR ASSISTANT ARCHITECTS, A.P.T. IV (General, New Town Hall & Housing Sections), £1,065—£1,220 per annum.

SENIOR ASSISTANT ARCHITECTS, A.P.T. III (Housing & Re-housing Sections), £880—£1,065 per annum.

ASSISTANT ARCHITECT, A.P.T. II (Re-housing Section), £765—£880 per annum.

ARCHITECTURAL ASSISTANTS, A.P.T. I (Education & Re-housing Sections), £610—£765 per annum.

Work has now commenced on the superstructure of the New Town Hall and there are interesting schemes in preparation for Colleges of Further Education, Multi-Storey Flats and other building works of a major nature. There is, too, the prospect of stimulating work in the near future on redevelopment of the City Centre.

Further details of the above posts and Forms of Application may be obtained from George Kenyon, A.R.I.B.A., A.M.T.P.I., City Architect, 18, Cloth Market, Newcastle upon Tyne, 1. Applicants must state the Section of the Department and the post and grade applied for when requesting particulars.

Closing date for completed applications: Thursday, 30th June, 1960.

JOHN ATKINSON,  
Town Clerk.

Town Hall,  
Newcastle upon Tyne, 1.  
May 27th, 1960. 1598

**BOROUGH OF WORTHING**  
**BOROUGH ENGINEER'S DEPARTMENT**  
**APPOINTMENT OF ASSISTANT ARCHITECT**

Applications are invited for an Assistant Architect at a salary in accordance with Grade A.P.T. II of the National Joint Council's Scale of Salaries, i.e. £765—£880 per annum. Candidates should have passed the Intermediate Examination of the R.I.B.A. and should have had a sound experience in the preparation of drawings and specifications for local authority building contracts.

The appointment will be subject to the National Scheme of Conditions of Service of Local Government Officers; to the provisions of the Local Government Superannuation Acts; and to the successful candidate passing satisfactorily a medical examination. The appointment will be terminable by one month's notice on either side.

Applications, stating age, qualifications, experience, present and past appointments, with dates, and accompanied by copies of three testimonials, should be sent to the Borough Engineer and Surveyor, Town Hall, Worthing, not later than the 20th June, 1960.

ERNEST G. TOWNSEND,  
Town Clerk.

Town Hall,  
Worthing. 1601

**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 20th June, 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. 1550

**BOROUGH OF MAIDSTONE**

Applications are invited by June 13th from appropriately qualified persons for:—

(a) PRINCIPAL ARCHITECT, A.P.T. V, salary scale £1,220—£1,375.

(b) SENIOR ASSISTANT ARCHITECT, £1,030—£1,150.

(c) BUILDING TECHNICIAN, A.P.T. I, £730—£765.

(d) TRACER, within General Division, £210—£295.

Consideration will be given to the provision of housing accommodation if required, and the person appointed to (a) will receive an essential user's car allowance. Applicants for (c) should have a good knowledge of the building trade, particularly administrative estimating and costing.

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

Applications, giving names of two referees, to be sent to the Borough Engineer, Palace Avenue, Maidstone.

T. SCHOLES,  
Town Clerk. 1602

AIR MINISTRY require JUNIOR and SENIOR WORKERS UP in Quantities Division in London. Must be fully experienced and competent to Work Up entire Bills of Quantities. Candidates must hold O.N.C. or C. & G. (Quantities) or equivalent technical qualification. Financial assistance and time off given for recognised courses of study. Promotion and pension prospects. Five-day week with 18 days paid leave a year initially. Salary ranges (Junior) from £720 (at age 26) to £990 and (Senior) £794 (at age 26) to £1,065. Applicants must be natural born British subjects, should write stating age, qualifications and experience to the Manager, (PE.1234), Ministry of Labour, Professional and Executive Register, Atlantic House, Farringdon Street, London, E.C.4. No original testimonials should be sent. 1603

**HARLOW DEVELOPMENT CORPORATION**

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

(a) ARCHITECT, A.P.T. VI, £1,163—£1,390.

(b) ARCHITECT, A.P.T. V, £1,220—£1,375.

(c) ASSISTANT ARCHITECT, A.P.T. IV, £1,065—£1,220.

(d) ASSISTANT ARCHITECT, A.P.T. III, £880—£1,065.

(e) ASSISTANT ARCHITECT, A.P.T. II, £765—£880.

Appointments will be made at a salary within the scale according to qualifications and experience. Applicants for posts (a), (b), (c) and (d) must be Associate Members of the R.I.B.A. and for post (e) must have passed the Intermediate Examination of the Institute, and successful applicants in appropriate cases will on qualifying be placed in A.P.T. III.

Housing provided in suitable cases. Applications, stating age, qualifications, experience, etc., and post applied for, together with the names of two persons to whom reference may be made, to be addressed within 14 days to: The General Manager "Terlings," Harlow, Essex. 1593

**SHIPLEY URBAN DISTRICT COUNCIL**

Applications are invited from appropriately qualified persons for the following appointment:—

ARCHITECTURAL ASSISTANT, Special Grade (£785—£1,075).

The post is superannuable and subject to the provisions of the National Scheme of Conditions of Service. The commencing salary will be fixed according to experience and qualifications.

Housing accommodation will be provided if required. Applications giving age, details of training, qualifications and experience, together with the names and addresses of two referees, to be sent to the Engineer and Surveyor, Town Hall, Shipley, Yorkshire, by Monday, 27th June, 1960.

ERNEST PEARS,  
Clerk and Solicitor.

Town Hall,  
Shipley,  
Yorkshire. 1599

design  
in  
\*stone

The skill of our craftsmen is being exploited by an increasing number of quality-conscious architects, for whose guidance we have prepared technical literature (to A4 size, of course) covering a number of applications — the latest being FIREPLACES

\* HIGH FELL Westmorland Green Slate  
ORTON SCAR Limestone

Limestone & Green Slate Slab Co (Westmorland) Ltd.  
Appleby Road Kendal Phone Kendal 1246



# **BOROUGH OF BEBINGTON SENIOR ARCHITECTURAL ASSISTANT GRADE IV A.P.T.**

Applications are invited for the above post, commencing salary of which will be fixed according to qualifications and experience.

Applicants must hold appropriate architectural qualification and should also be capable of undertaking development schemes of housing and public buildings.

Application forms are available from the Borough Engineer and Surveyor, Town Hall, Bebington, Cheshire, and when completed should be returned to the Town Clerk so as to be received by him at the same address not later than first post on Friday, 17th June, 1960.

The candidate appointed, if married, and considered by the Council to be in need of housing at the time of appointment will be found accommodation within a reasonable period of time.

Canvassing will be a disqualification.  
**G. CHAPPELL,**  
Town Clerk.

Town Hall, Bebington. 1581

## **QUANTITY SURVEYING ASSISTANTS GRADE III REQUIRED BY AIR MINISTRY IN THE PROVINCES**

Duties include abstracting and billing, site measurement and preparation of estimates. Candidates must hold O.N.C. (Building or Builders (Quantities) or equivalent and have good experience under Quantity Surveyor or Building Contractor. Knowledge W.D. Schedule an advantage. Financial assistance and time off given for recognised courses of study. Promotion and pension prospects. Five-day week with 18 days' paid leave a year initially. Overseas tours for which special allowances granted. Salary ranges from £680 (at age 26) to £850. Commencing salary dependent upon age, qualifications and experience.

Applicants, who must be natural born British subjects, should write stating age, qualifications and previous appointments including type of work done, to Manager (P.E.2), Ministry of Labour, Professional and Executive Register, Atlantic House, Farringdon Street, London, E.C.4. No original testimonials should be sent. Candidates selected will normally be interviewed in London and certain expenses reimbursed. Only applicants selected for interview will be advised. 1589

## **STAFFORDSHIRE COUNTY COUNCIL COUNTY ARCHITECT'S DEPARTMENT**

Applications are invited from suitably qualified candidates for the following posts:—

### **ASSISTANT ARCHITECTS**

Special Grade (£785-£1,070). These posts are particularly suitable for recently qualified Architects.

Grade A.P.T. IV (£1,065-£1,220).

Candidates must be Associates of R.I.B.A., and be suitably experienced.

Grade A.P.T. II (£765-£880). Candidates must hold the Intermediate R.I.B.A.

The appointments will be subject to:—

(a) The National Scheme of Conditions of Service.

(b) The Local Government Superannuation Acts and the passing of a medical examination.

The County Council are prepared to grant a lodging allowance of 35s. per week to married applicants maintaining a home outside the geographical County for a period of six months, also second-class rail travel home every second month during the initial six months. The Council are also prepared to give consideration to the granting of financial assistance in appropriate cases towards removal expenses.

There is a possibility that housing may be made available in special circumstances.

Forms of application, which must be returned by the 18th June, 1960, may be obtained from the County Architect, Green Hall, Lichfield Road, Stafford.

**T. H. EVANS,**  
Clerk of the County Council. 1594

## **WEST SUSSEX COUNTY COUNCIL PLANNING DEPARTMENT**

Applications are invited for the undermentioned appointments:—

### **SENIOR PLANNING ASSISTANT (DEVELOPMENT PLAN)**

Salary: Grade A.P.T. IV-£1,065 × £55 (1) × £50 (2)-£1,220. 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 ASSISTANT**

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 30th June, 1960.

**T. C. HAYWARD,**  
Clerk of the County Council. 1648

## **HAYES & HARLINGTON U.D.C.**

Applications are invited for:—

(a) ASSISTANT ARCHITECT. Salary within Special Grade, i.e., £785-£1,070 p.a. (b) ARCHITECTURAL ASSISTANTS (two). Salary within Grade A.P.T. II, i.e., £765-£880 p.a., plus appropriate London weighting in all cases, 21-25 years, 425 p.a., 26 years and over £40 p.a. Preference will be given to candidates for (a) who have passed the examination for Associateship of the R.I.B.A. and who must be capable of preparing sketch designs, full working drawings, specifications, supervision of building contracts, etc. Applicants for (b) should have passed the Intermediate examination of the R.I.B.A. and must have good general architectural experience. Five-day week. Housing accommodation if required will be made available for (a) and for one of the appointments (b). Further particulars and conditions of service and form of application obtainable from the undersigned, which when completed must be returned by 27th June, 1960.

**GEORGE HOOPER,**  
Clerk and Solicitor.

Town Hall, Hayes, Middlesex. 1660

## **MOUNTAIN ASH URBAN DISTRICT COUNCIL APPOINTMENT OF ASSISTANT ARCHITECT**

Applications are invited for the above appointment in the Department of the Council's Architect.

The conditions of employment will be in accordance with the National Scheme of Conditions of Service, and the appointment will be remunerated in accordance with A.P.T. Grade II (£765-£880).

The appointment will be supernumerary subject to one month's notice on either side and the successful applicant will be required to pass a medical examination.

Applications stating age, qualifications and experience, accompanied by copies of two recent testimonials, must reach the undersigned not later than 23rd June, 1960.

Housing accommodation will be provided if required.

**R. GWYNNE RICHARDS,**  
Clerk of the Council.

Town Hall, Mountain Ash. 1644  
3rd June, 1960.

## **WEDNESFIELD URBAN DISTRICT COUNCIL ASSISTANT ARCHITECT**

Applications are invited for an experienced Architect for the above position at a salary in accordance with A.P.T. Grade IV (£1,065 to £1,220).

Wednesfield has a population of approximately 31,000, and is developing rapidly.

A large programme of varied schemes has to be undertaken, and the district is a reception area for overspill population.

The National Joint Council Conditions of Service will apply and the successful candidate will be required to contribute to a Superannuation Scheme and also undergo a medical examination.

Housing accommodation will be provided, if necessary, and reasonable removal expenses will be paid.

Applications stating age, qualifications, experience, with the names of two referees must be received by the undersigned by not later than 24th June, 1960.

**J. HENWOOD JONES,**  
Clerk of the Council.

Council Offices, Alfred Squire Road, Wednesfield, Staffs. 1645

## **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, £785-£1,070 per annum, commencing according to qualifications and experience.

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 Wednesday, 22nd June, 1960.

**S. R. H. LOXTON,**  
Town Clerk. 1646

## **BOROUGH OF PORT TALBOT APPOINTMENT OF PLANNING ASSISTANT**

Applications are invited for the appointment of a Planning Assistant within the A.P.T. Grade I/II (£610-£880).

The duties consist mainly of Development Control, etc., and the applicants should have had experience of such work. The appointment will be subject to the Scheme of Conditions of Service and the provisions of the Local Government Superannuation Acts.

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

The Council will give consideration to the provision of housing accommodation if required by the successful applicant.

Applications, stating age, previous appointments, qualifications, experience and accompanied by names of two referees should be forwarded to the undersigned not later than noon, 17th June, 1960.

**W. KING DAVIES,**  
Town Clerk.

Municipal Buildings, Port Talbot, Glam. 1619

## **STAFFORDSHIRE COUNTY COUNCIL COUNTY PLANNING AND DEVELOPMENT DEPARTMENT**

Applications are invited for a SENIOR PLANNING ASSISTANT at Headquarters in the County Planning and Development Department on A.P.T. Grade V (£1,220-£1,375 per annum).

This is a new post, and the person appointed will be required to act as personal assistant to the County Planning and Development Officer. He should have had a wide general experience in the work of a Planning Department, covering Development Plan, Development Control and Administration. Applicants should be Corporate Members of the Town Planning Institute and should preferably hold an additional recognised qualification in architecture, engineering or surveying.

The Council are prepared to grant lodging allowances of 35s. per week for a period of six months and second class railway travel home every two months during the initial six months to married applicants maintaining a home outside the geographical County. Consideration will also be given to the granting of financial assistance in appropriate cases towards removal expenses.

Applications giving details of age, education, qualifications, present and previous appointments, experience and the names of two persons to whom reference may be made should be sent to D. W. Riley, County Planning and Development Officer, 41A, Eastgate Street, Stafford, not later than 20th June, 1960.

Relationship to any member or senior officer of the County Council must be disclosed. Canvassing will disqualify.

**T. H. EVANS,**  
Clerk of the County Council. 1615

## **BOROUGH OF PORT TALBOT APPOINTMENT OF JUNIOR ARCHITECTURAL ASSISTANT**

Applications are invited for the appointment of a Junior Architectural Assistant in the Borough Engineer's Department. Salary to be in accordance with A.P.T. Grade I (£610-£765). Candidates should have had Drawing Office experience. The appointment will be subject to the Scheme of Conditions of Service and the provisions of the Local Government Superannuation Acts.

Applications, stating age, experience and accompanied by names of two referees should reach the undersigned not later than noon, 17th June, 1960.

**W. KING DAVIES,**  
Town Clerk.

Municipal Buildings, Port Talbot, Glam. 1618

## **THE ROYAL TECHNICAL COLLEGE OF EAST AFRICA AND PROPOSED UNIVERSITY COLLEGE IN NAIROBI**

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## **CUMBERLAND COUNTY COUNCIL COUNTY ARCHITECT'S DEPARTMENT**

Applications are invited for the following appointments to the Architectural Staff. N.J.C. Service Conditions. Posts pensionable. Subject to medical examination. Possibility of housing accommodation in the near future. Appointments will be made within the scales shown according to ability and experience.

(a) ASSISTANT ARCHITECT. Special Grade.

£785-£1,070. Must be A.R.I.B.A.

(b) ASSISTANT ARCHITECT. Special Grade/A.P.T. Grade IV. £785-£1,070-£1,220. Must be A.R.I.B.A., preferably with Schools experience.

(c) ASSISTANT ARCHITECT. A.P.T. Grade IV. £1,065-£1,220. Must be A.R.I.B.A., with Schools experience and handling of large contracts.

Application forms and further particulars obtainable from A. Lumb, A.R.I.B.A., Deputy County Architect, 15, Portland Square, Carlisle, to whom completed applications should be returned not later than 4th July, 1960.

**G. N. C. SWIFT,**  
Clerk of the County Council. 1649

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Application forms, with full particulars, obtainable from Harold E. Buteux, A.R.I.B.A., A.M.T.P.I., Chief Technical Officer, 19, Palmerston Place, Edinburgh, 12. 1668

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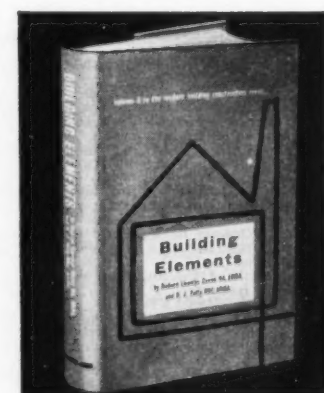
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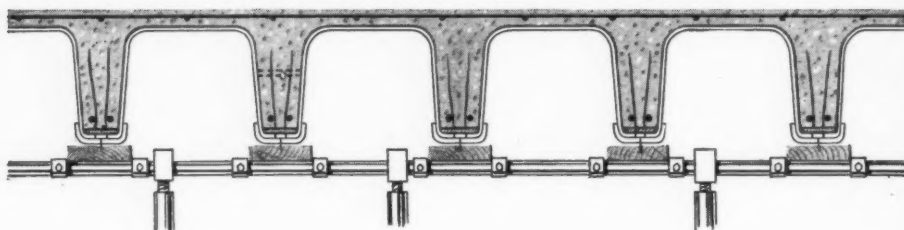
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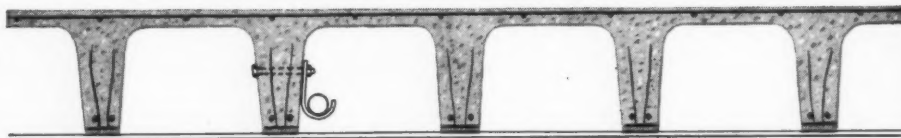
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