

THE ARCHITECTS' JOURNAL



★ 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 li one week, II to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

Standard contents

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

NEWS and COMMENT

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Prices

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CURRENT BUILDING

Major Buildings described:

Details of Planning, Construction,

Finishes and Costs

Buildings in the News

Building Costs Analysed

Architectural Appointments

Wanted and Vacant

A 3391]

[Vol. 131

THE ARCHITECTURAL PRESS

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Registered as a Newspaper.

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.	Redditch 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
FBBDO	Fibre Building Board Development Organization Ltd. (Fidor), Stafford House, Norfolk Street, W.C.2.	Covent Garden 3008
FBI	Federation of British Industries. 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission. 25, Savile Row, W.1.	Regent 0221
FCMI	Federation of Coated Macadam Industries. 37, Chester Square, S.W.1.	Sloane 1002
FDMA	The Flush Door Manufacturers Association Ltd. Trowell, Nottingham.	Ilkeston 623
FLD	Friends of the Lake District. Pennington House, nr. Ulverston, Lancs.	Ulverston 201
FMB	Federation of Master Builders. 33, John Street, W.C.1. Tel.: Chancery 7583 (6 lines)	
FPC	The Federation of Painting Contractors, St. Stephen's House, S.W.1.	Whitehall 3902
FRHB	Federation of Registered House Builders. 82, New Cavendish Street, W.1.	Langham 4341
GPDA	Gypsum Plasterboard Development Association. 11, Ironmonger Lane, E.C.2.	Monarch 8888
GC	Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
GG	Georgian Group. 2, Chester Street, S.W.1.	Belgravia 3081
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors. 29, Belgrave Square, S.W.1.	Belgravia 3755
ICA	Institute of Contemporary Arts. 17-18, Dover Street, Piccadilly, W.1.	Grosvenor 6186
ICE	Institution of Civil Engineers. 1, Great George Street, S.W.1.	Whitehall 4577
IEE	Institution of Electrical Engineers. Savoy Place, Victoria Embankment, W.C.2.	Temple Bar 7676
IES	Illuminating Engineering Society. 32, Victoria Street, S.W.1.	Abbey 5215
IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers. 49, Cadogan Square	Sloane 1601/3158
IIBDID	Incorporated Institute of British Decorators and Interior Designers. 37, Soho Square, W.1.	Gerrard 5056

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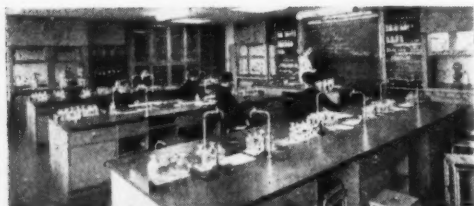
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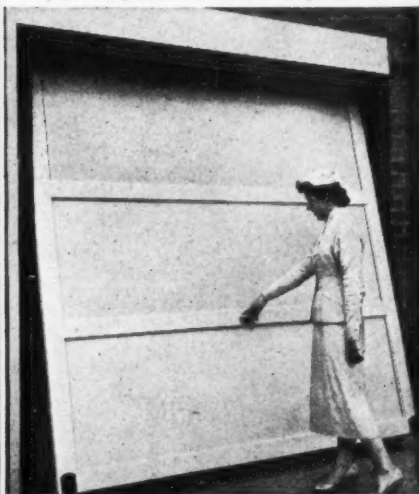
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Place:

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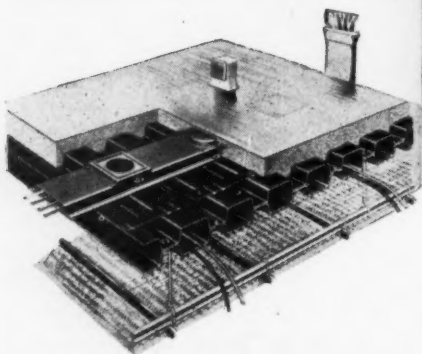
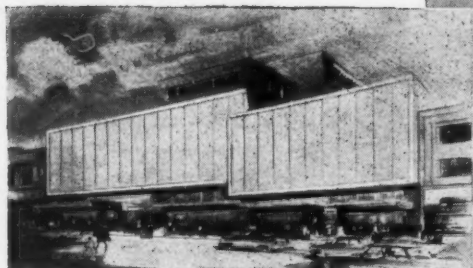
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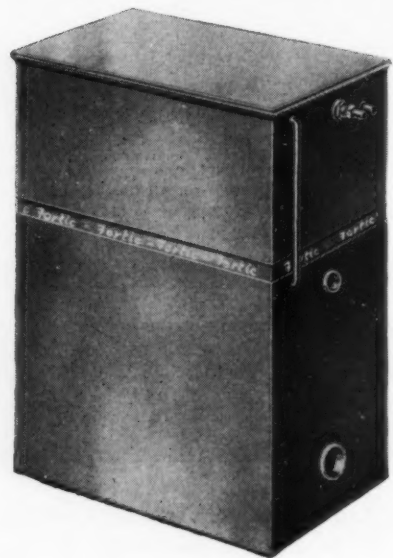
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A large, stylized graphic for an Escaboard advertisement. At the top center is a circular logo with a crown and the letters 'SCA'. Below this, the word 'ESCABOARD' is written in large, bold, italicized capital letters, set against a dark, angular background that resembles a large arrow pointing downwards. Below the main graphic, a group of stylized, glowing figures of people in mid-20th-century attire are shown in various poses, some pointing upwards. At the bottom of the graphic, the text '-AN IMMEDIATE SUCCESS' is written in bold, italicized capital letters.

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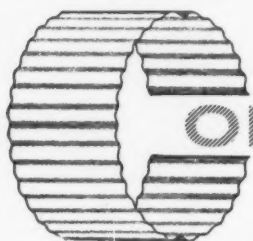
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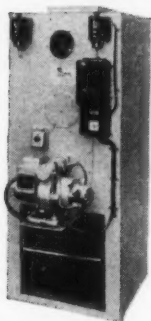
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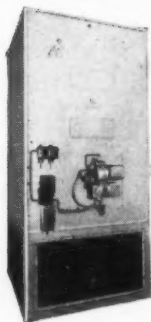
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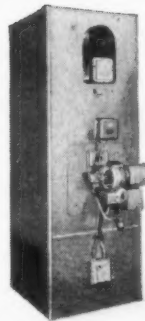
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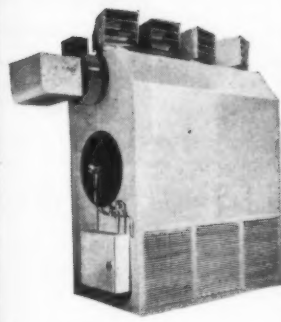
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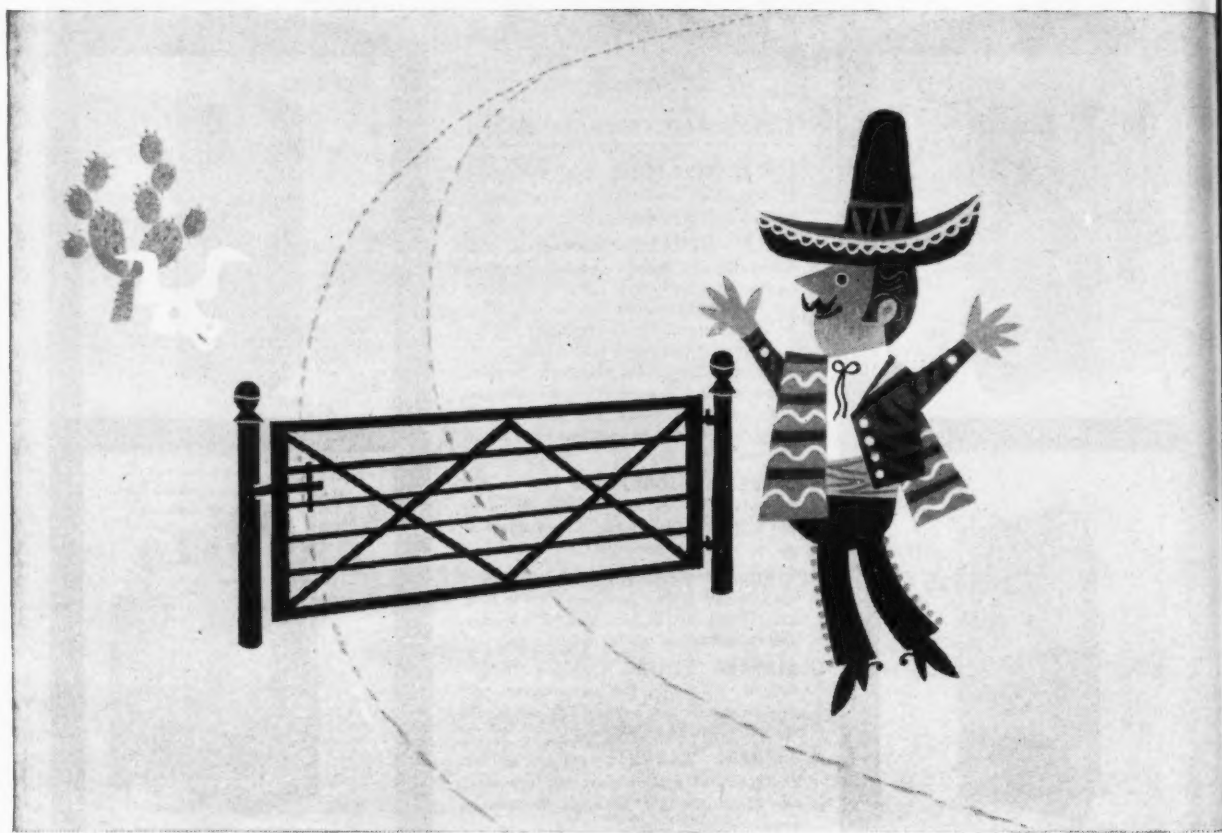
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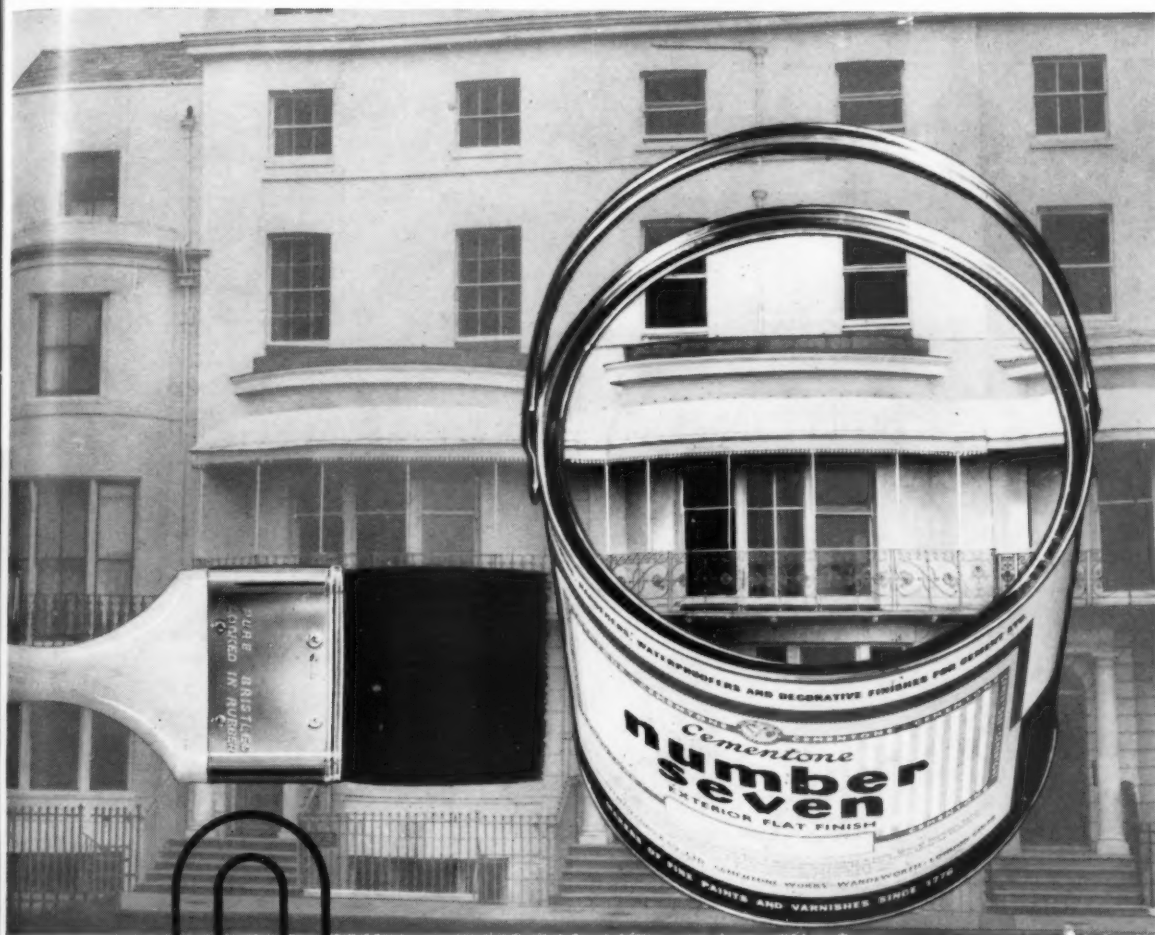
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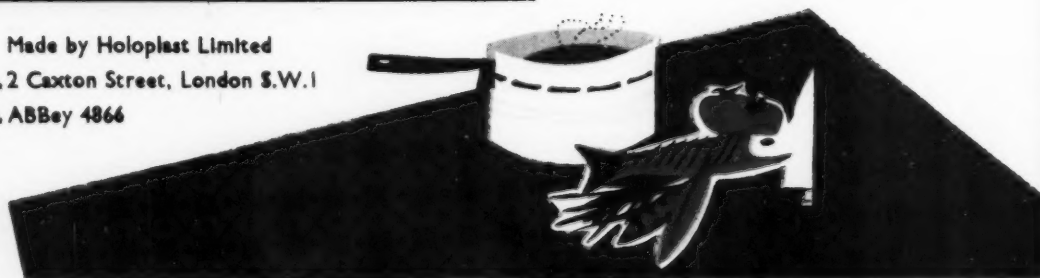
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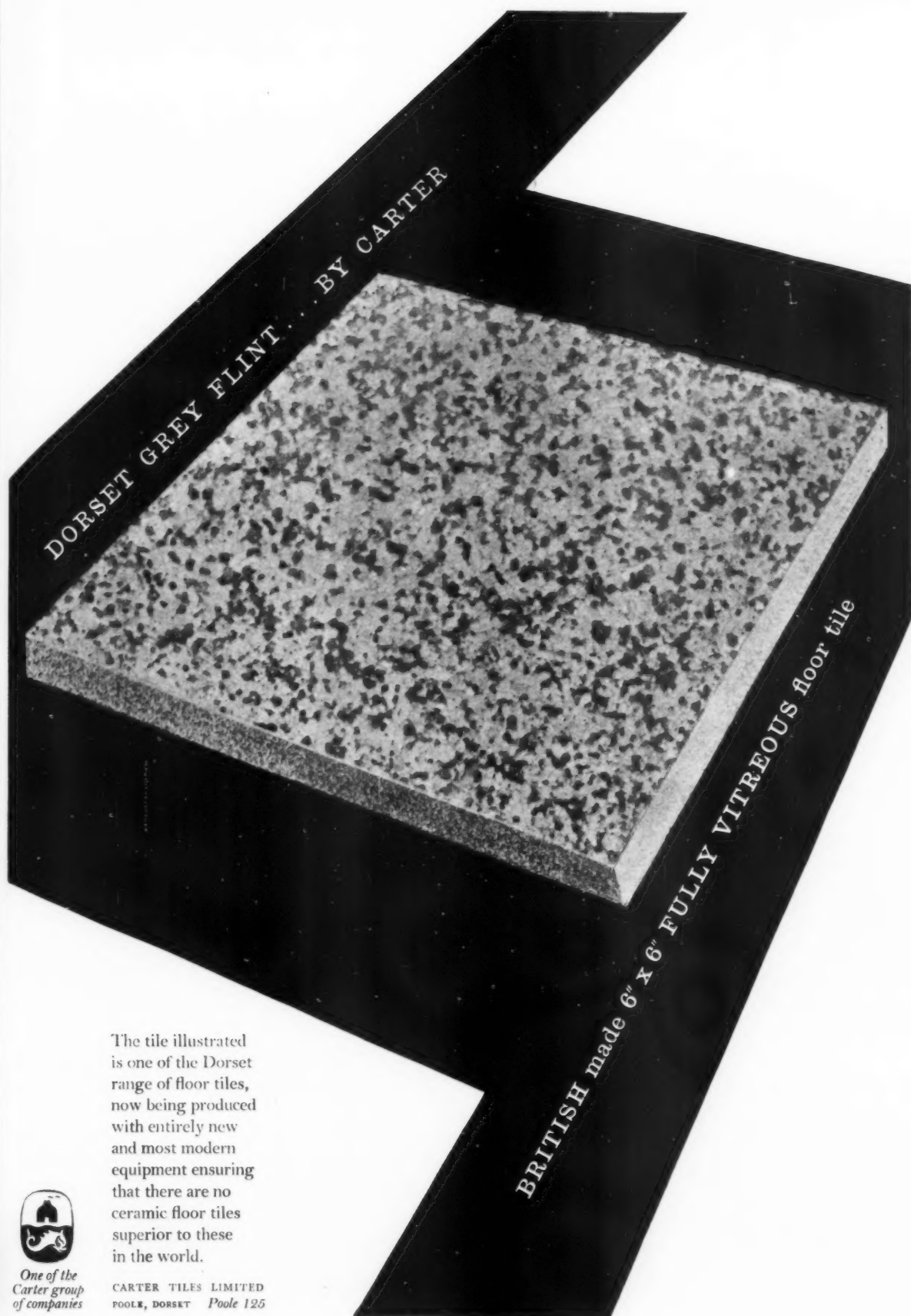
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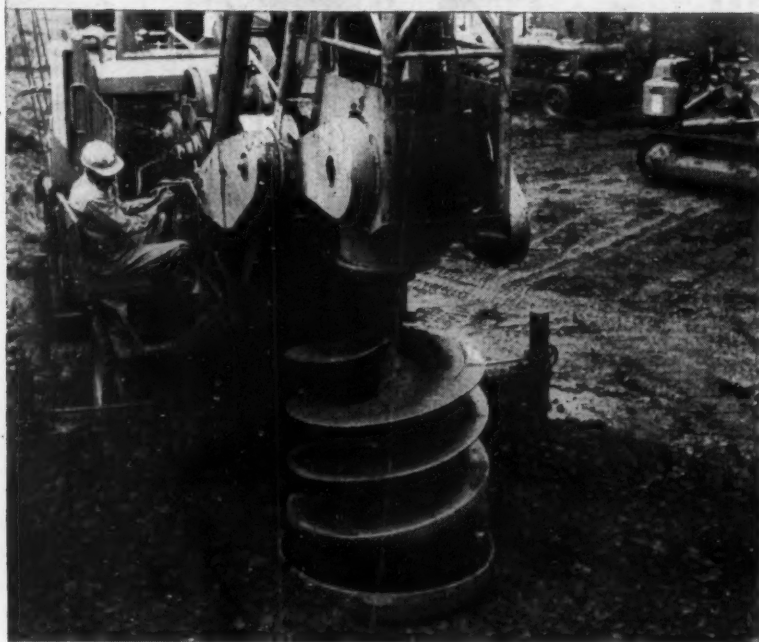
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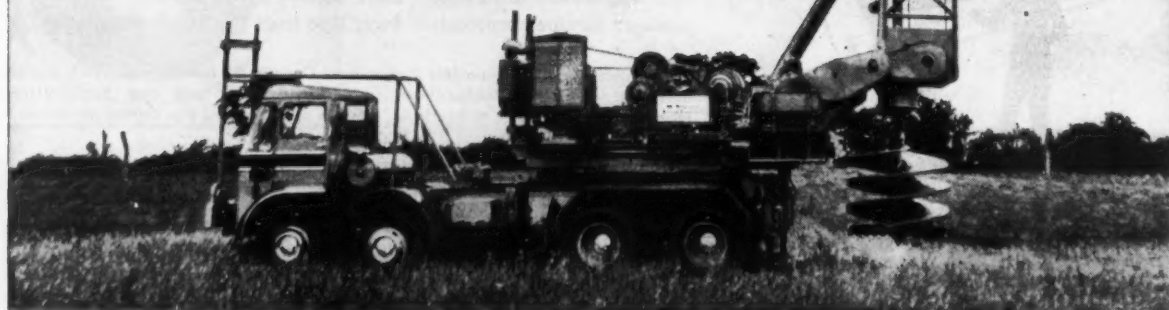
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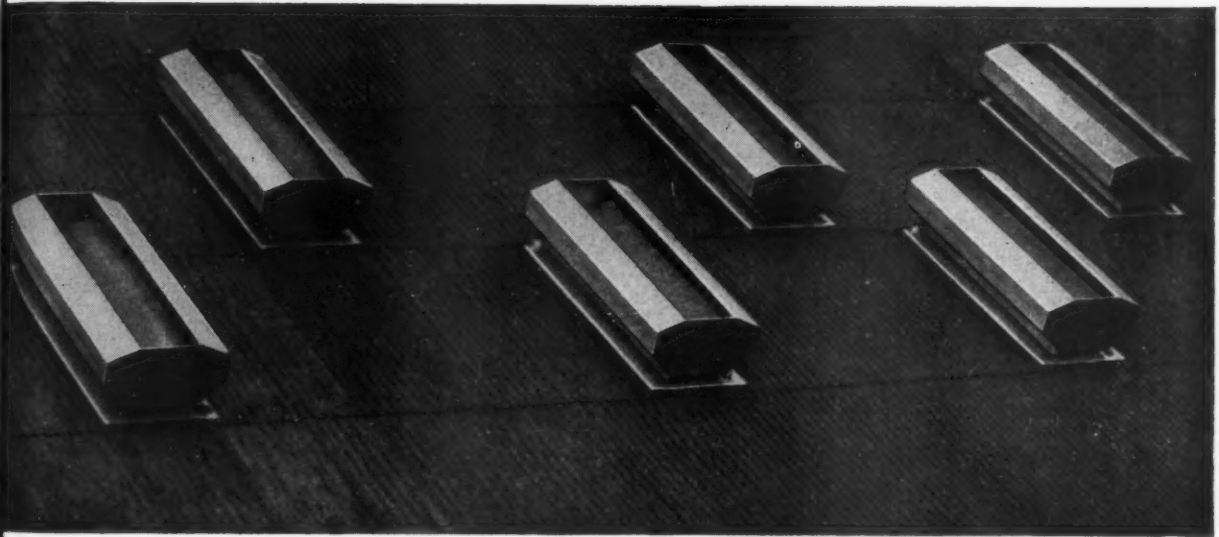
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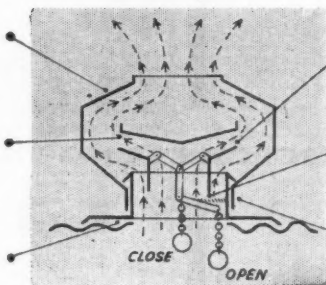
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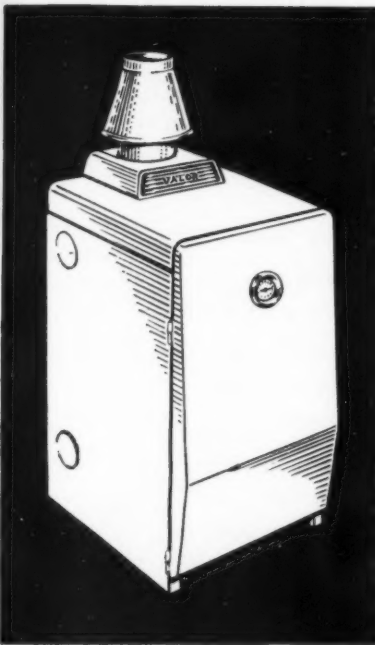
*Aldermanbury House, Aldermanbury, London, E.C.2
Architects: Montagu Evans & Son*



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MODEL SA 35 has an output of 30,000 B.T.U.'s constant loading suitable for up to 6 radiators (150 sq. ft. surface) and 30 gallons of hot water. Maximum fuel consumption 2 pints per hour.

MODEL SA 25 has an output of 15,000 B.T.U.'s constant loading suitable for 2 to 3 radiators (50 sq. ft. surface) and 30 gallons of hot water. Maximum fuel consumption 1 pint per hour.



Why Valor leads the field!

- Small and unobtrusive
- Easy to install
- Highest recovery rate of any oil-fired boiler
- Burner gives extremely economical running on kerosine (paraffin) — does not require any electrical supply
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- Thermostat controls hot water temperature
- White stove-enamelled steel casing complete with vitreous-enamelled draught-diverter
- Dial gauge thermometer on front
- Guaranteed for twelve months

Valor

OIL-FIRED BOILERS

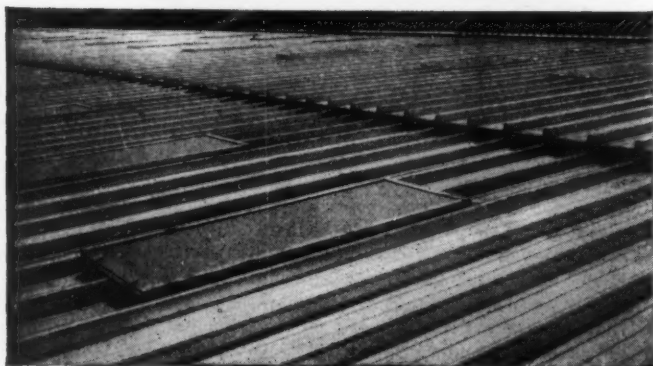
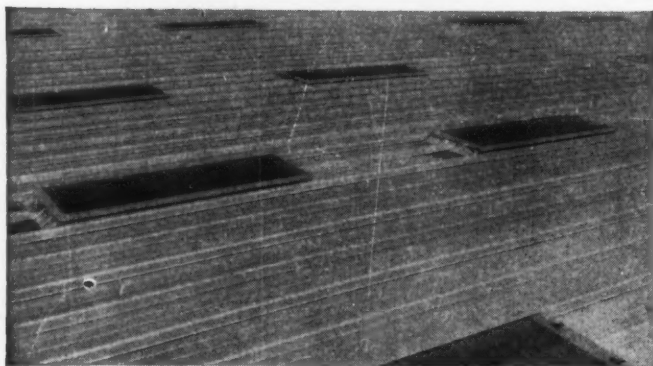
For further details please contact:

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



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SNAPDEK is a fire-proof roof decking



Snapdek, being of aluminium construction, is completely fire-proof and requires no protective coating.

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And Snapdek has many other advantages:—

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- durability
- ease and speed of erection
- lightness of weight
- strength and safety
- adaptability
- functional good looks
- freedom from leaks
- LOW INITIAL COST AND
NO MAINTENANCE COST**

50 ft. Span Decking laid at 4° pitch including 4' 0" long deadlights incorporated into sheets. Fixed by Messrs. Rudders & Paynes Ltd., Birmingham.

SPECIFY

SNAPDEK

Regd. Trade Mark

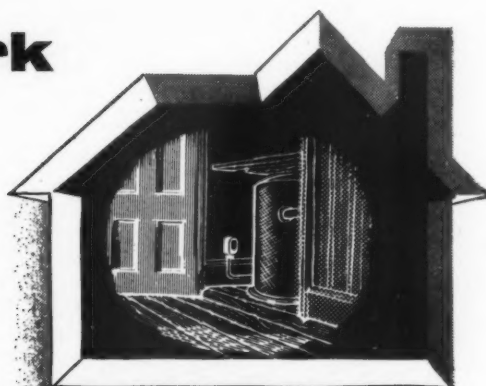
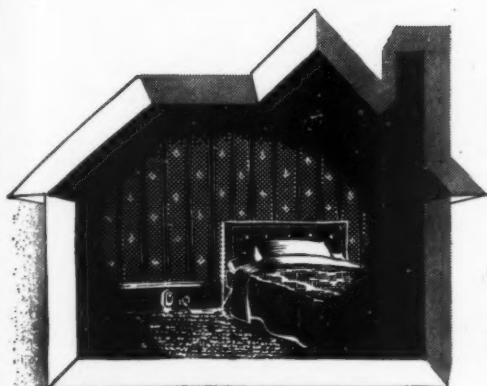
Prov. Patents Nos.
32555, 36279

THE MODERN INSULATED ALUMINIUM ROOF DECKING

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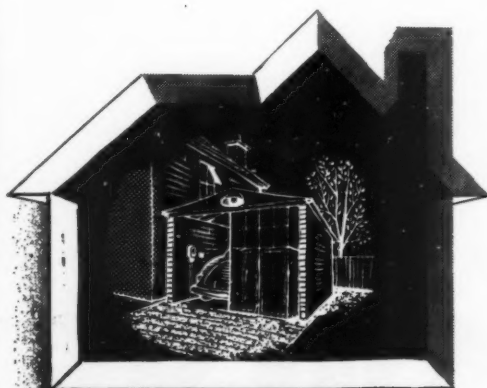
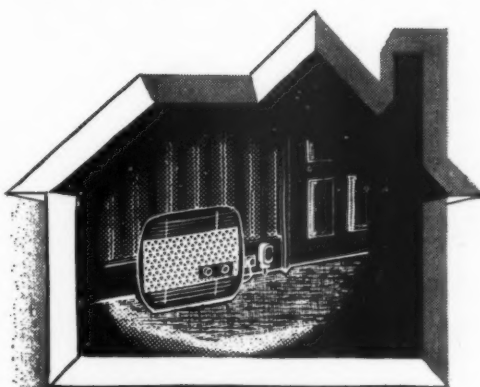
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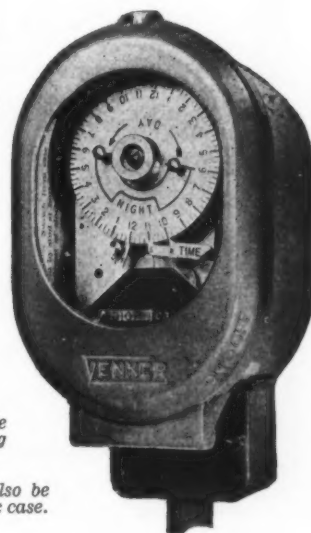


about the house

The average home today relies more and more on electrical equipment which can prove expensive if it is not properly controlled . . . immersion and under floor heating, for example. The Time Switch type MD1QP illustrated can switch an immersion heater off at night as well as on again in the morning while the family are still sleeping, saving power overnight but still providing hot water when it is needed. It can also control an electric blanket, porch or drive lighting, or a wireless set used as an early morning alarm.



Once set, the Time Switch needs no attention. The clock is electrically actuated; an external switch allows the appliance which it controls to be turned off when it is not needed. There are many variations of the Venner Time Switch, all described in our No. 1 series of leaflets, free on request.



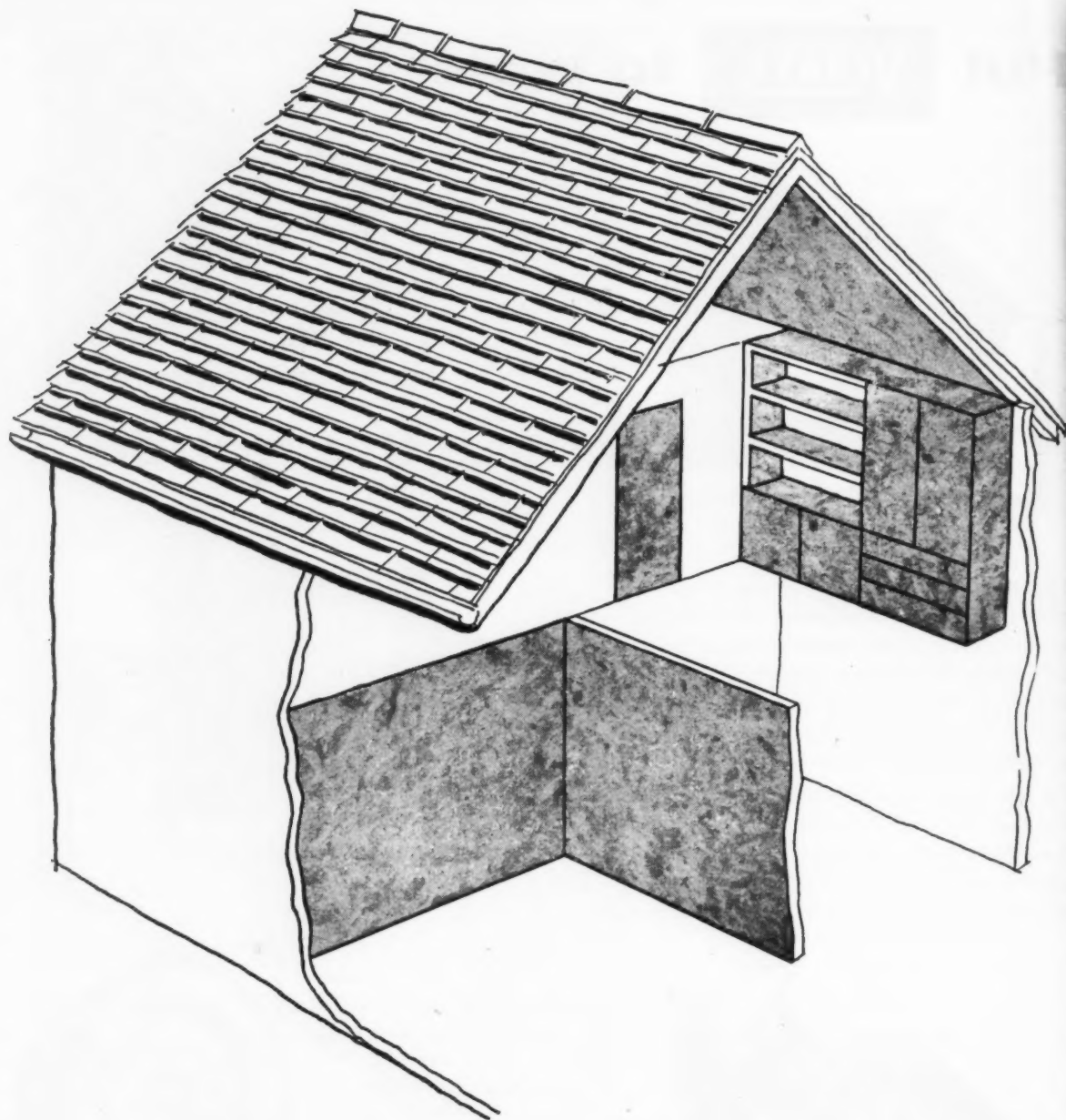
A cable cover is available for conduit wiring. Rating 20 amps. 200/250v. A.C.

The Time Switch can also be supplied in an all-plastic case.

Venner Limited, Kingston By-Pass,
New Malden, Surrey.
Telephone: MALden 2442

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Time Switches



the board you can trust — to do so many jobs, so well

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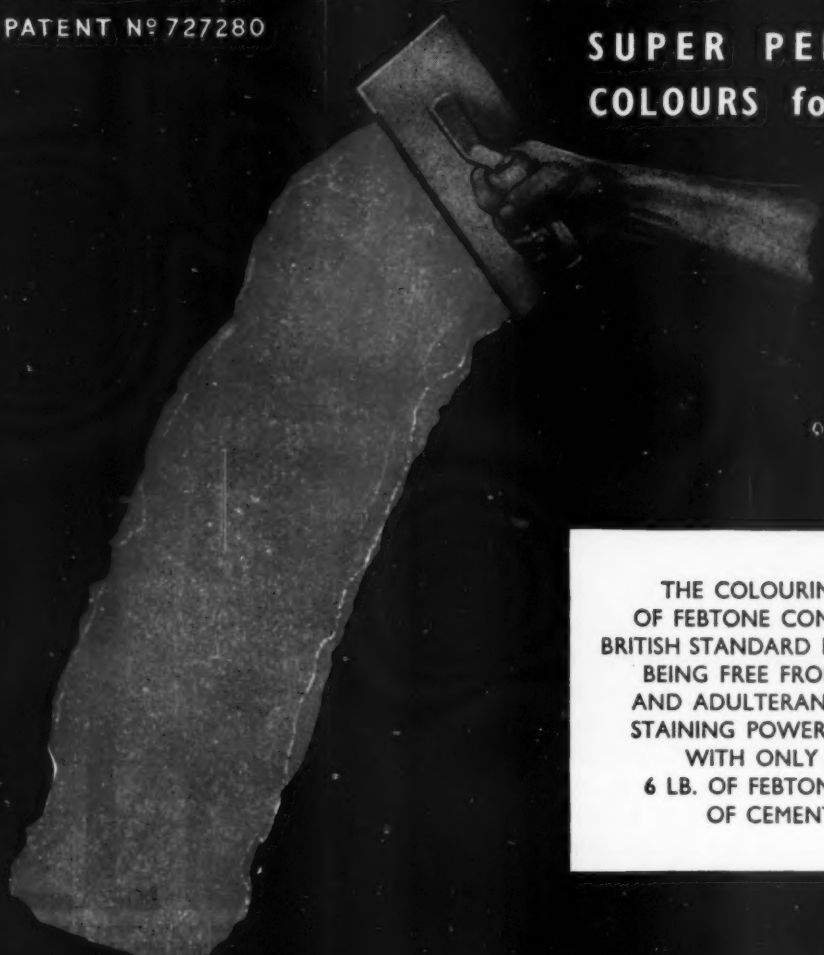
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WPS 85

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It costs LESS for fuel....
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A modern solid fuel boiler, to burn Hard Coke, costs much less than any alternative source of heat. Combined with a small-bore system of piping it provides Central Heating and complete domestic hot water services. With full automatic control it costs far less to install, is cheaper to run and can compete in heating efficiency with any other system.

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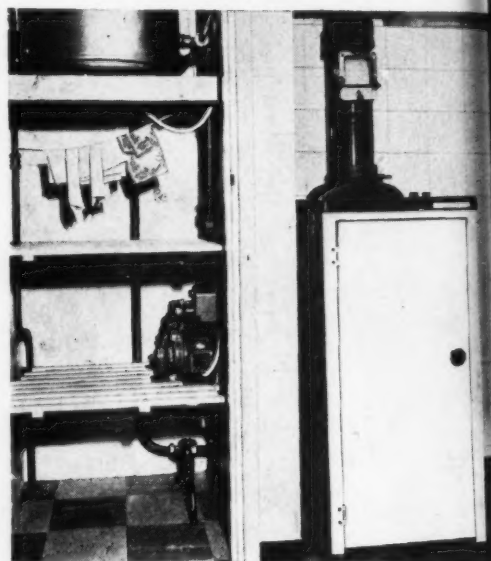
The addition to sectional boilers of an inexpensive, easily-applied conversion unit, thermostatically-controlled, with time-switch will (1) reduce fuel costs, (2) lengthen periods between refuelling, (3) provide automatic heat control, (4) reduce clinkering, (5) enable the boiler to be banked from Friday evening to Monday morning.

* * * * *

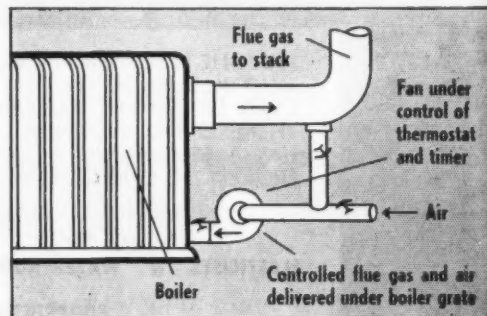
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It is a smokeless fuel made in coke ovens from specially selected coal which is washed and crushed before carbonisation. Users prefer it because it is uniformly sized, consistent in quality and their appliances operate with greater efficiency.

HCI 23



Boiler, fired with Hard Coke, serving a small bore system. The circulating pump can be seen inside the airing cupboard.



The diagram shows a G.A.P. conversion unit fitted to a sectional boiler for Central Heating.

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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.

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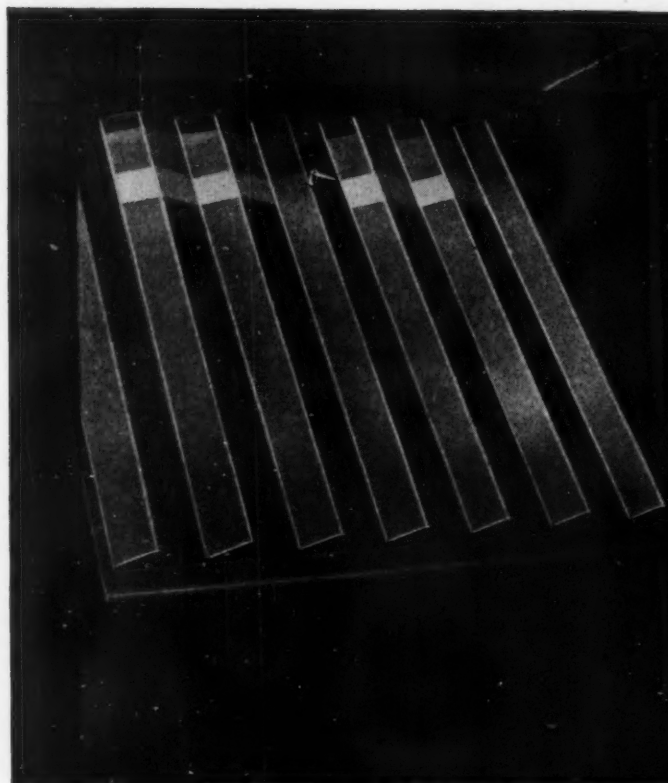
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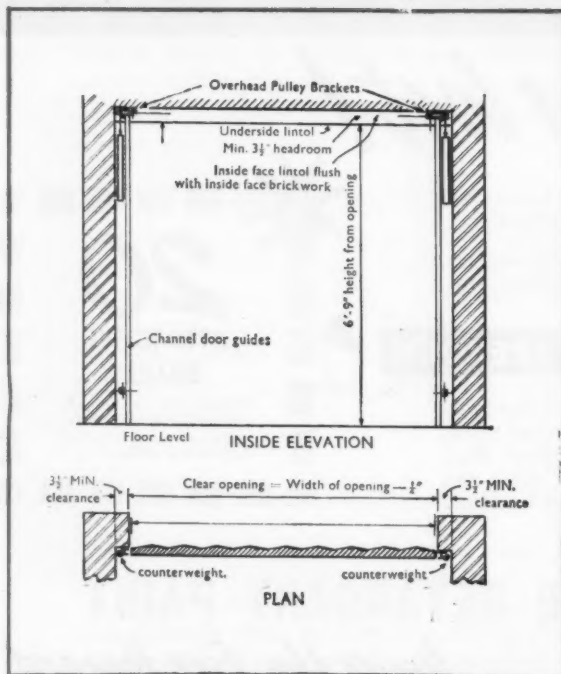


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- * Light panels available at little extra cost.

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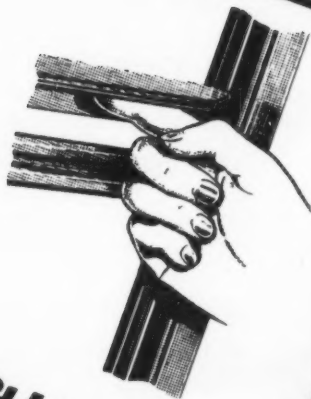
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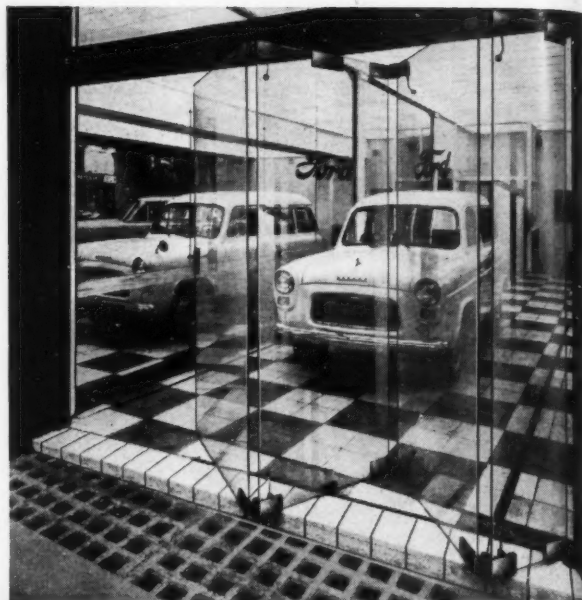
11

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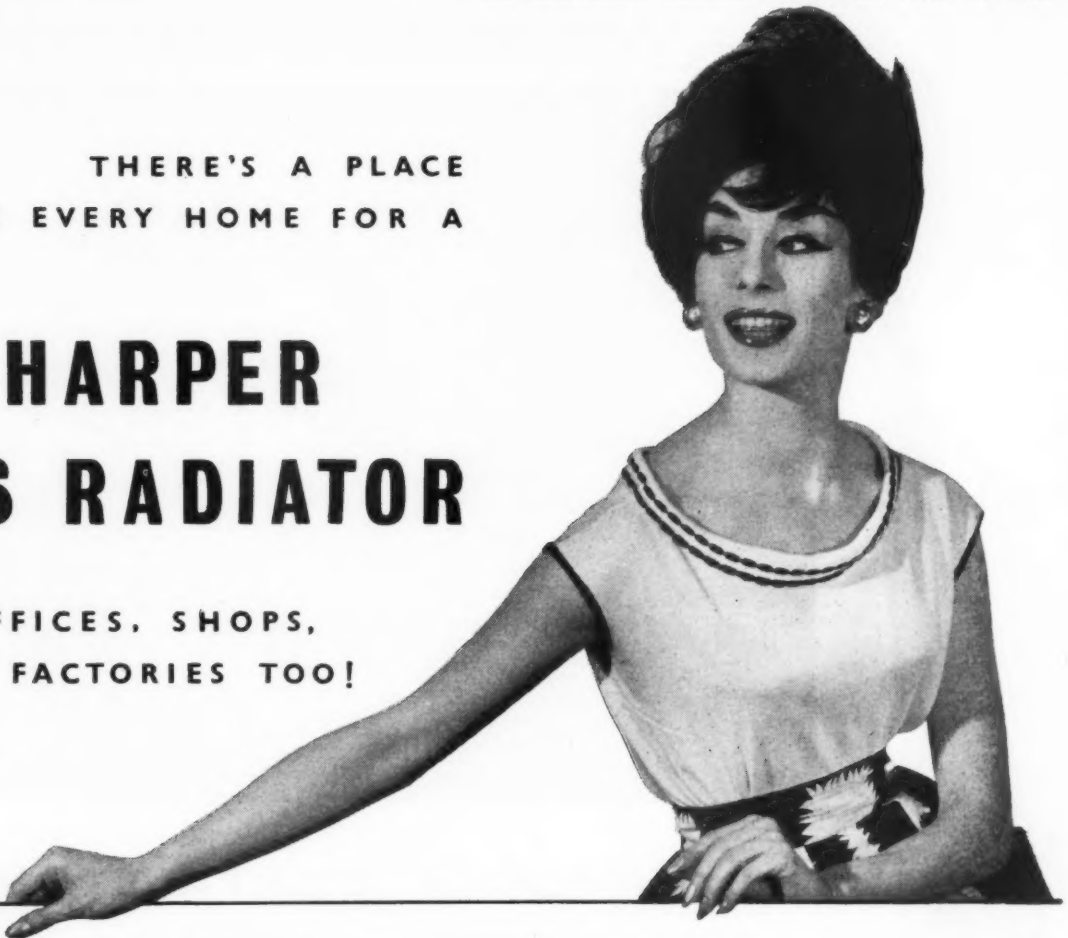
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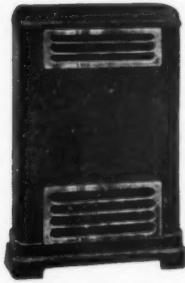
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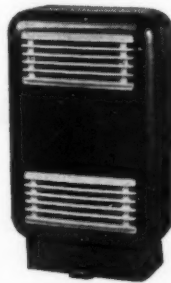
OFFICES, SHOPS,
FACTORIES TOO!



Model No. 3161. Finish
—Base and body heat
resisting coinage bronze
paint. Baffle vitreous
enamelled. Louvers cream
vitreous enamelled.
Burner—cast iron with
luminous gray jets. $\frac{1}{2}$ in.
gas inlet, can be fitted
for R.H. or L.H. feed.
Governor—constant
pressure. Gas Consump-
tion—18 cu. ft. per hour
at $2\frac{1}{2}$ in. W.G. Maxi-
mum Output per hour
8,100 B.Th.U. at 500
c.v. Dimensions—Height
29 $\frac{1}{2}$ in. Width 17 $\frac{1}{2}$ in.
Depth 7 in. Weight 42 lb.



Model No. 3160. Finish
—Heat resisting coinage
bronze. The top louvre
and the door (which has
concealed hinges) are
cream vitreous enamelled.
Burner—cast iron with
luminous gray jets. $\frac{1}{2}$ in.
B.S.P. inlet for R.H. or
L.H. feed. Governor—
Constant pressure. Gas
Consumption 12 cu. ft.
per hour at $2\frac{1}{2}$ in. W.G.
Maximum Output per
hour—5,400 B.Th.U. at
500 c.v. Dimensions—
Height 25 in. Width
17 in. Depth 6 $\frac{1}{2}$ in.
Weight 31 $\frac{1}{2}$ lb.

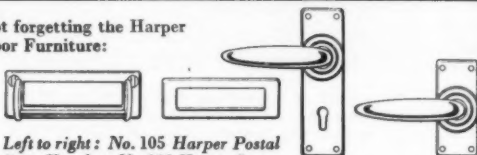


Model No. 4008. Finish
—Base and body heat
resisting coinage bronze
or pearl blue. Baffle
vitreous enamelled.
Louvers cream vitreous
enamelled. Burner—Cast
iron with luminous gray
jets. $\frac{1}{2}$ in. gas inlet can
be fitted for R.H. or
L.H. feed. Governor—
Constant Pressure. Gas
Consumption—8 cu. ft.
per hour at $2\frac{1}{2}$ in.
W.G. Maximum Output
per hour—3,600 B.Th.U.
at 500 c.v. Dimensions—
Height 20 $\frac{1}{2}$ in. Width
2 $\frac{1}{2}$ in. Depth 5 $\frac{1}{2}$ in.

Harper radiators make plan-
ning so much easier, blend
happily with most colour
schemes yet they're eco-
nomical and require virtually
no maintenance. No won-
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Also makers of Harper Castings, Harper Meehanite and Harper Ductile Castings.

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Door Furniture:

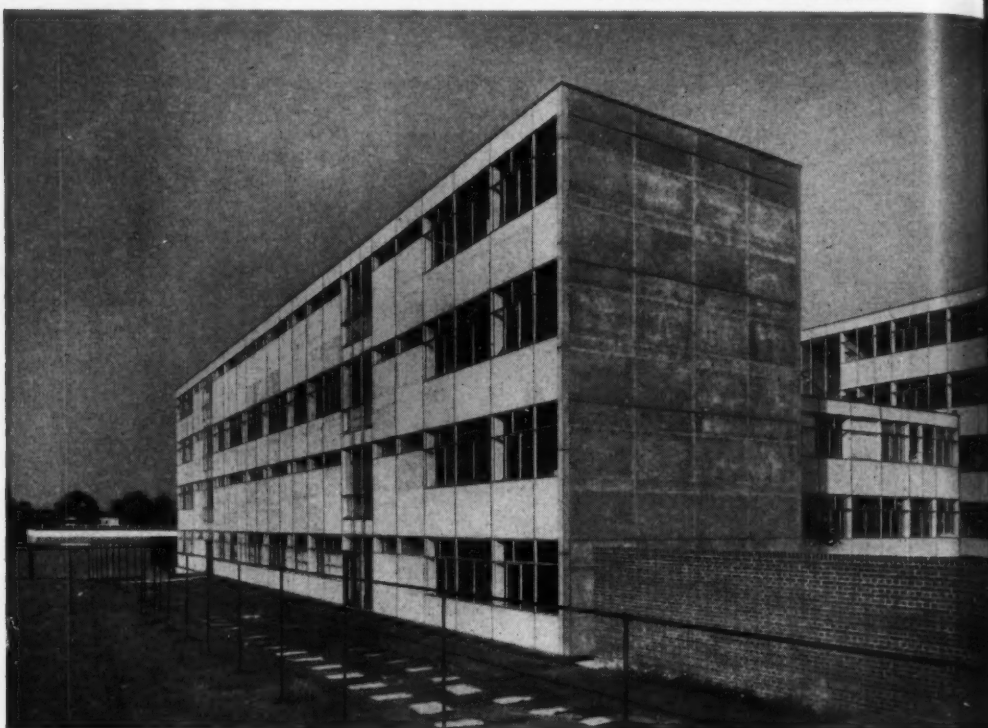


Left to right: No. 105 Harper Postal
Door Knocker, No. 110 Harper Letter
Plate, No. 135 Harper Mortice Lock
and No. 130 Mortice Latch.

HARPER

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New Technical College for the Hertfordshire County Council at Letchworth, with aluminium curtain walling by GARDINER, SONS & CO. LTD. No back-up wall is used and mullions have been dispensed with by use of interlocking framework. County Architect: G. C. Fardell, M.B.E., A.R.I.B.A. Former County Architect: The late C. H. Aslin, C.B.E.

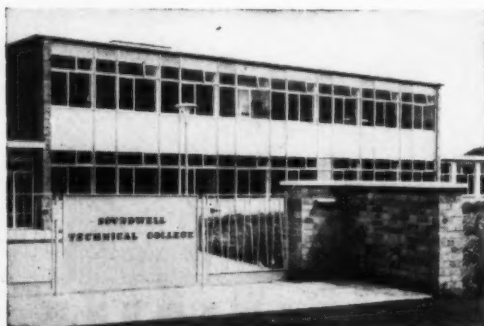


TOMORROW'S CURTAIN WALLING

—already taking shape with

ALCAN ALUMINIUM

Lighter, stronger, and more quickly erected than conventional wall structures, the curtain walling and windows of today and tomorrow made of ALCAN aluminium are better than ever before. In its natural clean finish, or colourfully anodised, aluminium presents no problems of rust and lessens the cost of maintenance.



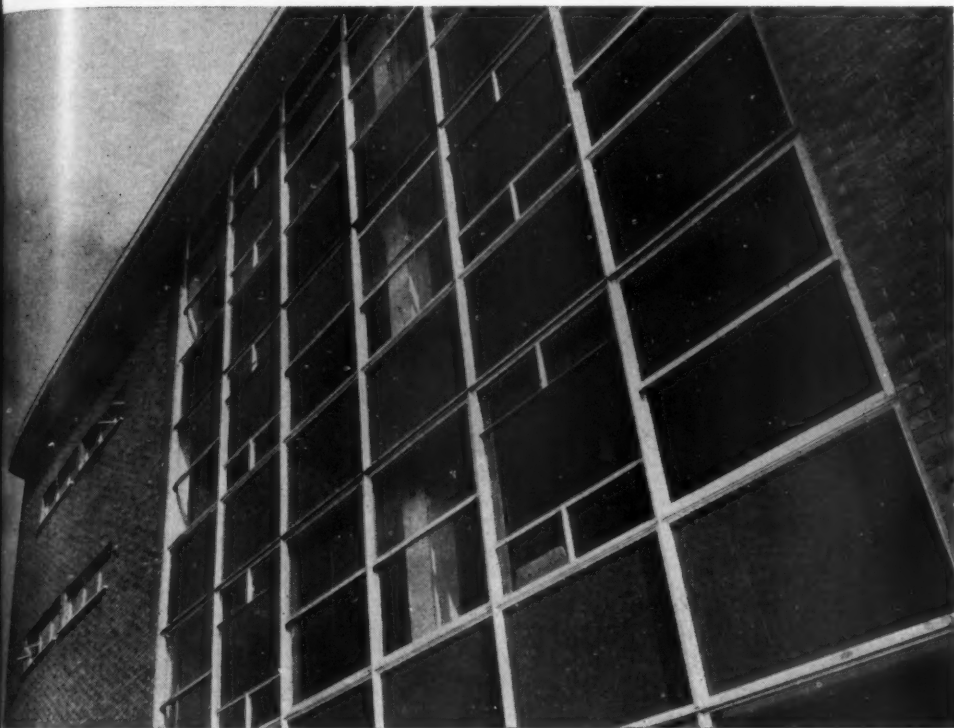
This view of the Soundwell Technical College, Kingswood, Bristol, shows the aluminium Panelgard curtain walling supplied by GARDINER. Architect: R. F. Fairhurst, Dipl. Arch. (L'pool), A.R.I.B.A., A.M.T.P.I.



I.C.T. factory at Castlereagh with aluminium curtain walling construction. One extruded section was used to frame the curtain wall at head, sill and jambs. Architects: Smyth & Cowser, R.F.R.I.B.A.



Aldridge 4 F.E. Grammar Technical School—another example of the use of 'Alwil' anodised curtain walling which is made by ALLAN H. WILLIAMS LTD. of Coventry. Architect: A. C. H. Stillman, F.R.I.B.A.



ING the architect and designer

ALCAN aluminium means:

- Freedom to create with no raw material limitations
- An opportunity to demand hollow or solid sections to conform with the most intricate designs
- Thinner, lighter, permanent walls, with a wide range of architectural expression
- Speedy erection

UM the building owner or occupier

ALCAN aluminium means:

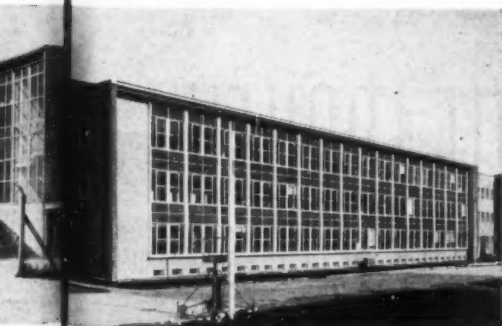
- More floor space due to thinner wall construction
- Lower fuel costs through more efficient insulation
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- No unsightly rusting or flaking, no painting necessary—and therefore lower maintenance costs throughout the life of the building

The advantages of aluminium are at their greatest with ALCAN aluminium. ALCAN, one of the world's largest producers, are specialists in the ingot field.

To manufacturers, ALCAN specialisation means a constant, reliable source of aluminium in alloy forms, exactly – consistently – suited to precise needs.

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ain walling of aluminium curtain walling, manufactured by ALLAN H. WILLIAMS LTD. of Coventry, was used for the administrative of the A.E.I. Turbine Generator Division's Larne factory on proposed site on the coast.

ALLAN H. WILLIAMS' 'Alwil' curtain walling, colourfully anodised, with stove enamelled aluminium glazing beads, was specified for Aldridge County Secondary Modern School, Staffs. Architect: A. C. H. Stillman, F.R.I.B.A.



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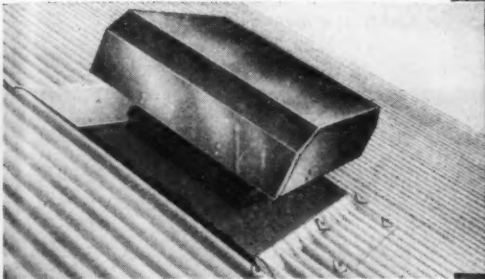
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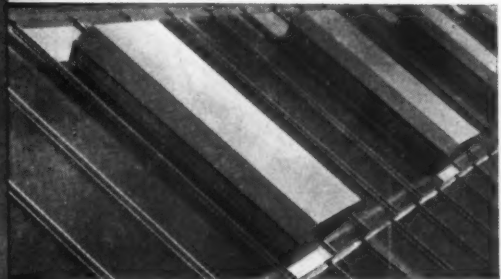
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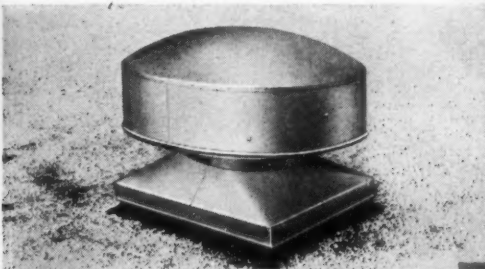
POWERED 'MEHAVENT' ROOFLINE

Roof-mounted extractor ventilator with exhaust capacities from 300 c.f.m. to 27,000 c.f.m. Available with heat conservation shutters. Heavy gauge hardened aluminium.



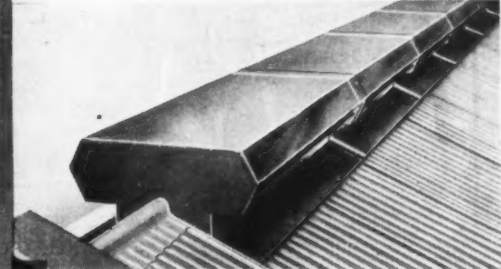
NATURAL 'ROOFLINE'

For permanent or controlled natural ventilation and effective removal of fumes and vitiated air by stack action. Low overall height and large free outlet area. Heavy gauge hardened aluminium.



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Roof-mounted extractor with completely enclosed spun aluminium hinged dome head for access to motor. Exhaust capacities from 300 c.f.m. to 4,800 c.f.m.

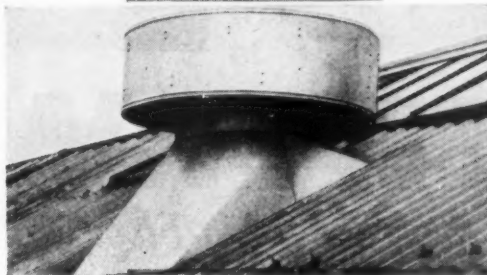


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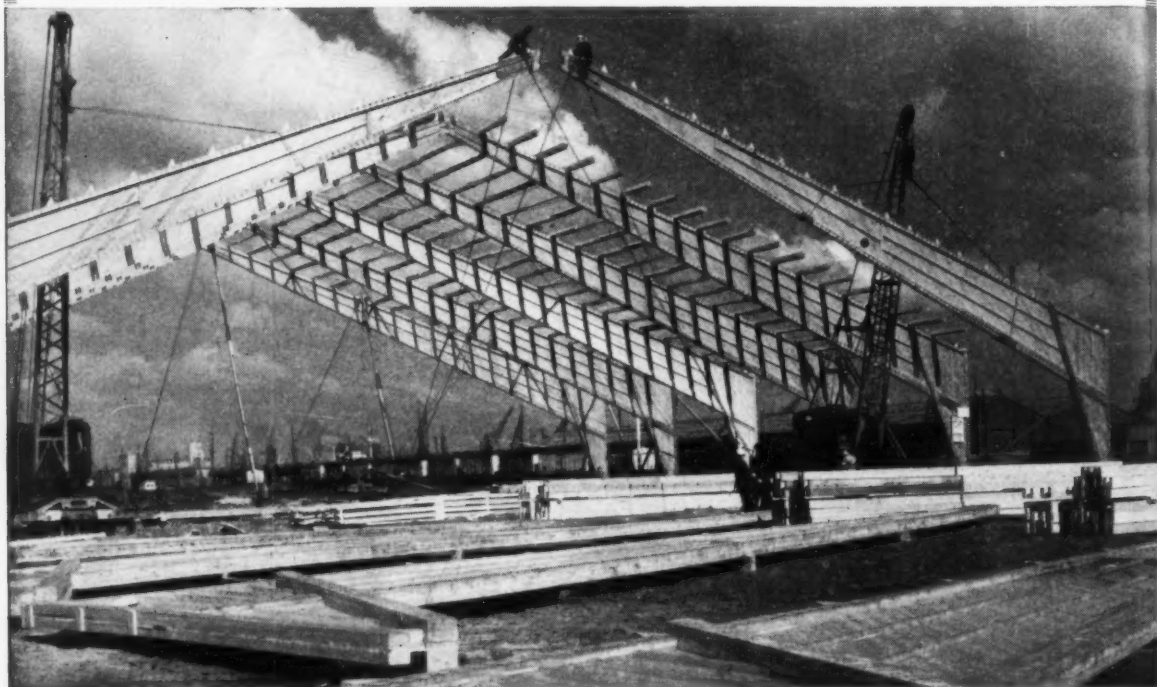
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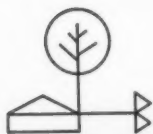


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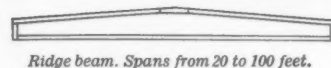
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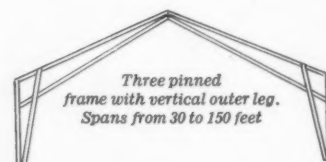
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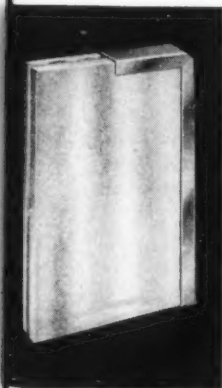
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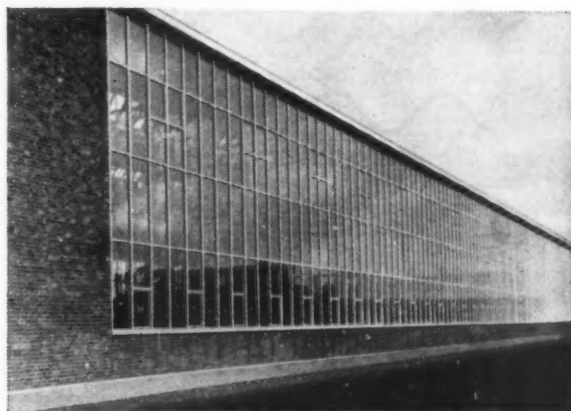
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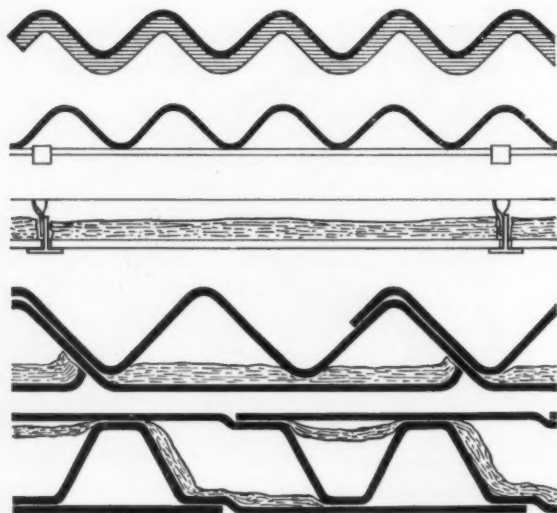
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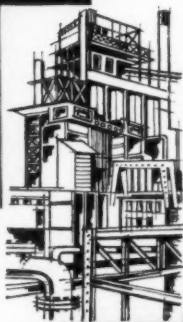
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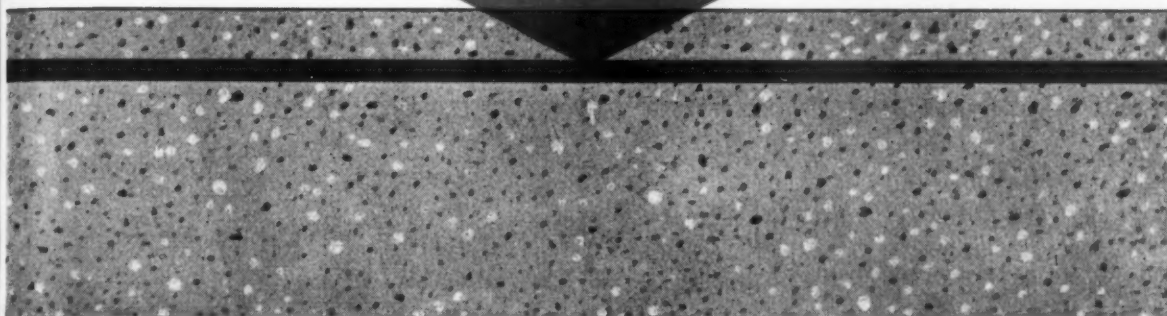
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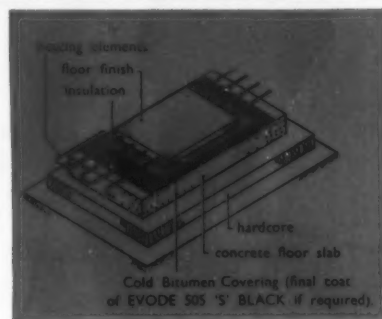
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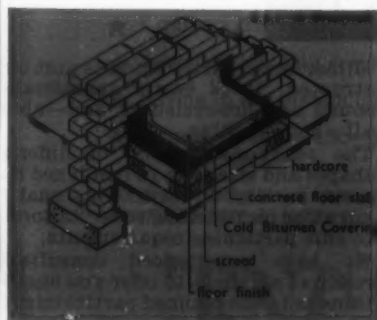
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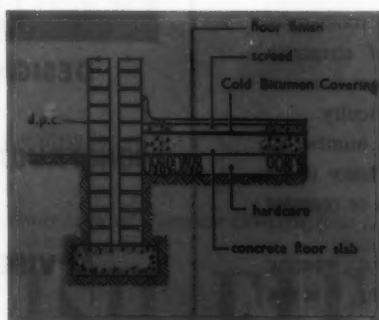
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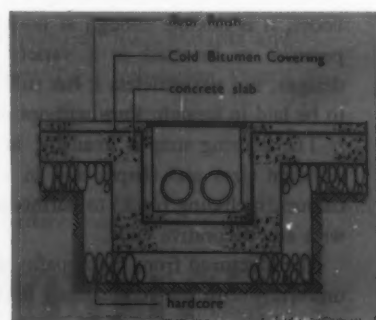
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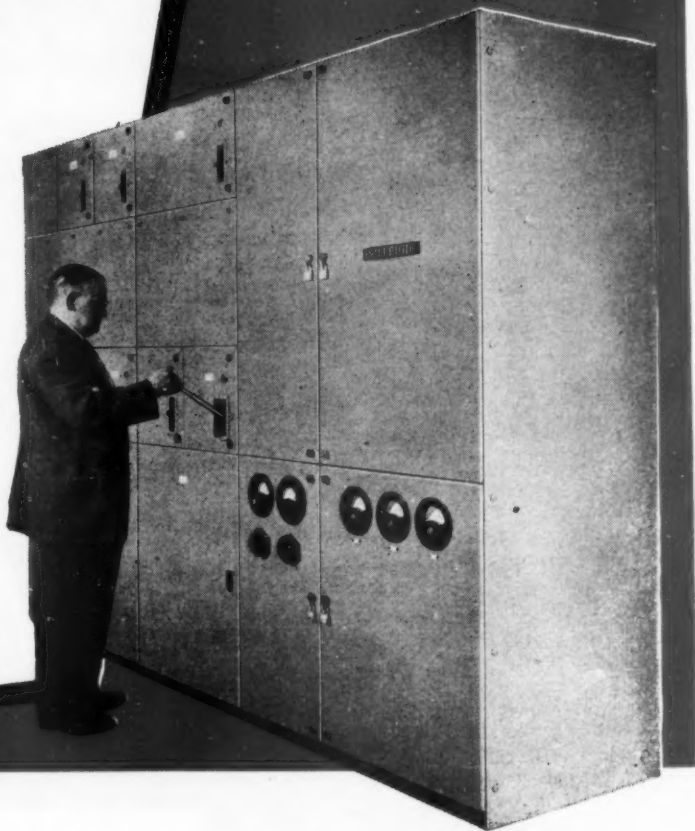
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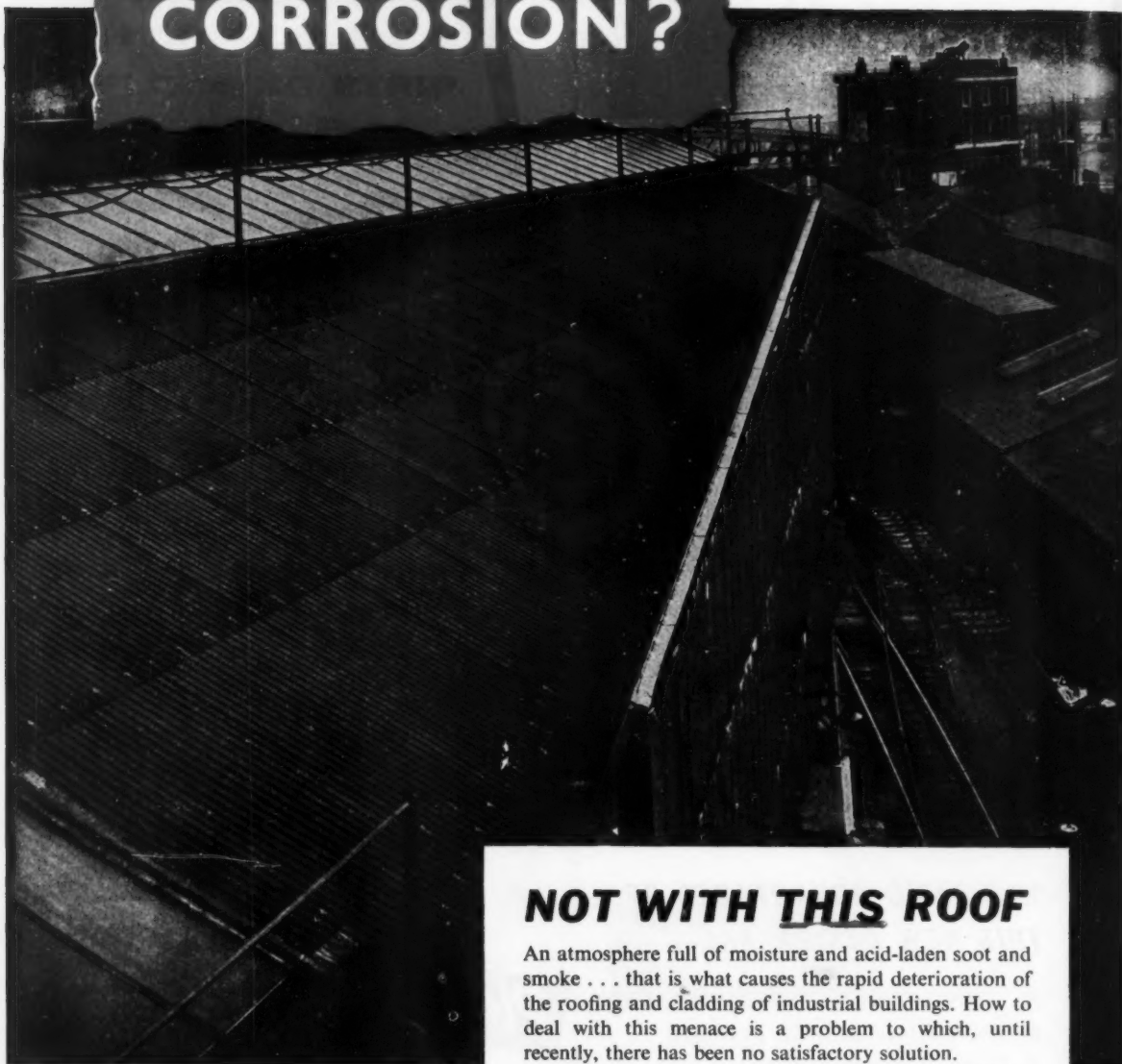
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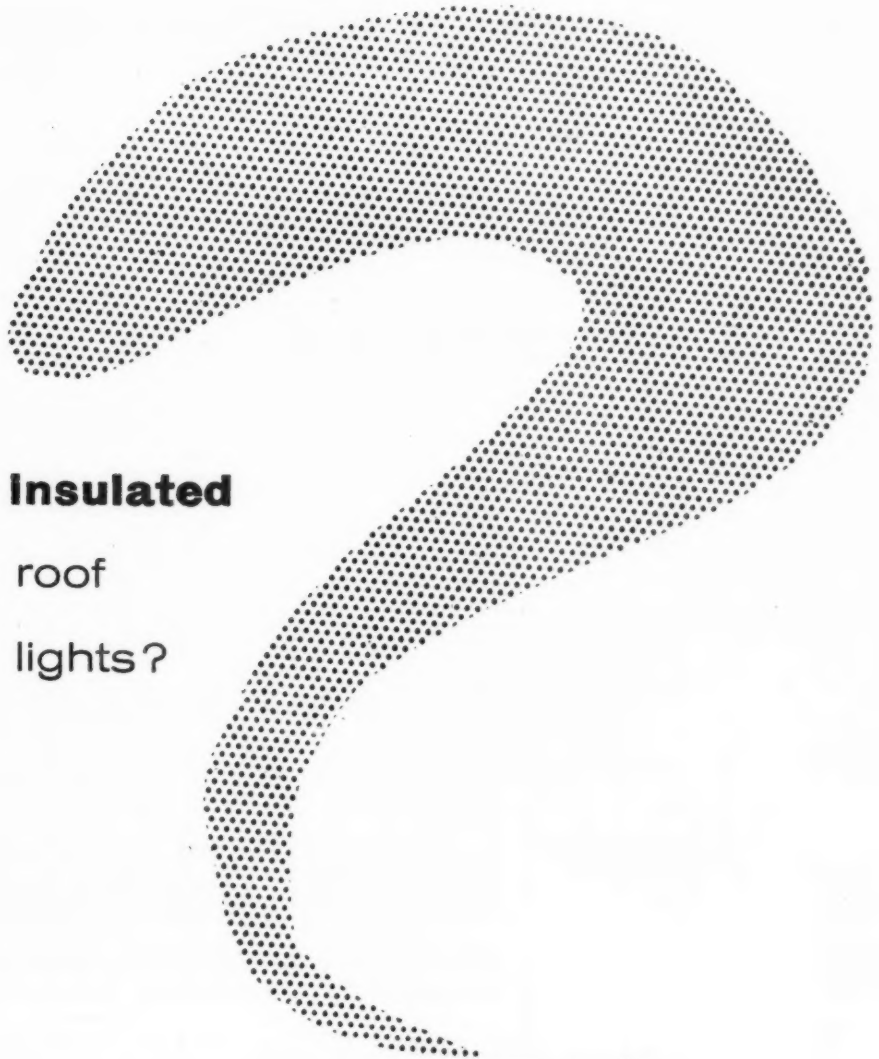
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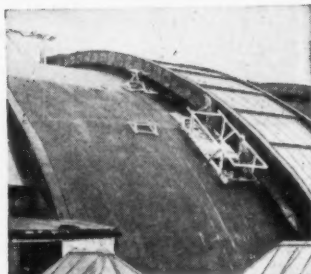
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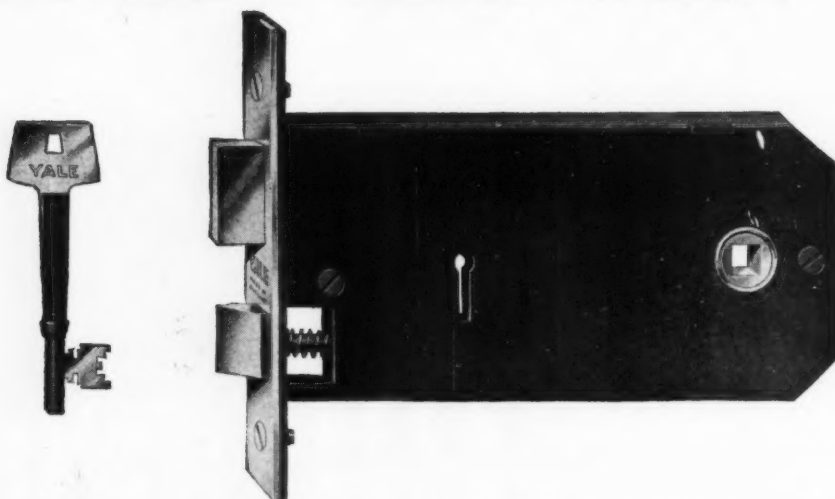
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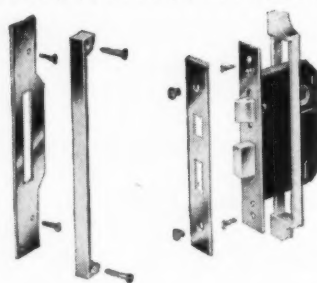


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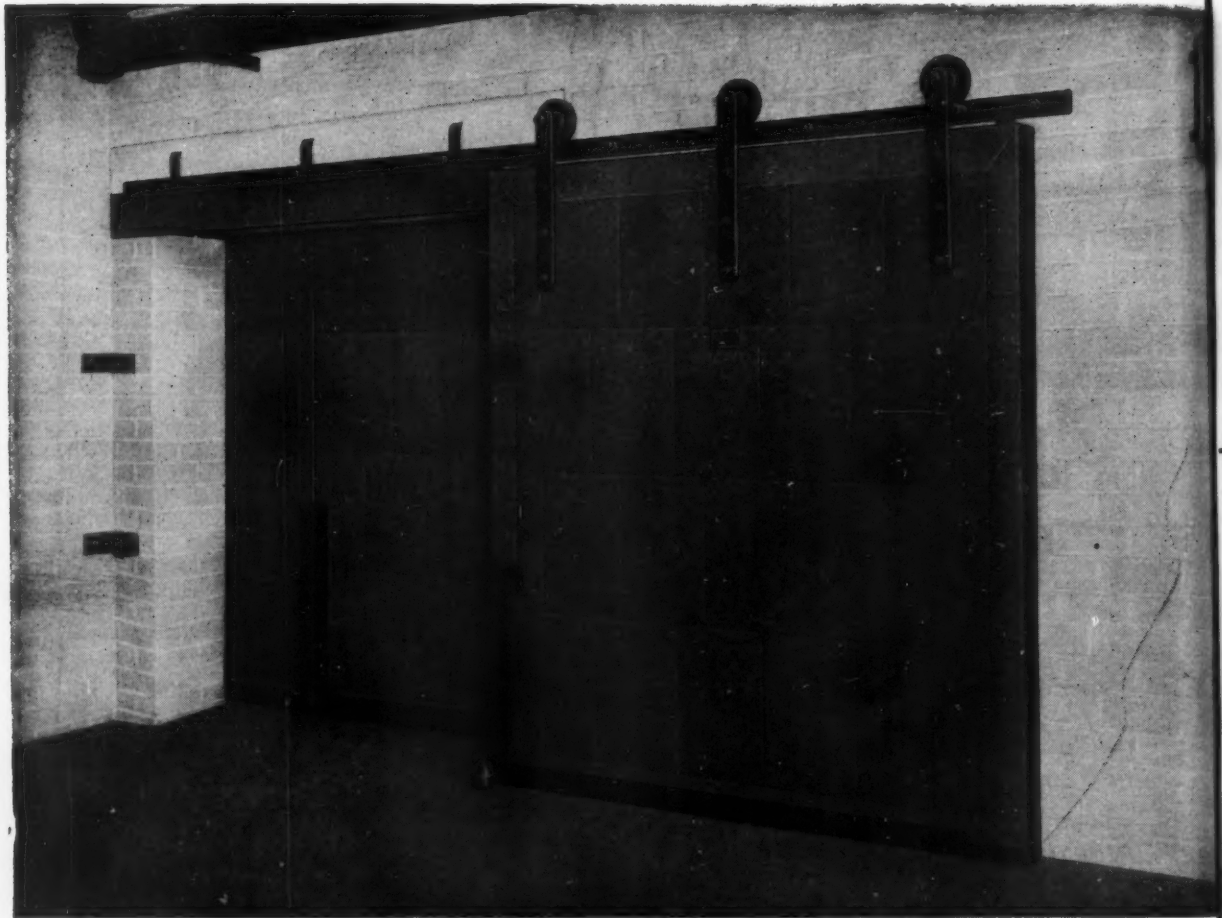
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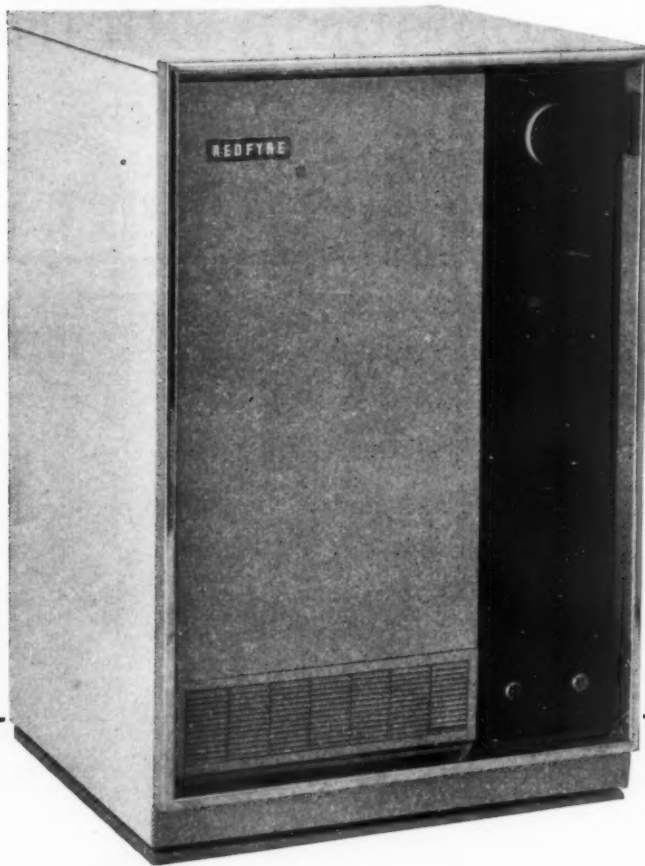
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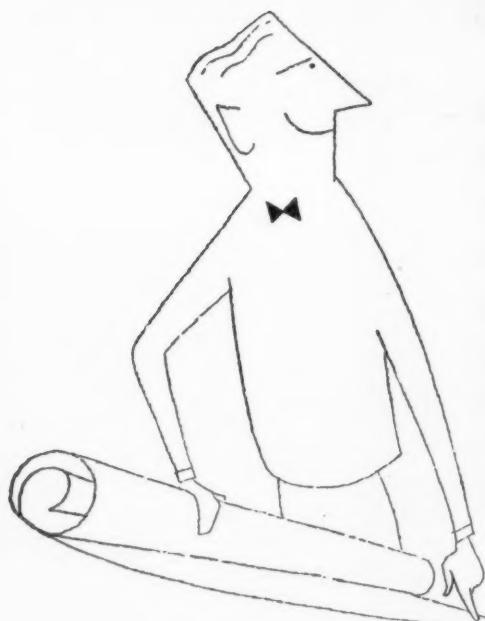
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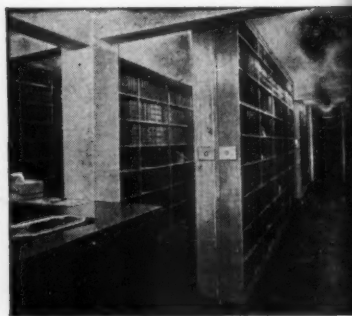
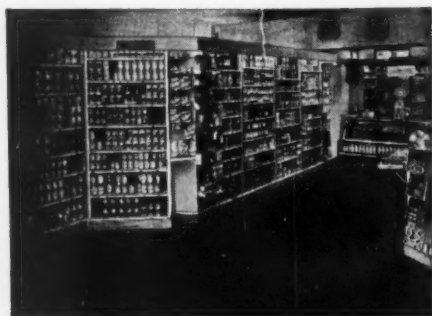


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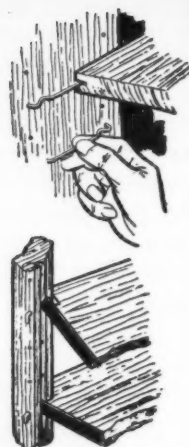
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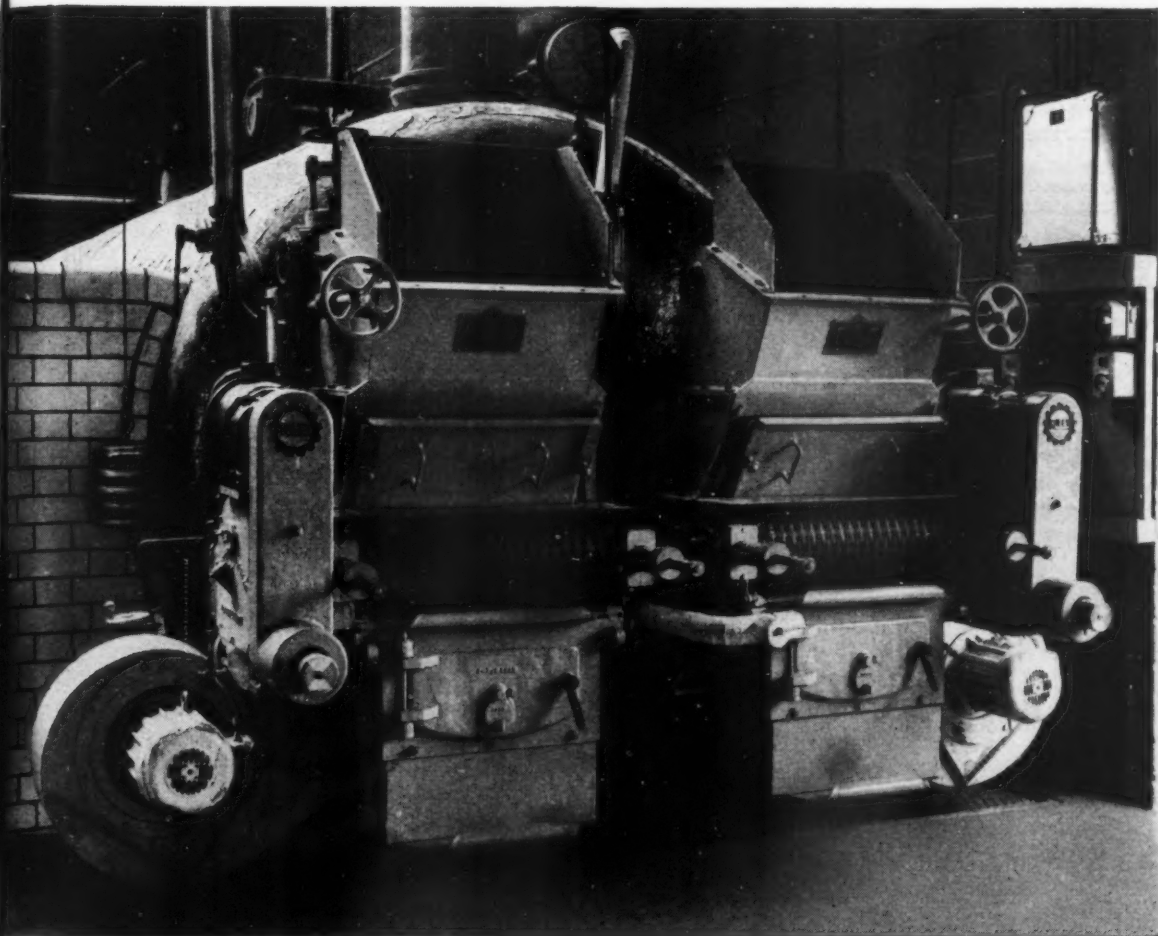
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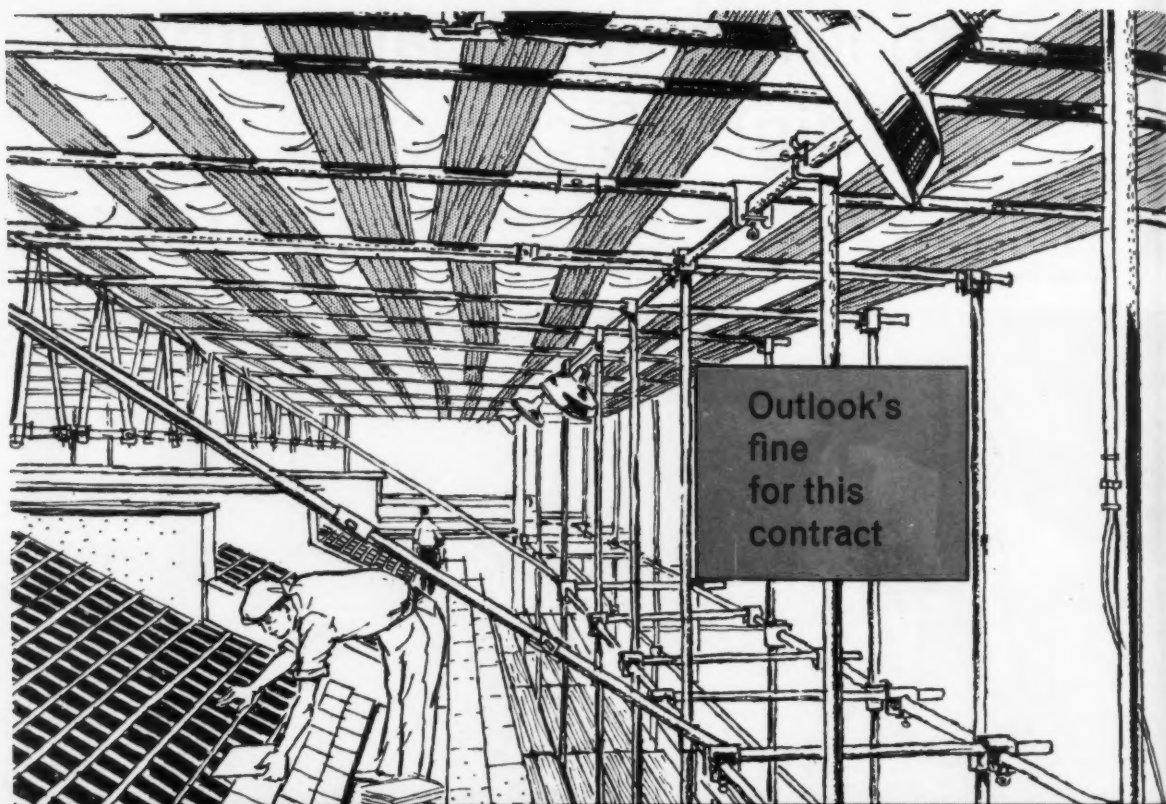
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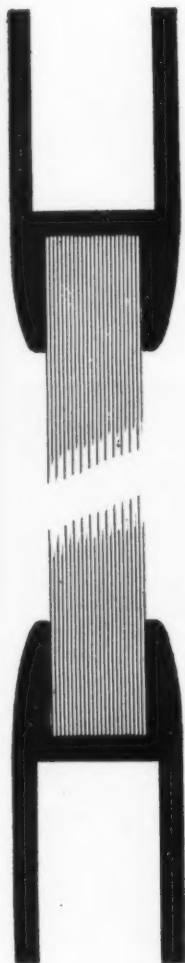
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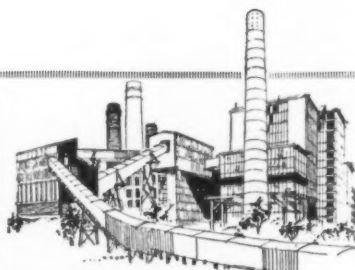
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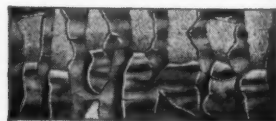
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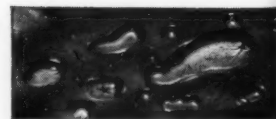


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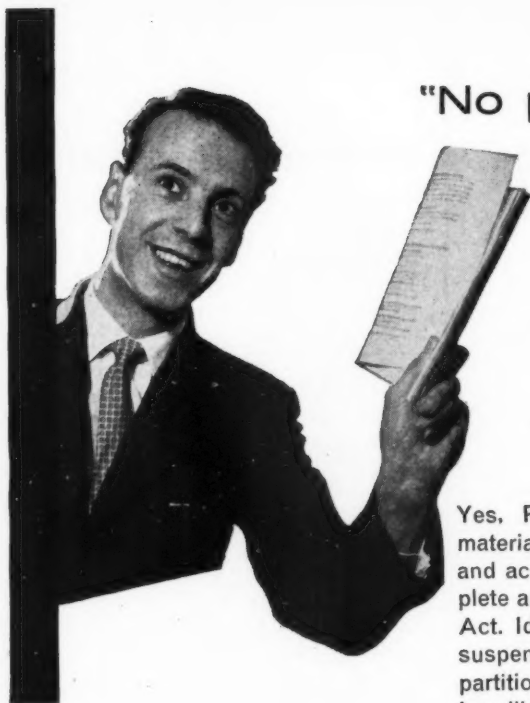
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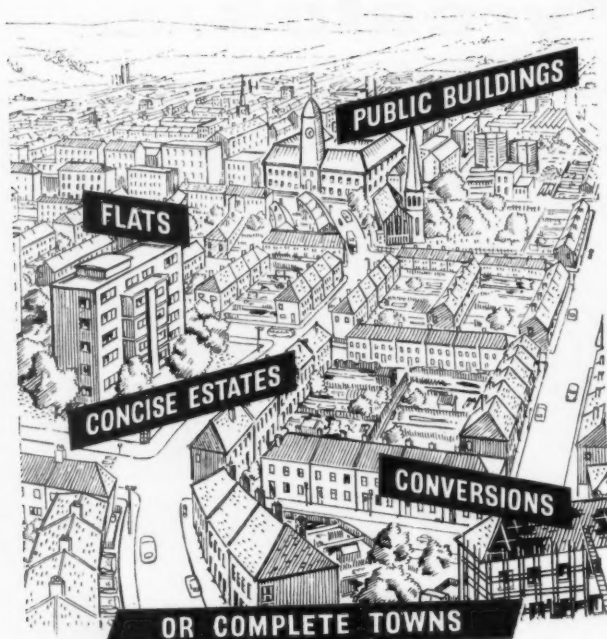
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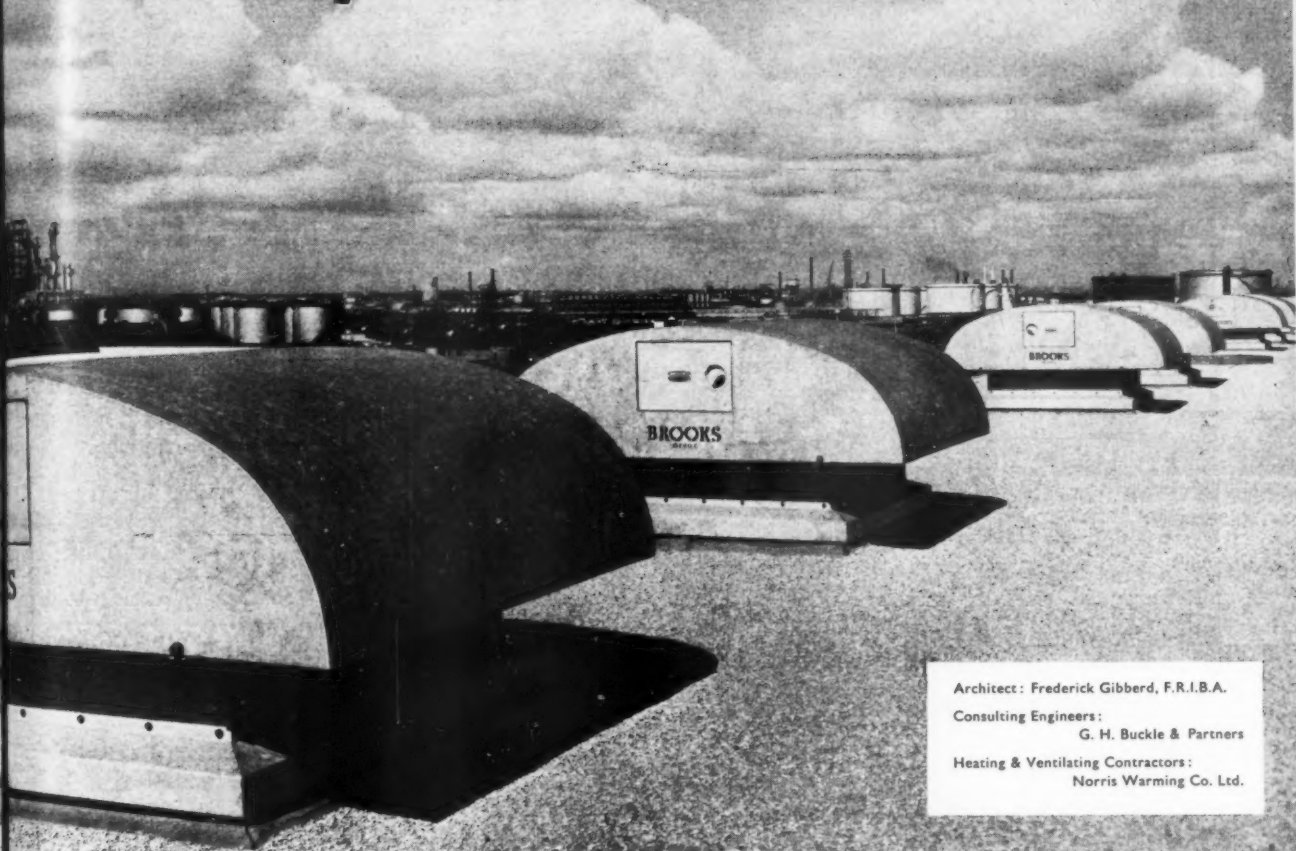
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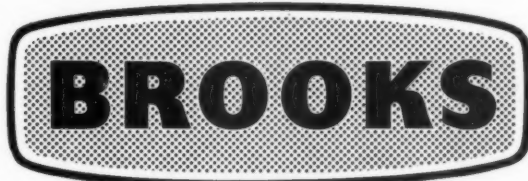
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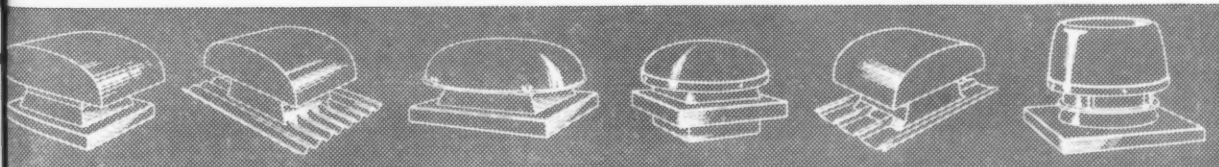
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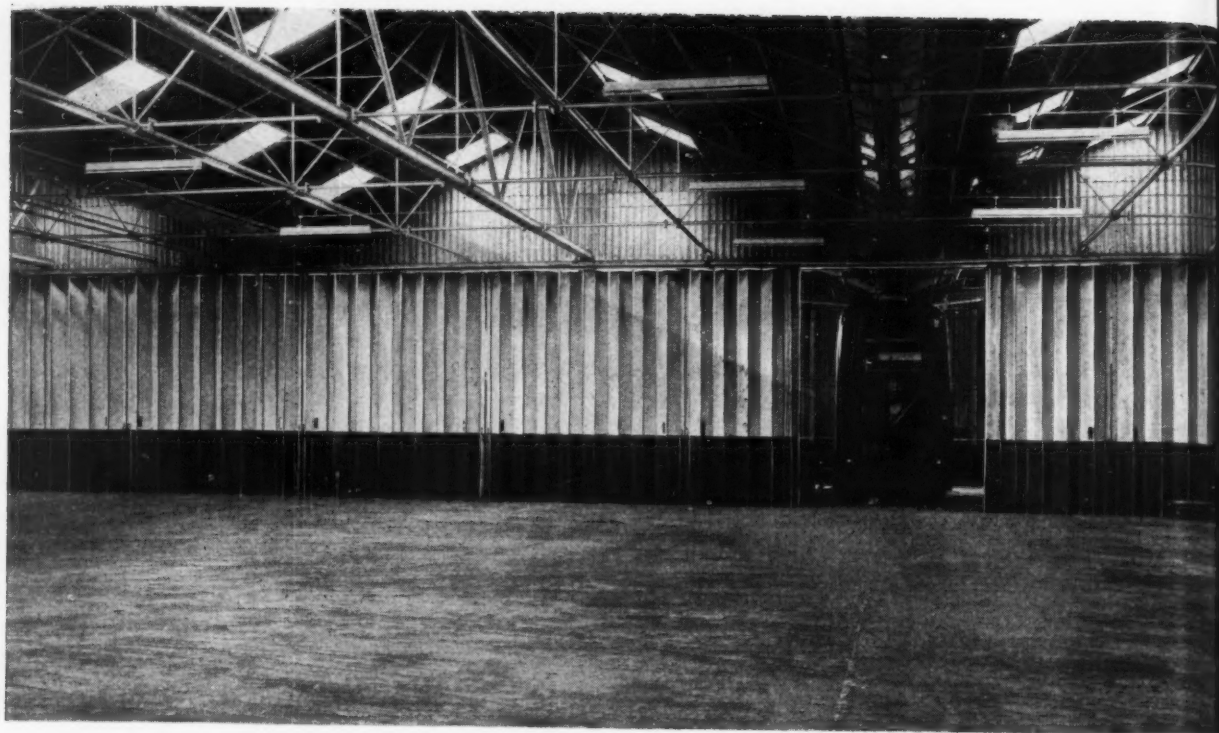
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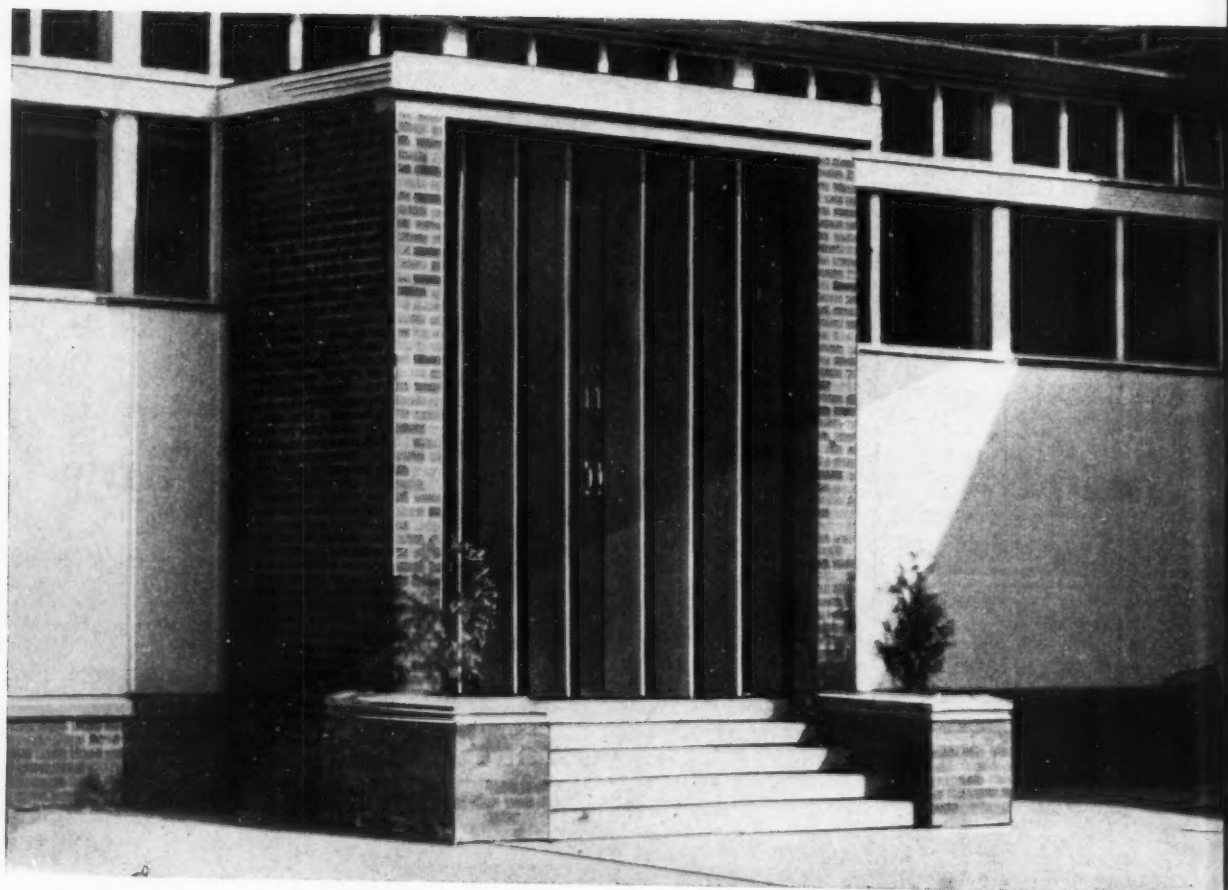
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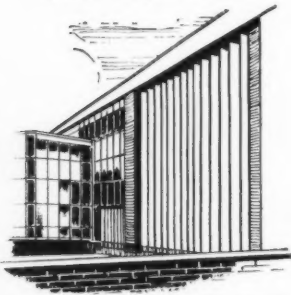


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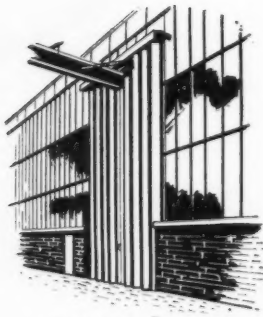


Bolton Shutter Doors for a double garage at a private house.

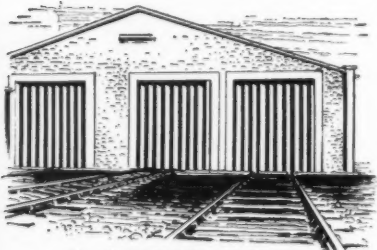


Bolton Shutter Doors at a large modern research centre.

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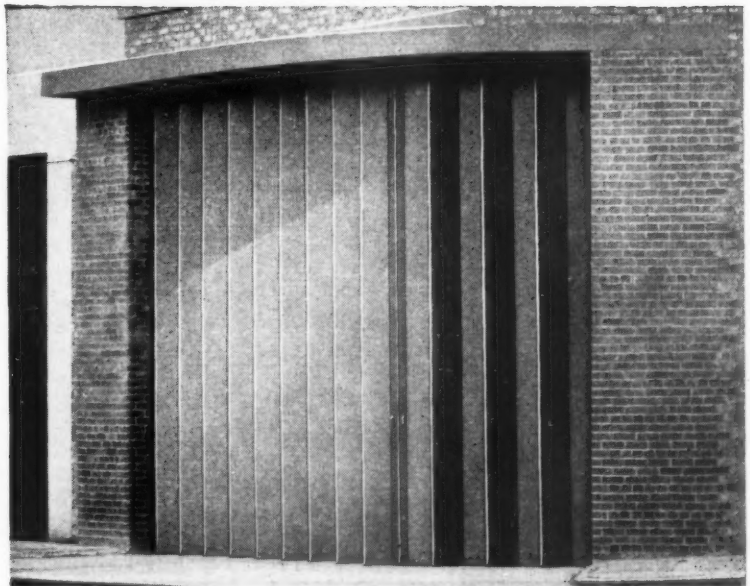


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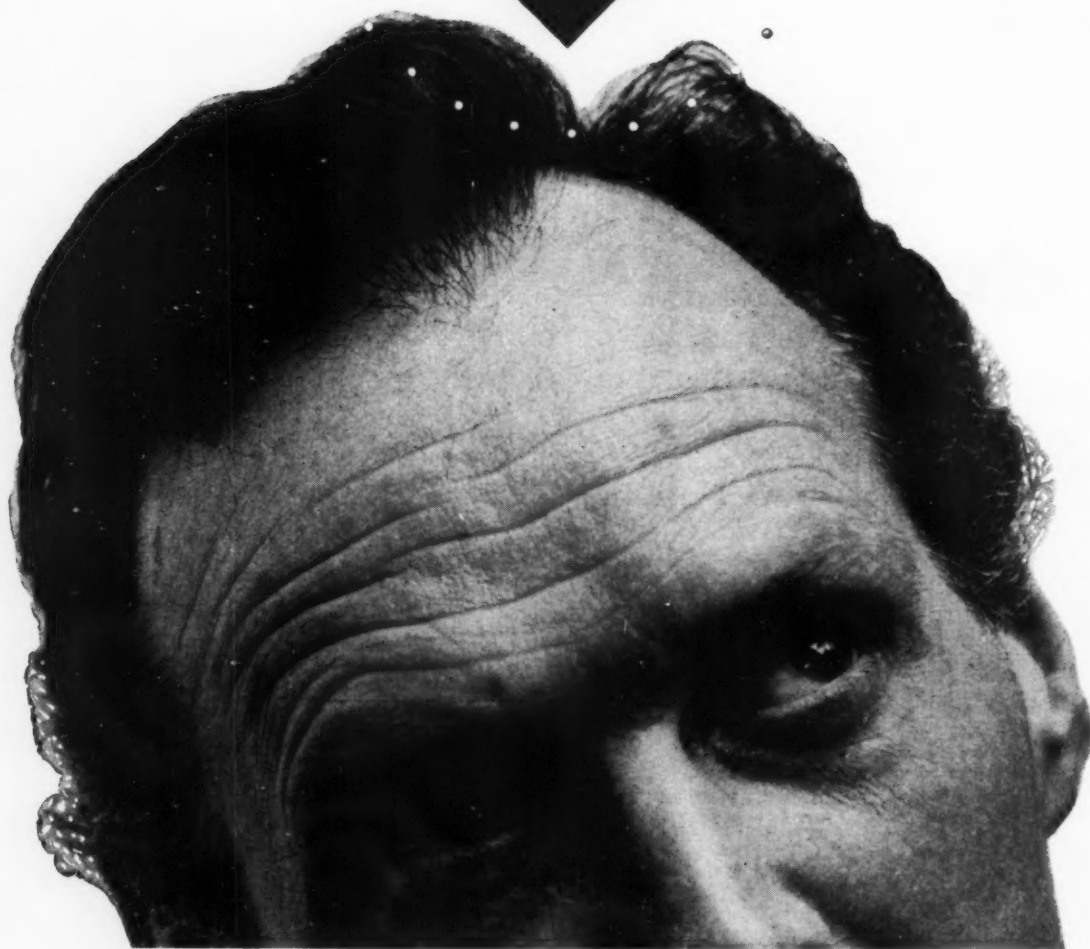
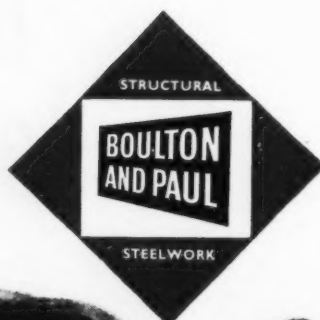
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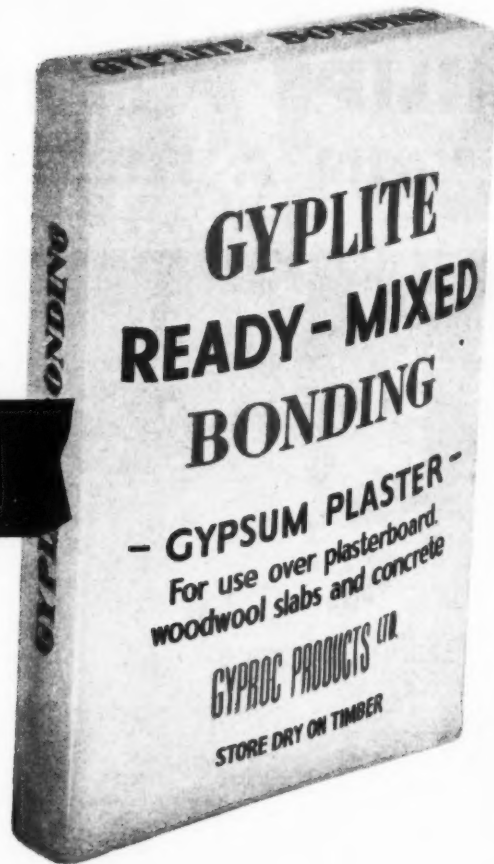


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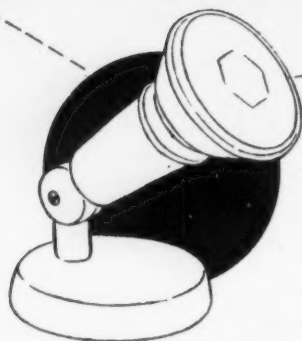
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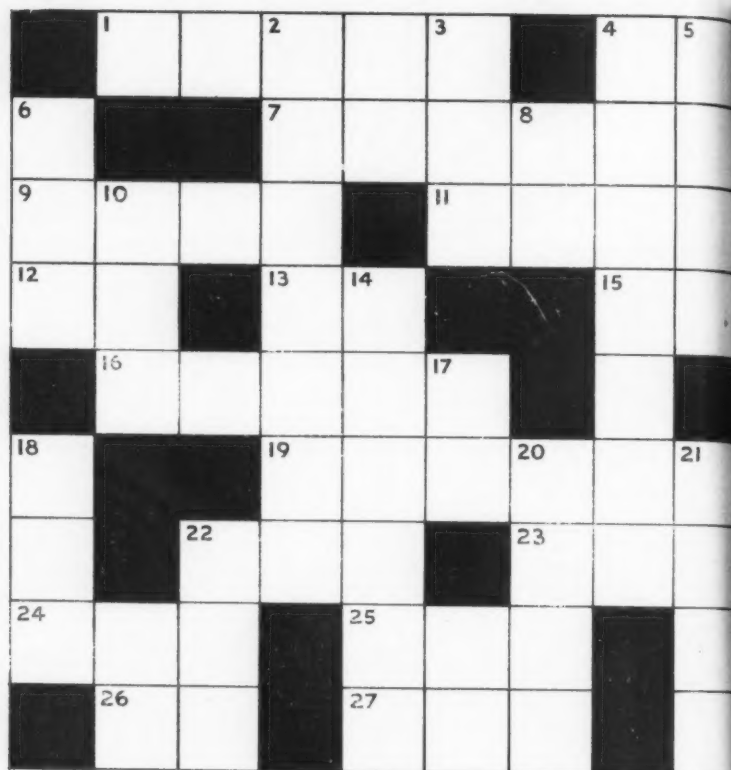
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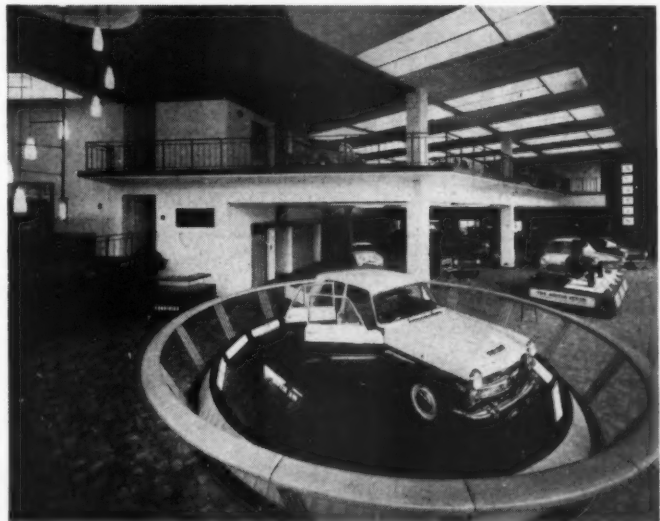
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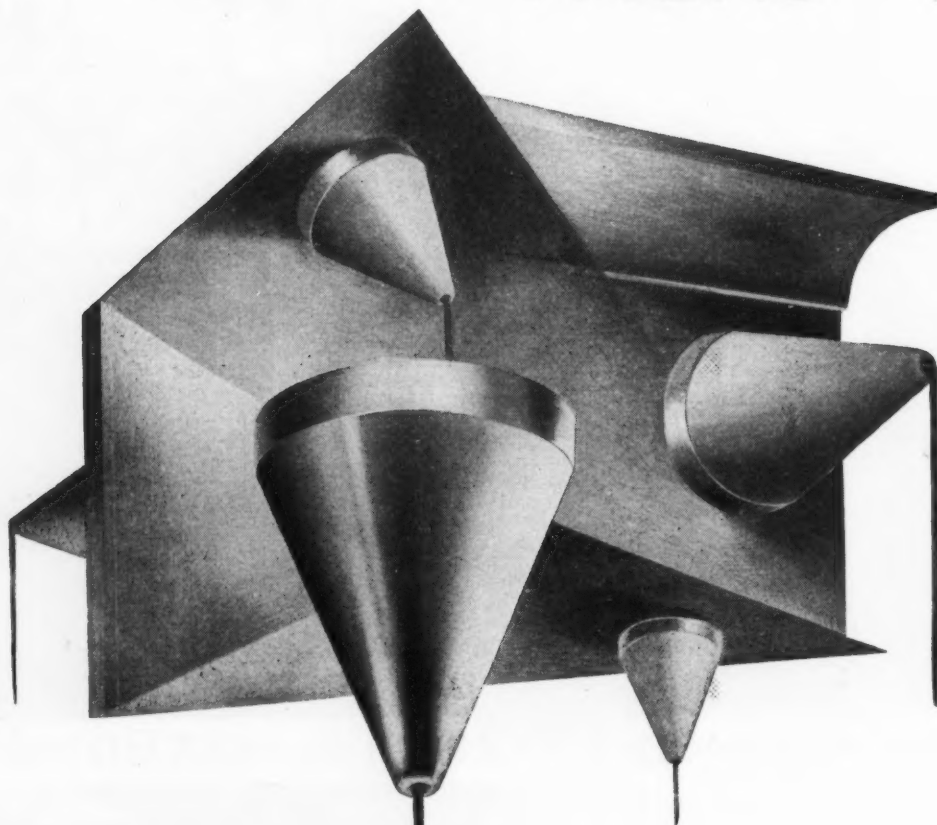
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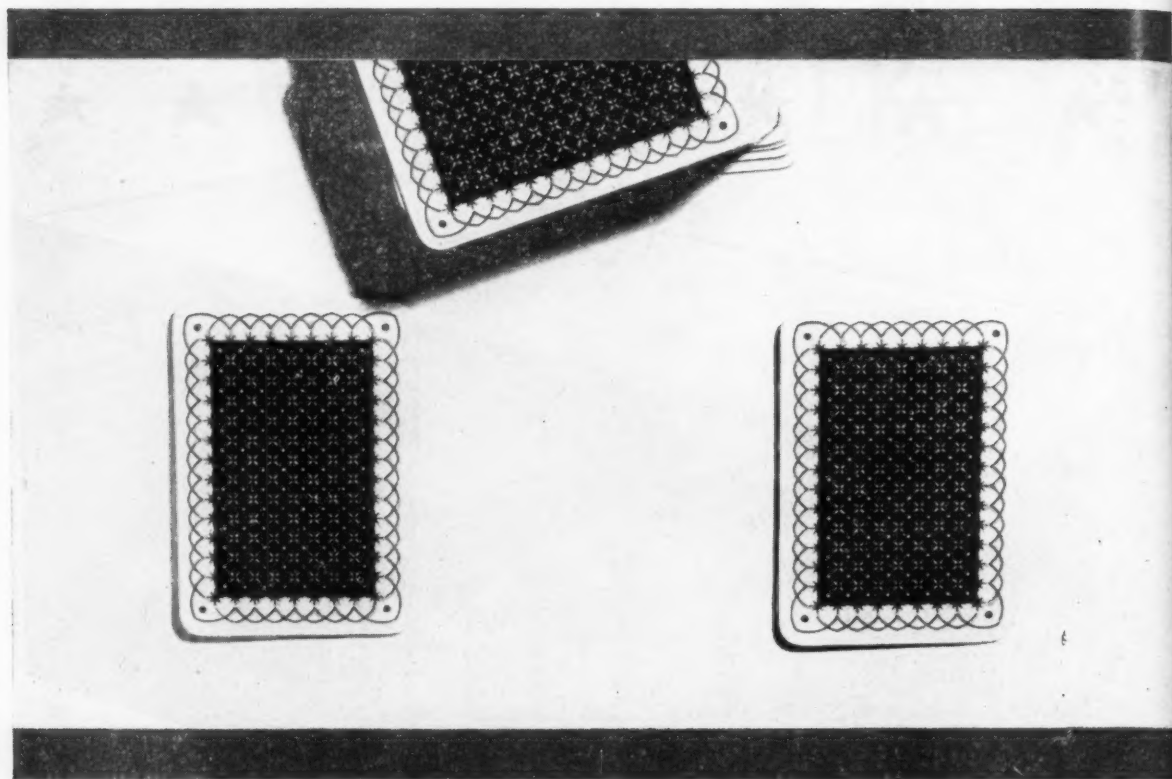
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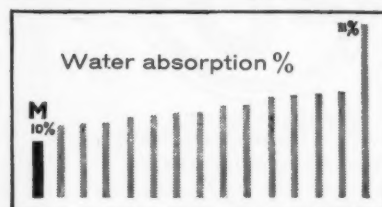
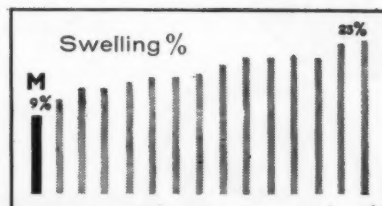
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Föremål: 16 st träfiberark

Undersökning: Svällning och vattenabsorption

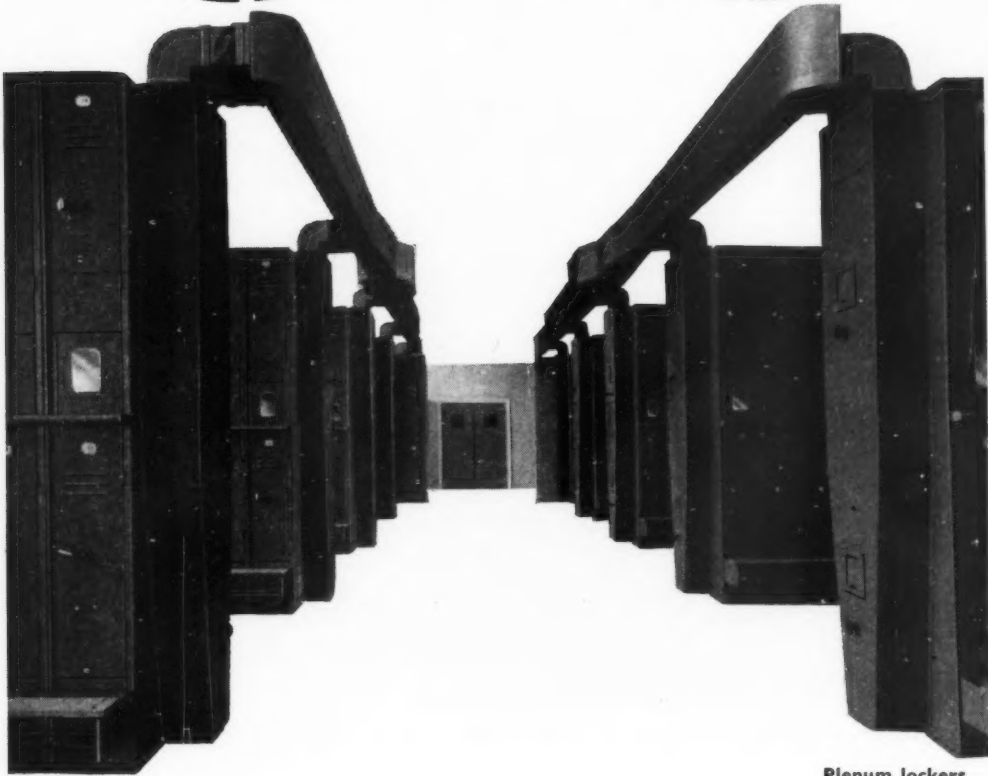
	Water absorption	Swelling
MASONITE	9.6	8.9
Mean value for 14 other makes	22.3	17.7
Maximum among these	50.7	23.3
Minimum " "	15.8	12.2



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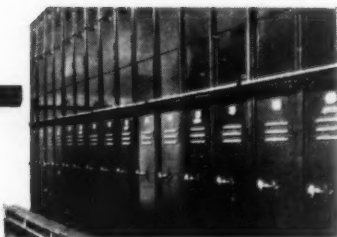
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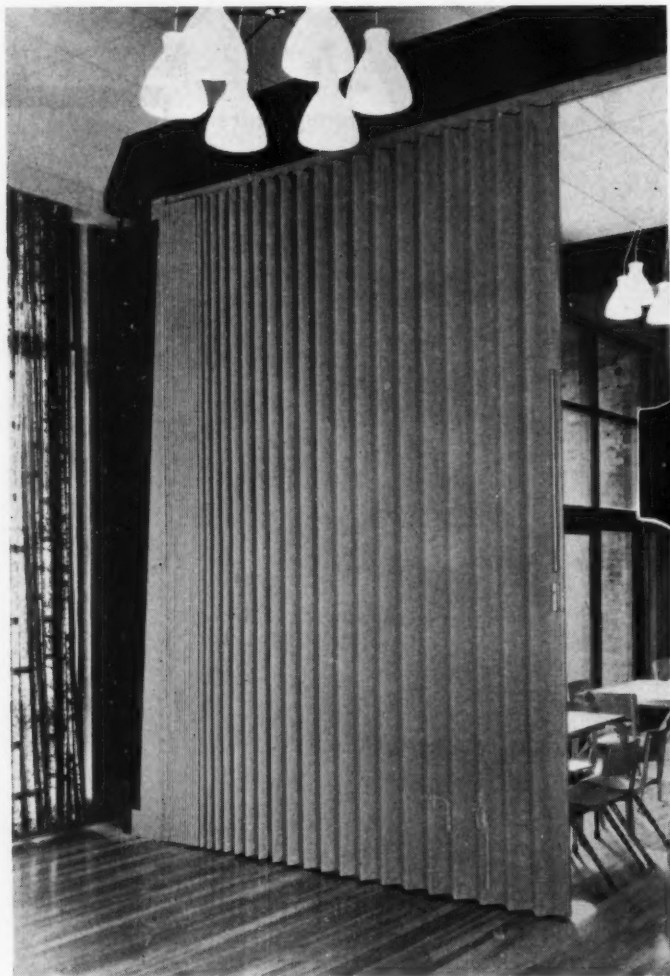
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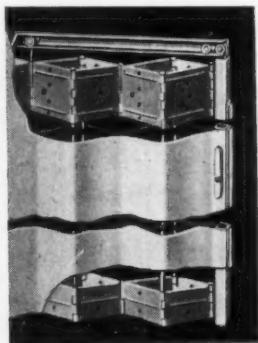
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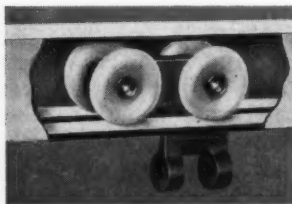
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“The Case for the Local Brick”

The announcement in last week's issue of *The Architects' Journal* under the above heading has provoked some comment, particularly the reference to large stocks of bricks. As mentioned at the foot of the announcement, it was reprinted from *The Brick Bulletin*, and referred to the supply position as it was at the time of publication—June, 1958.

Within twelve months there was a radical change, and the building industry is now enjoying a period of great activity.

There could be no more appropriate time to remind brick users of the situation existing less than two years ago, and of the necessity of safeguarding future supplies of brick by supporting the local brick manufacturer.



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



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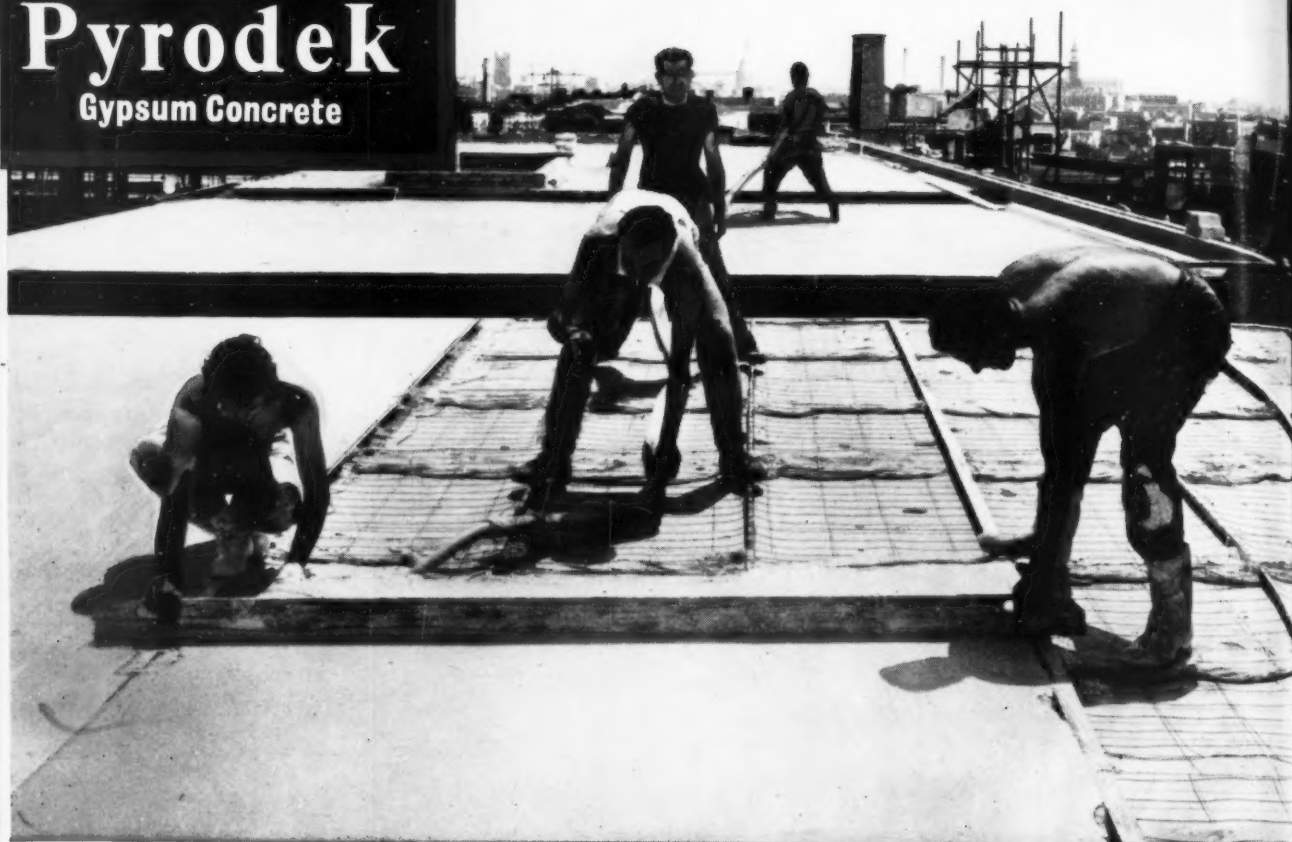
SOMETHING NEW IN STEEL Until recently steel always needed periodic repainting. But not any more. Stelvetite even arrives with a finished surface in the colour you choose. *A surface finish which lasts for ever.* Stelvetite's permanent P.V.C. surface resists scratches, acids, detergents and time. Thus, depending on the size of the job, Stelvetite can save a small fortune or a large one when a surfacing problem arises because, with all its beauty . . . **Stelvetite can be worked and welded as steel!** It is used to fabricate, among other things, lifts and doors, partitioning, panelling, furniture, kitchen equipment, walls and cladding . . . all of them colourful and permanent. There's a wide range of plain or embossed finishes, a wide range of colours and a vast range of uses. **Investigate Stelvetite.**

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Pyrodek

Gypsum Concrete



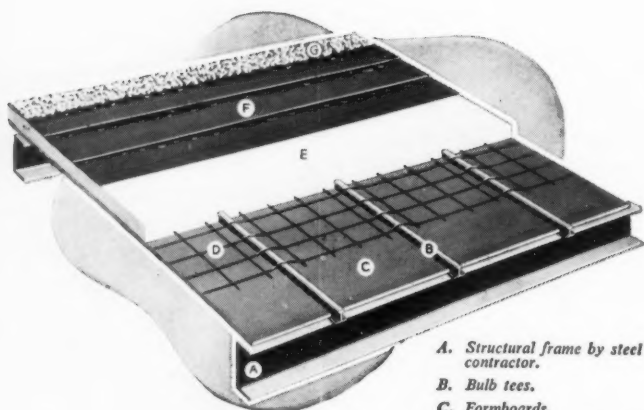
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- A. Structural frame by steel contractor.
- B. Bulb tees.
- C. Formboards.
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- E. Pyrodek gypsum concrete.
- F. Built-up roofing.
- G. Gravel finish.

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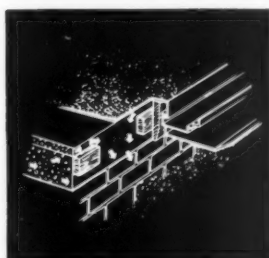
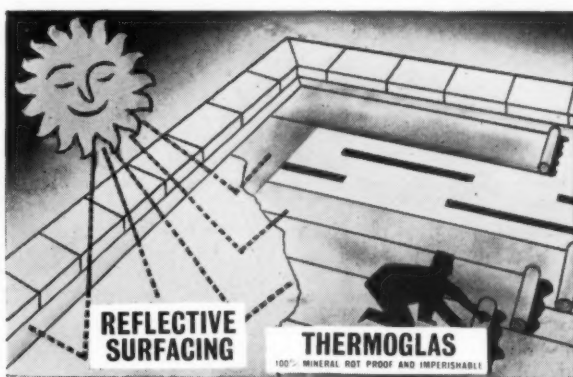
and roof ventilation

. . . a technique designed to protect the weather-proofing of flat roof structures against influences arising from :-

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- * Heat build-up on insulation
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- * Roof movement

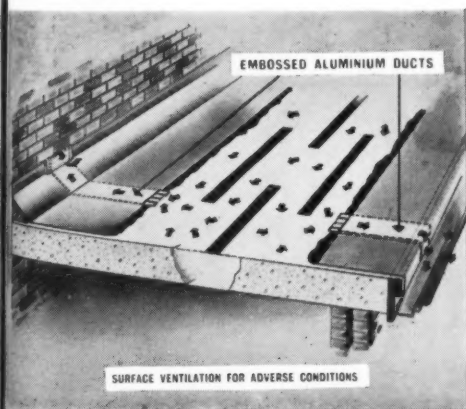
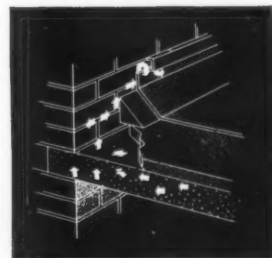
Thermoglas is laid by the isolated system combining frame bonding and anchor strips to permit free vapour dispersal. The waterproofing is finished with a heavy stone surfacing to secure maximum reflectivity.

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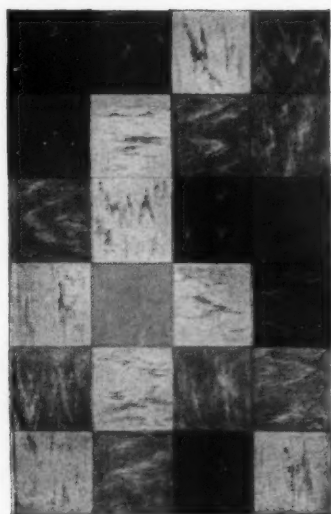
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The Architects' Journal

No. 3391. Vol. 131. April 14, 1960

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NOT QUITE ARCHITECTURE

Anti-plan-hattan

What do I think of Manhattan? First, as a planner, a little strategy. Manhattan is unique as a city core in that it is nearly surrounded by a blue belt of water instead of a twilight area of slums and industries. Everything has therefore to be squeezed into a long narrow promontory or taken right across the Hudson or East River. Second, in contrast to London, it has a limitation of metropolitan functions, no Buckingham Palace, no houses of Parliament, no Whitehall, and in spite of the subtle effect of the beginnings of World Government, this lack of a stable governmental establishment has produced a chronic instability.

Nothing, urbanistically speaking, is "not done" in New York. If you want to do something, whether you are Commissioner Moses cutting through a new motorway, or a speculator who wants to tear down an almost new city block, you do it first and leave someone else to ask about the implications. This again, makes it quite different from anything in Europe, and gives it excitement, exasperation, and a fascinating visual anarchy that even São Paulo cannot equal.

Because of this you have to invent a new method of design evaluation. In terms of traditional space enclosure and volumetric composition, it makes no sense whatever, but seen as urban movement, of constant change, of new experiment, of pushful, often selfish, anti-social and anti-visual and anti-conventional planning, it has an extraordinary and overwhelming vitality. Within this jungle, interesting patterns and movements emerge. The concentration of skyscrapers at the southern tip of Manhattan near the Battery gradually forced out the shops, restaurants and other social uses, so in order to attract employees the big firms moved up to Park Avenue, leaving a trough of land values in the middle. This is clearly reflected in the condition of property.

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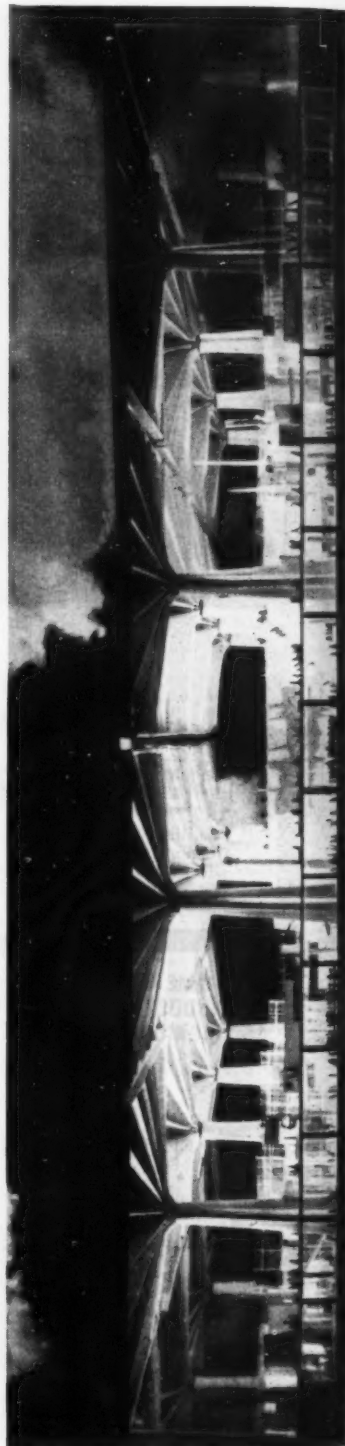
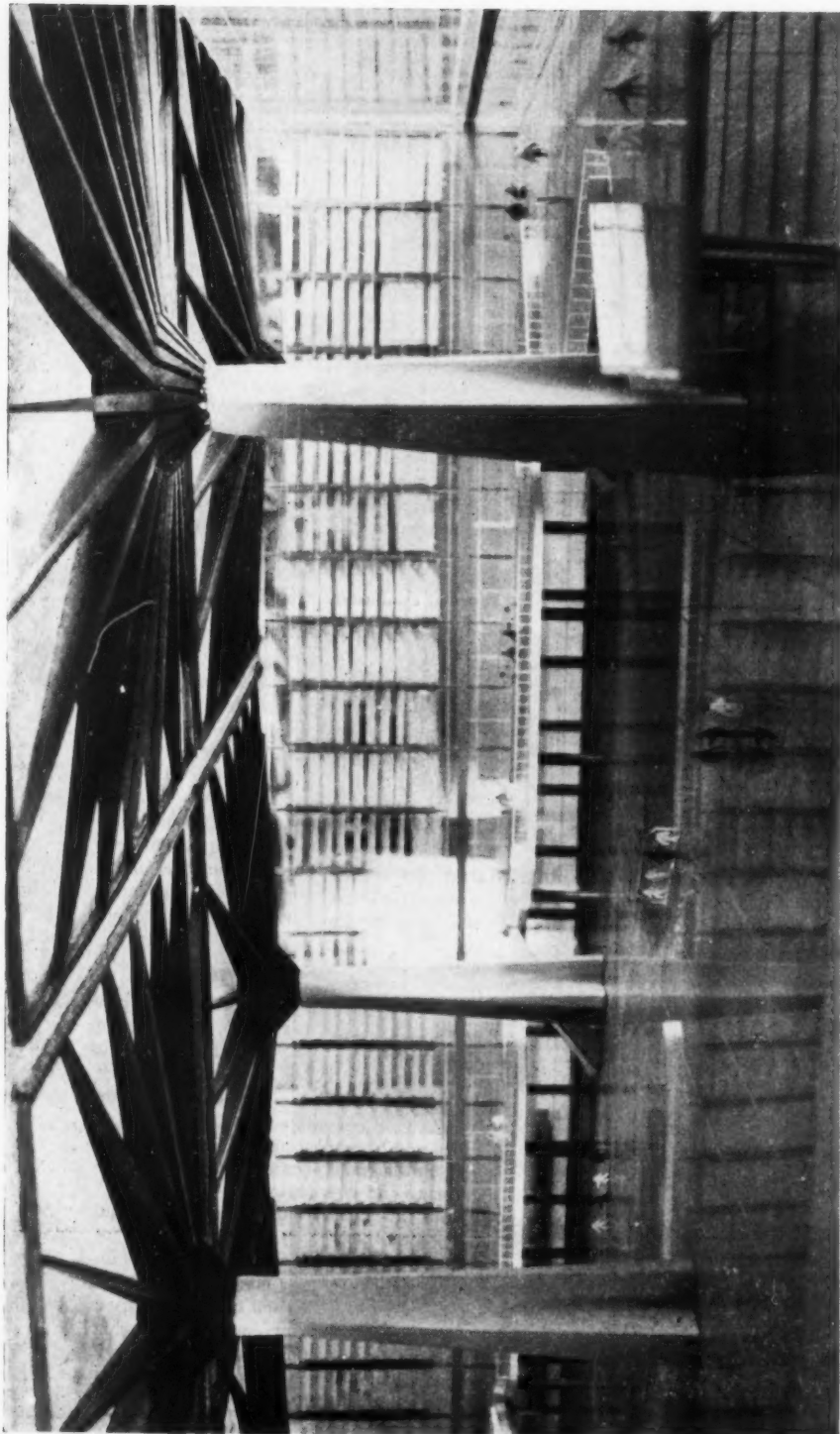
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Architectural Engineering

Last week, to a packed house at 66 Portland Place, the great Italian engineer-contractor, Pier Luigi Nervi (above, right) received the Royal Gold Medal Spence the Royal Gold Medal for 1960. On view at the RIBA is a well-staged exhibition of Nervi's work, prepared by the Cement and Concrete Association, from which these illustrations of his latest project are taken. In collaboration with his son, Antonio Nervi, and Gio Ponti, he has designed this pavilion for the International Labour Exhibition at Turin in 1961. The scale of the vast cruciform columns and the cantilevered ribs of the roof can be judged by the model figures, above left. The columns are nearly seventy feet high and seventeen feet wide at the base, and the radiating ribs project about ninety feet. Further illustrations of Nervi's buildings appear on page 568.



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The Editors

FIRST STEPS TO JOINT EDUCATION

THE first official news about the proposed new college of architecture and building has now been released and is published on page 569. It is not inspiring reading. For 20 years or so the idea of joint education in some form has been put forward by far-sighted architects and, for the last four years, various senior members of the building industry, guided in the end by the Ministry of Education, have been endeavouring to make concrete proposals.

When it became known that the Ministry had decided that the LCC was the most appropriate authority to form a college of architecture and building some expressed fears that a local authority, even of the standing of the LCC, would not be able to give such a college the freedom, independence, and above all, prestige which a cultural and educational experiment of this kind must have to become an acclaimed, nationally accepted establishment. The new college must obtain a principal and staff of a quality better than the University schools if it is to attract the best students and not to be a poor relation dispensing a second-rate educational service. And staff will only be attracted to such an experimental venture if the pay, responsibilities and opportunities transcend those to be found elsewhere.

The educational organization proposed has not yet been given in detail, but it is disquieting to note that engineering is to be part of a completely separate college. If joint training is to be of any significance, engineering, whether of structure or of the services of heat, light and sound, must be part of the college of architecture and building. Such a fundamental omission does not augur well.

EXPENSIVE BUT EXCLUSIVE
ARCHITECTS?

Architects, the proven poor relations in the Pilkington professional family tree, should be exercising their minds on how to improve their lot. For most of the profession it is a matter of daring to ask for a rise in salary. For principals in private practice the position is not so simple. One of the established creeds to query is the scale of professional charges, a scale laid down on a basis now unknown. Is it still valid? Should the percentage fee vary for each building type, according to the degree of work involved? Or should it be simply increased? And if so, by what amount? Some local authorities ought to be able to give accurate figures of what an architect's costs are, if a job is conscientiously carried out, and from that could be deduced what the percentage scale should be. Let that be done speedily.

In the mean time, however, another line could be studied. The Pilkington report showed that although the average income of architects was only £1,200 per annum, about 450

Then there is Greenwich Village, the island of small scale early Victorian terrace houses, whose road pattern does not conform to the rest of the grid, and is the home of all the intellectuals who want to live urban lives in the city centre, and who are fighting hard to preserve the scale and character of their neighbourhood.

They have some difficulty: first, they all have cars, so that all the sidewalks are lined both sides, and the streets can hardly be seen. Then, "improvements" take place. Only the other day the eldest son of the Jacobs (the Greenwich Village family with whom I am staying—Mr. Jacobs is an architect and Mrs. Jacobs is Assistant Editor of *Architectural Forum*) saw some surveyors measuring the streets, and on inquiry found that the City Authorities were proposing to cut the width of the sidewalks in half and throw the space into the road: they hadn't even bothered to notify the residents. So the Jacobs organized a mass petition, which is now being presented and will probably succeed in its highly desirable object of running as fast as you can to stay in the same place.

Up in the Park Avenue area, Seagram faces Lever across a sea of moving automobiles and both stand out in elegant form in contrast to the extraordinary and stupid shapes which are so often created by building right out to the control envelope (like the old rigid London light angle control). Nearby a number of well-designed new skyscrapers of moderate height have recently been built, but they stand out among a mass of poor designs. In this way it is similar to London's office building boom, although much more intense, of much higher quality, and on a much larger scale—also nobody builds a Farmers' Union or a Shell design. What they do do is to experiment with all kinds of curtain wall and panel glazing, running right through the current range of patterns, colours and textures. There is no sign of any design control, although the more sophisticated owners have small plazas which are fantastically generous in real estate terms, but have little significance otherwise.

As I have said, in conventional civic design thinking Manhattan makes no sense. There is little ordered space enclosure, and instead of terminal vistas nearly every road in the grid ends on the sky. Public buildings too receive undignified treatment, as though business society was saying "nuts to the establishment." This has its unfortunate side, especially where a highly idiosyncratic building like the Guggenheim (inadequate external finishes, Mr. Wright) is pushed into a gap in the street block instead of being landscaped into Central Park. But in the end it is at night that New York really comes into its own. The long view fairyland of the skyscrapers is complemented by the incredible close-ups of the Broadway medley of the neon jazz symphony. Entirely fantastical.

architects earned over £4,000. A lot of jobs, and cheap assistants, must be required, with a scale fee of 6 per cent., to bring in net incomes of this level.

And how depressing that so much of this income must be lost through surtax. If work could be more evenly distributed through the profession, not so much of the profession's income would be lost in taxation and more architects would be better off without it costing the client a penny.

But, the wealthy 450 must be protesting, what about us? With our commitments, how can we afford to pass on jobs?

The answer is simple: let them raise the percentage rate of their fees until the supply of work is no greater than they can control personally. This will please the client, who knows that he is more likely to get the personal attention he is paying for; and please those other architects who get the clients who cannot afford the higher fees.

Top lawyers and doctors take this course. Surely there are some architects with sufficient prestige in the public eye to be able to do likewise?



OH HENRY!

Engineers, said Henry Brooke, are versatile. The Institution of Municipal Engineers preened itself. This was just the thing for an annual dinner. But, added Mr. Brooke, the engineers should not also be civil defence officer, cleaning superintendent, planning officer, public health inspector, sewerage works manager, transport manager and water

engineer. There was, he added, a function for the architect and the planning officer separate from those of the surveyor and the engineer. The shouts of protest showed why there are still 38 county boroughs without an architect as a chief officer. (There are many more where the engineer is also the planner). It only remains for Mr. Brooke to do something to help the undervalued architect to find his proper place.

GRIM FOR BRUM

I'm not sure that Mr. Brooke has said the right thing to the people of Birmingham. He has not only told them they can't develop two and a half thousand acres of land on the city's outskirts, at Wythall (which is probably fair enough); he has also said that families must find homes outside the city. Why doesn't he consider higher densities in privileged areas like Edgbaston, or the building of another new town? He is forcing Birmingham back on the ineffective expanded towns procedure, though he admits it has proved disappointing.

IF IN DOUBT, DON'T

Do you ever survey a house? If you do you might have decided never to do so again—even as a personal favour—after hearing what C. A. Martin French told the RICS the other day. It seems that discoveries of dry and

wet rot are leading to many claims of negligence in surveying. A lot depends on how the survey reports are written. It's no use saying there are a few tiles missing on the roof, or that the wall by the cellar steps looks a bit damp: you must insert a warning about the worst things these faults could lead to and a note about the cost of putting them right. Surveying is, in fact, a specialized business—a profession in fact. So don't let yourself in for it without finding out how thorough you have to be. And you'd better insure yourself against any nasty surprises.

CO-WHAT-EXISTENCE?

Professor J. D. Bernal's book, *World Without War*, has been translated into an effective little exhibition (at the RBA Galleries (by Ronald Houghton, of Architect's Co-Partnership. With large photographs, brief captions and a good use of colour he tells the story of the book—the terrible story of people going hungry (three quarters of the human race) in a world that could feed ten times the world population if we were not spending £1,000 a second on armaments. The exhibition, which will be paid for by the sale of paintings (also exhibited) by Piper, Reg Butler, Michael Ayrton and others, is open until Easter Monday.

STRAWBERRY FAIR

Is it a sign of prosperity in the profession that there were many more people at the AA reception this year than last? Or is it merely a reflection of the modest reduction made in the price of the tickets? Whatever the reason, some 800 members and their guests, some as distinguished as Nervi, others as undistinguished as ASTRAGAL, were received by Mr. and Mrs. Cadbury Brown, and there seemed to be far more students—a fact one could discover by dancing in the basement studio, where the joys of jiving were somewhat complicated by a large strawberry net suspended about 4 ft from the floor. Fees at the AA are so high, because it gets no grants, that one wonders how the students (or their parents) can afford it. But apparently they can. The reception itself was very much the mixture as before, commending itself to ASTRAGAL's taste for such Victoriana as magic-lantern slides and elaborately worked visiting card cases.

PORTLAND BILL

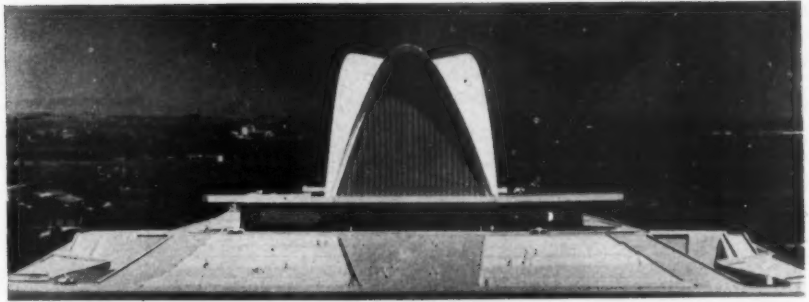
I hope it's true that Peter Sellers is one of the many entertainers who have agreed to appear, without fee, in the "Evening of Divertissements" being staged at the RIBA on April 28 by the British Architects' Appeal for World Refugee Year. With four cabarets in a "champagne nightclub," three dance bands (including the Temperance Seven and Johnnie Dankworth), old Chinese folk dancing, and raffles of paintings and sculpture by Reg Butler, Eduardo Poalozzi and others, the RIBA promises to be unrecognizable. Tickets are two guineas each, from the Hon. Sec., WRYBAA, 66, Portland Place, W.1.

A SYMBOL TO THE WORLD

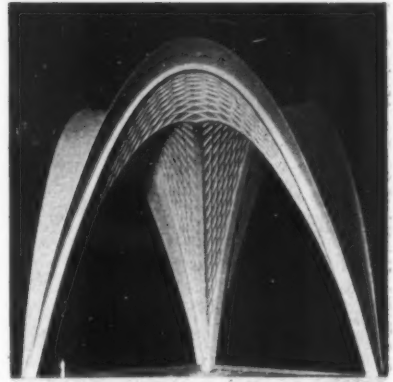
ASTRAGAL is, reluctantly, prepared to admit that it is a sign of the stature of the leaders of the architectural profession today that they recommended to the Queen that the Royal Gold Medal for Architecture be awarded to the Italian engineer, Luigi Nervi. The RIBA teamed up with the Cement and Concrete Association to lay on exhibition, lunch, presentation ceremony and reception for him, which, with an address given at the Italian Institute must have been a formidable series of events for a non-English speaking visitor to endure.

As another sign of newly-acquired authority the presentation ceremony was not quite such an embarrassed shuffle-and-hug affair as formerly. The Tweedledum and Tweedledee gold-medalled escort, who never had more than a couple of steps of escorting to do have been dispensed with, and the President, instead of slipping in, quick-like, from the side door, marched Nervi down the centre aisle so that the audience could have a closer view of the man, and invested him with a large gesture and a peroration that was worthy of a bishop.

Four speeches were made in London of Nervi, by architects, Lionel Brett and Robert H. Matthew, and by engineers Ove Arup and Professor L. L. Baker of Imperial College. Arup emphasized that the rule for achieving architectural content in building is to study the art of building, which engineer-contractor Nervi so evidently did, and saw in the award encouragement for those who



A general view, above, and right, a detail of the interior, of a proposed cathedral for Perth, Australia, designed by this year's Royal Gold Medallist, Pier Luigi Nervi, and his son Antonio Nervi. Though one of his latest designs, it is the most disappointing of those exhibited at the RIBA. The mild excitement of three modest parabolic arches makes an insignificant contribution to the evolution of church design, unlike the success Nervi has achieved in secular work.



believed in the unity of the architect and engineer, and Brett neatly developed this theme. Robert Matthew announced that the Edinburgh University had offered Nervi an Honorary degree and affirmed that in the present essential reappraisal of education we should take Nervi's advice who, apparently, has "thought more of the fundamentals of education than anyone today."

Professor Baker concentrated on Nervi's careful balance of design and economy, describing the brilliance with which Nervi achieved great engineering at a competitive price (his two sports palaces in Rome cost only £150,000 and £350,000, with domes of 200 ft and 300 ft. respectively. Nervi, speaking in French, briefly and simply expressed his thanks for the honour given him.

THE OBLIGATORY CRIT.

One of the achievements of the assessors of the recent Somerset County offices competition was that a fairly full report was made in which the assessors attempted to explain how they arrived at a decision about the winners, and give the reasons why designs were rejected. ASTRAGAL learns that this has caused complaint in certain quarters by those who fear that such an action may lead to controversy.

This is a fallacious argument. Most competitors will accept an assessor's decision, if they know how he has arrived at it, however stupid they may think the assessor has been in not ap-

preciating the beauty of their design. What is intolerable is to have no reason given at all: a play-safe policy which is an insult to the hard work undertaken by competitors, who are thereby surely entitled to a clearly stated criticism. Competitions committee, please note.

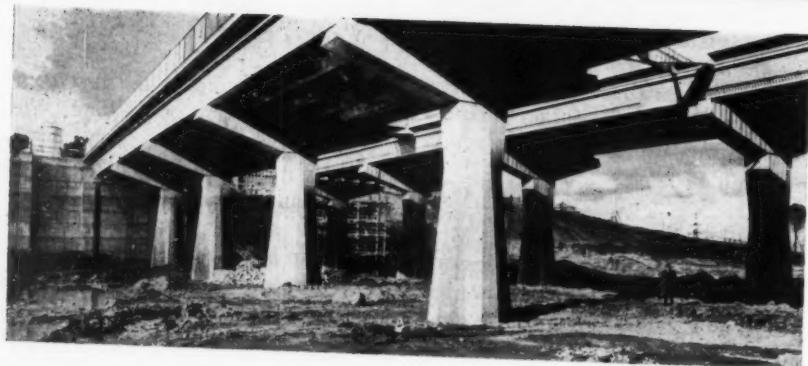
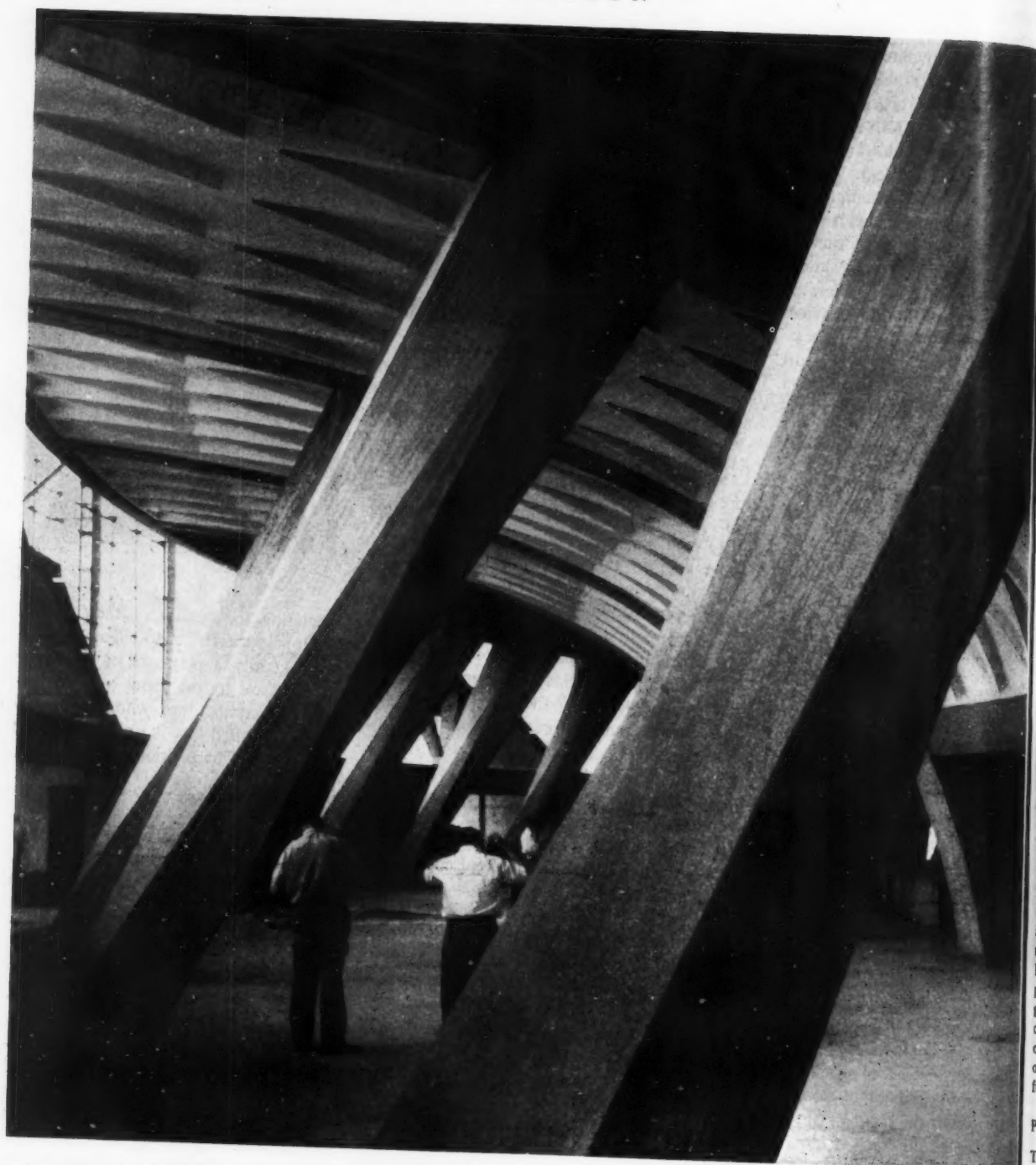
PRACTICE MADE PERFECT

What does a man do if he has a planning problem, or wants to build a laboratory or a hospital? He might approach an architect, of course, but there's quite a chance he would apply instead to SI (Scientific Installation) Service—an organization which advertises its ability to help him. This organization not only has impeccable connections—an Admiral as chairman and the Medical Research Council as a client—but it also has a well-known architectural firm as a consultant. J. Douglass Mathews and Partners help it to give a complete design service.

This is by no means the first commercial undertaking of its kind. Why are such organizations being developed? Is it because they give a better service than an architect working alone. or is it simply because they are allowed to advertise? It would be useful if the RIBA tried to find the answer to those questions.

ASTRAGAL

TWENTIETH CENTURY PANTHEON



Recent work by 1960 Gold Medalist Luigi Nervi: above, the main gallery of the Palazzo dello Sport, Rome, showing the splayed columns which take the load of the dome. The curved underside of the upper gallery is formed of precast ferro-cement units. Right, the Corso Francia, linking the new Olympic Games village with the old city; a partly precast concrete viaduct of two carriageways.

G. C.
Pete

No

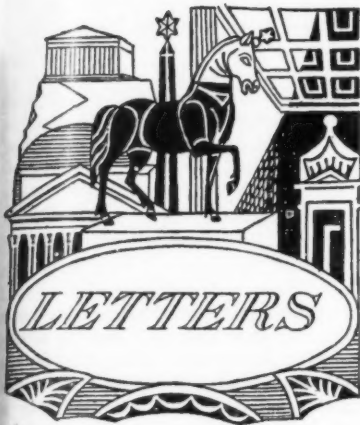
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G. G. Baines, F.R.I.B.A., A.M.T.P.I.

Peter Cable

No Excessive Profits

SIR: Your editorial on the *Ideal Home*/RIBA Small House scheme should not pass without clarification. Here are the facts: Costs quoted at the time of the competition and published in the Book of Small House Plans were house building costs only, and the house was two-bedroom and one-bathroom with undeveloped first floor. Selling prices at Bromley include freehold land—which was very costly to the Builders, Roads, Sewers, Site Works and Landscape generally. In addition the house is a four-bedroom, two-bathroom type. Since the competition an increase of wages has taken place. Making proper allowances for these additions, the building cost of the basic house is completely in line with our estimates and we have every reason to believe no excessive profit is being made. The house is also being built on five other sites in the country and when similar allowances are made, nett building costs show a remarkable degree of agreement. Regarding the architects' share of this enterprise, we keep our costs and if sales of plans go on as they have, this particular job will clearly pay us as well as any other part of our work. Naturally any increases the RIBA or the AJ could bring about would be gratefully received.

G. G. BAINES

Preston.

The Editors reply: We are glad to have Mr. Baines' assurance that the builders are not profiteering at his expense, or at the client's. But the fact remains that the houses cost almost double the figures quoted in the book on sale to the public who are, in consequence, grossly misled, even if full allowance is made for an extra bathroom. We would be interested to know if the other architects concerned are equally well satisfied.

Lightweight Screeds

SIR: I have read with interest your article on the lecture on lightweight cellular screeds which I recently gave at the Building Centre. Your concluding paragraph, if I may say so,

admirably and objectively sums up the problem facing ourselves and the roofing contractors.

I would like to leave this thought with the roofing contractor who urges a topping of cement and sand on cellular concrete. Blistering of the roof covering is only the manifestation of the trouble, in other words it is the symptom. The root cause is moisture.

Many insidious diseases manifest themselves in the form of pimples, rashes or spots whereas the root cause is the virus. Superficial treatment may well get rid of the spots but it will not destroy the virus. Cement and sand toppings may minimise the blistering but they do not get rid of the moisture.

PETER CABLE

London

NEWS

COLLEGE OF ARCHITECTURE AND BUILDING

Reorganization of Regent Street Polytechnic

The Polytechnic School of Architecture, Regent Street, London, is to be merged in a College of Architecture and Building Technologies as part of the reorganization of the Polytechnic into federal institution, composed of three constituent colleges. The other colleges will be a college of engineering and science, and a college of commerce, which will probably include school of management studies.

The site of the college of architecture and building technology is expected to be Loughborough Lodge, Marylebone Road (opposite Baker Street Station), an old people's home. But this depends on the satisfactory conclusion of negotiations for the replacement of Luxborough Lodge by new small homes, and the transfer to them of its 1,100 old people. It is hoped to achieve this transfer by 1964, when Luxborough Lodge could be demolished, and the site made available. It seems unlikely, therefore, that the new college could be completed before 1964.

The following summary of the report approved by the Education Committee has been issued by the LCC:

"Proposals for the establishment of a college of architecture and building as part of a scheme for the reorganization of Regent Street polytechnic, St. Marylebone have been under discussion with the Ministry of Education and the governors of the polytechnic. As a result we have approved in principle proposals for the transformation of the polytechnic into a federal institution, composed of three colleges, namely a college of architecture and advanced building technologies, a college of engineering and science and a college of commerce, with which will probably be included a school of management studies. Each college would provide instruction at an advanced level. The professional associations concerned, including the Architectural Association, have been informed of the proposals.

"Each of three constituent colleges would have the fullest possible measure of independence and would, it is hoped, attract principals and staffs of high quality. In the interim period before the proposed reorganization is complete it is contemplated that there will be a school of general studies for work not properly forming a related part of the three colleges, this school being administered by a committee of the central governing body.

"It is hoped that it will be possible for each of the constituent colleges to occupy a separate site including the sites now occupied by the polytechnic in Regent Street and Little Titchfield Street, and for the college of architecture and advanced building technologies, subject to consideration by the Welfare Committee and to negotiations which are still proceeding, to be built on part of the site in Marylebone Road now occupied by Luxborough Lodge. We will report later, following the conclusion of the negotiations, on this matter.

"We have also approved in principle the constitution of the central governing body of the federal institution and its order of reference and the establishment of college councils which would be the governing bodies of the constituent colleges. It is also proposed that each college shall establish such advisory committees as may be necessary and its own board of studies to be concerned with academic matters within the college. There would be a central academic council, under the chairmanship of the director of education, to deal with academic matters affecting the polytechnic as a whole. There will be a students' union forming part of the Institute.

"The governors of the polytechnic have accepted in principle the draft proposals referred to above, and we have authorized the preparation of detailed plans and estimates for giving effect to the proposals.

"It will be appreciated, however, that so important a new development in technical education in London will need very full discussion and the outline proposals will need to be considered at length and in greater detail in consultation with all concerned. These discussions will proceed as rapidly as possible and we will report further thereon in due course."

RIBA PRESIDENT

Holford Nominated

Presidency. Following a clear-cut majority of nominations the RIBA Council agreed last week to propose Sir William Holford as President, to succeed Basil Spence. It is understood that the ever-busy Holford, who as President, with in addition to normal duties an IVA conference to organise, is in for a busy time, has resigned from his chair of Planning at London University in order to limit his commitments.

Professional Income. All sections of the RIBA, and the Allied Societies have been asked to submit their views on the recent survey of professional incomes. The Professional Relations committee has the responsibility for co-ordinating the replies and putting forward proposals for investigation and action.

New Commissions. The value of new work commissioned of private architects in the fourth quarter of 1959 was one fifth greater than in the previous quarter and 40 per cent greater than the same period of 1958. This increase was general to all sizes of office.

Town Planning Exams. The Town Planning Joint Examination Board (consisting of representatives of the RIBA, the RICS, the ICE, IMunE and the TPI) has written to say that there is no advantage in its continuance, that it should be dissolved and the TPI conduct its own examinations. The RIBA agreed to having no official connection with Town Planning Examinations. It is understood that the RIBA Board of Architectural Education will itself be looking into education in town planning, in which in the interests of architects is now thought to be on the increase, and it is felt that the RIBA will have a freer hand in this matter if it has no formal connection with the equivalent body of the TPI.

YOUTH SERVICE

£3 Million Programme

Sir David Eccles, Minister of Education, in a circular to local education authorities, describes the procedure for the £3 million Youth Service building programme, which he has already announced. The programme covers both local education authority and local voluntary building projects. Local education authorities may apply at once to have projects included in the programme, which covers all jobs costing more than £1,000.

On the general design of youth clubs the circular stresses the need for authorities to take direct account of those who will use the new buildings. Many of the new projects will introduce relationships between architect and client which are novel in the field of educational building. The Minister expresses the hope that architects, and those responsible for the planning of youth clubs, will go as far as they reasonably can towards meeting the wishes of their potential customers.

Under the new arrangements it will be possible to design a youth as an integral part of a secondary school or a community centre. There will be no objection to youth service facilities being used for other purposes. They could be used, for example, in the afternoon by old people's associations or women's organizations, when the clubs are not wanted for their main purpose.

A development project for the youth service will be undertaken soon by the Development Group of the Ministry's Architects and Building Branch. For the time being youth service building projects are to be treated as major projects so that informa-

tion can be collected for a Ministry Building Bulletin.

The previous limit of Ministry grant, which was £5,000 for any individual project, has been removed. In assessing the amount of grant for voluntary projects the Minister will consider all jobs on their merits and regardless of size. In general, however, the grant will not be more than half the cost of the project as finally approved, or three-quarters of the cost when Ministry grant is combined with a local authority grant. If a local voluntary project is to attract grant a substantial number of members of the organization concerned must be between 14 and 20 years of age.

RESEARCH

Heating and Ventilating

Lord Hailsham, opening the new laboratory of the Heating and Ventilating Research Association at Bracknell on April 6, remarked that, though we spend about £25 per head per year on fuel, we only spend about 1d. per head per year on research on fuel use. The HVRA are now working on four main research projects:

Intermittent heating

The first is to find a method for timing the switching on of heating plant in intermittently heated buildings. Neither the usual time switch nor the external thermostat are satisfactory as neither can take into account the thermal behaviour of the building. A method proposed is to use the building air temperature (as indicated by water temperatures) as a control for the switch. A device based on this, it is claimed, can cut fuel bills by 5 per cent.

Floor warming

Electric floor warming is also being investigated: six installations in the South of

England are under continuous test using numerical and analogue techniques. A report is expected at the end of the year.

Chimneys for oil firing

Chimneys in oil-fired installations are giving trouble, as chimney height and diameter are far more critical than in solid fuel systems. Usually existing chimneys built for solid fuel are oversized for oil. Investigations are going on and tables of heights and diameters for different duties are now being prepared.

Duct noise

The tendency to use higher velocities in both pipes and ducts increases the risk of noise. The Association is now working with the makers of fans to agree a method of measuring the intensity, and frequency of noise made by fans, so that designers can determine how much sound insulation to provide in ducts. Measurements already made show that air resistance in p.v.c. tube is considerably lower than in conventional galvanised ducting and that a change-over to p.v.c. could contribute to the sound problem by reducing the amount of power necessary.

Solar heating

N. V. Billington speaking of the long term research of the Association said that "there is little doubt that in the foreseeable future solar energy will provide an appreciable fraction of the total energy requirements." Pointing out that its use will come first in the tropics, he said that it will extend from there to temperature climates. "A first step is being taken," he said, "by the study of the possibility of using sunshine as the power source for a unit dehumidifier for room conditioning." The Association, he said, cannot now spare a large part of its resources to such long term interests, but the time will come when such interests occupy "the major part of the activity."

LCC DEVELOPMENT GROUP

His Work Described

The work of the LCC Development Group was the subject of four lectures given at the AA during March by Oliver Cox, former Development Architect, and Robert Purdew, his deputy. The lectures were held at weekly intervals and each attracted a large and enthusiastic audience. The AA is to be congratulated on its initiative in organizing the series. At the same time Cox and Purdew themselves are to be congratulated not only for the workmanlike way in which they presented the material but for the range of subjects they tackled. The AJ hopes to publish part of the series as technical articles later this year.

It is rare indeed to find a local authority which puts so much into development work as does the LCC. The Development Group is a self-contained unit working within the Housing Architect's Department. It is in the position to make use of other specialized sections of the LCC for the testing of materials, the making of prototypes and for tenant surveys to establish "user require-

ments." Architects and the building industry in general would be richer for having the results of such work published more often. For this reason alone the Cox-Purdew lectures have been of considerable value, presenting as they did not only the advances and refinements worked out by the Group in anything from garbage disposal to ironmongery, but the setbacks and failures which, in the long run, provided the lessons whereby progress could be made. The only real criticism one could make of the series was that some of the lectures were overloaded, notably the first and the last. Probably the subject matter could have been spread over six lectures.

The first lecture was something of a marathon though we were gently introduced by way of the play habits of tenant's children. This gave us the opportunity of seeing how the tenant surveys work. A study of the way different age groups behave and what they require in the way of equipment led to the three-group classification—2 to 5 year olds, 6 to 10 and 11 to 16. Each of these

groups requires different equipment and different amounts of space if the older group in each case is not to interfere with the younger.

From children the lecturers passed to a brief history of post-war multi-storey housing types, starting with the earliest four-storey maisonettes and 11-storey point blocks to the recent 17- to 19-storey blocks such as at Roehampton. Cost studies have been made of various plan types and heights over the years giving interesting comparisons between methods of construction layouts and numbers of storeys. It seems from this that the present policy to build point blocks to at least 19 storeys is right.

The speakers then described various development projects. These are carried out on the basis of a negotiated tender with a contractor selected either for his organizational ability as displayed in previous LCC contracts or for his special interest in a particular material or form of construction. Needless to say the contracts are carried out in close association with the development group. Several contracts were described including one constructed in lightweight aggregate concrete and which makes use of a system of shuttering developed first in Austria.

Windows

The second lecture was concerned with windows and the two speakers traced the work of the development group over the last ten years or so. As with much of their research the group was assisted in the first place by tenant surveys carried out in conjunction with the LCC's sociologist. One of the earliest of these attempted to discover the problems of window cleaning to determine how far this factor should decide window shape and size.* Among the points established was the maximum distance (1 ft. 10 in.) which the person cleaning from inside the room can reach in a horizontal direction on the outer surface of a fixed sash.

Tall blocks of flats and maisonettes, of course, present special problems of weathering and the need to develop timber sections which are adequate to the exposed conditions led to developments from the original EJMA sections. Ironmongery was also investigated and various prototypes for casement hinges, easy-clean hinges, stays and handles have been produced from time to time in order to give the best possible weather- and tenant-resistance coupled with maximum efficiency and safety.

The third lecture covered heating. Although solid fuel open fires are still used in conjunction with back boilers (e.g., low blocks for old people's housing), development group work has covered all forms of central and whole house heating, including small-bore accelerated systems with radiators, forced warm air and electric floor warming. A considerable amount of research has been done in establishing cost per dwelling and subsequent running costs of each system. From this it has been possible to decide what performance can reasonably be expected from a system and whether, say, landlord control is desirable. For example

electric floor warming is considered as suitable for background heating with some other means of "topping up." The heating studies, of course, have taken account of the related construction problems, such as flues in tall blocks and the requirements for adequate thermal insulation. This is a special problem in electric floor warming where heat transfer through the slab into adjacent flats can account for a substantial proportion of the heat emitted. The point here is that the ideal arrangement for thermal insulation does not necessarily coincide with that for sound insulation and an effective compromise must be worked out.

Condensation Problems

The last lecture in the series dealt with two widely separated subjects—services (garbage disposal, ventilation) and mural techniques. Oliver Cox started by pointing out that some years ago the LCC found itself with condensation troubles in many post-war housing schemes, particularly those using cross-wall construction. This, he said, gave the detractors of new construction methods the opportunity for criticizing them as being faulty for reasons such as condensation. When the Development Group went to work on the problem they found that condensation was due to two main causes, (1) the changed living habits of post-war tenants and (2) inadequate detailing.

The increase in the incidence of whole families being out at work during the day has been remarkable since the war. The result is that flats are unoccupied during the day and consequently unheated. When the tenants return in the evening and start heating kettles of water for tea, cooking, taking baths and simply breathing and sweating, they release into the atmosphere large quantities of moisture with which the heating—only just turned on—is unable to cope.

In terms of detailing one point of weakness was the beam spanning between cross walls which supported external cladding. The problem has been overcome first by providing insulation at danger points, and second by providing background heating, the responsibility for which rests with the LCC.

The speakers also described systems of garbage disposal and the constant struggle to overcome problems of lack of labour (reducing the bi-weekly removal of garbage to once a week), noise (heavy objects dropped say 20 storeys down a refuse chute into a receptacle in the basement), smell (a problem of flueing) and tenant abuse. They also discussed methods of mechanically ventilating internal bathrooms and w.c.'s and produced an interesting chart showing the result of a tenant survey. Surprisingly this showed a majority of tenants in favour of internal bathrooms.

The second half of the lecture was devoted to the work of the two mural artists retained by the LCC. George Mitchell is a product of the RCA metals and plastics school and Tony Hollaway their mosaic and stained glass school. These two are retained on the basis of an annual fee and devote about three days each week to LCC work. They work in close association with the development group and the underlying ele-

ment in their brief is an imaginative use of common building materials in murals. This has led to several interesting projects. One of the earliest wall murals, described by Oliver Cox, was carried out by George Mitchell using chipboard. On this he drew his design in charcoal then ran over the charcoal line with a router, cutting a groove approximately $\frac{1}{4}$ in. deep by $\frac{1}{4}$ in. wide. The groove was filled with polyester resin in several colours and, when this had hardened the whole surface was sanded to a smooth even finish and sprayed with a coating of clear resin to provide a protective covering.

MODULAR SOCIETY

'Position Tolerance'

In the winter edition of *The Modular Quarterly* the report of the Technical Committee on the subject of "Position Tolerance" was published with an introductory note to the effect that it was to be discussed at a meeting of the Modular Society on March 30. One might have expected that a subject as critically important as this would have drawn a large audience with something useful to contribute and it is indeed a disappointment that so few turned up.

By definition the subject is a complex one and it is no reflection on the audience, whose enthusiasm generated a lively discussion, that this produced few positive ideas. One felt that the direction taken by the Technical Committee, as expressed in the report, was endorsed in a negative way by the absence of any positive criticism of their approach rather than by the presence of fresh ideas which would support that approach. This, in fact, was the theme taken by Mark Hartland Thomas in his summing up.

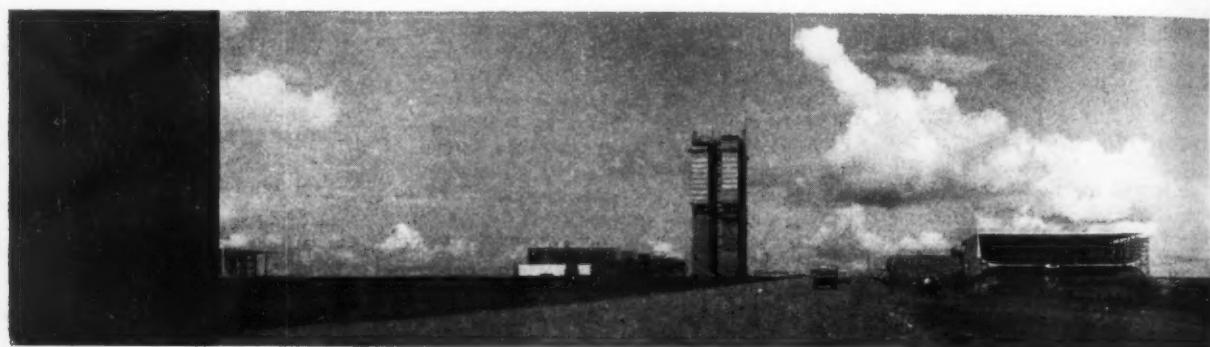
In his introductory remarks, Alan Sefton Jenkins, chairman of the committee, pointed out that manufacturers usually do not know what tolerances they work to. He explained that a study of this subject by the Modular Society was not aimed at necessarily reducing tolerances but at establishing those tolerances which were most workable.

A most interesting discussion developed on the validity of plus tolerances, one or two builder members insisting that there was no place for plus tolerances on site, such as with the assembly of precast concrete beams or the successive levels of floors in multi-storey work. It was clear that many present would have liked some guidance on where one might reasonably expect to work with a plus or minus tolerance and where one could only work with a minus tolerance. The example was quoted of woodwool slabs, channel-reinforced, used as ceiling lining in which case plus or minus tolerance would be acceptable and woodwool slabs used in conjunction with metal T's, also for ceiling lining where only a minus tolerance for the woodwool slabs could be permitted. It was not until the end of the evening that a member suggested the possibility of producing a sort of catalogue or handbook of tolerances which would show, for example, under what circumstances different tolerances would be acceptable.

*See AJ, July 10, 1958.

A party of architects, builders, engineers and quantity surveyors has recently returned from a visit to Brazil, Venezuela and Mexico. We have asked C. C. Handisyde to record his impressions. Time and circumstances did not

permit a detailed study of any particular aspect of work in those countries but an overall picture was obtained, which shows how necessary it is to know more about the work in such places than is usually evident



B R A

So much was seen in São Paulo, Belo Horizonte, Rio de Janeiro and Brasilia that it is difficult to know where to begin. Brasilia is most in the news and is affecting work all over the country to such an extent that it is perhaps the place to start.

The place is a sea of rather gluey red marl, with feverish activity being carried on day and night. Officially, the rush is to enable the opening to take place in late April. In fact, we got a strong impression from a number of sources that the real objective is to get the whole project to "a point of no return" before the

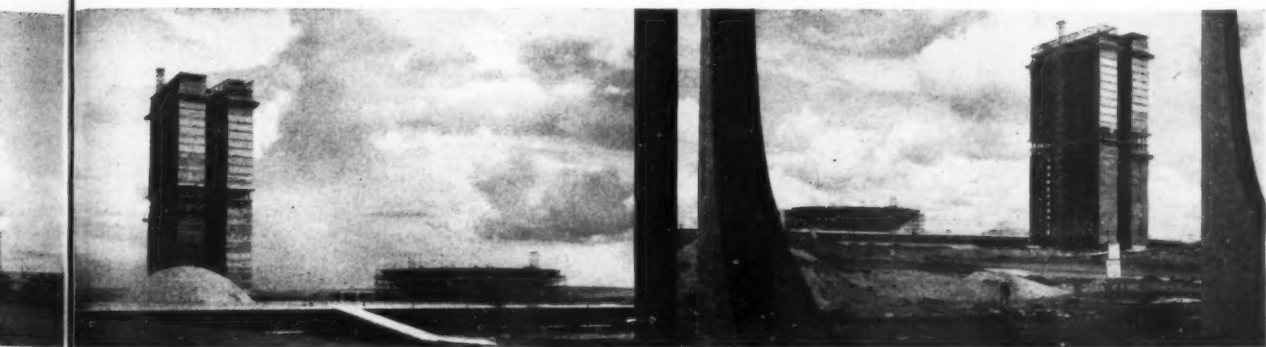
forthcoming presidential election lest the whole thing be abandoned with a change of presidents and consequently of policy. With the vast amount of money already sunk in the place, and nobody seems able to say how much this is, one would have thought any change of plan would be impossible, but Brazil is a strange country. One heard tales elsewhere, for example, of a local official pushing some project, such as a new library, but, on going out of office before its completion, the half-finished building being left uncompleted because the successor in office would be more interested in some new scheme than

in completing a monument to his predecessor. Certainly the effort which has been going into Brasilia has had disastrous effects elsewhere and it is hardly an exaggeration to say we got a feeling that large numbers of lost causes were lying about decaying for lack of finance because of Brasilia. The University at Rio seemed to be a particularly sad example of this.

What of Brasilia itself as a place and of such of its buildings far advanced enough to be judged? Driving in from the Airport, three impressions: it is very much larger than one had expected: the

particular from carefully selected pictures of the best
but an buildings. Mr. Handisyde wishes to make
shows quite clear that the views which he expresses
out there his own personal reactions to what was
evident seen in a very hurried tour, and not

necessarily those of others of the party. In
next week's issue Mr. Handisyde continues
his journey through Venezuela and Mexico,
describing buildings in Caracas and Mexico
City.



is prede benefit of building on a vast uncluttered
which has area is very obvious in the road plan-
ad disas ing, which seems to be excellent, especi-
hardly ally the very nice handling of road junc-
a feeling tions with a free flow of traffic obtained
uses were without abrupt and ugly embankments:
if financ a third point noticed on the drive in was
ty at Ri the dramatic siting arrangements for the
examp very large number of future embassy
buildings. A long row of these will face
place and across the approach road down to the
advance Lake and should become one of the most
in from impressive ways from an Airport to town
it is ver anywhere, and will, at the same time,
ted: the become a kind of permanent building

exhibition for the countries concerned.
It is to be hoped that Britain will grasp
the opportunity—certainly the competi-
tion will be severe.

The great feature in the town is the
Government Buildings group (above)
with its twin-towered Secretariat as the
only really high building in the place.
From all directions the twin towers
dominate the flat landscape and as such
are successful. From nearby the compo-
sition of the tall block and the saucer
and dome of the debating chambers is
extremely interesting. One wonders, how-
ever, whether from a distance it may

prove to be another Delhi, since the lower
buildings seem to be sunk into the ground
and, especially when the main approach
is planted, they may almost disappear
from sight, except from nearby. **Left**,
which is from the Palace side of the
group, shows how well the towers domi-
nate but how the other buildings are
invisible—although in this view, possibly
this effect is more obvious than from
other directions.

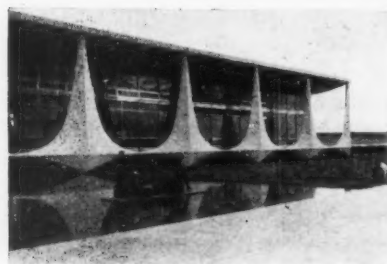
The saucer and dome idea is impressive
from close up (above and 13) and pre-
sumably the cost of such things is justi-
fiable in a Parliament Building. What

BRAZIL (continued)

seems less certain is whether the circular debating chambers will be acoustically satisfactory. Unfortunately, it was not possible to discuss this with anyone who knew the design side of the job.

It is too early to judge whether the layout around the central buildings will be successful. At the moment, the open spaces seem to be very large and to involve more walking than will be comfortable in either very hot weather or storm rain conditions. Near to the central group is the range of ten-storey buildings (12) for the various Ministries. Not yet completed they appear to be simple and straightforward, but it seems odd that they are all detached and of the same size and one wonders how the Administration will cope with the problem of fitting differing departments into standard buildings. Any extension would ruin the appearance of the group as a whole.

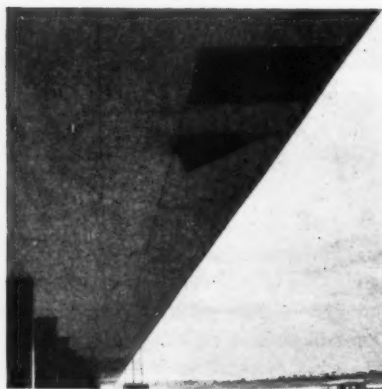
The three Palaces are very interesting, especially the similar, but differing, white marble-faced shaped "columns." On the



Presidential Palace the columns run parallel with the façade of the building and, in detail, are most delicately shaped and their marble facing is beautifully worked to the subtle curves. It seems odd that this building has a raised terrace along front and back (3) and no easy means of getting around the ends. In the

other two Palaces (1, 2) the columns run at right angles to the buildings and, although differing in each case, they do not have quite the grace of detail of those on the Presidential Building. The Presidential Palace is one of the few major buildings, the Hotel is another, at present complete, and both inside and out are very impressive. Whether the columns serve any construction purpose was a mystery. If they are supposed to do so then it is difficult to see how a number can suddenly be omitted (2). Personally, I thought they were so attractive that even if they were quite false they were justified. What was rather ominous, however, was the fact that on the Justice building the white marble facing was already showing signs of coming off, apparently from thermal movement of the very long canopy. This kind of trouble was noticed on numerous buildings in other towns. Expansion joints were provided on some jobs but in others were omitted or used too infrequently.

The large hotel, pleasantly sited for aspect, but almost as far away from the Airport and the centre of the town as it could be, was attractive in many ways but its enormous length resulted in a terrifying corridor vista. The front elevation is flat and dull and it is curious that no through ventilation is allowed for.



Deterioration is already apparent, but this is no worse than one got used to expecting on almost any new building.

There was not time to more than glance at the rest of the town. Blocks of flats were simple and straightforward but in some of the few small shops so far built the standard of design was not main-

tained and they were little, if any, better than suburban development might have produced in England.

How can one sum up such a place as only a very hasty view? It is a tremendous experimental gamble, at present it is having a devastating effect on the progress of work elsewhere and is the subject of some very strong criticisms as a result. Certainly at present it is very unpopular with many people. It looks to be a slightly forced plan in its overall shape and open spaces may prove to be too large. It is said that Lucia Costa, the planner, lives in Rio and never visits the site. If this is true it seems most curious. An ivory tower may be an excellent place in which to think but surely the scene of action should also be visited as the ideas begin to materialize. There is also at present rather a lack of colour but completion of other buildings and, later, the landscaping, may alter this. Vast amounts of labour are being used for hand work which we would expect to do by machine but this was general throughout the country as nowhere was much plant seen in use, except for earth moving.

SAO PAULO

What of the other towns visited? São Paulo is a typically big business city except that it is growing faster than almost any other town in the world. The amount of new building is fantastic, the design for the most part ordinary, the standards of finish no more than fair and so far as we could see, its overall planning chaotic. Surely a comparison between Moscow and São Paulo should be a lesson to us here while there is still time. In Moscow a few high buildings stand proud of the general mass of the town and, whatever their individual design, they do read as dramatic punctuations. In São Paulo, the high buildings jostle for space and look an untidy mess except perhaps from a distance when they merge into a fairly dramatic group on elevated ground in the centre of the city.

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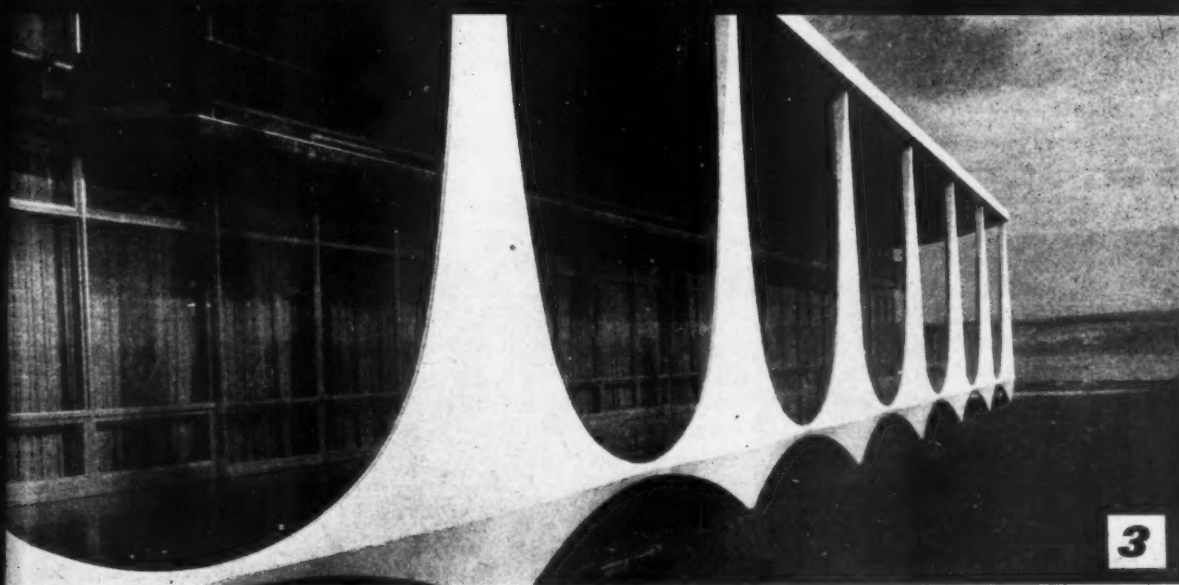
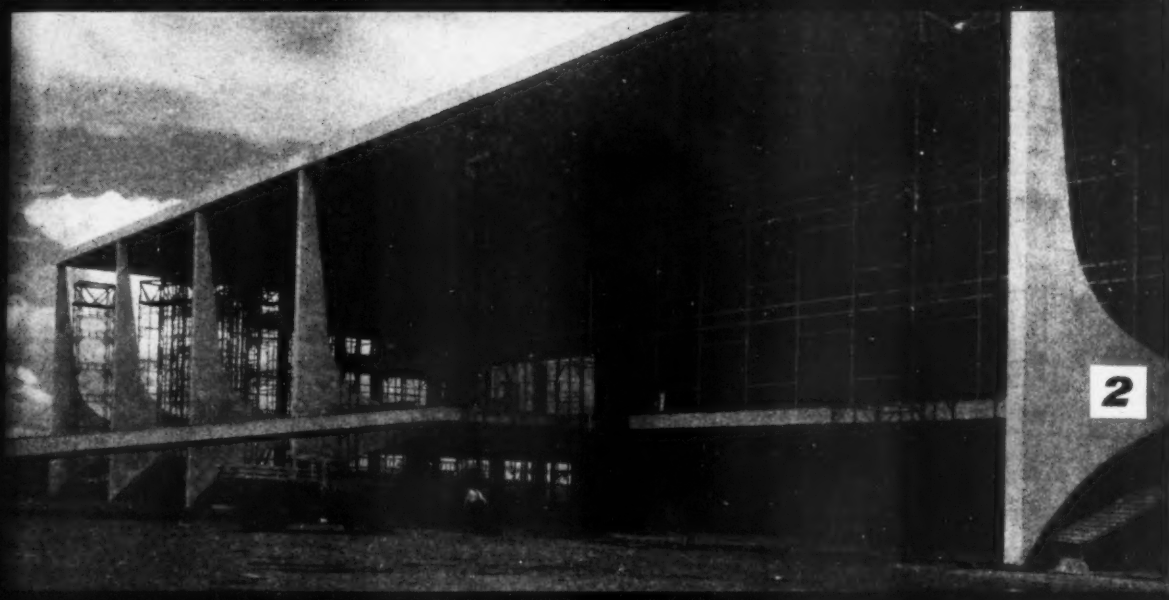
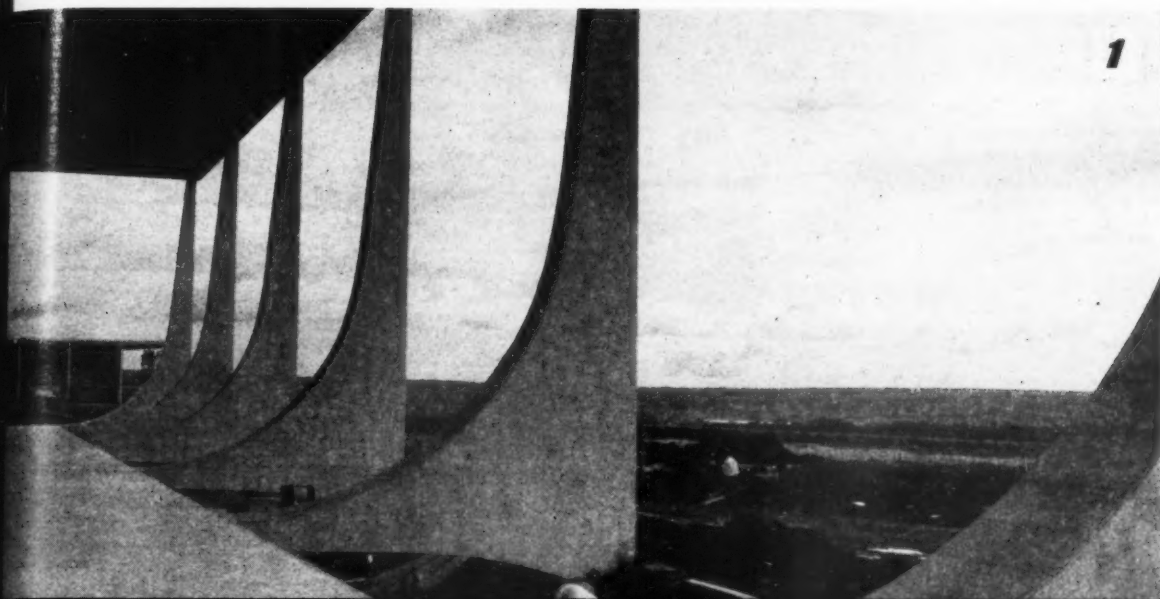
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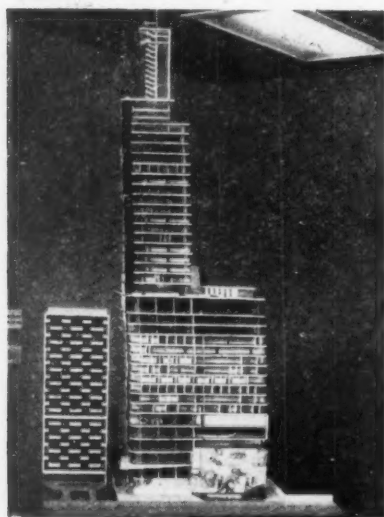


BRAZIL continued

How long even this condition will remain is doubtful for some very high buildings are now going up away from the centre.



One of the pleasanter high buildings was a block of **Flats** of about 24 storeys. Immediately alongside this was starting what must be one of the largest projects



in the town. Here is a **model**—the "small" block is that of the flats! This project, to be 700 feet high, will contain, among other things, a public theatre, a newspaper printing works, a printing shop for a magazine, a TV concern with studios, theatre and cinema, offices, small hotel for visitors, restaurants, and, for the staff, a gymnasium, skating rink, swimming bath, church and ballroom. This was not untypical of the big thinking and bold ideas seen in many places, but

one could not help wondering whether it was wise to squeeze such accommodation into a tightly planned multi-storey building and what would happen if ever more accommodation proved necessary. The job was displayed in an astonishing model which built up floor-by-floor so that the whole of the interiors could be inspected. The model was shown to us in what was quite a large two-storey site office, very neatly designed, and erected in two weeks, and altogether a very nice advertisement for the Contractors and a pleasant place from which to direct a large building job.

On the roof of another large new project, an amusing dome structure (9) was seen. The roofing of this was of plastic material.

Although there was a vast amount of work going on, São Paulo is much less interesting than the other places which were seen and too much like any very large city to be attractive. Future travellers with only limited time, are advised to skip it and spend longer in either Brasilia for its architecture, or Rio for its attractions of every kind.

BELO HORIZONTE

Belo Horizonte is a very much smaller place and life goes at a quieter pace. As one inhabitant said, "They have time to be polite and live a civilised life." Although relatively small, there is a lot to see. The famous sights are, of course, Pampalha and a long road trip to the old gold mining town of Ouro Preto. The latter is a full day trip past some interesting scenery. Ouro Preto is picturesque and has a number of interesting old churches, but is virtually preserved as a museum piece. To anyone in a hurry, it is questionable whether the journey is worth while as many rather similar towns and churches can be seen in southern Europe. Ten miles or so on the road out of Belo Horizonte, however, is an interesting little development. A speculator

has bought up some very attractive mountain land and built a good small modern restaurant and club building. Membership is restricted to people who buy nearby site on which to build themselves a house. The scheme appeared to be prospering. An interesting minor detail, inside the clubroom was a wood "mosaic" floor composed of end grain blocks cut from whole trunks varying in diameter from about two to six inches. Quite amusing in its appearance.

To return to Pampulha. It is sad to record that this project seems to have had trouble. The Lake, which one understands dried up at one stage, is now full but some kind of bug makes it unsafe for bathing. The Casino is now an Art Exhibition because gambling is now against the law. The Yacht Club looks rather tatty and uncared for. The later club building, considerably illustrated in our journals years ago in model form, has not been completed. On the other hand the famous Niemeyer Church (4), which for years was objected to by the Church authorities, has at last been consecrated. The blue and white tiled mural, seen when looking towards the Lake, fully came up to expectations and the interior of the Church was simple and attractive. The Church is worth a visit but it is questionable whether the other buildings are

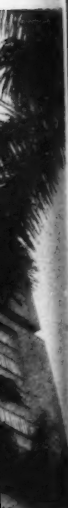
In Belo Horizonte itself some of the new office buildings were among the best seen. Outstanding as an individual building was the **Olivetti** one. Very simple



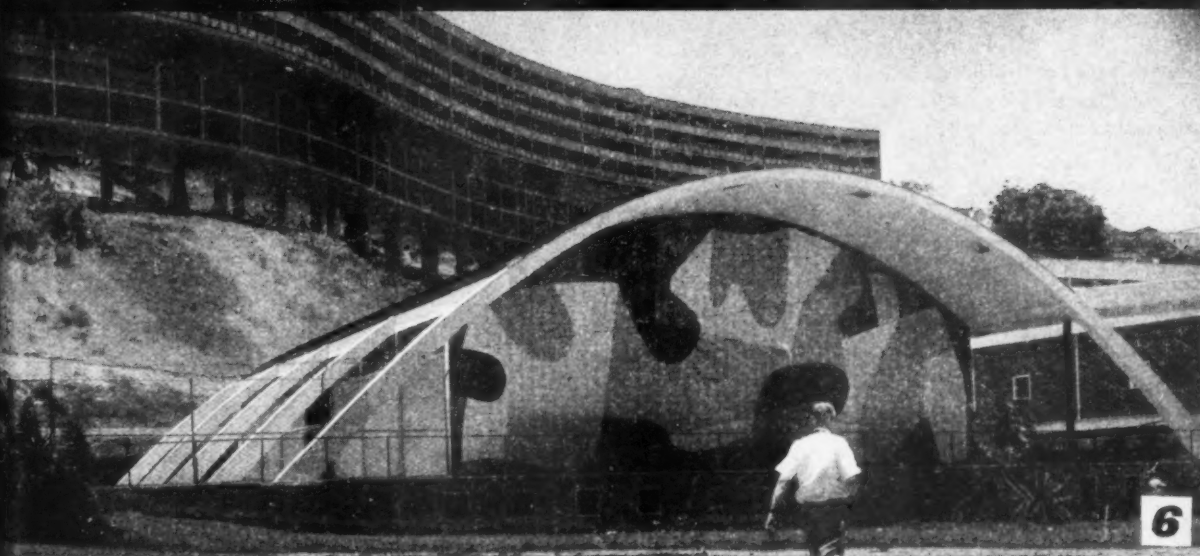
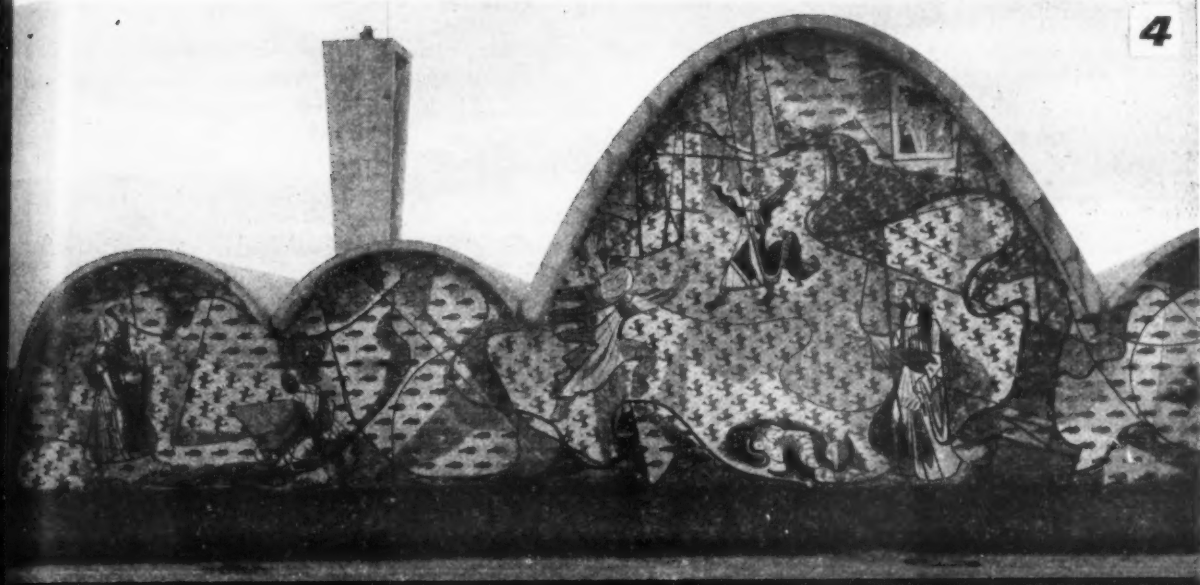
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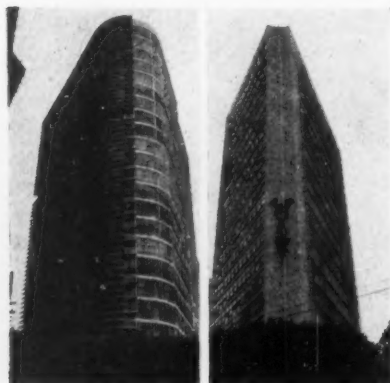






BRAZIL (continued)

and crisp with its gleaming vertical adjustable louvres. Will they stay bright? One hopes so as they are very striking. A terraced set-back about six floors from the top was rather more obvious than is apparent in the illustration. Whether it was required for a set of V.I.P. rooms, I am not sure, but it gave just a pleasant interruption to the otherwise all-over treatment. Perhaps more important in some ways than the individual Olivetti building was the treatment of the main square. With diagonal streets coming in the plots were triangular. Each building was designed individually but there was some clear overall control of height and treatment. It has been in operation for a



long time for the **bank building**, shown right, is about seven years old. The corner wall here is in mosaic finish and it is interesting to see the two side elevations quite different, on the left normal windows, on the right vertical concrete sun louvres. Opposite this, shown left, is a building under construction and designed by Niemeyer, again sun louvres required on one side and not on the other but in this case placed horizontally, and rather dramatically stopped on the curved corner. We could do with some road junction treatments in our towns as well-designed as this.

A very big Niemeyer job was a two-block group of flats (7) adjacent to a large traffic circus with an island garden. This illustrated rather well some of the curious features of the building world in Brazil. Owing to inflation, it appears that the only sensible thing for anyone with any money to do is immediately to go out and convert it into something of more certain value. The result is a gorgeous spending spree. Presumably, this is partly respon-

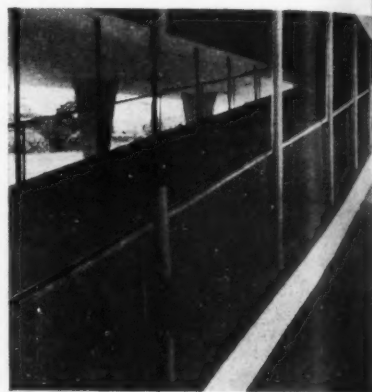
sible for the astonishing amount of building work. In the case of these tall blocks, it appears that would-be purchasers of individual flats were the source of much of the money required to finance the job. Unfortunately, for them, a year or two after commencement the estimates were being exceeded and they were asked for more money. Work proceeded but again the money was insufficient! What do the unfortunate clients do? The end of this story is shrouded in mystery. This was by no means the only job stopped for lack of money for completion. A large job in São Paulo was said to have been standing half finished for years.

One cannot go to Belo Horizonte without visiting the suburban school by Niemeyer (8). This really does seem to justify a remark that one young Brazilian architect made that "Niemeyer is really a brilliant sculptor." After getting over the first few moments of wild photography, the expensive stupidity of the scheme becomes more and more obvious. The main hall, with floor sloping down from the platform and then up again to the back may possibly function as an auditorium, but its external shape must have made its cost outrageous even in a country of cheap timber and labour for shuttering. Exterior



mosaic cladding round the hall building is falling off with rather disastrous results to the appearance. The classroom block has the usual vast area at ground level as just covered space—a good idea in principle in their climate, but surely overdone in many cases. From this covered space there is a very wide ramp access to the classrooms at first floor level. Ramps were seen in a number of buildings and, having walked up and down several, I am fairly convinced that they are seldom worth while. They take up a vast amount of space and, unless they are of a very easy gradient, are not comfortable and might well be dangerous in buildings used by elderly people during

descent. In this school, the ramp led into an enormously wide central corridor. Enough wasted space here for all the extra activities that any Ministry of Education



could think up! There were some **curious posts** along the edges of this ramp. Their purpose was not clear but their construction is all too obvious. The whole building is a good example of an exciting doodle which when exported as photographs is apt to lead students and others astray. It is said to have originated when the designer saw on the table in front of him a blotter, pen and ruler and, fascinated by the composition, decided to create a school in the same form. "Not quite architecture"?

Near to this school is a housing area with a fair collection of extremely ordinary houses but a sprinkling of quite interesting designs—more of the latter than we would ever find in a comparable development in this country. Also nearby is a

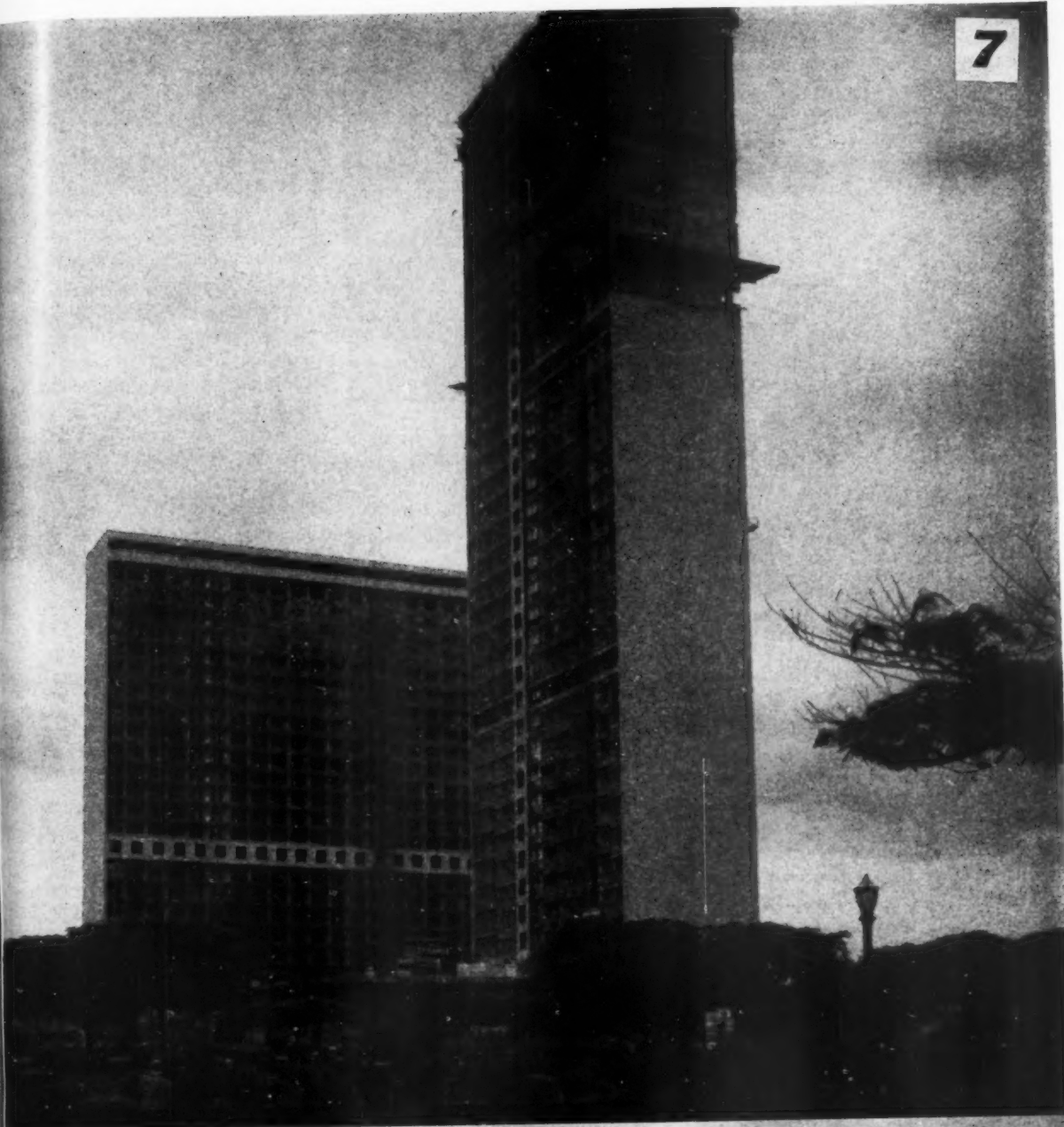


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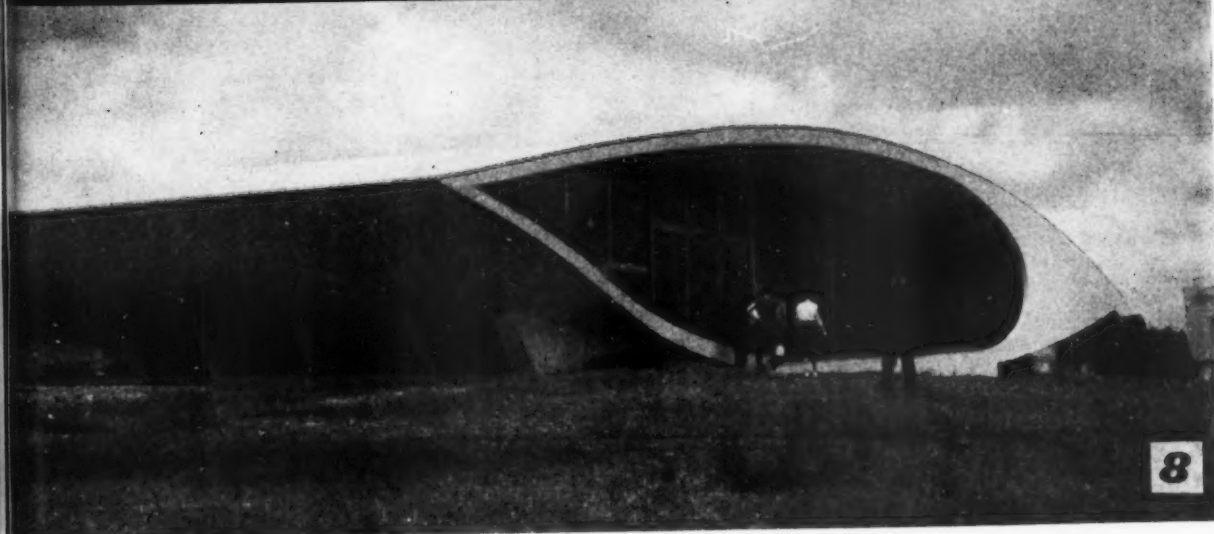
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BRAZIL (continued)

modest little building for the **School of Architecture**, the exterior of which showed a nice restraint in the use of sun louvres and the inside a bold black and white **marble tile floor** treatment with the patterning arranged to echo the gallery over and also to lead from entrance to the stair.

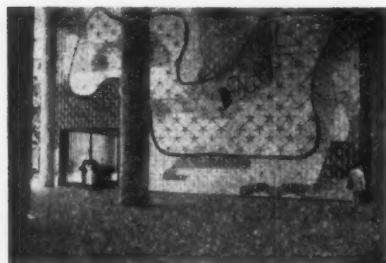


of the lower block and shows a little of the **Burle Marx garden** while (5) gives a view of the same garden from the top of the main block. This was the only one of his gardens which did not come up to expectations, mainly because it was not being kept in good order. Elsewhere, both in public buildings and private houses, he has produced compositions of quite breath-taking beauty with a splendid use of shape, colour and texture contributing to the whole. The inside of the Ministry comes as a most unpleasant shock. Like many other buildings the roof leaks and for several floors down the ceilings look like a slum property. Even where damage of this kind has not occurred, the interior design is uninspired and the colours a very close relation to our own old brand of municipal brown and green.

RIO DE JANEIRO

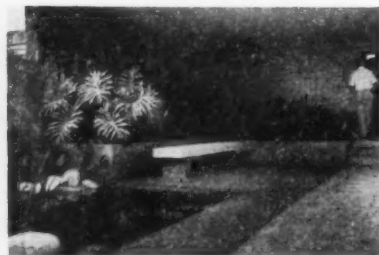
Rio de Janeiro is such a magnificent place of beaches and exciting viewpoints that it tempts one to see less of the buildings than one should, because there are some very good jobs and moreover the average building here seems better than elsewhere and one got an impression that the quality of construction was higher.

Although it is now almost ancient history, it is interesting to see the famous Ministry of Education. The front comes up to expectations and still looks very well.



The blue and white **tile murals** in the covered area outside the entrances are very impressive but, unfortunately, some of the tiles have fallen off and it appears that as this has happened before, there are no longer any spares with which to do repairs. The less illustrated rear elevation is quite ordinary.

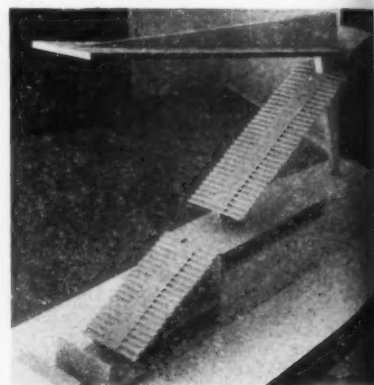
This picture is taken at the roof level



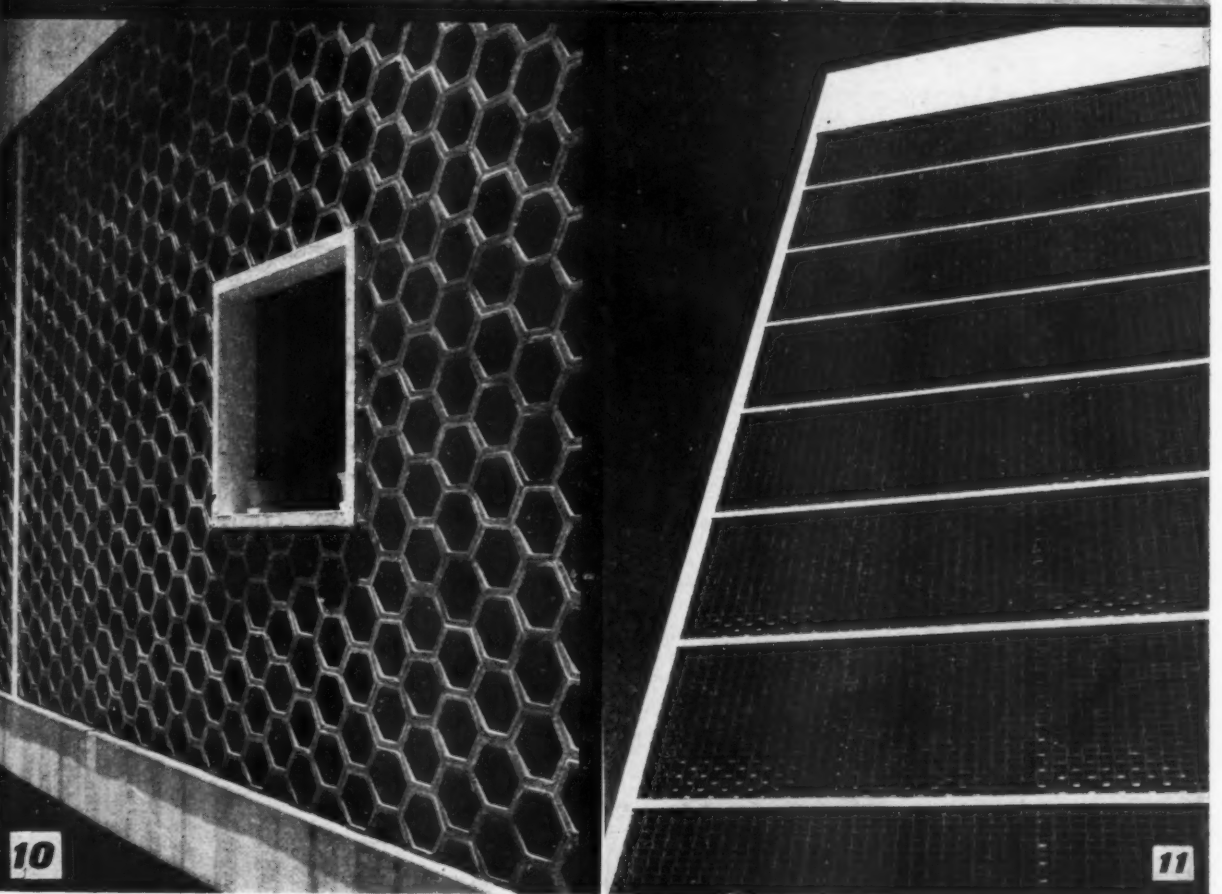
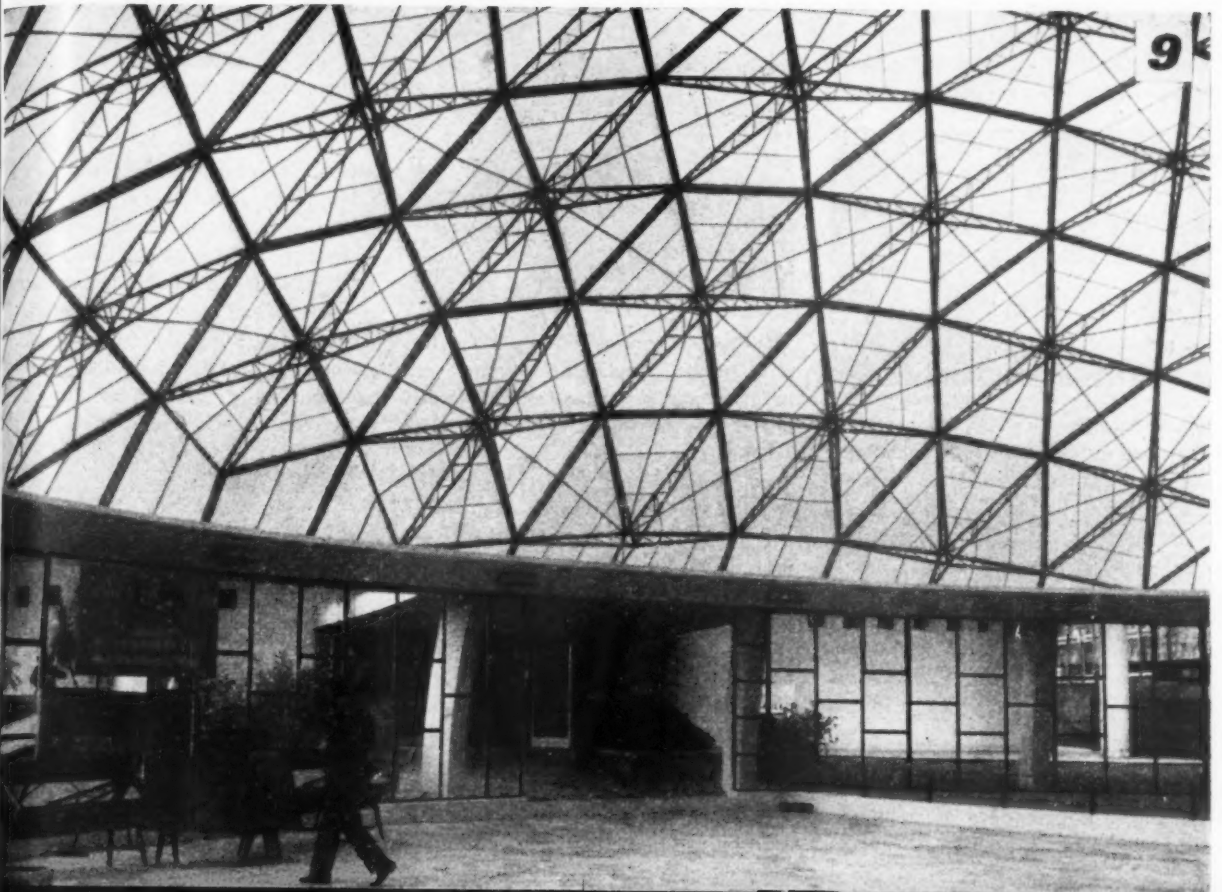
garages seem to be common. **Entrances** are almost always attractively detailed with well laid out and maintained planting. How one envied the effects that could be obtained with their lush growths.

On the outskirts of Rio are two of the real tragedies of the town which are typical of what the system seems to produce. Years ago, illustrations were coming over of the development at Pedregulho housing, school and clinic, etc. Well designed as a group on steeply rising ground, this was at least a move towards providing some lower income amenities. The clinic, school and two modest blocks of flats are complete and occupied but the very large curved block of flats (6) which has been nearly finished for years, is just not being completed and stands empty and decaying. It is about 15 years since it was designed.

The other, equally tragic job, is the University of Rio. Here on a vast campus we saw splendid models of what was intended. A detail model showed the bold

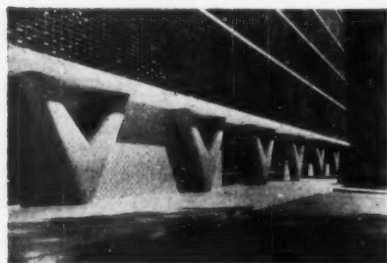


cantilever design for the stadium, a cantilever of 50 metres. What chance has it of being built? On the ground at present is the completed R.C. frame of a very large hospital—no work in progress; a little way off is a large building for a school of engineering, frame, walls and roof nearly complete but no real sign of work. Further along was the school of architecture, a vast building intended for 900 students, a terrifying thought! It looked large enough to take several thousand and was certainly not an economic job. It was at least 75 per cent complete but again showed no sign of being finished and occupied. All this seems to be the price which has to be paid for Brasília.



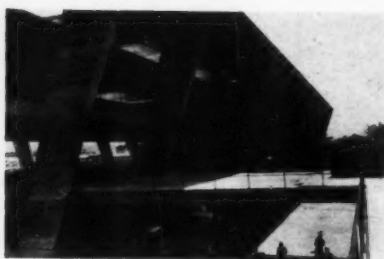
BRAZIL (continued)

Elevationally, one of the most attractive of the newer buildings in Rio was the



South America Hospital, by Niemeyer. Very well detailed with perhaps the most attractive example of his trade mark V shaped piloti, finished in this case in beautifully textured concrete. Unfortunately, the building has been up for some considerable time but is not occupied. It was said to have cost so much that the clients could not afford to run it and were hoping to get it taken over by the Government. (There was no opportunity to verify this statement.) The garden here by Burle Marx was very simple but attractive, including an amusing lawn pattern obtained by using two different types of grass.

On this hospital job was one of the many very attractive hollow clay block screens (11). In this instance, red in colour, the effect was startling in its contrast and texture. Another very good example of the same kind of thing is on the well known Parque Guinle flats but there were many lesser examples of interest, such as the corridor wall to the school at Pedregulho (10). We may not need the sun screen treatment in this country but the same technique might well be used for other purposes; it seems a relatively cheap way of forming a screen wall and adding some texture and fun to a design.



The new **Museum of Modern Art at Rio** is at present functioning in some very ordinary premises at the front of what is intended to be the main museum. The concrete frame for the future building is an interesting piece of construction. Again, however, there was not much sign of activity on the site. One of the large columns had a tell-tale fixed across a crack at the V-junction near ground level.

CONCLUSIONS

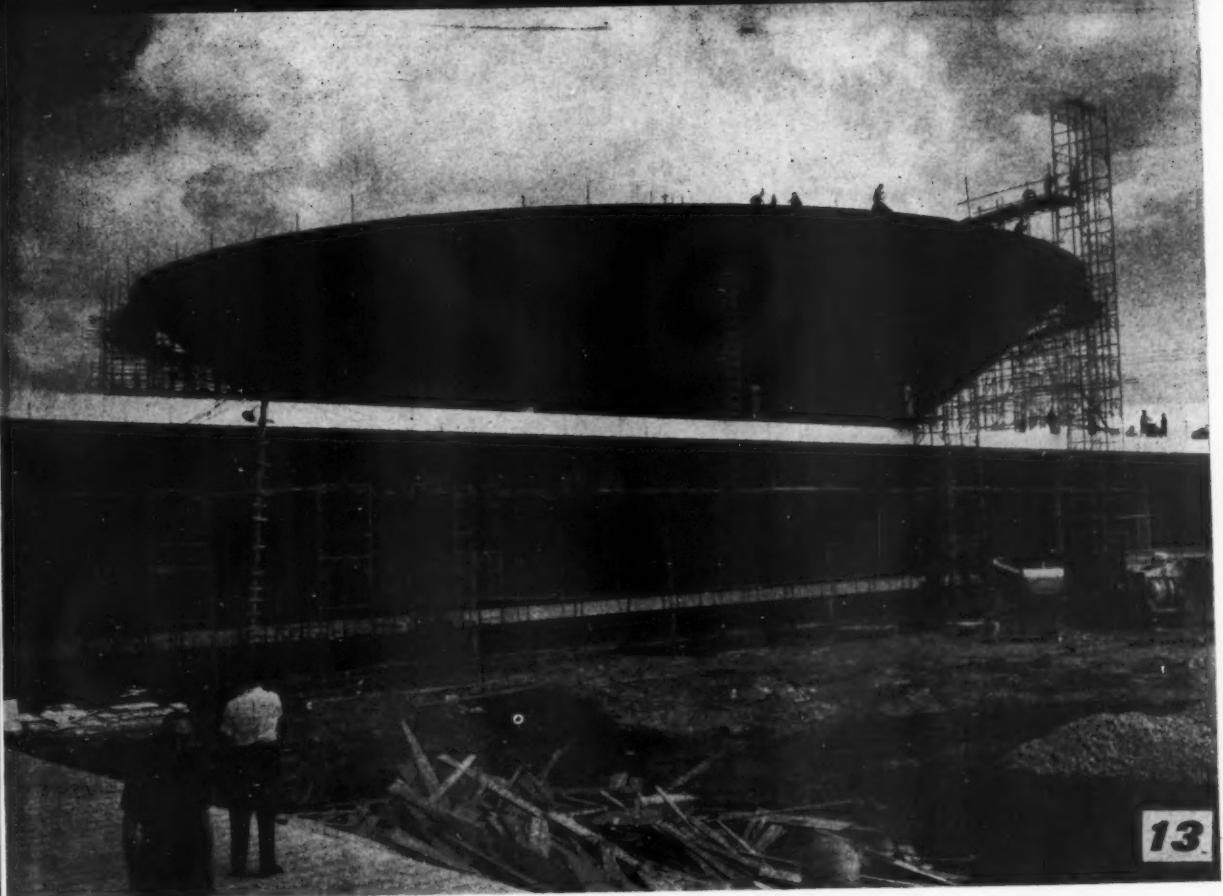
Looking back at the whole Brazilian scene, there is an impression of great drive and enthusiasm, with the average design, when done by architects, perhaps a little better than the average here, but with less really spectacular work than might have been expected. Undoubtedly, the majority of the really exciting and unusual designs were those by Niemeyer, but one could not help feeling that often these were designed for their appearance rather than for their function. There was

less colour in exteriors as a whole than I had expected to see. The Brazilian architect seems to have a nice easy life. Site planning regulations do not seem too severe, fire precautions, so far as they affect plans, seem child's play by comparison with ours, there are no problems of heating, because of inflation and contract methods the attitude to provisional estimates seems light-hearted, defects in completed buildings don't seem to worry anyone very much and, finally, architects are regarded as important people and are therefore exempt from much of the normal taxation!

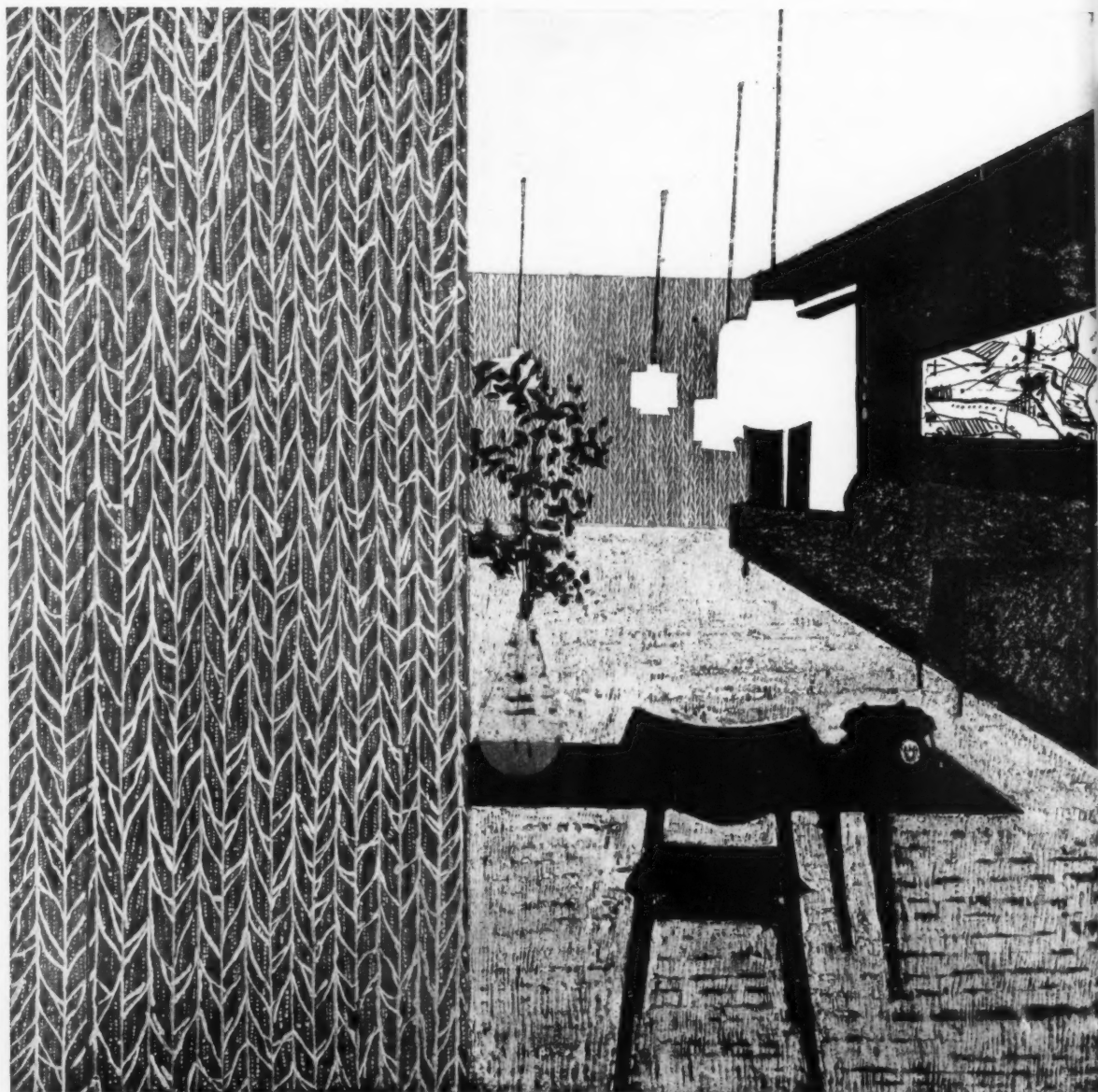
Just a note to anyone who may follow the same trail in the near future. Don't rely on advance arrangements; people are charming, but the system does not always work! Be prepared for very considerable delays. Distances are great and air travel plus walking around buildings in hot weather is very tiring and the programme should allow for this. If trying to fit in a big programme, then exclude São Paulo in favour of more time in Brasilia and Rio. Brasilia is a big place and transport not yet organized and it takes longer than might be expected to see it. Rio is a wonderful place in which to relax as well as to see things and is, therefore, an excellent middle-of-a-tour stopping centre.

To photographers: films can be obtained but not always the particular brand required. Light can be very bright indeed and there is a temptation to disbelieve one's light meter. On the whole, the costs at present rates of exchange are a little lower than in England. Dollar cheques are easier to change than pounds, though there is no real difficulty over this.

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Drawing by Fay Hillier



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DESIGNERS OF THE FUTURE



Finnish nursery



A number of student groups representing various countries have been given the opportunity to exhibit their work at Heals furnishing store as a part of the 150th anniversary celebrations of the firm. The English exhibit was a combined effort by Paul Goble, Sandra Heath and Pamela Evans who designed the furniture, Ruth Kaye, the curtain fabric, and Helena Newman who was responsible for the bed covers which were woven by Anne Meurling. Nigel Walters, the head of the interior design department at the Central School of Arts and Crafts, acted as co-ordinator. Below, David Reeves gives his comments on the exhibition.

Few firms survive untaken-over for 150 years, with descendants of the founder still in charge and actively designing. To do so, Heal's have sold the public what it wants—survival in business is not simple—but they have always managed to combine business with a soft spot for the young and unknown. The highpoint of their birthday exhibition (appropriately on the top floor) is a group of rooms by students from seven countries. "Contemporary" style is now universal, so that there is little national diversity—there is nothing to compare with the impact of the Finnish furniture while we were quietly Russelling our way through the thirties. Perhaps the British bedroom is typically antiseptic, but a Teutonic heaviness has descended on the Italians. The Finns have had the most fun—enjoyment is a designer's asset—but all should pay attention to costs.

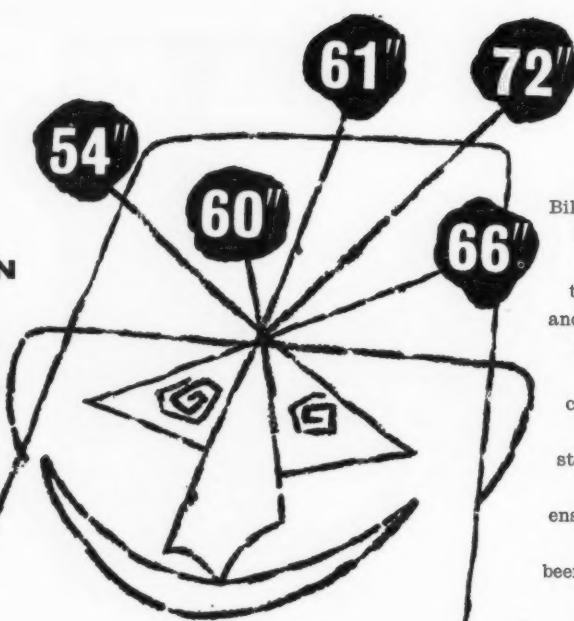
Student designs in wood tend to be rather knobbly, with exposed wedged tenons emphasising the more primitive of the classical methods of construction. This is because they all, quite rightly, study the history of construction and all are made to feel a need to go "to the roots of the matter." It is good to have an enthusiasm for appearance,

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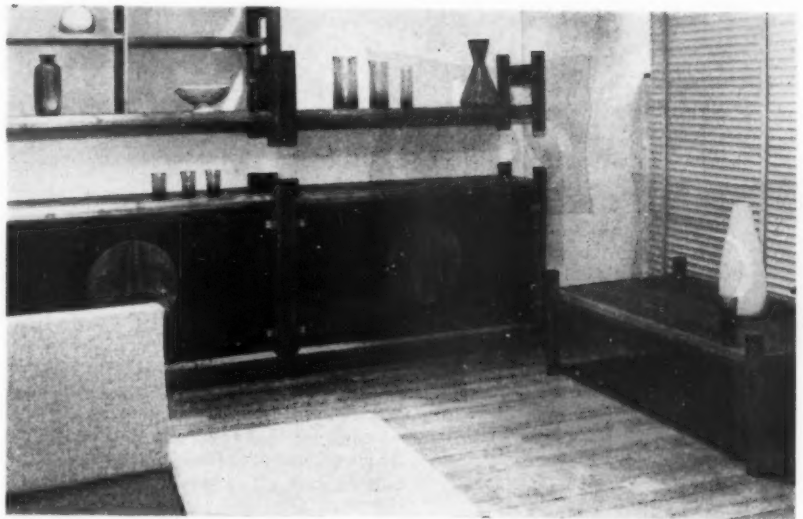
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DESIGNERS OF THE FUTURE (continued)

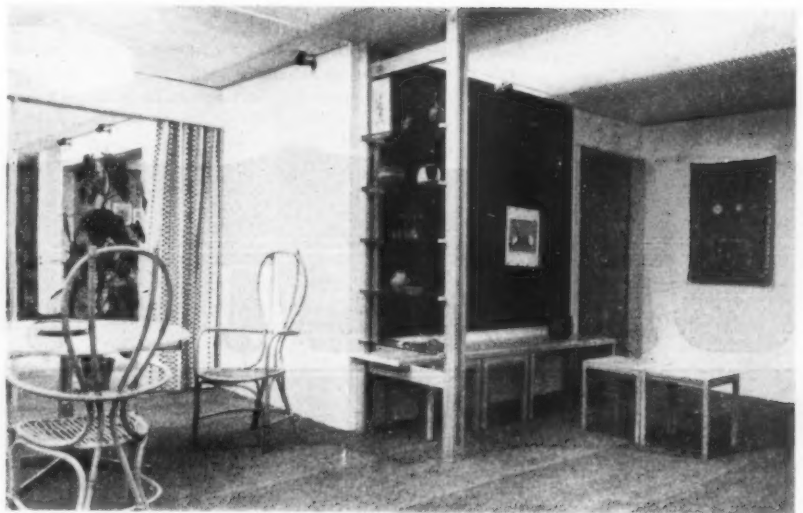
and there is nothing much wrong with going to the roots, but appearance should not be allowed to over-ride consideration of the other, more difficult aspects of design—particularly makeability—and the root of our matter is the machine. We are told that the furniture is all made by Heal's craftsmen, which to me is a confession of failure rather than a boast—a failure to study the machine. Studying the machine means more than knowing what operations can be performed by what woodworking machines, and I would like to see designs by students with good basic training in work-study, cost-accounting, labour relations, market research and the other techniques by which about nine-tenths of our furniture is actually made. For the tragedy is that this nine-tenths is produced with little or none of the genuine enthusiasm for appearance shown by these students, who, if they are really the designers of the future for all of us, must sooner or later master industrial technique—and improve it. While I do not know their curricula, the point is made by the cost of the exhibits—£236 5s. 0d. for a wardrobe (Britain can make it).

If I have been critical, I should conclude my criticism by a strong recommendation to go and see this exhibition—it is visually exciting, you may well see something there which you both like and can afford (and how often can one say that?), and Heal's enterprise and interest in the young deserve support—the world would be poorer without them.

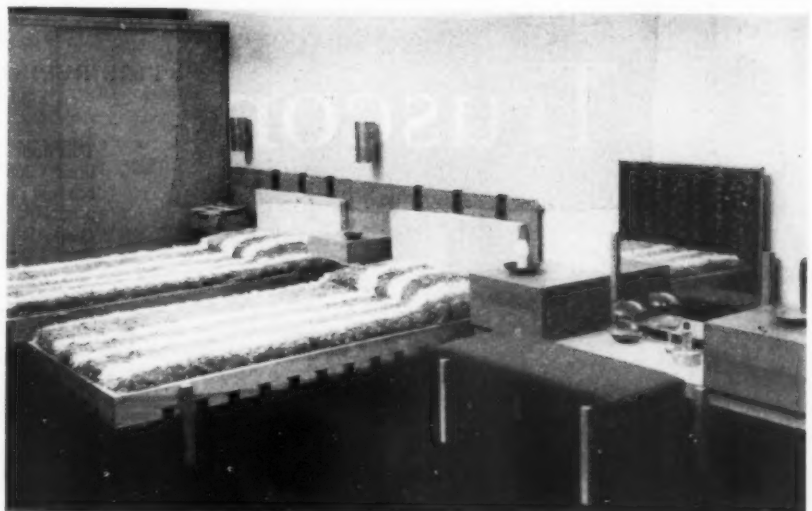
This recommendation applies also to the other floors—the entire shop is an exhibition where there is some china I would like to own, and much of historical interest. An exhibition of beds from about 1840 includes magnificent Tulip Period piece by Ambrose Heal in 1906. Also there are ruffs, carpets, glass, kitchen things and so on. An exhibition to see and enjoy, any time in the next two months.



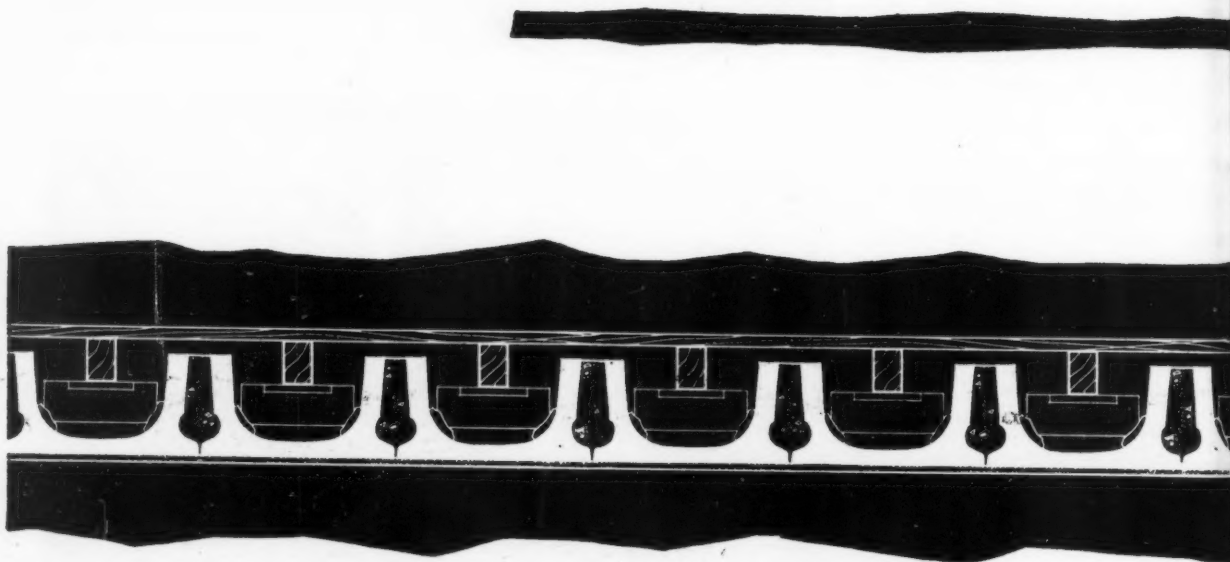
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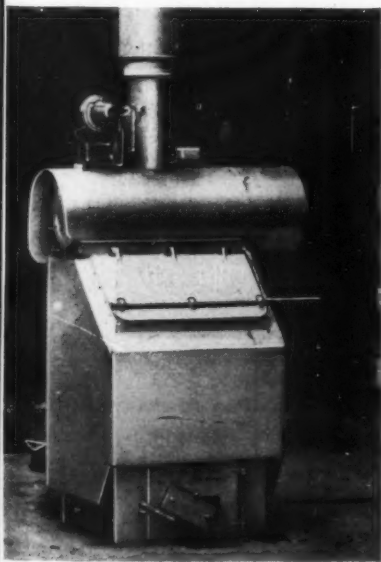
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THE INDUSTRY

This week Brian Grant describes an incinerator, a gas boiler and an accelerator pump.

Heat from waste

The Hoskinson incinerator is a dual purpose unit which will burn, smokelessly, up to 500 lb. per hour of almost any rubbish and in doing so will produce about 500,000 B.Th.U. though the precise amount will naturally depend on the heat value of the rubbish burnt. The incinerator consists of a large combustion chamber with a capacity of 1½ cubic yards, above which is a heat exchanger and fan to provide hot air, though as an alternative it can be arranged to supply hot water. The incinerator will burn any form of rubbish, paper, oily rags, rubber, plastic or leather trimmings. To consume the smoke there is a small oil burner, with a consumption of about ½ gallon per hour, at the base of the chimney to provide the heated secondary air and flame to ensure complete combustion. On



The Hoskinson incinerator.

demonstration this is extremely effective, thick smoke from burning rubber disappearing after barely one second. If the incinerator is to provide continuous heating there is a separate oil burner at the back of the combustion chamber, and this can be brought into use in a few minutes and will take care of the times when a regular supply of rubbish may not be available.

The 1½ cu. yd. model costs £585, and it is to be followed by a very much larger 10 cu. yd. model which will deal with van loads at a time. These incinerators were originally evolved in America, but have been considerably developed in this country and are now being exported to America. British manufacturers are so often accused of ignoring British inventions and allowing them to be exploited commercially by Americans that it is pleasant to be able to record that the traffic sometimes works the other way. (Boston Marine & General Engineering Co. Ltd., Heath Town Works, Wolverhampton, Staffs.)

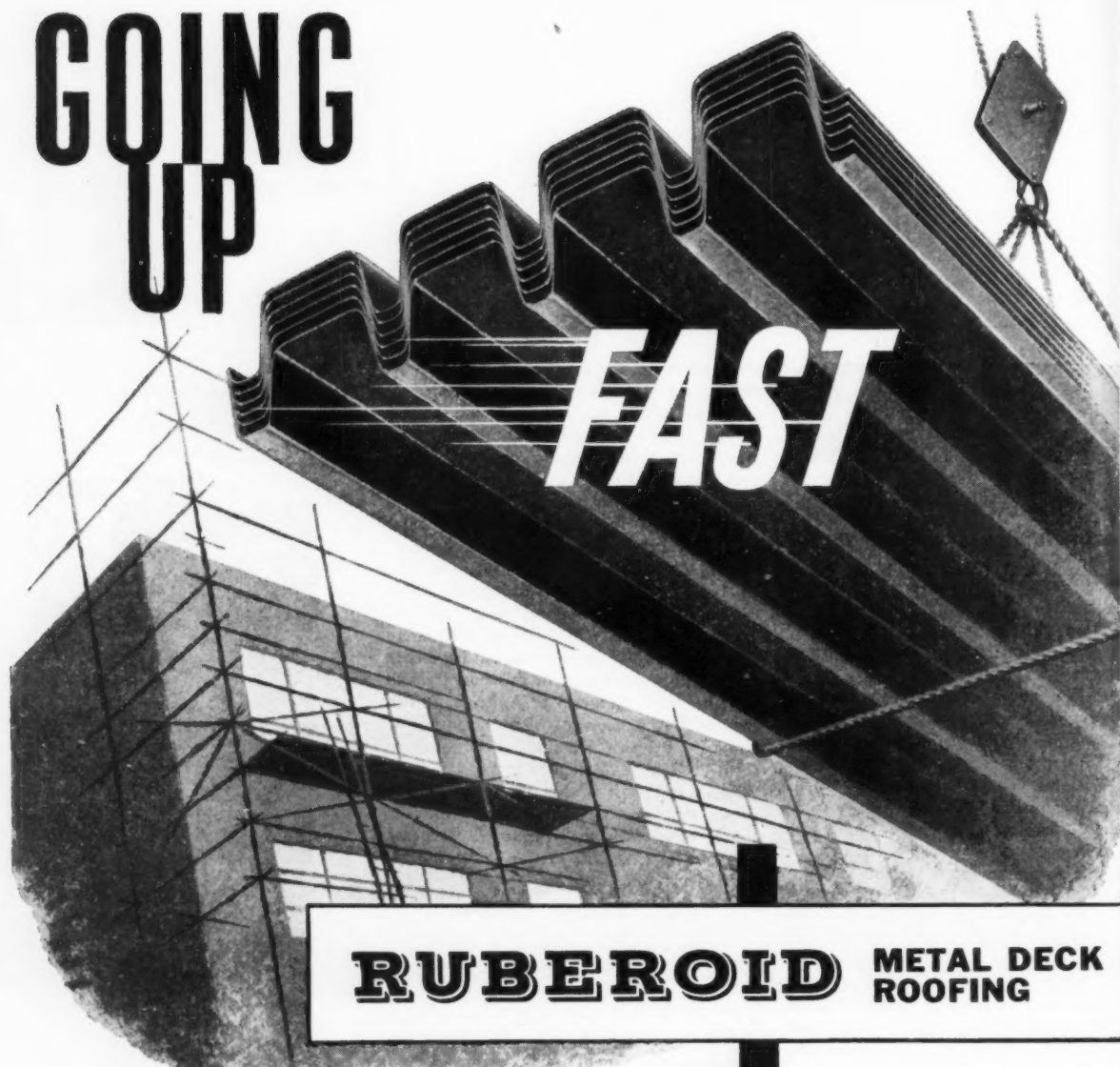
Heating systems

At the Ideal Home the Elite gas boiler was one of the new items of equipment shown by Ideal Boilers & Radiators Ltd. This is available in five sizes with outputs from 90,000 to 220,000 B.Th.U. per hour. Although it is gas fired, the boiler has electric ignition and there is no pilot flame. The boiler is made with three to seven cast iron sections to give the five different outputs, and the makers claim an efficiency of 80 per cent. Time controls can be incorporated and the boiler shuts down automatically if either the gas or the electricity supply should fail.

Ideal have also just produced the Hotflow accelerator pump for small bore systems. It can be fitted at any angle in the pipe-work, and is constructed mainly of non-ferrous metals. This overcomes most corrosion problems, but a bronze version is available for use if water supplies are extremely corrosive. The pump has no seals or glands, so that no maintenance is required, and it is suitable for temperatures up to 275 deg. F. Available accessories include a manually controlled mixing valve which allows the temperature of the heating circuit to be varied while the temperature of the flow and return to the indirect hot water cylinder remains constant. (Ideal Boilers & Radiators Ltd., Ideal Works, Hull.)

Below, top, the Ideal Elite gas boiler; bottom, the Ideal Hotflow accelerator pump.





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technical section

7 PRACTICE

check lists and schedules

This week we provide three opportunities for readers to exchange useful office information on check lists and schedules of equipment.

In our December 17 issue we published a check list for Traditional Housing to be read in conjunction with the basic check list.* We offered to pay five guineas for each item submitted by a reader which, in our opinion, represented a useful addition to the housing list. The response, we are pleased to say, was good, though, as one might expect, useful additions were fewer than those made to the basic list as most of the ground has been covered. We now publish the revised check list for Traditional Housing in its final fileable version.

The Editors wish to thank readers for their suggestions for suitable subjects for schedules. A list of these suggestions is published. Readers are invited to submit standard schedules which they themselves use and a fee of ten guineas will be paid for any published.

We are also publishing (on p. 588) a basic check list for a Building Survey. We are prepared to pay ten guineas to the reader who submits a check list for this purpose which in our opinion best improves on the one published. Submissions should reach this office by the first post on April 29.

Traditional Housing

As a result of suggestions from readers five items have been added to the check list published in our December 17 issue and the revised list appears on page 588.

SFB File No.

B

UDC No.

651

In considering additions to the list for traditional housing the Editors applied three of the four conditions used to judge items for the basic list. These are (1) the item must be common to most (*i.e.*, in this case traditional) methods of construction, (2) items of equipment must be given their general description and (3) it should be an isolated item as distinct from something implicit in the construction. Needless to say it was conditional that items were essentially of a domestic nature.

58 readers submitted items. The Editors considered that *fuel storage*, *drying cupboard*, *flue linings*, *ventilated food cupboard* and *bathroom (shaving) cupboard* qualified for the list and the readers concerned will each receive an award of five guineas per item.

Fuel storage is, of course, a general description and may apply to anything from an oil storage tank and its support and housing to the traditional coal bunker. Its presence on the list will serve to remind the architect that if he has not already done something about this he must do so now (it is to be hoped that by working drawing stage he will have already considered it).

List of awards

Ten guineas to:

G. K. V. Tomlinson

fuel storage (plans)
drying cupboard
(plans)

Five guineas to:

A. E. Inman

Anthony Le M. Pearce and

Derek S. Bottomley

R. Desmond Henly

flue linings (plans)
ventilated food cup-
board (plans)
bathroom shaving
cupboard (plans)

SCHEDULES

Architects are coming to realize that a drawing is not always the simplest and clearest way of conveying all the information about a building. The use of schedules is much more common today than it has been, though such items as *ironmongery* and *doors*, for example, are traditionally "scheduled." We asked readers to suggest items which they considered would be suitable subjects or which they themselves were in the habit of treating in schedule form. The following is a list of readers' suggestions:

Internal finishes (wall, floor, ceiling)

Doors and linings

Windows and frames

Ironmongery

Lintels

Electrical

Fire-fighting equipment

Sanitary fittings

Skirtings

*A.J., October 15, 1959.

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are roofed with

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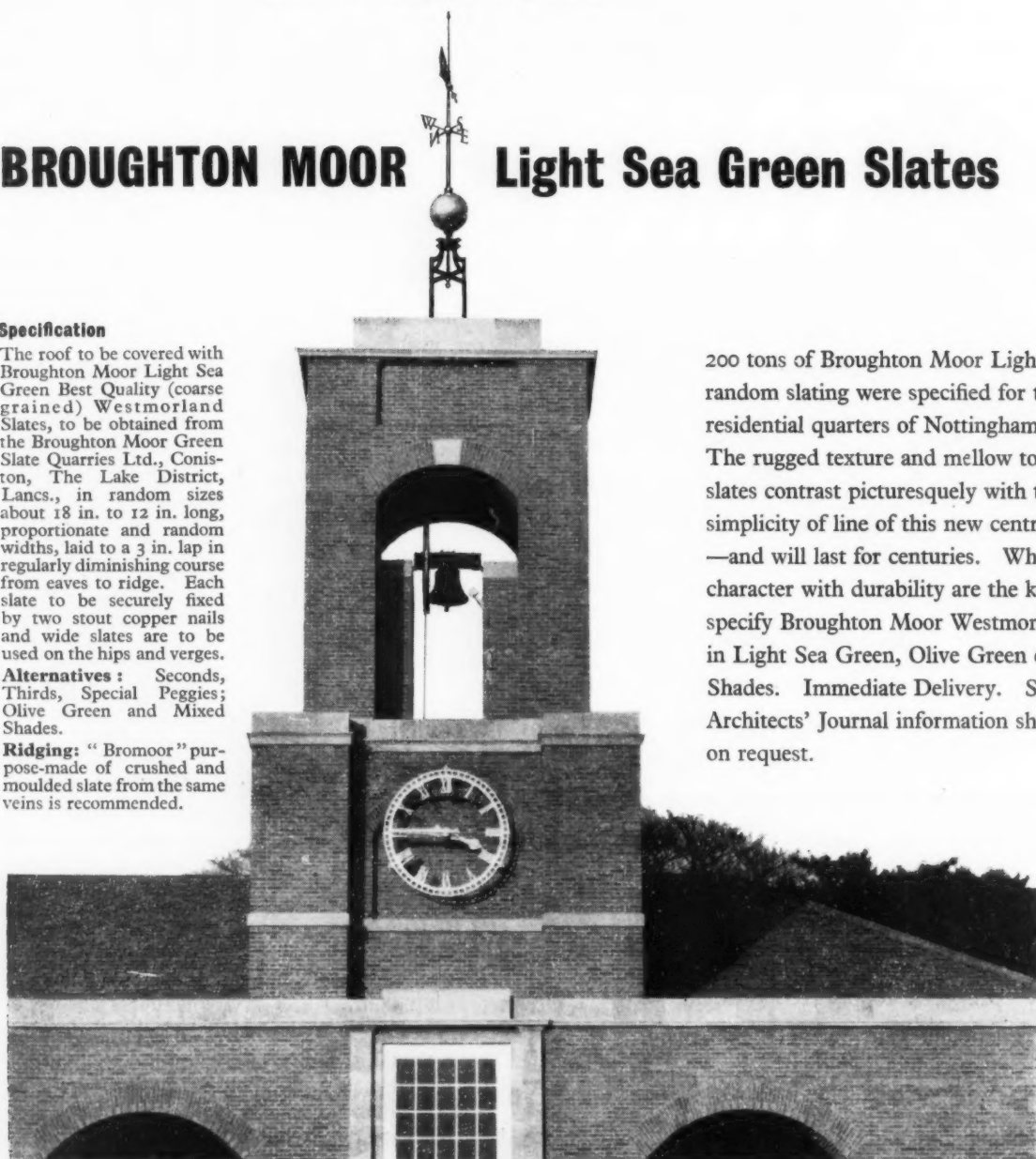
Specification

The roof to be covered with Broughton Moor Light Sea Green Best Quality (coarse grained) Westmorland Slates, to be obtained from the Broughton Moor Green Slate Quarries Ltd., Coniston, The Lake District, Lancs., in random sizes about 18 in. to 12 in. long, proportionate and random widths, laid to a 3 in. lap in regularly diminishing course from eaves to ridge. Each slate to be securely fixed by two stout copper nails and wide slates are to be used on the hips and verges.

Alternatives: Seconds, Thirds, Special Peggies; Olive Green and Mixed Shades.

Ridging: "Bromoor" purpose-made of crushed and moulded slate from the same veins is recommended.

200 tons of Broughton Moor Light Sea Green random slating were specified for the residential quarters of Nottingham University. The rugged texture and mellow tone of these slates contrast picturesquely with the simplicity of line of this new centre of learning—and will last for centuries. Where character with durability are the keynote, specify Broughton Moor Westmorland slates, in Light Sea Green, Olive Green or Mixed Shades. Immediate Delivery. Samples and Architects' Journal information sheet available on request.



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Architects: Horace Farquharson, Donald McMorran, ARA, George Whitby MBE.


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technical section



This is the final version of this list, compiled by the Journal Editors in consultation with readers. You may cut it out and keep it by your drawing board for future use.



The question of how much information to put in a schedule and how much to leave off is a debatable subject amongst architects. Those readers who have evolved standard schedules for these items (or any other) which they have used and found to be workable over a period of time are invited to send them in and the Editors will pay ten guineas for each one published.

BUILDING SURVEY

The response to the request for suitable subjects for check lists and schedules has been encouraging. Some readers have suggested a check list for the occasion when the architect has to inspect an existing building and submit a report for the purpose of, say, valuation, prospective purchase or possible development or conversion. We are grateful to those readers who submitted check lists of their own and have made use of these in compiling a list.

In preparing this list we have adopted the same approach used with the working drawings check list, that is that this list is a basic one containing items pertinent to virtually all building items but none (we hope) exclusive to only one or two. This basic list will then be supplemented with others for individual building types (e.g., one for houses, one for factories, etc.). We have described it as "Provisional" as it can no doubt be improved. Such improvements are not necessarily confined to additions to the list. It may well be that certain items should not be included or else designated in some other, more useful way. The Editors are prepared to pay ten guineas for a list which, in their opinion, best improves on our check list for a Building Survey published this week. Submissions should be made by April 29.

The purpose of the check list, in this case, is not so much to assist the architect in preparing the report, as to remind him, during his inspection, what items to look for and record. Most items will, of course, be recorded in two parts, (1) a description of the material (water pipes, flashings) or the construction (roof, walls) and (2) a description of their condition. Where further information is required, such as the positions of stopcocks and meters, it is noted in the list.

Check List for Working Drawings—Traditional Housing

(To be read in conjunction with basic check list)

1. General

Refer to basic check list

2. Plans*Foundation*

Floor joists over (direction and sizes)

Bearers

Sleeper walls (and access)

Floor

Floor and/or ceiling joists over (direction, sizes)

Herringbone strutting

Roof trusses over (dotted)

Towel rails

Mat well

Fuel storage

Drying cupboard

Flue lining

Ventilated food cupboard

Bathroom shaving cupboard

Roof.

C.W. cistern (access)

Flashings

Chimney

Pipes through roof

Roof access

Electrical and heating layout

Radio and TV equipment

Cooker point

Extract fan

Clock point

Electric fires

Boiler (independent)

Back boiler

Immersion heater

Instantaneous water heater

Radiators, convectors, skirting panels

Heater cabinets

Room thermostats

3. Sections

Concrete site slab

Hardcore

Herringbone strutting

Insulation

Flue gathering

Chimney capping and dimensions

4. Elevations

Refer to basic list

Shower Song

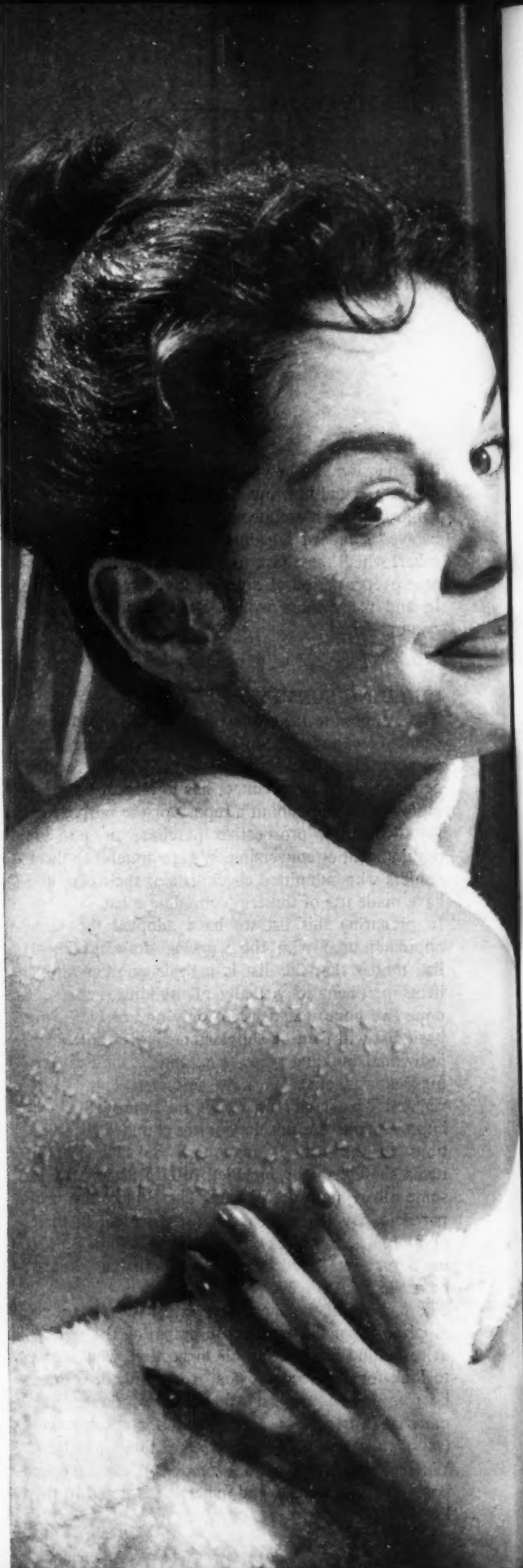
*Bending and turning and gaily carolling
Loving the feel of the tropical rain
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technical section

This check list is provisional only. You are invited to submit suggestions for improving it and we will

pay 10 guineas to the reader who, in our opinion, submits the best list for this purpose.

Provisional Check List for a Building Survey

Site and general

Town planning requirements (e.g. road widening)
Orientation
Building line
Adjoining properties
Outbuildings
Fences, railings
Gates
Steps, ramps
Paths
Paved areas
Roads, drives
Landscaping and natural features (e.g. trees, rock outcrops)
Soil

Drainage

Surface water
Soil and waste (sewer, septic tank, cesspit)
Gulleys
Manholes
Ventilation pipes
Fresh air inlets

Building

Construction (i.e., load-bearing frame, etc.)
Planning
Roof covering
Roof construction (parapets, box gutters, hips, valleys)
Roof space access
Flashings
Eaves (overhang, fascia, bargeboard, soffit)
Pipes through roof (flashing)
Chimney stacks and flues (flashing)
Roof lights (glazing flashing)
Gutters, rainwater heads
Downpipes
External and internal walls
Wall finishes
Windows (frames, sashes, sills, lintels, arches)
Doors (frames, fanlights, lintels, arches, thresholds)
Air bricks and ventilators
Damp-proof course
Ceilings, cornices
Floors
Foundations
Trim (architraves, skirtings, windowboards)
Stairs, changes in level

Water supply and sanitary plumbing

Stopcock (position)
Piping
Insulation
Cistern (means of support)
Sanitary fittings (taps)
Waste and soil pipes

Hot water

System
Piping
H. W. cylinder
Expansion tank

Heating

System
Fuel storage
Fittings

Electrical supply and installation

Overhead or underground
Poles and overhead lines
External wiring
Point of entry
Meter
Wiring
Light and socket outlets, switches
Fittings and equipment

Gas installation

Meter
Piping
Points
Fittings and equipment

Other services

Defects

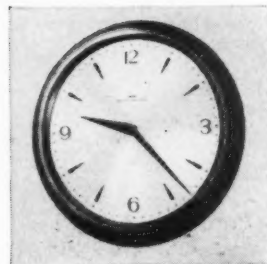
Dampness and cause
Dry rot and cause
Cracks, bulges
Recent repairs



Melton/Fleet



Mayfair/Farnham

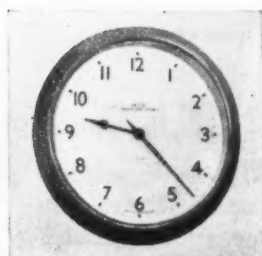


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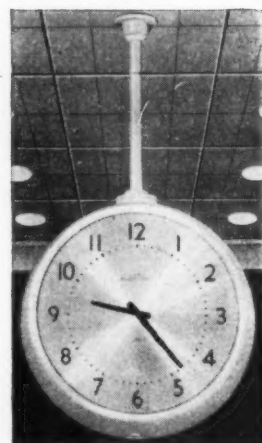
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Medway/Fife



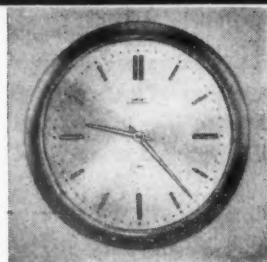
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SERVICE STATION

at ROSE LANE, CANTERBURY
designed by ROBERT PAINE AND
PARTNERS

Partner-in-charge C. W. H. WRIGHT
quantity surveyors ARTHUR J. WILLIS AND
THOMPSON

STB File No. (93)

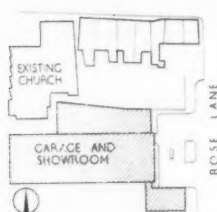
UDC No. 725

This is a small service station for Southern Autos Ltd. who have recently extended their activities to Canterbury. The aim has been to produce a garage expressing a new conception in motor vehicle sales and service facilities, with a walk-in showroom open to the passer-by.

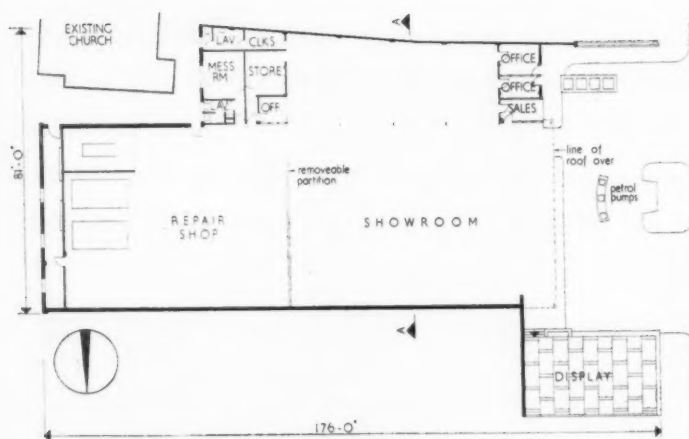
General view of the garage from the north-west with the open display area in the foreground.



building illustrated



Site plan

Section A-A Scale: $\frac{1}{4}'' = 1' 0''$ Ground floor plan (Scale: $\frac{1}{4}'' = 1' 0''$)

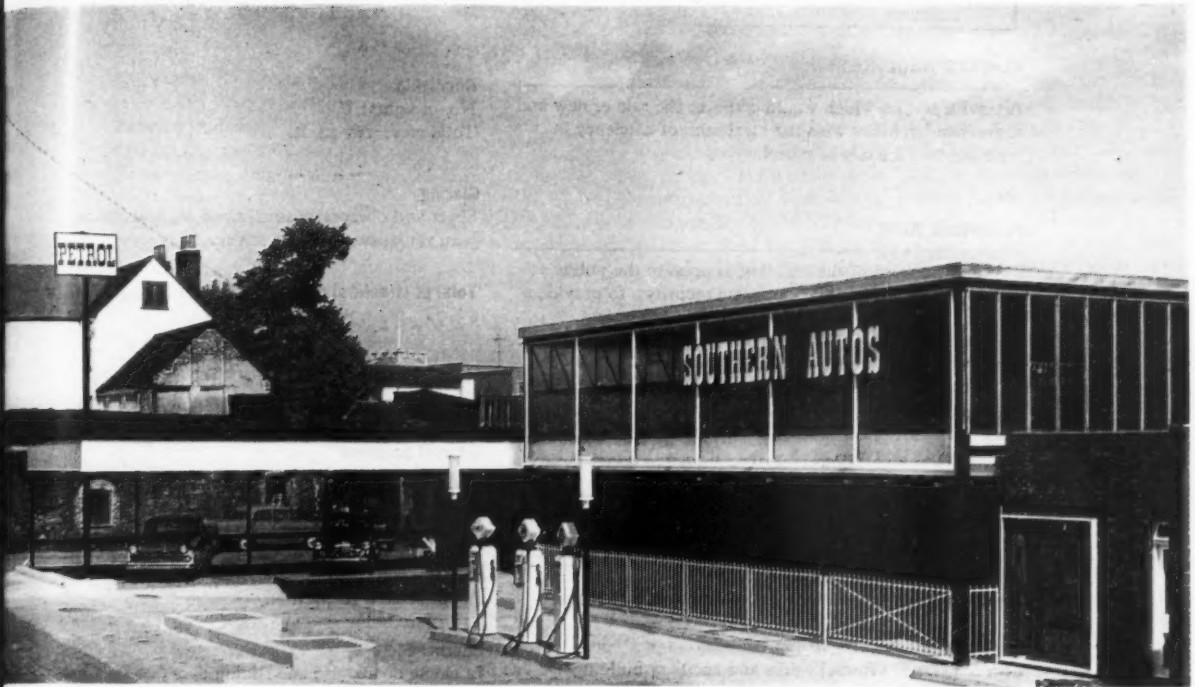
APPRAISAL: this station is on the site of an old garage which was destroyed by bombing. The main building is basically a plain, steel framed, rectangular box with brick and glass infill. The careful handling of the external detailing and the treatment of the colour scheme have made the simple construction into an interesting building of its kind. The colours used in the interior are black for all structural steelwork and white for the joinery. Applied finishes have been kept to a minimum and the brickwork is in blue and white flints. The structural steelwork involved is mainly the 4-ft. deep lattice trusses which support the roof. The roof has a span of 50 ft. and is decked with asbestos on steel purlins. It is finished with three-layer roofing felt on sarking board and the rainwater is taken away by a built-in gutter on the south side of the building to down-pipes which run internally down each stanchion. The upper part of the service station has patent glazing along the two sides and at the front, a steel angle frame takes the $\frac{1}{2}$ -in. roughcast glass on which are fixed self-illuminated letters. The continuous fascia is of 20 gauge aluminium.

For reasons of economy, the existing foundations of the old garage were re-used as much as possible. This naturally affected the design of the building though it is doubtful that any other plan would have been a great improvement on the present one. Another influence on the layout of the building was the proposed widening of Rose Lane which, under the city plan, is to provide the main link between the High Street and a new civic centre, to be built in Watling Street. It is for this reason that the garage is set well back from the existing road. It is also proposed to build a service road along the north flank of the site and any building in this area therefore had to be of a temporary nature. The architects decided to use this piece of ground for a more or less open air showroom, a walk-in showroom, in fact.

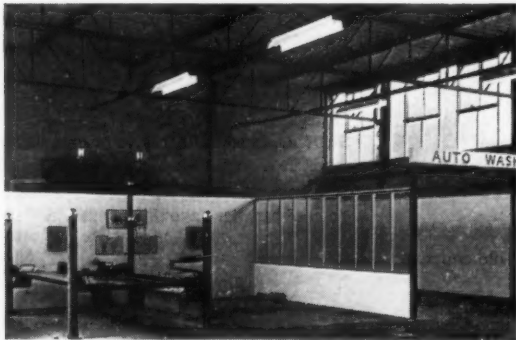
It takes the form of a roof on stilts, completely open to the public highway. This form was adopted not purely because of the need for a temporary building but also as a result of the architects' conscious attempt to break through the natural shyness of passers-by who are usually loth to walk around showrooms without the definite intention of buying something. The architects and their clients believe that custom is more likely to be successfully wooed by allowing potential buyers as much unmolested freedom to wander about the exhibited cars as possible. The temporary showroom is only one of two provided. The other is inside the main building at the front and this is also left completely open. It is protected from night-time intrusion by a removable metal railing. This is stacked away out of sight during the daytime, the long sections being transported on specially designed little hand trollies. It is possible to pass from the outer showroom to the inner quite easily and the two are given visual unity by means of the same false suspended ceiling.

This is formed of varnished 2-in. \times 1-in. battens with a 1-in. gap between them, the whole held up by steel angle pieces hanging down from the roof structure. This form of ceiling allows the sun to filter through on to the cars and some sparkle is obtained on the polished surfaces.

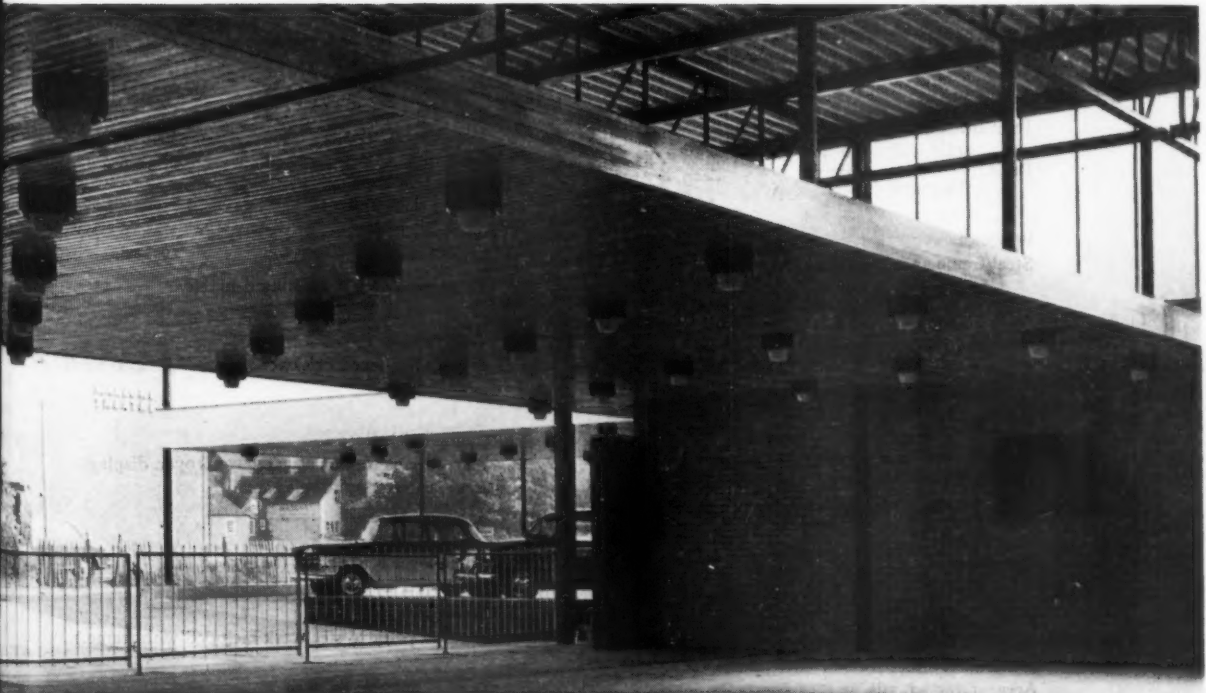
There is a small shop for the usual motor accessories and a large open space at the rear of the main showroom serves as the workshop and car washing space.



Above: the garage from the south-west. The guard rails are taken right away when the garage is open.



Left: the car-washing bays at the back of the building with workshops behind.



Below: the showroom area with a view of the suspended false ceiling.

analysis

CLIENT'S REQUIREMENTS

A service station which would combine the sale of new and secondhand vehicles with the maximum of efficiency in servicing and the sale of petrol.

PLANNING AIMS

To keep the front of the building as open to the public as possible while maintaining adequate security; to provide a pleasant setting for the display of cars and to attract customers by giving them freedom to wander among them.

SUMMARY

Ground floor area: 10,563 sq. ft.
 Total floor area: 10,563 sq. ft.
 Type of contract: RIBA with quantities.
 Tender date: September, 1958.
 Work began: December, 1958.
 Work finished: May, 1959.
 Tender price of foundations, superstructure, installations and finishes: £19,313.
 Final contract price: £19,963.
 Tender price of external works and ancillary buildings: £637.
 Final contract price: £951.
 Total final cost: £20,914.

Preliminaries and insurances
 Prices included in rates.

Contingencies
 (In original tender: 8½d)

Work below ground floor level 1 4½
 Largely off existing foundations and much of old concrete floor re-used.

STRUCTURAL ELEMENTS

Frame or load-bearing element 8 11½
 Steel frame, including roof steelwork.

External walls 3 2½
 Flint brick and stock external facings.
 solid wall = 0.48
 Ratio: $\frac{\text{solid wall}}{\text{floor area}} = \frac{0.48}{1}$

Windows 2 10½
 Steel frame and vertical patent glazing.
 windows = 0.28
 Ratio: $\frac{\text{windows}}{\text{floor area}} = \frac{0.28}{1}$

External doors 4 ¾
 Wood doors and steel removable gates across frontage.
 doors = 0.05
 Ratio: $\frac{\text{doors}}{\text{floor area}} = \frac{0.05}{1}$

Upper floors Nil

Staircases Nil

Roof construction 4 3½
 Asbestos decking and softwood trimmings (steel is included under frame).
 Area: 1,160 sq. yds.

Rooflights

No. of lights: 6.
 Total area: 167 sq. ft.

Glazing

Sheet and obscure to small windows and doors, ½-in. rough cast to front screen.

Total of structural elements: 21s 0d

PARTITIONS AND FITTINGS

Internal partitions

Type of partition	Area of each type in sq. ft.
Brick	609
Timber framed	336

Screens

Patent screens to wash bay

Internal doors

14 single doors, also one sliding door; 10 ft. 3 in. × 10 ft.

Ironmongery

Normal door furniture, etc.

Fittings

Shelving, cloak rails, notice boards, small tool racks.

Total of partitions and fittings: 2s 2½d

FINISHES

Floor finishes

Type of finish	Area in sq. ft.	Price per sq. yd.
Patent hardened concrete	4,581	21s. 11d.
2-in. grano.	234	12s. 6d.
½-in. quarry tiles	369	30s. od.
Lino tiles	653	31s. 7d.
Precast concrete paving slabs and black bricks to pattern	1,597	29s. 1d.

Remaining area in existing concrete.

Wall finishes

Mainly fair-faced brickwork, glazed tiling to wash bay.

Ceiling finishes

Pine battens to part of garage and open display area, false ceiling to sales area.

Roof finishes

Three-layer roofing felt (10,440 sq. ft.).

Decorations

(Cost of paint to steelwork included with frame.)

Total of finishes: 5s. 10½d

analysis

SERVICES

External plumbing

Galvanized steel tube rainwater pipes.
Some zinc cappings.

Hot and cold water installation

Cold water only (gas water heaters not in contract).

Sanitary fittings

Type of fitting	Number of each type
W.c.s	2
Lavatory basins	2
Urinals	1

Heating and ventilating

Gas installation
Two points for water heaters.

Electrical installation

108 lighting points, 15 power points.

Lifts or other mechanical services

(Car lifts not included in contract.)

Total of services: 3s 2½d

DRAINAGE

All below building

OTHER ELEMENTS

Demolition and preparing site
Lettering to front.
Air pipeline.
Bearers to waste oil tanks and fixing tanks.

Total per sq. ft. of floor area:

£19,963 (net cost excluding external works)	=	37 8½
10,563 sq. ft. (net floor area, measured to the inside of external walls)		

COST COMMENTS

Below is a comparison of the main groups of elements of this garage at Canterbury and two previously analysed (at Poole, *AJ*, September 24, 1959, and at Knaphill, October 22, 1959), with the costs per square foot of floor area also expressed as percentages of the overall cost.

Element group	Poole		%	Knaphill		%	Canterbury		%
	s	d		s	d		s	d	
Preliminaries, etc.	—	0½	0.2	11½	1.8		Included	—	
Contingencies	—	—	—	5	0.8		—	—	
Foundations	4	6½	12.1	8	1½	11.2	1	4½	3.6
Structure	20	1	53.4	23	4½	43.1	21	0	55.7
Partitions and fittings	2	2½	5.9	3	0½	5.6	2	2½	5.8
Finishings	2	2½	5.8	10	1½	18.7	5	10½	15.6
Services	7	11½	21.1	7	3½	13.5	3	2½	8.5
Drainage	Not included			With founds.			2	3½	6.1
Other elements	7		1.5	2	10½	5.3	1	9½	4.7
	37	7½	100	54	2½	100	37	8½	100

Poole is included as a matter of interest rather than for direct comparison because it was a much larger project,

where it was found possible to analyse the contract into separate functions of (a) showrooms with offices and (b) workshop. The analysis shown against Poole is for the factory-type workshop block only. No such clear division was possible at Knaphill and Canterbury and both their analyses are a combination of showroom and workshop.

Structurally, Knaphill is a more compact scheme, which normally tends to raise the cost per square foot. But to offset this, the Canterbury garage is twice as high, with 50 ft. clear spans compared with Knaphill's 30 ft. The average unit cost of solid external walling at Knaphill is 8s. 7½d. per sq. ft. compared with Canterbury's 6s. 8½d. Roof constructions are comparable, but not patent glazing to external walls, as Canterbury has no showroom windows to pay for.

Partitions and finishes: the difference is due to Knaphill's greater ratio of partitions to floor area.

Finishes: Canterbury's are minimal, not only because the concrete area of the floor was there before the building was put up, but because there are no decorations to walls other than the glazed tiles to the washbay. The walls are mainly fair-faced.

Services: differences arise because: (a) Canterbury's garage does not include water heaters or any form of space heating; (b) Knaphill's compactness is reflected in the plumbing costs, and (c) there is a difference of 50 per cent in the cost per square foot of the electrical installation.

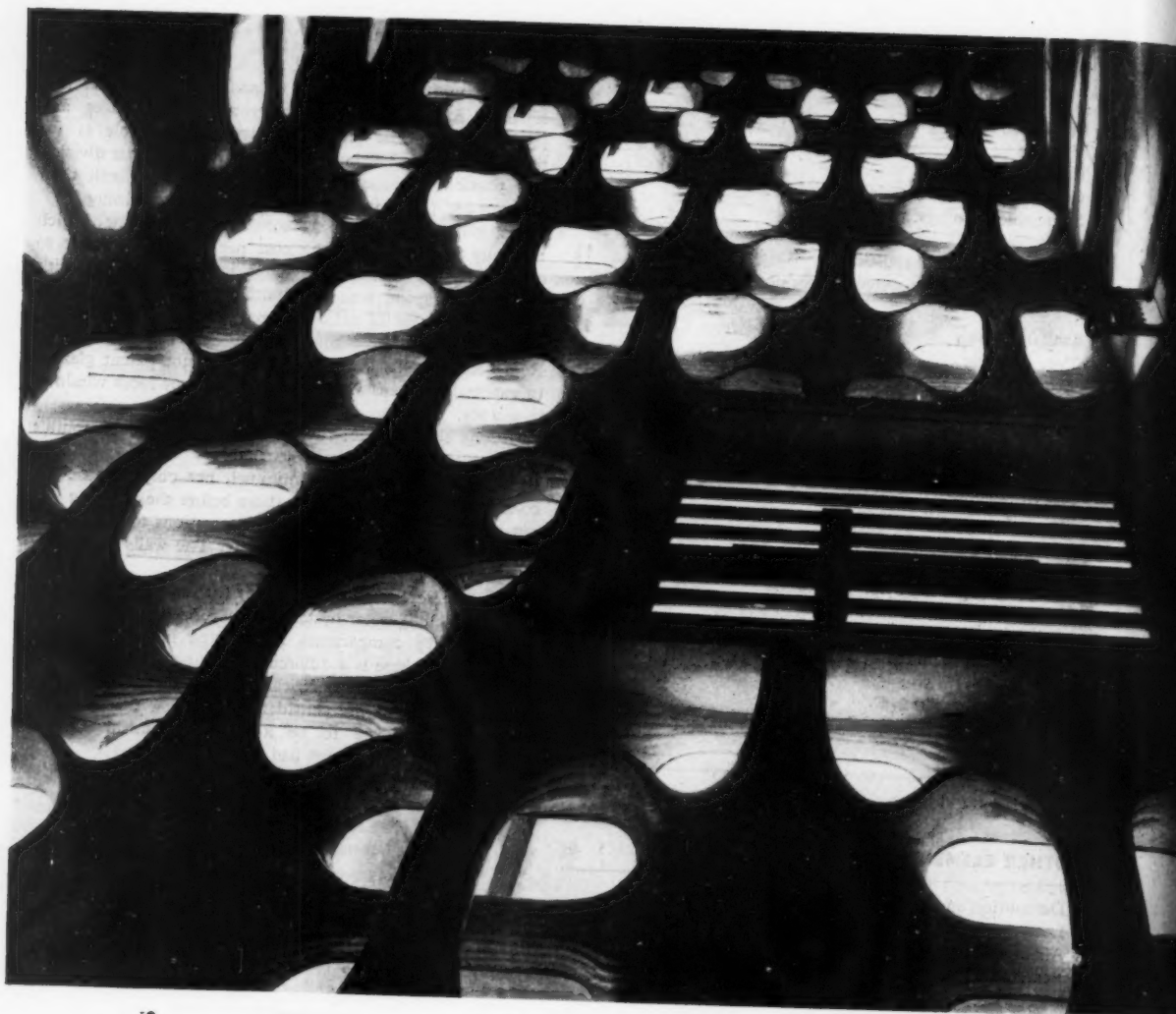
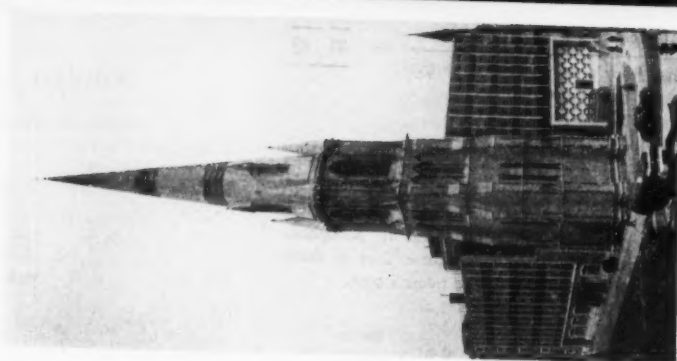
When these points are considered it is clear that although Canterbury's proved to be a very economical scheme, Knaphill was by no means bad value for money.

CONTRACTORS

General contractors: Richard Costain Ltd. Sub-contractors—
Electrical installation: Electron Engineering Co. Lighting: Atlas Lighting Ltd. Patent glazing, front metal screen, steel lantern lights, metal windows: Henry Hope & Sons Ltd. Fascia lettering: Ward & Co. Ltd. Sanitary fittings: Alfred Olby Ltd. Ironmongery: A. J. Binns Ltd. Felt roofing: Vulcanite Ltd. Asbestos cavity decking: John Denyer Ltd. Structural steelwork: Hotchkiss Engineers Ltd. External brickwork (Uxbridge flint facings): Cape Building Products Ltd. Internal brickwork: Robert Brett & Sons Ltd. Floor finish: J. H. Sankey & Son Ltd. Linoleum tiles: Nasons (Canterbury) Ltd. Partitions: Norwood Steel Equipment Ltd. Gates: Thanet-Ware (Kent) Ltd. Lubrication gear: Weaver Manufacturing & Engineering Co. Ltd.; Brown Brothers Ltd.

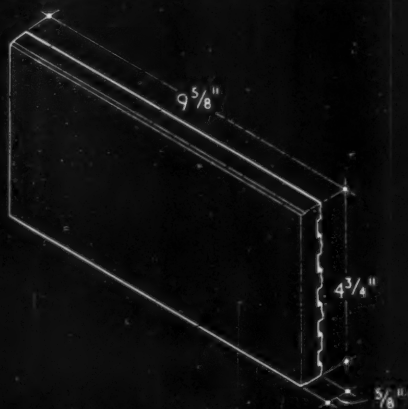
The new Christ Church and Lincoln House—a five- and six-storey office block—represents the unusual redevelopment of the site of a famous Victorian Gothic church in Kennington Road, London, S.E., which was blitzed during the war. It has been designed for the Dolphin Development Co. by P. J. Darvall (consulting architects, Sir John Burnet, Tait and Partners). The church tower—named the Lincoln Tower and built to commemorate the abolition of slavery in 1865—was scarcely damaged and has been retained, dominating the corner of the site, and a new church is almost embedded under one arm of the T-shaped office block. Its presence is signalized, however, by a massive and remarkable entrance porch, 48 ft. wide by 17 ft. high, consisting of intricately carved stonework of an interlacing design and glazed with coloured glass through which the church lights shine at night. Within, the church is simple and non-conformist in style with raised pews encircling the pulpit and Communion table. A Vierendell truss made of heavily reinforced concrete beams carries the offices over the top of the church—a distance of 50 ft. The truss is three storeys high and is actually two trusses, joined by the corridors between the offices. The church was officially opened last week. (General contractors, Richard Costain Ltd.) Right, top, general view of the Lincoln Tower, Christ Church porch and steps and Lincoln House; below, the interior of the church; beyond, the porch by night, from outside.

CHURCH AND OFFICES IN LAMBETH

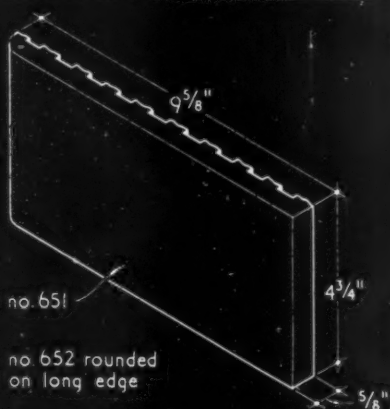


WALL TILES | CLAY

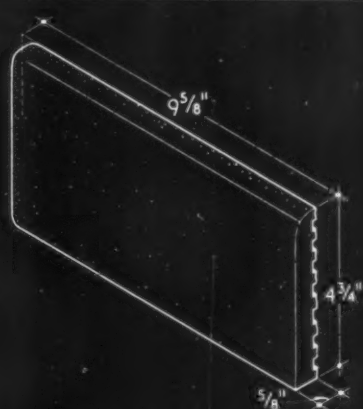
The Architects' Journal Library of Information Sheets 761. Editor: Cotterell Butler, A.R.I.B.A.



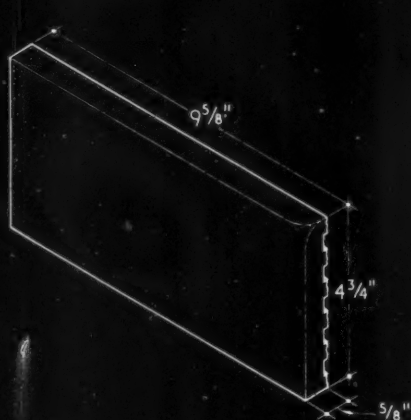
no. 650 (standard tile)



nos. 651, 652



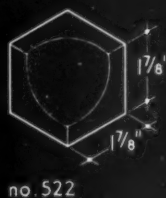
no. 653 (right- or left-handed)



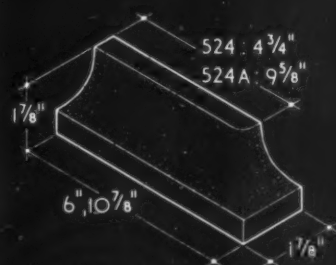
no. 610A (right or left-handed)
TYPES OF TILE AND FITTINGS.



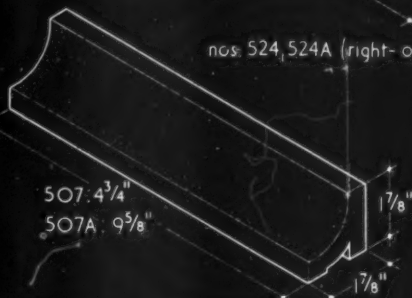
nos. 513, 513A



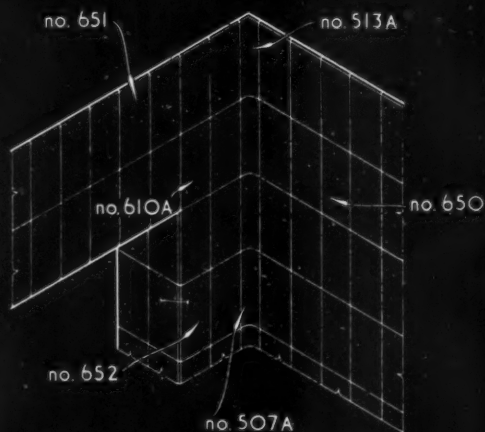
no. 522



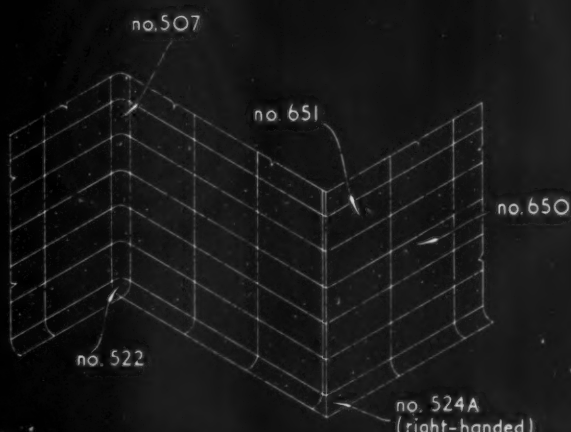
nos. 524, 524A (right- or left-handed)



nos. 507, 507A



tiles laid vertically
TYPICAL APPLICATIONS OF TILES AND FITTINGS.



tiles laid horizontally

18.E2 · SINZIG · GLAZED CERAMIC WALL FACINGS

This Sheet describes Sinzig glazed ceramic tiles for wall facing for internal or external use. The drawings on the face show the standard tiles and fittings available and their application.

Material

The tiles are fully-vitrified glazed ceramic material, the glaze and body of the tile being fired in one operation at a very high temperature. The glaze is frost-proof, has never been known to craze and has a high resistance to acids: the facings are specially manufactured for external use and for internal industrial applications. The backs of the tiles are mechanically keyed to facilitate efficient fixing.

Sizes and Types

The standard tile is $9\frac{1}{8}$ in. by $4\frac{1}{2}$ in. by $\frac{3}{8}$ in. thick. Tiles $4\frac{1}{2}$ in. by $4\frac{1}{2}$ in. by $\frac{3}{8}$ in. can be obtained to order in quantity. The range of fittings available is illustrated on the face of the Sheet.

Weight and Covering Capacity

1,090 tiles weigh a ton. 27 tiles with $\frac{3}{16}$ -in. joints cover one square yard.

Preparation of Surface

The surface to be tiled should be a strong wall of concrete, brick or hollow blocks. It should be keyed or rake-jointed brickwork, or well-scratched rendering. The surface must be cleaned and damped before the application of the tiles.

Fixing

Individual rows of tiles should be selected and set out by the tiler so that any variations in size, inevitable with fired clay products, are noticed before fixing and to ensure uniformity of joints. The tiles should not be soaked. They can be machine-cut or cut with a glass cutter or, alternatively, they may be scored with a small chisel and tapped from the back with a hammer.

The laying mortar should be 1 part cement to 3 parts washed sand, not too coarse. The tiles should be well spread with mortar and tapped firmly into position. The face of the tiles should be cleaned of mortar as the work proceeds and washed down after pointing.

Joints should be $\frac{3}{16}$ in. wide minimum and uniform horizontally and vertically: after the bedding has set they should be pointed. For external facing Chromolith pointing mortar is recommended, a graded compound containing special cement, some lime, quartz and a water repellent: it is obtainable from Langley London Ltd. in a number of colours. For industrial purposes or where the tiles are exposed to chemical corrosion, individual consideration must be given in each case.

Bonding: For internal tiling for industrial applications, the tiles should be laid horizontally or vertically to a straight joint, or, where greater strength is required, horizontally with break joints. For external facing, tiles should be laid to a straight joint, preferably vertically.

Coursing: The following table gives the dimensions of specific numbers of tiles laid horizontally and vertically. These dimensions are converted to the

nearest $\frac{1}{16}$ in. from the metric dimensions of the tiles allowing for 5 mm. joints.

Tiles laid vertically		Tiles laid horizontally		Dimension (ft. and in.)
No. of tiles	No. of joints	No. of tiles	No. of joints	
1	2	—	—	5½
2	3	—	—	10½
3	4	—	—	1 3½
4	5	2	3	1 8½
5	6	3	4	2 1½
6	7	4	5	2 6½
7	8	5	6	2 11½
8	9	6	7	3 4½
9	10	7	8	3 9½
10	11	8	9	4 2½
11	12	9	10	4 7½
12	13	10	11	5 0½
13	14	11	12	5 5½
14	15	12	13	5 10½
15	16	13	14	6 3½
16	17	14	15	6 8½
17	18	15	16	7 1½
18	19	16	17	7 6½
19	20	17	18	7 11½
20	21	18	19	8 4½

Fittings: The fittings shown on the face of the Sheet provide for external and internal angles, three-way junctions, coves and capping courses.

Applications

Apart from their use as permanent external decorative wall claddings the tiles are suitable for internal use in dairies, bakeries, abattoirs, refrigeration plants, breweries and food and confectionery factories, pulp and paper mills, paint-spraying, enamelling and dipping rooms; pickling shops, power and turbine houses; laboratories, kitchens and canteens; swimming pools.

Colours

The standard colours are chamois (12), ivory white (21), white (31), turquoise blue (51), light green (53), lime green (55), lavender blue (61), sky blue (62), yellow (73), brown (81), black (91), pale grey-green (115).

Further Information

The supplier maintains a technical advisory service which is available to answer questions on installation generally, fixing techniques and colour schemes. In addition to the range of tiles described on this Sheet, scum channels and other fittings for swimming pools and partition blocks and fittings for cubicles of all kinds are available in the same material: details may be obtained from the supplier.

Compiled from information supplied by:

Langley London Limited.

Address: 163-7, Borough High Street, London, S.E.1.

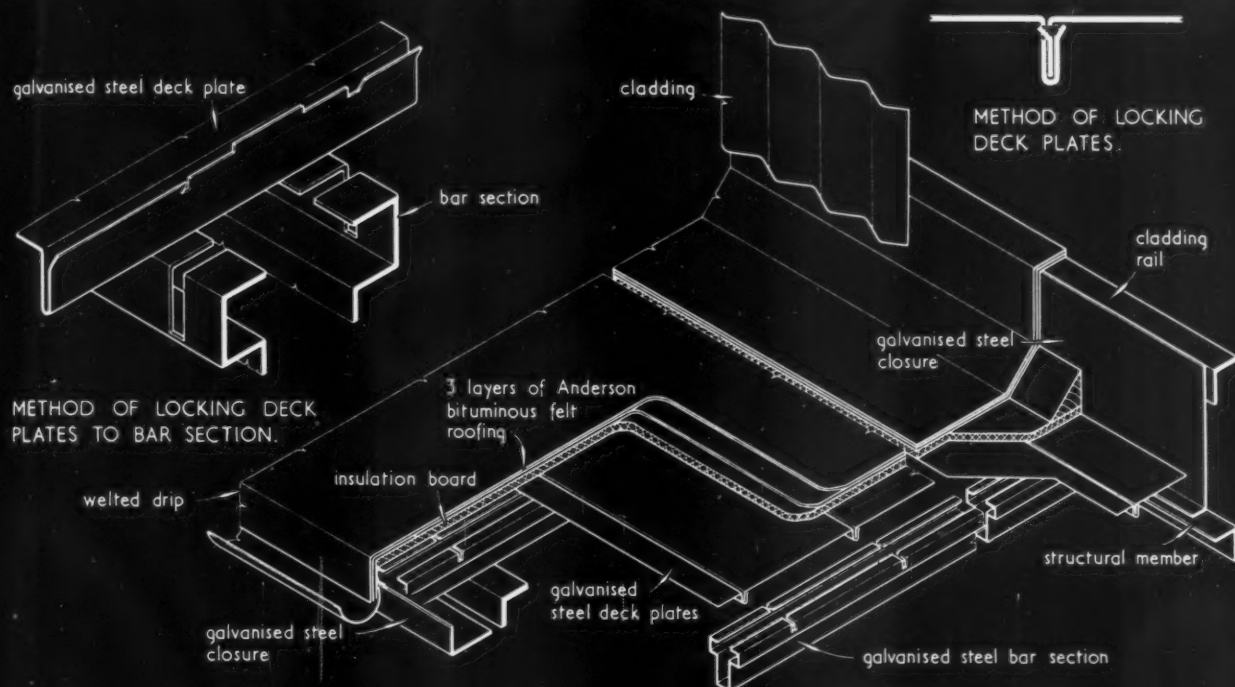
Telephone: Hop 4444 (10 lines).

Telegrams: Laglycol, Souphone, London.

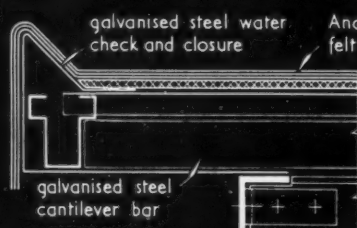
ROOFS COMPOSITE

20.Z14

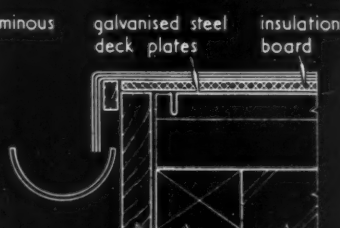
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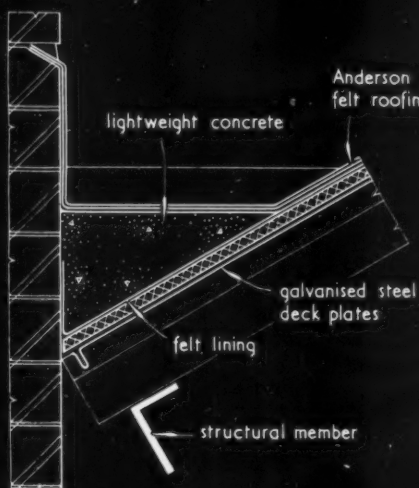
GENERAL ASSEMBLY OF ROOF SHOWING TREATMENT AT EAVES AND JUNCTION WITH VERTICAL CLADDING.



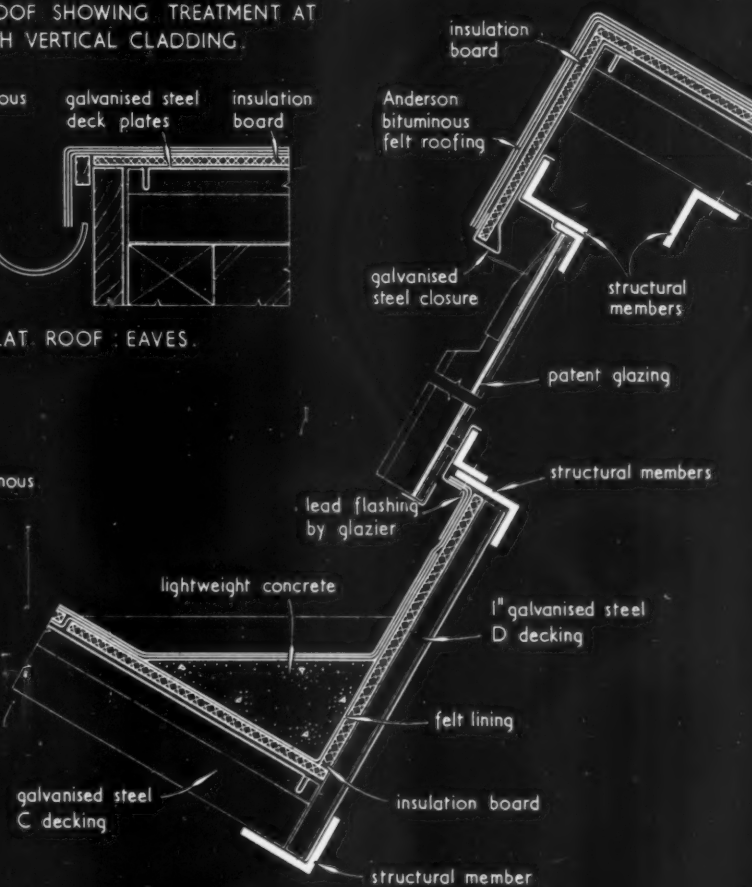
FLAT ROOF : VERGE.



FLAT ROOF : EAVES.



PARAPET GUTTER.



NORTHLIGHT : RIDGE AND VALLEY.

20.Z14 ANDERSON INSULATED STEEL · C · DECKING

This Sheet describes a roof built up from galvanised steel decking, rigid insulation and bituminous roofing. It may be adapted to flat, pitched or vertical constructions. The Sheet should be read in conjunction with Sheet 20.Z5 as the fixing for pitched roofs and patent glazing is similar to that given for B decking (Thermolok).

Construction

The system consists of bar sections to which deck plates are secured. The components are manufactured from hot-dip galvanised sheet steel, the material complying with Class F of Group 2 of B.S.2989:1958 and also with B.S.1449:1956 for steel in sheet form.

Fixing: The bar sections are secured to the structural supports with hook bolts or cleats. Lengths of bar section are joined by connector sleeves. The deck plates engage in slots at approximately 2 ft. 3 in. centres in the flange of the bar section as shown in the first detail on the upper face of the Sheet and the plates are held together as shown in the detail on the right. The lower drawings show fixings at eaves and verge of a flat roof, northlight glazing and a parapet gutter.

Insulation: A layer of insulating board, cork slabs or fibre-glass is laid over the deck plates, the thickness depending on the application: typical U values obtained are given under Thermal transmittance. Where a humid atmosphere is anticipated inside the building, a layer of felt should be fixed below the insulation as a vapour barrier.

Roof covering: The roof is waterproofed with built-up bituminous felt, the number of layers depending on the climatic conditions and whether the roof is flat or pitched. General recommendations are given in B.S. Code of Practice C.P.144.101:1952. Flat roofs are surfaced with stone chippings and pitched roofs with Flextile Mineral Surfaced Roofing.

Sizes

Bar sections: Three sizes of bar section are available: 2½ in. deep by 16 g. in lengths of 6 ft. 0 in. to 8 ft. 0 in.; 3½ in. deep by 16 g. in lengths of 8 ft. 0 in. to 12 ft. 0 in.; 4½ in. deep by 14 g. in lengths of 8 ft. 0 in. to 14 ft. 0 in. In all cases the lengths rise in increments of 1 ft. 0 in. Non-standard lengths can be supplied at extra cost. Spans up to 15 ft. 0 in. can be accommodated by arranging for continuity over structural supports: the minimum number of spans required for this method is three.

Deck plates: These are available in 20 or 22 gauge in lengths up to 10 ft. 0 in. to suit bar spacings of 2 ft. 0 in. and 2 ft. 3 in.

Weight

Flat roofs (up to 10° pitch), with ½-in. insulation board, three layers of bituminous roofing and stone chippings, weigh 8 lb./sq. ft.

Pitched roofs (over 10° pitch), with ½-in. insulation board, two layers of bituminous roofing and Flextile Mineral Surfaced Roofing, weigh 6 lb./sq. ft.

Loading

The depth and gauge of decking used will depend on the span and the superimposed load, as given in the tables below. Reference should be made to B.S. Code of Practice C.P.3, Chapter V, 1952, and to the local byelaws. The Code of Practice recommendations with regard to wind pressure should be specially noted, particularly the section relating to suction on flat and low-pitched roofs. Where the buildings are high and exposed to strong winds special consideration may be necessary.

Decking 2½ in. deep:

Span (ft. and in.)	Safe inclusive load in lb./sq. ft.			
	2 ft. 3 in. centres		2 ft. 0 in. centres	
	A	B	A	B
6 0	55	55	62	62
7 0	41	35	46	39
8 0	31	24	35	26

Decking 3½ in. deep:

Span (ft. and in.)	Safe inclusive load in lb./sq. ft.			
	2 ft. 3 in. centres		2 ft. 0 in. centres	
	A	B	A	B
8 0	57	57	65	65
9 0	45	44	51	49
10 0	37	32	41	36
11 0	30	25	34	28
12 0	26	19	29	21

Decking 4½ in. deep:

Span (ft. and in.)	Safe inclusive load in lb./sq. ft.			
	2 ft. 3 in. centres		2 ft. 0 in. centres	
	A	B	A	B
8 0	105	105	119	119
9 0	84	84	94	94
10 0	68	68	76	76
11 0	56	56	63	53
12 0	47	44	53	50
13 0	40	35	45	39
14 0	35	28	39	32
Continuous spans (minimum 3 bays)				
15 0	25	25	28	28

A = based on stress of 20,000 lb./sq. in.

B = based on deflection limited to 1/250 span.

Thermal Transmittance

The following U values are obtained using the various insulating materials shown:

Insulation	U value obtained for thickness (in.)				
	½	¾	1	1½	2
Fibreboard	0.32	0.30	0.26	0.22	—
Cork board	0.29	—	0.23	0.19	0.12
Fibre-glass	0.26	—	0.20	0.17	—

Finish

In accordance with normal practice it is recommended that the steel decking be painted after fixing. A paint suitable for galvanised surfaces should be used embodying a calcium plumbate primer or similar.

Compiled from information supplied by:

D. Anderson & Son Limited.

Head Office: Stretford, Manchester.

Telephone: Longford 4444.

Telegrams: Roofing, Stretford.

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

Telephone: Amherst 9381.

Birmingham Office: 97, Grange Road, Birmingham, 10.

Telephone: Victoria 5124.

Nottingham Office: 17, Huntingdon Street, Nottingham.

Telephone: Nottingham 53266.

Leeds Office: 2, Central Road, Leeds, 1.

Telephone: Leeds 21403.

Glasgow Office: 425, Scotland Street, Glasgow, S.1.

Telephone: South 2233.

Belfast Office: Short Strand, Belfast.

Telephone: Belfast 57413.

Bristol Office: 81, St. George's Road, Bristol.

Telephone: Bristol 27888.

Archit

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working detail

COVERED WAYS AND CANOPIES: 31

GLAZED PASSAGEWAY: MUSEUM IN COPENHAGEN

Jørgen Bo and Vilhelm Wohlert, architects (material supplied by George Kew)



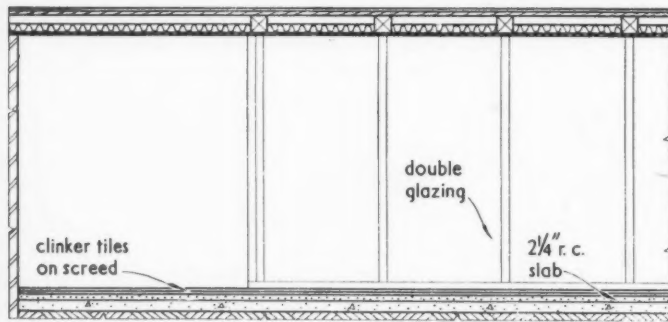
The detailing of this glazed passageway has been reduced almost to the ultimate in simplicity, instanced, for example, by the spacing of joists over mullions (visible on the drawing only) and the absence of a head frame for the double glazing.

working detail

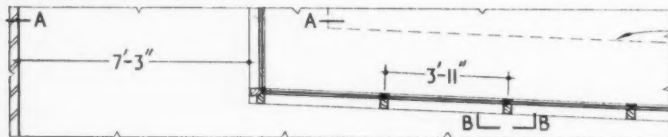
COVERED WAYS AND CANOPIES: 31

GLAZED PASSAGEWAY: MUSEUM IN COPENHAGEN

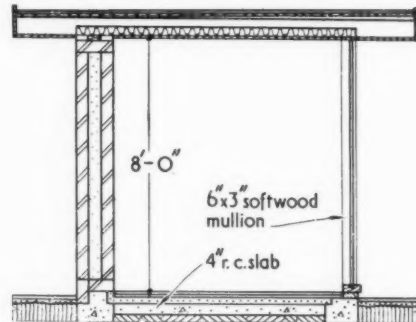
Jørgen Bo and Vilhelm Wohlert, architects (material supplied by George Kew)



ELEVATION. scale 3/16"=1'-0"

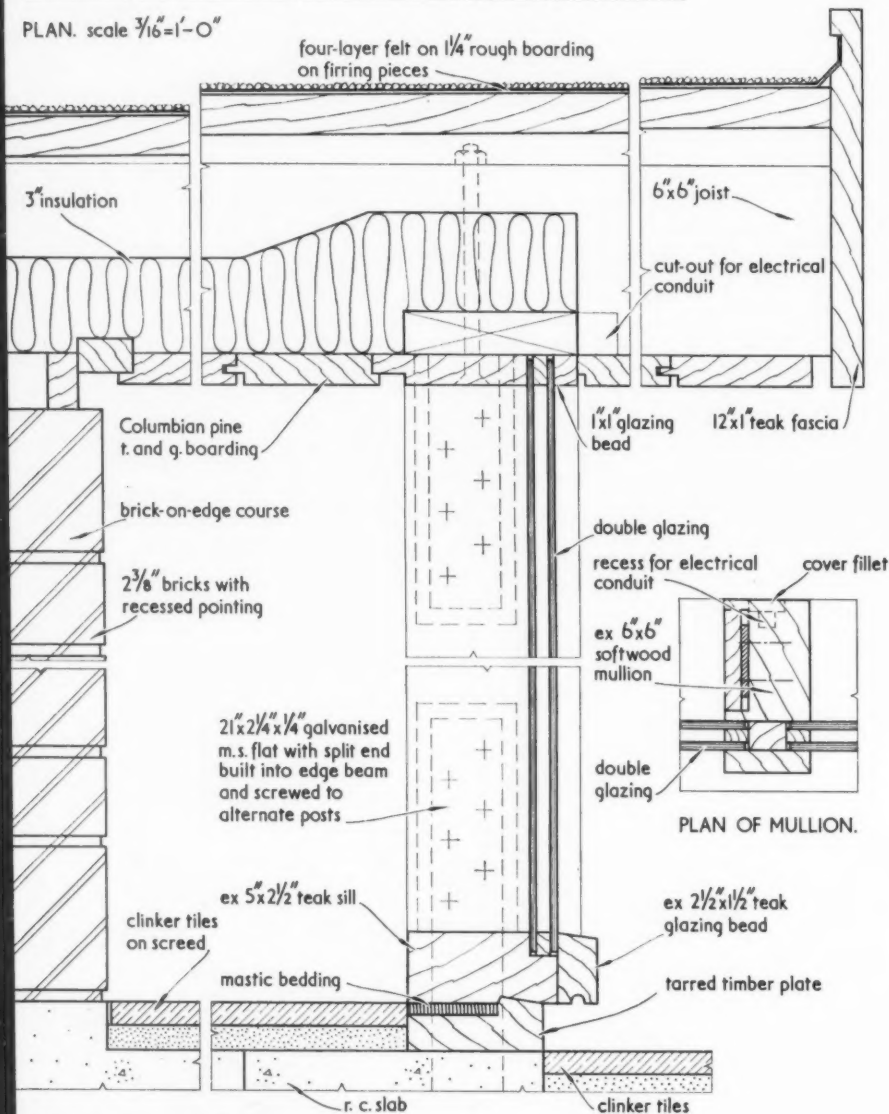


PLAN. scale 3/16"=1'-0"

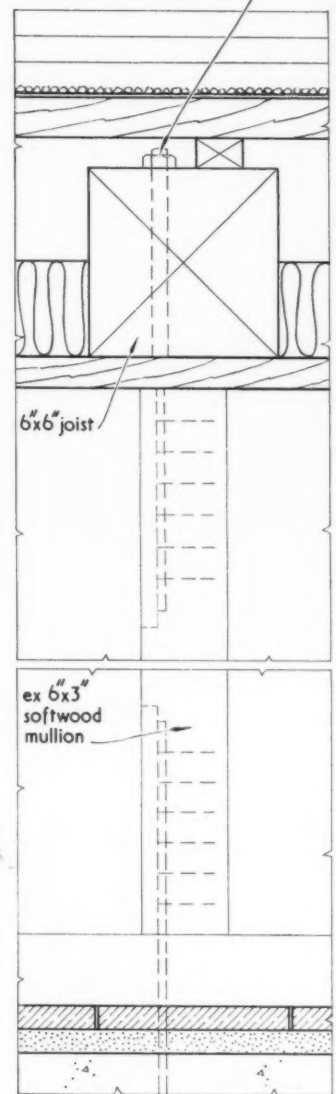


SECTION. scale 3/16"=1'-0"

15" long galvanised m.s. cramp with bolt at one end and 2 1/4 x 1/4 flat at other end bolted to alternate mullions and joists



SECTION A-A. scale 3/16" full size.



SECTION B-B.

note: figured dimensions in feet and inches are approximate

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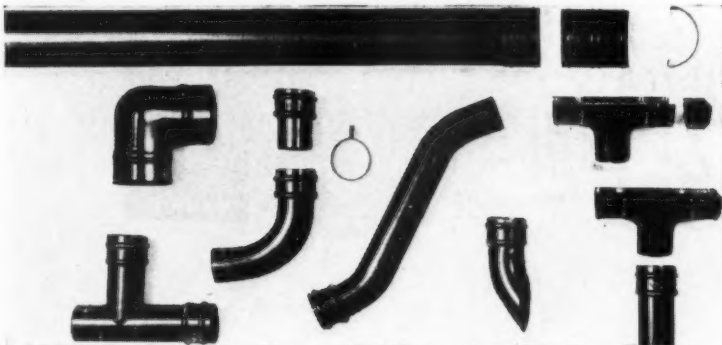
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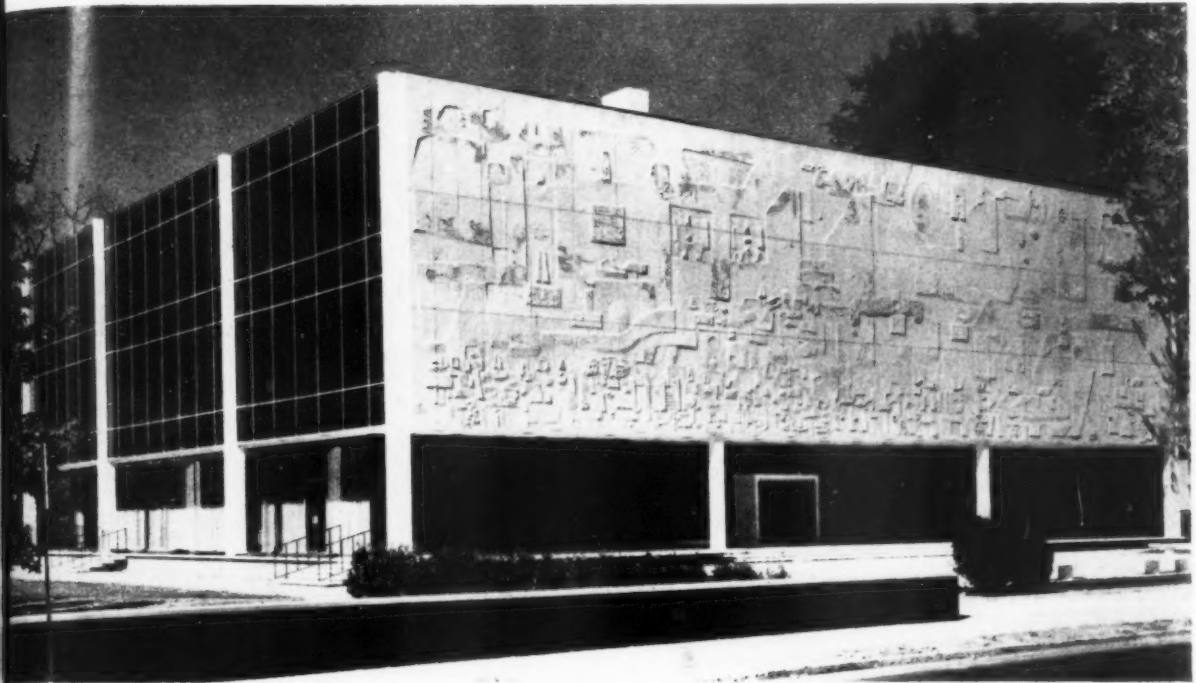
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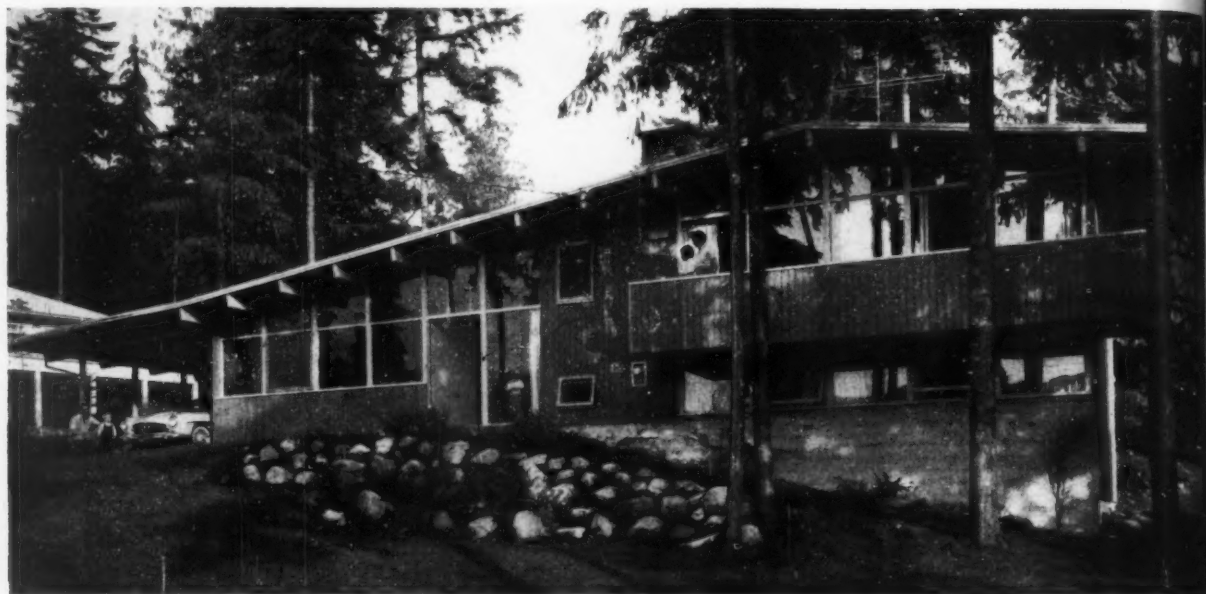
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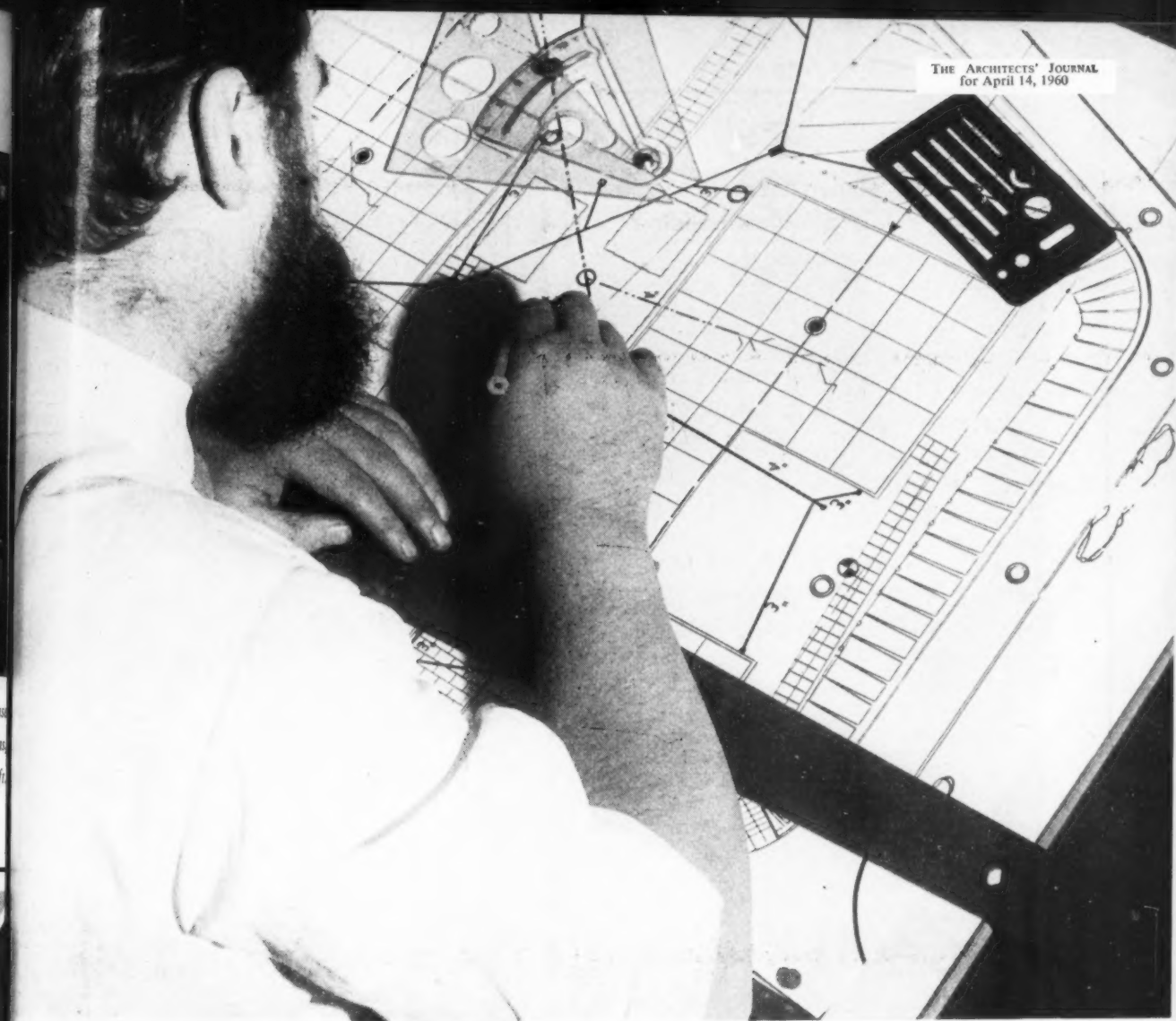
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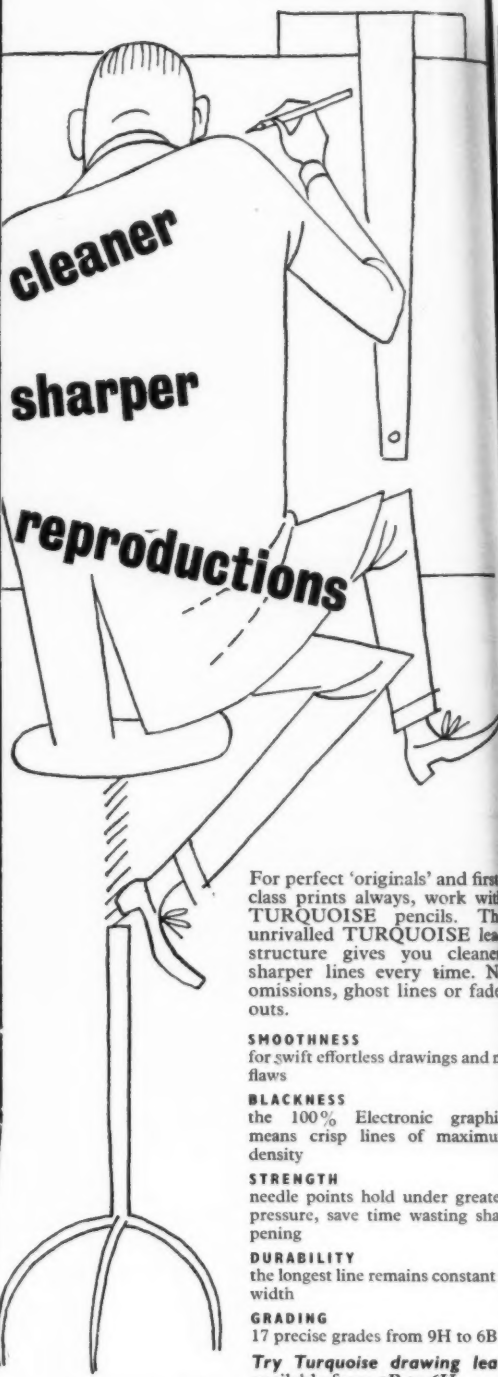
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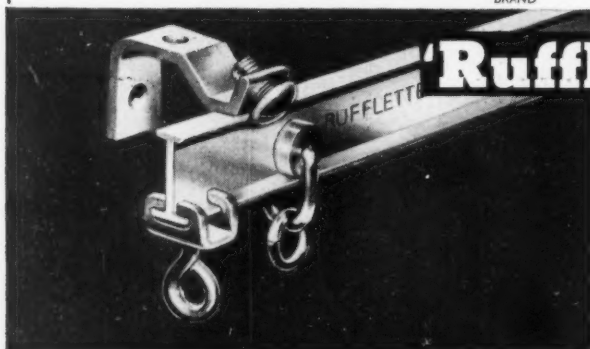


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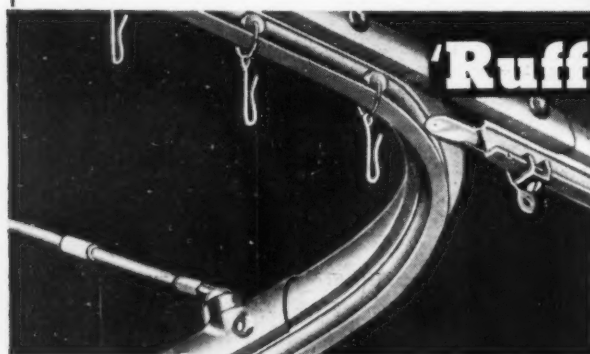
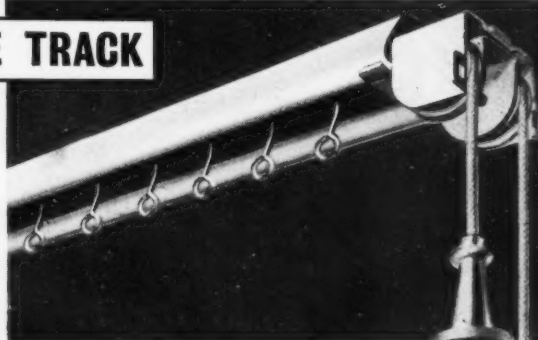
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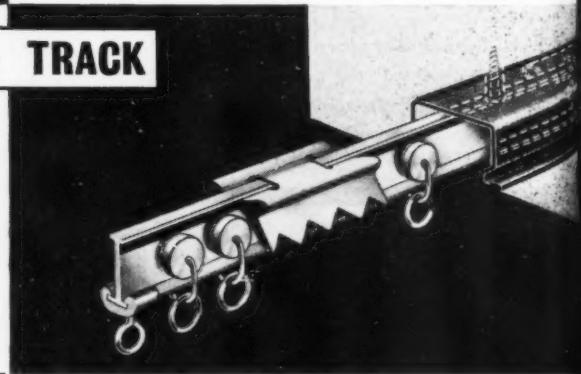
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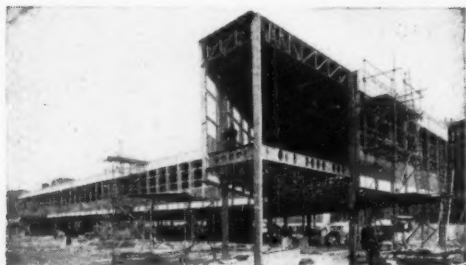
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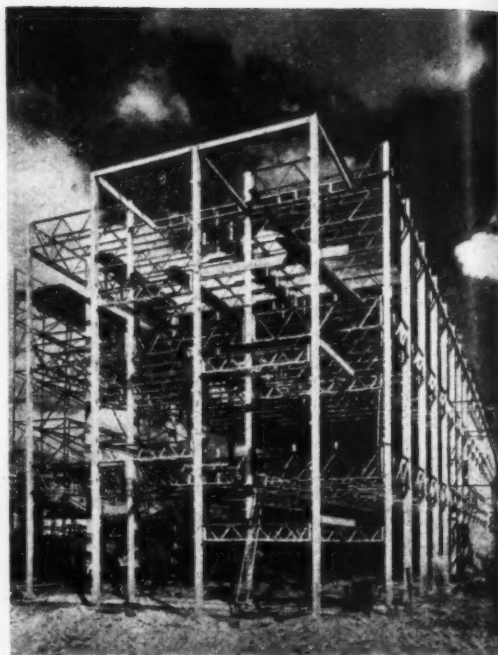
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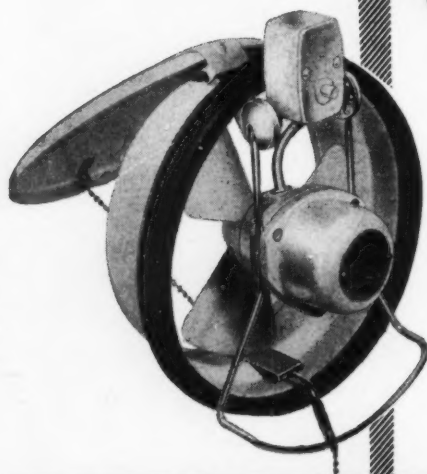
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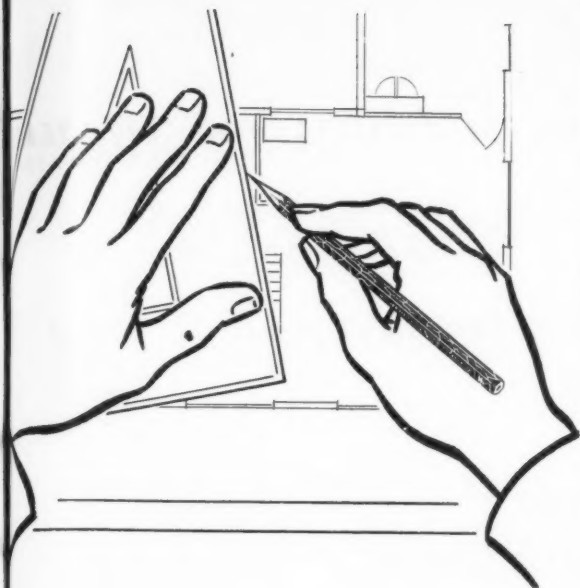
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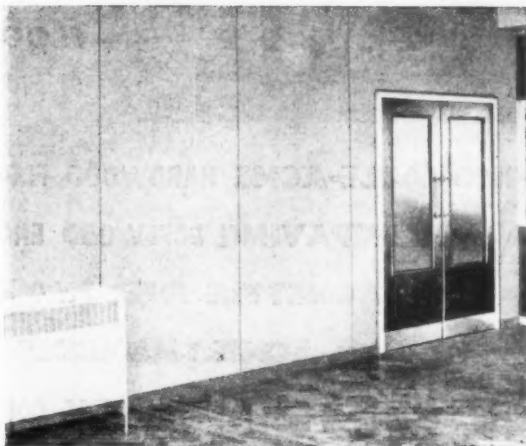
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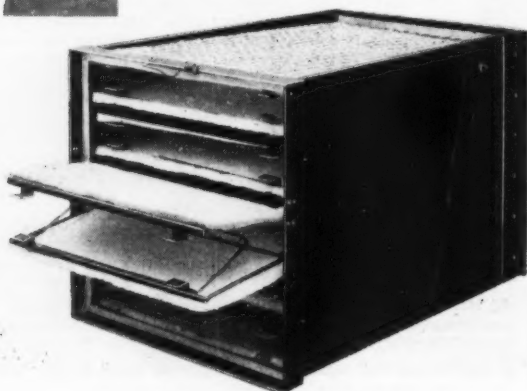
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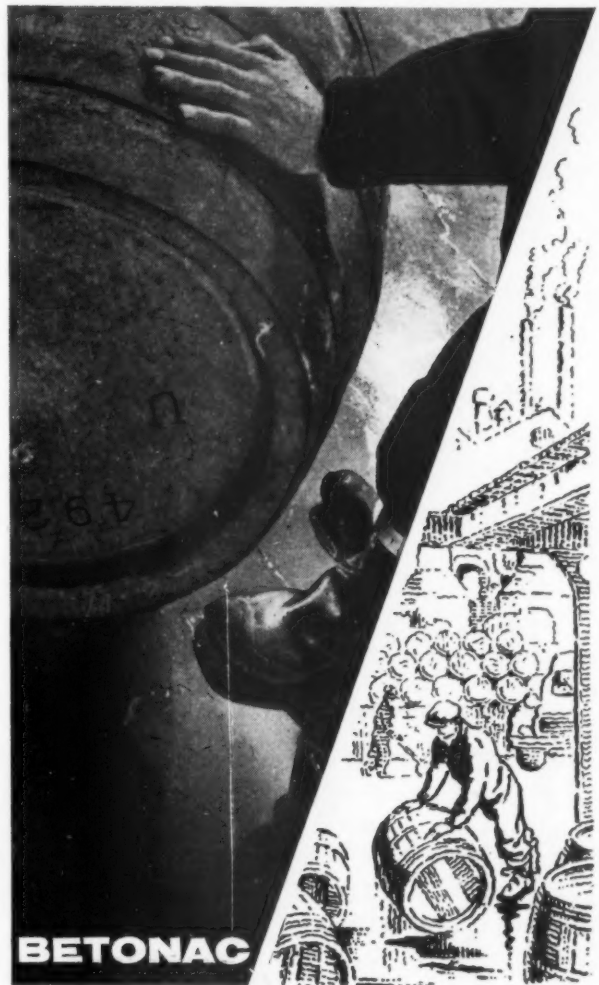
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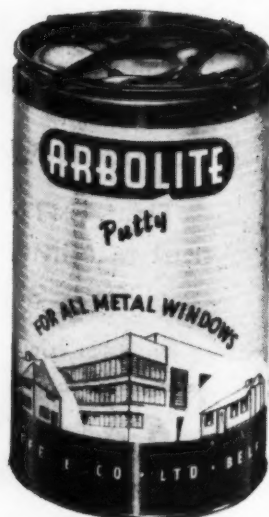


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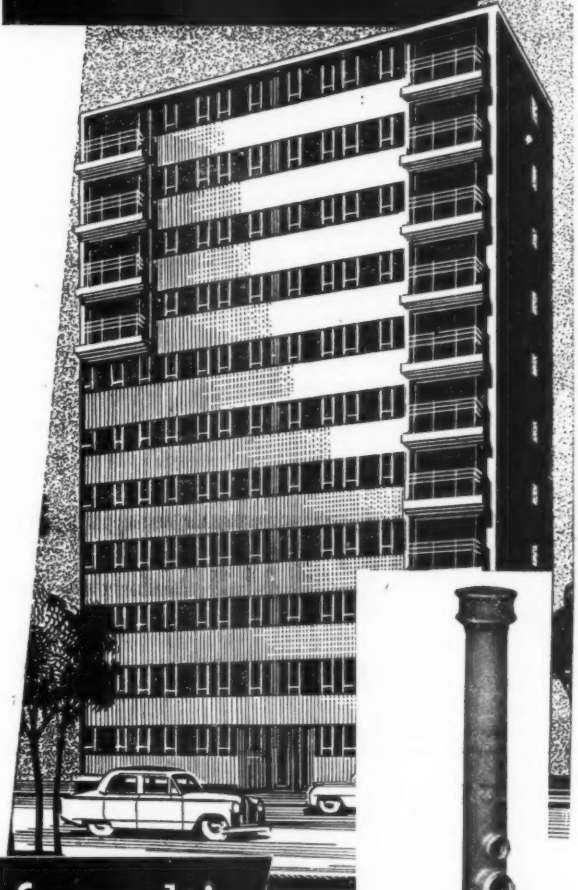
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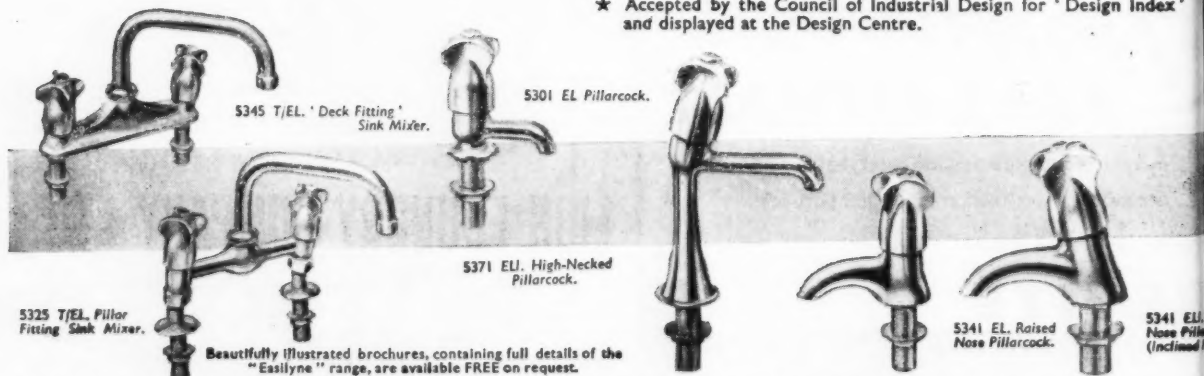
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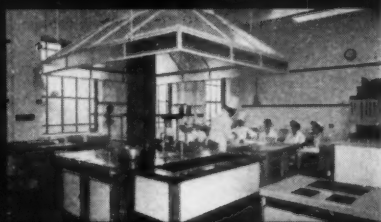
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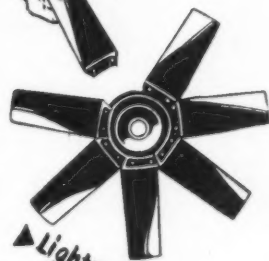
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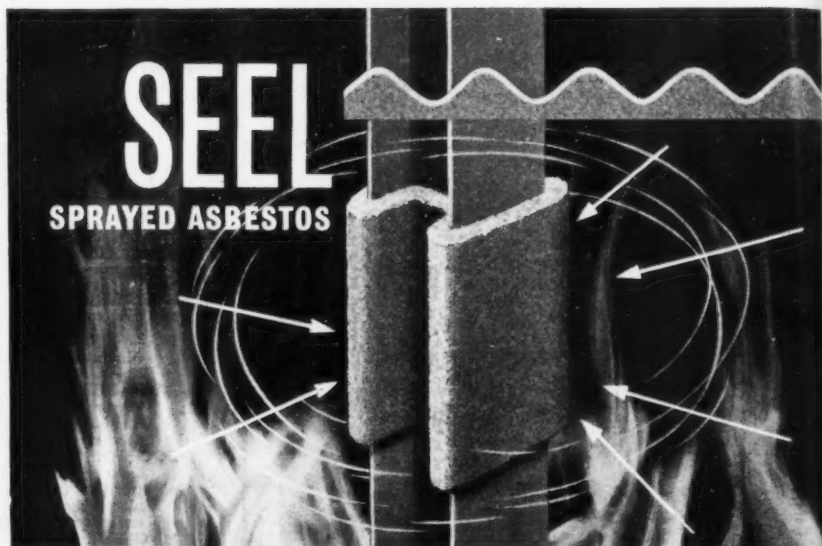
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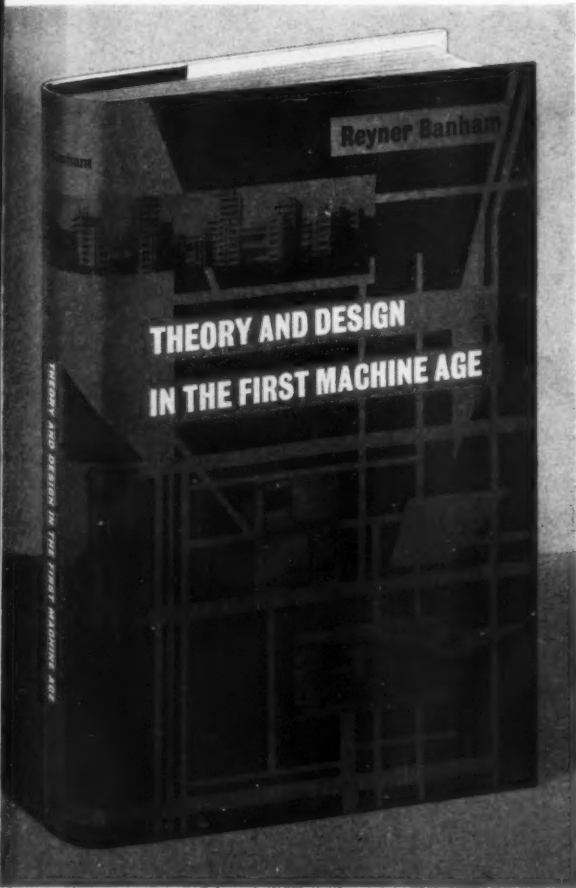
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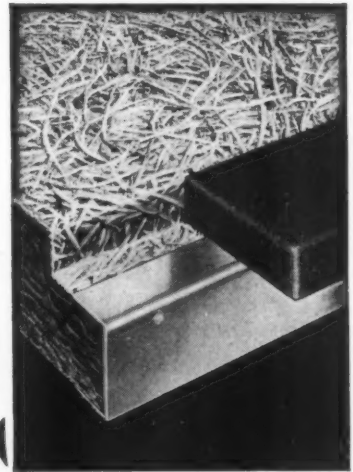
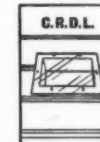
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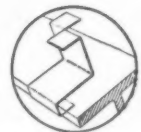
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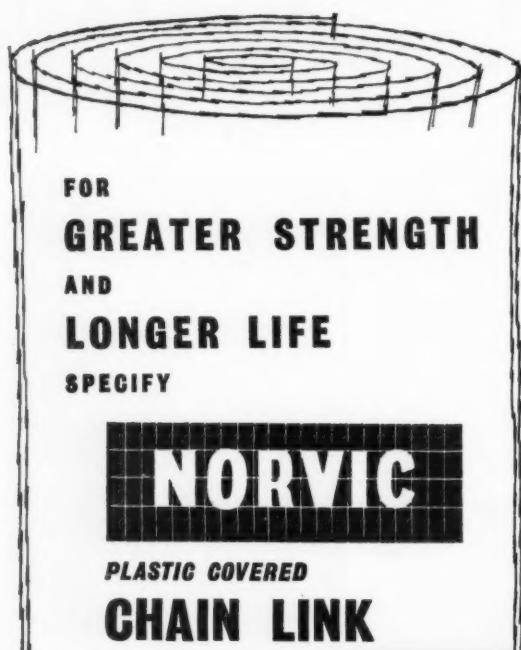
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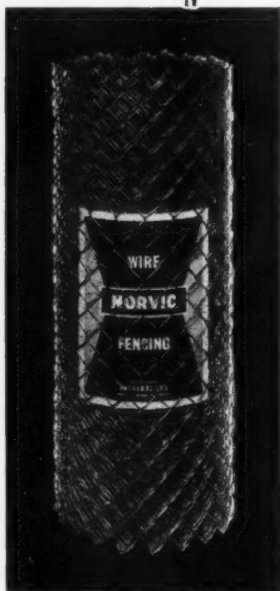
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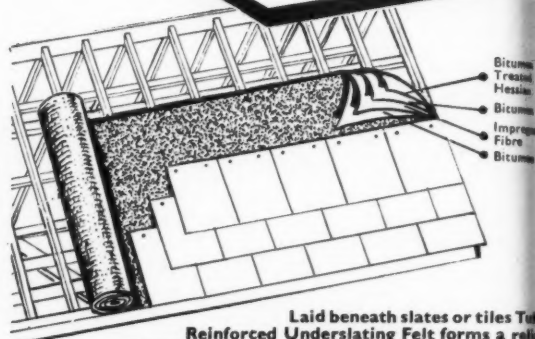
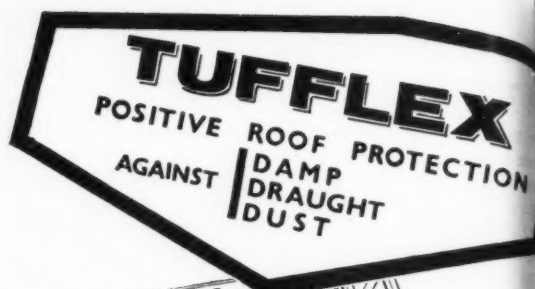


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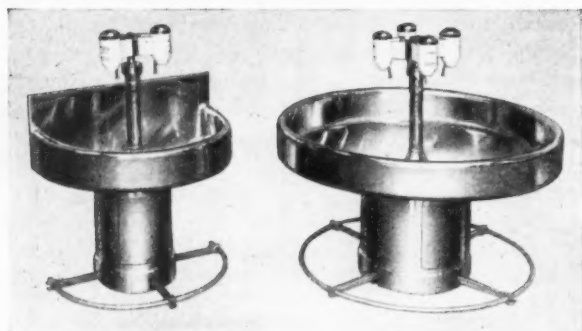
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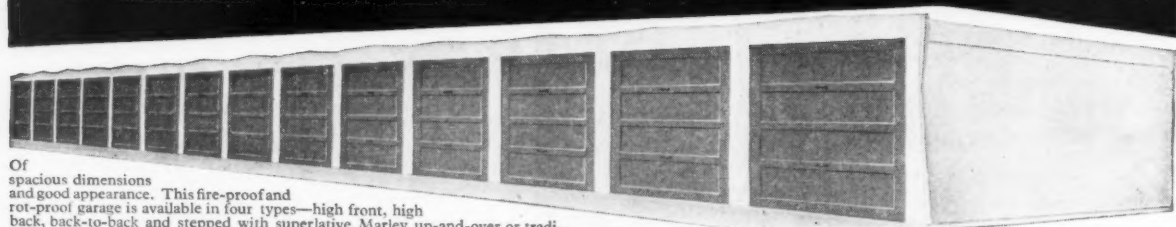
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CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advertisement Manager, "The Architects' Journal," 11 and 13, Queen Anne's Gate, Westminster, W.1. Normal printing arrangements have been made to allow for the Easter holiday. The latest dates for receiving advertisements for the April issues are as follows:—

April 21 issue—Tuesday, April 12.

April 28 issue—Friday, April 22.

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 Special Appointment details and Other Appointments Vacant, we have been pleased to arrange 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 one week (1s. 3d. for each additional week) and payment 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.

BOROUGH OF ENFIELD
BOROUGH ENGINEER & SURVEYOR'S
DEPARTMENT

Applications are invited for the post of ARCHITECTURAL ASSISTANT, Grade A.P.T. I £610-£765 per annum, plus a London Weighting allowance of £10-£30 per annum according to age.

Applicants must have had experience in the preparation of plans, specifications, etc., including the maintenance of public buildings.

Saturday mornings are normally free of duty. Application forms obtainable from H. D. Wake, M.Sc.(Eng.), M.I.C.E., Borough Engineer & Surveyor, 7 Little Park Gardens, Enfield, Middx., returnable to the undersigned.

CYRIL E. C. R. PLATTEN,
Town Clerk.
Enfield, Middx. 9454

BUILDING SURVEYORS

Architect's Department, L.C.C., has vacancies in Building Regulation Division and District Surveyors' Service for work in connection with applications under London Building Acts and bye-laws. District Surveyors' Offices are located in Metropolitan Boroughs and work involves negotiations with developers and supervision of works in progress.

Up to £1,135 (under review) commencing according to qualifications and experience. Application form and particulars from Hubert Bennett, F.R.I.B.A., Architect to Council (EK/AJ/494/4b), County Hall, S.E.1. 9076

CORPORATION OF GLASGOW
ARCHITECTURAL AND PLANNING
DEPARTMENT

ASSISTANT QUANTITY SURVEYORS

Vacancies exist for a number of qualified assistants as above. Salary scale £795-£1,240 with increasing allowance to experience.

Applications should be addressed to the City Architect and Planning Officer, 20, Tronquare, Glasgow, C.1. Those who have submitted applications during the past 12 months should not reply to this advertisement.

A. G. JURY,
City Architect and Planning Officer.
9015

METROPOLITAN BOROUGH OF BATTERSEA

Applications are invited for the following permanent appointments:—

(i) ASSISTANT ARCHITECT—
A.P.T. Grade III £680-£1,065 per annum.

(ii) ARCHITECTURAL ASSISTANT—
A.P.T. Grade I £610-£765 per annum.
London Weighting £10-£30 per annum according to age, also payable.

For appointment (i) applicants should be registered architects or have passed the final R.I.B.A. examination and have had several years thorough office experience. Previous Local Government experience is not essential. The commencing salary will be according to qualifications and experience.

Further particulars and application forms obtainable from the Borough Engineer and Surveyor, Town Hall, S.W.11. Closing date 25th April. 9470

BOROUGH OF WEMBLEY

APPOINTMENT OF ASSISTANT ARCHITECT
(Special Classes £785-£1,070 plus weighting)

Applications are invited from suitably qualified persons.

The appointment is subject to the Council's Conditions of Service and to the passing of a medical examination. A five-day week is in operation.

Forms of application, returnable by 22nd April, 1960, are obtainable from the Borough Engineer and Surveyor, Town Hall, Wembley.

N. CUMPTSY,
Town Clerk.
Wembley, Middlesex.
1st April, 1960. 9561

BOROUGH OF SOLIHULL
APPOINTMENT OF LANDSCAPE ARCHITECT

Applications are invited from members of the Institute of Landscape Architects who have had considerable experience, for appointment as Landscape Architect in the Borough Engineer and Surveyor's Department at a salary in accordance with A.P.T. Grade IV—£1,065×£55(1)×£50(2)—£1,220.

The rapid growth of the Borough has necessitated the development of public open spaces and playing fields, as well as the landscaping of housing estates, etc.

Half the reasonable cost of removal expenses will be paid and where applicable housing accommodation made available as soon as possible.

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

Applications, giving full particulars as to present and past experience, together with the names and addresses of two referees, should be submitted to the Borough Surveyor, 90, Station Road, Solihull, not later than 26th April, 1960.

W. MAURICE MELL,
Town Clerk.
The Council House,
Solihull.
30th March, 1960. 9496

CUMBERLAND COUNTY COUNCIL
COUNTY ARCHITECTS' DEPARTMENT

Applications are invited for the appointment of a SENIOR ASSISTANT ARCHITECT within A.P.T. Grade V (£1,220-£1,375). Commencing salary according to experience. Essential User Grade D travelling allowance. Housing accommodation may be available.

Applicants must be A.R.I.B.A. with experience of handling large contracts, and supervision of other staff. N.J.C. Service Conditions. Post pensionable. Subject to medical examination.

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 FRIDAY, 22nd APRIL, 1960.

G. N. C. SWIFT,
Clerk of the County Council.
9396

BOROUGH OF TAUNTON
ASSISTANT ARCHITECT

Applications are invited for appointment of Assistant Architect in the Borough Architect's Department, Special Grade, Salary £785-£1,070 per annum.

Superannuable post, subject to medical examination, and to National Conditions of Service. Applications stating age, present position and salary, qualifications, experience and names of two referees to be sent to C. Bacon, F.R.I.B.A., Borough Architect, Flook House, Station Road, Taunton, by Monday, 25th April, 1960.

K. A. HORNE,
Town Clerk.
9494

BOROUGH OF EPSOM AND EWELL
BOROUGH ENGINEER AND SURVEYOR'S
DEPARTMENT

(a) SENIOR PLANNING ASSISTANT.
(b) SENIOR ARCHITECTURAL ASSISTANT.

Applications are invited for the above posts in the Borough Engineer and Surveyor's Department at a salary on Scale A.P.T. IV (£1,065-£1,220) plus London weighting, together with an essential user transport allowance.

Candidates for post (a) must be Associate Members of the Town Planning Institute and for post (b) Associates of the Royal Institute of British Architects.

Conditions of appointment and application forms are obtainable from Mr. Colin Cobbett, A.M.I.C.E., M.I.Mun.E., Borough Engineer and Surveyor, Town Hall, Epsom, to whom they must be returned, together with the names of three referees, by Friday, the 29th April, 1960.

EDWARD MOORE,
Town Clerk.
9456

CHESTERTON RURAL DISTRICT COUNCIL
ARCHITECT'S DEPARTMENT

Applications are invited for the following posts:—

(a) MEASURING SURVEYOR, A.P.T. Grade II.
(b) JUNIOR ARCHITECTURAL ASSISTANT, A.P.T. Grade I.

Applicants for (a) should be capable of preparing Bills of Quantities, for houses and similar work. Estimates and settling Final Accounts.

Applicants for (b) must have had a sound Architectural training and be capable of preparing working drawings, specifications and making surveys.

The appointments will be subject to the terms of the National Joint Council's Scheme of Conditions of Service and to termination by one month's notice on either side. The successful candidates will be required to pass a medical examination.

Applications, suitably endorsed, stating age, qualifications, experience, etc., accompanied by the names of two referees, are to be sent to the undersigned not later than the 25th April, 1960.

W. H. HAYWARD,
Clerk of the Council.
County Hall,
Hobson Street,
Cambridge. 9517

CITY OF WORCESTER
APPOINTMENT OF ARCHITECTURAL
ASSISTANT

Applications are invited for this appointment within Salary Scale A.P.T. I (£610-£765 per annum). The appointment is superannuable and subject to a medical examination.

Housing accommodation will be offered if necessary, and the Corporation are prepared to make a contribution towards removal expenses.

Casual User's Car Allowance will be applicable. Applications, stating age, present and previous appointments and experience, are to be sent to the City Engineer and Surveyor, 22, Bridge Street, Worcester, by Wednesday, 20th April, 1960.

BERTRAM WEBSTER,
Town Clerk.
Guildhall,
Worcester. 9457

BOROUGH OF LEYTON
(Municipal Borough in the County of Essex.
Population approximately 100,000.)

BOROUGH ENGINEER'S DEPARTMENT

Applications invited for appointments of ASSISTANT ARCHITECTS at salaries within the scale of £785 per annum rising to £1,070 per annum (plus London weighting) in accordance with the provisions of the National Scheme of Conditions of Service for Local Authority Staff (Special Classes).

Housing accommodation will be made available to successful applicants if required. Five-day week is operated.

Apply by letter to Borough Engineer, Town Hall, Leyton, E.10 (giving names of two referees) not later than Friday, 22nd April, 1960.

D. J. OSBORNE,
Town Clerk.
Leyton, E.10. 9427

COUNTY BOROUGH OF DARLINGTON
BOROUGH ARCHITECT'S DEPARTMENT

Applications are invited for the posts of:—

(a) SENIOR ASSISTANT ARCHITECT,
A.P.T. Grade III-IV (£880-£1,220).

(b) ASSISTANT QUANTITY SURVEYORS,
A.P.T. Grade III-IV (£880-£1,220).

(c) ARCHITECTURAL LEARNER—Gen. Div.
£210-£465 (£430 at age 22).

The Authority has a large building programme, including Schools, Technical College, Civic Buildings, etc.

For (a) and (b) preference will be given to candidates with experience in Local Government, and holding professional qualifications. Starting salary by negotiation. Housing accommodation available. Applicants for (c) should be about 21 years of age.

Applications, stating age, experience, qualifications, present salary, and nominating two referees, should be received by E. A. Tornbohm, A.R.I.B.A., A.M.T.P.I., Borough Architect, Central Buildings, Darlington, by 21st April, 1960. 9380

WEDNESFIELD URBAN DISTRICT COUNCIL
ENGINEER AND SURVEYOR'S
DEPARTMENT

Applications are invited for the position of CHIEF ASSISTANT ARCHITECT at a salary in accordance with A.P.T. Grade IV (£1,065 to £1,220).

Candidates must be qualified and have had considerable experience in the appointment for which they make application.

The district is developing rapidly and offers exceptional experience.

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 25th April, 1960.

J. HENWOOD JONES,
Clerk of the Council. 9435

COUNCIL OFFICES,
Alfred Squire Road,
Wednesfield,
Staffs. 9435BOROUGH OF OLDBURY
STONE STREET AND LODGE STREET
DEVELOPMENT—PHASE 2

The Council invite Tenders on a fixed-price basis for the erection of 78 4-storey dwellings and four garages, together with landscape wall and construction of drying areas.

Forms of Tender, Conditions of Contract and Bills of Quantities may be obtained from the Architects, Messrs. Wood & Kendrick & Williams, of 57, Colmore Row, Birmingham, upon payment of a deposit of £2 2s. This sum will be refunded on receipt of a bona fide tender not subsequently withdrawn.

Tenders must be submitted in the envelope provided, the envelope being duly sealed and bearing no name or mark indicating the sender. Tenders must be delivered to the Town Clerk's Office, not later than 12 noon on Saturday, 7th May, 1960.

The Corporation does not bind itself to accept the lowest or any tender.

KENNETH PEARCE,
Town Clerk.
Municipal Buildings,
April, 1960. 9560
Oldbury.

BIRMINGHAM REGIONAL HOSPITAL BOARD

ARCHITECT'S DEPARTMENT

(a) ASSISTANT ARCHITECTS (ref. Arch. 1).
Salary scale £730-£1,055 per annum. Starting salary according to age and experience. Applicants must be registered architects having passed the requisite examinations. Experience of hospital planning and construction an advantage. Sound knowledge of architectural design, working drawings, surveying and specifications essential.

(b) ARCHITECTURAL ASSISTANTS (ref. Arch. 2).

Salary £545 (at age 21 years or over)-£765 per annum. Point of entry according to experience. Intermediate-R.I.B.A. essential.

(c) ASSISTANT QUANTITY SURVEYORS (ref. Arch. 3).

Salary scale £730-£1,055 per annum. Starting salary according to age and experience. Final R.I.C.S. and experience in taking off and preparing bills of quantities and settlement of final accounts essential.

(d) SURVEYING ASSISTANT (BUILDING) (ref. Arch. 4).

Salary scale £545-£765. To assist in survey of existing hospital buildings and preparation of record plans. Intermediate R.I.C.S. (Buildings Division) essential. Must be a neat draughtsman with experience in measurement and plotting of surveys to all scales.

All salary scales now under review.

All posts superannuable. Five-day week. Written applications, quoting reference of post desired and naming two referees to Secretary, R.H.B. 10, Augustus Road, Birmingham, 15, by 25th April, 1960. 9398

COUNTY COUNCIL OF ROSS AND CROMARTY

COUNTY ARCHITECT'S DEPARTMENT

Applications are invited from qualified Architects for appointments as SENIOR ASSISTANT ARCHITECTS in the Dingwall Office of the County Architect on salary scale £1,039 10s.-£1,228 10s.

Housing accommodation will be provided. Applicants must be Associates of the Royal Institute of British Architects.

Applications giving details of training and experience with attached copies of three recent testimonials should be lodged with Peter S. Leask, A.R.I.B.A., A.M.T.P.I., County Architect, Tulloch Street, Dingwall, not later than Saturday, 23rd April, 1960.

W. D. ROSS,
County Clerk.

County Buildings,
Dingwall.
January, 1960. 9583

COUNTY BOROUGH OF BOLTON BOROUGH ARCHITECT'S DEPARTMENT

Applications are invited from qualified architects for the post of PRINCIPAL ASSISTANT ARCHITECT, Grade A.P.T. IV (£1,065-£1,220). The successful candidate will be expected to lead a group on varied work, and the commencing salary will be within the grade according to experience.

The appointment is superannuable and is subject to medical examination. Applications, giving full details of age, qualifications and experience, and the names of two referees, should be received by me by 10 a.m., Monday, the 25th April. PHILIP S. RENNISON,
Town Clerk.

Town Hall,
Bolton. 9578

WEST SUFFOLK COUNTY COUNCIL COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for the following appointment:-

SENIOR ASSISTANT ARCHITECT, at a salary in accordance with Grade V (A.P.T.) of the National Scales of Salaries-£1,220 x £55 x £50-£1,375. Commencing salary will be according to experience.

Further particulars should be obtained from the County Architect, County Hall, Chichester, to whom all detailed applications must be submitted not later than 5th May, 1960.

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

County Hall,
Chichester. 9548

ASSISTANT QUANTITY SURVEYOR

Applications invited from Corporate Members of the Royal Institution of Chartered Surveyors (Quantities) for unestablished post in Chief Quantity Surveyor's Branch, Ministry of Finance. Experience in "taking off" for large building works essential. Salary scale £805-£1,260. Prospects point according to age and experience. Prospects of permanent and pensionable appointment. Preference for ex-Servicemen. Application forms, obtainable from Director of Establishments, Room 271, Stormont, Belfast, to be completed and returned by the 20th April, 1960. 9294

LONDON COUNTY COUNCIL

ARCHITECTS (up to £1,135) (under review) required for Housing, Schools, General and Special Works Divisions. Full and varied programme of new work including schools, multi-storey flats and Town Development. Starting salaries according to qualifications and experience.

Particulars and application form from Hubert Bennett, F.R.I.B.A., Architect to Council (EK/AJ/496/4a), County Hall, S.E.1. 9075

COUNTY BOROUGH OF GATESHEAD

Applications are invited from suitably qualified persons for the following positions in the Borough Surveyor's Department to work under the CHIEF ARCHITECT upon an interesting programme of Educational, Housing and Multi-Storey Flats, and Public Buildings.

(a) PRINCIPAL ASSISTANT ARCHITECTS

Scale "A" (£1,290 x £50 to £1,390)

(b) SENIOR ASSISTANT ARCHITECTS, A.P.T. V (£1,220 rising to £1,375).

(c) ASSISTANT ARCHITECTS, A.P.T. IV (£1,065 rising to £1,220).

(d) SENIOR QUANTITY SURVEYOR, A.P.T. V (£1,220 rising to £1,375).

(e) SENIOR ASSISTANT QUANTITY SURVEYOR, A.P.T. IV (£1,065 rising to £1,220).

Salaries within the above scales, according to qualifications and experience. Local Government experience not essential.

In suitable cases housing accommodation will be made available at an economic rent, on Pleasant Post War Estates.

Posts pensionable, medical examination, and subject to one month's notice.

Application forms and details obtainable from the Borough Surveyor, Swinburne Street, Gateshead, 8, must be returned to him by the 30th April, 1960.

C. D. JACKSON,
Town Clerk.

Town Hall,
Gateshead, 8.
1st April, 1960. 9564

CHISLEHURST AND SIDCUP URBAN DISTRICT COUNCIL

APPOINTMENT OF ARCHITECTURAL ASSISTANT

Architectural Assistant required in Engineer and Surveyor's Department. Salary A.P.T. II (£765-£880) plus London weighting. Preference to candidates with R.I.B.A. (Intermediate) examination. Housing available.

Applications giving age, training, qualifications and experience and names of two referees, to Clerk, Council Offices, Sidcup Place, Sidcup, Kent, by 27th April, 1960. 9566

LONDON COUNTY COUNCIL

ARCHITECT'S 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/AJ/527/4b), County Hall, S.E.1. 9076



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Architectural Assistants**

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The positions occur in our offices at Leamington Spa and Tunbridge Wells, and they carry good salaries (commensurate with ability and experience) and include participation in a generous bonus scheme.

Please apply, in writing only, stating full particulars of training, experience, age and salary required, to:-

**The Chief Architect,
ATCOST (FACTORIES) LTD., YORK HOUSE,
TUNBRIDGE WELLS, KENT.**

One of the ATCOST Group of Companies

**MINISTRY OF HOUSING
AND
LOCAL GOVERNMENT
DIRECTING GRADE
ARCHITECT**

There is a vacancy for a Directing Grade Architect who, on appointment, will be responsible to the Chief Architect for the organisation and supervision of the professional side of a newly created Development Group. The work of this Group, which will form part of the Ministry's architectural advisory service, will include research into the design, construction and costs of housing and of other types of local government buildings. It will be concerned in the preparation of advisory bulletins and studies as well as the carrying out of selected development projects in the housing field. The post carries a salary (men, London) of £3,000 per annum.

Candidates must be registered architects and hold professional qualifications in architecture. They should have had wide building and contract experience, including experience of new constructional techniques, combined with design ability of a high order.

Application forms may be obtained from the Secretary, Civil Service Commission, 17, North Audley Street, London, W.1 (quoting S/5124/60/8), and should be returned to him by 26th April, 1960.

HUNTINGDONSHIRE

COUNTY ARCHITECT'S DEPARTMENT
CHIEF QUANTITY SURVEYING ASSISTANT

Grade A.P.T. V (£1,220-£1,375).
Applications are invited for the above appointment from chartered quantity surveyors. The person appointed will be directly responsible to the County Architect for the organisation and work of this section of five assistants.

Application forms may be obtained from S. M. Holloway, A.R.I.B.A., County Architect, County Buildings, Huntingdon, and completed forms should be returned to the undersigned by Monday, 25th April, 1960.

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

County Buildings, Huntingdon. 9567

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 £902-£1,002 per annum.

Applications, stating age, qualifications and experience, together with the names of two referees, should be addressed to the Industrial Relations Office, West Midlands Gas Board, 6, Ingush Road, Edgbaston, Birmingham, 15. 9565

BOROUGH OF EDMONTON

BOROUGH ARCHITECT'S DEPARTMENT
Applications are invited for the following appointments in connection with the Council's Capital Building Programme, including multi-storey housing and public buildings, and maintenance and improvement works. Applicants should be appropriately qualified.

(a) ARCHITECTURAL ASSISTANTS.—Salary within Special Grade £785-£1,070 plus London weighting.

(b) ARCHITECTURAL ASSISTANTS.—Salary within Grade A.P.T. II, £765-£880 plus London weighting.

(c) QUANTITY SURVEYING ASSISTANTS.—Salary within Grade A.P.T. II, £765-£880 plus London weighting.

Applications on forms obtainable from the Town Clerk, Town Hall, Edmonton, N.9, must be delivered by the 23rd April, 1960. 9553

COUNTY OF ESSEX

COUNTY PLANNING DEPARTMENT
Applications are invited for the following posts:

(a) PRINCIPAL PLANNING OFFICER, J.N.C. Scale "D" (£1,520-£1,755).

The successful applicant for this important Headquarters executive post will be required to take charge of the Development Plan and Control Section. He will be responsible for the work in connection with the production and progress, through all stages, of review of the County Development Plan, with additional Town Maps and Comprehensive Development Areas, together with Headquarters work on Development Control, including Minerals and liaison with the New Town Development Corporations, and on footpaths and amenities generally.

Candidates must be Corporate Members of the Town Planning Institute and should also hold an appropriate University Degree or other professional qualification. They must also have had extensive experience in both Development Plan and Control work of a large local planning authority, and be capable administrators.

(b) ARCHITECT/PLANNER, J.N.C. Scale "C" (£1,385-£1,620).

The successful applicant for this Headquarters post will be required to take charge of the detailed Planning and Design Section. He will be responsible for advising upon third-dimensional design and grouping of buildings, in intimate scale, in central redevelopment and in civic design projects and the care and improvement of buildings under preservation orders; and upon aesthetic considerations generally.

Candidates must be competent, experienced and qualified designers, capable of original thought in initiating design of central area proposals and be able to give guidance to Area Officers in a course of development control. They must be Corporate Members of the Royal Institute of British Architects, and should also be Corporate Members of the Town Planning Institute or of the Institute of Landscape Architects. They must also have had extensive allied architectural and planning experience and be capable administrators.

(c) SENIOR PLANNING OFFICER, A.P.T. Grade V (£1,220-£1,375).

The successful candidate will be required to work as one of two sub-section leaders in the Development Plan and Control Section at Headquarters directly under the person to be appointed to post (a). They must be Corporate Members of the Town Planning Institute, should hold an additional appropriate professional qualification and be suitably experienced both in development plan and development control work in the office of a large local planning authority.

(d) SENIOR PLANNING OFFICER, A.P.T. Grade V (£1,220-£1,375).

The successful candidate will be required to take charge of a small section in an Area Office at Romford dealing mainly with redevelopment schemes for central areas, including civic design projects. Candidates should be Corporate Members of the Royal Institution of British Architects

and the Town Planning Institute, and have had considerable allied architectural and planning experience in large redevelopment and central area schemes.

(e) SENIOR PLANNING OFFICER, A.P.T. Grade V (£1,220-£1,375).

Applicants must be Corporate Members of the Town Planning Institute and should possess another appropriate professional qualification. They should have had considerable experience in the preparation of development plans in highly urbanised areas and be capable of organising and analysing the various surveys in connection therewith.

(f) SENIOR PLANNING ASSISTANTS, A.P.T. Grade IV (£1,065-£1,220).

Vacancies as Section Heads either in the Development Plan or Control Sections at Area Offices at Chelmsford, Colchester, Romford and Wansstead.

Candidates must be Corporate Members of the Town Planning Institute or other appropriate professional institution and have had considerable experience in either development plan or control work in the office of a large local planning authority.

(g) SENIOR PLANNING ASSISTANT, Special Grade (£785-£1,070), in the Detailed Design Section at Headquarters.

Candidates should be Corporate Members of the Town Planning Institute or Royal Institution of British Architects, or be well advanced in their studies towards this end.

Candidates should have experience in, and will be required to assist with, the work mentioned under post (b).

(h) SENIOR PLANNING ASSISTANTS, Special Grade (£785-£1,070).

Vacancies exist in various Area Offices in the Development Plan or Control Sections.

Candidates should be Corporate Members of the Town Planning Institute or other recognised professional institution, or be well advanced in their studies to this end.

They must have had experience in Plan or Control work in the office of a large local planning authority.

(i) SENIOR PLANNING ASSISTANT (RESEARCH), Special Grade (£785-£1,070).

Candidates should possess an appropriate University Degree in Geography or Economics and be prepared, if they are not already doing so, to study for the Final Examination of the Town Planning Institute. They should have had experience in Research and Survey work in the office of a large local planning authority.

Five-day week; medical examination; superannuation. Day release facilities in appropriate cases. Canvassing directly or indirectly disqualified.

Applications, with names of three referees, to the County Planning Adviser, at Broomfield Place, Broomfield, Chelmsford, Essex, by 25th April, 1960. 9484

HATFIELD RURAL DISTRICT COUNCIL

Applications are invited for appointment of ARCHITECTURAL ASSISTANT. Grade A.P.T. II, £765-£880 per annum, preferably with R.I.B.A. Intermediate.

Summary forms, and applications to Engineer and Surveyor, 82, Great North Road, Hatfield, not later than 25th April, 1960.

S. F. JAGO
Clerk of the Council.

Council Offices,
16, St. Albans Road,
Hatfield,
Herts. 9306

RURAL DISTRICT COUNCIL OF ROSS AND WHITCHURCH
ASSISTANT IN THE DEPARTMENT OF THE ARCHITECT & SURVEYOR

Applications are invited for the above appointment at a salary in accordance with A.P.T. I to A.P.T. II according to qualifications and experience. Applicants should have had experience on housing work of a local authority.

The appointment will be subject to the National Scheme of Conditions of Service for Local Authorities' A.P.T. etc., Services, to the provisions of the Local Government Superannuation Acts and to the passing of a medical examination.

Applications stating age, qualifications and experience, with the names of two referees, must be received by the undersigned not later than noon, on the 20th April, 1960.

H. B. REYNOLDS,
Clerk of the Council.

Council Offices,
Woodside,
Ross-on-Wye,
Herefordshire. 9607

YORKSHIRE ELECTRICITY BOARD
APPOINTMENT OF ASSISTANT ARCHITECT ON THE STAFF OF THE CHIEF ENGINEER

Preference given to applicants who are Associate Members of R.I.B.A. Must have had good training and adequate experience in design and construction of modern offices, service centres, workshops and substation buildings.

Permanent superannuable post—National Joint Board conditions.

Salary scale—£1,180/£25/£1,305 rising to £1,445 per annum. Commencing salary according to qualifications and experience.

Applications, giving full details of age, qualifications and experience, together with the names of two referees, should be forwarded to The Secretary, Yorkshire Electricity Board, Wetherby Road, Scarcroft, near Leeds, within 14 days of the appearance of this advertisement. 9558

THE NORTH WESTERN ELECTRICITY BOARD

THIRD ASSISTANT ENGINEER (CIVIL ENGINEERING)

SUB-AREA ENGINEERING DEPARTMENT, PRESTON

Applicants should be suitably qualified and have had experience in preparing sketch schemes, working drawings, specifications and bills of quantities, in connection with new buildings (offices, substations, workshops, service centres, etc.); also setting out and supervision of work on site. Membership of the Royal Institute of British Architects will be an advantage.

Salary scale: £1,025-£1,085 p.a. Grade L.10. N.J.B. Conditions.

Applications must be made on a form to be obtained from the Manager, No. 4 Sub-Area, The North Western Electricity Board, 40/41, Lune Street, Preston, and returned to him so as to be received not later than 27th April, 1960. 9595

WILTSHIRE COUNTY COUNCIL

COUNTY PLANNING DEPARTMENT

SENIOR PLANNING ASSISTANT, Special Grade.

Salary within the range £785-£1,070 per annum.

Applicants should be Associate Members of the Town and Country Planning Institute and should have had experience in the preparation of Reports, Town Maps, Development Control Maps and Re-development Schemes, etc., together with any other duties assigned to him. Applicants should possess a motor-car.

Written application, giving details of age, education, qualifications and experience together with the names of two referees should be sent to the Clerk of the County Council, County Hall, Trowbridge, by Saturday, 30th April, 1960. 9593

CITY OF PETERBOROUGH
CITY ENGINEER'S DEPARTMENT
ARCHITECT'S SECTION

Applications are invited for the undermentioned appointments:—

(1) TWO SENIOR ASSISTANT ARCHITECTS: Grade A.P.T. IV, £1,065-£1,220 per annum.

(2) TWO ARCHITECTURAL ASSISTANTS: Grade A.P.T. II, £765-£880 per annum.

Applicants for (1) should be Associates of the R.I.B.A., or its equivalent at one of the recognised schools of architecture, and for (2) to have passed the Intermediate examination R.I.B.A.

The assistants appointed will work as a team and will be engaged for the completion of a redevelopment scheme adjacent to the Cathedral, estimated to cost £300,000, comprising houses, flats, maisonettes, etc. in multi-storey blocks, of framed and load bearing construction. Experience in housing and flat design and cost control will be an advantage. Possibilities exist for permanent engagement for suitable assistants.

The scheme at present is in the sketch stage and assistants are required for preparing complete working and detail drawings, etc., where good draughtsmanship and knowledge of construction are essential.

Housing accommodation will be provided if required.

Application forms, together with conditions of appointment are obtainable from Mr. L. H. Robjohn, M.B.E., A.M.I.C.E., City Engineer & Surveyor, Town Hall, Peterborough, and should be returned by 12th May, 1960.

C. PETER CLARKE,
Town Clerk.

Town Hall,
Peterborough.
April, 1960. 9591

BEDFORDSHIRE COUNTY COUNCIL

invite applications from persons with experience in work of Planning Authority for post of PLANNING ASSISTANT (Development Control).

A.P.T. II (£765-£880). Experience of Development Control an advantage, particularly with regard to elevational treatment. Preference given to persons studying for professional examinations.

Application forms and further particulars from Establishment Officer, Shire Hall, Bedford, Closing date 28th April. 9590

UNIVERSITY OF ABERDEEN

Applications are invited for the post of JUNIOR ASSISTANT SECRETARY to work under the Assistant Secretary for Lands and Buildings. Qualified Surveyor or Architect preferred. Initial salary £900 to £1,100, on scale rising to £1,350. Superannuation (F.S.S.U.) and child allowance.

Particulars from The Secretary, The University, Aberdeen, with whom applications (eight copies) should be lodged by 6th May, 1960. Applicants outside the British Isles may submit one copy of application. 9588

COUNTY BOROUGH OF BOLTON

BOROUGH ARCHITECT'S DEPARTMENT

Applications are invited for the post of QUANTITY SURVEYOR on Grade A.P.T. III (£880-£1,065) or Special Classes (£785-£1,070). Commencing salary according to experience.

Applicants should have experience in taking off quantities for architectural works, and measuring for interim and final accounts. Post superannuable, subject to medical examination. Previous Local Government experience not essential.

Applications, giving full details, including experience, present post and salary, and naming two referees, should be received by me not later than 25th April.

PHILIP S. RENNISON,
Town Clerk. 9612

BOROUGH OF EALING
Erection of 16 Flats—Lynecroft Gardens, W.13
Forms of Tender and Specification, etc. can be obtained from the Borough Surveyor on payment of £5.
Tenders to be delivered to the Town Clerk, Town Hall, Ealing, W.5, not later than 12 noon, 20th May, 1960.

E. J. COPE-BROWN,
Town Clerk.
9601

CAMBS COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT
Applications are invited for the post of ASSISTANT QUANTITY SURVEYOR, Grade I, A.P.T. Division, £610—£765.
Applicants should have had experience in abstracting, billing and site measurements and preference will be given to an applicant who is studying for the R.I.C.S. examinations.
Applications stating age, present and previous appointments, details of training and experience, together with the names and addresses of two referees, should be submitted to the undersigned not later than April 26th, 1960.

CHARLES PHYTHIAN,
Clerk of the County Council.
Shire Hall,
Cambridge.
7th April, 1960. 9611

BOROUGH OF KING'S LYNN
HOUSING ARCHITECT'S DEPARTMENT
Applications are invited for the appointment of ASSISTANT QUANTITY SURVEYOR, Grade A.P.T. I (£610—£765 per annum).
Candidates, who should have passed or be studying for the appropriate Intermediate examination, will be required to assist in the preparation of Bills of Quantities, Valuations and measurement of works in progress and settlement of Final Accounts.

Consideration will be given to the provision of housing accommodation. The appointment is superannuable and subject to the National Scheme of Conditions of Service, and to Medical Examination.
Applications, giving age and full particulars of experience and previous appointments, and naming two referees, should be addressed to G. Holmes, A.R.I.B.A., Housing Architect, Clifton House, Queen Street, King's Lynn, not later than Thursday, 28th April, 1960.
Canvassing disqualifies.

E. W. GOCHER,
Town Clerk.
Town Hall,
King's Lynn,
Norfolk. 9618

AUSTRALIA
GOVERNMENT OF QUEENSLAND
Applications are invited for appointment as ARCHITECT, Division II, in the Queensland Housing Commission in Brisbane. Salary minimum A£1,580, maximum A£1,655. Age limit 45 years.

Application form and further details may be obtained from the Agent-General for Queensland, 409/410, Strand, London, W.C.2. 9569

THE UNIVERSITY OF LIVERPOOL
DRAUGHTSMAN required in the Fabric Maintenance Department, preferably with Architect's Office experience. £600 to £750 per annum, stating age, present position, experience, and contributory pension scheme.
Apply in writing, quoting reference Number 910 AJ to the Registrar before 21st April, 1960, stating age, present position, experience, and give the names of two referees. 9555

WEST SUFFOLK COUNTY COUNCIL
Applications are invited from suitably qualified persons for the post of ARCHITECTURAL ASSISTANT within A.P.T. Grade I (£610—£765).
N.J.C. Service Conditions; post pensionable, medical examination.
One day per week will be allowed for study at a recognised school of architecture.
Application forms obtainable from the County Architect, 13, Westgate Street, Bury St. Edmunds, to be returned as soon as possible. 9539

SURREY COUNTY COUNCIL
Applications invited for the following appointments:

GRADE IV (£1,065—£1,220 p.a. plus £30 p.a. London Allowance).

ARCHITECTS: Must be Assoc. Mem. R.I.B.A. and have had experience in preparation of drawings and specifications, and be capable of assuming responsibility for medium to large-scale contracts.

GRADE II (£765—£880 p.a. plus up to £30 p.a. London Allowance, according to age).

ARCHITECTURAL ASSISTANTS: 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 copy testimonials to County Architect, County Hall, Kingston, as soon as possible. 9381

BOROUGH OF LEYTON
(in the County of Essex)
COMMITTEE FOR EDUCATION
APPOINTMENT OF ARCHITECTURAL ASSISTANT

Applications are invited for the permanent appointment of Architectural Assistant, Grade A.P.T. II (£765—£880 per annum, plus London weighting). The successful applicant will be employed by the Essex County Council, and will work in the School Architect's Section of the Borough Engineer & Surveyor's Department, Town Hall, Leyton, E.10. Five-day week is observed.

Details and forms of application from the Borough Education Officer, Education Offices, Kirkdale Road, Leytonstone, E.11, to whom they should be returned within 10 days from the appearance of this advertisement.

D. J. OSBORNE,
Town Clerk.
Town Hall,
Leyton, E.10. 9431

HOLLAND COUNTY COUNCIL (LINCOLN-SHIRE) invite applications for the appointment of a SENIOR ASSISTANT ARCHITECT, Grade A.P.T. IV, £1,065—£1,220 p.a.

The Council have a varied and interesting programme and the successful applicant will be required to work within a "Group" system, where enthusiasm, initiative and contemporary outlook are required.

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

The County Council would consider making a contribution towards the cost of removals.

Forms obtainable from the County Architect, should be returned to the Clerk of the County Council, County Hall, Boston, Lincs, by 25th April, 1960. 9533

LAMBETH BOROUGH COUNCIL
HOUSING DEPARTMENT

ARCHITECTURAL ASSISTANTS are required for work on a wide variety of housing schemes, including new buildings and conversions. Appointments will be made in A.P.T. grade II (£765 p.a. to £880 p.a.) and in A.P.T. grade III (£880 to £1,065 p.a.) according to experience; plus London weighting £20/£30 p.a. according to age). A professional qualification will be an advantage.

Applications to Director of Housing, 65/67, Brixton Hill, S.W.2 (quote ref. 118A). 9559

HAMPSHIRE COUNTY COUNCIL
ASSISTANT ARCHITECT, A.P.T. Grade IV (£1,065—£1,220), required for pensionable post in office of the County Architect. Candidates must have passed the Final examination of the R.I.B.A. and have had considerable experience, preferably in the office of a Local Authority. Assistance with removal and other expenses in approved cases. Five-day week. Canteen facilities.

Application forms (send s.a.e.) returnable by 25th April, from Clerk of the County Council, The Castle, Winchester. 9538

BOROUGH OF EALING
TWO ARCHITECTURAL ASSISTANTS, within scale A.P.T. IV according to experience (£1,065 to £1,250 inclusive). Must hold recognised architectural qualifications.

Full particulars and application forms from Borough Engineer, Town Hall, Ealing, W.5. Closing date 18th April, 1960.

E. J. COPE-BROWN,
Town Clerk.
9592

CORPORATION OF GLASGOW
ARCHITECTURAL AND PLANNING DEPARTMENT

A new planning team is being set up to study the planning problems of the City Centre involving the preparation of schemes for seven Major Comprehensive Development Areas and the Inner Ring Road—a four-mile-long Urban Motorway.

Applications are invited from enthusiastic QUALIFIED PLANNERS interested in the architectural, engineering or statistical aspects of the problems involved.

The work will provide scope for initiative in preparing details for schemes on which constructional work is intended to start as soon as possible.

Salary scale of £795 to £1,240 with placing according to experience.
Apply to City Architect and Planning Officer, 20, Trongate, Glasgow, C.1, giving details and names of referees. 9516

CITY OF LEICESTER
CITY ARCHITECT'S DEPARTMENT

ARCHITECTS interested in modular co-ordination and prefabricated systems of building are invited to apply for the post of ASSISTANT ARCHITECT, Grade A.P.T. IV (£1,065—£1,220).

The post will be concerned with research and development of C.I.A.S.P. building and will involve work in co-operation with other local authorities.

Previous local government experience not essential. Housing accommodation at an economic rent will be provided if necessary. National Conditions of Service apply.

Applications with the names of two referees should be sent to the undersigned not later than Monday, 25th April, 1960.

J. H. LLOYD OWEN,
City Architect.
10, Loseby Lane,
Leicester. 9511

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 £900 and (Senior) £794 (at age 26) to £1,065. Applicants, who must be natural born British subjects, should write stating age, qualifications and experience to the Manager (P.E.1234), Ministry of Labour, Professional and Executive Register, Atlantic House, Farringdon Street, London, E.C.4. No original testimonials should be sent.

BOROUGH OF BASINGSTOKE
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, Dipl.Arch., A.R.I.B.A., Municipal Buildings, Basingstoke, Hants, by the 2nd May, 1960.

L. WOMERSLEY,
Town Clerk.
9522

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Architectural Appointments Vacant

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

TWO ARCHITECTURAL ASSISTANTS required—Intermediate R.I.B.A. standard—must have had good office experience. Salary £200-£1,000 according to experience. Housing accommodation could be provided. Reply, giving particulars of age and experience and salary required, to: Francis W. Keyworth, L.R.I.B.A., 10 Park Road, Melton Mowbray, and 31, Friar Lane, Leicester. 8776

ARCHITECTURAL ASSISTANT required, Intermediate/Final standard. Varied and interesting work. Good draughtsmanship, sound knowledge of construction and ability to manage staff, essential. Five-day week. Apply, stating age, experience and salary required, to: George Lowe & Partner, 79, George Street, CROYDON SURREY. 8645

ARCHITECTURAL ASSISTANTS required in busy Bloomsbury office with varied practice. Good salary and prospects for suitable applicants. Five-day week. Write giving particulars of age, qualifications, experience, etc., to Box 910, c/o 7, Glick Street, W.C.1. 8815

SENIOR ARCHITECTURAL ASSISTANTS required in salary range £700-£1,000 to take control of varied and interesting jobs of all kinds. Experience in colour and design of interiors and fittings and good presentation draughtsmanship an advantage. Five-day week, excellent working conditions and holidays. Please write, giving full details of experience and qualifications, to: Deacon and Laing, 65, Goldington Road, Bedford. 8678

ASSISTANT ARCHITECTS required by firm with offices in Middlesbrough and Billingham-on-Tees. The work is interesting and of considerable variety. Salary according to experience and ability. Elder and Lester, A.A.R.I.B.A., Governor Buildings, 65, Albert Road, Middlesbrough. 8820

ASSISTANTS required capable of taking responsibility for the preparation of working drawings and supervision of contracts. Interesting projects with opportunity to gain worthwhile experience. Telephone Mayfair 3111 for appointment or write giving details of experience to Box 8930. 8930

ARCHITECTURAL ASSISTANTS required by Harker & Hall, L.F.R.I.B.A., in their offices London and Warwickshire. Good salary, with scope for initiative and responsibility. Write to Welbeck Street, W.1. or telephone WEL 0061 (Knowle (Birmingham) 3502. 9062

DEVEREUX & DAVIES require capable and enthusiastic **ASSISTANT ARCHITECTS** salary £1,000 per annum or according to experience and ability. 3, Gower St., Bedford Sq., London, W.C.1. 8629

W. H. WATKINS, GRAY & PARTNERS require **ASSISTANTS** of Intermediate and Final standard. Pension scheme and luncheon vouchers. Salary range £700 to £900. Apply 57, Sherine Place, London, S.W.1. 8720

DONALD WARD & PARTNERS have immediate vacancy for **ASSISTANT ARCHITECTS** with initiative and some experience, for residential, commercial, industrial and civic projects. Salaries commensurate with ability. Box 29, Chesham Place, S.W.1. BELGRAVIA 5638

BEHEARNE & NORMAN, PRESTON & PARTNERS have vacancies for **ARCHITECTS AND ASSISTANTS** with imagination and training ability to assist with important new developments in the London area. Apply in confidence to 83, Kingsway, London, W.C.2 (WIL. 4071.) 6429

OLIE MAYORCAS requires **SENIOR ASSISTANTS** with minimum of three years' experience in this country. Write, giving particulars of architectural education and experience, and salary required, to: 13, David St., Baker Street, W.1. 8099

LARGE SCALE Development in London and Industrial Buildings in Home Counties. Office blocks and residential flats. Four **ASSISTANT ARCHITECTS** required. Senior and Intermediate standard. West End Office. Five-day week. Good salaries and bonuses. Box 8086. 8086

LEWIS SOLOMON, KAYE & PARTNERS rapidly expanding practice require **ARCHITECTS AND ASSISTANTS** with initiative and competence to work on major design projects in the London area. These projects include Comprehensive Development Schemes, Hotels, Schools, Flats, and Luxury Flats. Good salaries according to ability and experience, luncheon vouchers, five-day week, and excellent working conditions. 5, Holborn Circus, Tavies Inn House, W.1. or telephone CITY 8811, quoting SLB in all instances. 7700

ARCHITECTURAL ASSISTANT (Intermediate standard) required, capable of making site surveys, preparing sketch plans, working drawings and specifications. Please apply, stating age, experience and salary required, to: R. E. GERMAN, F.R.I.B.A., Chief Architect, United Services Ltd., 31, St. Petersburg Place, W.2. 8489

ASSISTANT ARCHITECT required by Harker & Hall, L.F.R.I.B.A., for responsible position in their London office, 13, Welbeck Street, W.1. (WEL. 0061.) 9061

ARCHITECTURAL ASSISTANT required, with at least two years' office experience. Apply in writing to Thomas Mitchell & Partners, 20, Bedford Square, London, W.C.1. 7284

TWO ASSISTANTS required: one at Intermediate standard and one qualified with some years office experience, for small busy office. Salary according to experience. Ring LANGHAM 1732 or write to F. G. Frizzell, A.R.I.B.A., 80, Portland Place, W.1. 8022

VACANCIES exist for **ASSISTANTS** of Pre-Intermediate to Final Grades. Salary Range £200-£900 per annum. Interesting work and good prospects. Apply in writing to: H. Hubbard Ford, F.R.I.B.A., 35 South Audley Street, London, W.1. 8498

MONROE AND PARTNERS require **ARCHITECTURAL ASSISTANTS** of Intermediate/Final R.I.B.A. standard in their London, Watford, and Glasgow offices for work on interesting industrial and commercial projects. Salary range £800-£1,000 p.a. Non-contributory Pension Scheme. Five-day week. Apply in writing to 32, Clarendon Road, Watford. 8609

SENIOR ASSISTANT urgently required for pleasant office in Gray's Inn. Interesting and varied practice. Salary up to £1,100. Telephone Chancery 6387. 8335

SEELY & PAGET have immediate vacancy in their City office. Standard near Final R.I.B.A. with office experience. Holiday arrangements respected. Salary range £342 x £52 (4) - £1,050 plus luncheon vouchers. Write 41, Cloth Fair, E.C.1. or telephone MET 8511. 9155

ARCHITECTURAL ASSISTANTS, senior and junior, required by firm in High Wycombe for commercial and industrial schemes. Scope for responsibility and experience. Five-day week. Box 9143. 9150

MORRIS DE METZ, F.R.I.B.A., requires an assistant for interesting work. Salary from £950 according to ability and experience. 29, Gloucester Place, W.1. Telephone HUNTER 2581/3. 9150

FOUR-FIGURE SALARY. SENIOR ASSISTANT required in Architects' West End office. Varied interesting work. Applicants must be capable of taking responsibility and controlling drawing office team. Box 9096. 9096

FOUR-DAY WEEK. Opportunity for Juniors and/or post Intermediate Students to keep abreast with their school work and undertake interesting and varied office work including Schools, Hospitals, and Public Houses. Good salary according to qualifications and experience. Five-day working and overtime when desired, plus luncheon vouchers. Appointment by telephone ROYAL 6216. Stewart Hendry & Smith, F.F.R.I.B.A. A.M.T.P.I., 90, Fenchurch Street, London, E.C.3. 9095

IN January I recommended a London firm of Architects and as a result several senior assistants have joined the staff. There are still vacancies in this First Rate Practice. I invite anyone interested to visit us by appointment for an informal discussion when I will give opportunities to see work in progress and the general method of working. This invitation is open to all grades of assistants and to final year students who think of starting work this Summer. Profit sharing and Pension schemes are available. Salaries are realistic and regularly revised. Write Box 9202 or 'phone Hunter 1711. 9210

SIR ALFRED MCPALPINE & SON LIMITED **ARCHITECTURAL STAFF. Vacancies** for Intermediate and qualified **ARCHITECTURAL ASSISTANTS AND EXPERIENCED ARCHITECTURAL DRAUGHTSMEN**. Varied commercial and industrial works. Salary according to experience. Hours 9.00 a.m. to 5.30 p.m. and 9.00 a.m. to 12.00 noon alternate Saturdays. Staff Canteen. Apply by post to—F. H. Marvan, A.R.I.B.A., Sir Alfred McAlpine & Son Ltd., Hooton, Little Sutton, Wirral, Cheshire. 9110

ASSISTANTS required, Intermediate to Final standard, with minimum two years' office experience. Small busy practice. Please apply R. Jelinek-Karl, F.R.I.B.A., 6, Buckingham Street, W.C.2. 9383

ASSISTANTS required in Croydon area. Intermediate or near Intermediate standard, to assist on varied and interesting projects. Five-day week. Two weeks' holiday this year. Apply giving details of education, experience and salary required. Box 9390. 9390

CROYDON. ARCHITECTURAL ASSISTANTS required for preparation of working drawings and details for large scale projects. Salary according to experience. Five-day week. Holidays this year. State training and experience. Box 9391. 9391

ARCHITECTURAL ASSISTANTS required. A capable of carrying through a variety of contracts from rough sketch stage to final account. Plenty of scope for people with initiative. Telephone MAYfair 9556 for appointment or write Box 9404. 9405

ARCHITECTURAL ASSISTANTS of Final or Intermediate standard required by London Architects with varied practice. Salary by arrangement. Five-day week. Ring WHI 2552 for interview. 9405

GUY MORGAN & PARTNERS require **ARCHITECTURAL ASSISTANTS** in their London office. Salary range £750-£1,200 per annum. Please telephone BELGRAVIA 4581 for appointment. 9503

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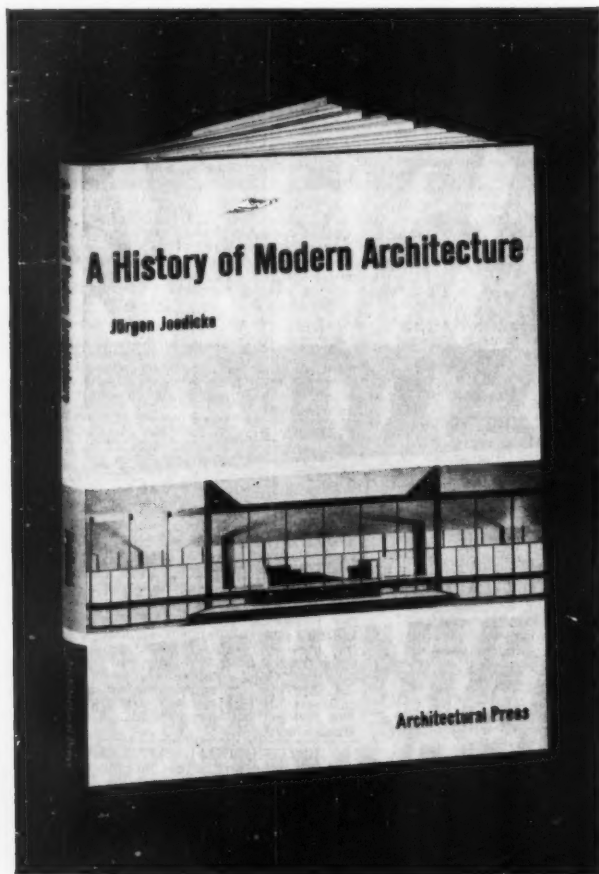
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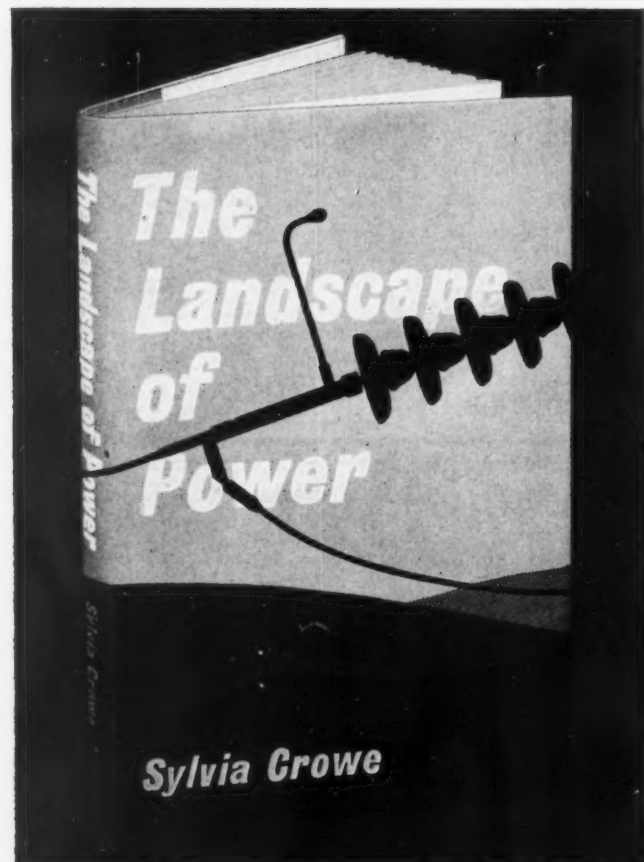
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25 0740
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5 0460
99 0390
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77 1020
09 0480

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The Thinker from "The Gate of Hell", Rodin, Bronze, 1879-1900

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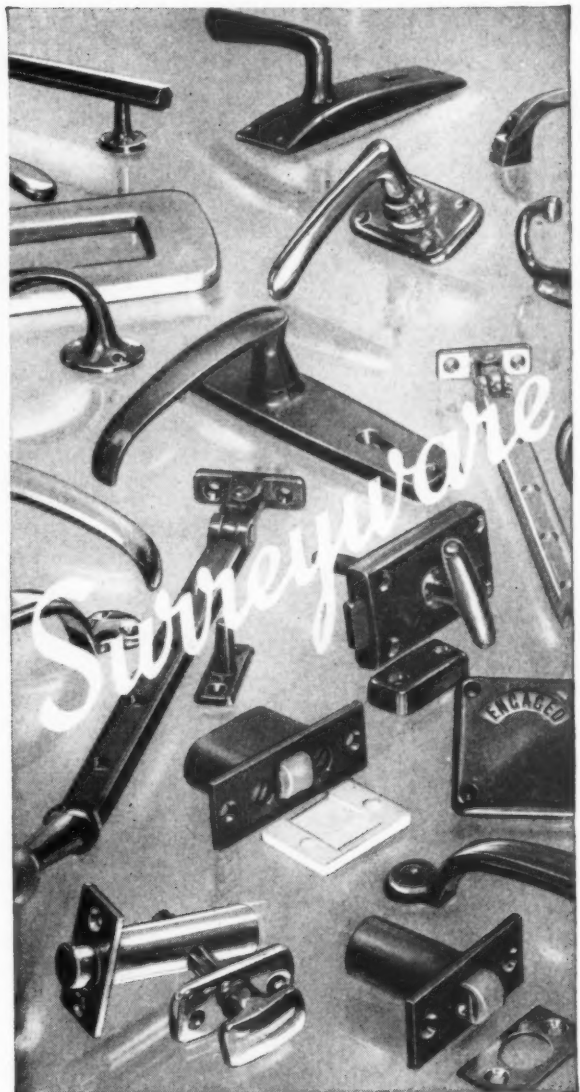
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